

CITY OF LONDON 2017 DRINKING WATER SUMMARY REPORT

System Name: City of London Distribution System

Mailing Address: Corporation of the City of London
P.O. Box 5035, 300 Dufferin Ave.
London, ON N6A 4L9



System Rating: Water Distribution Subsystem Class IV
Water Treatment Subsystem Class II
Average Day Demand: 128.87 MLD
Peak Day Demand: 170.68 MLD (July 31, 2017)
Population Served: 381,000 (approx.)
Source Water: Surface Water (Lake Huron, Lake Erie)
Drinking Water System Number: 260004917
Municipal Drinking Water Licence: 006-101

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 21, 2018 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, 2018, a copy of the 2017 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 and Climate Change (MOECC) as a courtesy for information purposes.

The Elgin-Middlesex Pumping Station (EMPS) is jointly owned by the St. Thomas Secondary Water Supply System, the Aylmer Secondary Water Supply System, and the City of London. EMPS is operated by the Ontario Clean Water Agency (OCWA). As required, the Annual Report for the EMPS (London portion) is attached as an appendix to this report for members of Council.

Ministry of the Environment and Climate Change Annual Inspection (MOECC)

MOECC inspections can be in the form of comprehensive detailed inspections, or less intensive focused inspections. They can also be announce or unannounced. The MOECC selected London's Water Distribution System for an unannounced focused inspection in 2017.

The MOECC unannounced inspection was conducted on November 29, 2017. It included staff interviews and facility inspections, as well as a review of operating procedures, water analysis reports, operational records, and staff certification and training records.

On December 22, 2017, the MOECC issued the City of London Water Distribution System Inspection Report. The report summarizes the inspection findings, and lists incidents of non-compliance with regulatory requirements. A full report on this MOECC Inspection was presented to the Civic Works Committee on February 6, 2018.

Southeast Reservoir and Pumping Station

The City of London obtains water supply from two Regional Water Supply Systems. The Lake Huron Primary Water Supply System supplies approximately 85% of the City's water needs, feeding water supply into the north of the City via the Arva Terminal Reservoir. The Elgin Primary Water Supply System provides the remaining 15%, feeding water into the south of the City via the Elgin Middlesex Pumping Station.

The Southeast Reservoir and Pumping Station was designed to provide greater flexibility and security of supply in the event that the Lake Huron Primary Water Supply feed were to be interrupted as it was in 1983, 1988, 2010 and again in 2012. The reservoir capacity at the site is 113 ML (million litres), bringing the total available reservoir capacity for the

City of London to 431 ML, including the Arva Terminal Reservoir. In comparison, the Average Daily Demand for 2017 was 128.87 MLD.

The Southeast Reservoir and Pumping Station officially became operational September 11, 2017. Since that time, the City of London Water Supply staff have been operating the station, supplying potable water into the distribution system, working with our consultant and contractors to fine tune SCADA, instrumentation, processes, and systems to become more operationally efficient.

Water Budget

The approved 2016-2019 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 2016-2019 water operating and capital budgets support four core business objectives:

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

The total Water budget for 2017 was \$75.9 million, which includes long term infrastructure renewal and replacement plans. 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.

Notable Initiatives

Downtown Leak Detection Fixed Network

The City consists of over 1,585 km of water main and associated hydrants, water service connections, and other appurtenances. London experiences approximately 120 water main breaks a year. London's water loss level is relatively low (less than 10%; or an internationally recognized Infrastructure Leakage Index (ILI) factor of less than 2.0), placing us amongst the best municipalities in North America.

Permanent leakage monitoring, via a fixed network, is a concept that has been gaining popularity, and London has been considering it for several years. Acoustic leak loggers will be deployed in the core downtown area through magnetic connection to valves. They will log noise levels every single day, in the early hours of the morning, when pressure is highest and background noise is lowest. Automatic software analysis of this data provides the probability of leakage based on the level and consistency of the noise. If a high leak probability is found, the data is correlated and the leak location is pin-pointed. The data is displayed on a map, and colour codes will depict the probability and locations of leaks. All of this is done prior to anyone going out to the field to investigate.

The greatest benefit of this system is risk-aversion and preventing a devastating catastrophic failure, similar to the one that occurred in 2007 at the intersection of Dundas and Wellington Streets. Huge investments have already been made to our trunk water mains in order to reduce our level of risk. Given the importance of the Downtown Core, and the future high profile, high cost projects that are being developed (Dundas Streetscape, SHIFT/Bus Rapid Transit) these risk-aversion investments that will reduce the possibility of shutting down a portion of downtown or destroying part of one of these projects is essential.

Computerized Maintenance Management System

The City's critical infrastructure continues to grow in magnitude and complexity. High expectations are placed on proper administration of these complex systems in order to comply with stringent legislative requirements. Accurate data management relating to assigned and completed work, full cost accounting, tangible capital asset reporting, strategic asset management planning and budget challenges are just a few elements that have added to the complexity of ownership and maintenance management. Fortunately, for those that own and/or manage utilities, the technology to manage complex infrastructures is available, and has been in use for many years. In Canada, all larger municipalities have been utilizing a Computerized Maintenance Management System (CMMS) for numerous years. Within a three hour drive of London, there are 11 municipalities that currently use CMMS, including Kitchener, Waterloo, Hamilton, and the Regions of York, Durham and Niagara. In the United States, where many water and wastewater systems are privatized, the use of CMMS systems are much more prevalent.

In 2006, for the Water and Sewer Operations Divisions, it was evident that existing practices were unsustainable and that the demands associated with infrastructure ownership needed to be managed through a formal work order system that enabled staff to develop sound, strategic work plans, and to implement, record and store data effectively, efficiently and economically. Since that time, they have been attempting to implement a formal CMMS.

In 2010, Water Operations issued a comprehensive Request for Information (RFI) package in order to get a sense for what the market had to offer with respect to formal computerized maintenance management. Elements within the RFI required respondents to consider their capabilities with respect to functionality, maintenance management, integration, reliability and asset management.

In December 2012, the City issued a RFQUAL seeking interested, qualified vendors who could offer a CMMS that would successfully meet the prescribed mandatory and functional requirements established by a cross section of stakeholders across the Corporation.

In June 2013, the City selected and awarded the CMMS implementation project to ESRI Canada, with the selection of their proposal to implement CityWorks. A scope of work has been approved, and the Phase 1 implementation of CMMS has commenced, with a "Go-Live" scheduled to be in June, 2019.

Benefits of a CMMS include:

- Improved citizen response
- Improved efficiency in the use of available resources
- Duplication of work can be avoided
- Improved focus for maintenance activities
- Improved response to government/ legal and MFIPPA requests
- Improved information sharing with other departments and/or divisions

Sampling & Water Quality Monitoring

In 2017, the MOECC required large municipal drinking water systems to test for 70 different organic, inorganic and chemical parameters. The City of London's water sampling regime includes monthly testing for microbiological indicators and chlorine residuals from 57 standard locations across the City, as well as nearly 2,800 random grab samples. Analysis is also performed for up to 112 parameters, including organics, inorganics, chemicals, pesticides and metals at 13 standard locations around the City. This level of testing far exceeds the MOECC'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. All of these efforts help ensure that the water within the distribution system is always of high quality.

