

SUMMARY REPORT 2024

WINDSOR UTILITIES COMMISSION

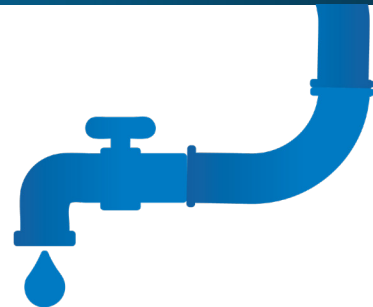


WINDSOR
UTILITIES
COMMISSION

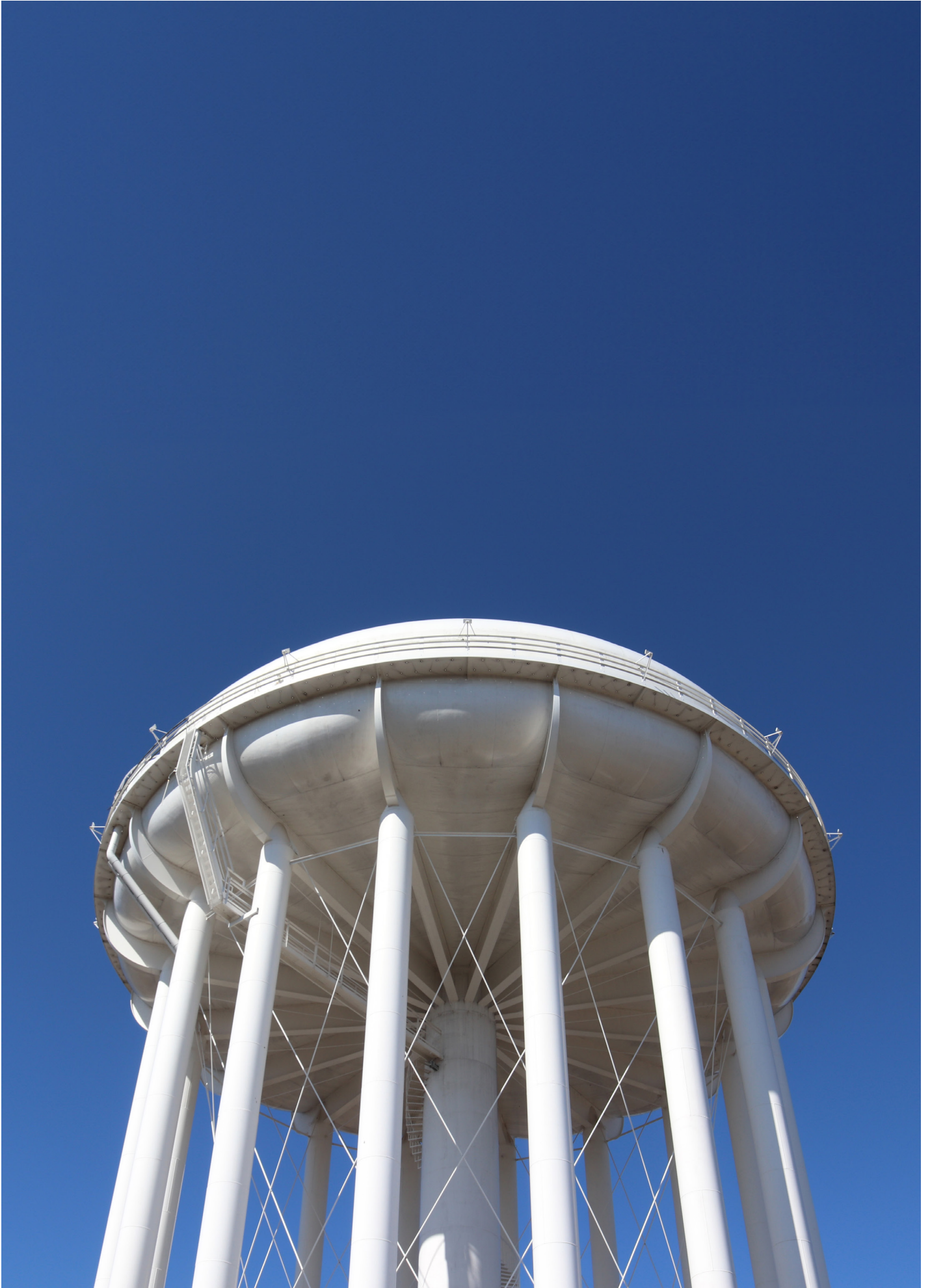
Land Acknowledgment Statement

We acknowledge that we are on land and surrounded by water, which was originally inhabited by Indigenous Peoples who had travelled this area since time immemorial. This territory is honoured by the Wampum Treaties of the Anishinaabe, Haudenosaunee, Lenni Lenape, and allied Nations, to peacefully share and care for the resources around the Great Lakes, and the waters that we drink. We would like to acknowledge the presence of the Three Fires Confederacy of the Ojibwe, Odawa, and Potawatomi and the Huron/Wendat Peoples. We are dedicated to honouring Indigenous history and culture while remaining committed to moving forward respectfully with all First Nations, Inuit and Métis.

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Success by the NUMBERS



Windsor's water system has been a source of safe and reliable potable water for more than 160 years.

2024 Fast Facts



76,810
Customers



\$38.4 M
Invested in
Infrastructure



1,580
New Water
Meters Installed



36,117 ML*
Water Delivered



14.13 km
New Watermain
Installed

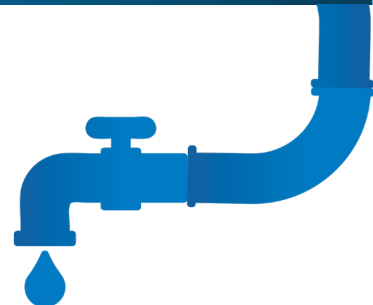


2.52 km
Feedermain
Installed

*ML = Volume in megalitres (ML)

1 ML = 1,000,000 L

Windsor Utilities COMMISSIONERS



Kieran McKenzie

(Chair)
Councillor,
City of Windsor,
Ward 9
BA



Egidio Sovran

(Vice-Chair)
Owner, E L Sovran
Professional Corp.
Associate Grant
Thornton
MBA, CPA, CA



Onorio Colucci

Retired CAO,
City of Windsor
CPA



Robert Feldmann

Retired Energy
Sales and
Marketing Executive
MBA
(Appointed January 2024)



Gary Kaschak

Councillor,
City of Windsor,
Ward 8



Jim Morrison

Councillor,
City of Windsor,
Ward 10
PFP



Ed Sleiman

Councillor,
City of Windsor,
Ward 5



Mario Sonogo

Retired City Engineer,
City of Windsor
President, Sonogo
Management Inc.
P.Eng

ENWIN EXECUTIVE TEAM



Garry Rossi

President and CEO
BASc, P.Eng, C.Dir



Michelle Bonnici

Chief People Officer
LLM, BA, C.Dir



Jim Brown

Chief Operating
Officer - Hydro
BESc, BCom, P.Eng
C.Dir



Matt Carlini

Chief Financial
Officer
CPA, CA, MBA,
C.Dir



Paul Gleason

Chief Risk
Officer
LLM, BA,
CSCMP, C.Dir



Robert Spagnuolo

Chief Operating
Officer - Water
MBA, BASc, P.Eng,
C.Dir



Kris Taylor

Chief Business
Development Officer
MBA, CEM, C.Dir

Commissioner ATTENDANCE



Windsor Utilities Commission REGULARLY SCHEDULED MEETINGS


Commissioner
Attended
Held
%

Kieran McKenzie

5

5

100%



Egidio Sovran

5

5

100%



Onorio Colucci

5

5

100%



Robert Feldmann

5

5

100%



Gary Kaschak

5

5

100%



Jim Morrison

5

5

100%



Ed Sleiman

5

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100%



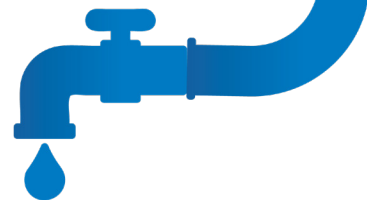
Mario Sonego

4

5

80%

Message from the CHAIR OF THE COMMISSION AND CHIEF OPERATING OFFICER - WATER



On behalf of the Windsor Utilities Commission (WUC), we are pleased to present our 2024 annual report to our customers, colleagues, and community.

This year has marked an unprecedented period of investment for WUC as we diligently prepare for the significant economic growth anticipated in Windsor. We are particularly enthusiastic about the advancements linked to the NextStar Energy facility, the Gordie Howe International Bridge, and the impending construction of the regional mega-hospital in Sandwich South, scheduled to commence in 2026.

We are confident in our ability to meet our region's growing demands thanks to our five-year plan and the significant progress we have made in enhancing our infrastructure. In 2024, we invested over \$50 million in asset renewal and infrastructure preparation for Windsor's anticipated growth, constituting WUC's largest capital investment to date. This investment included preparatory work for a new water tower, advancements on the Central Corridor Feedermain, and the initiation of decommissioning our venerable Original Water Treatment Plant (OWTP).

The OWTP served Windsor residents for an impressive 88 years, from 1924 until its closure in 2012, witnessing the creation of WUC itself in 1935. The decommissioning of the OWTP marks a pivotal moment in WUC's ongoing efforts to modernize our infrastructure and optimize our operations. While we regret its closure, by retiring this facility WUC is securing the area for expansion to ensure that future residents will have the essential water services they need.

The Central Corridor Feedermain will have the largest pipe diameter in our system and will significantly boost our capacity to serve the growing needs of southern Windsor, Tecumseh, and LaSalle.

We have also made significant progress on the design of a new water tower and are currently evaluating potential locations.

Despite these record-breaking investments in 2024, we have maintained rate increases consistent with previous years, demonstrating our dedication to both infrastructure growth and affordability.

As part of our commitment to maintaining a resilient water supply, we continue to collaborate with Union Water Supply System Inc. on the design of a joint reservoir and interconnect between our two distribution systems for added resiliency. Following our Joint Board's approval to proceed in 2024, we have initiated an Environmental Assessment and conceptual design process. These steps aim to strengthen our system and mitigate the risk of water supply shortages in the event of a source water or water system emergency.

We have also made notable strides in strengthening our connection with the communities we serve, as outlined in our Corporate Strategic Plan. We have expanded our community engagement efforts, hosting a local World Water Day event and connecting with customers at City Ward Meetings.

Looking to the future, WUC remains steadfast in our commitment to excellence and to providing our customers with reliable, cost-effective water solutions that are essential to life.




Kieran McKenzie,
Chair
Windsor Utilities
Commission

Robert Spagnuolo,
Chief Operating Officer -
Water
ENWIN Utilities Ltd.

Mission, Vision & VALUES



Strategic Goals and Initiatives

- 
Continue to partner with a people driven learning organization.
 Encourage our ENWIN service provider to drive organizational excellence and learning through attracting, retaining, developing, and engaging passionate and diverse people.
- 
Drive a safe, secure, and resilient water supply.
 Ensure a safe, secure, and resilient water supply for customers through sound physical and cyber infrastructure management and regional partnerships and investments in source water protection.
- 
Grow WUC's value to customers and partners.
 Demonstrate exceptional value to our customers and partners through a relentless focus on operational excellence and fostering a platform for clean water solutions and talent development.

Mission

We deliver to our customers the reliable and cost-effective water solutions that are essential to life.

Vision

Connecting communities through safe and sustainable water solutions.

Our Values



Agility

We are agile in responding to, and anticipating, our customers' and communities' water solutions needs.



Stewardship

We are responsible stewards of the sustainability and affordability of the vital resources that our customers and communities rely on for their quality of life.



Trust

We build trusted, long-term relationships with each other, our customers, and our communities through collaboration, engagement and volunteerism.



Excellence

We encourage and challenge ourselves to model and deliver excellence in our operations and every experience we share with each other, our customers, and our communities.



