

## Report to Civic Works Committee

**To:** Chair and Members  
Civic Works Committee

**From:** Kelly Scherr, P. Eng., MBA, FEC  
Deputy City Manager, Environment and Infrastructure

**Subject:** 2023 Drinking Water Annual Report and Summary Report for  
the City of London Drinking Water System

**Date:** February 21, 2024

## Recommendation

That, on the recommendation of the Deputy City Manager, Environment and Infrastructure, the 2023 Drinking Water Annual Report and Summary Report for the City of London Drinking Water System **BE RECEIVED** for information.

## Executive Summary

Ontario Regulation 170/03 (Drinking Water Systems) requires the owner of a municipal drinking water system ensure that an Annual Report and a Summary Report be prepared, covering the period of January 1 through to December 31 of the previous year. This report, along with its appendices, fulfills these requirements.

## Linkage to the Corporate Strategic Plan

Municipal Council's Strategic Plan identifies "Well-Run City" as a strategic area of focus. This report supports the 2023-2027 Strategic Plan by demonstrating leadership and accountability in the management and provision of quality programs and services.

## Analysis

### 1.0 Background Information

#### 1.1 Previous Reports Related to this Matter

["2022 Drinking Water Annual Report and Summary Report for the City of London Drinking Water System"](#), Civic Works Committee, February 22, 2023.

### 2.0 Discussion and Considerations

#### 2.1 Regulatory Requirements

Ontario Regulation 170/03 (Drinking Water Systems) requires the owner of a municipal drinking water system ensure that an Annual Report and a Summary Report be prepared, covering the period of January 1 through to December 31 of the previous year.

The Annual Report is to contain:

- A brief description of the drinking water system, including a list of water treatment chemicals used by the system;
- A summary of the results of required tests;
- A summary of any adverse test results reported and corrective actions taken; and,
- A description of any major expenses incurred to install, repair or replace required equipment.

O. Reg. 170/03 further stipulates that:

- a) The Owner shall ensure that a copy of the Annual Report is given without charge to every person who requests a copy;
- b) Effective steps are taken to advise users of water from the system that copies of the Annual Report are available, without charge, and of how a copy may be obtained;
- c) The Owner of a large municipal residential system serving more than 10,000 people is required to post a copy of the Annual Report to the municipality's website; and,
- d) A Summary Report is to be prepared and presented to the members of the Municipal Council by no later than March 31 of the following year.

The Summary Report is to contain:

- A list of any regulatory requirements applicable to the system that were not met at any time during the period covered by the report, the duration of the failure, and the measures that were taken to correct the failure; and,
- A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows and compared to the rated capacity of the system.

Due to the large number of pages, the 2023 Drinking Water Summary Report for the City of London Drinking Water System has been provided to members of Council in electronic format, with the 2023 Annual Report attached as an appendix. The Summary Report (without appendices) is attached as Appendix 'A' to this report.

The Elgin-Middlesex Pumping Station (EMPS) is jointly owned by the City of St. Thomas, the Town of Aylmer, and the City of London, and is operated by the Ontario Clean Water Agency (OCWA). The Annual Report for the EMPS (London portion) was not yet available at the time of writing this report. It will be provided to members of Council under separate memo prior to the reporting deadline of February 28, 2022.

## Conclusion

Receipt of Appendix 'A' of this report by members of Council fulfils the reporting requirements of O. Reg. 170/03, Schedule 22. The 2023 Drinking Water Summary Report is available to members of the public by request and will be posted on the City's website.

**Prepared by:** John Simon, P.Eng.  
Division Manager, Water Operations

**Submitted by:** Ashley Rammeloo, MMSc., P.Eng.,  
Director Water, Wastewater, and Stormwater

**Recommended by:** Kelly Scherr, P. Eng., MBA, FEC  
Deputy City Manager, Environment and Infrastructure

Appendix 'A' – City of London 2023 Drinking Water Summary Report  
Appendix 'B' – 2023 Annual Report EMPS London

c.c. Scott Koshowski – Water Operations Engineer  
Michael Schulthess – City Clerk  
Aaron Rozentals – Division Manager – Water Engineering  
Andrew Henry – Director – Regional Water Supply  
Dan Huggins – Water Quality Manager  
Dr. Alex Summers – Medical Officer of Health Middlesex-London Health Unit

## Appendix A

# CITY OF LONDON

## 2023 DRINKING WATER SUMMARY REPORT

**System Name: City Of London Drinking Water System**

**System Rating:**

Water Distribution Subsystem Class IV

Water Treatment Subsystem Class II

Average Day Demand: 127.790 MLD

Peak Day Demand: 177.070 MLD (June 2, 2023)

Population Served: 431,000 (approx.)

Source Water: Surface Water (Lake Huron, Lake Erie)

Drinking Water System Number: 260004917

Municipal Drinking Water Licence: 006-101



**London**  
C A N A D A

**CONTACT INFO:**

Owner:

Corporation of the City of London

300 Dufferin Avenue, London, Ontario N6A 4L9

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## **Reporting Requirements**

Ontario Regulation 170/03 requires that municipalities prepare a Summary Report for their drinking water system for the preceding calendar year and submit it to the members of the Municipal Council by March 31 of each year. This report, presented to Municipal Councils Civic Works Committee on February 21, 2024, fulfills that requirement.

O. Reg 170/03 also requires the preparation of an Annual Report on the operation of the drinking-water system to be made available to members of the public.

Before February 28, 2024, a copy of the 2023 Annual Report and Summary Report for the City of London's water works will be provided to the local office of the Ministry of the Environment, Conservation and Parks (MECP) as a courtesy for information purposes.

The Elgin-Middlesex Pumping Station (EMPS) is jointly owned by the St. Thomas Area Secondary Water Supply System, the Aylmer Area Secondary Water Supply System, and the City of London. EMPS is operated by the Ontario Clean Water Agency (OCWA). The Annual Report for the EMPS (London portion) has been provided by OCWA and is attached as Appendix C of this report.

## **Water Budget**

The 2020-2023 operating and capital budgets represent financial sustainability for Londoners, whereby annual rate increases are approximately the average of the Consumer Price Index (CPI) and the Non-Residential Building Construction Price Index (NRBCPI). The 2020-2023 Water Operating and Capital Budgets support four core business objectives:

- Compliance
- Financial Management
- Customer Service
- Best Management Practices

The total Water budget for 2023 was \$93.7 million, which includes long term infrastructure improvements. The Water Budget helps maintain London's advantage of a safe, clean, and secure water supply. The Water Service Area remains proactive in initiatives to ensure that this service continues to meet the demands and expectations of customers. Existing infrastructure requires ongoing renewal (replacement and rehabilitation) activities to manage the infrastructure gap, ensuring that future generations are not faced with a water system that is failing, unreliable, and expensive to maintain.

## **Operational Performance**

The City of London Water Service Area continues to experience ongoing challenges, more recently with the current economic environment. The most significant impact during the past few years has been the availability and cost of essential stock, inventory, supplies, and material. Delivery time for many standard stock items has increased from weeks to now months, and in some cases nearly a year. In addition, the costs for these items have seen increases of 20% to 40%. The Water Service Area has taken steps to address these issues and continues to closely monitor availability of supplies. The Water Service Area is an essential service that must maintain service continuity. Despite these circumstances, the Water Service Area once again continued operationally with "business-as-usual", having only minor service level impacts seen on non-critical work processes for 2023.

### **Staffing/Business Continuity**

Throughout 2023, continuity of service was never in jeopardy. Water Operations staff remained fully dedicated to the delivery of safe, reliable drinking water. During this time, staff continued with their work arrangements and environments, implemented new and updated existing procedures (ie. Corporate Health and Safety Standard Operating Guidelines) and worked diligently to ensure uninterrupted supply of this essential service.

### **Budget**

Due to supply chain disruptions and price increases, there have been budget implications to operational material and supplies. The Water Service Area has continued to work within allocated budgets.

## Sampling & Water Quality Monitoring

In 2023, the MECP required large municipal drinking water systems to test for 70 different organic, inorganic, and chemical parameters. The City of London's water sampling regime includes monthly testing for microbiological indicators and chlorine residuals from 57 standard locations across the City, as well as nearly 3,000 random grab samples. Analysis is also performed for up to 117 parameters, including organics, inorganics, chemicals, pesticides, and metals at 13 standard locations around the City. This level of testing far exceeds the MECP's minimum sampling requirements.

London has 10 locations throughout the City where continuous in-line sampling of chlorine residual and pH is monitored. Staff also perform approximately 4,000 additional chlorine tests each year related to construction and maintenance activities. These efforts help ensure that the water within the distribution system is always of high quality, completely safe to consume, and consistent for manufacturing processes.