2017 Water Quality Sampling Summary

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations	MAC Exceedance (Y/N)
				2017	
REGULATED INORGANICS					
Antimony	6	ug/L	0.02	0.09 - 0.12	No
Arsenic	25	ug/L	0.2	1 - 1.7	No
Barium	1000	ug/L	0.01	13.8 - 20.8	No
Boron	5000	ug/L	2	16 - 22	No
Cadmium	5	ug/L	0.003	0.003 - 0.008	No
Chromium	50	ug/L	0.03	0.46 - 0.53	No
Fluoride	1.5	mg/L	0.06	0.13 - 0.87	No
Free Chlorine Residual	--	mg/L		0.1 - 3.00	No
Mercury	1	ug/L	0.01	<MDL	No
Selenium	10	ug/L	0.04	0.17 - 0.24	No
Sodium	*20	mg/L	0.01	10.8 - 16.9	No
Uranium	20	ug/L	0.002	0.036 - 0.073	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations	MAC Exceedance (Y/N)
				2017	
REGULATED ORGANICS					
Atrazine	--	ug/L	0.01	0.01 - 0.03	No
Atrazine + N-dealkylated metabolites	5	ug/L	0.01	0.01 - 0.05	No
De-ethylated Atrazine	--	ug/L	0.01	<MDL	No
Azinphos-methyl	20	ug/L	0.05	<MDL	No
Benzene	5	ug/L	0.32	<MDL	No
Benzo(a)pyrene	0.01	ug/L	0.004	<MDL	No
Bromoxynil	5	ug/L	0.33	<MDL	No
Carbaryl	90	ug/L	0.05	<MDL	No
Carbofuran	90	ug/L	0.01	<MDL	No
Carbon tetrachloride	5	ug/L	0.16	<MDL	No
Chlorpyrifos	90	ug/L	0.02	<MDL	No
Diazinon	20	ug/L	0.02	<MDL	No
Dicamba	120	ug/L	0.2	<MDL	No
1,2-Dichlorobenzene	200	ug/L	0.41	<MDL	No
1,4-Dichlorobenzene	5	ug/L	0.36	<MDL	No
1,2-Dichloroethane	5	ug/L	0.35	<MDL	No
Dichloromethane	50	ug/L	0.35	<MDL	No
2,4-dichlorophenol	900	ug/L	0.15	<MDL	No
2,4-dichlorophenoxyacetic acid (2,4-D)	100	ug/L	0.19	<MDL	No
Diclofop-methyl	9	ug/L	0.4	<MDL	No
Dimethoate	20	ug/L	0.03	<MDL	No
Diquat	70	ug/L	1	<MDL	No
Diuron	150	ug/L	0.03	<MDL	No
Glyphosate	280	ug/L	1	<MDL	No
Malathion	190	ug/L	0.02	<MDL	No
MCPA	--	mg/L	0.00012	<MDL	No
Metolachlor	50	ug/L	0.01	<MDL	No
Metribuzin	80	ug/L	0.02	<MDL	No
Monochlorobenzene	80	ug/L	0.3	<MDL	No
Paraquat	10	ug/L	1	<MDL	No
Pentachlorophenol	--	ug/L	0.15	<MDL	No
Phorate	2	ug/L	0.01	<MDL	No
Picloram	190	ug/L	1	<MDL	No
Polychlorinated Biphenyls (PCBs)	3	ug/L	0.04	<MDL	No
Prometryne	1	ug/L	0.03	<MDL	No
Simazine	10	ug/L	0.01	<MDL	No
Terbufos	1	ug/L	0.01	<MDL	No
2,3,4,6-tetrachlorophenol	100	ug/L	0.2	<MDL	No
Triallate	230	ug/L	0.01	<MDL	No
Trichloroethylene	50	ug/L	0.44	<MDL	No
2,4,6-trichlorophenol	5	ug/L	0.25	<MDL	No
Trifluralin	45	ug/L	0.02	<MDL	No
Vinyl Chloride	2	ug/L	0.17	<MDL	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations	MAC Exceedance (Y/N)
				2017	
NITRATES					
Nitrate (as nitrogen)	--	mg/L	0.006	0.129 - 1.01	No
Nitrate + Nitrite (as nitrogen)	--	mg/L	0.006	0.129 - 1.01	No
Nitrite (as nitrogen)	--	mg/L	0.003	0.005 - 1.7	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations	MAC Exceedance (Y/N)
				2017	
TRIHALOMETHANES & HALOACETIC ACIDS					
Total Haloacetic Acids	--	ug/L	5.3	5.3 - 17	No
Bromoacetic Acid	--	ug/L	2.9	<MDL	No
Chloroacetic Acid	--	ug/L	4.7	<MDL	No
Dibromoacetic Acid	--	ug/L	2	<MDL	No
Dichloroacetic Acid	--	ug/L	2.6	2.8 - 10.9	No
Trichloroacetic Acid	--	ug/L	5.3	5.3 - 6.6	No
Trihalomethanes (total)	--	ug/L	0.37	12 - 48	No
Bromodichloromethane	--	ug/L	0.26	4 - 12	No
Bromoform	--	ug/L	0.34	0.34 - 0.42	No
Chloroform	--	ug/L	0.29	5.8 - 31	No
Dibromochloromethane	--	ug/L	0.37	1.4 - 4.9	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations	MAC Exceedance (Y/N)
				2017	
MICROBIOLOGICAL					
E. coli	0	cfu/100 mL	0	0 - 0	No
Total Coliform	0	cfu/100 mL	0	0 - 30	Yes
Heterotrophic Plate Count	N/A	cfu/1 mL	10	10 - 2000	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations	MAC Exceedance (Y/N)
				2017	
NON-REGULATED INORGANICS/ORGANICS					
Alkalinity	--	mg/L as CaCO ₃	2	73 - 88	No
Aluminum	--	ug/L	0.3	21.7 - 30.9	No
Ammonia+Ammonium (N)	--	mg/L	0.04	0.04 - 0.09	No
Calcium	--	mg/L	0.01	27.6 - 34.4	No
Chloride	--	mg/L	0.04	9 - 17	No
Cobalt	--	ug/L	0.004	0.005 - 0.02	No
Colour	--	TCU	3	<MDL	No
Conductivity	--	uS/cm	2	254 - 297	No
Copper	--	ug/L	0.02	2.31 - 3.18	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations	MAC Exceedance (Y/N)
				2017	
NON-REGULATED INORGANICS/ORGANICS					
Cyanide	0.2	mg/L	0.002	<MDL	No
1,1-Dichloroethylene (vinylidene chloride)	14	ug/L	0.33	<MDL	No
Dissolved Organic Carbon	--	mg/L	1	1.3 - 1.8	No
Ethylbenzene	--	ug/L	0.33	<MDL	No
Hardness	--	mg/L as CaCO ₃	0.05	101 - 122	No
Iron	--	ug/L	7	7 - 12	No
Langelier's Index	--	no unit	--	-0.3 - -0.29	No
Magnesium	--	mg/L	0.001	7.78 - 8.78	No
Manganese	--	ug/L	0.01	0.06 - 0.46	No
Nickel	--	ug/L	0.1	0.3 - 0.6	No
Nitrogen-Kjeldahl (N)	--	mg/L	0.05	0.14 - 0.2	No
Organic Nitrogen	--	mg/L	0.01	0.05 - 0.2	No
pH	--	no unit	0.05	7.84 - 8	No
Phosphorus	--	mg/L	0.003	<MDL	No
Potassium	--	mg/L	0.003	0.996 - 1.5	No
Silica	--	mg/L	0.02	0.94 - 1.99	No
Silver	--	ug/L	0.002	<MDL	No
Solids (Total Dissolved)	--	mg/L	30	140 - 183	No
Sulphate	--	mg/L	0.04	<MDL	No
Sulphide	--	mg/L	0.006	<MDL	No
Surr 1,2-Dichloroethane-d4	--	Surr Rec %	--	104 - 105	No
Surr 4-Bromofluorobenzene	--	Surr Rec %	--	87 - 88	No
Surr Decachlorobiphenyl	--	%	--	68 - 73	No
Tetrachloroethylene (perchloroethylene)	30	ug/L	0.35	<MDL	No
Toluene	--	ug/L	0.36	<MDL	No
Toxaphene	--	ug/L	5	<MDL	No
2,4,5-TP (Silvex)	--	ug/L	0.18	<MDL	No
Turbidity	1	NTU	0.1	0.16 - 0.36	No
Xylene (Total)	--	ug/L	0.43	<MDL	No
m/p-xylene	--	ug/L	0.43	<MDL	No
o-xylene	--	ug/L	0.17	<MDL	No
Zinc	--	ug/L	1	<MDL	No

In 2017, there were sixteen (16) adverse microbiological results out of 2,491 samples taken. Eleven (11) involved the detection of Total Coliform bacteria (ranging from 1 to 30 cfu/100 mL). Two (2) were due to results of “No Data – Overgrown with Non-target Bacteria”. Three (3) were due to results of “No Data – Overgrown with Target Bacteria”. In each case, staff implemented the mandatory adverse response procedure, which included notifying the MOECC and the Middlesex-London Health Unit, and immediately re-sampling 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 0.32 to 1.65 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, 2017 through to December 31, 2017 a total of 47,111,242,000 litres of water were purchased, at a cost of more than \$24,690,000, from the Joint Water Boards and subsequently pumped into London via the Arva Pumping Station and EMPS. Average day demand was 128,870,000 litres. Peak day consumption of 170,682,000 litres occurred on July 31, 2017.