Purposeful

We are purpose-driven in our pursuit of innovation, growth, and exceptional results by seeking out and integrating diverse perspectives, experiences, and backgrounds.

WUC OPERATIONS



In 2024, WUC produced 36,117 million litres of potable water for residential, industrial, commercial and institutional customers within the City of Windsor, Town of LaSalle, and the Town of Tecumseh.

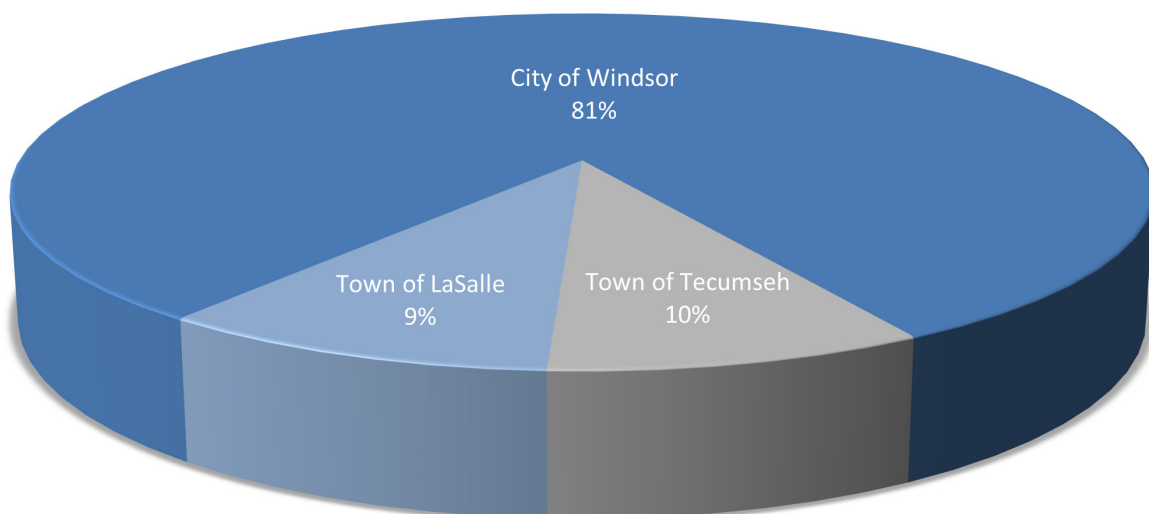
The summary contained in Table 6 – 2024 Monthly Treated Water Volume (ML) (*page 26*) provides a detailed breakdown of the monthly production rates. The volume of water transferred to the Town of LaSalle and the Town of Tecumseh is also provided.

Under the Municipal Drinking Water Licence (MDWL) and Ontario Regulation 170/03 (O. Reg. 170/03), there are a number of Schedules that outline the requirements for compliance with the Safe Drinking Water Act (SDWA). This report highlights O. Reg. 170/03 Schedule requirements and applicable statements of compliance or non-compliance.

Table 1: 2024 Total Treated Water Delivered by Municipality

	ML	%
Town of LaSalle	3,308	9%
Town of Tecumseh	3,513	10%
City of Windsor	29,296	81%

Chart 1: 2024 Total Treated Water Delivered by Municipality



Treatment EQUIPMENT



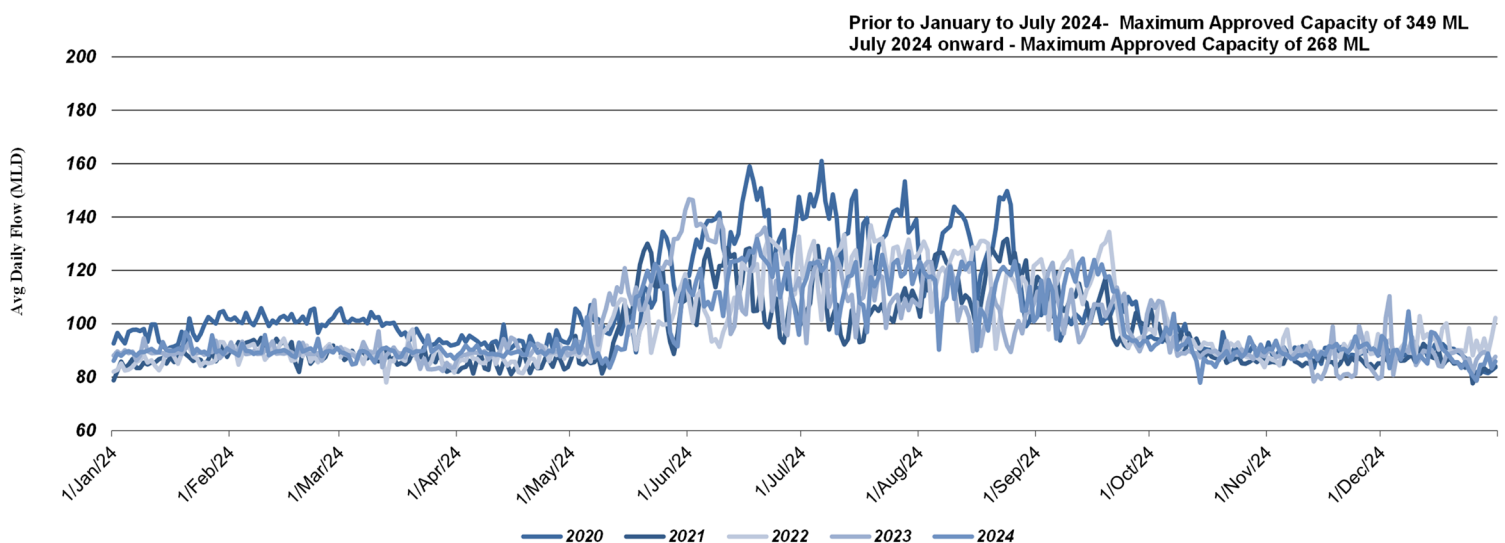
O. Reg. 170/03, Schedule 1 dictates that the owner of a drinking water system shall ensure that approved water treatment equipment, as specified in the Drinking Water Works Permit (DWWP), is provided and it is in operation whenever water is being supplied for potable use.

Further, the regulation requires that the equipment be operated in a manner that achieves its design capabilities and that only certified operators carry out operation of the system.

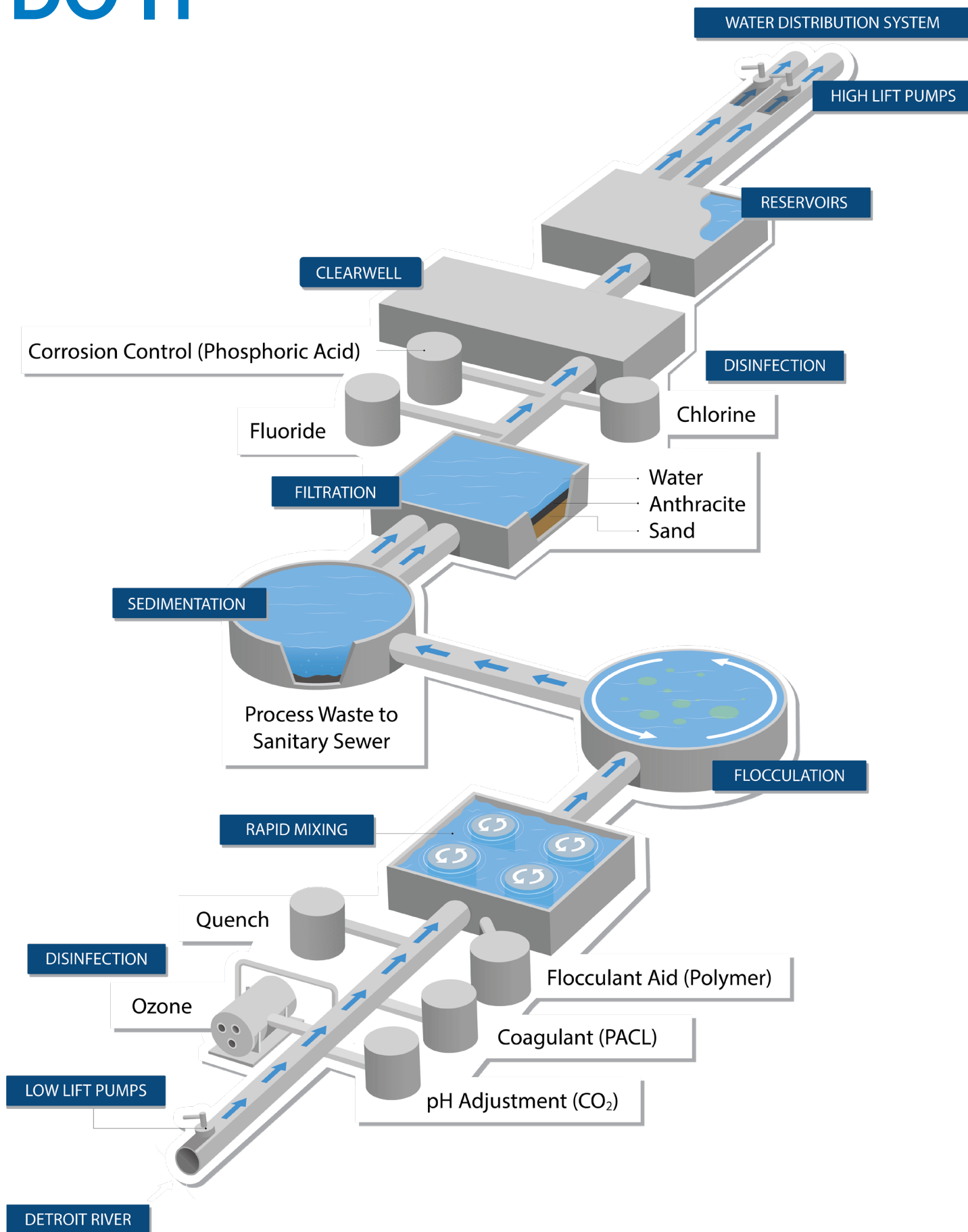
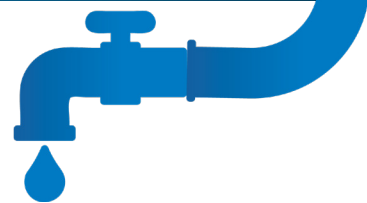
In the calendar year 2024, WUC complied fully with Schedule 1 of the regulation.

Chart 2: 2020 - 2024 Volume of Approved Capacity (below) depicts WUC's average daily water flow for the 2020-2024 calendar years. A daily maximum of 349 ML was the approved treatment capacity of WUC's treatment plants prior to the decommissioning of the OWTP. As of July 9, 2024, a daily maximum of 268 ML is the approved treatment capacity of Albert H. Weeks Water Treatment Plant (A.H. Weeks WTP). As illustrated in the chart, WUC is operating well within the approved limits of the MDWL.

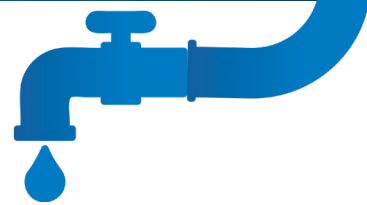
Chart 2: 2020 - 2024 Volume of Approved Capacity



How We DO IT



Operational Checks, SAMPLING & TESTING



O. Reg. 170/03, Schedule 6 outlines:

- The frequency of sampling and testing requirements;
- The requirement for chlorine residual testing to be carried out at the time microbiological samples are collected;
- The location at which samples are to be collected;
- The form of sampling to be undertaken and the requirements for continuous monitoring equipment; and
- Clarification of how samples are to be handled and recorded, and the need for an appropriately accredited laboratory to carry out the sample analysis.

In the calendar year 2024, WUC complied fully with this section of the regulation.

