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: **2022 Drinking Water Annual Report and Summary Report for the City of London Drinking Water System**
Date: **February 22, 2023**

Recommendation

That, on the recommendation of the Deputy City Manager, Environment and Infrastructure, the 2022 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 to 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

The 2019 – 2023 Strategic Plan identifies this objective under Leading in Public Service: Measure and publicly report on corporate performance.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

- Civic Works Committee – February 1, 2022 - 2021 Drinking Water Annual Report and Summary Report for the City of London Drinking Water System

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 to 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 2022 Drinking Water Summary Report for the City of London Drinking Water System has been provided to members of Council in electronic format, with the 2022 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 made available to London on January 31, 2023. As required, it will form part of the overall 2022 Drinking Water Summary Report for the City of London Drinking Water System.

Conclusion

Receipt of Appendix 'A' of this report by members of Council fulfils the reporting requirements of O. Reg. 170/03, Schedule 22. The 2022 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 2022 Drinking Water Summary Report

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

CITY OF LONDON

2022 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: 126.041 MLD
Peak Day Demand: 161.701 MLD (July 14, 2022)
Population Served: 400,000 (approx.)
Source Water: Surface Water (Lake Huron, Lake Erie)
Drinking Water System Number: 260004917
Municipal Drinking Water Licence: 006-101

London
CANADA

CONTACT INFO:
Owner:
Corporation of the City of London
300 Dufferin Avenue, London, Ontario N6A 4L9
Contact: Mr. John Simon, P.Eng. Division Manager Water Operations
519-661-2489 ext. 4938

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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 Council's Civic Works Committee on February 22, 2023, 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, 2023, a copy of the 2022 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) was provided by OCWA on January 31, 2023 and is included in 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 2022 was $90.5 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.

Impacts of Covid-19 on Operational Performance

The novel coronavirus (Covid-19) has continued to cause unprecedented interruption to the daily activities of individuals, businesses, and institutions around the world. The City of London continues to experience ongoing challenges, and there remains considerable uncertainty. Availability and cost of essential stock, inventory, supplies, and material is

concerning. The Water Service Area has taken steps to maintain product delivery, continue to closely monitor availability of supplies, and in some cases have implemented advanced procurement of material and products. The Water Service Area is an Essential Service that must maintain service continuity. Operationally throughout 2022, with all the impacts of Covid-19 and supply chain difficulties, the Water Service Area once again continued with “business-as-usual”, with only minor service level impacts seen on non-critical work processes.

Staffing/Business Continuity
Throughout 2022, even with impacts of Covid-19, 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 the Covid-19 pandemic and supply chain disruptions, there have been cost increases to operational material and supplies. The Water Service Area has continued to work within allocated budgets. Water demand has continued to be strong and essentially unaffected by the pandemic.

Maintenance and Construction
With the effects of the pandemic controlling and altering daily activities, the Water Operations Division continued to deliver essential water services. Water Operations Division and Water Engineering Division staff maintained, whenever possible, a “business-as-usual” level of service. Staff adapted to mandated requirements and found ways to continue their tasks and duties. The Corporation continued to provide support to staff by way of allocating necessary supplies, additional vehicles, sourcing and providing personal protective equipment.

Sampling & Water Quality Monitoring

In 2022, 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 over 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 also 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.

2022 Water Quality Sampling Summary

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2022	MAC Exceedance (Y/N)
REGULATED INORGANICS					
Antimony	6	ug/L	0.6	**0.9 - 0.9**	No
Arsenic	10	ug/L	0.2	**0.2 - 0.5**	No
Barium	1000	ug/L	0.02	**13.7 - 20.9**	No
Boron	5000	ug/L	2	**17 - 31**	No
Cadmium	5	ug/L	0.003	**0.003 <MDL**	No
Chromium	50	ug/L	0.08	**0.17 - 0.26**	No
Fluoride	1.5	mg/L	0.06	**0.13 - 0.68**	No
Free Chlorine	--	mg/L	0.000	**0.3 - 1.4**	No
Lead	10	ug/L	0.01	**0.01 - 0.13**	No
Mercury	1	ug/L	0.01	**0.01 <MDL**	No
Selenium	50	ug/L	0.04	**0.13 - 0.24**	No
Sodium	20	mg/L	0.01	**12.4 - 18.2**	No
Uranium	20	ug/L	0.002	**0.037 - 0.039**	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2022	MAC Exceedance (Y/N)
NITRATES					
Nitrate (as nitrogen)	10	mg/L	0.006	**0.04 - 0.565**	No
Nitrate + Nitrite (as nitrogen)	--	mg/L	0.006	**0.04 - 0.565**	No
Nitrite (as nitrogen)	1	mg/L	0.003	**0.003 <MDL**	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2022	MAC Exceedance (Y/N)
TRIHALOMETHANES & HALOACETIC ACIDS					
Total Haloacetic Acids	80	ug/L	5.3	**5.3 - 25.5**	No
Dibromoacetic Acid	--	ug/L	2	**2 <MDL**	No
Dichloroacetic Acid	--	ug/L	2.6	**3.4 - 17.2**	No
Monobromoacetic acid	--	ug/L	2.9	**2.9 <MDL**	No
Monochloroacetic Acid	--	ug/L	4.7	**4.7 <MDL**	No
Trichloroacetic Acid	--	ug/L	5.3	**5.3 - 8.4**	No
Trihalomethanes (total)	100	ug/L	0.37	**15 - 58**	No
Bromodichloromethane	--	ug/L	0.26	**4.6 - 13**	No
Bromoform	--	ug/L	0.34	**0.34 <MDL**	No
Chloroform	--	ug/L	0.29	**7.6 - 41**	No
Dibromochloromethane	--	ug/L	0.37	**1.8 - 4.8**	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations	MAC Exceedance (Y/N)
				2022	
REGULATED ORGANICS					
Atrazine	--	ug/L	0.01	**0.01 - 0.04**	No
Atrazine + N-dealkylated metabolites	5	ug/L	0.01	**0.02 - 0.06**	No
De-ethylated Atrazine	--	ug/L	0.01	**0.01 - 0.02**	No
Azinphos-methyl	20	ug/L	0.05	**0.05 <MDL**	No
Benzene	1	ug/L	0.32	**0.32 <MDL**	No
Benzo(a)pyrene	0.01	ug/L	0.004	**0.004 <MDL**	No
Bromoxynil	5	ug/L	0.33	**0.33 <MDL**	No
Carbaryl	90	ug/L	0.05	**0.05 <MDL**	No
Carbofuran	90	ug/L	0.01	**0.01 <MDL**	No
Carbon tetrachloride	2	ug/L	0.17	**0.17 <MDL**	No
Chlorpyrifos	90	ug/L	0.02	**0.02 <MDL**	No
Diazinon	20	ug/L	0.02	**0.02 <MDL**	No
Dicamba	120	ug/L	0.2	**0.2 <MDL**	No
1,2-Dichlorobenzene	200	ug/L	0.41	**0.41 <MDL**	No
1,4-Dichlorobenzene	5	ug/L	0.36	**0.36 <MDL**	No
1,2-Dichloroethane	5	ug/L	0.35	**0.35 <MDL**	No
Dichloromethane	50	ug/L	0.35	**0.35 <MDL**	No
2,4-dichlorophenol	900	ug/L	0.15	**0.15 <MDL**	No
2,4-dichlorophenoxyacetic acid (2,4-D)	100	ug/L	0.19	**0.19 <MDL**	No
Diclofop-methyl	9	ug/L	0.4	**0.4 <MDL**	No
Dimethoate	20	ug/L	0.06	**0.06 <MDL**	No
Diquat	70	ug/L	1	**1 <MDL**	No
Diuron	150	ug/L	0.03	**0.03 <MDL**	No
Glyphosate	280	ug/L	1	**1 <MDL**	No
Malathion	190	ug/L	0.02	**0.02 <MDL**	No
MCPA	0.1	mg/L	0.00012	**0.00012 <MDL**	No
Metolachlor	50	ug/L	0.01	**0.01 - 0.02**	No
Metribuzin	80	ug/L	0.02	**0.02 <MDL**	No
Monochlorobenzene	80	ug/L	0.3	**0.3 <MDL**	No
Paraquat	10	ug/L	1	**1 <MDL**	No
Pentachlorophenol	60	ug/L	0.15	**0.15 <MDL**	No
Phorate	2	ug/L	0.01	**0.01 <MDL**	No
Picloram	190	ug/L	1	**1 <MDL**	No
Polychlorinated Biphenyls (PCBs)	3	ug/L	0.04	**0.04 <MDL**	No
Prometryne	1	ug/L	0.03	**0.03 <MDL**	No
Simazine	10	ug/L	0.01	**0.01 <MDL**	No
Terbufos	1	ug/L	0.01	**0.01 <MDL**	No
2,3,4,6-tetrachlorophenol	100	ug/L	0.2	**0.2 <MDL**	No
Triallate	230	ug/L	0.01	**0.01 <MDL**	No
Trichloroethylene	5	ug/L	0.44	**0.44 <MDL**	No
2,4,6-trichlorophenol	5	ug/L	0.25	**0.25 <MDL**	No
Trifluralin	45	ug/L	0.02	**0.02 <MDL**	No
Vinyl Chloride	1	ug/L	0.17	**0.17 <MDL**	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2022	MAC Exceedance (Y/N)
NON-REGULATED INORGANICS/ORGANICS					
Alachlor	5	ug/L	0.02	**0.02 <MDL**	No
Alkalinity	--	mg/L as CaCO3	2	**78 - 96**	No
Aluminum	--	ug/L	1	**14 - 52**	No
Ammonia+Ammonium (N)	--	mg/L	0.04	**0.04 <MDL**	No
Calcium	--	mg/L	0.01	**26.7 - 33.4**	No
Chloride	--	mg/L	0.04	**10 - 18**	No
Cobalt	--	ug/L	0.004	**0.006 - 0.012**	No
Colour	--	TCU	3	**3 <MDL**	No
Conductivity	--	uS/cm	2	**237 - 300**	No
Copper	--	ug/L	0.2	**0.9 - 2**	No
Cyanide	200	ug/L	2	**2 <MDL**	No
1,1-Dichloroethylene (vinylidene chloride)	14	ug/L	0.33	**0.33 <MDL**	No
Dissolved Organic Carbon	--	mg/L	1	**2 - 2**	No
Ethylbenzene	140	ug/L	0.33	**0.33 <MDL**	No
Hardness	--	mg/L as CaCO3	0.05	**101 - 122**	No
Iron	--	ug/L	7	**7 <MDL**	No
Langelier's Index @ 20 C	--	@ 20 C	0	**-0.2 - -0.11**	No
Langelier's Index @ 4 C	--	@ 4 C	0	**-0.52 - -0.43**	No
Magnesium	--	mg/L	0.001	**8.49 - 9.4**	No
Manganese	--	ug/L	0.01	**0.13 - 0.28**	No
Nickel	--	ug/L	0.1	**0.4 - 0.7**	No
Nitrogen-Kjeldahl (N)	--	mg/L	0.05	**0.19 - 0.24**	No
Organic Nitrogen	--	mg/L	0.05	**0.17 - 0.21**	No
pH	--	No unit	0	**7.99 - 8.07**	No
Phosphorus	--	mg/L	0.003	**0.003 <MDL**	No
Potassium	--	mg/L	0.009	**1.01 - 1.38**	No
Silicon; reactive silicate	--	mg/L	0.02	**0.26 - 1.2**	No
Silver	--	ug/L	0.05	**0.05 <MDL**	No
Solids (Total Dissolved)	--	mg/L	30	**131 - 169**	No
Sulphate	--	mg/L	0.04	**25 - 29**	No
Sulphide	--	ug/L	6	**6 <MDL**	No
Surr 1,2-Dichloroethane-d4	--	Surr Rec %	0	**100 - 102**	No
Surr 4-Bromofluorobenzene	--	Surr Rec %	0	**95 - 96**	No
Surr Decachlorobiphenyl	--	%	0	**98 - 103**	No
Tetrachloroethylene (perchloroethylene)	10	ug/L	0.35	**0.35 <MDL**	No
Toluene	60	ug/L	0.36	**0.36 <MDL**	No
Total Chlorine-Field	--	mg/L	0	**1.26 - 1.38**	No
2,4,5-TP (Silvex)	--	ug/L	0.18	**0.18 <MDL**	No
Turbidity	1	NTU	0.1	**0.1 <MDL**	No
Xylene (Total)	90	ug/L	0.43	**0.43 <MDL**	No
m/p-xylene	--	ug/L	0.43	**0.43 <MDL**	No
o-xylene	--	ug/L	0.17	**0.17 <MDL**	No
Zinc	--	ug/L	2	**2 <MDL**	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations	MAC Exceedance (Y/N)
				2022	
MICROBIOLOGICAL					
Escherichia Coli	0	cfu/100mL	0	**0 <MDL**	No
Total Coliform	0	cfu/100mL	0	**0 - 66**	Yes
Heterotrophic Plate Count (HPC)	--	cfu/1mL	0	**0 - 2000**	No