A summary of system pumpage can be found starting on page 52. 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 2017 statistics for the City of London Distribution System.

Approximate Replacement Value of Drinking Water System	\$2,800,000,000
Number of Pumping Stations	8
Number of Fire Hydrants	9,273
Number of Watermain Valves	13,473
Total Number of Water Services	116,283
Length of Watermain	1,588 km
Number of Watermain Breaks	86
Number of Water Service Leaks	228

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 2016. 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.

**2017 Annual Report
(London)**



London
CANADA



Drinking-Water System Number:	260004917
Municipal Drinking-Water Licence:	006-101
Drinking-Water System Name:	London Water Supply
Drinking-Water System Owner:	The Corporation of the City of London
Drinking-Water System Category:	Large Municipal Residential System
Period being reported:	January 1, 2017 to December 31, 2017

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>City of London – City Hall Customer Service Division – 8th Floor (Public Service Information Area) 300 Dufferin Avenue, London, ON</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: N/A</p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? N/A</p> <p>Number of Interested Authorities you report to: N/A</p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [<input type="checkbox"/>] No [<input type="checkbox"/>] N/A [<input checked="" type="checkbox"/>]</p>
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Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

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 [] No []



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

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

Describe your Drinking-Water System

There are two water supplies in the City of London: primary sources are surface water and emergency back-up sources of well water in stand-by mode.

1. Primary Treated Water Sources (surface water)
 - Lake Huron Primary Water Supply System (LHPWSS)
 - Elgin Area Primary Water Supply System (EAPWSS)
2. Stand-by Emergency Wells (removed from service October 2017)
 - Fanshawe Well Field (6 Wells) – GUDI with in-situ filtration
 - Hyde Park Well – Not GUDI

During 2017 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?

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

Please provide a brief description and breakdown of monetary expenses incurred

2015 saw a record number of frozen water services due to the extreme severity of the winter. Continued operating costs of approximately \$750,000 annually are associated with remediation of these frozen services. Remediation should be complete by 2020.

Large numbers of Water Service Leaks continue to dominate repair/remediation efforts. In excess of 200 water service leaks occurred in 2017, attributing to more than a 3:1 ratio of water service leaks to water main breaks.



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.

Adverse Incident Date	Corrective Action	Corrective Action Date	Adverse Water Quality Indicator # (AWQI #)	Parameters			
				E. coli (cfu/100ml)	Total Coliform (cfu/100ml)	HPC / Background (cfu/1ml)	Free Cl2 (mg/L)
10-Mar-2017 ¹			132620	0	2	410	0.80
	Resample	11-Mar-2017		0	0	0	0.78
	Resample	11-Mar-2017		0	0	0	0.78
	Resample	11-Mar-2017		0	0	0	0.77
29-Mar-2017 ²			132754	0	21	<10	0.76
	Resample	30-Mar-2017		0	0	<10	0.78
	Resample	30-Mar-2017		0	0	<10	0.79
	Resample	30-Mar-2017		0	0	<10	0.83
4-Apr-2017 ³			132802	NDOGT	NDOGT	NDOGT	0.88
	Resample	5-Apr-2017		0	0	0	0.81
	Resample	5-Apr-2017		0	0	0	0.83
	Resample	7-Apr-2017		0	0	0	0.71
	Resample	7-Apr-2017		0	0	0	0.71
9-May-2017 ⁴			133050	0	7	20	0.71
	Resample	10-May-2017		0	0	<10	0.73
	Resample	10-May-2017		0	0	<10	0.73
	Resample	10-May-2017		0	0	<10	0.74
12-Jul-2017 ⁵			134043	0	1	<10	0.92
	Resample	13-Jul-2017		0	0	<10	0.71
	Resample	13-Jul-2017		0	0	<10	0.77
	Resample	13-Jul-2017		0	0	<10	0.79
27-Jul-2017 ⁶			134753	0	1	173	0.32
	Resample	29-Jul-2017		0	0	0	0.32
	Resample	29-Jul-2017		0	0	0	0.30
	Resample	29-Jul-2017		0	0	0	0.35
15-Aug-2017 ⁷			135585	NDOGN	NDOGN	NDOGN	0.75
	Resample	17-Aug-2017		0	0	0	0.65
	Resample	17-Aug-2017		0	0	0	0.59
	Resample	17-Aug-2017		0	0	0	0.60
	Resample	18-Aug-2017		0	0	0	0.50
	Resample	18-Aug-2017		0	0	0	0.47
	Resample	18-Aug-2017		0	0	0	0.42



Adverse Incident Date	Corrective Action	Corrective Action Date	Adverse Water Quality Indicator # (AWQI #)	Parameters			
				E. coli (cfu/100ml)	Total Coliform (cfu/100ml)	HPC / Background (cfu/1 ml)	Free Cl2 (mg/L)
17-Aug-2017 ⁸			135677	0	2	90	1.65
	Resample	18-Aug-2017		0	0	<10	1.37
	Resample	18-Aug-2017		0	0	<10	1.73
	Resample	18-Aug-2017		0	0	<10	0.65
26-Aug-2017 ⁹			136024	0	2	8	0.49
	Resample	28-Aug-2017		0	0	1	0.87
	Resample	28-Aug-2017		0	0	0	0.78
	Resample	28-Aug-2017		0	0	0	0.66
28-Aug-2018 ¹⁰			136084	NDOGT	NDOGT	NDOGT	0.38
	Resample	29-Aug-2017		0	0	0	0.37
	Resample	29-Aug-2017		0	0	0	0.43
	Resample	29-Aug-2017		0	0	0	0.37
19-Sep-2017 ¹¹			136796	NDOGT	NDOGT	NDOGT	0.70
	Resample	20-Sep-2017		0	0	<10	0.47
	Resample	20-Sep-2017	136807	0	3	<10	0.62
	Resample	20-Sep-2017		0	0	<10	0.49
	Resample	21-Sep-2017		0	0	0	0.58
	Resample	21-Sep-2017		0	0	0	0.50
	Resample	21-Sep-2017		0	0	0	0.62
	Resample	23-Sep-2017		0	0	0	0.69
	Resample	23-Sep-2017		0	0	0	0.67
	Resample	23-Sep-2017		0	0	0	0.69
19-Sep-2017 ¹²			136797	0	2	<10	0.54
	Resample	20-Sep-2017		0	0	<10	0.41
	Resample	20-Sep-2017		0	0	<10	0.40
	Resample	20-Sep-2017		0	0	20	0.47
20-Sep-2017 ¹³			136807	0	3	<10	0.62
	Resample	21-Sep-2017		0	0	0	0.58
	Resample	21-Sep-2017		0	0	0	0.50
	Resample	21-Sep-2017		0	0	0	0.62
	Resample	23-Sep-2017		0	0	0	0.69
	Resample	23-Sep-2017		0	0	0	0.67
	Resample	23-Sep-2017		0	0	0	0.69



Adverse Incident Date	Corrective Action	Corrective Action Date	Adverse Water Quality Indicator # (AWQI #)	Parameters			
				E. coli (cfu/100ml)	Total Coliform (cfu/100ml)	HPC / Background (cfu/1 ml)	Free Cl2 (mg/L)
26-Sep-2017 ¹⁴			136910	NDOGN	NDOGN	NDOGN	0.33
	Resample	27-Sep-2017		0	0	0	0.83
	Resample	27-Sep-2017		0	0	2	0.80
	Resample	27-Sep-2017		0	0	0	0.46
	Resample	29-Sep-2017		0	0	0	0.81
	Resample	29-Sep-2017		0	0	2	0.38
	Resample	29-Sep-2017	136987	0	1	0	0.67
29-Sep-2017 ¹⁵			136987	0	1	0	0.67
	Resample	30-Sep-2017		0	0	0	0.78
	Resample	30-Sep-2017		0	0	1	0.60
	Resample	30-Sep-2017		0	0	0	0.68
	Resample	2-Oct-2017		0	0	0	0.66
	Resample	2-Oct-2017		0	0	0	0.62
	Resample	2-Oct-2017		0	0	0	0.43
6-Oct-2017 ¹⁶			137140	0	30	34	0.41
	Resample	8-Oct-2017		0	0	0	0.76
	Resample	8-Oct-2017		0	0	0	0.66
	Resample	8-Oct-2017		0	0	0	0.60

Notes:

¹**Details:** 2 Total Coliform was detected in a sample taken from 2003 Dingman Drive.