OPERATIONAL CHECKS

O. Reg. 170/03, Schedule 7 specifies the requirements for continuous monitoring of equipment for free chlorine residual, turbidity and fluoride, and the required location for this equipment. The regulation dictates the requirement for regular collection and analysis of samples by an appropriately certified individual. Chart 3: Operational Trends (below) summarizes the results for free chlorine residual and turbidity and Table 2 (below) summarizes the fluoride sample results for both treated and distribution water.

In the calendar year 2024, WUC complied fully with this section of the regulation.

Chart 3: 2024 Operational Trends

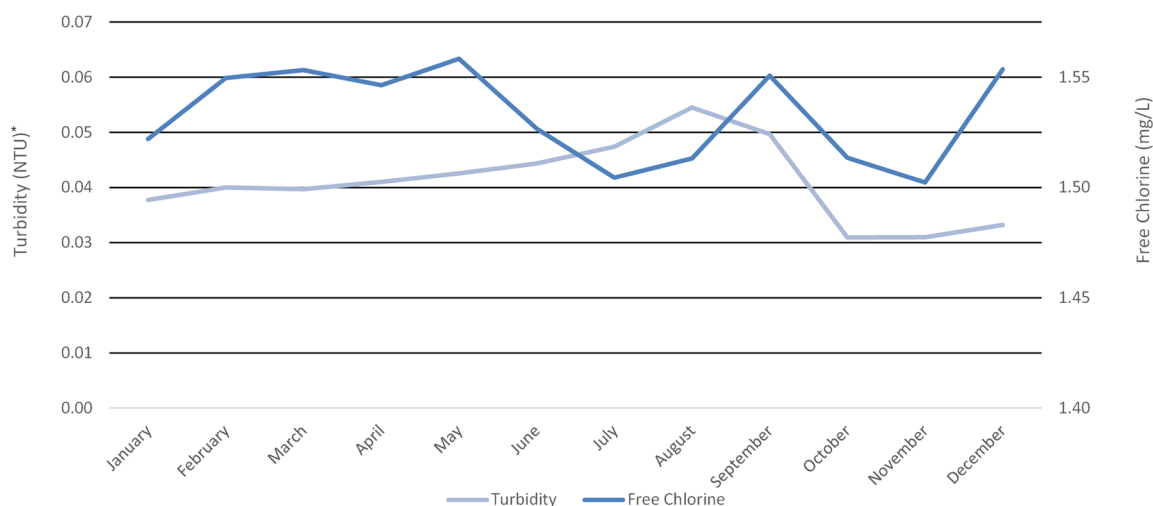


Table 2: 2024 Fluoride Sample Results

Parameter	MAC*OR IMAC*	Range of Results (min#)-(max#)	Average Results	Unit of Measure	In Compliance
Fluoride - Treated	1.5	0.44 - 0.87	0.57	mg/L	Yes
Fluoride - Distribution	1.5	0.44 - 0.85	0.57	mg/L	Yes

*NTU = Nephelometric Turbidity Unit

*MAC = Maximum Acceptable Concentration

*IMAC = Interim Maximum Acceptable Concentration

MICROBIOLOGICAL SAMPLING AND TESTING

O. Reg. 170/03, Schedule 10 provides the requirements for sampling and testing of microbiological parameters.

Schedule 10 states that for large municipal systems serving a population of more than 100,000 people, the required monthly frequency of sampling is 100 distribution samples, plus one additional sample for every 10,000 people served, with at least three samples taken weekly.

Each of these samples are to be tested for *Escherichia Coli* and Total Coliform, with a requirement that at least 25 per cent of the samples be tested for general bacteria population, expressed as colony counts on a heterotrophic plate count. Windsor's required sampling frequency is 130 samples monthly. In 2024, 1,950 samples were collected and analyzed — an average of 163 samples per month. Approximately 52 per cent of the distribution samples were also analyzed for heterotrophic plate count. In addition, each sample was tested for free chlorine residual at the time the sample was taken.

Schedule 10 states that a treated water sample must be taken at least once per week and tested for *Escherichia Coli* and Total Coliform. Windsor's treated water samples were generally collected and tested on average five days per week.

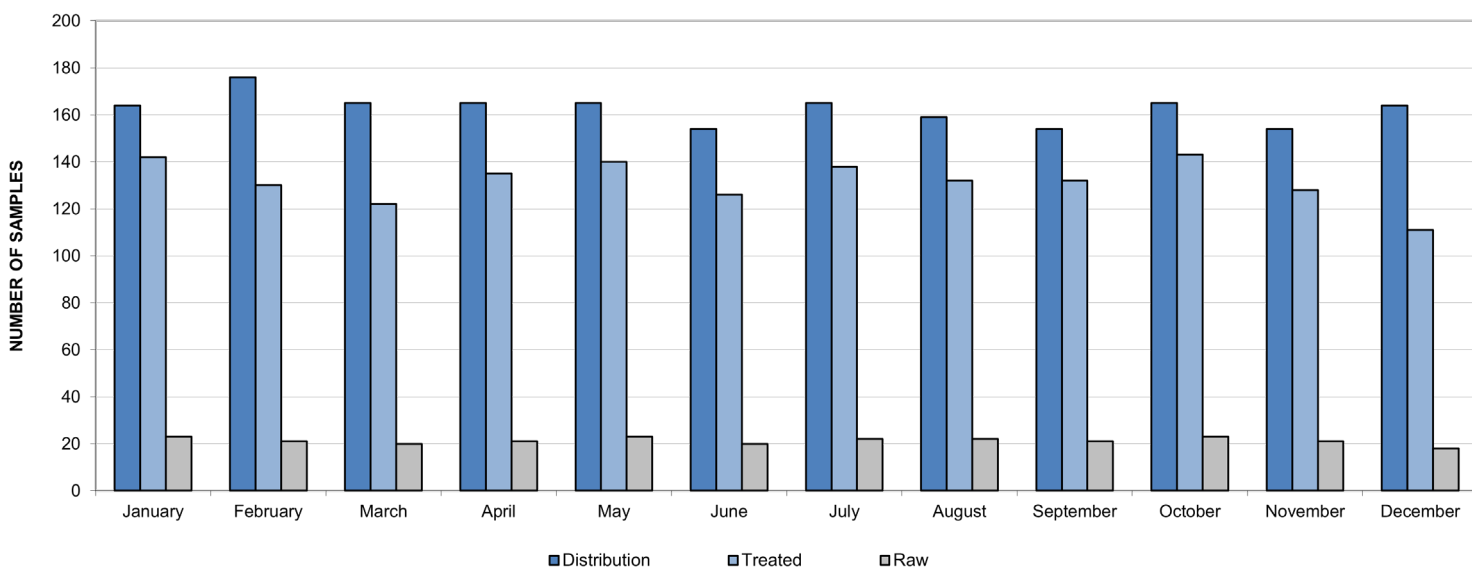
Furthermore, it states that a raw water sample must be taken at least once per week, before any treatment is applied to the water, and that the sample be tested for *Escherichia Coli* and Total Coliform. Samples were collected and tested on average five days per week. Table 3 provides a monthly summary of the microbiological samples collected from raw water, treated water, and distribution water (below).

Table 3: 2024 Microbiological Sample Count

Month	January	February	March	April	May	June	July	August	September	October	November	December
Distribution	164	176	165	165	165	154	165	159	154	165	154	164
Treated	142	130	122	135	140	126	138	132	132	143	128	111
Raw	23	21	20	21	23	20	22	22	21	23	21	18
Total	329	327	307	321	328	300	325	313	307	331	303	293

Chart 4: 2024 Microbiological Sample Count (below) indicates the number of samples taken on a monthly basis.

Chart 4: 2024 Microbiological Sample Count



CHEMICAL SAMPLING AND TESTING

O. Reg. 170/03, Schedule 13 provides the requirements for sample collection and testing for a variety of chemical parameters in drinking water. O. Reg. 169/03 outlines the Maximum Acceptable Concentration (MAC) for each parameter required to be tested under O. Reg. 170/03. The testing requirements are outlined in the following sections, along with the status of Windsor's sampling program.

INORGANICS

If the water source is surface water, one sample must be collected and tested every 12 months for every parameter set out in O. Reg. 170/03 Schedule 23 (see page 16 for Table 4 - Inorganics, Lead, Nitrates, and Sodium Sample Results).

In 2024, ENWIN, on behalf of WUC, collected and tested samples for every parameter set out in Schedule 23 on a quarterly basis.

ORGANICS

If the water source is surface water, one sample must be collected and tested every 12 months for every parameter set out in O. Reg. 170/03 Schedule 24 (see page 17 for Table 5 - Organics, THMs and HAAs Results).

In 2024, ENWIN, on behalf of WUC, collected and tested samples for every parameter set out in Schedule 24 on a quarterly basis.

TRICHALOMETHANES (THMs) AND HALOACETIC ACIDS (HAAs)

For any system that provides chlorination, one distribution sample must be collected and tested for trihalomethanes every three months (see page 17 for Table 5 - Organics, THMs and HAAs Sample Results).

In 2024, ENWIN, on behalf of WUC, collected and tested samples for trihalomethanes on a quarterly basis.

NITRATES AND NITRITES

The owner of a drinking water system (WUC) and the operating authority for the system (ENWIN) must ensure that at least one water sample is taken every three months and tested for nitrates and nitrites (see page 16 for Table 4 - Inorganics, Lead, Nitrates, and Sodium Sample Results).

In 2024, ENWIN, on behalf of WUC, collected and tested samples for nitrates and nitrites on a quarterly basis.

LEAD

One sample must be collected and tested every 12 months for Lead (see page 16 for Table 4 - Inorganics, Lead, Nitrates, and Sodium Sample Results).

In 2024, ENWIN, on behalf of WUC, collected and tested samples for lead in a treated water sample and a distribution sample on a quarterly basis.

SODIUM

O. Reg. 170/03, Schedule 13 stipulates that at least one water sample is taken every 60 months and tested for sodium (see page 16 for Table 4 - Inorganics, Lead, Nitrates, and Sodium Sample Results).

In 2024, ENWIN, on behalf of WUC, collects and tests for sodium on a quarterly basis.

BROMATES

For any system that provides ozonation as a primary disinfection method, one treated water sample must be collected monthly from each Water Treatment Plant (see page 16 for Chart 5 - Bromate Sample Results).

In 2024, ENWIN, on behalf of WUC collected and tested samples for Bromates on a monthly basis.