### 2023 Water Quality Sampling Summary

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2023	MAC Exceedance (Y/N)
<b>REGULATED INORGANICS</b>					
Antimony	6	ug/L	0.6	<b>0.9 - 0.9</b>	No
Arsenic	10	ug/L	0.2	<b>0.2 - 0.3</b>	No
Barium	1000	ug/L	0.02	<b>13.9 - 23.6</b>	No
Boron	5000	ug/L	2	<b>13 - 17</b>	No
Cadmium	5	ug/L	0.003	<b>0.004 - 0.008</b>	No
Chromium	50	ug/L	0.08	<b>0.08 &lt;MDL</b>	No
Fluoride	1.5	mg/L	0.06	<b>0.35 - 0.78</b>	No
Free Chlorine	--	mg/L	0.000	<b>0.25 - 1.7</b>	No
Lead	10	ug/L	0.01	<b>0.01 - 0.09</b>	No
Mercury	1	ug/L	0.01	<b>0.01 &lt;MDL</b>	No
Selenium	50	ug/L	0.04	<b>0.16 - 0.21</b>	No
Sodium	20	mg/L	0.01	<b>11 - 16.2</b>	No
Uranium	20	ug/L	0.002	<b>0.034 - 0.046</b>	No
<b>TRIHALOMETHANES &amp; HALOACETIC ACIDS</b>					
Total Haloacetic Acids	80	ug/L	5.3	<b>5.3 - 19.9</b>	No
Dibromoacetic Acid	--	ug/L	2	<b>2 &lt;MDL</b>	No
Dichloroacetic Acid	--	ug/L	2.6	<b>3.5 - 13.6</b>	No
Monobromoacetic acid	--	ug/L	2.9	<b>2.9 &lt;MDL</b>	No
Monochloroacetic Acid	--	ug/L	4.7	<b>4.7 &lt;MDL</b>	No
Trichloroacetic Acid	--	ug/L	5.3	<b>5.3 - 10.5</b>	No
Trihalomethanes (total)	100	ug/L	0.37	<b>13 - 56</b>	No
Bromodichloromethane	--	ug/L	0.26	<b>4.1 - 12</b>	No
Bromoform	--	ug/L	0.34	<b>0.34 - 0.37</b>	No
Chloroform	--	ug/L	0.29	<b>7.3 - 39</b>	No
Dibromochloromethane	--	ug/L	0.37	<b>2 - 4.8</b>	No
Total Haloacetic Acids	80	ug/L	5.3	<b>5.3 - 19.9</b>	No
Dibromoacetic Acid	--	ug/L	2	<b>2 &lt;MDL</b>	No
Dichloroacetic Acid	--	ug/L	2.6	<b>3.5 - 13.6</b>	No
Monobromoacetic acid	--	ug/L	2.9	<b>2.9 &lt;MDL</b>	No
Monochloroacetic Acid	--	ug/L	4.7	<b>4.7 &lt;MDL</b>	No
Trichloroacetic Acid	--	ug/L	5.3	<b>5.3 - 10.5</b>	No
Trihalomethanes (total)	100	ug/L	0.37	<b>13 - 56</b>	No
Bromodichloromethane	--	ug/L	0.26	<b>4.1 - 12</b>	No
Bromoform	--	ug/L	0.34	<b>0.34 - 0.37</b>	No
Chloroform	--	ug/L	0.29	<b>7.3 - 39</b>	No
Dibromochloromethane	--	ug/L	0.37	<b>2 - 4.8</b>	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2023	MAC Exceedance (Y/N)
<b>REGULATED ORGANICS</b>					
Atrazine	--	ug/L	0.01	<b>0.01 - 0.04</b>	No
Atrazine + N-dealkylated metabolites	5	ug/L	0.01	<b>0.02 - 0.06</b>	No
De-ethylated Atrazine	--	ug/L	0.01	<b>0.01 &lt;MDL</b>	No
Azinphos-methyl	20	ug/L	0.05	<b>0.05 &lt;MDL</b>	No
Benzene	1	ug/L	0.32	<b>0.32 &lt;MDL</b>	No
Benzo(a)pyrene	0.01	ug/L	0.004	<b>0.004 &lt;MDL</b>	No
Bromoxynil	5	ug/L	0.33	<b>0.33 &lt;MDL</b>	No
Carbaryl	90	ug/L	0.05	<b>0.05 &lt;MDL</b>	No
Carbofuran	90	ug/L	0.01	<b>0.01 &lt;MDL</b>	No
Carbon tetrachloride	2	ug/L	0.17	<b>0.17 &lt;MDL</b>	No
Chlorpyrifos	90	ug/L	0.02	<b>0.02 &lt;MDL</b>	No
Diazinon	20	ug/L	0.02	<b>0.02 &lt;MDL</b>	No
Dicamba	120	ug/L	0.2	<b>0.2 &lt;MDL</b>	No
1,2-Dichlorobenzene	200	ug/L	0.41	<b>0.41 &lt;MDL</b>	No
1,4-Dichlorobenzene	5	ug/L	0.36	<b>0.36 &lt;MDL</b>	No
1,2-Dichloroethane	5	ug/L	0.35	<b>0.35 &lt;MDL</b>	No
Dichloromethane	50	ug/L	0.35	<b>0.35 &lt;MDL</b>	No
2,4-dichlorophenol	900	ug/L	0.15	<b>0.15 &lt;MDL</b>	No
2,4-dichlorophenoxyacetic acid (2,4-D)	100	ug/L	0.19	<b>0.19 &lt;MDL</b>	No
Diclofop-methyl	9	ug/L	0.4	<b>0.4 &lt;MDL</b>	No
Dimethoate	20	ug/L	0.06	<b>0.06 &lt;MDL</b>	No
Diquat	70	ug/L	1	<b>1 &lt;MDL</b>	No
Diuron	150	ug/L	0.03	<b>0.03 &lt;MDL</b>	No
Glyphosate	280	ug/L	1	<b>1 &lt;MDL</b>	No
Malathion	190	ug/L	0.02	<b>0.02 &lt;MDL</b>	No
MCPA	0.1	mg/L	0.00012	<b>0.00012 &lt;MDL</b>	No
Metolachlor	50	ug/L	0.01	<b>0.01-0.02</b>	No
Metribuzin	80	ug/L	0.02	<b>0.02 &lt;MDL</b>	No
Monochlorobenzene	80	ug/L	0.3	<b>0.3 &lt;MDL</b>	No
Paraquat	10	ug/L	1	<b>1 &lt;MDL</b>	No
Pentachlorophenol	60	ug/L	0.15	<b>0.15 &lt;MDL</b>	No
Phorate	2	ug/L	0.01	<b>0.01 &lt;MDL</b>	No
Picloram	190	ug/L	1	<b>1 &lt;MDL</b>	No
Polychlorinated Biphenyls (PCBs)	3	ug/L	0.04	<b>0.04 &lt;MDL</b>	No
Prometryne	1	ug/L	0.03	<b>0.03 &lt;MDL</b>	No
Simazine	10	ug/L	0.01	<b>0.01 &lt;MDL</b>	No
Terbufos	1	ug/L	0.01	<b>0.01 &lt;MDL</b>	No
2,3,4,6-tetrachlorophenol	100	ug/L	0.2	<b>0.2 &lt;MDL</b>	No
Triallate	230	ug/L	0.01	<b>0.01 &lt;MDL</b>	No
Trichloroethylene	5	ug/L	0.44	<b>0.44 &lt;MDL</b>	No
2,4,6-trichlorophenol	5	ug/L	0.25	<b>0.25 &lt;MDL</b>	No
Trifluralin	45	ug/L	0.02	<b>0.02 &lt;MDL</b>	No
Vinyl Chloride	1	ug/L	0.17	<b>0.17 &lt;MDL</b>	No
<b>NITRATES</b>					
Nitrate (as nitrogen)	10	mg/L	0.006	<b>0.021 - 1.2</b>	No
Nitrate + Nitrite (as nitrogen)	10	mg/L	0.006	<b>0.021 - 1.2</b>	No
Nitrite (as nitrogen)	1	mg/L	0.003	<b>0.003 &lt;MDL</b>	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2023	MAC Exceedance (Y/N)
<b>NON-REGULATED INORGANICS/ORGANICS</b>					
Alachlor	5	ug/L	0.02	<b>0.02 &lt;MDL</b>	No
Alkalinity	--	mg/L as CaCO <sub>3</sub>	2	<b>78 - 98</b>	No
Aluminum	--	ug/L	1	<b>19 - 28</b>	No
Ammonia+Ammonium (N)	--	mg/L	0.04	<b>0.04 &lt;MDL</b>	No
Calcium	--	mg/L	0.01	<b>27.9 -37</b>	No
Chloride	--	mg/L	0.04	<b>9.3 - 17</b>	No
Cobalt	--	ug/L	0.004	<b>0.007 - 0.015</b>	No
Colour	--	TCU	3	<b>3 &lt;MDL</b>	No
Conductivity	--	uS/cm	2	<b>248 - 315</b>	No
Copper	--	ug/L	0.2	<b>0.9 - 1.6</b>	No
Cyanide	200	ug/L	2	<b>2 &lt;MDL</b>	No
1,1-Dichloroethylene (vinylidene chloride)	14	ug/L	0.33	<b>0.33 &lt;MDL</b>	No
Dissolved Organic Carbon	--	mg/L	1	<b>1 &lt;MDL</b>	No
Ethylbenzene	140	ug/L	0.33	<b>0.33 &lt;MDL</b>	No
Field pH	--	no unit	0	<b>7.4 - 8.06</b>	No
Field Temperature	--	celcius	0	<b>10.6 - 14.8</b>	No
Hardness	--	mg/L as CaCO <sub>3</sub>	0.05	<b>102 - 129</b>	No
Iron	--	ug/L	7	<b>7 &lt;MDL</b>	No
Langelier's Index @ 20 C	--	@ 20 C	0	<b>-0.27 - -0.07</b>	No
Langelier's Index @ 4 C	--	@ 4 C	0	<b>-0.59 - -0.39</b>	No
Magnesium	--	mg/L	0.001	<b>7.8 - 8.89</b>	No
Manganese	--	ug/L	0.01	<b>0.04 - 0.17</b>	No
Nickel	--	ug/L	0.1	<b>0.3 - 0.7</b>	No
Nitrogen-Kjeldahl (N)	--	mg/L	0.05	<b>0.1 - 0.12</b>	No
Organic Nitrogen	--	mg/L	0.05	<b>0.11 - 0.12</b>	No
pH	--	No unit	0	<b>7.98 - 7.99</b>	No
Phosphorus	--	mg/L	0.003	<b>0.003 &lt;MDL</b>	No
Potassium	--	mg/L	0.009	<b>1.02 - 1.46</b>	No
Silicon; reactive silicate	--	mg/L	0.02	<b>0.66 - 1.63</b>	No
Silver	--	ug/L	0.05	<b>0.05 &lt;MDL</b>	No
Solids (Total Dissolved)	--	mg/L	30	<b>154 - 183</b>	No
Sulphate	--	mg/L	0.04	<b>26 - 30</b>	No
Sulphide	--	ug/L	6	<b>6 &lt;MDL</b>	No
Surr 1,2-Dichloroethane-d4	--	Surr Rec %	0	<b>101 - 104</b>	No
Surr 4-Bromofluorobenzene	--	Surr Rec %	0	<b>92 - 92</b>	No
Surr Decachlorobiphenyl	--	%	0	<b>99 - 105</b>	No
Tetrachloroethylene (perchloroethylene)	10	ug/L	0.35	<b>0.35 &lt;MDL</b>	No
Toluene	60	ug/L	0.36	<b>0.36 &lt;MDL</b>	No



Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2023	MAC Exceedance (Y/N)
Total Chlorine-Field	--	mg/L	0	<b>1.33 - 1.44</b>	No
2,4,5-TP (Silvex)	--	ug/L	0.18	<b>0.18 &lt;MDL</b>	No
Turbidity	--	NTU	0.1	<b>0.25 - 1.1</b>	No
Turbidity-Field	--	NTU	0	<b>0.03 - 0.11</b>	No
Xylene (Total)	--	ug/L	0.43	<b>0.43 &lt;MDL</b>	No
m/p-xylene	--	ug/L	0.43	<b>0.43 &lt;MDL</b>	No
o-xylene	--	ug/L	0.17	<b>0.17 &lt;MDL</b>	No
Zinc	--	ug/L	2	<b>2 &lt;MDL</b>	No
<b>MICROBIOLOGICAL</b>					
Escherichia Coli	0	cfu/10 0mL	0	<b>0 &lt;MDL</b>	No
Total Coliform	0	cfu/10 0mL	0	<b>0 - 4</b>	Yes
Heterotrophic Plate Count (HPC)	--	cfu/1 mL	0	<b>0 - 2000</b>	No
Total Coliform Background	--	cfu/10 0mL	0	<b>0 - 143</b>	No

In 2023, there were six (6) adverse microbiological results out of 2,955 samples taken. All involved the detection of Total Coliform bacteria (ranging from 1 to 4 cfu/100 mL). In each case, staff implemented the mandatory adverse response procedure, which included notifying the MECP and the Middlesex-London Health Unit, and immediately re-sampled at each location. The re-sample results revealed no adverse indicators.

In all instances, it is highly unlikely that there were 'actual' water quality issues at these sites. All adverse samples were identified as having free chlorine residuals which were well above the minimum acceptable level at the time of the sampling (ranging between 0.72 to 1.00 mg/L). E. coli and Coliform bacteria cannot survive in chlorinated water; therefore, it is suspected that post-sampling contamination occurred. The re-sampling results support this conclusion. The microbiological testing procedure is extremely sensitive: accidental sample contamination can occur through operator or laboratory error, despite the specific procedures and precautions being adhered to while processing samples.

### **System Statistics and Major Events**

During the period from January 1, 2023, through to December 31, 2023, a total of 6,665,929,000 litres of water were purchased, at a cost of more than \$27,900,000 from the Joint Water Boards and subsequently pumped into London via the Arva Pumping Station and the London components within the Elgin Middlesex Pumping Station. Overall, the City's average day demand was 127,790,400 litres. Peak day consumption increased over that of 2022, likely due to the hot and dry month of May. The June 2, 2023 peak day demand was recorded at 177,070,000 litres.

A summary of system pumpage can be found in the full version of the Summary Report. The data includes monthly average and maximum daily flows. These values are also compared to the rated flow rate capacities identified in London's Municipal Drinking Water License. There were no occurrences of flow rate exceedance during the specified time period.

Listed below are some 2023 statistics for the City of London Distribution System:

<b>Approximate Replacement Value of Drinking Water System</b>	<b>\$6,100,000,000</b>
<b>Number of Pumping Stations</b>	<b>9</b>
<b>Total Number of Water Services</b>	<b>&gt;124,000</b>
<b>Length of Watermain</b>	<b>1,645 km</b>
<b>Number of Watermain Breaks</b>	<b>62</b>
<b>Number of Water Service Leaks</b>	<b>313</b>

## **Municipalities Receiving London Water**

In the Municipality of Middlesex Centre, the villages of Arva and Ballymote continue to receive their drinking water under contract from the City of London. During 2023, Delaware discontinued receiving their drinking water from the City of London, opting to be supplied directly from the Lake Huron Primary Water Supply System. The Municipality of Middlesex Centre has been provided a copy of the Annual Report as per O. Reg 170/03.

Several residences within Central Elgin also continued receiving drinking water from the transmission watermain that supplies London from EMPS. For this reason, Central Elgin has also been provided a copy of the report.

**2023 Annual Report  
(London)**



**London**  
CANADA

**Drinking-Water Systems Regulation O. Reg. 170/03**

**Drinking Water System Number:** 260004917  
**Municipal Drinking-Water Licence:** 006-001  
**Drinking-Water System Name:** City of London Drinking Water System  
**Drinking-Water System Owner:** The Corporation of the City of London  
**Drinking-Water System Category:** Large Municipal Residential System  
**Period being reported:** January 1, 2023 to December 31, 2023

Does your Drinking-Water System serve more than 10,000 people? **Yes**

Is your annual report available to the public at no charge on a web site? **Yes**

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection:

**City of London – City Hall  
Customer Service Division – 8<sup>th</sup> Floor  
(Public Service Information Area)  
300 Dufferin Avenue, London, ON**

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

<b>Drinking Water System Name</b>	<b>Drinking Water System Number</b>
Middlesex Centre Distribution System	260004202
Includes: Arva Waterworks	260004202
Ballymote Waterworks	260004202
Delaware Distribution System	260063323

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 of its drinking water? **Yes**

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

Public access/notice via the web: **Yes**  
Public access/notice via Government Office: **Yes**  
Public access/notice via a newspaper: **No**  
Public access/notice via Public Request: **Yes**  
Public access/notice via a Public Library: **No**  
Public access/notice via other method: **No**

**Describe your Drinking-Water System:**

There are two primary water supplies in the City of London. These are both surface water sources and are:

- Lake Huron Primary Water Supply System (LHPWSS)
- Elgin Area Primary Water Supply System (EAPWSS)

During 2023 the London-Elgin-Middlesex Booster Station was operated by a designated Operating Authority that being, Ontario Clean Water Agency. The annual report for the London-Elgin-Middlesex Booster Station was not available at the time this report was created and therefore, it will be provided under separate cover.

**List all water treatment chemicals used over this reporting period:**

- Liquid Chlorine
- Sodium Hypochlorite
- Fluorosilicic Acid (hydrofluorosilicic acid)

**Were any significant expenses incurred to?**

Large numbers of Water Service Leaks continue to dominate repair/remediation efforts. Approximately 310 water service leaks occurred in 2023, attributing to a 5:1 ratio of water service leaks to water main breaks.

**Drinking-Water Systems Regulation O. Reg. 170/03**

Springbank Reservoir #3 underwent significant remediation and refurbishment to the internal roof slab T beams, as well as reconstruction of the exterior roof slab water proofing. This refurbishment is anticipated to provide an additional 50 years of life expectancy of this asset.

**Drinking-Water Systems Regulation O. Reg. 170/03**

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.

Bacteriological Adverse							
Adverse Incident Date	Corrective Action	Corrective Action Date	Adverse Water Quality Indicator # (AWQI #)	Parameters			
				E. coli (cfu/100ml)	Total Coliform (cfu/100ml)	HPC / Background (cfu/1ml)	Free Cl2 (mg/L)
8-Aug-2023 <sup>1</sup>			162967	0	1	<10	0.80
	Resample	9-Aug-2023		0	0	0	0.68
	Resample	9-Aug-2023		0	0	0	0.76
8-Aug-2023 <sup>2</sup>			162968	0	1	<10	0.79
	Resample	9-Aug-2023		0	0	0	0.83
	Resample	9-Aug-2023		0	0	2	0.78
10-Aug-2023 <sup>3</sup>			163002	0	1	<10	0.72
	Resample	11-Aug-2023		0	0	0	0.79
	Resample	11-Aug-2023		0	0	0	0.85
	Resample	11-Aug-2023		0	0	0	0.84
7-Dec-2023 <sup>4</sup>			164179	0	4	0	1.00
	Resample	8-Dec-2023		0	0	<10	1.07
	Resample	8-Dec-2023		0	0	<10	1.01
	Resample	8-Dec-2023		0	0	<10	1.00
14-Dec-2023 <sup>5</sup>			164210	0	1	<10	0.80
	Resample	15-Dec-2023		0	0	0	0.78
	Resample	15-Dec-2023		0	0	0	0.84
	Resample	15-Dec-2023		0	0	0	0.91
21-Dec-2023 <sup>6</sup>			164253	0	1	<10	0.86
	Resample	22-Dec-2023		0	0	0	0.76
	Resample	22-Dec-2023		0	0	0	0.89
	Resample	22-Dec-2023		0	0	0	0.82

**Notes:**

<sup>1</sup>**Details:** A Total Coliform count of 1 per 100 mL was detected in a sample collected from 1600 Attawandaron Rd.

**Corrective Action:** The original site was immediately re-sampled. A sample was also taken upstream of the original site. No downstream site was available because the original sample was taken at the end of a dead-end watermain. There were no indicators of adverse water quality in any of the re-sample results.