In 2022, there were ten (10) adverse microbiological results out of 3,070 samples taken. Seven involved the detection of Total Coliform bacteria (ranging from 1 to 66 cfu/100 mL), three were the result of NDOG (No Data Overgrown). 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, as 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 0.33 to 0.98 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, 2022, through to December 31, 2022, a total of 45,977,168,000 litres of water were purchased, at a cost of more than $26,500,000 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. Average day demand was 126,041,100 litres. Peak day consumption continued a downward trend. Peak day demand occurred on July 14, 2022, being 161,701,000 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 Licence. There were no occurrences of flow rate exceedance during the specified time period.

Listed below are some 2022 statistics for the City of London Distribution System:

Approximate Replacement Value of Drinking Water System	**$5,900,000,000**
Number of Pumping Stations	**9**
Total Number of Water Services	**>120,000**
Length of Watermain	**1,635 km**
Number of Watermain Breaks	**77**
Number of Water Service Leaks	**286**

Municipalities Receiving London Water

In the Municipality of Middlesex Centre, the villages of Arva, Ballymote, and Delaware continued to receive their drinking water under contract from the City of London during 2022. 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 to receive drinking water from the transmission watermain that supplies the City of London from the EMPS. For this reason, Central Elgin has also been provided a copy of the report.

2022 Annual Report
(London)

Ontario

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, 2022 to December 31, 2022**

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 – 8th 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:

Drinking Water System Name	Drinking Water System Number
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 2022 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 270 water service leaks occurred in 2022, attributing to nearly a 4:1 ratio of water service leaks to water main breaks.

Springbank Reservoir #1 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.

Ontario

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

				Parameters			
Adverse Incident Date	Corrective Action	Corrective Action Date	Adverse Water Quality Indicator # (AWQI #)	E. coli (cfu/100ml)	Total Coliform (cfu/100ml)	HPC / Background (cfu/1ml)	Free Cl2 (mg/L)
31-Jan-2022 [1]			157753	NDOGT	NDOGT	NDOGT	0.89
	Resample	2-Feb-2022		0	0	0	1.01
	Resample	2-Feb-2022		0	0	0	1.01
	Resample	2-Feb-2022		0	0	0	0.94
	Resample	4-Feb-2022		0	0	0	1.10
	Resample	4-Feb-2022		0	0	0	1.12
	Resample	4-Feb-2022		0	0	0	1.15
11-May-2022 [2]			158370	0	1	2	0.80
	Resample	13-May-2022		0	0	0	0.62
	Resample	13-May-2022		0	0	0	0.62
20-May-2022 [3]			158426	0	2	<10	0.66
	Resample	21-May-2022		0	0	0	0.75
	Resample	21-May-2022		0	0	0	0.68
	Resample	21-May-2022		0	0	0	0.85
27-May-2022 [4]			158509	0	2	<10	0.74
	Resample	28-May-2022		0	0	0	0.68
	Resample	28-May-2022		0	0	0	0.83
	Resample	28-May-2022		0	0	0	0.69
13-Jun-2022 [5]			158695	0	2	<10	0.89
	Resample	14-Jun-2022		0	0	0	1.01
	Resample	14-Jun-2022		0	0	0	0.97
	Resample	14-Jun-2022		0	0	0	0.93
13-Jul-2022 [6]			159146	0	66	<10	0.88
	Resample	14-Jul-2022		0	0	0	0.92
	Resample	14-Jul-2022		0	0	0	1.03
	Resample	14-Jul-2022		0	0	0	1.05
9-Aug-2022 [7]			159521	0	1	<10	0.64
	Resample	11-Aug-2022		0	0	<10	0.54
	Resample	11-Aug-2022		0	0	<10	0.63
	Resample	11-Aug-2022		0	0	<10	0.73

Bacteriological Adverse con't							
				Parameters			
Adverse Incident Date	Corrective Action	Corrective Action Date	Adverse Water Quality Indicator # (AWQI #)	E. coli (cfu/100ml)	Total Coliform (cfu/100ml)	HPC / Background (cfu/1ml)	Free Cl2 (mg/L)
29-Aug-2022 [8]			159781	0	1	<10	0.98
	Resample	30-Aug-2022		0	0	0	0.65
	Resample	30-Aug-2022		0	0	0	1.02
	Resample	30-Aug-2022		0	0	0	0.98
11-Oct-2022 [9]			160309	NDOGN	NDOGN	NDOGN	0.33
		13-Oct-2022		0	0	0	0.97
		13-Oct-2022		0	0	0	0.99
		13-Oct-2022		0	0	0	0.94
		14-Oct-2022		0	0	3	0.99
		14-Oct-2022		0	0	0	0.97
		14-Oct-2022		0	0	0	0.91
12-Oct-2022 [10]			160322	NDOGT	NDOGT	NDOGT	0.60
	Resample	14-Oct-2022		0	0	0	0.68
	Resample	14-Oct-2022		0	0	0	0.76
	Resample	15-Oct-2022		0	0	0	0.51
	Resample	15-Oct-2022		0	0	0	0.53

Notes:

[1]**Details:** A water sample collected from a hydrant at 166 Berkshire Dr was reported as NDOGT (No Data, Overgrown with Target Bacteria for Total Coliforms (TC) and E. coli (EC). The lab also reported the samples as PSS, indicating the presence of settled sediments.

Corrective Action: The original site was immediately re-sampled and samples were also taken at sites upstream and downstream from the original site. This sampling was repeated approximately 42 hours later. There were no indicators of adverse water quality in any of the re-sample results.

[2]**Details:** A Total Coliform count of 1 per 100 mL was detected in a sample collected from 18 Harrison Cr.

Corrective Action: The original site was immediately re-sampled. Another sample was also taken at a site upstream from the original site. Because the original site was at a dead-end, no downstream sample was collected. There were no indicators of adverse water quality in any of the re-sample results.

[3]**Details:** A Total Coliform count of 2 per 100 mL was detected in a sample collected from 869 Commissioners Rd. W.(#2 Reservoir).

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.

[4]**Details:** A Total Coliform count of 2 per 100 mL was detected in a sample collected from 3502 Manning Dr.

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.

[5]**Details:** A Total Coliform count of 2 per 100 mL was detected in a sample collected from 844 Commissioners Rd W.

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.

[6]**Details:** A Total Coliform count of 66 per 100 mL was detected in a sample collected from 869 Commissioners Rd. W. (#2 Reservoir).

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.

[7]**Details:** A Total Coliform count of 1 per 100 ml. was detected in a sample collected from 175 Whisperwood Ave.

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.

[8]**Details:** A Total Coliform count of 1 per 100 mL was detected in a sample collected from 5200 Highbury Ave 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.

[9]Details: A sample collected from 39 Northcrest Dr. was reported as NDOGN for both Total Coliforms and for E. coli.

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

[10]Details: A sample collected from 1322 Sprucedale Ave was reported as NDOGN for both Total Conforms and for E. coli.

Corrective Action: The original site was immediately re-sampled. A sample was also taken upstream from the original site. The original site was at the dead-end of a cul-de-sac, so there was no downstream site to sample. This sampling was repeated the next day. There were no indicators of adverse water quality in any of the re-sample results.