Chart 5: Bromate Annual Running Average Results

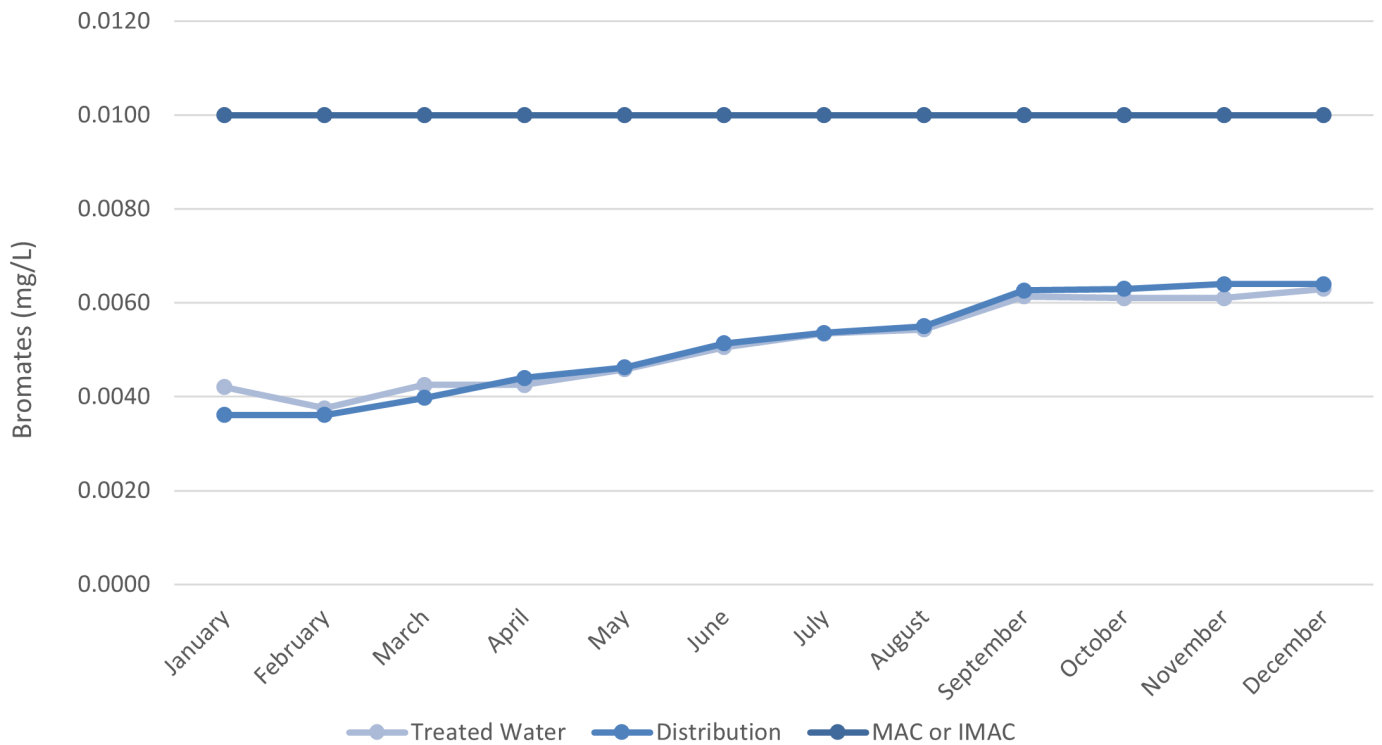


Table 4 - Inorganics, Lead, Nitrates and Sodium Results

Parameter	MAC or IMAC	Sample Date	Result Value	Unit of Measure	In Compliance
Antimony	0.006	9-Oct-24	<0.0006	mg/L	YES
Arsenic	0.01	9-Oct-24	0.0003	mg/L	YES
Barium	1	9-Oct-24	0.0151	mg/L	YES
Boron	5	9-Oct-24	0.014	mg/L	YES
Cadmium	0.005	9-Oct-24	0.000003	mg/L	YES
Chromium	0.05	9-Oct-24	<0.00008	mg/L	YES
Lead *	0.01	9-Oct-24	0.00001	mg/L	YES
Mercury	0.001	9-Oct-24	<0.00001	mg/L	YES
Selenium	0.05	9-Oct-24	0.00008	mg/L	YES
Sodium	20	9-Oct-24	5.42	mg/L	YES
Uranium	0.02	9-Oct-24	0.000047	mg/L	YES
Fluoride	1.5	9-Oct-24	0.52	mg/L	YES
Nitrite	1	9-Oct-24	<0.003	mg/L	YES
Nitrate	10	9-Oct-24	0.202	mg/L	YES

*Lead, Nitrite, Nitrate results are from maximum resolution in the distribution system

Table 5: Organics, THMs and HAAs Results

Parameter	MAC or IMAC	Sample Date	Result Value	Unit of Measure	In Compliance
Alachlor	0.005	9-Oct-24	<0.00002	mg/L	YES
Atrazine + N-dealkylated metabolites	0.005	9-Oct-24	0.00001	mg/L	YES
Azinphos-methyl	0.02	9-Oct-24	<0.00005	mg/L	YES
Benzene	0.001	9-Oct-24	<0.00032	mg/L	YES
Benzo(a)pyrene	0.00001	9-Oct-24	<0.000004	mg/L	YES
Bromoxynil	0.005	9-Oct-24	<0.00033	mg/L	YES
Carbaryl	0.09	9-Oct-24	<0.00005	mg/L	YES
Carbofuran	0.09	9-Oct-24	<0.00001	mg/L	YES
Carbon Tetrachloride	0.002	9-Oct-24	<0.00017	mg/L	YES
Chlorpyrifos	0.09	9-Oct-24	<0.00002	mg/L	YES
Diazinon	0.02	9-Oct-24	<0.00002	mg/L	YES
Dicamba	0.12	9-Oct-24	<0.00020	mg/L	YES
1,2-Dichlorobenzene	0.2	9-Oct-24	<0.00041	mg/L	YES
1,4Dichlorobenzene	0.005	9-Oct-24	<0.00036	mg/L	YES
1,2-Dichloroethane	0.005	9-Oct-24	<0.00035	mg/L	YES
1,1-Dichloroethylene (vinylidene chloride)	0.014	9-Oct-24	<0.00033	mg/L	YES
Dichloromethane	0.05	9-Oct-24	<0.00035	mg/L	YES
2,4-Dichlorophenol	0.9	9-Oct-24	<0.00015	mg/L	YES
2,4-Dichlorophenoxy acetic acid (2,4-D)	0.1	9-Oct-24	<0.00019	mg/L	YES
Diclofop-methyl	0.009	9-Oct-24	<0.00040	mg/L	YES
Dimethoate	0.02	9-Oct-24	<0.00006	mg/L	YES
Diquat	0.07	9-Oct-24	<0.001	mg/L	YES
Diuron	0.15	9-Oct-24	<0.000003	mg/L	YES
Glyphosate	0.28	9-Oct-24	<0.001	mg/L	YES
Haloacetic Acids (HAA5) (Note: show latest running annual average)	0.08	Running Annual average	<0.0053	mg/L	YES
Q4 = <0.0053 mg/L					
Q3 = <0.0053 mg/L					
Q2 = <0.0050 mg/L					
Q1 = <0.0050 mg/L					
Malathion	0.19	9-Oct-24	<0.00002	mg/L	YES
MCPA	0.1	9-Oct-24	<0.00000012	mg/L	YES
Metolachlor	0.05	9-Oct-24	<0.00001	mg/L	YES
Metribuzin	0.08	9-Oct-24	<0.00002	mg/L	YES
Monochlorobenzene	0.08	9-Oct-24	<0.0003	mg/L	YES
Paraquat	0.01	9-Oct-24	<0.001	mg/L	YES
Pentachlorophenol	0.06	9-Oct-24	<0.00015	mg/L	YES
Phorate	0.002	4-Oct-23	<0.00001	mg/L	YES
Picloram	0.19	4-Oct-23	<0.001	mg/L	YES
Polychlorinated Biphenyls (PCB)	0.003	4-Oct-23	<0.00004	mg/L	YES
Prometryne	0.001	4-Oct-23	<0.00003	mg/L	YES
Simazine	0.01	4-Oct-23	<0.00001	mg/L	YES
THM (Note: show latest running annual average)	0.10	Running Annual average	0.0093	mg/L	YES
Q4 2024 = 0.00925 mg/L					
Q3 2024 = 0.010475 mg/L					
Q2 2024 = 0.010325 mg/L					
Q1 2024 = 0.0102375 mg/L					
Terbofos	0.001	4-Oct-23	<0.00001	mg/L	YES
Tetrachlorethylene	0.01	4-Oct-23	<0.00035	mg/L	YES
2,3,4,6-Tetrachlorophenol	0.1	4-Oct-23	<0.00020	mg/L	YES
Triallate	0.23	4-Oct-23	<0.00001	mg/L	YES
Trichloroethylene	0.005	4-Oct-23	<0.00044	mg/L	YES
2,4,6-Trichlorophenol	0.005	4-Oct-23	<0.00025	mg/L	YES
Trifluralin	0.045	4-Oct-23	<0.00002	mg/L	YES
Vinyl Chloride	0.001	4-Oct-23	<0.00017	mg/L	YES

SAMPLING & TESTING: LEAD

The MDWL requires 60 samples annually to monitor corrosion control effectiveness. Sample locations include residential, non-residential, and distribution systems. Each of these samples are to be tested for lead.

A total of 158 lead sample locations were collected and tested in 2024: 84 residential and non-residential samples and 74 samples in distribution. Of the 84 lead sample locations tested, two sample locations exceeded the 10 micrograms per litre (µg/L).

Lead samples were collected from the kitchen tap as prescribed in O. Reg. 170/03. It remains optional to collect samples from an outside tap, as per our MDWL.

In the calendar year 2024, WUC complied fully with the requirements of the MDWL.

REPORTING ADVERSE TEST RESULTS

O. Reg. 170/03 Schedule 16, outlines the adverse test result reporting requirements. If a sample collected and tested indicates an adverse test result, the owner of a drinking water system must report the result to the local Medical Officer of Health (MOH) and the Spills Action Centre (SAC) of the Ministry of Environment, Conservation and Parks (MECP). If an observation other than an adverse test result indicates that a drinking water system is directing water that may not be adequately disinfected to users of the water system, the observation must be reported to the MOH and the SAC.

If a report is required under this section, a verbal report must be provided to the MOH by speaking directly to a person at the Windsor Essex County Health Unit (WECHU) or the designated on-call representative. In addition, a verbal report must be provided to the Ministry by contacting the SAC.

The verbal report of an adverse test result must be verified by written notice within 24 hours to the MOH and the SAC. This specifies the nature of the adverse test result, actions or observations taken and what corrective action is being taken.

Within seven days of the adverse test result resolution, a follow up written notice is to be provided.

In 2024, there was one adverse test result and one observation of inadequate disinfected water requiring notification of the MOH and the SAC. Details are as follows:

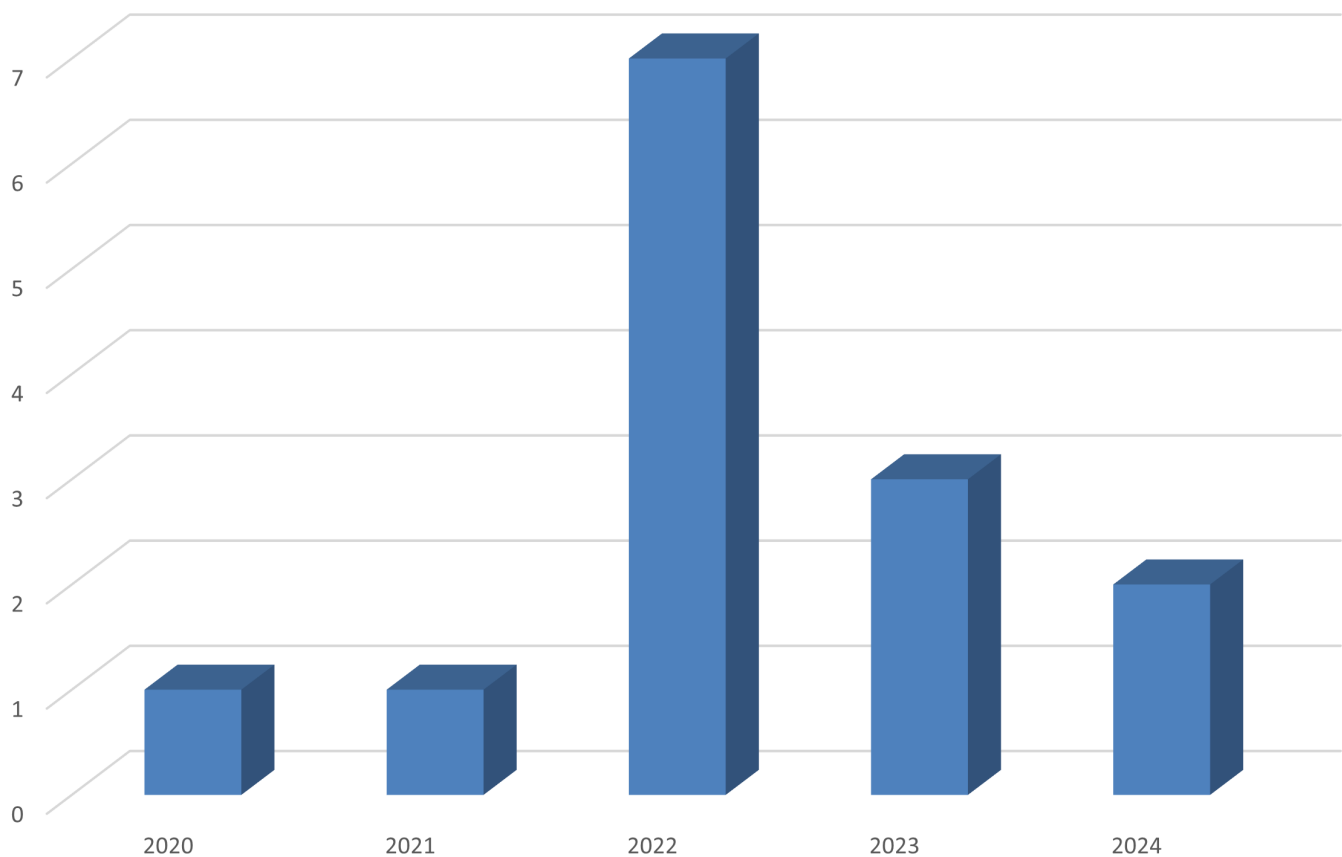
- Total Coliform result of 1 CFU/100mL* at George Avenue Pumping Station. Adverse test result caused by point source contamination. Resampling of the location was found clear of bacterial content.
- No coagulant feed during the treatment process at A.H. Weeks WTP. Improperly disinfected water has been flushed to waste and never reached customers.