<sup>2</sup>**Details:** A Total Coliform count of 1 per 100 mL was detected in a sample collected from 869 Commissioners Rd (#1 Reservoir).

**Corrective Action:** The original site was immediately re-sampled. A sample was also taken downstream of the original site. No upstream site was available because the original sample was taken from a reservoir. There were no indicators of adverse water quality in any of the re-sample results.

<sup>3</sup>**Details:** A Total Coliform count of 1 per 100 mL was detected in a sample collected from 2080 Wickerson Rd.

**Drinking-Water Systems Regulation O. Reg. 170/03**

**Corrective Action:** The original site was immediately re-sampled. Samples were also taken at sites upstream and downstream from the original site. There were no indicators of adverse water quality in any of the re-sample results.

**<sup>4</sup>Details:** A Total Coliform count of 4 per 100 mL was detected in a sample collected from 13966 Medway Rd. (Arva Pumping Station).

**Corrective Action:** The original site was immediately re-sampled. Samples were also taken at sites upstream and downstream from the original site. There were no indicators of adverse water quality in any of the re-sample results.

**<sup>5</sup>Details:** A Total Coliform count of 1 per 100 mL was detected in a sample collected from 2080 Wickerson Rd (Wickerson P.S.).

**Corrective Action:** The original site was immediately re-sampled. Samples were also taken at sites upstream and downstream from the original site. There were no indicators of adverse water quality in any of the re-sample results.

**<sup>6</sup>Details:** A Total Coliform count of 1 per 100 mL was detected in a sample collected from 603 Wonderland Rd S (Westmount Pumping Station).

**Corrective Action:** The original site was immediately re-sampled. Samples were also taken at sites upstream and downstream from the original site. There were no indicators of adverse water quality in any of the re-sample results.

**Drinking-Water Systems Regulation O. Reg. 170/03**

**Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.**

	# of E. coli Samples Taken	Range of E. coli (cfu/100mL)	# of Total Coliform Samples Taken	Range of Coliform (cfu/100mL)	# of HPC / Background Samples	Range of HPC (cfu/1mL)
<b>Treated</b>	N/A	N/A	N/A	N/A	N/A	N/A
<b>Distribution</b>	2955	0 - 0	2955	0 - 4	2955	0 - 2000

**Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.**

	# of Grab Samples	Continuous Monitoring	Range of Results
Turbidity	57	N/A	0.03 - 0.11 NTU
Alkalinity	5	N/A	78 - 87 mg/L as CaCO <sub>3</sub>
Lead	5	N/A	<0.01 - 0.09 µg/L
Chlorine*	3018	87600	0.25 - 1.70 mg/L
Fluoride**	102	17520	0.35 - 0.83 mg/L

\*London has 10 locations with continuous online chlorine monitoring

\*\*Continuous online fluoride monitoring occurs at Arva and SERPs

**Note:** For continuous monitors use 8760 as the number of samples



**Drinking-Water Systems Regulation O. Reg. 170/03**

**Summary of Inorganic and Organic parameters tested during this reporting period or the most recent sample results.**

**As outlined below, sampling was carried out for inorganic and organic parameters at the following sites: Arva Pumping Station and Southeast Reservoir and Pumping Station.**

**SITE: Arva Pumping Station - Treated Distribution**
**a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Antimony	6/Jun/23	0.9	ug/L	No
September 21, 2017	Arsenic	6/Jun/23	0.2	ug/L	No
September 21, 2017	Barium	6/Jun/23	13.9	ug/L	No
September 21, 2017	Boron	6/Jun/23	13	ug/L	No
September 21, 2017	Cadmium	6/Jun/23	0.004	ug/L	No
September 21, 2017	Chromium	6/Jun/23	0.08	ug/L	No
September 21, 2017	Fluoride	4/Jan/23	0.40	mg/L	No
September 21, 2017	Fluoride	11/Jan/23	0.44	mg/L	No
September 21, 2017	Fluoride	18/Jan/23	0.49	mg/L	No
September 21, 2017	Fluoride	25/Jan/23	0.56	mg/L	No
September 21, 2017	Fluoride	1/Feb/23	0.54	mg/L	No
September 21, 2017	Fluoride	8/Feb/23	0.59	mg/L	No
September 21, 2017	Fluoride	15/Feb/23	0.50	mg/L	No
September 21, 2017	Fluoride	22/Feb/23	0.58	mg/L	No
September 21, 2017	Fluoride	1/Mar/23	0.46	mg/L	No
September 21, 2017	Fluoride	8/Mar/23	0.35	mg/L	No
September 21, 2017	Fluoride	15/Mar/23	0.51	mg/L	No
September 21, 2017	Fluoride	22/Mar/23	0.54	mg/L	No
September 21, 2017	Fluoride	29/Mar/23	0.45	mg/L	No
September 21, 2017	Fluoride	5/Apr/23	0.54	mg/L	No
September 21, 2017	Fluoride	12/Apr/23	0.50	mg/L	No
September 21, 2017	Fluoride	19/Apr/23	0.50	mg/L	No
September 21, 2017	Fluoride	24/Apr/23	0.61	mg/L	No
September 21, 2017	Fluoride	3/May/23	0.52	mg/L	No
September 21, 2017	Fluoride	10/May/23	0.52	mg/L	No
September 21, 2017	Fluoride	17/May/23	0.56	mg/L	No
September 21, 2017	Fluoride	24/May/23	0.54	mg/L	No
September 21, 2017	Fluoride	31/May/23	0.61	mg/L	No
September 21, 2017	Fluoride	8/Jun/23	0.66	mg/L	No
September 21, 2017	Fluoride	14/Jun/23	0.58	mg/L	No
September 21, 2017	Fluoride	22/Jun/23	0.56	mg/L	No
September 21, 2017	Fluoride	29/Jun/23	0.61	mg/L	No
September 21, 2017	Fluoride	5/Jul/23	0.64	mg/L	No
September 21, 2017	Fluoride	12/Jul/23	0.58	mg/L	No
September 21, 2017	Fluoride	19/Jul/23	0.62	mg/L	No
September 21, 2017	Fluoride	26/Jul/23	0.50	mg/L	No
September 21, 2017	Fluoride	2/Aug/23	0.57	mg/L	No
September 21, 2017	Fluoride	9/Aug/23	0.63	mg/L	No
September 21, 2017	Fluoride	16/Aug/23	0.60	mg/L	No
September 21, 2017	Fluoride	23/Aug/23	0.65	mg/L	No
September 21, 2017	Fluoride	30/Aug/23	0.78	mg/L	No
September 21, 2017	Fluoride	6/Sep/23	0.58	mg/L	No
September 21, 2017	Fluoride	13/Sep/23	0.58	mg/L	No
September 21, 2017	Fluoride	20/Sep/23	0.59	mg/L	No
September 21, 2017	Fluoride	27/Sep/23	0.52	mg/L	No

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September 21, 2017	Fluoride	4/Oct/23	0.47	mg/L	No
September 21, 2017	Fluoride	11/Oct/23	0.66	mg/L	No
September 21, 2017	Fluoride	18/Oct/23	0.62	mg/L	No
September 21, 2017	Fluoride	25/Oct/23	0.55	mg/L	No
September 21, 2017	Fluoride	1/Nov/23	0.56	mg/L	No
September 21, 2017	Fluoride	8/Nov/23	0.55	mg/L	No
September 21, 2017	Fluoride	15/Nov/23	0.69	mg/L	No
September 21, 2017	Fluoride	22/Nov/23	0.70	mg/L	No
September 21, 2017	Fluoride	29/Nov/23	0.57	mg/L	No
September 21, 2017	Fluoride	6/Dec/23	0.59	mg/L	No
September 21, 2017	Fluoride	13/Dec/23	0.55	mg/L	No
September 21, 2017	Fluoride	20/Dec/23	0.52	mg/L	No
September 21, 2017	Fluoride	27/Dec/23	0.52	mg/L	No
September 21, 2017	Lead	14/Mar/23	0.01 <MDL	ug/L	No
September 21, 2017	Lead	6/Jun/23	0.01	ug/L	No
September 21, 2017	Lead	7/Sep/23	0.02	ug/L	No
September 21, 2017	Lead	5/Dec/23	0.01	ug/L	No
September 21, 2017	Mercury	6/Jun/23	0.01	ug/L	No
September 21, 2017	Nitrate (as nitrogen)	14/Mar/23	1.200	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	6/Jun/23	0.354	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	7/Sep/23	0.335	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	5/Dec/23	0.285	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	14/Mar/23	1.200	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	6/Jun/23	0.354	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	7/Sep/23	0.335	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	5/Dec/23	0.285	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	14/Mar/23	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	6/Jun/23	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	7/Sep/23	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	5/Dec/23	0.003 <MDL	mg/L	No
September 21, 2017	Selenium	6/Jun/23	0.16	ug/L	No
September 21, 2017	Sodium	6/Jun/23	11	mg/L	No
September 21, 2017	Uranium	6/Jun/23	0.034	ug/L	No

**b) ORGANIC PARAMETERS (including THM)**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Alachlor	6/Jun/23	0.02 <MDL	ug/L	No
September 21, 2017	Atrazine	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Atrazine + N-dealkylated metabolites	6/Jun/23	0.02	ug/L	No
September 21, 2017	De-ethylated Atrazine	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Azinphos-methyl	6/Jun/23	0.05 <MDL	ug/L	No
September 21, 2017	Benzene	6/Jun/23	0.32 <MDL	ug/L	No
September 21, 2017	Benzo(a)pyrene	6/Jun/23	0.004 <MDL	ug/L	No
September 21, 2017	Bromoxynil	6/Jun/23	0.33	ug/L	No
September 21, 2017	Carbaryl	6/Jun/23	0.05 <MDL	ug/L	No
September 21, 2017	Carbofuran	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Carbon tetrachloride	6/Jun/23	0.17 <MDL	ug/L	No
September 21, 2017	Chlorpyrifos	6/Jun/23	0.02 <MDL	ug/L	No
September 21, 2017	Diazinon	6/Jun/23	0.02 <MDL	ug/L	No
September 21, 2017	Dicamba	6/Jun/23	0.2	ug/L	No
September 21, 2017	1,2-Dichlorobenzene	6/Jun/23	0.41 <MDL	ug/L	No
September 21, 2017	1,4-Dichlorobenzene	6/Jun/23	0.36 <MDL	ug/L	No
September 21, 2017	1,2-Dichloroethane	6/Jun/23	0.35 <MDL	ug/L	No
September 21, 2017	Dichloromethane	6/Jun/23	0.35 <MDL	ug/L	No

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September 21, 2017	2,4-dichlorophenol	6/Jun/23	0.15	ug/L	No
September 21, 2017	2,4-dichlorophenoxyacetic acid (2,4-D)	6/Jun/23	0.19	ug/L	No
September 21, 2017	Diclofop-methyl	6/Jun/23	0.4	ug/L	No
September 21, 2017	Dimethoate	6/Jun/23	0.06 <MDL	ug/L	No
September 21, 2017	Diquat	6/Jun/23	1 <MDL	ug/L	No
September 21, 2017	Diuron	6/Jun/23	0.03 <MDL	ug/L	No
September 21, 2017	Glyphosate	6/Jun/23	1 <MDL	ug/L	No
September 21, 2017	Malathion	6/Jun/23	0.02 <MDL	ug/L	No
September 21, 2017	MCPA	6/Jun/23	0.00012 <MDL	mg/L	No
September 21, 2017	Metolachlor	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Metribuzin	6/Jun/23	0.02 <MDL	ug/L	No
September 21, 2017	Paraquat	6/Jun/23	1 <MDL	ug/L	No
September 21, 2017	Pentachlorophenol	6/Jun/23	0.15	ug/L	No
September 21, 2017	Phorate	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Picloram	6/Jun/23	1	ug/L	No
September 21, 2017	Polychlorinated Biphenyls (PCBs)	6/Jun/23	0.04	ug/L	No
September 21, 2017	Prometryne	6/Jun/23	0.03 <MDL	ug/L	No
September 21, 2017	Simazine	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Terbufos	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	2,3,4,6-tetrachlorophenol	6/Jun/23	0.2	ug/L	No
September 21, 2017	Triallate	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Trichloroethylene	6/Jun/23	0.44 <MDL	ug/L	No
September 21, 2017	2,4,6-trichlorophenol	6/Jun/23	0.25	ug/L	No
September 21, 2017	Trifluralin	6/Jun/23	0.02 <MDL	ug/L	No
September 21, 2017	Trihalomethanes (total)	14/Mar/23	25	ug/L	No
September 21, 2017	Bromodichloromethane	14/Mar/23	6.9	ug/L	No
September 21, 2017	Bromoform	14/Mar/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	14/Mar/23	16	ug/L	No
September 21, 2017	Dibromochloromethane	14/Mar/23	2	ug/L	No
September 21, 2017	Trihalomethanes (total)	6/Jun/23	21	ug/L	No
September 21, 2017	Bromodichloromethane	6/Jun/23	6.5	ug/L	No
September 21, 2017	Bromoform	6/Jun/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	6/Jun/23	12	ug/L	No
September 21, 2017	Dibromochloromethane	6/Jun/23	2.1	ug/L	No
September 21, 2017	Trihalomethanes (total)	7/Sep/23	30	ug/L	No
September 21, 2017	Bromodichloromethane	7/Sep/23	8.8	ug/L	No
September 21, 2017	Bromoform	7/Sep/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	7/Sep/23	17	ug/L	No
September 21, 2017	Dibromochloromethane	7/Sep/23	4.2	ug/L	No
September 21, 2017	Trihalomethanes (total)	5/Dec/23	19	ug/L	No
September 21, 2017	Bromodichloromethane	5/Dec/23	6.5	ug/L	No
September 21, 2017	Bromoform	5/Dec/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	5/Dec/23	8.8	ug/L	No
September 21, 2017	Dibromochloromethane	5/Dec/23	3.3	ug/L	No
September 21, 2017	Vinyl Chloride	6/Jun/23	0.17 <MDL	ug/L	No

**c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Alkalinity	6/Jun/23	78	mg/L as CaCO <sub>3</sub>	No
September 21, 2017	Aluminum	6/Jun/23	28	ug/L	No
September 21, 2017	Ammonia+Ammonium (N)	6/Jun/23	0.04	mg/L	No
September 21, 2017	Calcium	6/Jun/23	27.9	mg/L	No
September 21, 2017	Chloride	6/Jun/23	9.3	mg/L	No
September 21, 2017	Cobalt	6/Jun/23	0.007	ug/L	No