Corrective Action: The original site was immediately re-sampled and 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. Free chlorine concentration of 0.80 mg/L for the original sample is indicative of a false positive.

²**Details:** 21 Total Coliform was detected in a sample taken from 2003 Dingman Drive.

Corrective Action: The original site was immediately re-sampled and 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. Free chlorine concentration of 0.76 mg/L for the original sample is indicative of a false positive.

³**Details:** Total Coliform NDOGT, E. Coli NDOGT (No Data - Overgrown with Target Bacteria) from blowoff at Ashland St. & Frances St.



Corrective Action: The original site was immediately re-sampled and a sample was also taken at a site upstream from the original site. No downstream sample was taken as this location was at a dead-end. 31 hours later, these 2 locations were resample again. There were no indicators of adverse water quality in any of the re-sample results. Free chlorine concentration of 0.88 mg/L for the original sample is indicative of a false positive.

⁴Details: 7 Total Coliform was detected in a sample taken from 215 Wharnccliffe Road N. (Jeanne Sauvé PS).

Corrective Action: The original site was immediately re-sampled and 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. Free chlorine concentration of 0.71 mg/L for the original sample is indicative of a false positive.

⁵Details: 1 Total Coliform was detected in a sample taken from 1617 Hyde Park Road (Hyde Park PS).

Corrective Action: The original site was immediately re-sampled and 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. Free chlorine concentration of 0.92 mg/L for the original sample is indicative of a false positive.

⁶Details: 1 Total Coliform was detected in a sample taken from a hydrant at 304 Maurice Street.

Corrective Action: The original site was immediately re-sampled and 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. Free chlorine concentration of 0.32 mg/L for the original sample is indicative of a false positive.

⁷Details: A sample taken from a hydrant at the intersection of St. George St. and Bridgeport St was reported as NDOGN (No Data- Overgrown with Non-Target Bacteria) for both Total Coliforms and E. Coli.

Corrective Action: The original site was immediately re-sampled and samples were also taken at sites upstream and downstream from the original site. This was then repeated 24 hours later. There were no indicators of adverse water quality in any of the re-sample results. Free chlorine concentration of 0.75 mg/L for the original sample is indicative of a false positive.

⁸Details: 2 Total Coliform was detected in a sample taken from Cell #2 of the Southeast Reservoir and PS (SERPS). Please note at the time SERPS is not yet part of the London Distribution System.



Corrective Action: The original site was immediately re-sampled and 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. Free chlorine concentration of 1.65 mg/L for the original sample is indicative of a false positive.

⁹Details: 2 Total Coliform was detected in a sample taken from a hydrant at 638 Oxford Street East.

Corrective Action: The original site was immediately re-sampled and 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. Free chlorine concentration of 0.49 mg/L for the original sample is indicative of a false positive.

¹⁰Details: A sample taken from a hydrant at 421 Boler Road was reported as NDOGT (No Data- Overgrown with Target Bacteria) for both Total Coliforms and E. Coli. The lab labelled the results as "Provisional Until Further Notice due to suspected interference/contamination", explaining that they believed the sample was contaminated in the laboratory.

Corrective Action: The original site was immediately re-sampled and 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. Free chlorine concentration of 0.38 mg/L for the original sample is indicative of a false positive as thought by the laboratory.

¹¹Details: Total Coliform NDOGT, E. Coli NDOGT (No Data - Overgrown with Target Bacteria) from a sample collected at Westmount Pumping Station.

Corrective Action: The original site was immediately re-sampled and samples were also taken at sites upstream and downstream from the original site on September 20th. There were no indicators of adverse water quality in the upstream and downstream samples, but the sample from the original site had 3 Total Coliforms and was reports as AWQI #136807. The site was re-sampled and samples were also taken at sites upstream and downstream from the original site on September 21. There were no indicators of adverse water quality in any of the re-sample results. The site was re-sampled and samples were also taken at sites upstream and downstream from the original site on September 23. There were no indicators of adverse water quality in any of the re-sample results.

¹²Details: 2 Total Coliform was detected in a sample taken from 301 Wortley Road (Wortley PS).

Corrective Action: The original site was immediately re-sampled and 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. Free chlorine concentration of 0.54 mg/L for the original sample is indicative of a false positive.



¹³**Details:** 3 Total Coliform was detected in a sample taken from 603 Wonderland Road S (Wonderland Pumping Station).

Corrective Action: The site was re-sampled and samples were also taken at sites upstream and downstream from the original site on September 21. There were no indicators of adverse water quality in any of the re-sample results. The site was re-sampled and samples were also taken at sites upstream and downstream from the original site on September 23. There were no indicators of adverse water quality in any of the re-sample results.

¹⁴**Details:** A sample taken from a hydrant at 195 Cheapside was reported as NDOGN (No Data- Overgrown with Non-Target Bacteria) for both Total Coliforms and E. Coli.

Corrective Action: The original site was immediately re-sampled and samples were also taken at sites upstream and downstream from the original site on September 27th. There were no indicators of adverse water quality in any of the re-sample results. A second set of resamples were taken on September 29th. The downstream resample had 1 Total Coliform indicated and was returned with AWQI #136987.

¹⁵**Details:** 1 Total Coliform was detected in the second set of resamples taken from 195 Cheapside. This site was St. George & Cheapside.

Corrective Action: On September 30th, the original site was immediately re-sampled and a sample was also taken at a site upstream from the original site. This was the last sample point on the line so no downstream sample was taken. There were no indicators of adverse water quality in any of the re-sample results. On October 2nd, the original site was immediately re-sampled and a sample was also taken at a site upstream from the original site. This was the last sample point on the line so no downstream sample was taken. There were no indicators of adverse water quality in any of the re-sample results. Free chlorine concentration of 0.67 mg/L for the original sample is indicative of a false positive.

¹⁶**Details:** 30 Total Coliform was detected in a sample taken from a hydrant at 27 Logan Avenue.

Corrective Action: The original site was immediately re-sampled and 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. Free chlorine concentration of 0.41 mg/L for the original sample is indicative of a false positive.



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)
Raw	7	0 - 0	7	0 - 1	7	<10 - 30
Treated	N/A	N/A	N/A	N/A	N/A	N/A
Distribution	2741	0 - 0	2741	0 - 30	2741	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	2	N/A	0.13 - 0.14 NTU
Alkalinity	24	N/A	75 - 101 mg/L as CaCO ₃
Lead*	44	N/A	0.02 - 29.5 µg/L
Chlorine**	2721	87600*	0.10 - 3.00 mg/L
Fluoride	98	8760	0.13 - 0.87 mg/L

*Some Lead sampling results include those taken from the tap of customers with Lead Water Services

**London has 10 locations with continuous online chlorine monitoring

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



As outlined below, sampling was carried out in accordance with the requirements listed in the City of London’s 2010 and 2015 Drinking Water Licence for inorganic and organic parameters at the following sites: Fanshawe Wells (No. 1, 2, 3, 4, 5, and 6) and Hyde Park Well.

SITE: Fanshawe Well #1 - Raw

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
November 20, 2015	Antimony	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Arsenic	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Barium	21/Jun/17	37.7	ug/L	N
November 20, 2015	Boron	21/Jun/17	93	ug/L	N
November 20, 2015	Cadmium	21/Jun/17	0.003 <MDL	ug/L	N
November 20, 2015	Chromium	21/Jun/17	0.66	ug/L	N
November 20, 2015	Fluoride	21/Jun/17	0.11	mg/L	N
November 20, 2015	Mercury	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Nitrate (as nitrogen)	28/Mar/17	1.04	mg/L	N
November 20, 2015	Nitrate (as nitrogen)	21/Jun/17	1.05	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	28/Mar/17	1.04	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	21/Jun/17	1.05	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	28/Mar/17	0.004	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	21/Jun/17	0.003	mg/L	N
November 20, 2015	Selenium	21/Jun/17	0.13	ug/L	N
November 20, 2015	Sodium	21/Jun/17	25.1	mg/L	N
November 20, 2015	Uranium	21/Jun/17	0.528	ug/L	N