*CFU/100mL = colony forming units per 100 millilitres

Notifications were made to the MOH and the SAC.

Chart 6: Adverse Water Quality Incidents (see below) presents the number of adverse test results from 2012-2024.

Chart 6: Adverse Water Quality Incidents



CORRECTIVE ACTION

O. Reg. 170/03, Schedule 17 outlines required corrective action to be followed with the determination of an adverse test result requiring notification. In all cases, the required corrective action was followed, as directed by the MOH.

SUMMARY REPORT FOR MUNICIPALITIES

O.Reg. 170/03 Schedule 22 requires that, no later than March 31 of each year, a summary report must be prepared for the preceding calendar year and submitted to members of municipal council and members of a municipal services board, if one exists. The submission of this report fulfills the Schedule 22 requirement of the regulation.

The following summarizing tables and charts are attached for review, included in Appendix A:

- Table 6 – 2024 Monthly Treated Water Volume (page 26)
- Table 7 – 2024 Volume as a Percentage of Approved Plant Capacity (pages 27-38.)
- Chart 7 & 8 – 2024 Distribution Chlorine Residuals (page 29)
- Chart 9 & 10 – 2024 Operational Parameters (page 30)
- Chart 11 – 2024 Treated Water Aluminum (page 31)

A copy of O. Reg. 170/03 Schedule 23 (Inorganic Test Parameters) and O. Reg. 170/03 Schedule 24 (Organic Test Parameters) are attached for information (pages 31-32).

Capital Renewal PROGRAM



Water Meter Replacement Program

WUC installed 1,580 new meters in 2024. A very small number of non-radio frequency (RF) meters remained in the field at year end. The remaining meters are either located in vacant properties or require additional attention prior to replacement due to the conditions on the customer sites. These replacements will be coordinated with customers on a case-by-case basis.

At year end, the average age of WUC's total meter population is 8.5 years. For industrial, commercial, and institutional premises only, the average age is 12.5 years.

All meter reading routes are now using the drive-by RF method to collect meter data. Aside from the exceptions noted, the Water Meter Replacement Program is now considered complete.

Watermain Replacement Program

The 2024 WUC capital renewal program involved the replacement of approximately 14.1 km of existing cast and ductile iron watermain, as well as water services, with new PVC pipelines and polyethylene/copper tubing, respectively. In addition, WUC installed 2.52 km of feedermain that will be connected to the future Central Corridor Feedermain.

Water services are typically replaced from the new watermain to the property line.

The MECP and Ontario Fire Codes (OFC) mandate minimum levels of performance required for hydrants throughout the water distribution system. In 2024, 93 water hydrants were replaced as part of our inspection program.

WUC capital projects, such as renewal of cast iron watermain, are prioritized based on a scoring system algorithm. A point score is assigned to the seven criteria listed below to determine the priority of the project.

The algorithm uses the following priority:

1. Breaks per 100 m with an emphasis on recency
2. Likelihood of lead services based on pipe age
3. Deficient hydrant spacing
4. Low fire flow
5. Pipe diameter
6. Disturbed water per 100 m
7. Age (life cycle of pipe type)

Water Treatment Plant Replacement Program

West Settler Rehabilitation

In 2024, WUC rehabilitated various components of the west settler system, including the lower sludge rack and flumes, and applied recoating to all coated surfaces. Stantec Consulting assisted with detailed design and contract administration. The approximate cost for the project was \$950,000.



West Settler Rehabilitation

Original Water Treatment Plant Decommissioning

In 2024, WUC began the decommissioning of the OWTP, located adjacent to the A.H. Weeks WTP. The facility will be decommissioned except for the raw water intake and low lift pumping station. Following the decommissioning, WUC will reconnect the low lift pumping station to a new pipeline supplying water to the A.H. Weeks WTP. The decommissioning of the OWTP is expected to be completed by summer 2025, with an approximate cost of approximately \$6 million.



Start of OWTP Decommission



OWTP Decommission Continued

OWTP Decommission New CO₂ Tank Installation



Backwash System Valve Replacements



New Polymer Dosing System



New Potable Water Feed to A.H. Weeks WTP

Appendix A: OPERATIONAL CHARTS

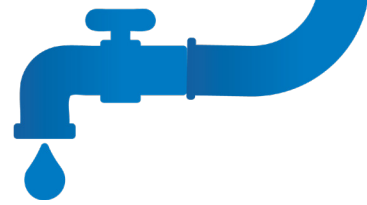


Table 6 - 2024 Monthly Treated Water Volume (ML)

MONTH	TOTAL PUMPED ML (WINDSOR / LASALLE / TECUMSEH)	TOWN OF LASALLE ML	TOWN OF TECUMSEH ML	CITY OF WINDSOR ML
JANUARY	2795.01	218.27	209.52	2367.22
FEBRUARY	2609.82	201.91	192.66	2215.25
MARCH	2764.67	212.97	206.62	2345.09
APRIL	2693.28	226.12	220.34	2246.83
MAY	3100.18	305.89	282.02	2512.26
JUNE	3503.69	384.48	356.58	2762.63
JULY	3627.20	383.14	372.22	2871.84
AUGUST	3500.97	356.81	380.12	2764.04
SEPTEMBER	3286.78	324.64	385.57	2576.57
OCTOBER	2796.14	254.26	327.99	2213.88
NOVEMBER	2700.49	214.50	303.46	2182.53
DECEMBER	2738.52	225.12	275.87	2237.53
TOTAL	36116.75	3308.12	3512.96	29295.67
AVERAGE	3009.73	275.68	292.75	2441.31

Table 7 - 2024 Volume as Percentage of Approved Plant Capacity

Date	January		February		March		April		May		June	
	Average Daily Flow (MLD)	Plant Capacity %	Average Daily Flow (MLD)	Plant Capacity %	Average Daily Flow (MLD)	Plant Capacity %	Average Daily Flow (MLD)	Plant Capacity %	Average Daily Flow (MLD)	Plant Capacity %	Average Daily Flow (MLD)	Plant Capacity %
1	86.2	25%	89.8	26%	89.4	26%	88.4	25%	90.6	26%	112.7	32%
2	88.9	25%	89.1	26%	89.0	25%	89.5	26%	94.0	27%	110.7	32%
3	88.0	25%	88.1	25%	88.3	25%	92.0	26%	89.2	26%	116.4	33%
4	89.3	26%	92.6	27%	84.8	24%	90.3	26%	94.0	27%	120.6	35%
5	89.8	26%	89.9	26%	85.1	24%	90.3	26%	102.5	29%	106.5	31%
6	89.2	26%	89.8	26%	89.6	26%	92.0	26%	93.0	27%	108.3	31%
7	88.1	25%	88.7	25%	89.9	26%	89.4	26%	87.3	25%	105.5	30%
8	89.4	26%	89.3	26%	89.2	26%	89.2	26%	89.0	26%	111.7	32%
9	89.4	26%	89.1	26%	87.4	25%	88.6	25%	85.2	24%	111.9	32%
10	89.9	26%	95.9	27%	85.5	24%	88.8	25%	87.1	25%	103.0	29%
11	90.6	26%	88.2	25%	89.5	26%	88.6	25%	83.6	24%	115.3	33%
12	89.6	26%	89.1	26%	90.7	26%	88.4	25%	87.0	25%	123.1	35%
13	89.4	26%	89.7	26%	91.1	26%	87.7	25%	91.4	26%	123.4	35%
14	93.2	27%	89.8	26%	90.2	26%	89.6	26%	90.3	26%	123.8	35%
15	90.2	26%	90.2	26%	89.9	26%	88.9	25%	90.6	26%	124.7	36%
16	89.9	26%	89.5	26%	87.5	25%	89.3	26%	98.9	28%	123.6	35%
17	90.0	26%	88.1	25%	87.7	25%	89.7	26%	98.9	28%	127.4	36%
18	90.7	26%	87.5	25%	90.6	26%	88.6	25%	110.0	32%	126.7	36%
19	90.3	26%	93.1	27%	90.0	26%	88.4	25%	110.8	32%	131.8	38%
20	96.9	28%	89.6	26%	89.1	26%	92.8	27%	115.1	33%	125.6	36%
21	94.9	27%	90.3	26%	89.8	26%	91.8	26%	119.9	34%	123.9	36%
22	88.8	25%	90.8	26%	89.7	26%	89.2	26%	115.9	33%	122.2	35%
23	90.7	26%	89.7	26%	90.1	26%	89.8	26%	122.4	35%	117.6	34%
24	89.2	26%	94.4	27%	95.7	27%	88.4	25%	120.2	34%	126.0	36%
25	89.6	26%	87.8	25%	89.5	26%	90.1	26%	113.0	32%	109.9	31%
26	88.3	25%	89.5	26%	90.7	26%	89.6	26%	114.4	33%	116.1	33%
27	95.8	27%	89.9	26%	91.7	26%	94.4	27%	96.8	28%	122.7	35%
28	89.4	26%	89.4	26%	89.9	26%	87.8	25%	93.0	27%	111.6	32%
29	90.1	26%	91.0	26%	88.1	25%	90.9	26%	91.5	26%	105.3	30%
30	88.6	25%			88.5	25%	91.0	26%	108.4	31%	95.9	27%
31	90.9	26%			86.9	25%			116.5	33%		
MAX	96.9	28%	95.9	27%	95.7	27%	94.4	27%	122.4	35%	131.8	38%

Note: White highlighted cells indicate peak consumption for the year.