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September 21, 2017	Colour	6/Jun/23	3 <MDL	TCU	No
September 21, 2017	Conductivity	6/Jun/23	248	uS/cm	No
September 21, 2017	Copper	6/Jun/23	1.6	ug/L	No
September 21, 2017	Cyanide; total	6/Jun/23	2	ug/L	No
September 21, 2017	1,1-Dichloroethylene (vinylidene chloride)	6/Jun/23	0.33 <MDL	ug/L	No
September 21, 2017	Dissolved Organic Carbon	6/Jun/23	1	mg/L	No
September 21, 2017	Ethylbenzene	6/Jun/23	0.33 <MDL	ug/L	No
September 21, 2017	Field pH	6/Jun/23	8.02	no unit	No
September 21, 2017	Field pH	6/Jun/23	8.02	no unit	No
September 21, 2017	Field Temperature	6/Jun/23	10.6	celcius	No
September 21, 2017	Field Temperature	6/Jun/23	10.6	celcius	No
September 21, 2017	Hardness	6/Jun/23	102	mg/L as CaCO <sub>3</sub>	No
September 21, 2017	Iron	6/Jun/23	7	ug/L	No
September 21, 2017	Langelier's Index	6/Jun/23	-0.59	@ 4 C	No
September 21, 2017	Langelier's Index	6/Jun/23	-0.27	@ 20 C	No
September 21, 2017	Magnesium	6/Jun/23	7.8	mg/L	No
September 21, 2017	Manganese	6/Jun/23	0.04	ug/L	No
September 21, 2017	Monochlorobenzene	6/Jun/23	0.3 <MDL	ug/L	No
September 21, 2017	Nickel	6/Jun/23	0.3	ug/L	No
September 21, 2017	Nitrogen-Kjeldahl (N)	6/Jun/23	0.11	mg/L	No
September 21, 2017	Organic Nitrogen	6/Jun/23	0.11	mg/L	No
September 21, 2017	pH	6/Jun/23	7.99	No unit	No
September 21, 2017	Phosphorus	6/Jun/23	0.003	mg/L	No
September 21, 2017	Potassium	6/Jun/23	1.02	mg/L	No
September 21, 2017	Silicon; reactive silicate	6/Jun/23	1.63	mg/L	No
September 21, 2017	Silver	6/Jun/23	0.05	ug/L	No
September 21, 2017	Solids (Total Dissolved)	6/Jun/23	154	mg/L	No
September 21, 2017	Sulphate	6/Jun/23	26	mg/L	No
September 21, 2017	Sulphide	6/Jun/23	6	ug/L	No
September 21, 2017	Surr 1,2-Dichloroethane-d4	6/Jun/23	101	Surr Rec %	No
September 21, 2017	Surr 4-Bromofluorobenzene	6/Jun/23	92	Surr Rec %	No
September 21, 2017	Surr Decachlorobiphenyl	6/Jun/23	99	%	No
September 21, 2017	Tetrachloroethylene (perchloroethylene)	6/Jun/23	0.35 <MDL	ug/L	No
September 21, 2017	Toluene	6/Jun/23	0.36 <MDL	ug/L	No
September 21, 2017	Total Chlorine-Field	6/Jun/23	1.44	mg/L	No
September 21, 2017	Total Chlorine-Field	6/Jun/23	1.44	mg/L	No
September 21, 2017	2-(2,4,5-Trichlorophenoxy)propanoic acid (2,4,5-TP)	6/Jun/23	0.18	ug/L	No
September 21, 2017	Turbidity	6/Jun/23	1.1	NTU	No
September 21, 2017	Xylene (Total)	6/Jun/23	0.43 <MDL	ug/L	No
September 21, 2017	m/p-Xylene	6/Jun/23	0.43 <MDL	ug/L	No
September 21, 2017	o-xylene	6/Jun/23	0.17 <MDL	ug/L	No
September 21, 2017	Zinc	6/Jun/23	2	ug/L	No

**SITE: Arva Pumping Station - Treated Distribution**
**d) ORGANIC PARAMETERS (HAA)**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	14/Mar/23	15.4	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	14/Mar/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	14/Mar/23	7.2	ug/L	No
September 21, 2017	(Monobromoacetic acid)	14/Mar/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	14/Mar/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	14/Mar/23	8.1	ug/L	No
September 21, 2017	Total Haloacetic Acids	6/Jun/23	5.3 <MDL	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	6/Jun/23	2 <MDL	ug/L	No

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September 21, 2017	(Dichloroacetic Acid)	6/Jun/23	4	ug/L	No
September 21, 2017	(Monobromoacetic acid)	6/Jun/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	6/Jun/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	6/Jun/23	5.3 <MDL	ug/L	No
September 21, 2017	Total Haloacetic Acids	7/Sep/23	6.1	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	7/Sep/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	7/Sep/23	6.1	ug/L	No
September 21, 2017	(Monobromoacetic acid)	7/Sep/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	7/Sep/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	7/Sep/23	5.3 <MDL	ug/L	No
September 21, 2017	Total Haloacetic Acids	5/Dec/23	5.3 <MDL	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	5/Dec/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	5/Dec/23	4.9	ug/L	No
September 21, 2017	(Monobromoacetic acid)	5/Dec/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	5/Dec/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	5/Dec/23	5.3 <MDL	ug/L	No

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**SITE: Southeast Reservoir and Pumping Station - Treated Distribution**
**a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Antimony	6/Jun/23	0.9	ug/L	No
September 21, 2017	Arsenic	6/Jun/23	0.3	ug/L	No
September 21, 2017	Barium	6/Jun/23	23.6	ug/L	No
September 21, 2017	Boron	6/Jun/23	17	ug/L	No
September 21, 2017	Cadmium	6/Jun/23	0.008	ug/L	No
September 21, 2017	Chromium	6/Jun/23	0.08 <MDL	ug/L	No
September 21, 2017	Fluoride	4/Jan/23	0.45	mg/L	No
September 21, 2017	Fluoride	11/Jan/23	0.48	mg/L	No
September 21, 2017	Fluoride	18/Jan/23	0.56	mg/L	No
September 21, 2017	Fluoride	25/Jan/23	0.47	mg/L	No
September 21, 2017	Fluoride	1/Feb/23	0.54	mg/L	No
September 21, 2017	Fluoride	8/Feb/23	0.53	mg/L	No
September 21, 2017	Fluoride	15/Feb/23	0.44	mg/L	No
September 21, 2017	Fluoride	22/Feb/23	0.47	mg/L	No
September 21, 2017	Fluoride	1/Mar/23	0.45	mg/L	No
September 21, 2017	Fluoride	23/Mar/23	0.48	mg/L	No
September 21, 2017	Fluoride	29/Mar/23	0.44	mg/L	No
September 21, 2017	Fluoride	5/Apr/23	0.58	mg/L	No
September 21, 2017	Fluoride	12/Apr/23	0.52	mg/L	No
September 21, 2017	Fluoride	19/Apr/23	0.57	mg/L	No
September 21, 2017	Fluoride	24/Apr/23	0.59	mg/L	No
September 21, 2017	Fluoride	3/May/23	0.39	mg/L	No
September 21, 2017	Fluoride	10/May/23	0.55	mg/L	No
September 21, 2017	Fluoride	17/May/23	0.53	mg/L	No
September 21, 2017	Fluoride	24/May/23	0.51	mg/L	No
September 21, 2017	Fluoride	31/May/23	0.54	mg/L	No
September 21, 2017	Fluoride	8/Jun/23	0.55	mg/L	No
September 21, 2017	Fluoride	14/Jun/23	0.51	mg/L	No
September 21, 2017	Fluoride	22/Jun/23	0.55	mg/L	No
September 21, 2017	Fluoride	29/Jun/23	0.55	mg/L	No
September 21, 2017	Fluoride	5/Jul/23	0.59	mg/L	No
September 21, 2017	Fluoride	12/Jul/23	0.55	mg/L	No
September 21, 2017	Fluoride	19/Jul/23	0.52	mg/L	No
September 21, 2017	Fluoride	26/Jul/23	0.53	mg/L	No
September 21, 2017	Fluoride	2/Aug/23	0.49	mg/L	No
September 21, 2017	Fluoride	9/Aug/23	0.57	mg/L	No
September 21, 2017	Fluoride	16/Aug/23	0.54	mg/L	No
September 21, 2017	Fluoride	23/Aug/23	0.55	mg/L	No
September 21, 2017	Fluoride	30/Aug/23	0.60	mg/L	No
September 21, 2017	Fluoride	6/Sep/23	0.58	mg/L	No
September 21, 2017	Fluoride	13/Sep/23	0.58	mg/L	No
September 21, 2017	Fluoride	20/Sep/23	0.58	mg/L	No
September 21, 2017	Fluoride	27/Sep/23	0.55	mg/L	No
September 21, 2017	Fluoride	4/Oct/23	0.55	mg/L	No
September 21, 2017	Fluoride	11/Oct/23	0.55	mg/L	No
September 21, 2017	Fluoride	18/Oct/23	0.57	mg/L	No
September 21, 2017	Fluoride	25/Oct/23	0.53	mg/L	No
September 21, 2017	Fluoride	1/Nov/23	0.56	mg/L	No
September 21, 2017	Fluoride	8/Nov/23	0.65	mg/L	No
September 21, 2017	Fluoride	15/Nov/23	0.56	mg/L	No
September 21, 2017	Fluoride	22/Nov/23	0.55	mg/L	No
September 21, 2017	Fluoride	29/Nov/23	0.54	mg/L	No

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September 21, 2017	Fluoride	6/Dec/23	0.59	mg/L	No
September 21, 2017	Fluoride	13/Dec/23	0.53	mg/L	No
September 21, 2017	Fluoride	20/Dec/23	0.52	mg/L	No
September 21, 2017	Fluoride	27/Dec/23	0.51	mg/L	No
September 21, 2017	Lead	27/Mar/23	0.02	ug/L	No
September 21, 2017	Lead	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Lead	7/Sep/23	0.01 <MDL	ug/L	No
September 21, 2017	Lead	5/Dec/23	0.01 <MDL	ug/L	No
September 21, 2017	Mercury	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Nitrate (as nitrogen)	27/Mar/23	0.16	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	6/Jun/23	0.12	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	7/Sep/23	0.09	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	5/Dec/23	0.02	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	27/Mar/23	0.16	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	6/Jun/23	0.12	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	7/Sep/23	0.09	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	5/Dec/23	0.02	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	27/Mar/23	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	6/Jun/23	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	7/Sep/23	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	5/Dec/23	0.003 <MDL	mg/L	No
September 21, 2017	Selenium	6/Jun/23	0.21	ug/L	No
September 21, 2017	Sodium	6/Jun/23	16.2	mg/L	No
September 21, 2017	Uranium	6/Jun/23	0.046	ug/L	No

**b) ORGANIC PARAMETERS (including THM)**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Alachlor	6/Jun/23	0.02 <MDL	ug/L	No
September 21, 2017	Atrazine	6/Jun/23	0.04	ug/L	No
September 21, 2017	Atrazine + N-dealkylated metabolites	6/Jun/23	0.06	ug/L	No
September 21, 2017	De-ethylated Atrazine	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Azinphos-methyl	6/Jun/23	0.05 <MDL	ug/L	No
September 21, 2017	Benzene	6/Jun/23	0.32 <MDL	ug/L	No
September 21, 2017	Benzo(a)pyrene	6/Jun/23	0.004 <MDL	ug/L	No
September 21, 2017	Bromoxynil	6/Jun/23	0.33 <MDL	ug/L	No
September 21, 2017	Carbaryl	6/Jun/23	0.05 <MDL	ug/L	No
September 21, 2017	Carbofuran	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Carbon tetrachloride	6/Jun/23	0.17 <MDL	ug/L	No
September 21, 2017	Chlorpyrifos	6/Jun/23	0.02 <MDL	ug/L	No
September 21, 2017	Diazinon	6/Jun/23	0.02 <MDL	ug/L	No
September 21, 2017	Dicamba	6/Jun/23	0.2 <MDL	ug/L	No
September 21, 2017	1,2-Dichlorobenzene	6/Jun/23	0.41 <MDL	ug/L	No
September 21, 2017	1,4-Dichlorobenzene	6/Jun/23	0.36 <MDL	ug/L	No
September 21, 2017	1,2-Dichloroethane	6/Jun/23	0.35 <MDL	ug/L	No
September 21, 2017	Dichloromethane	6/Jun/23	0.35 <MDL	ug/L	No
September 21, 2017	2,4-dichlorophenol	6/Jun/23	0.15 <MDL	ug/L	No
September 21, 2017	2,4-dichlorophenoxyacetic acid (2,4-D)	6/Jun/23	0.19 <MDL	ug/L	No
September 21, 2017	Diclofop-methyl	6/Jun/23	0.4 <MDL	ug/L	No
September 21, 2017	Dimethoate	6/Jun/23	0.06 <MDL	ug/L	No
September 21, 2017	Diquat	6/Jun/23	1 <MDL	ug/L	No
September 21, 2017	Diuron	6/Jun/23	0.03 <MDL	ug/L	No
September 21, 2017	Glyphosate	6/Jun/23	1 <MDL	ug/L	No
September 21, 2017	Malathion	6/Jun/23	0.02 <MDL	ug/L	No
September 21, 2017	MCPA	6/Jun/23	0.00012 <MDL	mg/L	No
September 21, 2017	Metolachlor	6/Jun/23	0.02	ug/L	No