b) ORGANIC PARAMETERS (including THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
November 20, 2015	Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Atrazine + N-dealkylated metabolites	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	De-ethylated Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Azinphos-methyl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Benzene	21/Jun/17	0.32 <MDL	ug/L	N
November 20, 2015	Benzo(a)pyrene	21/Jun/17	0.004 <MDL	ug/L	N
November 20, 2015	Bromoxynil	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Carbaryl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Carbofuran	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Carbon tetrachloride	21/Jun/17	0.16 <MDL	ug/L	N
November 20, 2015	Chlorpyrifos	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Diazinon	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Dicamba	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	1,2-Dichlorobenzene	21/Jun/17	0.41 <MDL	ug/L	N
November 20, 2015	1,4-Dichlorobenzene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	1,2-Dichloroethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Dichloromethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenoxyacetic acid (2,4-D)	21/Jun/17	0.19 <MDL	ug/L	N
November 20, 2015	Diclofop-methyl	21/Jun/17	0.4 <MDL	ug/L	N
November 20, 2015	Dimethoate	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Diquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Diuron	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Malathion	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	MCPA	21/Jun/17	0.00012<MDL	mg/L	N
November 20, 2015	Metolachlor	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Metribuzin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Paraquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Pentachlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	Phorate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Picloram	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Polychlorinated Biphenyls (PCBs)	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Prometryne	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Simazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Terbufos	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	2,3,4,6-tetrachlorophenol	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Triallate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Trichloroethylene	21/Jun/17	0.44 <MDL	ug/L	N
November 20, 2015	2,4,6-trichlorophenol	21/Jun/17	0.25 <MDL	ug/L	N
November 20, 2015	Trifluralin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Vinyl Chloride	21/Jun/17	0.17 <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
November 20, 2015	Alkalinity	21/Jun/17	287	mg/L as CaCO ₃	N
November 20, 2015	Aluminum	21/Jun/17	0.7	ug/L	N
November 20, 2015	Ammonia+Ammonium (N)	21/Jun/17	0.06	mg/L	N
November 20, 2015	Azoxystrobin	21/Jun/17	NotDetected		N
November 20, 2015	Calcium	21/Jun/17	111	mg/L	N
November 20, 2015	Chloride	21/Jun/17	58	mg/L	N
November 20, 2015	Chlorothalonil	21/Jun/17	NotDetected	ug/L	N
November 20, 2015	Cobalt	21/Jun/17	0.025	ug/L	N
November 20, 2015	Colour	21/Jun/17	3 <MDL	TCU	N
November 20, 2015	Conductivity	21/Jun/17	746	uS/cm	N
November 20, 2015	Copper	21/Jun/17	0.68	ug/L	N
November 20, 2015	Cyanide	21/Jun/17	0.002 <MDL	mg/L	N
November 20, 2015	1,1-Dichloroethylene (vinylidene chloride)	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Dissolved Organic Carbon	21/Jun/17	1	mg/L	N
November 20, 2015	Ethylbenzene	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Escherichia Coli	21/Jun/17	0	cfu/100mL	N
November 20, 2015	Field pH	21/Jun/17	7.41	mg/L	N
November 20, 2015	Field Turbidity	21/Jun/17	0.57	NTU	N
November 20, 2015	Fludioxonil	21/Jun/17	NotDetected		N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Hardness	21/Jun/17	376	mg/L as CaCO ₃	N
November 20, 2015	Heterotrophic Plate Count (HPC)	21/Jun/17	10	cfu/1mL	N
November 20, 2015	Iron	21/Jun/17	34	ug/L	N
November 20, 2015	Langelier's Index	21/Jun/17	0.81	@ 20 C	N
November 20, 2015	Magnesium	21/Jun/17	23.9	mg/L	N
November 20, 2015	Manganese	21/Jun/17	0.56	ug/L	N
November 20, 2015	Monochlorobenzene	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Nickel	21/Jun/17	0.3	ug/L	N
November 20, 2015	Nitrogen-Kjeldahl (N)	21/Jun/17	0.05 <MDL	mg/L	N
November 20, 2015	Organic Nitrogen	21/Jun/17	0.05 <MDL	mg/L	N
November 20, 2015	pH	21/Jun/17	7.96	no unit	N
November 20, 2015	Phosphorus	21/Jun/17	0.003 <MDL	mg/L	N
November 20, 2015	Potassium	21/Jun/17	2.14	mg/L	N
November 20, 2015	Silica Dioxide	21/Jun/17	9.33	mg/L	N
November 20, 2015	Silver	21/Jun/17	0.002 <MDL	ug/L	N
November 20, 2015	Solids (Total Dissolved)	21/Jun/17	509	mg/L	N
November 20, 2015	Sulphate	21/Jun/17	45	mg/L	N
November 20, 2015	Sulphide	21/Jun/17	0.006 <MDL	mg/L	N
November 20, 2015	Surr 1,2-Dichloroethane-d4	21/Jun/17	113	Surr Rec %	N
November 20, 2015	Surr 4-Bromofluorobenzene	21/Jun/17	86	Surr Rec %	N
November 20, 2015	Surr Decachlorobiphenyl	21/Jun/17	74	%	N
November 20, 2015	Tetrachloroethylene (perchloroethylene)	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Toluene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	Total Coliform	21/Jun/17	0	cfu/100mL	N



November 20, 2015	2,4,5-TP (Silvex)	21/Jun/17	0.18 <MDL	ug/L	N
November 20, 2015	Toxaphene	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Turbidity	21/Jun/17	0.3	NTU	N
November 20, 2015	Xylene (Total)	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	m/p-Xylene	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	o-xylene	21/Jun/17	0.17 <MDL	ug/L	N
November 20, 2015	Zinc	21/Jun/17	1	ug/L	N



SITE: Fanshawe Well #2 - Raw

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
November 20, 2015	Antimony	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Arsenic	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Barium	21/Jun/17	37	ug/L	N
November 20, 2015	Boron	21/Jun/17	52	ug/L	N
November 20, 2015	Cadmium	21/Jun/17	0.004	ug/L	N
November 20, 2015	Chromium	21/Jun/17	0.6	ug/L	N
November 20, 2015	Fluoride	21/Jun/17	0.14	mg/L	N
November 20, 2015	Mercury	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Nitrate (as nitrogen)	28/Mar/17	0.014	mg/L	N
November 20, 2015	Nitrate (as nitrogen)	21/Jun/17	0.019	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	28/Mar/17	0.017	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	21/Jun/17	0.024	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	28/Mar/17	0.003	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	21/Jun/17	0.005	mg/L	N
November 20, 2015	Selenium	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Sodium	21/Jun/17	31	mg/L	N
November 20, 2015	Uranium	21/Jun/17	0.547	ug/L	N