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)
Treated	N/A	N/A	N/A	N/A	N/A	N/A
Distribution	3070	0 - 0	3070	0 - 66	3070	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	56	N/A	0.04 - 0.75 NTU
Alkalinity	5	N/A	78 - 89 mg/L as CaCO3
Lead	6	N/A	<0.01 - 0.13 µg/L
Chlorine*	3102	87600	0.30 - 1.40 mg/L
Fluoride**	104	17520	0.12 - 0.79 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

Summary of Inorganic 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	28/Jun/22	0.9	ug/L	No
September 21, 2017	Arsenic	28/Jun/22	0.2 <MDL	ug/L	No
September 21, 2017	Barium	28/Jun/22	13.7	ug/L	No
September 21, 2017	Boron	28/Jun/22	17	ug/L	No
September 21, 2017	Cadmium	28/Jun/22	0 <MDL	ug/L	No
September 21, 2017	Chromium	28/Jun/22	0.26	ug/L	No
September 21, 2017	Fluoride	5/Jan/22	0.47	mg/L	No
September 21, 2017	Fluoride	12/Jan/22	0.50	mg/L	No
September 21, 2017	Fluoride	19/Jan/22	0.47	mg/L	No
September 21, 2017	Fluoride	26/Jan/22	0.55	mg/L	No
September 21, 2017	Fluoride	2/Feb/22	0.45	mg/L	No
September 21, 2017	Fluoride	9/Feb/22	0.50	mg/L	No
September 21, 2017	Fluoride	16/Feb/22	0.45	mg/L	No
September 21, 2017	Fluoride	23/Feb/22	0.56	mg/L	No
September 21, 2017	Fluoride	2/Mar/22	0.56	mg/L	No
September 21, 2017	Fluoride	9/Mar/22	0.57	mg/L	No
September 21, 2017	Fluoride	16/Mar/22	0.53	mg/L	No
September 21, 2017	Fluoride	23/Mar/22	0.48	mg/L	No
September 21, 2017	Fluoride	30/Mar/22	0.51	mg/L	No
September 21, 2017	Fluoride	6/Apr/22	0.48	mg/L	No
September 21, 2017	Fluoride	13/Apr/22	0.52	mg/L	No
September 21, 2017	Fluoride	20/Apr/22	0.47	mg/L	No
September 21, 2017	Fluoride	27/Apr/22	0.50	mg/L	No
September 21, 2017	Fluoride	4/May/22	0.55	mg/L	No
September 21, 2017	Fluoride	11/May/22	0.66	mg/L	No
September 21, 2017	Fluoride	18/May/22	0.57	mg/L	No
September 21, 2017	Fluoride	25/May/22	0.36	mg/L	No
September 21, 2017	Fluoride	1/Jun/22	0.65	mg/L	No
September 21, 2017	Fluoride	29/Jun/22	0.60	mg/L	No
September 21, 2017	Fluoride	6/Jul/22	0.13	mg/L	No
September 21, 2017	Fluoride	13/Jul/22	0.54	mg/L	No
September 21, 2017	Fluoride	20/Jul/22	0.53	mg/L	No
September 21, 2017	Fluoride	27/Jul/22	0.55	mg/L	No
September 21, 2017	Fluoride	3/Aug/22	0.54	mg/L	No

September 21, 2017	Fluoride	10/Aug/22	0.53	mg/L	No

September 21, 2017	Fluoride	17/Aug/22	0.58	mg/L	No
September 21, 2017	Fluoride	24/Aug/22	0.64	mg/L	No
September 21, 2017	Fluoride	31/Aug/22	0.62	mg/L	No
September 21, 2017	Fluoride	7/Sep/22	0.58	mg/L	No
September 21, 2017	Fluoride	14/Sep/22	0.63	mg/L	No
September 21, 2017	Fluoride	21/Sep/22	0.61	mg/L	No
September 21, 2017	Fluoride	28/Sep/22	0.56	mg/L	No
September 21, 2017	Fluoride	5/Oct/22	0.60	mg/L	No
September 21, 2017	Fluoride	12/Oct/22	0.50	mg/L	No
September 21, 2017	Fluoride	19/Oct/22	0.52	mg/L	No
September 21, 2017	Fluoride	26/Oct/22	0.59	mg/L	No
September 21, 2017	Fluoride	2/Nov/22	0.54	mg/L	No
September 21, 2017	Fluoride	9/Nov/22	0.50	mg/L	No
September 21, 2017	Fluoride	16/Nov/22	0.52	mg/L	No
September 21, 2017	Fluoride	23/Nov/22	0.39	mg/L	No
September 21, 2017	Fluoride	30/Nov/22	0.39	mg/L	No
September 21, 2017	Fluoride	7/Dec/22	0.38	mg/L	No
September 21, 2017	Fluoride	21/Dec/22	0.34	mg/L	No
September 21, 2017	Fluoride	28/Dec/22	0.35	mg/L	No
September 21, 2017	Lead	8/Mar/22	0.01 <MDL	ug/L	No
September 21, 2017	Lead	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Lead	8/Sep/22	0.01 <MDL	ug/L	No
September 21, 2017	Lead	7/Dec/22	0.02	ug/L	No
September 21, 2017	Mercury	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Nitrate (as nitrogen)	8/Mar/22	0.565	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	28/Jun/22	0.373	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	8/Sep/22	0.267	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	7/Dec/22	0.283	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	8/Mar/22	0.565	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	28/Jun/22	0.373	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	8/Sep/22	0.267	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	7/Dec/22	0.283	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	8/Mar/22	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	28/Jun/22	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	8/Sep/22	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	7/Dec/22	0.003 <MDL	mg/L	No
September 21, 2017	Selenium	28/Jun/22	0.13	ug/L	No
September 21, 2017	Sodium	28/Jun/22	12.4	mg/L	No
September 21, 2017	Uranium	28/Jun/22	0.039	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	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Atrazine	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Atrazine + N-dealkylated metabolites	28/Jun/22	0.02	ug/L	No
September 21, 2017	De-ethylated Atrazine	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Azinphos-methyl	28/Jun/22	0.05 <MDL	ug/L	No
September 21, 2017	Benzene	28/Jun/22	0.32 <MDL	ug/L	No
September 21, 2017	Benzo(a)pyrene	28/Jun/22	0.004 <MDL	ug/L	No
September 21, 2017	Bromoxynil	28/Jun/22	0.33 <MDL	ug/L	No
September 21, 2017	Carbaryl	28/Jun/22	0.05 <MDL	ug/L	No
September 21, 2017	Carbofuran	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Carbon tetrachloride	28/Jun/22	0.17 <MDL	ug/L	No
September 21, 2017	Chlorpyrifos	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Diazinon	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Dicamba	28/Jun/22	0.2 <MDL	ug/L	No
September 21, 2017	1,2-Dichlorobenzene	28/Jun/22	0.41 <MDL	ug/L	No
September 21, 2017	1,4-Dichlorobenzene	28/Jun/22	0.36 <MDL	ug/L	No
September 21, 2017	1,2-Dichloroethane	28/Jun/22	0.35 <MDL	ug/L	No
September 21, 2017	Dichloromethane	28/Jun/22	0.35 <MDL	ug/L	No
September 21, 2017	2,4-dichlorophenol	28/Jun/22	0.15 <MDL	ug/L	No
September 21, 2017	2,4-dichlorophenoxyacetic acid (2,4-D)	28/Jun/22	0.19 <MDL	ug/L	No
September 21, 2017	Diclofop-methyl	28/Jun/22	0.4 <MDL	ug/L	No
September 21, 2017	Dimethoate	28/Jun/22	0.06 <MDL	ug/L	No
September 21, 2017	Diquat	28/Jun/22	1 <MDL	ug/L	No
September 21, 2017	Diuron	28/Jun/22	0.03 <MDL	ug/L	No
September 21, 2017	Glyphosate	28/Jun/22	1 <MDL	ug/L	No
September 21, 2017	Malathion	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	MCPA	28/Jun/22	0 <MDL	mg/L	No
September 21, 2017	Metolachlor	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Metribuzin	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Paraquat	28/Jun/22	1 <MDL	ug/L	No
September 21, 2017	Pentachlorophenol	28/Jun/22	0.15 <MDL	ug/L	No
September 21, 2017	Phorate	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Picloram	28/Jun/22	1 <MDL	ug/L	No
September 21, 2017	Polychlorinated Biphenyls (PCBs)	28/Jun/22	0.04 <MDL	ug/L	No
September 21, 2017	Prometryne	28/Jun/22	0.03 <MDL	ug/L	No
September 21, 2017	Simazine	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Terbufos	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	2,3,4,6-tetrachlorophenol	28/Jun/22	0.2 <MDL	ug/L	No
September 21, 2017	Triallate	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Trichloroethylene	28/Jun/22	0.44 <MDL	ug/L	No
September 21, 2017	2,4,6-trichlorophenol	28/Jun/22	0.25 <MDL	ug/L	No
September 21, 2017	Trifluralin	28/Jun/22	0.02 <MDL	ug/L	No

September 21, 2017	Trihalomethanes (total)	8/Mar/22	18	ug/L	No
September 21, 2017	Bromodichloromethane	8/Mar/22	5.7	ug/L	No
September 21, 2017	Bromoform	8/Mar/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	8/Mar/22	11	ug/L	No
September 21, 2017	Dibromochloromethane	8/Mar/22	1.8	ug/L	No
September 21, 2017	Trihalomethanes (total)	28/Jun/22	23	ug/L	No
September 21, 2017	Bromodichloromethane	28/Jun/22	6.7	ug/L	No
September 21, 2017	Bromoform	28/Jun/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	28/Jun/22	14	ug/L	No
September 21, 2017	Dibromochloromethane	28/Jun/22	2.8	ug/L	No
September 21, 2017	Trihalomethanes (total)	8/Sep/22	29	ug/L	No
September 21, 2017	Bromodichloromethane	8/Sep/22	8	ug/L	No
September 21, 2017	Bromoform	8/Sep/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	8/Sep/22	17	ug/L	No
September 21, 2017	Dibromochloromethane	8/Sep/22	3.6	ug/L	No
September 21, 2017	Trihalomethanes (total)	7/Dec/22	18	ug/L	No
September 21, 2017	Bromodichloromethane	7/Dec/22	6	ug/L	No
September 21, 2017	Bromoform	7/Dec/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	7/Dec/22	9.1	ug/L	No
September 21, 2017	Dibromochloromethane	7/Dec/22	2.6	ug/L	No
September 21, 2017	Vinyl Chloride	28/Jun/22	0.17 <MDL	ug/L	No

SITE: Arva Pumping Station - Treated Distribution

b) ORGANIC PARAMETERS (HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	8/Mar/22	5.4	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	5.4	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Mar/22	6.1	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	6.1	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	28/Jun/22	5.3 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	28/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	28/Jun/22	4.5	ug/L	N
September 21, 2017	(Monobromoacetic acid)	28/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	28/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	28/Jun/22	5.3 <MDL	ug/L	N

September 21, 2017	Total Haloacetic Acids	28/Jun/22	14.7	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	28/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	28/Jun/22	9.3	ug/L	N
September 21, 2017	(Monobromoacetic acid)	28/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	28/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	28/Jun/22	5.4	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	7.1	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	7.1	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	23.9	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	16	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	7.9	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	5.3 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	3.4	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	8.2	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	8.2	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	5.3 <MDL	ug/L	N