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September 21, 2017	Metribuzin	6/Jun/23	0.02 <MDL	ug/L	No
September 21, 2017	Paraquat	6/Jun/23	1 <MDL	ug/L	No
September 21, 2017	Pentachlorophenol	6/Jun/23	0.15 <MDL	ug/L	No
September 21, 2017	Phorate	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Picloram	6/Jun/23	1 <MDL	ug/L	No
September 21, 2017	Polychlorinated Biphenyls (PCBs)	6/Jun/23	0.04 <MDL	ug/L	No
September 21, 2017	Prometryne	6/Jun/23	0.03 <MDL	ug/L	No
September 21, 2017	Simazine	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Terbufos	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	2,3,4,6-tetrachlorophenol	6/Jun/23	0.2 <MDL	ug/L	No
September 21, 2017	Triallate	6/Jun/23	0.01 <MDL	ug/L	No
September 21, 2017	Trichloroethylene	6/Jun/23	0.44 <MDL	ug/L	No
September 21, 2017	2,4,6-trichlorophenol	6/Jun/23	0.25 <MDL	ug/L	No
September 21, 2017	Trifluralin	6/Jun/23	0.02 <MDL	ug/L	No
September 21, 2017	Trihalomethanes (total)	27/Mar/23	17	ug/L	No
September 21, 2017	Bromodichloromethane	27/Mar/23	5.8	ug/L	No
September 21, 2017	Bromoform	27/Mar/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	27/Mar/23	8.5	ug/L	No
September 21, 2017	Dibromochloromethane	27/Mar/23	3	ug/L	No
September 21, 2017	Trihalomethanes (total)	6/Jun/23	29	ug/L	No
September 21, 2017	Bromodichloromethane	6/Jun/23	8.2	ug/L	No
September 21, 2017	Bromoform	6/Jun/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	6/Jun/23	18	ug/L	No
September 21, 2017	Dibromochloromethane	6/Jun/23	3.3	ug/L	No
September 21, 2017	Trihalomethanes (total)	7/Sep/23	41	ug/L	No
September 21, 2017	Bromodichloromethane	7/Sep/23	11	ug/L	No
September 21, 2017	Bromoform	7/Sep/23	0.37	ug/L	No
September 21, 2017	Chloroform	7/Sep/23	25	ug/L	No
September 21, 2017	Dibromochloromethane	7/Sep/23	4.4	ug/L	No
September 21, 2017	Trihalomethanes (total)	5/Dec/23	25	ug/L	No
September 21, 2017	Bromodichloromethane	5/Dec/23	7.6	ug/L	No
September 21, 2017	Bromoform	5/Dec/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	5/Dec/23	15	ug/L	No
September 21, 2017	Dibromochloromethane	5/Dec/23	2.8	ug/L	No
September 21, 2017	Vinyl Chloride	6/Jun/23	0.17 <MDL	ug/L	No

**c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Alkalinity	6/Jun/23	98	mg/L as CaCO <sub>3</sub>	No
September 21, 2017	Aluminum	6/Jun/23	19	ug/L	No
September 21, 2017	Ammonia+Ammonium (N)	6/Jun/23	0.04 <MDL	mg/L	No
September 21, 2017	Calcium	6/Jun/23	37	mg/L	No
September 21, 2017	Chloride	6/Jun/23	17	mg/L	No
September 21, 2017	Cobalt	6/Jun/23	0.015	ug/L	No
September 21, 2017	Colour	6/Jun/23	3 <MDL	TCU	No
September 21, 2017	Conductivity	6/Jun/23	315	uS/cm	No
September 21, 2017	Copper	6/Jun/23	0.9	ug/L	No
September 21, 2017	Cyanide; total	6/Jun/23	2 <MDL	ug/L	No
September 21, 2017	1,1-Dichloroethylene (vinylidene chloride)	6/Jun/23	0.33 <MDL	ug/L	No
September 21, 2017	Dissolved Organic Carbon	6/Jun/23	1 <MDL	mg/L	No
September 21, 2017	Ethylbenzene	6/Jun/23	0.33 <MDL	ug/L	No
September 21, 2017	Field pH	6/Jun/23	7.40	no unit	No
September 21, 2017	Field pH	6/Jun/23	7.40	no unit	No
September 21, 2017	Field Temperature	6/Jun/23	14.80	celcius	No
September 21, 2017	Field Temperature	6/Jun/23	14.80	celcius	No



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September 21, 2017	Hardness	6/Jun/23	129	mg/L as CaCO <sub>3</sub>	No
September 21, 2017	Iron	6/Jun/23	7 <MDL	ug/L	No
September 21, 2017	Langelier's Index	6/Jun/23	-0.39	@ 4 C	No
September 21, 2017	Langelier's Index	6/Jun/23	-0.07	@ 20 C	No
September 21, 2017	Magnesium	6/Jun/23	8.89	mg/L	No
September 21, 2017	Manganese	6/Jun/23	0.17	ug/L	No
September 21, 2017	Monochlorobenzene	6/Jun/23	0.3 <MDL	ug/L	No
September 21, 2017	Nickel	6/Jun/23	0.7	ug/L	No
September 21, 2017	Nitrogen-Kjeldahl (N)	6/Jun/23	0.12	mg/L	No
September 21, 2017	Organic Nitrogen	6/Jun/23	0.12	mg/L	No
September 21, 2017	pH	6/Jun/23	7.98	No unit	No
September 21, 2017	Phosphorus	6/Jun/23	0.003 <MDL	mg/L	No
September 21, 2017	Potassium	6/Jun/23	1.46	mg/L	No
September 21, 2017	Silicon; reactive silicate	6/Jun/23	0.66	mg/L	No
September 21, 2017	Silver	6/Jun/23	0.05 <MDL	ug/L	No
September 21, 2017	Solids (Total Dissolved)	6/Jun/23	183	mg/L	No
September 21, 2017	Sulphate	6/Jun/23	30	mg/L	No
September 21, 2017	Sulphide	6/Jun/23	6 <MDL	ug/L	No
September 21, 2017	Surr 1,2-Dichloroethane-d4	6/Jun/23	104	Surr Rec %	No
September 21, 2017	Surr 4-Bromofluorobenzene	6/Jun/23	92	Surr Rec %	No
September 21, 2017	Surr Decachlorobiphenyl	6/Jun/23	105	%	No
September 21, 2017	Tetrachloroethylene (perchloroethylene)	6/Jun/23	0.35 <MDL	ug/L	No
September 21, 2017	Toluene	6/Jun/23	0.36 <MDL	ug/L	No
September 21, 2017	Total Chlorine-Field	6/Jun/23	1.33	mg/L	No
September 21, 2017	Total Chlorine-Field	6/Jun/23	1.33	mg/L	No
September 21, 2017	2-(2,4,5-Trichlorophenoxy)propanoic acid (2,4,5-TP)	6/Jun/23	0.18 <MDL	ug/L	No
September 21, 2017	Turbidity	6/Jun/23	0.25	NTU	No
September 21, 2017	Xylene (Total)	6/Jun/23	0.43 <MDL	ug/L	No
September 21, 2017	m/p-Xylene	6/Jun/23	0.43 <MDL	ug/L	No
September 21, 2017	o-xylene	6/Jun/23	0.17 <MDL	ug/L	No
September 21, 2017	Zinc	6/Jun/23	2 <MDL	ug/L	No

**SITE: Southeast Reservoir and Pumping Station - Treated Distribution**
**d) ORGANIC PARAMETERS (HAA)**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	27/Mar/23	6.4	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	27/Mar/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	27/Mar/23	6.4	ug/L	No
September 21, 2017	(Monobromoacetic acid)	27/Mar/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	27/Mar/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	27/Mar/23	5.3 <MDL	ug/L	No
September 21, 2017	Total Haloacetic Acids	6/Jun/23	18.4	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	6/Jun/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	6/Jun/23	11.2	ug/L	No
September 21, 2017	(Monobromoacetic acid)	6/Jun/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	6/Jun/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	6/Jun/23	7.2	ug/L	No
September 21, 2017	Total Haloacetic Acids	7/Sep/23	19.9	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	7/Sep/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	7/Sep/23	13.6	ug/L	No
September 21, 2017	(Monobromoacetic acid)	7/Sep/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	7/Sep/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	7/Sep/23	6.3	ug/L	No
September 21, 2017	Total Haloacetic Acids	5/Dec/23	17.2	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	5/Dec/23	2 <MDL	ug/L	No

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September 21, 2017	(Dichloroacetic Acid)	5/Dec/23	9.5	ug/L	No
September 21, 2017	(Monobromoacetic acid)	5/Dec/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	5/Dec/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	5/Dec/23	7.7	ug/L	No

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**Summary of Inorganic/Organic parameters tested during this reporting period.**

**As outlined below, sampling was carried out for THM's & HAA's at 214 Rathowan St., 4562 Colonel Talbot Rd., 603 Wonderland Rd. S., 525 Crestwood Dr., 950 East Springbank Gate, and 365DD London Pipeline.**

**SITE: Fire Hydrant at 214 Rathowan St. - Treated Distribution**

**a) ORGANIC PARAMETERS (HAA & THM)**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	14/Mar/23	13.4	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	14/Mar/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	14/Mar/23	6.5	ug/L	No
September 21, 2017	(Monobromoacetic acid)	14/Mar/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	14/Mar/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	14/Mar/23	6.8	ug/L	No
September 21, 2017	Total Haloacetic Acids	6/Jun/23	12.9	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	6/Jun/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	6/Jun/23	7.4	ug/L	No
September 21, 2017	(Monobromoacetic acid)	6/Jun/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	6/Jun/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	6/Jun/23	5.5	ug/L	No
September 21, 2017	Total Haloacetic Acids	7/Sep/23	5.3 <MDL	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	7/Sep/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	7/Sep/23	5.3	ug/L	No
September 21, 2017	(Monobromoacetic acid)	7/Sep/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	7/Sep/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	7/Sep/23	5.3 <MDL	ug/L	No
September 21, 2017	Total Haloacetic Acids	5/Dec/23	5.3 <MDL	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	5/Dec/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	5/Dec/23	5.1	ug/L	No
September 21, 2017	(Monobromoacetic acid)	5/Dec/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	5/Dec/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	5/Dec/23	5.3 <MDL	ug/L	No
September 21, 2017	Trihalomethanes (total)	14/Mar/23	24	ug/L	No
September 21, 2017	Bromodichloromethane	14/Mar/23	7	ug/L	No
September 21, 2017	Bromoform	14/Mar/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	14/Mar/23	14	ug/L	No
September 21, 2017	Dibromochloromethane	14/Mar/23	2.5	ug/L	No
September 21, 2017	Trihalomethanes (total)	6/Jun/23	25	ug/L	No
September 21, 2017	Bromodichloromethane	6/Jun/23	7	ug/L	No
September 21, 2017	Bromoform	6/Jun/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	6/Jun/23	15	ug/L	No
September 21, 2017	Dibromochloromethane	6/Jun/23	2.3	ug/L	No
September 21, 2017	Trihalomethanes (total)	7/Sep/23	34	ug/L	No
September 21, 2017	Bromodichloromethane	7/Sep/23	9.1	ug/L	No
September 21, 2017	Bromoform	7/Sep/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	7/Sep/23	21	ug/L	No
September 21, 2017	Dibromochloromethane	7/Sep/23	4	ug/L	No
September 21, 2017	Trihalomethanes (total)	5/Dec/23	23	ug/L	No
September 21, 2017	Bromodichloromethane	5/Dec/23	7.4	ug/L	No
September 21, 2017	Bromoform	5/Dec/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	5/Dec/23	12	ug/L	No
September 21, 2017	Dibromochloromethane	5/Dec/23	3.5	ug/L	No

**Drinking-Water Systems Regulation O. Reg. 170/03**
**SITE: 4562 Colonel Talbot Rd. (Hydrant) - Treated Distribution**
**a) ORGANIC PARAMETERS (HAA & THM)**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	14/Mar/23	19.9	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	14/Mar/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	14/Mar/23	9.3	ug/L	No
September 21, 2017	(Monobromoacetic acid)	14/Mar/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	14/Mar/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	14/Mar/23	10.5	ug/L	No
September 21, 2017	Total Haloacetic Acids	6/Jun/23	18.5	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	6/Jun/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	6/Jun/23	11.4	ug/L	No
September 21, 2017	(Monobromoacetic acid)	6/Jun/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	6/Jun/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	6/Jun/23	7	ug/L	No
September 21, 2017	Total Haloacetic Acids	7/Sep/23	18.8	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	7/Sep/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	7/Sep/23	12.2	ug/L	No
September 21, 2017	(Monobromoacetic acid)	7/Sep/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	7/Sep/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	7/Sep/23	6.6	ug/L	No
September 21, 2017	Total Haloacetic Acids	5/Dec/23	17.8	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	5/Dec/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	5/Dec/23	10.3	ug/L	No
September 21, 2017	(Monobromoacetic acid)	5/Dec/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	5/Dec/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	5/Dec/23	7.5	ug/L	No
September 21, 2017	Trihalomethanes (total)	14/Mar/23	29	ug/L	No
September 21, 2017	Bromodichloromethane	14/Mar/23	8	ug/L	No
September 21, 2017	Bromoform	14/Mar/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	14/Mar/23	19	ug/L	No
September 21, 2017	Dibromochloromethane	14/Mar/23	2.7	ug/L	No
September 21, 2017	Trihalomethanes (total)	6/Jun/23	33	ug/L	No
September 21, 2017	Bromodichloromethane	6/Jun/23	8.5	ug/L	No
September 21, 2017	Bromoform	6/Jun/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	6/Jun/23	22	ug/L	No
September 21, 2017	Dibromochloromethane	6/Jun/23	3	ug/L	No
September 21, 2017	Trihalomethanes (total)	7/Sep/23	56	ug/L	No
September 21, 2017	Bromodichloromethane	7/Sep/23	12	ug/L	No
September 21, 2017	Bromoform	7/Sep/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	7/Sep/23	39	ug/L	No
September 21, 2017	Dibromochloromethane	7/Sep/23	4.8	ug/L	No
September 21, 2017	Trihalomethanes (total)	5/Dec/23	32	ug/L	No
September 21, 2017	Bromodichloromethane	5/Dec/23	9	ug/L	No
September 21, 2017	Bromoform	5/Dec/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	5/Dec/23	20	ug/L	No
September 21, 2017	Dibromochloromethane	5/Dec/23	3.1	ug/L	No