b) ORGANIC PARAMETERS (including THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
November 20, 2015	Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Atrazine + N-dealkylated metabolites	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	De-ethylated Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Azinphos-methyl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Benzene	21/Jun/17	0.32 <MDL	ug/L	N
November 20, 2015	Benzo(a)pyrene	21/Jun/17	0.004 <MDL	ug/L	N
November 20, 2015	Bromoxynil	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Carbaryl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Carbofuran	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Carbon tetrachloride	21/Jun/17	0.16 <MDL	ug/L	N
November 20, 2015	Chlorpyrifos	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Diazinon	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Dicamba	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	1,2-Dichlorobenzene	21/Jun/17	0.41 <MDL	ug/L	N
November 20, 2015	1,4-Dichlorobenzene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	1,2-Dichloroethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Dichloromethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenoxyacetic acid (2,4-D)	21/Jun/17	0.19 <MDL	ug/L	N
November 20, 2015	Diclofop-methyl	21/Jun/17	0.4 <MDL	ug/L	N
November 20, 2015	Dimethoate	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Diquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Diuron	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Malathion	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	MCPA	21/Jun/17	0.00012<MDL	mg/L	N
November 20, 2015	Metolachlor	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Metribuzin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Paraquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Pentachlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	Phorate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Picloram	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Polychlorinated Biphenyls (PCBs)	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Prometryne	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Simazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Terbufos	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	2,3,4,6-tetrachlorophenol	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Triallate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Trichloroethylene	21/Jun/17	0.44 <MDL	ug/L	N
November 20, 2015	2,4,6-trichlorophenol	21/Jun/17	0.25 <MDL	ug/L	N
November 20, 2015	Trifluralin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Vinyl Chloride	21/Jun/17	0.17 <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
November 20, 2015	Alkalinity	21/Jun/17	247	mg/L as CaCO ₃	N
November 20, 2015	Aluminum	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Ammonia+Ammonium (N)	21/Jun/17	0.04 <MDL	mg/L	N
November 20, 2015	Azoxystrobin	21/Jun/17	NotDetected		N
November 20, 2015	Calcium	21/Jun/17	94.6	mg/L	N
November 20, 2015	Chloride	21/Jun/17	79	mg/L	N
November 20, 2015	Chlorothalonil	21/Jun/17	NotDetected	ug/L	N
November 20, 2015	Cobalt	21/Jun/17	0.265	ug/L	N
November 20, 2015	Colour	21/Jun/17	3 <MDL	TCU	N
November 20, 2015	Conductivity	21/Jun/17	747	uS/cm	N
November 20, 2015	Copper	21/Jun/17	0.87	ug/L	N
November 20, 2015	Cyanide	21/Jun/17	0.002 <MDL	mg/L	N
November 20, 2015	1,1-Dichloroethylene (vinylidene chloride)	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Dissolved Organic Carbon	21/Jun/17	1	mg/L	N
November 20, 2015	Ethylbenzene	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Escherichia Coli	21/Jun/17	0	cfu/100mL	N
November 20, 2015	Field pH	21/Jun/17	7.09	mg/L	N
November 20, 2015	Field Turbidity	21/Jun/17	0.62	NTU	N
November 20, 2015	Fludioxonil	21/Jun/17	NotDetected		N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Hardness	21/Jun/17	324	mg/L as CaCO ₃	N
November 20, 2015	Heterotrophic Plate Count (HPC)	21/Jun/17	30	cfu/1mL	N
November 20, 2015	Iron	21/Jun/17	185	ug/L	N
November 20, 2015	Langelier's Index	21/Jun/17	0.43	@ 20 C	N
November 20, 2015	Magnesium	21/Jun/17	21.4	mg/L	N
November 20, 2015	Manganese	21/Jun/17	132	ug/L	N
November 20, 2015	Monochlorobenzene	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Nickel	21/Jun/17	0.8	ug/L	N
November 20, 2015	Nitrogen-Kjeldahl (N)	21/Jun/17	0.06	mg/L	N
November 20, 2015	Organic Nitrogen	21/Jun/17	0.05 <MDL	mg/L	N
November 20, 2015	pH	21/Jun/17	7.72	no unit	N
November 20, 2015	Phosphorus	21/Jun/17	0.003 <MDL	mg/L	N
November 20, 2015	Potassium	21/Jun/17	2.75	mg/L	N
November 20, 2015	Silica Dioxide	21/Jun/17	7.77	mg/L	N
November 20, 2015	Silver	21/Jun/17	0.002 <MDL	ug/L	N
November 20, 2015	Solids (Total Dissolved)	21/Jun/17	494	mg/L	N
November 20, 2015	Sulphate	21/Jun/17	34	mg/L	N
November 20, 2015	Sulphide	21/Jun/17	0.006 <MDL	mg/L	N
November 20, 2015	Surr 1,2-Dichloroethane-d4	21/Jun/17	113	Surr Rec %	N
November 20, 2015	Surr 4-Bromofluorobenzene	21/Jun/17	87	Surr Rec %	N
November 20, 2015	Surr Decachlorobiphenyl	21/Jun/17	70	%	N
November 20, 2015	Tetrachloroethylene (perchloroethylene)	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Toluene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	Total Coliform	21/Jun/17	0	cfu/100mL	N



November 20, 2015	2,4,5-TP (Silvex)	21/Jun/17	0.18 <MDL	ug/L	N
November 20, 2015	Toxaphene	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Turbidity	21/Jun/17	1.5	NTU	N
November 20, 2015	Xylene (Total)	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	m/p-Xylene	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	o-xylene	21/Jun/17	0.17 <MDL	ug/L	N
November 20, 2015	Zinc	21/Jun/17	2	ug/L	N



SITE: Fanshawe Well #3 - Raw

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
November 20, 2015	Antimony	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Arsenic	21/Jun/17	0.2	ug/L	N
November 20, 2015	Barium	21/Jun/17	44	ug/L	N
November 20, 2015	Boron	21/Jun/17	44	ug/L	N
November 20, 2015	Cadmium	21/Jun/17	0.003 <MDL	ug/L	N
November 20, 2015	Chromium	21/Jun/17	0.59	ug/L	N
November 20, 2015	Fluoride	21/Jun/17	0.13	mg/L	N
November 20, 2015	Mercury	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Nitrate (as nitrogen)	28/Mar/17	0.006 <MDL	mg/L	N
November 20, 2015	Nitrate (as nitrogen)	21/Jun/17	0.006 <MDL	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	28/Mar/17	0.006 <MDL	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	21/Jun/17	0.006 <MDL	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	28/Mar/17	0.004	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	21/Jun/17	0.003 <MDL	mg/L	N
November 20, 2015	Selenium	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Sodium	21/Jun/17	28.2	mg/L	N
November 20, 2015	Uranium	21/Jun/17	0.578	ug/L	N



b) ORGANIC PARAMETERS (including THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
November 20, 2015	Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Atrazine + N-dealkylated metabolites	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	De-ethylated Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Azinphos-methyl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Benzene	21/Jun/17	0.32 <MDL	ug/L	N
November 20, 2015	Benzo(a)pyrene	21/Jun/17	0.004 <MDL	ug/L	N
November 20, 2015	Bromoxynil	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Carbaryl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Carbofuran	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Carbon tetrachloride	21/Jun/17	0.16 <MDL	ug/L	N
November 20, 2015	Chlorpyrifos	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Diazinon	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Dicamba	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	1,2-Dichlorobenzene	21/Jun/17	0.41 <MDL	ug/L	N
November 20, 2015	1,4-Dichlorobenzene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	1,2-Dichloroethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Dichloromethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenoxyacetic acid (2,4-D)	21/Jun/17	0.19 <MDL	ug/L	N
November 20, 2015	Diclofop-methyl	21/Jun/17	0.4 <MDL	ug/L	N
November 20, 2015	Dimethoate	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Diquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Diuron	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Malathion	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	MCPA	21/Jun/17	0.00012<MDL	mg/L	N
November 20, 2015	Metolachlor	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Metribuzin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Paraquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Pentachlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	Phorate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Picloram	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Polychlorinated Biphenyls (PCBs)	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Prometryne	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Simazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Terbufos	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	2,3,4,6-tetrachlorophenol	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Triallate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Trichloroethylene	21/Jun/17	0.44 <MDL	ug/L	N
November 20, 2015	2,4,6-trichlorophenol	21/Jun/17	0.25 <MDL	ug/L	N
November 20, 2015	Trifluralin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Vinyl Chloride	21/Jun/17	0.17 <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
November 20, 2015	Alkalinity	21/Jun/17	299	mg/L as CaCO ₃	N
November 20, 2015	Aluminum	21/Jun/17	0.5	ug/L	N
November 20, 2015	Ammonia+Ammonium (N)	21/Jun/17	0.04 <MDL	mg/L	N
November 20, 2015	Azoxystrobin	21/Jun/17	NotDetected		N
November 20, 2015	Calcium	21/Jun/17	105	mg/L	N
November 20, 2015	Chloride	21/Jun/17	64	mg/L	N
November 20, 2015	Chlorothalonil	21/Jun/17	NotDetected	ug/L	N
November 20, 2015	Cobalt	21/Jun/17	0.505	ug/L	N
November 20, 2015	Colour	21/Jun/17	3 <MDL	TCU	N
November 20, 2015	Conductivity	21/Jun/17	756	uS/cm	N
November 20, 2015	Copper	21/Jun/17	1.05	ug/L	N
November 20, 2015	Cyanide	21/Jun/17	0.002 <MDL	mg/L	N
November 20, 2015	1,1-Dichloroethylene (vinylidene chloride)	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Dissolved Organic Carbon	21/Jun/17	1	mg/L	N
November 20, 2015	Ethylbenzene	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Escherichia Coli	21/Jun/17	0	cfu/100mL	N
November 20, 2015	Field pH	21/Jun/17	7.05	mg/L	N
November 20, 2015	Field Turbidity	21/Jun/17	0.36	NTU	N
November 20, 2015	Fludioxonil	21/Jun/17	NotDetected		N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Hardness	21/Jun/17	357	mg/L as CaCO ₃	N
November 20, 2015	Heterotrophic Plate Count (HPC)	21/Jun/17	10	cfu/1mL	N
November 20, 2015	Iron	21/Jun/17	283	ug/L	N
November 20, 2015	Langelier` s Index	21/Jun/17	0.56	@ 20 C	N
November 20, 2015	Magnesium	21/Jun/17	23.3	mg/L	N
November 20, 2015	Manganese	21/Jun/17	379	ug/L	N
November 20, 2015	Monochlorobenzene	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Nickel	21/Jun/17	1.7	ug/L	N
November 20, 2015	Nitrogen-Kjeldahl (N)	21/Jun/17	0.16	mg/L	N
November 20, 2015	Organic Nitrogen	21/Jun/17	0.16	mg/L	N
November 20, 2015	pH	21/Jun/17	7.72	no unit	N
November 20, 2015	Phosphorus	21/Jun/17	0.003 <MDL	mg/L	N
November 20, 2015	Potassium	21/Jun/17	2.91	mg/L	N
November 20, 2015	Silica Dioxide	21/Jun/17	10.3	mg/L	N
November 20, 2015	Silver	21/Jun/17	0.002 <MDL	ug/L	N
November 20, 2015	Solids (Total Dissolved)	21/Jun/17	471	mg/L	N
November 20, 2015	Sulphate	21/Jun/17	20	mg/L	N
November 20, 2015	Sulphide	21/Jun/17	0.006 <MDL	mg/L	N
November 20, 2015	Surr 1,2-Dichloroethane-d4	21/Jun/17	113	Surr Rec %	N
November 20, 2015	Surr 4-Bromofluorobenzene	21/Jun/17	86	Surr Rec %	N
November 20, 2015	Surr Decachlorobiphenyl	21/Jun/17	67	%	N
November 20, 2015	Tetrachloroethylene (perchloroethylene)	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Toluene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	Total Coliform	21/Jun/17	0	cfu/100mL	N