Table 7 - 2024 Volume as Percentage of Approved Plant Capacity

Date	July		August		September		October		November		December	
	Average Daily Flow (MLD)*	Plant Capacity %	Average Daily Flow (MLD)*	Plant Capacity %	Average Daily Flow (MLD)*	Plant Capacity %	Average Daily Flow (MLD)*	Plant Capacity %	Average Daily Flow (MLD)*	Plant Capacity %	Average Daily Flow (MLD)*	Plant Capacity %
1	113.6	33%	123.3	35%	102.8	29%	90.3	26%	90.8	26%	95.4	27%
2	117.0	34%	119.4	34%	116.2	33%	92.0	26%	90.4	26%	93.7	27%
3	122.7	35%	117.5	34%	104.0	30%	93.0	27%	93.7	27%	83.4	24%
4	122.6	35%	117.7	34%	116.5	33%	94.5	27%	89.8	26%	90.1	26%
5	123.3	35%	116.4	33%	112.2	32%	98.6	28%	88.6	25%	90.2	26%
6	119.9	34%	90.3	26%	94.5	27%	96.2	28%	88.5	25%	86.6	25%
7	121.6	35%	108.0	31%	104.4	30%	103.8	30%	86.9	25%	92.3	26%
8	128.0	37%	110.0	32%	114.3	33%	90.3	26%	86.9	25%	104.7	30%
9	122.9	35%	121.4	35%	120.4	35%	91.9	26%	88.3	25%	91.3	26%
10	96.5	28%	109.3	31%	120.0	34%	92.4	26%	88.2	25%	85.7	25%
11	105.7	30%	117.3	34%	115.8	33%	94.6	27%	88.9	25%	88.3	25%
12	112.1	32%	123.3	35%	122.5	35%	89.4	26%	87.5	25%	86.7	25%
13	117.6	34%	120.4	34%	124.4	36%	86.2	25%	90.1	26%	85.2	24%
14	118.1	34%	122.8	35%	114.4	33%	78.0	22%	86.7	25%	96.9	28%
15	123.2	35%	122.6	35%	118.4	34%	87.0	25%	89.5	26%	96.5	28%
16	107.9	31%	90.1	26%	123.9	36%	85.6	25%	88.4	25%	94.2	27%
17	107.1	31%	105.6	30%	118.5	34%	85.5	25%	91.7	26%	90.6	26%
18	96.8	28%	103.2	30%	122.3	35%	83.9	24%	91.3	26%	89.3	26%
19	117.5	34%	97.5	28%	117.4	34%	87.0	25%	92.5	26%	87.5	25%
20	114.1	33%	106.7	31%	117.9	34%	88.0	25%	90.3	26%	85.7	25%
21	117.3	34%	115.3	33%	112.1	32%	89.8	26%	90.6	26%	85.6	25%
22	125.9	36%	119.6	34%	112.4	32%	86.2	25%	89.4	26%	83.4	24%
23	119.8	34%	121.3	35%	104.8	30%	89.3	26%	91.3	26%	85.8	25%
24	111.2	32%	119.5	34%	95.8	27%	89.6	26%	95.3	27%	82.7	24%
25	122.5	35%	118.2	34%	94.7	27%	87.6	25%	91.1	26%	80.6	23%
26	123.9	36%	123.5	35%	93.7	27%	89.1	26%	92.0	26%	78.7	23%
27	117.7	34%	116.0	33%	93.8	27%	95.0	27%	92.7	27%	84.6	24%
28	119.0	34%	104.9	30%	91.8	26%	91.9	26%	90.5	26%	84.8	24%
29	127.2	36%	105.0	30%	93.6	27%	88.0	25%	90.6	26%	88.9	25%
30	114.9	33%	113.9	33%	93.5	27%	92.3	26%	88.1	25%	83.3	24%
31	119.7	34%	100.8	29%			89.4	26%			86.0	25%
MAX	128.0	37%	123.5	35%	124.4	36%	103.8	30%	95.3	27%	104.7	30%

*MLD = Megalitres per day

2024 Distribution Chlorine Residuals

Chart 7: Free Chlorine Concentration

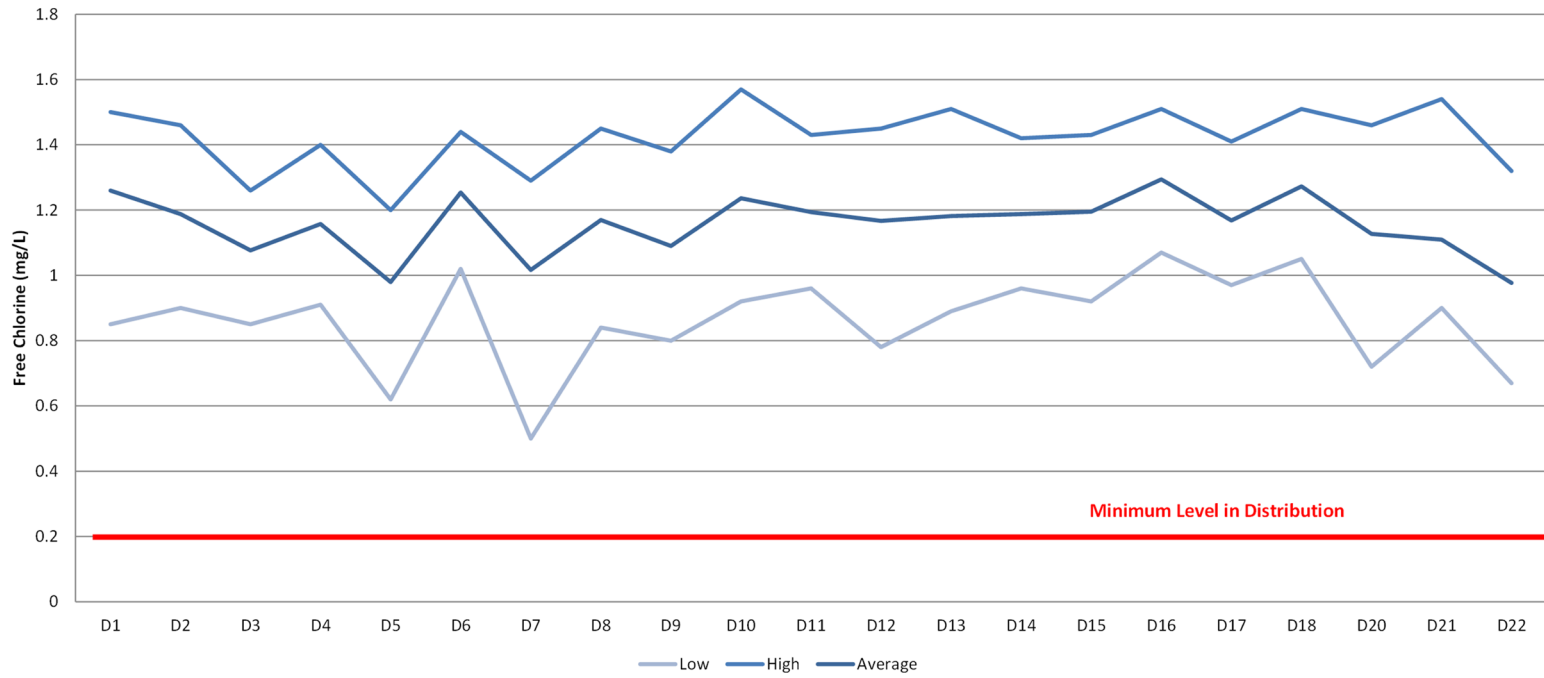
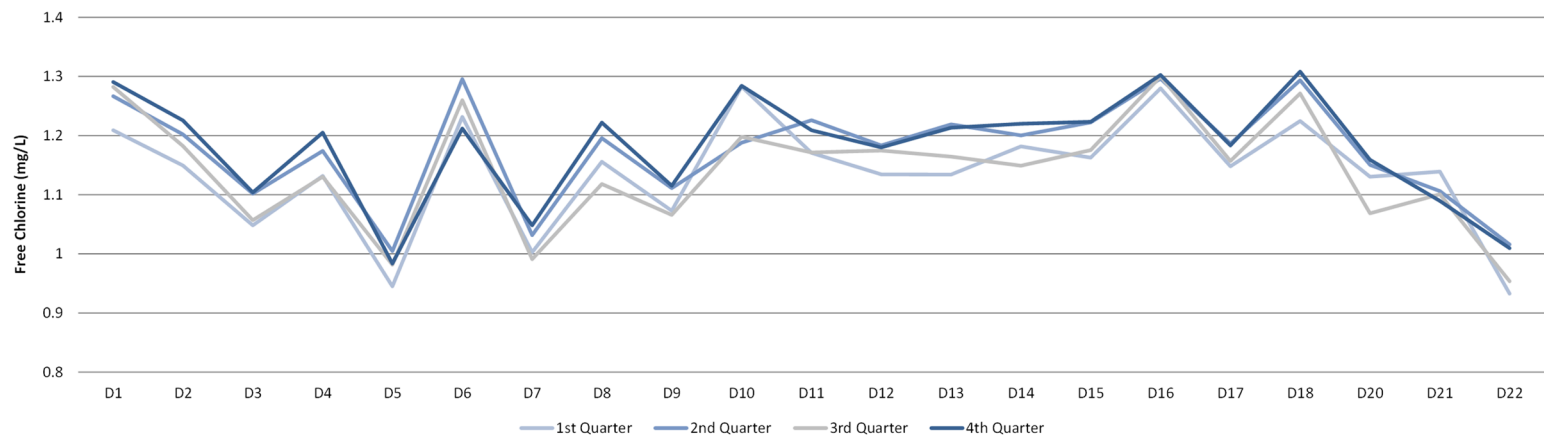