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	28/Jun/22	80	mg/L as CaCO3	No
September 21, 2017	Aluminum	28/Jun/22	52	ug/L	No
September 21, 2017	Ammonia+Ammonium (N)	28/Jun/22	0.04 <MDL	mg/L	No
September 21, 2017	Calcium	28/Jun/22	26.7	mg/L	No
September 21, 2017	Chloride	28/Jun/22	10	mg/L	No
September 21, 2017	Cobalt	28/Jun/22	0.006	ug/L	No
September 21, 2017	Colour	28/Jun/22	3 <MDL	TCU	No
September 21, 2017	Conductivity	28/Jun/22	237	uS/cm	No
September 21, 2017	Copper	28/Jun/22	2	ug/L	No
September 21, 2017	Cyanide; total	28/Jun/22	2 <MDL	ug/L	No
September 21, 2017	1,1-Dichloroethylene (vinylidene chloride)	28/Jun/22	0.33 <MDL	ug/L	No

September 21, 2017	Dissolved Organic Carbon	28/Jun/22	2	mg/L	No
September 21, 2017	Ethylbenzene	28/Jun/22	0.33 <MDL	ug/L	No
September 21, 2017	Field pH	28/Jun/22	8.1	no unit	No
September 21, 2017	Field Temperature	28/Jun/22	15.4	celcius	No
September 21, 2017	Field Turbidity	28/Jun/22	0.19	NTU	No
September 21, 2017	Hardness	28/Jun/22	101	mg/L as CaCO3	No
September 21, 2017	Iron	28/Jun/22	7 <MDL	ug/L	No
September 21, 2017	Langelier`s Index	28/Jun/22	-0.52	@ 20º C	N
September 21, 2017	Langelier`s Index	28/Jun/22	-0.2	@ 4º C	N
September 21, 2017	Magnesium	28/Jun/22	8.49	mg/L	No
September 21, 2017	Manganese	28/Jun/22	0.28	ug/L	No
September 21, 2017	Monochlorobenzene	28/Jun/22	0.3 <MDL	ug/L	No
September 21, 2017	Nickel	28/Jun/22	0.4	ug/L	No
September 21, 2017	Nitrogen-Kjeldahl (N)	28/Jun/22	0.24	mg/L	No
September 21, 2017	Organic Nitrogen	28/Jun/22	0.21	mg/L	No
September 21, 2017	pH	28/Jun/22	8.07	No unit	No
September 21, 2017	pH-Field	28/Jun/22	8.1	no unit	No
September 21, 2017	Phosphorus	28/Jun/22	0.003 <MDL	mg/L	No
September 21, 2017	Potassium	28/Jun/22	1.01	mg/L	No
September 21, 2017	Silicon; reactive silicate	28/Jun/22	1.2	mg/L	No
September 21, 2017	Silver	28/Jun/22	0.05 <MDL	ug/L	No
September 21, 2017	Solids (Total Dissolved)	28/Jun/22	131	mg/L	No
September 21, 2017	Sulphate	28/Jun/22	25	mg/L	No
September 21, 2017	Sulphide	28/Jun/22	6 <MDL	ug/L	No
September 21, 2017	Surr 1,2-Dichloroethane-d4	28/Jun/22	102	Surr Rec %	No
September 21, 2017	Surr 4-Bromofluorobenzene	28/Jun/22	95	Surr Rec %	No
September 21, 2017	Surr Decachlorobiphenyl	28/Jun/22	98	%	No
September 21, 2017	Temperature-Field	28/Jun/22	15.4	celcius	No
September 21, 2017	Tetrachloroethylene (perchloroethylene)	28/Jun/22	0.35 <MDL	ug/L	No
September 21, 2017	Toluene	28/Jun/22	0.36 <MDL	ug/L	No
September 21, 2017	Total Chlorine-Field	28/Jun/22	1.26	mg/L	No
September 21, 2017	Total Chlorine-Field	28/Jun/22	1.26	mg/L	No
September 21, 2017	2-(2,4,5-Trichlorophenoxy)propanoic acid (2,4,5-TP)	28/Jun/22	0.18 <MDL	ug/L	No
September 21, 2017	Turbidity	28/Jun/22	0.1 <MDL	NTU	No
September 21, 2017	Turbidity-Field	28/Jun/22	0.19	NTU	No
September 21, 2017	Xylene (Total)	28/Jun/22	0.43 <MDL	ug/L	No
September 21, 2017	m/p-Xylene	28/Jun/22	0.43 <MDL	ug/L	No
September 21, 2017	o-xylene	28/Jun/22	0.17 <MDL	ug/L	No
September 21, 2017	Zinc	28/Jun/22	2 <MDL	ug/L	No

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	28/Jun/22	0.9	ug/L	No
September 21, 2017	Arsenic	28/Jun/22	0.5	ug/L	No
September 21, 2017	Barium	28/Jun/22	20.9	ug/L	No
September 21, 2017	Boron	28/Jun/22	31	ug/L	No
September 21, 2017	Cadmium	28/Jun/22	0.003 <MDL	ug/L	No
September 21, 2017	Chromium	28/Jun/22	0.17	ug/L	No
September 21, 2017	Fluoride	5/Jan/22	0.46	mg/L	No
September 21, 2017	Fluoride	12/Jan/22	0.47	mg/L	No
September 21, 2017	Fluoride	19/Jan/22	0.49	mg/L	No
September 21, 2017	Fluoride	26/Jan/22	0.44	mg/L	No
September 21, 2017	Fluoride	2/Feb/22	0.46	mg/L	No
September 21, 2017	Fluoride	9/Feb/22	0.45	mg/L	No
September 21, 2017	Fluoride	16/Feb/22	0.44	mg/L	No
September 21, 2017	Fluoride	23/Feb/22	0.46	mg/L	No
September 21, 2017	Fluoride	2/Mar/22	0.42	mg/L	No
September 21, 2017	Fluoride	9/Mar/22	0.44	mg/L	No
September 21, 2017	Fluoride	16/Mar/22	0.46	mg/L	No
September 21, 2017	Fluoride	23/Mar/22	0.43	mg/L	No
September 21, 2017	Fluoride	30/Mar/22	0.43	mg/L	No
September 21, 2017	Fluoride	6/Apr/22	0.43	mg/L	No
September 21, 2017	Fluoride	13/Apr/22	0.48	mg/L	No
September 21, 2017	Fluoride	20/Apr/22	0.44	mg/L	No
September 21, 2017	Fluoride	27/Apr/22	0.47	mg/L	No
September 21, 2017	Fluoride	4/May/22	0.51	mg/L	No
September 21, 2017	Fluoride	11/May/22	0.51	mg/L	No
September 21, 2017	Fluoride	18/May/22	0.52	mg/L	No
September 21, 2017	Fluoride	25/May/22	0.36	mg/L	No
September 21, 2017	Fluoride	1/Jun/22	0.53	mg/L	No
September 21, 2017	Fluoride	29/Jun/22	0.48	mg/L	No
September 21, 2017	Fluoride	6/Jul/22	0.51	mg/L	No
September 21, 2017	Fluoride	13/Jul/22	0.53	mg/L	No
September 21, 2017	Fluoride	20/Jul/22	0.55	mg/L	No
September 21, 2017	Fluoride	27/Jul/22	0.60	mg/L	No
September 21, 2017	Fluoride	3/Aug/22	0.56	mg/L	No
September 21, 2017	Fluoride	10/Aug/22	0.58	mg/L	No
September 21, 2017	Fluoride	17/Aug/22	0.68	mg/L	No
September 21, 2017	Fluoride	24/Aug/22	0.65	mg/L	No
September 21, 2017	Fluoride	31/Aug/22	0.62	mg/L	No
September 21, 2017	Fluoride	7/Sep/22	0.60	mg/L	No
September 21, 2017	Fluoride	14/Sep/22	0.64	mg/L	No

September 21, 2017	Fluoride	21/Sep/22	0.61	mg/L	No
September 21, 2017	Fluoride	28/Sep/22	0.56	mg/L	No
September 21, 2017	Fluoride	5/Oct/22	0.62	mg/L	No
September 21, 2017	Fluoride	12/Oct/22	0.58	mg/L	No
September 21, 2017	Fluoride	19/Oct/22	0.59	mg/L	No
September 21, 2017	Fluoride	26/Oct/22	0.59	mg/L	No
September 21, 2017	Fluoride	2/Nov/22	0.57	mg/L	No
September 21, 2017	Fluoride	9/Nov/22	0.66	mg/L	No
September 21, 2017	Fluoride	16/Nov/22	0.62	mg/L	No
September 21, 2017	Fluoride	23/Nov/22	0.56	mg/L	No
September 21, 2017	Fluoride	30/Nov/22	0.56	mg/L	No
September 21, 2017	Fluoride	7/Dec/22	0.52	mg/L	No
September 21, 2017	Fluoride	21/Dec/22	0.46	mg/L	No
September 21, 2017	Fluoride	28/Dec/22	0.49	mg/L	No
September 21, 2017	Lead	8/Mar/22	0.01 <MDL	ug/L	No
September 21, 2017	Lead	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Lead	8/Sep/22	0.01 <MDL	ug/L	No
September 21, 2017	Lead	7/Dec/22	0.01 <MDL	ug/L	No
September 21, 2017	Mercury	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Nitrate (as nitrogen)	8/Mar/22	0.05	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	28/Jun/22	0.04	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	8/Sep/22	0.05	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	7/Dec/22	0.04	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	8/Mar/22	0.05	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	28/Jun/22	0.04	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	8/Sep/22	0.05	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	7/Dec/22	0.04	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	8/Mar/22	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	28/Jun/22	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	8/Sep/22	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	7/Dec/22	0.003 <MDL	mg/L	No
September 21, 2017	Selenium	28/Jun/22	0.24	ug/L	No
September 21, 2017	Sodium	28/Jun/22	18.2	mg/L	No
September 21, 2017	Uranium	28/Jun/22	0.037	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	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Atrazine	28/Jun/22	0.04	ug/L	No
September 21, 2017	Atrazine + N-dealkylated metabolites	28/Jun/22	0.06	ug/L	No
September 21, 2017	De-ethylated Atrazine	28/Jun/22	0.02	ug/L	No
September 21, 2017	Azinphos-methyl	28/Jun/22	0.05 <MDL	ug/L	No
September 21, 2017	Benzene	28/Jun/22	0.32 <MDL	ug/L	No