November 20, 2015	2,4,5-TP (Silvex)	21/Jun/17	0.18 <MDL	ug/L	N
November 20, 2015	Toxaphene	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Turbidity	21/Jun/17	2.56	NTU	N
November 20, 2015	Xylene (Total)	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	m/p-Xylene	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	o-xylene	21/Jun/17	0.17 <MDL	ug/L	N
November 20, 2015	Zinc	21/Jun/17	3	ug/L	N



SITE: Fanshawe Well #4 - Raw

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
November 20, 2015	Antimony	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Arsenic	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Barium	21/Jun/17	30.7	ug/L	N
November 20, 2015	Boron	21/Jun/17	24	ug/L	N
November 20, 2015	Cadmium	21/Jun/17	0.003 <MDL	ug/L	N
November 20, 2015	Chromium	21/Jun/17	0.58	ug/L	N
November 20, 2015	Fluoride	21/Jun/17	0.17	mg/L	N
November 20, 2015	Mercury	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Nitrate (as nitrogen)	28/Mar/17	0.217	mg/L	N
November 20, 2015	Nitrate (as nitrogen)	21/Jun/17	0.281	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	28/Mar/17	0.232	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	21/Jun/17	0.297	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	28/Mar/17	0.015	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	21/Jun/17	0.016	mg/L	N
November 20, 2015	Selenium	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Sodium	21/Jun/17	11.1	mg/L	N
November 20, 2015	Uranium	21/Jun/17	0.76	ug/L	N



b) ORGANIC PARAMETERS (including THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
November 20, 2015	Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Atrazine + N-dealkylated metabolites	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	De-ethylated Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Azinphos-methyl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Benzene	21/Jun/17	0.32 <MDL	ug/L	N
November 20, 2015	Benzo(a)pyrene	21/Jun/17	0.004 <MDL	ug/L	N
November 20, 2015	Bromoxynil	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Carbaryl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Carbofuran	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Carbon tetrachloride	21/Jun/17	0.16 <MDL	ug/L	N
November 20, 2015	Chlorpyrifos	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Diazinon	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Dicamba	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	1,2-Dichlorobenzene	21/Jun/17	0.41 <MDL	ug/L	N
November 20, 2015	1,4-Dichlorobenzene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	1,2-Dichloroethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Dichloromethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenoxyacetic acid (2,4-D)	21/Jun/17	0.19 <MDL	ug/L	N
November 20, 2015	Diclofop-methyl	21/Jun/17	0.4 <MDL	ug/L	N
November 20, 2015	Dimethoate	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Diquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Diuron	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Malathion	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	MCPA	21/Jun/17	0.00012<MDL	mg/L	N
November 20, 2015	Metolachlor	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Metribuzin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Paraquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Pentachlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	Phorate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Picloram	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Polychlorinated Biphenyls (PCBs)	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Prometryne	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Simazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Terbufos	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	2,3,4,6-tetrachlorophenol	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Triallate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Trichloroethylene	21/Jun/17	0.44 <MDL	ug/L	N
November 20, 2015	2,4,6-trichlorophenol	21/Jun/17	0.25 <MDL	ug/L	N
November 20, 2015	Trifluralin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Vinyl Chloride	21/Jun/17	0.17 <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
November 20, 2015	Alkalinity	21/Jun/17	278	mg/L as CaCO ₃	N
November 20, 2015	Aluminum	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Ammonia+Ammonium (N)	21/Jun/17	0.04 <MDL	mg/L	N
November 20, 2015	Azoxystrobin	21/Jun/17	NotDetected		N
November 20, 2015	Calcium	21/Jun/17	87.4	mg/L	N
November 20, 2015	Chloride	21/Jun/17	26	mg/L	N
November 20, 2015	Chlorothalonil	21/Jun/17	NotDetected	ug/L	N
November 20, 2015	Cobalt	21/Jun/17	0.164	ug/L	N
November 20, 2015	Colour	21/Jun/17	3 <MDL	TCU	N
November 20, 2015	Conductivity	21/Jun/17	596	uS/cm	N
November 20, 2015	Copper	21/Jun/17	1.38	ug/L	N
November 20, 2015	Cyanide	21/Jun/17	0.002 <MDL	mg/L	N
November 20, 2015	1,1-Dichloroethylene (vinylidene chloride)	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Dissolved Organic Carbon	21/Jun/17	1	mg/L	N
November 20, 2015	Ethylbenzene	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Escherichia Coli	21/Jun/17	0	cfu/100mL	N
November 20, 2015	Field pH	21/Jun/17	7.12	mg/L	N
November 20, 2015	Field Turbidity	21/Jun/17	0.53	NTU	N
November 20, 2015	Fludioxonil	21/Jun/17	NotDetected		N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Hardness	21/Jun/17	296	mg/L as CaCO ₃	N
November 20, 2015	Heterotrophic Plate Count (HPC)	21/Jun/17	10	cfu/1mL	N
November 20, 2015	Iron	21/Jun/17	251	ug/L	N
November 20, 2015	Langelier's Index	21/Jun/17	0.52	@ 20 C	N
November 20, 2015	Magnesium	21/Jun/17	19	mg/L	N
November 20, 2015	Manganese	21/Jun/17	188	ug/L	N
November 20, 2015	Monochlorobenzene	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Nickel	21/Jun/17	1	ug/L	N
November 20, 2015	Nitrogen-Kjeldahl (N)	21/Jun/17	0.05 <MDL	mg/L	N
November 20, 2015	Organic Nitrogen	21/Jun/17	0.05 <MDL	mg/L	N
November 20, 2015	pH	21/Jun/17	7.78	no unit	N
November 20, 2015	Phosphorus	21/Jun/17	0.003 <MDL	mg/L	N
November 20, 2015	Potassium	21/Jun/17	1.97	mg/L	N
November 20, 2015	Silica Dioxide	21/Jun/17	8.3	mg/L	N
November 20, 2015	Silver	21/Jun/17	0.002 <MDL	ug/L	N
November 20, 2015	Solids (Total Dissolved)	21/Jun/17	360	mg/L	N
November 20, 2015	Sulphate	21/Jun/17	13	mg/L	N
November 20, 2015	Sulphide	21/Jun/17	0.006 <MDL	mg/L	N
November 20, 2015	Surr 1,2-Dichloroethane-d4	21/Jun/17	113	Surr Rec %	N
November 20, 2015	Surr 4-Bromofluorobenzene	21/Jun/17	86	Surr Rec %	N
November 20, 2015	Surr Decachlorobiphenyl	21/Jun/17	78	%	N
November 20, 2015	Tetrachloroethylene (perchloroethylene)	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Toluene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	Total Coliform	21/Jun/17	0	cfu/100mL	N