**Drinking-Water Systems Regulation O. Reg. 170/03**
**SITE: 603 Wonderland Rd. S. - Treated Distribution**
**a) ORGANIC PARAMETERS (HAA)**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	14/Mar/23	14.7	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	14/Mar/23	7.2	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	14/Mar/23	2 <MDL	ug/L	No
September 21, 2017	(Monobromoacetic acid)	14/Mar/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	14/Mar/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	14/Mar/23	7.5	ug/L	No
September 21, 2017	Total Haloacetic Acids	6/Jun/23	17.7	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	6/Jun/23	10.1	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	6/Jun/23	2 <MDL	ug/L	No
September 21, 2017	(Monobromoacetic acid)	6/Jun/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	6/Jun/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	6/Jun/23	7.6	ug/L	No
September 21, 2017	Total Haloacetic Acids	7/Sep/23	7.2	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	7/Sep/23	7.2	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	7/Sep/23	2 <MDL	ug/L	No
September 21, 2017	(Monobromoacetic acid)	7/Sep/23	4.7 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	7/Sep/23	2.9 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	7/Sep/23	5.3 <MDL	ug/L	No
September 21, 2017	Total Haloacetic Acids	5/Dec/23	5.3 <MDL	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	5/Dec/23	5.3	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	5/Dec/23	2 <MDL	ug/L	No
September 21, 2017	(Monobromoacetic acid)	5/Dec/23	4.7 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	5/Dec/23	2.9 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	5/Dec/23	5.3 <MDL	ug/L	No

**Drinking-Water Systems Regulation O. Reg. 170/03**
**SITE: 525 Crestwood Dr. - Treated Distribution**
**a) ORGANIC PARAMETERS (HAA)**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	14/Mar/23	14.7	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	14/Mar/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	14/Mar/23	7.9	ug/L	No
September 21, 2017	(Monobromoacetic acid)	14/Mar/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	14/Mar/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	14/Mar/23	6.8	ug/L	No
September 21, 2017	Total Haloacetic Acids	6/Jun/23	14	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	6/Jun/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	6/Jun/23	8.5	ug/L	No
September 21, 2017	(Monobromoacetic acid)	6/Jun/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	6/Jun/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	6/Jun/23	5.5	ug/L	No
September 21, 2017	Total Haloacetic Acids	7/Sep/23	15.8	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	7/Sep/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	7/Sep/23	10.5	ug/L	No
September 21, 2017	(Monobromoacetic acid)	7/Sep/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	7/Sep/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	7/Sep/23	5.3 <MDL	ug/L	No
September 21, 2017	Total Haloacetic Acids	5/Dec/23	13	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	5/Dec/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	5/Dec/23	7.1	ug/L	No
September 21, 2017	(Monobromoacetic acid)	5/Dec/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	5/Dec/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	5/Dec/23	5.9	ug/L	No

**Drinking-Water Systems Regulation O. Reg. 170/03**
**SITE: 950 East Springbank Gate - Treated Distribution**
**a) ORGANIC PARAMETERS (HAA)**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	14/Mar/23	17.3	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	14/Mar/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	14/Mar/23	9	ug/L	No
September 21, 2017	(Monobromoacetic acid)	14/Mar/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	14/Mar/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	14/Mar/23	8.4	ug/L	No
September 21, 2017	Total Haloacetic Acids	6/Jun/23	12.9	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	6/Jun/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	6/Jun/23	7.2	ug/L	No
September 21, 2017	(Monobromoacetic acid)	6/Jun/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	6/Jun/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	6/Jun/23	5.7	ug/L	No
September 21, 2017	Total Haloacetic Acids	7/Sep/23	7.7	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	7/Sep/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	7/Sep/23	7.7	ug/L	No
September 21, 2017	(Monobromoacetic acid)	7/Sep/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	7/Sep/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	7/Sep/23	5.3 <MDL	ug/L	No
September 21, 2017	Total Haloacetic Acids	5/Dec/23	5.7	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	5/Dec/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	5/Dec/23	5.7	ug/L	No
September 21, 2017	(Monobromoacetic acid)	5/Dec/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	5/Dec/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	5/Dec/23	5.3 <MDL	ug/L	No

**Drinking-Water Systems Regulation O. Reg. 170/03**
**SITE: 365DD - London Pipeline - Treated Distribution**
**a) ORGANIC PARAMETERS (HAA & THM)**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Lead	4/Jan/23	0.01 <MDL	ug/L	No
September 21, 2017	Total Haloacetic Acids	4/Jan/23	5.3 <MDL	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	4/Jan/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	4/Jan/23	3.9	ug/L	No
September 21, 2017	(Monobromoacetic acid)	4/Jan/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	4/Jan/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	4/Jan/23	5.3 <MDL	ug/L	No
September 21, 2017	Total Haloacetic Acids	4/Apr/23	5.3 <MDL	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	4/Apr/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	4/Apr/23	3.5	ug/L	No
September 21, 2017	(Monobromoacetic acid)	4/Apr/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	4/Apr/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	4/Apr/23	5.3 <MDL	ug/L	No
September 21, 2017	Total Haloacetic Acids	4/Jul/23	6	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	4/Jul/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	4/Jul/23	6	ug/L	No
September 21, 2017	(Monobromoacetic acid)	4/Jul/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	4/Jul/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	4/Jul/23	5.3 <MDL	ug/L	No
September 21, 2017	Total Haloacetic Acids	3/Oct/23	5.8	ug/L	No
September 21, 2017	(Dibromoacetic Acid)	3/Oct/23	2 <MDL	ug/L	No
September 21, 2017	(Dichloroacetic Acid)	3/Oct/23	5.8	ug/L	No
September 21, 2017	(Monobromoacetic acid)	3/Oct/23	2.9 <MDL	ug/L	No
September 21, 2017	(Monochloroacetic Acid)	3/Oct/23	4.7 <MDL	ug/L	No
September 21, 2017	(Trichloroacetic Acid)	3/Oct/23	5.3 <MDL	ug/L	No
September 21, 2017	Trihalomethanes (total)	4/Jan/23	13	ug/L	No
September 21, 2017	Bromodichloromethane	4/Jan/23	4.1	ug/L	No
September 21, 2017	Bromoform	4/Jan/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	4/Jan/23	7.3	ug/L	No
September 21, 2017	Dibromochloromethane	4/Jan/23	2	ug/L	No
September 21, 2017	Trihalomethanes (total)	4/Apr/23	15	ug/L	No
September 21, 2017	Bromodichloromethane	4/Apr/23	5	ug/L	No
September 21, 2017	Bromoform	4/Apr/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	4/Apr/23	7.4	ug/L	No
September 21, 2017	Dibromochloromethane	4/Apr/23	2.8	ug/L	No
September 21, 2017	Trihalomethanes (total)	4/Jul/23	26	ug/L	No
September 21, 2017	Bromodichloromethane	4/Jul/23	7.9	ug/L	No
September 21, 2017	Bromoform	4/Jul/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	4/Jul/23	15	ug/L	No
September 21, 2017	Dibromochloromethane	4/Jul/23	3.5	ug/L	No
September 21, 2017	Trihalomethanes (total)	3/Oct/23	31	ug/L	No
September 21, 2017	Bromodichloromethane	3/Oct/23	9.1	ug/L	No
September 21, 2017	Bromoform	3/Oct/23	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	3/Oct/23	18	ug/L	No
September 21, 2017	Dibromochloromethane	3/Oct/23	3.6	ug/L	No

**b) NON-REGULATED INORGANIC/ORGANIC PARAMETERS**

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Turbidity-Field	4/Jan/23	0.07	NTU	No
September 21, 2017	Turbidity-Field	3/Jan/23	0.08	NTU	No
September 21, 2017	Turbidity-Field	10/Jan/23	0.06	NTU	No



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September 21, 2017	Turbidity-Field	17/Jan/23	0.05	NTU	No
September 21, 2017	Turbidity-Field	24/Jan/23	0.07	NTU	No
September 21, 2017	Turbidity-Field	31/Jan/23	0.07	NTU	No
September 21, 2017	Turbidity-Field	7/Feb/23	0.05	NTU	No
September 21, 2017	Turbidity-Field	14/Feb/23	0.08	NTU	No
September 21, 2017	Turbidity-Field	21/Feb/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	28/Feb/23	0.11	NTU	No
September 21, 2017	Turbidity-Field	7/Mar/23	0.08	NTU	No
September 21, 2017	Turbidity-Field	14/Mar/23	0.09	NTU	No
September 21, 2017	Turbidity-Field	21/Mar/23	0.1	NTU	No
September 21, 2017	Turbidity-Field	28/Mar/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	4/Apr/23	0.08	NTU	No
September 21, 2017	Turbidity-Field	11/Apr/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	18/Apr/23	0.09	NTU	No
September 21, 2017	Turbidity-Field	25/Apr/23	0.08	NTU	No
September 21, 2017	Turbidity-Field	2/May/23	0.07	NTU	No
September 21, 2017	Turbidity-Field	8/May/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	8/May/23	0.07	NTU	No
September 21, 2017	Turbidity-Field	9/May/23	0.04	NTU	No
September 21, 2017	Turbidity-Field	16/May/23	0.05	NTU	No
September 21, 2017	Turbidity-Field	23/May/23	0.09	NTU	No
September 21, 2017	Turbidity-Field	30/May/23	0.1	NTU	No
September 21, 2017	Turbidity-Field	6/Jun/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	13/Jun/23	0.07	NTU	No
September 21, 2017	Turbidity-Field	19/Jun/23	0.09	NTU	No
September 21, 2017	Turbidity-Field	27/Jun/23	0.05	NTU	No
September 21, 2017	Turbidity-Field	4/Jul/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	4/Jul/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	11/Jul/23	0.04	NTU	No
September 21, 2017	Turbidity-Field	18/Jul/23	0.04	NTU	No
September 21, 2017	Turbidity-Field	25/Jul/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	1/Aug/23	0.05	NTU	No
September 21, 2017	Turbidity-Field	8/Aug/23	0.08	NTU	No
September 21, 2017	Turbidity-Field	15/Aug/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	22/Aug/23	0.04	NTU	No
September 21, 2017	Turbidity-Field	29/Aug/23	0.08	NTU	No
September 21, 2017	Turbidity-Field	5/Sep/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	12/Sep/23	0.08	NTU	No
September 21, 2017	Turbidity-Field	19/Sep/23	0.07	NTU	No
September 21, 2017	Turbidity-Field	26/Sep/23	0.09	NTU	No
September 21, 2017	Turbidity-Field	3/Oct/23	0.03	NTU	No
September 21, 2017	Turbidity-Field	3/Oct/23	0.03	NTU	No
September 21, 2017	Turbidity-Field	10/Oct/23	0.09	NTU	No
September 21, 2017	Turbidity-Field	17/Oct/23	0.05	NTU	No
September 21, 2017	Turbidity-Field	24/Oct/23	0.07	NTU	No
September 21, 2017	Turbidity-Field	31/Oct/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	6/Nov/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	14/Nov/23	0.05	NTU	No
September 21, 2017	Turbidity-Field	21/Nov/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	28/Nov/23	0.09	NTU	No
September 21, 2017	Turbidity-Field	5/Dec/23	0.06	NTU	No
September 21, 2017	Turbidity-Field	12/Dec/23	0.08	NTU	No
September 21, 2017	Turbidity-Field	19/Dec/23	0.05	NTU	No
September 21, 2017	Turbidity-Field	27/Dec/23	0.06	NTU	No

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

None.

## 2023 Summary of Water Pumpage



**London**  
CANADA

DAY	DATE	ARVA PUMPAGE (m <sup>3</sup> )	SERPS PUMPAGE (m <sup>3</sup> )	TOTAL LONDON CONSUMPTION (m <sup>3</sup> )
Sunday	1/Jan/23	83,316	20,960	103,938
Monday	2/Jan/23	89,644	22,763	111,363
Tuesday	3/Jan/23	88,656	22,794	113,254
Wednesday	4/Jan/23	94,048	22,714	115,973
Thursday	5/Jan/23	89,808	22,794	115,871
Friday	6/Jan/23	95,884	24,225	118,305
Saturday	7/Jan/23	93,698	25,239	115,104
Sunday	8/Jan/23	96,518	26,365	121,305
Monday	9/Jan/23	93,800	25,448	122,292
Tuesday	10/Jan/23	94,992	21,176	121,467
Wednesday	11/Jan/23	97,628	24,073	120,010
Thursday	12/Jan/23	98,108	23,114	118,967
Friday	13/Jan/23	94,352	22,809	120,656
Saturday	14/Jan/23	98,400	22,728	118,648
Sunday	15/Jan/23	106,608	22,740	119,314
Monday	16/Jan/23	89,286	<b>28,119</b>	120,336
Tuesday	17/Jan/23	90,422	22,876	119,837
Wednesday	18/Jan/23	<b>124,974</b>	25,933	117,085
Thursday	19/Jan/23	122,568	23,542	116,685
Friday	20/Jan/23	94,032	22,764	118,218
Saturday	21/Jan/23	92,816	22,781	116,386
Sunday	22/Jan/23	96,912	22,806	117,125
Monday	23/Jan/23	93,648	22,768	120,700
Tuesday	24/Jan/23	99,840	22,728	119,186
Wednesday	25/Jan/23	94,912	22,779	118,142
Thursday	26/Jan/23	94,928	22,764	118,256
Friday	27/Jan/23	94,736	22,764	117,725
Saturday	28/Jan/23	90,656	22,769	116,582
Sunday	29/Jan/23	97,328	22,769	117,955
Monday	30/Jan/23	113,216	22,765	118,844
Tuesday	31/Jan/23	99,944	19,536	<b>126,921</b>
<b>January 2023 Monthly Max</b>		124,974	28,119	126,921
<b>January 2023 Monthly Average</b>		97,412	23,315	118,417
<b>January 2023 Total</b>		2,922,362	699,445	3,552,511

DAY	DATE	ARVA PUMPAGE (m <sup>3</sup> )	SERPS PUMPAGE (m <sup>3</sup> )	TOTAL LONDON CONSUMPTION (m <sup>3</sup> )
Wednesday	1/Feb/23	95,294	22,737	<b>126,036</b>
Thursday	2/Feb/23	106,762	23,072	123,070
Friday	3/Feb/23	98,446	22,270	121,956
Saturday	4/Feb/23	98,830	19,201	118,482
Sunday	5/Feb/23	106,490	10,621	120,606
Monday	6/Feb/23	102,508	23,249	120,796
Tuesday	7/Feb/23	101,982	23,084	120,669
Wednesday	8/Feb/23	100,952	24,114	122,924
Thursday	9/Feb/23	92,352	24,681	120,528
Friday	10/Feb/23	97,352	24,083	120,984
Saturday	11/Feb/23	91,868	24,646	117,754
Sunday	12/Feb/23	98,160	24,852	119,630
Monday	13/Feb/23	110,980	11,948	119,884
Tuesday	14/Feb/23	109,648	11,866	120,048
Wednesday	15/Feb/23	105,584	11,932	122,251
Thursday	16/Feb/23	88,240	22,910	120,169
Friday	17/Feb/23	78,928	22,922	119,099
Saturday	18/Feb/23	79,104	25,002	114,027
Sunday	19/Feb/23	92,192	19,287	116,180
Monday	20/Feb/23	63,872	26,165	114,840
Tuesday	21/Feb/23	95,888	26,005	115,354
Wednesday	22/Feb/23	91,168	<b>26,561</b>	116,151
Thursday	23/Feb/23	87,712	15,828	114,701
Friday	24/Feb/23	109,056	10,868	115,753
Saturday	25/Feb/23	111,760	5,877	111,549
Sunday	26/Feb/23	105,696	4,978	116,762
Monday	27/Feb/23	<b>115,856</b>	4,972	116,995
Tuesday	28/Feb/23	112,080	4,951	120,300
<b>February 2023 Monthly Max</b>		115,856	26,561	126,036
<b>February 2023 Monthly Max</b>		98,170	18,524	118,839
<b>February 2023 Total</b>		2,748,760	518,682	3,327,499