September 21, 2017	Benzo(a)pyrene	28/Jun/22	0.004 <MDL	ug/L	No
September 21, 2017	Bromoxynil	28/Jun/22	0.33 <MDL	ug/L	No
September 21, 2017	Carbaryl	28/Jun/22	0.05 <MDL	ug/L	No
September 21, 2017	Carbofuran	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Carbon tetrachloride	28/Jun/22	0.17 <MDL	ug/L	No
September 21, 2017	Chlorpyrifos	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Diazinon	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Dicamba	28/Jun/22	0.2 <MDL	ug/L	No
September 21, 2017	1,2-Dichlorobenzene	28/Jun/22	0.41 <MDL	ug/L	No
September 21, 2017	1,4-Dichlorobenzene	28/Jun/22	0.36 <MDL	ug/L	No
September 21, 2017	1,2-Dichloroethane	28/Jun/22	0.35 <MDL	ug/L	No
September 21, 2017	Dichloromethane	28/Jun/22	0.35 <MDL	ug/L	No
September 21, 2017	2,4-dichlorophenol	28/Jun/22	0.15 <MDL	ug/L	No
September 21, 2017	2,4-dichlorophenoxyacetic acid (2,4-D)	28/Jun/22	0.19 <MDL	ug/L	No
September 21, 2017	Diclofop-methyl	28/Jun/22	0.4 <MDL	ug/L	No
September 21, 2017	Dimethoate	28/Jun/22	0.06 <MDL	ug/L	No
September 21, 2017	Diquat	28/Jun/22	1 <MDL	ug/L	No
September 21, 2017	Diuron	28/Jun/22	0.03 <MDL	ug/L	No
September 21, 2017	Glyphosate	28/Jun/22	1 <MDL	ug/L	No
September 21, 2017	Malathion	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	MCPA	28/Jun/22	0.00012<MDL	mg/L	No
September 21, 2017	Metolachlor	28/Jun/22	0.02	ug/L	No
September 21, 2017	Metribuzin	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Paraquat	28/Jun/22	1 <MDL	ug/L	No
September 21, 2017	Pentachlorophenol	28/Jun/22	0.15 <MDL	ug/L	No
September 21, 2017	Phorate	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Picloram	28/Jun/22	1 <MDL	ug/L	No
September 21, 2017	Polychlorinated Biphenyls (PCBs)	28/Jun/22	0.04 <MDL	ug/L	No
September 21, 2017	Prometryne	28/Jun/22	0.03 <MDL	ug/L	No
September 21, 2017	Simazine	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Terbufos	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	2,3,4,6-tetrachlorophenol	28/Jun/22	0.2 <MDL	ug/L	No
September 21, 2017	Triallate	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Trichloroethylene	28/Jun/22	0.44 <MDL	ug/L	No
September 21, 2017	2,4,6-trichlorophenol	28/Jun/22	0.25 <MDL	ug/L	No
September 21, 2017	Trifluralin	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Trihalomethanes (total)	8/Mar/22	16	ug/L	No
September 21, 2017	Bromodichloromethane	28/Jun/22	26	ug/L	No
September 21, 2017	Bromoform	8/Sep/22	47.00 <MDL	ug/L	No
September 21, 2017	Chloroform	7/Dec/22	22	ug/L	No
September 21, 2017	Dibromochloromethane	8/Mar/22	5.4	ug/L	No
September 21, 2017	Trihalomethanes (total)	28/Jun/22	7.5	ug/L	No
September 21, 2017	Bromodichloromethane	8/Sep/22	12	ug/L	No
September 21, 2017	Bromoform	7/Dec/22	6.80 <MDL	ug/L	No
September 21, 2017	Chloroform	8/Mar/22	0.34	ug/L	No
September 21, 2017	Dibromochloromethane	28/Jun/22	0.34	ug/L	No

September 21, 2017	Trihalomethanes (total)	8/Sep/22	0.34	ug/L	No
September 21, 2017	Bromodichloromethane	7/Dec/22	0.34	ug/L	No
September 21, 2017	Bromoform	8/Mar/22	8.40 <MDL	ug/L	No
September 21, 2017	Chloroform	28/Jun/22	16	ug/L	No
September 21, 2017	Dibromochloromethane	8/Sep/22	30	ug/L	No
September 21, 2017	Trihalomethanes (total)	7/Dec/22	12	ug/L	No
September 21, 2017	Bromodichloromethane	8/Mar/22	2.6	ug/L	No
September 21, 2017	Bromoform	28/Jun/22	2.60 <MDL	ug/L	No
September 21, 2017	Chloroform	8/Sep/22	4.6	ug/L	No
September 21, 2017	Dibromochloromethane	7/Dec/22	2.5	ug/L	No
September 21, 2017	Vinyl Chloride	28/Jun/22	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	28/Jun/22	96	mg/L as CaCO3	No
September 21, 2017	Aluminum	28/Jun/22	14	ug/L	No
September 21, 2017	Ammonia+Ammonium (N)	28/Jun/22	0.04 <MDL	mg/L	No
September 21, 2017	Calcium	28/Jun/22	33.4	mg/L	No
September 21, 2017	Chloride	28/Jun/22	18	mg/L	No
September 21, 2017	Cobalt	28/Jun/22	0.012	ug/L	No
September 21, 2017	Colour	28/Jun/22	3 <MDL	TCU	No
September 21, 2017	Conductivity	28/Jun/22	300	uS/cm	No
September 21, 2017	Copper	28/Jun/22	0.9	ug/L	No
September 21, 2017	Cyanide; total	28/Jun/22	2 <MDL	ug/L	No
September 21, 2017	1,1-Dichloroethylene (vinylidene	28/Jun/22	0.33 <MDL	ug/L	No
September 21, 2017	Dissolved Organic Carbon	28/Jun/22	2	mg/L	No
September 21, 2017	Ethylbenzene	28/Jun/22	0.33 <MDL	ug/L	No
September 21, 2017	Field pH	28/Jun/22	7.42	no unit	No
September 21, 2017	Field Temperature	28/Jun/22	12	celcius	No
September 21, 2017	Field Turbidity	28/Jun/22	0.21	NTU	No
September 21, 2017	Hardness	28/Jun/22	122	mg/L as CaCO3	No
September 21, 2017	Iron	28/Jun/22	7 <MDL	ug/L	No
September 21, 2017	Langelier`s Index	28/Jun/22	-0.43	@ 20º C	No
September 21, 2017	Langelier`s Index	28/Jun/22	-0.11	@ 4º C	No
September 21, 2017	Magnesium	28/Jun/22	9.4	mg/L	No
September 21, 2017	Manganese	28/Jun/22	0.13	ug/L	No
September 21, 2017	Monochlorobenzene	28/Jun/22	0.3 <MDL	ug/L	No
September 21, 2017	Nickel	28/Jun/22	0.7	ug/L	No
September 21, 2017	Nitrogen-Kjeldahl (N)	28/Jun/22	0.19	mg/L	No
September 21, 2017	Organic Nitrogen	28/Jun/22	0.17	mg/L	No
September 21, 2017	pH	28/Jun/22	7.99	No unit	No
September 21, 2017	pH-Field	28/Jun/22	7.42	no unit	No
September 21, 2017	Phosphorus	28/Jun/22	0.003 <MDL	mg/L	No

September 21, 2017	Potassium	28/Jun/22	1.38	mg/L	No
September 21, 2017	Silicon; reactive silicate	28/Jun/22	0.26	mg/L	No
September 21, 2017	Silver	28/Jun/22	0.05 <MDL	ug/L	No
September 21, 2017	Solids (Total Dissolved)	28/Jun/22	169	mg/L	No
September 21, 2017	Sulphate	28/Jun/22	29	mg/L	No
September 21, 2017	Sulphide	28/Jun/22	6 <MDL	ug/L	No
September 21, 2017	Surr 1,2-Dichloroethane-d4	28/Jun/22	100	Surr Rec %	No
September 21, 2017	Surr 4-Bromofluorobenzene	28/Jun/22	96	Surr Rec %	No
September 21, 2017	Surr Decachlorobiphenyl	28/Jun/22	103	%	No
September 21, 2017	Temperature-Field	28/Jun/22	12	celcius	No
September 21, 2017	Tetrachloroethylene (perchloroethylene)	28/Jun/22	0.35 <MDL	ug/L	No
September 21, 2017	Toluene	28/Jun/22	0.36 <MDL	ug/L	No
September 21, 2017	Total Chlorine-Field	28/Jun/22	1.38	mg/L	No
September 21, 2017	Total Chlorine-Field	28/Jun/22	1.38	mh/L	No
September 21, 2017	2-(2,4,5-Trichlorophenoxy)propanoic acid (2,4,5-TP)	28/Jun/22	0.18 <MDL	ug/L	No
September 21, 2017	Turbidity	28/Jun/22	0.1 <MDL	NTU	No
September 21, 2017	Turbidity-Field	28/Jun/22	0.21	NTU	No
September 21, 2017	Xylene (Total)	28/Jun/22	0.43 <MDL	ug/L	No
September 21, 2017	m/p-Xylene	28/Jun/22	0.43 <MDL	ug/L	No
September 21, 2017	o-xylene	28/Jun/22	0.17 <MDL	ug/L	No
September 21, 2017	Zinc	28/Jun/22	2 <MDL	ug/L	No

Ontario

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

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

As outlined below, sampling was carried out for THM's & HAA's at 603 Wonderland Rd. S., 525 Crestwood Dr., 214 Rathowan St., 4318 Colonel Talbot Rd., 4562 Colonel Talbot Rd., and 950 East Springbank Gate.