Chart 8: Average Free Chlorine Concentration per Quarter per Station



2024 Operational Parameters

Chart 9: Treated Water Hardness and Alkalinity

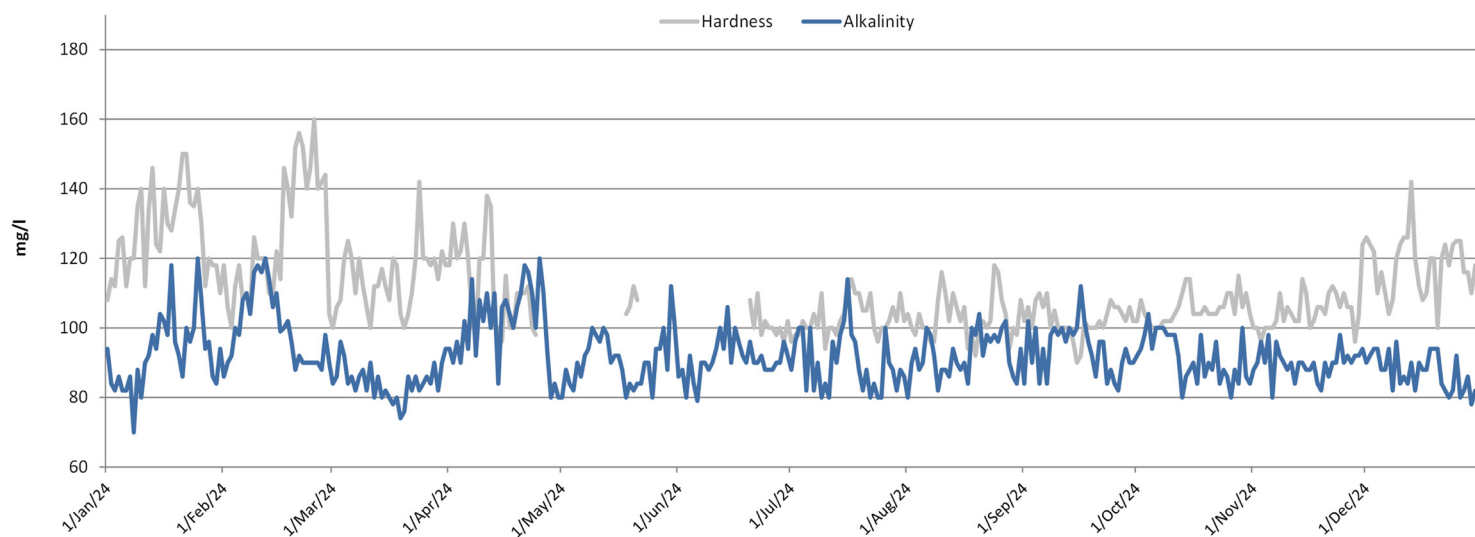


Chart 10: Treated Water Temperature and pH

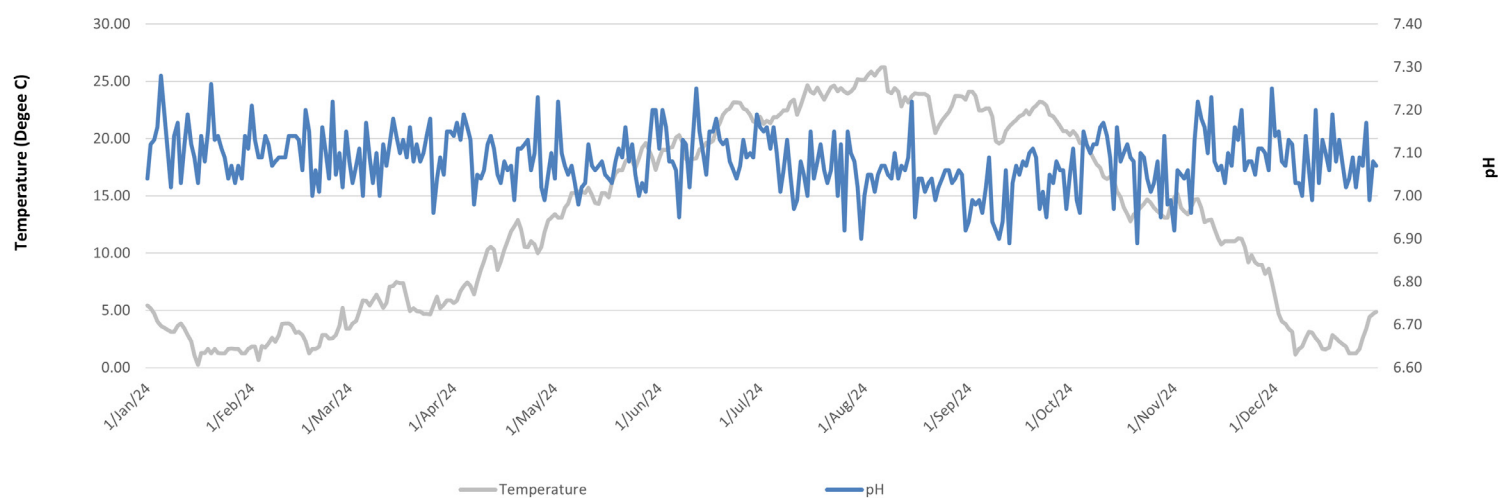
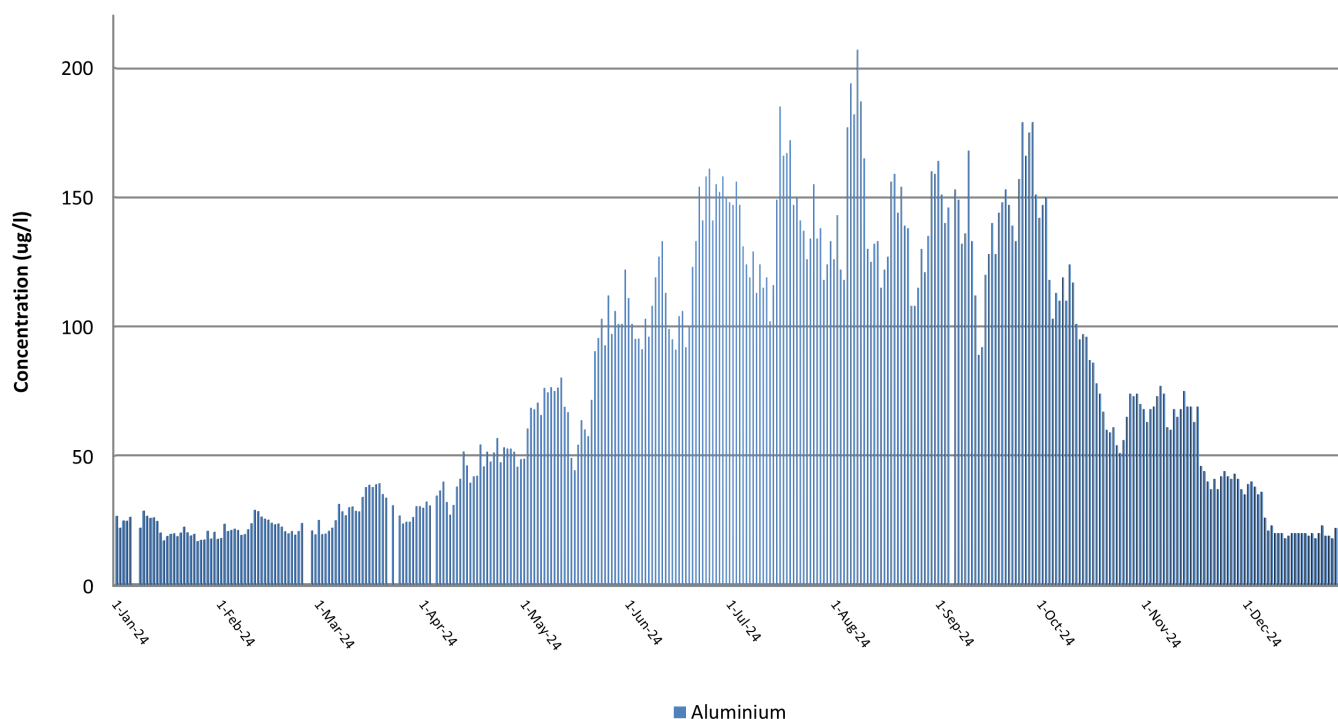


Chart 11: Treated Water Aluminum

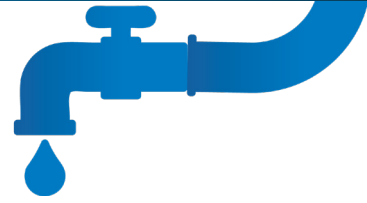


O. Reg. 170/03 - Schedule 23 - Inorganic Parameters List

Item	Parameter
1	Antimony
2	Arsenic
3	Barium
4	Boron
5	Cadmium
6	Chromium
7	Mercury
8	Selenium
9	Uranium

O. Reg. 170/03 - Schedule 24 - Organic Parameters List

Item	Parameter
1	Alachlor
2	Atrazine + N-dealkylated metabolites
3	Azinphos-methyl
4	Benzene
5	Benzo(a)pyrene
6	Bromoxynil
7	Carbaryl
8	Carbofuran
9	Carbon Tetrachloride
10	Chlorpyrifos
11	Diazinon
12	Dicamba
13	1,2-Dichlorobenzene
14	1,4-Dichlorobenzene
15	1,2-dichloroethane
16	1,1-Dichloroethylene (vinylidene chloride)
17	Dichloromethane
18	2,4-Dichlorophenol
19	2,4-Dichlorophenoxy acetic acid (2,4-D)
20	Diclofop-methyl
21	Dimethoate
22	Diquat
Item	Parameter
23	Diuron
24	Glyphosate
25	Malathion
26	2-Methyl-4-chlorophenoxyacetic acid
27	Metolachlor
28	Metribuzin
29	Monochlorobenzene
30	Paraquat
31	Pentachlorophenol
32	Phorate
33	Picloram
34	Polychlorinated Biphenyls (PCB)
35	Prometryne
36	Simazine
37	Terbufos
38	Tetrachloroethylene (perchloroethylene)
39	2,3,4,6-Tetrachlorophenol
40	Triallate
41	Trichloroethylene
42	2,4,6-Trichlorophenol
43	Trifluralin
44	Vinyl Chloride



Appendix B:

O. REG. 170/03 ANNUAL WATER QUALITY REPORT



Drinking Water Systems Regulation O. Reg. 170/03

OPTIONAL ANNUAL REPORT TEMPLATE

Drinking Water System Number:	220003421
Drinking Water System Name:	City of Windsor Drinking Water System
Drinking Water System Owner:	The Windsor Utilities Commission
Drinking Water System Category:	Large Municipal Residential
Period being reported:	Calendar Year 2024

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking Water System serve more than 10,000 people? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;"> <p>The Windsor Utilities Commission 4545 Rhodes Dr. Windsor ON N8W 5T1</p> </div>	<p><u>Complete for all other Categories</u></p> <p>Number of Designated Facilities served: <input type="text"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Number of Interested Authorities you report to: <input type="text"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes <input type="checkbox"/> No <input type="checkbox"/></p>
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List all Drinking Water Systems (if any), which receive all their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Town of Lasalle, ON	220004402
Town of Tecumseh, ON	260004969

Did you provide a copy of your annual report to all Drinking Water System owners that are connected to you and to whom you provide all drinking water? Yes ☒ No ☐

Indicate how you notified system users that your annual report is available and is free of charge.

- ☒ Public access/notice via the web
☒ Public access/notice via Government Office
☐ Public access/notice via a newspaper
☒ Public access/notice via Public Request
☐ Public access/notice via a Public Library
☐ Public access/notice via other method



Drinking Water Systems Regulation O. Reg. 170/03

Description of the Drinking Water System

The City of Windsor Drinking Water System is owned by The Windsor Utilities Commission (WUC). It is maintained and operated by ENWIN Utilities Ltd. (ENWIN) as Operating Authority.

The City of Windsor Drinking Water System consists of the A.H. Weeks Water Treatment Plant (WTP), which is a Class IV water treatment subsystem and a Class III distribution system under Ontario Regulation 128/04 of the Safe Drinking Water Act, 2002. In addition, WUC operates the A.J. Brian Pumping Station, George Avenue Pumping Station, J.F. Cooke Reservoir, Pumping and Re-chlorination Station and one (1) water tower.

To treat the raw water, which is sourced from the Detroit River, the WTP employs screening, pre-chlorination (on an as needed basis), pH adjustment (utilizing CO₂), disinfection (utilizing ozone), coagulation, flocculation, sedimentation, dual-media filtration with post chlorination, fluoridation (utilizing fluorosilicic acid) and corrosion control adjustment (utilizing phosphoric acid). The WTP pumps sedimentation sludge and backwash water to the sanitary sewer.

Treated water from the WTP is routed to an on-site reservoir and another reservoir located near the WTP. The treated water is then pumped into the distribution system from two (2) pumping stations, which are located near the WTP. Water from the pumping stations satisfies demand for the greater Windsor area including the Towns of Tecumseh and LaSalle. A reservoir, pumping and re-chlorination station located further from the WTP provides system pressure and flow to the southwest portion of the system, while a centrally located water tower provides pressure and flow control to the downtown core.

The drinking water system is monitored continuously at various locations, both at the WTP and pumping stations as well as throughout the distribution system via a Supervisory Control and Data Acquisition (SCADA) system.

List all water treatment chemicals used over this reporting period

Chlorine gas, Sodium Hypochlorite, Carbon Dioxide (CO₂), Ozone (generated on-site using liquid oxygen), Calcium Thiosulfate (ozone quench agent), Polyaluminum Chloride (PaCl) (coagulant), Filter Aid Polymer, Phosphoric Acid (corrosion control agent) and Fluorosilicic Acid.

Were any significant expenses incurred to?

- ☒ [X] Install required equipment
- ☒ [X] Repair required equipment
- ☒ [X] Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred:



Drinking Water Systems Regulation O. Reg. 170/03

Capital Projects in the Distribution System,

WUC, with a capital expenditure of approximately \$38 million, in 2024 has:

- Installed 14.13 km of Watermain (<400 mm)
- Installed 2.52 km of Feedermain (>400 mm)
- Installed 1,037 New Water Services in the public Right the Way (ROW)
- Installed 304 New Valves in the public Right the Way (ROW)
- Installed 93 New Fire Hydrants in the public Right the Way (ROW)
- Removed 87 Old Fire Hydrants in the public Right the Way (ROW)
- Removed 449 Old Lead Water Services in the public Right the Way (ROW)

Capital Projects in the Treatment System encompasses:

West Settler Rehabilitation

This project consisted of the rehabilitation of the various components that are part of the west settler system including the lower sludge rack and flumes as well as re-coating of all coated surfaces in the settler. Stantec Consulting assisted with detailed design and contract administration for the rehabilitation work. Approximate cost for the project was \$950,000.