DAY	DATE	ARVA PUMPAGE (m <sup>3</sup> )	SERPS PUMPAGE (m <sup>3</sup> )	TOTAL LONDON CONSUMPTION (m <sup>3</sup> )
Wednesday	1/Mar/23	<b>112,048</b>	8,858	120,004
Thursday	2/Mar/23	108,192	16,514	119,858
Friday	3/Mar/23	85,856	26,014	119,649
Saturday	4/Mar/23	96,434	25,136	120,104
Sunday	5/Mar/23	90,770	26,406	121,122
Monday	6/Mar/23	110,576	11,967	121,077
Tuesday	7/Mar/23	102,636	<b>29,523</b>	123,140
Wednesday	8/Mar/23	97,344	25,529	122,760
Thursday	9/Mar/23	97,152	25,518	120,641
Friday	10/Mar/23	90,112	25,202	118,696
Saturday	11/Mar/23	90,128	25,517	116,998
Sunday	12/Mar/23	88,064	24,909	110,944
Monday	13/Mar/23	104,272	16,685	117,575
Tuesday	14/Mar/23	89,406	26,343	121,499
Wednesday	15/Mar/23	99,074	26,042	121,396
Thursday	16/Mar/23	94,414	25,295	121,062
Friday	17/Mar/23	90,302	25,853	119,424
Saturday	18/Mar/23	90,160	25,616	117,693
Sunday	19/Mar/23	98,924	25,539	120,630
Monday	20/Mar/23	97,036	25,954	122,314
Tuesday	21/Mar/23	98,554	25,950	123,151
Wednesday	22/Mar/23	100,434	12,764	122,555
Thursday	23/Mar/23	100,486	24,639	120,277
Friday	24/Mar/23	95,860	24,001	121,101
Saturday	25/Mar/23	84,664	23,672	116,679
Sunday	26/Mar/23	103,380	22,839	118,102
Monday	27/Mar/23	96,738	22,796	120,210
Tuesday	28/Mar/23	106,656	21,461	121,916
Wednesday	29/Mar/23	96,864	21,488	122,185
Thursday	30/Mar/23	101,264	20,366	<b>123,659</b>
Friday	31/Mar/23	97,808	21,480	119,063
<b>March 2023 Monthly Max</b>		112,048	29,523	123,659
<b>March 2023 Monthly Average</b>		97,278	22,899	120,177
<b>March 2023 Total</b>		3,015,608	709,876	3,725,484

DAY	DATE	ARVA PUMPAGE (m <sup>3</sup> )	SERPS PUMPAGE (m <sup>3</sup> )	TOTAL LONDON CONSUMPTION (m <sup>3</sup> )
Saturday	1/Apr/23	97,424	20,979	118,403
Sunday	2/Apr/23	101,072	19,292	120,477
Monday	3/Apr/23	106,112	19,225	119,474
Tuesday	4/Apr/23	92,848	23,090	122,477
Wednesday	5/Apr/23	97,744	22,992	121,300
Thursday	6/Apr/23	96,448	22,943	120,518
Friday	7/Apr/23	97,008	22,956	116,131
Saturday	8/Apr/23	90,464	21,977	110,412
Sunday	9/Apr/23	85,408	22,955	113,211
Monday	10/Apr/23	97,136	22,893	121,269
Tuesday	11/Apr/23	102,624	22,914	126,102
Wednesday	12/Apr/23	99,004	27,680	129,277
Thursday	13/Apr/23	85,930	<b>35,709</b>	<b>131,347</b>
Friday	14/Apr/23	114,918	20,295	126,347
Saturday	15/Apr/23	<b>114,986</b>	20,300	122,075
Sunday	16/Apr/23	102,804	20,300	126,908
Monday	17/Apr/23	103,416	20,333	122,428
Tuesday	18/Apr/23	111,824	20,252	120,910
Wednesday	19/Apr/23	111,520	20,265	123,911
Thursday	20/Apr/23	98,736	20,288	125,311
Friday	21/Apr/23	94,016	21,995	123,668
Saturday	22/Apr/23	99,680	22,785	114,388
Sunday	23/Apr/23	91,856	22,801	118,420
Monday	24/Apr/23	103,584	22,888	122,532
Tuesday	25/Apr/23	91,130	25,981	124,668
Wednesday	26/Apr/23	100,384	24,332	125,064
Thursday	27/Apr/23	105,474	25,163	125,379
Friday	28/Apr/23	99,116	24,338	122,638
Saturday	29/Apr/23	94,074	22,880	117,945
Sunday	30/Apr/23	93,072	22,218	118,804
<b>April 2023 Monthly Max</b>		114,986	35,709	131,347
<b>April 2023 Monthly Average</b>		99,327	22,767	121,727
<b>April 2023 Total</b>		2,979,812	683,019	3,651,796

DAY	DATE	ARVA PUMPAGE (m <sup>3</sup> )	SERPS PUMPAGE (m <sup>3</sup> )	TOTAL LONDON CONSUMPTION (m <sup>3</sup> )
Monday	1/May/23	101,450	23,257	121,896
Tuesday	2/May/23	96,880	23,329	122,205
Wednesday	3/May/23	101,792	23,476	121,051
Thursday	4/May/23	101,424	23,305	123,666
Friday	5/May/23	101,680	23,459	123,833
Saturday	6/May/23	90,208	24,738	120,415
Sunday	7/May/23	93,040	23,627	119,994
Monday	8/May/23	101,456	24,644	127,667
Tuesday	9/May/23	91,776	28,600	132,494
Wednesday	10/May/23	115,926	27,657	137,586
Thursday	11/May/23	115,682	23,334	137,230
Friday	12/May/23	120,422	23,366	138,121
Saturday	13/May/23	115,256	21,624	133,669
Sunday	14/May/23	111,694	21,629	129,099
Monday	15/May/23	115,694	23,343	136,342
Tuesday	16/May/23	111,590	23,346	139,282
Wednesday	17/May/23	118,798	23,344	134,893
Thursday	18/May/23	114,448	23,332	136,532
Friday	19/May/23	105,828	23,313	136,584
Saturday	20/May/23	105,266	22,271	117,767
Sunday	21/May/23	83,090	23,369	126,121
Monday	22/May/23	105,904	25,114	137,444
Tuesday	23/May/23	127,458	23,363	142,261
Wednesday	24/May/23	124,154	23,347	142,204
Thursday	25/May/23	125,604	23,327	142,582
Friday	26/May/23	123,372	23,345	150,317
Saturday	27/May/23	131,216	23,394	151,542
Sunday	28/May/23	127,782	23,390	161,876
Monday	29/May/23	136,184	24,215	<b>170,624</b>
Tuesday	30/May/23	144,818	27,429	169,682
Wednesday	31/May/23	<b>148,480</b>	<b>29,426</b>	168,853
<b>May 2023 Monthly Max</b>		148,480	29,426	170,624
<b>May 2023 Monthly Average</b>		113,173	24,023	137,220
<b>May 2023 Total</b>		3,508,372	744,713	4,253,832



DAY	DATE	ARVA PUMPAGE (m <sup>3</sup> )	SERPS PUMPAGE (m <sup>3</sup> )	TOTAL LONDON CONSUMPTION (m <sup>3</sup> )
Thursday	1/Jun/23	144,078	27,898	172,908
Friday	2/Jun/23	142,638	<b>29,927</b>	<b>177,070</b>
Saturday	3/Jun/23	<b>156,736</b>	28,159	162,009
Sunday	4/Jun/23	123,872	23,371	165,910
Monday	5/Jun/23	144,096	23,337	163,774
Tuesday	6/Jun/23	148,032	21,326	160,117
Wednesday	7/Jun/23	138,160	21,025	161,733
Thursday	8/Jun/23	128,224	22,828	150,230
Friday	9/Jun/23	124,000	23,777	158,143
Saturday	10/Jun/23	123,920	19,100	151,776
Sunday	11/Jun/23	132,672	22,710	131,207
Monday	12/Jun/23	100,432	23,608	128,850
Tuesday	13/Jun/23	105,658	23,638	132,134
Wednesday	14/Jun/23	109,646	25,572	134,863
Thursday	15/Jun/23	109,338	23,645	135,333
Friday	16/Jun/23	119,450	21,441	134,396
Saturday	17/Jun/23	109,888	25,350	132,513
Sunday	18/Jun/23	110,306	21,994	139,411
Monday	19/Jun/23	118,830	21,988	153,496
Tuesday	20/Jun/23	140,028	22,306	156,607
Wednesday	21/Jun/23	140,474	22,451	162,925
Thursday	22/Jun/23	144,052	22,811	149,400
Friday	23/Jun/23	122,678	18,949	135,595
Saturday	24/Jun/23	93,712	24,996	129,799
Sunday	25/Jun/23	106,142	26,744	135,615
Monday	26/Jun/23	109,286	22,357	133,127
Tuesday	27/Jun/23	110,854	23,704	133,252
Wednesday	28/Jun/23	115,280	23,705	138,453
Thursday	29/Jun/23	104,608	20,322	144,366
Friday	30/Jun/23	131,664	22,979	144,081
<b>June 2023 Monthly Max</b>		156,736	29,927	177,070
<b>June 2023 Monthly Average</b>		123,625	23,401	146,970
<b>June 2023 Total</b>		3,708,754	702,018	4,409,092

DAY	DATE	ARVA PUMPAGE (m <sup>3</sup> )	SERPS PUMPAGE (m <sup>3</sup> )	TOTAL LONDON CONSUMPTION (m <sup>3</sup> )
Saturday	1/Jul/23	111,440	23,973	126,362
Sunday	2/Jul/23	99,312	23,330	115,072
Monday	3/Jul/23	91,888	23,324	124,023
Tuesday	4/Jul/23	114,000	23,319	137,142
Wednesday	5/Jul/23	115,648	24,952	<b>145,604</b>
Thursday	6/Jul/23	119,744	25,470	137,194
Friday	7/Jul/23	96,416	<b>25,751</b>	135,545
Saturday	8/Jul/23	105,584	25,092	113,002
Sunday	9/Jul/23	92,048	23,982	130,567
Monday	10/Jul/23	110,400	23,969	137,158
Tuesday	11/Jul/23	119,642	23,962	136,485
Wednesday	12/Jul/23	105,718	24,630	134,853
Thursday	13/Jul/23	104,770	24,645	131,854
Friday	14/Jul/23	110,058	24,636	133,127
Saturday	15/Jul/23	99,926	24,002	122,002
Sunday	16/Jul/23	101,262	23,988	125,426
Monday	17/Jul/23	99,994	23,977	139,245
Tuesday	18/Jul/23	123,326	22,387	140,055
Wednesday	19/Jul/23	123,346	24,627	142,197
Thursday	20/Jul/23	116,218	19,764	137,375
Friday	21/Jul/23	115,180	23,938	135,697
Saturday	22/Jul/23	106,718	23,982	129,591
Sunday	23/Jul/23	111,162	23,978	131,099
Monday	24/Jul/23	111,904	23,965	139,559
Tuesday	25/Jul/23	118,960	23,963	144,384
Wednesday	26/Jul/23	<b>123,360</b>	23,919	138,767
Thursday	27/Jul/23	106,544	21,280	134,763
Friday	28/Jul/23	111,552	22,645	137,511
Saturday	29/Jul/23	106,272	23,991	125,543
Sunday	30/Jul/23	98,320	24,008	125,594
Monday	31/Jul/23	107,328	23,960	133,664
<b>July 2023 Monthly Max</b>		123,360	25,751	145,604
<b>July 2023 Monthly Average</b>		108,969	23,852	132,918
<b>July 2023 Total</b>		3,378,040	739,409	4,120,460

DAY	DATE	ARVA PUMPAGE (m <sup>3</sup> )	SERPS PUMPAGE (m <sup>3</sup> )	TOTAL LONDON CONSUMPTION (m <sup>3</sup> )
Tuesday	1/Aug/23	115,118	23,956	139,309
Wednesday	2/Aug/23	118,942	23,969	142,276
Thursday	3/Aug/23	118,732	23,922	<b>147,445</b>
Friday	4/Aug/23	127,386	23,969	144,649
Saturday	5/Aug/23	118,526	23,997	131,002
Sunday	6/Aug/23	92,984	23,958	121,554
Monday	7/Aug/23	94,918	24,008	120,864
Tuesday	8/Aug/23	106,544	23,970	134,963
Wednesday	9/Aug/23	115,520	19,662	141,892
Thursday	10/Aug/23	<b>128,688</b>	18,983	140,725
Friday	11/Aug/23	119,472	22,809	136,549
Saturday	12/Aug/23	104,432	23,996	127,831
Sunday	13/Aug/23	103,024	23,989	128,777
Monday	14/Aug/23	110,176	24,465	136,812
Tuesday	15/Aug/23	105,504	23,962	128,173
Wednesday	16/Aug/23	105,408	<b>26,208</b>	134,139
Thursday	17/Aug/23	110,016	25,039	132,356
Friday	18/Aug/23	101,392	23,889	127,917
Saturday	19/Aug/23	100,672	23,996	123,902
Sunday	20/Aug/23	101,568	23,327	128,690
Monday	21/Aug/23	110,352	23,963	139,173
Tuesday	22/Aug/23	114,932	23,931	138,113
Wednesday	23/Aug/23	110,062	23,881	129,774
Thursday	24/Aug/23	106,064	23,963	134,714
Friday	25/Aug/23	110,246	23,920	133,071
Saturday	26/Aug/23	105,920	23,989	126,839
Sunday	27/Aug/23	105,574	23,989	126,424
Monday	28/Aug/23	111,086	23,952	137,132
Tuesday	29/Aug/23	117,240	23,952	138,458
Wednesday	30/Aug/23	111,148	23,940	129,033
Thursday	31/Aug/23	102,936	23,933	135,136
<b>August 2023 Monthly Max</b>		128,688	26,208	147,445
<b>August 2023 Monthly Average</b>		109,825	23,725	133,474
<b>August 2023 Total</b>		3,404,582	735,487	4,137,693