SITE: 603 Wonderland Rd. S. - Treated Distribution

b) ORGANIC PARAMETERS (HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	8/Mar/22	11.4	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	5.9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	5.5	ug/L	N
September 21, 2017	Total Haloacetic Acids	28/Jun/22	13.7	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	28/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	28/Jun/22	8.3	ug/L	N
September 21, 2017	(Monobromoacetic acid)	28/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	28/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	28/Jun/22	5.4	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	9	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	5.4	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	5.4	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	5.3 <MDL	ug/L	N

SITE: 525 Crestwood Dr. - Treated Distribution

b) ORGANIC PARAMETERS (HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	8/Mar/22	14.8	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	8.3	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	6.5	ug/L	N
September 21, 2017	Total Haloacetic Acids	28/Jun/22	16.1	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	28/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	28/Jun/22	8.9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	28/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	28/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	28/Jun/22	7.2	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	8.6	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	8.6	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	6.9	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	6.9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	5.3 <MDL	ug/L	N

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

b) ORGANIC PARAMETERS (THM & HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	8/Mar/22	12	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	6.5	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	5.5	ug/L	N
September 21, 2017	Total Haloacetic Acids	28/Jun/22	7.3	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	28/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	28/Jun/22	7.3	ug/L	N
September 21, 2017	(Monobromoacetic acid)	28/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	28/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	28/Jun/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	5.3 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	4.7	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	5.4	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	5.4	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	5.3 <MDL	ug/L	N

SITE: 4318 Colonel Talbot Rd. - Treated Distribution

b) ORGANIC PARAMETERS (THM & HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	8/Mar/22	13.1	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	7.2	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	5.9	ug/L	N
September 21, 2017	Total Haloacetic Acids	28/Jun/22	15.3	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	28/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	28/Jun/22	9.1	ug/L	N
September 21, 2017	(Monobromoacetic acid)	28/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	28/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	28/Jun/22	6.2	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	25.5	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	17.2	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	8.4	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	15	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	8.9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	6.1	ug/L	N

SITE: 4562 Colonel Talbot Rd. (Hydrant) - Treated Distribution

b) ORGANIC PARAMETERS (THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Trihalomethanes (total)	8/Mar/22	20	ug/L	No
September 21, 2017	Bromodichloromethane	8/Mar/22	6.2	ug/L	No
September 21, 2017	Bromoform	8/Mar/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	8/Mar/22	11	ug/L	No
September 21, 2017	Dibromochloromethane	8/Mar/22	2.8	ug/L	No
September 21, 2017	Trihalomethanes (total)	28/Jun/22	35	ug/L	No
September 21, 2017	Bromodichloromethane	28/Jun/22	8.6	ug/L	No
September 21, 2017	Bromoform	28/Jun/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	28/Jun/22	23	ug/L	No
September 21, 2017	Dibromochloromethane	28/Jun/22	3	ug/L	No
September 21, 2017	Trihalomethanes (total)	8/Sep/22	58	ug/L	No
September 21, 2017	Bromodichloromethane	8/Sep/22	13	ug/L	No
September 21, 2017	Bromoform	8/Sep/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	8/Sep/22	41	ug/L	No
September 21, 2017	Dibromochloromethane	8/Sep/22	4.8	ug/L	No
September 21, 2017	Trihalomethanes (total)	7/Dec/22	32	ug/L	No
September 21, 2017	Bromodichloromethane	7/Dec/22	8.8	ug/L	No
September 21, 2017	Bromoform	7/Dec/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	7/Dec/22	20	ug/L	No
September 21, 2017	Dibromochloromethane	7/Dec/22	3.3	ug/L	No
September 21, 2017	Surr 1,2-Dichloroethane-d4	28/Jun/22	101	Surr Rec %	No
September 21, 2017	Surr 4-Bromofluorobenzene	28/Jun/22	95	Surr Rec %	No

SITE: 950 East Springbank Gate - Treated Distribution

b) ORGANIC PARAMETERS (HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	8/Mar/22	12.1	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	6.6	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	5.5	ug/L	N
September 21, 2017	Total Haloacetic Acids	29/Jun/22	5.3 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	29/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	29/Jun/22	5.3	ug/L	N
September 21, 2017	(Monobromoacetic acid)	29/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	29/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	29/Jun/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	7.7	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	7.7	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	5.3 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	4.7	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	5.3 <MDL	ug/L	N

SITE: 365DD - London Pipeline - Treated Distribution

b) ORGANIC PARAMETERS (HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	5/Jan/22	5.5	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	5/Jan/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	5/Jan/22	5.5	ug/L	N
September 21, 2017	(Monobromoacetic acid)	5/Jan/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	5/Jan/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	5/Jan/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	6/Apr/22	5.3 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	6/Apr/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	6/Apr/22	5	ug/L	N
September 21, 2017	(Monobromoacetic acid)	6/Apr/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	6/Apr/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	6/Apr/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	5/Jul/22	7.9	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	5/Jul/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	5/Jul/22	7.9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	5/Jul/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	5/Jul/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	5/Jul/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	11/Oct/22	14.5	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	11/Oct/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	11/Oct/22	8.9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	11/Oct/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	11/Oct/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	11/Oct/22	5.6	ug/L	N

SITE: 365DD London Pipeline - Treated Distribution

b) ORGANIC PARAMETERS (THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Trihalomethanes (total)	5/Jan/22	15	ug/L	No
September 21, 2017	Bromodichloromethane	5/Jan/22	4.9	ug/L	No
September 21, 2017	Bromoform	5/Jan/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	5/Jan/22	8.4	ug/L	No
September 21, 2017	Dibromochloromethane	5/Jan/22	2	ug/L	No
September 21, 2017	Trihalomethanes (total)	6/Apr/22	15	ug/L	No
September 21, 2017	Bromodichloromethane	6/Apr/22	4.6	ug/L	No
September 21, 2017	Bromoform	6/Apr/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	6/Apr/22	7.6	ug/L	No
September 21, 2017	Dibromochloromethane	6/Apr/22	2.6	ug/L	No
September 21, 2017	Trihalomethanes (total)	5/Jul/22	20	ug/L	No
September 21, 2017	Bromodichloromethane	5/Jul/22	6.2	ug/L	No
September 21, 2017	Bromoform	5/Jul/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	5/Jul/22	11	ug/L	No
September 21, 2017	Dibromochloromethane	5/Jul/22	2.7	ug/L	No
September 21, 2017	Trihalomethanes (total)	11/Oct/22	23	ug/L	No
September 21, 2017	Bromodichloromethane	11/Oct/22	7.1	ug/L	No
September 21, 2017	Bromoform	11/Oct/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	11/Oct/22	14	ug/L	No
September 21, 2017	Dibromochloromethane	11/Oct/22	2.6	ug/L	No

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

None.

2022 Summary of Water Pumpage

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Saturday	1/Jan/22	78,766	23,036	104,621
Sunday	2/Jan/22	83,214	22,896	117,610
Monday	3/Jan/22	102,992	23,169	121,313
Tuesday	4/Jan/22	102,852	23,235	118,533
Wednesday	5/Jan/22	98,866	23,247	118,280
Thursday	6/Jan/22	98,688	23,062	***123,892***
Friday	7/Jan/22	98,528	23,193	120,706
Saturday	8/Jan/22	94,376	23,268	116,855
Sunday	9/Jan/22	98,824	24,114	118,203
Monday	10/Jan/22	94,294	23,900	123,606
Tuesday	11/Jan/22	101,136	24,002	118,712
Wednesday	12/Jan/22	96,000	23,355	116,987
Thursday	13/Jan/22	96,528	22,479	116,301
Friday	14/Jan/22	87,344	23,096	117,204
Saturday	15/Jan/22	84,480	23,863	117,588
Sunday	16/Jan/22	95,280	23,924	119,317
Monday	17/Jan/22	***115,260***	23,768	114,789
Tuesday	18/Jan/22	81,392	23,909	118,153
Wednesday	19/Jan/22	93,408	23,459	119,798
Thursday	20/Jan/22	93,664	***25,363***	121,507
Friday	21/Jan/22	94,238	25,016	120,381
Saturday	22/Jan/22	87,008	24,894	119,568
Sunday	23/Jan/22	96,472	24,238	120,372
Monday	24/Jan/22	99,582	23,797	118,306
Tuesday	25/Jan/22	100,800	23,912	121,330
Wednesday	26/Jan/22	102,770	23,902	121,035
Thursday	27/Jan/22	90,310	23,909	120,307
Friday	28/Jan/22	99,620	24,015	119,351
Saturday	29/Jan/22	95,516	23,968	120,160
Sunday	30/Jan/22	95,222	23,965	122,006
Monday	31/Jan/22	95,048	23,953	123,172
January 2022 Monthly Max		115,260	25,363	123,892
January 2022 Monthly Average		95,790	23,762	119,511
January 2022 Total		2,873,712	712,871	3,585,343

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Tuesday	1/Feb/22	101,890	22,459	118,712
Wednesday	2/Feb/22	83,984	26,694	117,555
Thursday	3/Feb/22	79,052	22,884	121,102
Friday	4/Feb/22	112,122	22,512	116,821
Saturday	5/Feb/22	101,464	22,237	120,770
Sunday	6/Feb/22	100,244	22,208	***122,227***
Monday	7/Feb/22	76,798	24,621	121,149
Tuesday	8/Feb/22	71,662	***32,217***	118,986
Wednesday	9/Feb/22	89,294	26,907	119,696
Thursday	10/Feb/22	96,818	27,674	118,855
Friday	11/Feb/22	96,706	28,010	114,231
Saturday	12/Feb/22	90,536	27,938	115,881
Sunday	13/Feb/22	97,754	24,925	119,184
Monday	14/Feb/22	99,552	22,418	115,769
Tuesday	15/Feb/22	93,120	24,638	118,885
Wednesday	16/Feb/22	98,672	27,618	117,947
Thursday	17/Feb/22	98,320	23,835	115,729
Friday	18/Feb/22	94,048	21,463	115,849
Saturday	19/Feb/22	90,960	21,317	114,081
Sunday	20/Feb/22	90,816	21,456	111,370
Monday	21/Feb/22	101,092	21,287	115,953
Tuesday	22/Feb/22	93,020	24,941	113,677
Wednesday	23/Feb/22	85,784	23,136	118,052
Thursday	24/Feb/22	94,504	21,829	119,039
Friday	25/Feb/22	96,970	20,248	116,091
Saturday	26/Feb/22	101,612	14,078	115,352
Sunday	27/Feb/22	102,016	16,062	118,529
Monday	28/Feb/22	***132,258***	15,744	115,082
February 2022 Monthly Max		132,258	32,217	122,227
February 2022 Monthly Max		95,395	23,263	117,378
February 2022 Total		2,671,068	651,356	3,286,572

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Tuesday	1/Mar/22	46,662	***32,138***	***123,333***
Wednesday	2/Mar/22	91,930	28,311	119,565
Thursday	3/Mar/22	101,650	24,769	120,218
Friday	4/Mar/22	96,716	24,112	120,941
Saturday	5/Mar/22	96,586	24,227	118,107
Sunday	6/Mar/22	96,062	24,988	120,712
Monday	7/Mar/22	96,276	24,836	117,392
Tuesday	8/Mar/22	91,144	25,130	120,333
Wednesday	9/Mar/22	97,452	23,655	119,980
Thursday	10/Mar/22	102,292	23,340	119,206
Friday	11/Mar/22	93,480	24,354	117,947
Saturday	12/Mar/22	93,042	23,585	118,093
Sunday	13/Mar/22	87,424	22,988	113,456
Monday	14/Mar/22	93,568	23,581	118,615
Tuesday	15/Mar/22	94,544	22,794	117,113
Wednesday	16/Mar/22	94,736	25,029	118,976
Thursday	17/Mar/22	98,192	23,856	118,102
Friday	18/Mar/22	95,136	23,828	116,258
Saturday	19/Mar/22	86,288	24,543	112,860
Sunday	20/Mar/22	86,880	25,078	118,159
Monday	21/Mar/22	90,512	25,102	117,756
Tuesday	22/Mar/22	91,792	25,162	117,630
Wednesday	23/Mar/22	92,112	25,977	117,864
Thursday	24/Mar/22	96,272	25,733	116,706
Friday	25/Mar/22	92,512	25,890	117,613
Saturday	26/Mar/22	87,200	24,402	114,759
Sunday	27/Mar/22	92,224	24,357	118,159
Monday	28/Mar/22	96,496	20,298	117,019
Tuesday	29/Mar/22	101,170	22,077	119,639
Wednesday	30/Mar/22	82,156	23,437	119,573
Thursday	31/Mar/22	***108,114***	21,504	118,231
March 2022 Monthly Max		108,114	32,138	123,333
March 2022 Monthly Average		92,601	24,486	118,204
March 2022 Total		2,870,620	759,081	3,664,312