Chlorine Emergency Valve Closure System

This project was for the installation a new automatic isolation system for the gaseous chlorine storage cylinders used in the chlorine system for disinfection of drinking water. The system is composed of electric actuators connected to a series of controls panels. In the event of a chlorine leak, a gas detector located in the area signals all the electric actuators to close valves on the chlorine storage cylinders isolating the system. Dillon Consulting assisted with detailed design and equipment procurement assistance for the project. Approximate cost for the project was \$410,000.

Old Treatment Plant Demolition

This project was for the decommissioning and demolition of the Old Treatment Plant Facility located adjacent to the A.H. Weeks Water Treatment Plant (A.H. Weeks WTP). The facility will be demolished with the exception of the raw water intake and low lift pumping station located on the northwest side of the facility. Following demolition, the low lift pump station will be reconnected by a new pipeline to supply water to the A.H. Weeks WTP. The project is expected to take until Summer 2025 with an approximate cost of \$6.2 million.

Provide details on the notices submitted in accordance with subsection 18 (1) of the Safe Drinking Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre.

See Table 1 – Adverse Water Quality Incidents (AWQI's)



Drinking Water Systems Regulation O. Reg. 170/03

Table 1 – Adverse Water Quality Incidents (AWQI's)

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
2024-04-19	Total Coliform (TC) – Treated Water	TC = 1	CFU/100 mL	Flush and Re-sample at location, upstream and downstream for 2 consecutive days. Results of the re-sampling are free of bacterial content.	2024-04-19
2024-10-14	Coagulant	Improper disinfection of the water	N/A	Restore coagulant feed. Improperly disinfected water flushed to waste. Developed sampling and monitoring plan.	2024-10-14

Note: – CFU – Colony Forming Units

Please refer to the colour chart below when reviewing the data summarized herein:

Green	Indicates results are in compliance
Yellow	Indicates results are in compliance however above the half Maximum Acceptable Concentration (MAC) or IMAC level.
Red	Indicates results are not in compliance or not within the operational guideline

1.1 Microbiological testing

Microbiological testing done under the Schedule 10 of Regulation 170/03, during the period covered by this Annual Report.

	Number of Samples	Range of E.Coli Results (min#)-(max#) CFU/100 mL	Range of Total Coliform Results (min#)-(max#) CFU/100 mL	Number of HPC Samples	Range of HPC Results (min#)-(max#) CFU/1 mL Spread Plate
Raw	255	0 – 1200 ⁽¹⁾	14 - 12200 ⁽¹⁾	255	20 - 2500 ⁽¹⁾
Treated	1579	0 – 0 ⁽²⁾	0 - 1 ⁽²⁾	1281	<10 – 310 ⁽³⁾
Distribution	1950	0 - 0 ⁽²⁾	0 - 0 ⁽²⁾	1021	<10 - >2000 ⁽³⁾

(1) No standard available – Results indicate the overall Raw Water Quality

(2) Not Detectable – Standard expressed as maximum

(3) < 500 – Internal Target as Best Management Practice

Note – CFU – Colony Forming Units, HPC – Heterotrophic Plate Counts

1.2 Operational Testing

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

	Number of Samples	Range of Results (min#)-(max#)	Average Results	Unit of Measure
Turbidity	365	0.03 - 0.09	0.04	NTU
Chlorine	365	1.47 - 1.65	1.53	mg/L

Parameter	MAC OR IMAC	Range of Results (min#)-(max#)	Average Results	Unit of Measure	In Compliance
Fluoride - Treated	1.5	0.44 - 0.87	0.57	mg/L	Yes
Fluoride - Distribution	1.5	0.44 - 0.85	0.57	mg/L	Yes

1.3 Additional Testing Required

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument, during the period covered by this Annual Report.

Parameter	Date Sampled	Running Annual Average	Unit of Measure	In compliance
Bromate - Treated	1-Jan-24 to 31-Dec-24	0.006	mg/L	Yes
Bromate - AJ Brian Pumping Station	1-Jan-24 to 31-Dec-24	0.006	mg/L	Yes
Bromate - George Ave Pumping Station	1-Jan-24 to 31-Dec-24	0.006	mg/L	Yes
Bromate - JF Cook Pumping Station	1-Jan-24 to 31-Dec-24	0.007	mg/L	Yes

1.4 Inorganic Parameters

Summary of Inorganic parameters tested during the period covered by this Annual Report. or the most recent sample results.

Parameter	MAC OR IMAC	Sample Date	Result Value	Unit of Measure	In Compliance
Antimony	0.006	October 9, 2024	<0.0006	mg/L	Yes
Arsenic	0.01	October 9, 2024	0.0003	mg/L	Yes
Barium	1	October 9, 2024	0.0151	mg/L	Yes
Boron	5	October 9, 2024	0.014	mg/L	Yes
Cadmium	0.005	October 9, 2024	0.000003	mg/L	Yes
Chromium	0.05	October 9, 2024	<0.00008	mg/L	Yes
Lead ⁽⁴⁾	0.01	October 9, 2024	0.00001	mg/L	Yes
Mercury	0.001	October 9, 2024	<0.00001	mg/L	Yes
Selenium	0.05	October 9, 2024	0.00008	mg/L	Yes
Sodium	20	January 10, 2024	5.42	mg/L	Yes
Uranium	0.02	October 9, 2024	0.000047	mg/L	Yes
Fluoride	1.5	October 9, 2024	0.52	mg/L	Yes
Nitrite ⁽⁴⁾	1	October 9, 2024	<0.003	mg/L	Yes
Nitrate ⁽⁴⁾	10	October 9, 2024	0.202	mg/L	Yes

(4) Lead, Nitrite, Nitrate results are from Maximum resolution in the Distribution system

1.5 Organic Parameters

Summary of Organic parameters sampled during the period covered by this Annual Report or the most recent sample results.

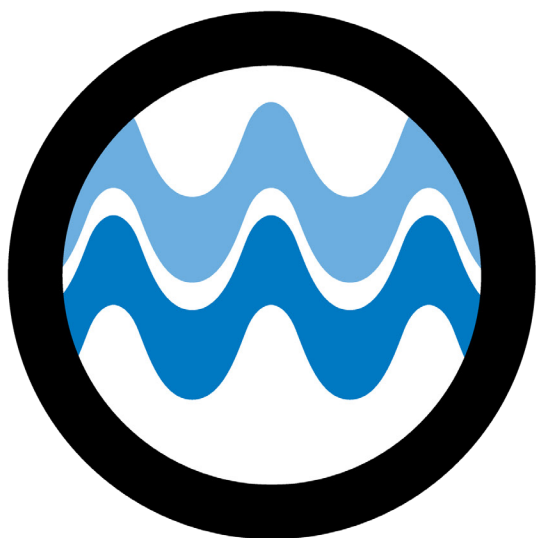
Parameter	MAC OR IMAC	Sample Date	Result Value	Unit of Measure	In Compliance
Alachlor	0.005	October 9, 2024	<0.00002	mg/L	Yes
Atrazine + N-dealkylated metabolites	0.005	October 9, 2024	0.00001	mg/L	Yes
Azinphos-methyl	0.02	October 9, 2024	<0.00005	mg/L	Yes
Benzene	0.001	October 9, 2024	<0.00032	mg/L	Yes
Benzo(a)pyrene	0.00001	October 9, 2024	<0.000004	mg/L	Yes
Bromoxynil	0.005	October 9, 2024	<0.00033	mg/L	Yes
Carbaryl	0.09	October 9, 2024	<0.00005	mg/L	Yes
Carbofuran	0.09	October 9, 2024	<0.00001	mg/L	Yes
Carbon Tetrachloride	0.002	October 9, 2024	<0.00017	mg/L	Yes
Chlorpyrifos	0.09	October 9, 2024	<0.00002	mg/L	Yes
Diazinon	0.02	October 9, 2024	<0.00002	mg/L	Yes
Dicamba	0.12	October 9, 2024	<0.00020	mg/L	Yes
1,2-Dichlorobenzene	0.2	October 9, 2024	<0.00041	mg/L	Yes
1,4-Dichlorobenzene	0.005	October 9, 2024	<0.00036	mg/L	Yes
1,2-Dichloroethane	0.005	October 9, 2024	<0.00035	mg/L	Yes
1,1-Dichloroethylene (vinylidene chloride)	0.014	October 9, 2024	<0.00033	mg/L	Yes
Dichloromethane	0.05	October 9, 2024	<0.00035	mg/L	Yes
2,4-Dichlorophenol	0.9	October 9, 2024	<0.00015	mg/L	Yes
2,4-Dichlorophenoxy acetic acid (2,4-D)	0.1	October 9, 2024	<0.00019	mg/L	Yes
Diclofop-methyl	0.009	October 9, 2024	<0.00040	mg/L	Yes
Dimethoate	0.02	October 9, 2024	<0.00006	mg/L	Yes
Diquat	0.07	October 9, 2024	<0.001	mg/L	Yes
Diuron	0.15	October 9, 2024	<0.000003	mg/L	Yes
Glyphosate	0.28	October 9, 2024	<0.001	mg/L	Yes
Haloacetic Acids (HAA5)⁽⁵⁾ (Max Resolution) (Note: show latest running annual average)					
Q4 = <0.0053 mg/L	0.080	Running Annual Average =	<0.0053	mg/L	Yes
Q3 = <0.0053 mg/L					
Q2 = <0.0050 mg/L					
Q1 = <0.0050 mg/L					

	MAC OR IMAC	Sample Date	Result Value	Unit of Measure	In Compliance
Malathion	0.19	October 9, 2024	<0.00002	mg/L	Yes
MCPA	0.1	October 9, 2024	<0.00000012	mg/L	Yes
Metolachlor	0.05	October 9, 2024	<0.00001	mg/L	Yes
Metribuzin	0.08	October 9, 2024	<0.00002	mg/L	Yes
Monochlorobenzene	0.08	October 9, 2024	<0.0003	mg/L	Yes
Paraquat	0.01	October 9, 2024	<0.001	mg/L	Yes
Pentachlorophenol	0.06	October 9, 2024	<0.00015	mg/L	Yes
Phorate	0.002	October 9, 2024	<0.00001	mg/L	Yes
Picloram	0.19	October 9, 2024	<0.001	mg/L	Yes
Polychlorinated Biphenyls (PCB)	0.003	October 9, 2024	<0.00004	mg/L	Yes
Prometryne	0.001	October 9, 2024	<0.00003	mg/L	Yes
Simazine	0.01	October 9, 2024	<0.00001	mg/L	Yes
THM's (Max. Resolution)⁽⁵⁾ (Note: show latest running annual average)					
Q4 2024 = 0.00925 mg/L	0.100	Running Annual Average =	0.0093	mg/L	0.00037
Q3 2024 = 0.010475 mg/L					
Q2 2024 = 0.010325 mg/L					
Q1 2024 = 0.0102375 mg/L					
Terbofos	0.001	October 9, 2024	<0.00001	mg/L	Yes
Tetrachloroethylene	0.01	October 9, 2024	<0.00035	mg/l	Yes
2,3,4,6-Tetrachlorophenol	0.1	October 9, 2024	<0.00020	mg/L	Yes
Triallate	0.23	October 9, 2024	<0.00001	mg/L	Yes
Trichloroethylene	0.005	October 9, 2024	<0.00044	mg/L	Yes
2,4,6-Trichlorophenol	0.005	October 9, 2024	<0.00025	mg/L	Yes
Trifluralin	0.045	October 9, 2024	<0.00002	mg/L	Yes
Vinyl Chloride	0.001	October 9, 2024	<0.00017	mg/L	Yes

(5) – THM's and HAA5 results are from Max resolution in the Distribution system

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

No Inorganic or Organic parameter(s) exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.



WINDSOR UTILITIES COMMISSION