DAY	DATE	ARVA PUMPAGE (m <sup>3</sup> )	SERPS PUMPAGE (m <sup>3</sup> )	TOTAL LONDON CONSUMPTION (m <sup>3</sup> )
Friday	1/Sep/23	106,394	23,966	136,842
Saturday	2/Sep/23	106,244	24,000	125,503
Sunday	3/Sep/23	103,426	23,995	128,292
Monday	4/Sep/23	110,742	23,992	141,991
Tuesday	5/Sep/23	<b>128,016</b>	25,141	<b>148,390</b>
Wednesday	6/Sep/23	126,976	20,978	143,027
Thursday	7/Sep/23	111,584	20,339	137,998
Friday	8/Sep/23	122,976	24,471	132,286
Saturday	9/Sep/23	102,368	24,515	128,060
Sunday	10/Sep/23	97,904	24,965	131,474
Monday	11/Sep/23	109,776	24,453	138,400
Tuesday	12/Sep/23	110,384	24,455	132,757
Wednesday	13/Sep/23	110,448	24,137	134,063
Thursday	14/Sep/23	110,304	24,432	133,753
Friday	15/Sep/23	110,208	23,923	132,851
Saturday	16/Sep/23	103,248	23,922	126,474
Sunday	17/Sep/23	103,328	23,906	126,947
Monday	18/Sep/23	101,728	23,870	133,234
Tuesday	19/Sep/23	110,728	23,844	136,583
Wednesday	20/Sep/23	122,332	23,859	136,892
Thursday	21/Sep/23	119,516	15,703	139,859
Friday	22/Sep/23	121,764	18,871	137,737
Saturday	23/Sep/23	119,568	18,378	129,641
Sunday	24/Sep/23	123,222	17,193	130,612
Monday	25/Sep/23	97,072	22,062	136,372
Tuesday	26/Sep/23	111,440	25,828	133,705
Wednesday	27/Sep/23	107,840	<b>26,695</b>	135,477
Thursday	28/Sep/23	107,824	24,484	132,772
Friday	29/Sep/23	107,152	23,971	133,628
Saturday	30/Sep/23	107,744	24,006	126,609
<b>September 2023 Monthly Max</b>		128,016	26,695	148,390
<b>September 2023 Monthly Average</b>		111,075	23,145	134,074
<b>September 2023 Total</b>		3,332,256	694,354	4,022,227

DAY	DATE	ARVA PUMPAGE (m <sup>3</sup> )	SERPS PUMPAGE (m <sup>3</sup> )	TOTAL LONDON CONSUMPTION (m <sup>3</sup> )
Sunday	1/Oct/23	97,024	23,975	129,966
Monday	2/Oct/23	112,160	23,957	<b>138,878</b>
Tuesday	3/Oct/23	<b>119,344</b>	23,952	138,563
Wednesday	4/Oct/23	115,008	22,244	137,948
Thursday	5/Oct/23	115,056	<b>26,551</b>	136,439
Friday	6/Oct/23	105,744	23,986	129,379
Saturday	7/Oct/23	100,736	23,997	115,840
Sunday	8/Oct/23	79,200	23,996	111,211
Monday	9/Oct/23	91,296	23,761	115,561
Tuesday	10/Oct/23	105,792	23,658	127,365
Wednesday	11/Oct/23	104,240	23,974	127,335
Thursday	12/Oct/23	103,504	23,973	130,225
Friday	13/Oct/23	103,424	23,972	126,869
Saturday	14/Oct/23	95,200	24,024	118,760
Sunday	15/Oct/23	90,944	24,011	121,534
Monday	16/Oct/23	104,304	23,983	127,130
Tuesday	17/Oct/23	104,174	23,151	129,179
Wednesday	18/Oct/23	106,498	24,535	129,353
Thursday	19/Oct/23	103,290	24,004	128,738
Friday	20/Oct/23	100,462	23,970	126,512
Saturday	21/Oct/23	96,116	24,010	120,126
Sunday	22/Oct/23	96,244	24,001	121,108
Monday	23/Oct/23	101,600	23,950	125,377
Tuesday	24/Oct/23	106,304	23,952	127,199
Wednesday	25/Oct/23	106,048	22,619	127,387
Thursday	26/Oct/23	105,520	22,621	127,906
Friday	27/Oct/23	100,576	22,971	126,281
Saturday	28/Oct/23	103,248	21,351	116,501
Sunday	29/Oct/23	99,296	21,353	114,463
Monday	30/Oct/23	99,264	20,923	119,832
Tuesday	31/Oct/23	70,410	26,297	124,872
<b>October 2023 Monthly Max</b>		119,344	26,551	138,878
<b>October 2023 Monthly Average</b>		101,356	23,668	125,737
<b>October 2023 Total</b>		3,142,026	733,722	3,897,836

DAY	DATE	ARVA PUMPAGE (m <sup>3</sup> )	SERPS PUMPAGE (m <sup>3</sup> )	TOTAL LONDON CONSUMPTION (m <sup>3</sup> )
Wednesday	1/Nov/23	108,360	24,138	122,881
Thursday	2/Nov/23	101,852	23,961	123,224
Friday	3/Nov/23	97,004	23,964	122,176
Saturday	4/Nov/23	96,786	23,553	114,267
Sunday	5/Nov/23	96,998	<b>24,583</b>	125,237
Monday	6/Nov/23	95,768	22,617	120,111
Tuesday	7/Nov/23	102,320	23,975	125,319
Wednesday	8/Nov/23	106,294	23,356	126,114
Thursday	9/Nov/23	102,302	23,939	126,241
Friday	10/Nov/23	102,862	23,988	125,979
Saturday	11/Nov/23	98,052	23,165	118,244
Sunday	12/Nov/23	102,646	22,783	121,499
Monday	13/Nov/23	102,904	22,714	126,561
Tuesday	14/Nov/23	102,980	22,699	127,260
Wednesday	15/Nov/23	107,648	22,713	126,305
Thursday	16/Nov/23	103,040	21,772	126,408
Friday	17/Nov/23	99,568	22,649	125,028
Saturday	18/Nov/23	94,944	22,684	118,331
Sunday	19/Nov/23	94,528	22,662	120,166
Monday	20/Nov/23	102,432	22,334	127,613
Tuesday	21/Nov/23	95,216	21,725	125,386
Wednesday	22/Nov/23	108,160	20,180	126,630
Thursday	23/Nov/23	110,624	20,194	126,103
Friday	24/Nov/23	106,704	20,204	128,289
Saturday	25/Nov/23	99,248	21,018	120,093
Sunday	26/Nov/23	104,496	20,983	120,100
Monday	27/Nov/23	99,088	20,965	126,242
Tuesday	28/Nov/23	109,922	20,945	134,990
Wednesday	29/Nov/23	<b>117,832</b>	22,679	<b>136,114</b>
Thursday	30/Nov/23	115,540	23,628	128,063
<b>November 2023 Monthly Max</b>		117,832	24,583	136,114
<b>November 2023 Monthly Average</b>		102,871	22,559	124,699
<b>November 2023 Total</b>		3,086,118	676,770	3,740,976

DAY	DATE	ARVA PUMPAGE (m <sup>3</sup> )	SERPS PUMPAGE (m <sup>3</sup> )	TOTAL LONDON CONSUMPTION (m <sup>3</sup> )
Friday	1/Dec/23	94,354	23,503	128,891
Saturday	2/Dec/23	97,026	22,003	119,142
Sunday	3/Dec/23	99,326	23,280	118,452
Monday	4/Dec/23	100,264	23,214	125,734
Tuesday	5/Dec/23	103,498	23,191	125,304
Wednesday	6/Dec/23	105,458	23,225	126,942
Thursday	7/Dec/23	106,434	23,208	124,398
Friday	8/Dec/23	97,072	23,992	124,567
Saturday	9/Dec/23	94,158	23,251	115,726
Sunday	10/Dec/23	91,816	23,043	119,328
Monday	11/Dec/23	101,700	23,964	127,460
Tuesday	12/Dec/23	111,076	23,939	129,911
Wednesday	13/Dec/23	105,286	23,823	<b>133,462</b>
Thursday	14/Dec/23	110,471	24,615	130,211
Friday	15/Dec/23	102,514	<b>24,632</b>	126,093
Saturday	16/Dec/23	97,088	21,642	118,379
Sunday	17/Dec/23	96,472	17,990	116,562
Monday	18/Dec/23	100,687	17,972	117,437
Tuesday	19/Dec/23	101,955	17,284	130,220
Wednesday	20/Dec/23	<b>114,737</b>	17,069	122,682
Thursday	21/Dec/23	110,284	15,970	123,343
Friday	22/Dec/23	105,478	15,982	122,927
Saturday	23/Dec/23	93,105	16,004	111,659
Sunday	24/Dec/23	85,261	16,031	106,837
Monday	25/Dec/23	85,901	12,999	97,002
Tuesday	26/Dec/23	85,320	12,004	102,150
Wednesday	27/Dec/23	98,140	11,984	113,089
Thursday	28/Dec/23	110,273	11,502	112,540
Friday	29/Dec/23	99,492	10,325	115,231
Saturday	30/Dec/23	99,593	10,019	109,439
Sunday	31/Dec/23	98,916	9,917	105,036
<b>December 2023 Monthly Max</b>		114,737	24,632	133,462
<b>December 2023 Monthly Average</b>		100,102	18,954	119,360
<b>December 2023 Total</b>		3,103,155	587,577	3,700,153



<b>Drinking-Water System Number:</b>	260004917
<b>Drinking-Water System Name:</b>	<b>Elgin Middlesex Pumping Station – City of London Distribution System</b>
<b>Drinking-Water System Owner:</b>	City of London
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 1, 2023 through December 31, 2023

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p><b>Does your Drinking-Water System serve more than 10,000 people? Yes [X] No [ ]</b></p> <p><b>Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No [ ]</b></p> <p><b>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</b></p> <div style="border: 1px solid black; padding: 5px;"> <p>City of London 300 Dufferin Ave London, ON N6B 1Z2 <a href="http://www.london.ca">www.london.ca</a></p> <p>Elgin Area Primary Water Supply System Treatment Plant 43665 Dexter Line, Union, ON</p> </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p><b>Number of Designated Facilities served:</b>  <div style="border: 1px solid black; padding: 2px; display: inline-block;">N/A</div> </p> <p><b>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]</b></p> <p><b>Number of Interested Authorities you report to:</b> <div style="border: 1px solid black; padding: 2px; display: inline-block;">N/A</div></p> <p><b>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</b></p>
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**List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:**

**Systems that receive their drinking water directly from the London EMPS:**

<b>Drinking Water System Name</b>	<b>Drinking Water System Number</b>
City of London Distribution System	260004917

**Systems that receive their drinking water indirectly from the London EMPS:**

<b>Drinking Water System Name</b>	<b>Drinking Water System Number</b>
Municipality of Central Elgin	260004761





**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 of its 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 \_\_\_\_\_**

**Describe your Drinking-Water System**

The Elgin Middlesex Pumping Station (EMPS) receives water from the Elgin Area Primary Water Supply System (EAPWSS), which is located to the east of Port Stanley. Water from the EAPWSS is pumped into the EAPWSS site reservoirs located at the EMPS. The total capacity of the 2 reservoirs is 54,600m<sup>3</sup>. Through various secondary water supply systems, the EMPS serves the Cities of London, St. Thomas, Town of Aylmer, Municipalities of Central Elgin, Malahide and Southwold.

The EMPS is a shared facility. Booster pumps are dedicated to directing water to the City of London, St. Thomas Secondary and/or Aylmer Area Secondary Water Supply Systems. The EMPS houses a surge facility to service the London transmission main.

Three pipelines exit the EMPS: one pipeline runs North along Highbury Avenue into the Southeast Reservoir Pumping Station (SERPS) to service the London distribution system, the second exits to the south of the EMPS property and extends West to service the St. Thomas Area Secondary Water Supply System; the third exits to the South, to Highway 3 and then runs in an Easterly direction to service the municipalities on the Aylmer Area Secondary Water Supply System.

**List all water treatment chemicals used over this reporting period**

No re-treatment of water directed into the London system took place at the EMPS in 2023.

**Were any significant expenses incurred to?**

- Install required equipment
- Repair required equipment
- Replace required equipment

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

- Elgin Middlesex Pumping Station Process Flow Diagram Consolidation
- London Air Compressor Engineering Design
- Air Compressor Repairs and Major Preventative Maintenance
- Pump Dismantle - Physical Component Inspection and Measurements

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

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
N/A	N/A	N/A	N/A	N/A	N/A

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.coli Results (CFU/100 mL) (min #)-(max #)	Range of Total Coliform Results (CFU/100 mL) (min #)-(max #)	Number of Heterotrophic Plate Count (HPC) Samples	Range of HPC Results (CFU/1 mL) (min #)-(max #)
Distribution	58	(0) – (0)	(0) – (0)	58	(<10)-(100)

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

Parameter	Number of Grab Samples (Continuous Monitoring)	Min	Max	Avg
Free Chlorine Residual (mg/L)	8760	0.45	1.08	0.88

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: result value is based on one sample)	January 4, 2023	13	µg/L	NO
	April 4, 2023	15	µg/L	
	July 4, 2023	26	µg/L	
	October 3, 2023	31	µg/L	
THM Running Annual Average (RAA)	2023	21	µg/L	NO



<b>HAA</b> (NOTE: result value is based on one sample)	January 4, 2023 April 4, 2023 July 4, 2023 October 3, 2023	ND ND 6.0 5.8	µg/L µg/L µg/L µg/L	NO
<b>HAA</b> <b>Running Annual Average (RAA)</b>	2023	5.9	µg/L	NO

ND = Non-detect