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Friday	1/Apr/22	100,804	20,905	118,665
Saturday	2/Apr/22	96,386	21,159	120,702
Sunday	3/Apr/22	100,692	20,925	117,558
Monday	4/Apr/22	96,500	20,672	118,187
Tuesday	5/Apr/22	98,222	20,665	119,902
Wednesday	6/Apr/22	89,196	20,421	119,989
Thursday	7/Apr/22	***109,850***	19,479	118,731
Friday	8/Apr/22	94,640	23,648	118,513
Saturday	9/Apr/22	94,386	23,748	115,879
Sunday	10/Apr/22	93,270	23,777	119,527
Monday	11/Apr/22	93,262	23,730	118,007
Tuesday	12/Apr/22	98,800	***24,431***	119,172
Wednesday	13/Apr/22	98,320	20,609	117,125
Thursday	14/Apr/22	90,816	22,897	116,757
Friday	15/Apr/22	87,056	22,904	114,695
Saturday	16/Apr/22	90,256	21,909	110,587
Sunday	17/Apr/22	90,016	23,541	111,866
Monday	18/Apr/22	98,320	23,678	118,052
Tuesday	19/Apr/22	89,456	23,708	116,321
Wednesday	20/Apr/22	96,416	23,602	119,905
Thursday	21/Apr/22	96,256	23,658	118,110
Friday	22/Apr/22	99,680	23,675	118,282
Saturday	23/Apr/22	85,504	23,254	116,763
Sunday	24/Apr/22	96,416	22,806	122,379
Monday	25/Apr/22	96,528	23,130	117,065
Tuesday	26/Apr/22	96,450	19,097	120,057
Wednesday	27/Apr/22	105,352	21,328	118,675
Thursday	28/Apr/22	95,230	21,442	***123,098***
Friday	29/Apr/22	106,126	21,594	121,294
Saturday	30/Apr/22	96,360	21,398	120,238
April 2022 Monthly Max		109,850	24,431	123,098
April 2022 Monthly Average		96,019	22,260	118,203
April 2022 Total		2,880,566	667,790	3,546,101

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Sunday	1/May/22	95,754	21,310	117,515
Monday	2/May/22	96,798	22,969	117,174
Tuesday	3/May/22	95,284	23,033	115,949
Wednesday	4/May/22	96,000	22,905	116,988
Thursday	5/May/22	100,224	22,806	118,520
Friday	6/May/22	89,888	23,571	117,292
Saturday	7/May/22	82,576	24,981	121,199
Sunday	8/May/22	91,296	25,463	120,592
Monday	9/May/22	100,512	25,815	124,974
Tuesday	10/May/22	110,078	25,906	127,979
Wednesday	11/May/22	109,410	***26,888***	131,112
Thursday	12/May/22	109,718	25,815	133,955
Friday	13/May/22	109,474	25,846	136,673
Saturday	14/May/22	110,464	25,892	137,822
Sunday	15/May/22	118,414	26,125	142,393
Monday	16/May/22	109,848	25,875	122,595
Tuesday	17/May/22	109,462	25,693	125,723
Wednesday	18/May/22	97,032	25,771	124,676
Thursday	19/May/22	89,510	25,777	129,382
Friday	20/May/22	90,126	25,256	130,732
Saturday	21/May/22	101,938	25,055	122,303
Sunday	22/May/22	68,264	14,642	115,475
Monday	23/May/22	98,524	23,155	123,766
Tuesday	24/May/22	98,768	23,962	126,843
Wednesday	25/May/22	107,312	23,970	124,537
Thursday	26/May/22	96,000	24,068	128,042
Friday	27/May/22	103,424	24,073	123,462
Saturday	28/May/22	99,072	24,801	126,094
Sunday	29/May/22	106,720	24,769	136,669
Monday	30/May/22	114,656	24,854	143,539
Tuesday	31/May/22	***133,184***	24,929	***143,550***
May 2022 Monthly Max		133,184	26,888	143,550
May 2022 Monthly Average		101,282	24,386	126,694
May 2022 Total		3,139,730	755,975	3,927,525

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Wednesday	1/Jun/22	118,976	19,730	132,927
Thursday	2/Jun/22	104,512	19,348	126,656
Friday	3/Jun/22	110,640	20,781	132,421
Saturday	4/Jun/22	103,648	21,893	133,014
Sunday	5/Jun/22	111,920	21,797	128,759
Monday	6/Jun/22	105,984	21,128	126,999
Tuesday	7/Jun/22	101,926	21,233	122,934
Wednesday	8/Jun/22	106,096	21,871	125,209
Thursday	9/Jun/22	94,242	22,218	128,149
Friday	10/Jun/22	110,282	24,374	126,768
Saturday	11/Jun/22	109,894	22,197	127,372
Sunday	12/Jun/22	98,904	22,348	128,445
Monday	13/Jun/22	115,552	20,759	133,612
Tuesday	14/Jun/22	111,392	22,116	141,457
Wednesday	15/Jun/22	127,440	12,199	141,910
Thursday	16/Jun/22	135,312	***30,440***	153,537
Friday	17/Jun/22	123,808	24,896	143,900
Saturday	18/Jun/22	108,816	22,954	135,187
Sunday	19/Jun/22	110,544	22,874	140,264
Monday	20/Jun/22	111,024	23,020	129,988
Tuesday	21/Jun/22	123,920	23,045	150,156
Wednesday	22/Jun/22	***135,856***	23,062	155,994
Thursday	23/Jun/22	127,776	23,205	151,734
Friday	24/Jun/22	132,000	23,059	155,964
Saturday	25/Jun/22	135,168	22,429	152,384
Sunday	26/Jun/22	126,880	20,116	150,966
Monday	27/Jun/22	135,584	22,496	149,543
Tuesday	28/Jun/22	127,008	22,354	151,591
Wednesday	29/Jun/22	120,704	21,131	142,012
Thursday	30/Jun/22	132,464	24,824	***156,885***
June 2022 Monthly Max		135,856	30,440	156,885
June 2022 Monthly Average		117,276	22,130	139,225
June 2022 Total		3,518,272	663,897	4,176,737

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Friday	1/Jul/22	114,000	20,526	136,781
Saturday	2/Jul/22	114,496	22,433	138,963
Sunday	3/Jul/22	123,648	***24,864***	150,180
Monday	4/Jul/22	120,268	24,078	151,790
Tuesday	5/Jul/22	124,524	23,187	138,036
Wednesday	6/Jul/22	125,868	16,145	145,600
Thursday	7/Jul/22	127,996	22,539	153,642
Friday	8/Jul/22	132,480	22,549	156,525
Saturday	9/Jul/22	131,680	22,496	150,714
Sunday	10/Jul/22	131,686	24,164	155,210
Monday	11/Jul/22	***143,948***	20,766	150,343
Tuesday	12/Jul/22	118,592	22,449	155,249
Wednesday	13/Jul/22	135,920	21,389	149,399
Thursday	14/Jul/22	130,192	22,481	***161,701***
Friday	15/Jul/22	139,744	24,158	160,388
Saturday	16/Jul/22	131,840	24,015	159,356
Sunday	17/Jul/22	135,824	22,331	145,713
Monday	18/Jul/22	109,344	22,451	139,433
Tuesday	19/Jul/22	124,000	24,235	143,156
Wednesday	20/Jul/22	118,048	23,220	136,425
Thursday	21/Jul/22	111,712	21,477	140,273
Friday	22/Jul/22	119,552	21,299	148,682
Saturday	23/Jul/22	124,000	21,783	140,112
Sunday	24/Jul/22	110,048	21,603	130,877
Monday	25/Jul/22	118,450	22,301	138,752
Tuesday	26/Jul/22	114,960	23,588	145,185
Wednesday	27/Jul/22	119,824	23,542	139,277
Thursday	28/Jul/22	118,794	22,009	143,762
Friday	29/Jul/22	108,240	22,891	149,347
Saturday	30/Jul/22	139,280	22,048	138,250
Sunday	31/Jul/22	110,144	21,967	137,198
July 2022 Monthly Max		143,948	24,864	161,701
July 2022 Monthly Average		123,519	22,419	146,139
July 2022 Total		3,829,102	694,984	4,530,317

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Monday	1/Aug/22	115,232	22,712	135,791
Tuesday	2/Aug/22	111,388	22,080	131,550
Wednesday	3/Aug/22	114,754	22,745	137,095
Thursday	4/Aug/22	106,736	22,844	129,436
Friday	5/Aug/22	110,454	21,629	132,390
Saturday	6/Aug/22	106,120	22,782	133,089
Sunday	7/Aug/22	110,728	22,020	134,969
Monday	8/Aug/22	109,128	22,173	130,021
Tuesday	9/Aug/22	106,944	21,938	130,891
Wednesday	10/Aug/22	108,928	20,347	133,639
Thursday	11/Aug/22	114,592	21,827	135,999
Friday	12/Aug/22	118,720	21,938	139,101
Saturday	13/Aug/22	119,808	21,949	129,928
Sunday	14/Aug/22	105,456	22,707	133,547
Monday	15/Aug/22	110,448	22,720	143,044
Tuesday	16/Aug/22	109,904	***24,313***	137,779
Wednesday	17/Aug/22	***124,688***	22,729	137,623
Thursday	18/Aug/22	124,176	22,641	140,529
Friday	19/Aug/22	119,520	23,552	***145,265***
Saturday	20/Aug/22	115,632	22,648	136,296
Sunday	21/Aug/22	101,952	22,736	126,220
Monday	22/Aug/22	105,600	22,449	129,483
Tuesday	23/Aug/22	109,516	22,229	134,682
Wednesday	24/Aug/22	112,726	22,332	142,626
Thursday	25/Aug/22	123,072	22,261	137,301
Friday	26/Aug/22	109,280	22,395	134,359
Saturday	27/Aug/22	108,646	22,438	132,570
Sunday	28/Aug/22	108,956	22,531	137,931
Monday	29/Aug/22	119,124	22,343	138,871
Tuesday	30/Aug/22	115,120	23,288	129,975
Wednesday	31/Aug/22	110,308	23,349	134,008
August 2022 Monthly Max		124,688	24,313	145,265
August 2022 Monthly Average		112,505	22,472	135,033
August 2022 Total		3,487,656	696,645	4,186,008

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Thursday	1/Sep/22	110,538	***24,797***	139,495
Friday	2/Sep/22	114,938	24,163	142,233
Saturday	3/Sep/22	118,548	24,062	137,952
Sunday	4/Sep/22	106,068	24,128	122,977
Monday	5/Sep/22	99,916	24,166	132,929
Tuesday	6/Sep/22	114,614	24,110	143,374
Wednesday	7/Sep/22	***127,484***	22,700	142,993
Thursday	8/Sep/22	119,106	22,642	***144,535***
Friday	9/Sep/22	122,880	22,734	142,890
Saturday	10/Sep/22	115,234	22,835	142,709
Sunday	11/Sep/22	114,728	22,754	138,576
Monday	12/Sep/22	114,874	22,764	135,038
Tuesday	13/Sep/22	114,960	22,699	132,705
Wednesday	14/Sep/22	111,344	22,810	137,602
Thursday	15/Sep/22	123,744	22,839	137,716
Friday	16/Sep/22	116,024	22,729	140,994
Saturday	17/Sep/22	116,208	22,721	136,283
Sunday	18/Sep/22	104,976	22,705	137,609
Monday	19/Sep/22	115,824	22,712	133,337
Tuesday	20/Sep/22	105,584	22,692	133,075
Wednesday	21/Sep/22	112,416	21,096	130,056
Thursday	22/Sep/22	124,110	17,474	124,255
Friday	23/Sep/22	91,742	18,060	126,127
Saturday	24/Sep/22	118,700	12,535	122,516
Sunday	25/Sep/22	103,258	11,158	124,252
Monday	26/Sep/22	114,814	11,410	124,304
Tuesday	27/Sep/22	114,582	10,487	122,191
Wednesday	28/Sep/22	108,158	10,510	124,244
Thursday	29/Sep/22	114,892	10,665	124,440
Friday	30/Sep/22	106,000	18,674	125,602
September 2022 Monthly Max		127,484	24,797	144,535
September 2022 Monthly Average		113,209	20,194	133,434
September 2022 Total		3,396,264	605,831	4,003,010

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Saturday	1/Oct/22	106,592	17,622	121,244
Sunday	2/Oct/22	98,248	20,132	125,886
Monday	3/Oct/22	106,324	22,239	125,370
Tuesday	4/Oct/22	106,958	19,307	124,306
Wednesday	5/Oct/22	***107,616***	23,125	***127,162***
Thursday	6/Oct/22	103,552	23,185	125,769
Friday	7/Oct/22	93,648	23,158	122,006
Saturday	8/Oct/22	89,312	23,150	115,466
Sunday	9/Oct/22	86,736	21,791	111,261
Monday	10/Oct/22	98,784	23,281	118,761
Tuesday	11/Oct/22	100,688	23,364	122,209
Wednesday	12/Oct/22	100,416	23,162	122,749
Thursday	13/Oct/22	100,528	22,511	118,916
Friday	14/Oct/22	87,344	21,722	119,084
Saturday	15/Oct/22	91,488	24,278	115,050
Sunday	16/Oct/22	96,144	23,239	119,148
Monday	17/Oct/22	96,032	23,303	116,838
Tuesday	18/Oct/22	94,090	23,281	115,150
Wednesday	19/Oct/22	91,706	24,169	115,650
Thursday	20/Oct/22	91,810	24,863	117,024
Friday	21/Oct/22	92,544	***25,999***	118,341
Saturday	22/Oct/22	86,388	25,947	119,177
Sunday	23/Oct/22	101,292	23,929	118,969
Monday	24/Oct/22	96,382	23,933	122,261
Tuesday	25/Oct/22	100,448	23,938	119,993
Wednesday	26/Oct/22	86,720	23,933	118,430
Thursday	27/Oct/22	96,832	23,879	119,544
Friday	28/Oct/22	98,896	23,850	117,655
Saturday	29/Oct/22	89,264	23,943	114,248
Sunday	30/Oct/22	85,824	23,955	115,499
Monday	31/Oct/22	93,300	24,184	111,940
October 2022 Monthly Max		107,616	25,999	127,162
October 2022 Monthly Average		95,997	23,173	119,197
October 2022 Total		2,975,906	718,372	3,695,104

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Tuesday	1/Nov/22	89,384	24,224	118,056
Wednesday	2/Nov/22	96,322	24,114	117,808
Thursday	3/Nov/22	93,190	24,162	115,293
Friday	4/Nov/22	91,910	24,244	117,046
Saturday	5/Nov/22	84,204	***25,413***	115,563
Sunday	6/Nov/22	96,974	25,113	124,005
Monday	7/Nov/22	93,674	23,924	115,741
Tuesday	8/Nov/22	93,830	23,945	121,463
Wednesday	9/Nov/22	102,428	23,914	119,622
Thursday	10/Nov/22	94,506	22,998	121,635
Friday	11/Nov/22	97,770	22,134	116,940
Saturday	12/Nov/22	94,264	22,081	115,239
Sunday	13/Nov/22	93,036	22,035	118,690
Monday	14/Nov/22	97,706	22,170	119,453
Tuesday	15/Nov/22	98,272	22,047	117,656
Wednesday	16/Nov/22	95,312	21,623	117,580
Thursday	17/Nov/22	86,112	24,852	119,000
Friday	18/Nov/22	106,726	22,944	124,146
Saturday	19/Nov/22	95,094	22,837	124,921
Sunday	20/Nov/22	104,880	22,871	***126,285***
Monday	21/Nov/22	***115,886***	22,762	123,541
Tuesday	22/Nov/22	99,530	22,941	123,147
Wednesday	23/Nov/22	100,358	22,883	120,986
Thursday	24/Nov/22	100,172	21,098	122,510
Friday	25/Nov/22	98,250	21,337	118,911
Saturday	26/Nov/22	98,458	21,052	118,157
Sunday	27/Nov/22	96,890	21,198	118,877
Monday	28/Nov/22	96,554	21,202	118,883
Tuesday	29/Nov/22	97,346	21,213	119,574
Wednesday	30/Nov/22	97,464	22,512	123,020
November 2022 Monthly Max		115,886	25,413	126,285
November 2022 Monthly Average		96,883	22,861	119,792
November 2022 Total		2,906,502	685,843	3,593,749

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Thursday	1/Dec/22	104,978	22,676	***128,894***
Friday	2/Dec/22	***112,552***	20,002	120,491
Saturday	3/Dec/22	98,320	22,174	116,661
Sunday	4/Dec/22	91,078	22,396	126,890
Monday	5/Dec/22	102,020	20,305	122,212
Tuesday	6/Dec/22	102,344	21,020	119,193
Wednesday	7/Dec/22	96,952	18,897	119,457
Thursday	8/Dec/22	97,230	11,785	120,176
Friday	9/Dec/22	102,730	24,572	118,846
Saturday	10/Dec/22	96,126	20,683	115,907
Sunday	11/Dec/22	94,618	21,636	118,283
Monday	12/Dec/22	99,074	25,501	122,343
Tuesday	13/Dec/22	103,470	23,484	119,228
Wednesday	14/Dec/22	110,686	20,032	126,998
Thursday	15/Dec/22	108,242	20,275	122,091
Friday	16/Dec/22	97,764	23,913	122,579
Saturday	17/Dec/22	96,292	22,678	123,818
Sunday	18/Dec/22	97,422	21,722	123,654
Monday	19/Dec/22	104,302	20,893	124,519
Tuesday	20/Dec/22	106,786	19,928	123,670
Wednesday	21/Dec/22	109,356	21,190	124,120
Thursday	22/Dec/22	105,834	16,833	117,738
Friday	23/Dec/22	84,318	21,018	119,992
Saturday	24/Dec/22	99,182	20,826	118,881
Sunday	25/Dec/22	91,690	17,969	109,884
Monday	26/Dec/22	105,524	11,866	107,356
Tuesday	27/Dec/22	96,980	11,630	112,330
Wednesday	28/Dec/22	104,280	16,976	115,957
Thursday	29/Dec/22	83,394	***30,460***	116,560
Friday	30/Dec/22	88,022	27,478	115,162
Saturday	31/Dec/22	85,930	23,639	111,711
December 2022 Monthly Max		112,552	30,460	128,894
December 2022 Monthly Average		99,274	20,789	119,536
December 2022 Total		3,077,496	644,457	3,705,601

2022 Annual Report (EMPS – London)

Drinking-Water System Number:	260004917
Drinking-Water System Name:	**Elgin Middlesex Pumping Station – City of London Distribution System**
Drinking-Water System Owner:	City of London
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2022 through December 31, 2022

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [X] No [ ]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No [ ]

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

City of London
300 Dufferin Ave
London, ON
N6B 1Z2
www.london.ca

Elgin Area Primary Water Supply System
Treatment Plant
43665 Dexter Line, Union, ON

Complete for all other Categories.

Number of Designated Facilities served:

N/A

Did you provide a copy of your annual report to all Designated Facilities you serve?
Yes [ ] No [ ]

Number of Interested Authorities you report to: N/A

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?
Yes [ ] No [ ]

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:

Drinking Water System Name	Drinking Water System Number
City of London Distribution System	260004917

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

Drinking Water System Name	Drinking Water System Number
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 [X] No [ ]

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

[X] Public access/notice via the web
[X] Public access/notice via Government Office
[ ] Public access/notice via a newspaper
[X] 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 54,600$m^{3.}$ 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 2022.

Were any significant expenses incurred to?

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

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

- Completed air compressor repairs
- Completed lighting and motion control upgrades
- Replacement of ASCO Valves on HLP04
- Engineering for surge tank compressor replacement
- EMPS PFD Consolidation

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	53	(0) – (0)	(0) – (0)	53	(<10)-(20)

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	0.58	1.16	0.89

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 5, 2022 April 6, 2022 July 5, 2022 October 11, 2022	15 15 20 23	µg/L µg/L µg/L µg/L	NO
THM Running Annual Average (RAA)	2022	18.25	µg/L	NO
HAA (NOTE: result value is based on one sample)	January 5, 2022 April 6, 2022 July 5, 2022 October 11, 2022	5.5 ND 7.9 14.5	µg/L µg/L µg/L µg/L	NO
HAA Running Annual Average (RAA)	2022	8.3	µg/L	NO

ND = Non-detect