November 20, 2015	2,4,5-TP (Silvex)	21/Jun/17	0.18 <MDL	ug/L	N
November 20, 2015	Toxaphene	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Turbidity	21/Jun/17	2.63	NTU	N
November 20, 2015	Xylene (Total)	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	m/p-Xylene	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	o-xylene	21/Jun/17	0.17 <MDL	ug/L	N
November 20, 2015	Zinc	21/Jun/17	3	ug/L	N



SITE: Fanshawe Well #5 - Raw

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
November 20, 2015	Antimony	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Arsenic	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Barium	21/Jun/17	60.9	ug/L	N
November 20, 2015	Boron	21/Jun/17	129	ug/L	N
November 20, 2015	Cadmium	21/Jun/17	0.005	ug/L	N
November 20, 2015	Chromium	21/Jun/17	0.68	ug/L	N
November 20, 2015	Fluoride	21/Jun/17	0.08	mg/L	N
November 20, 2015	Mercury	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Nitrate (as nitrogen)	28/Mar/17	1	mg/L	N
November 20, 2015	Nitrate (as nitrogen)	21/Jun/17	2.18	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	28/Mar/17	1.01	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	21/Jun/17	2.19	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	28/Mar/17	0.005	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	21/Jun/17	0.006	mg/L	N
November 20, 2015	Selenium	21/Jun/17	0.06	ug/L	N
November 20, 2015	Sodium	21/Jun/17	75.4	mg/L	N
November 20, 2015	Uranium	21/Jun/17	0.567	ug/L	N



b) ORGANIC PARAMETERS (including THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
November 20, 2015	Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Atrazine + N-dealkylated metabolites	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	De-ethylated Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Azinphos-methyl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Benzene	21/Jun/17	0.32 <MDL	ug/L	N
November 20, 2015	Benzo(a)pyrene	21/Jun/17	0.004 <MDL	ug/L	N
November 20, 2015	Bromoxynil	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Carbaryl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Carbofuran	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Carbon tetrachloride	21/Jun/17	0.16 <MDL	ug/L	N
November 20, 2015	Chlorpyrifos	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Diazinon	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Dicamba	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	1,2-Dichlorobenzene	21/Jun/17	0.41 <MDL	ug/L	N
November 20, 2015	1,4-Dichlorobenzene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	1,2-Dichloroethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Dichloromethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenoxyacetic acid (2,4-D)	21/Jun/17	0.19 <MDL	ug/L	N
November 20, 2015	Diclofop-methyl	21/Jun/17	0.4 <MDL	ug/L	N
November 20, 2015	Dimethoate	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Diquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Diuron	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Malathion	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	MCPA	21/Jun/17	0.00012<MDL	mg/L	N
November 20, 2015	Metolachlor	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Metribuzin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Paraquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Pentachlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	Phorate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Picloram	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Polychlorinated Biphenyls (PCBs)	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Prometryne	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Simazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Terbufos	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	2,3,4,6-tetrachlorophenol	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Triallate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Trichloroethylene	21/Jun/17	0.44 <MDL	ug/L	N
November 20, 2015	2,4,6-trichlorophenol	21/Jun/17	0.25 <MDL	ug/L	N
November 20, 2015	Trifluralin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Vinyl Chloride	21/Jun/17	0.17 <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
November 20, 2015	Alkalinity	21/Jun/17	315	mg/L as CaCO ₃	N
November 20, 2015	Aluminum	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Ammonia+Ammonium (N)	21/Jun/17	0.04 <MDL	mg/L	N
November 20, 2015	Calcium	21/Jun/17	161	mg/L	N
November 20, 2015	Chloride	21/Jun/17	240	mg/L	N
November 20, 2015	Cobalt	21/Jun/17	0.045	ug/L	N
November 20, 2015	Colour	21/Jun/17	3 <MDL	TCU	N
November 20, 2015	Conductivity	21/Jun/17	1370	uS/cm	N
November 20, 2015	Copper	21/Jun/17	3.83	ug/L	N
November 20, 2015	Cyanide	21/Jun/17	0.002 <MDL	mg/L	N
November 20, 2015	1,1-Dichloroethylene (vinylidene chloride)	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Dissolved Organic Carbon	21/Jun/17	2	mg/L	N
November 20, 2015	Ethylbenzene	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Escherichia Coli	21/Jun/17	0	cfu/100mL	N
November 20, 2015	Field pH	21/Jun/17	7.07	mg/L	N
November 20, 2015	Field Turbidity	21/Jun/17	0.78	NTU	N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Hardness	21/Jun/17	530	mg/L as CaCO ₃	N
November 20, 2015	Heterotrophic Plate Count (HPC)	21/Jun/17	10	cfu/1mL	N
November 20, 2015	Iron	21/Jun/17	148	ug/L	N
November 20, 2015	Langelier's Index	21/Jun/17	0.64	@ 20 C	N
November 20, 2015	Magnesium	21/Jun/17	30.8	mg/L	N
November 20, 2015	Manganese	21/Jun/17	5.95	ug/L	N
November 20, 2015	Monochlorobenzene	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Nickel	21/Jun/17	0.5	ug/L	N
November 20, 2015	Nitrogen-Kjeldahl (N)	21/Jun/17	0.21	mg/L	N
November 20, 2015	Organic Nitrogen	21/Jun/17	0.19	mg/L	N
November 20, 2015	pH	21/Jun/17	7.62	no unit	N
November 20, 2015	Phosphorus	21/Jun/17	0.003 <MDL	mg/L	N
November 20, 2015	Potassium	21/Jun/17	2.49	mg/L	N
November 20, 2015	Silica Dioxide	21/Jun/17	10	mg/L	N
November 20, 2015	Silver	21/Jun/17	0.002	ug/L	N
November 20, 2015	Solids (Total Dissolved)	21/Jun/17	986	mg/L	N
November 20, 2015	Sulphate	21/Jun/17	52	mg/L	N
November 20, 2015	Sulphide	21/Jun/17	0.006 <MDL	mg/L	N
November 20, 2015	Surr 1,2-Dichloroethane-d4	21/Jun/17	114	Surr Rec %	N
November 20, 2015	Surr 4-Bromofluorobenzene	21/Jun/17	86	Surr Rec %	N
November 20, 2015	Surr Decachlorobiphenyl	21/Jun/17	85	%	N
November 20, 2015	Tetrachloroethylene (perchloroethylene)	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Toluene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	Total Coliform	21/Jun/17	0	cfu/100mL	N



November 20, 2015	2,4,5-TP (Silvex)	21/Jun/17	0.18 <MDL	ug/L	N
November 20, 2015	Toxaphene	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Turbidity	21/Jun/17	1.09	NTU	N
November 20, 2015	Xylene (Total)	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	m/p-Xylene	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	o-xylene	21/Jun/17	0.17 <MDL	ug/L	N
November 20, 2015	Zinc	21/Jun/17	5	ug/L	N



SITE: Fanshawe Well #6 - Raw

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
November 20, 2015	Antimony	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Arsenic	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Barium	21/Jun/17	26.9	ug/L	N
November 20, 2015	Boron	21/Jun/17	21	ug/L	N
November 20, 2015	Cadmium	21/Jun/17	0.003	ug/L	N
November 20, 2015	Chromium	21/Jun/17	0.62	ug/L	N
November 20, 2015	Fluoride	21/Jun/17	0.09	mg/L	N
November 20, 2015	Mercury	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Nitrate (as nitrogen)	28/Mar/17	0.318	mg/L	N
November 20, 2015	Nitrate (as nitrogen)	21/Jun/17	0.679	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	28/Mar/17	0.33	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	21/Jun/17	0.704	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	28/Mar/17	0.012	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	21/Jun/17	0.025	mg/L	N
November 20, 2015	Selenium	21/Jun/17	0.18	ug/L	N
November 20, 2015	Sodium	21/Jun/17	11.4	mg/L	N
November 20, 2015	Uranium	21/Jun/17	0.396	ug/L	N



b) ORGANIC PARAMETERS (including THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
November 20, 2015	Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Atrazine + N-dealkylated metabolites	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	De-ethylated Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Azinphos-methyl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Benzene	21/Jun/17	0.32 <MDL	ug/L	N
November 20, 2015	Benzo(a)pyrene	21/Jun/17	0.004 <MDL	ug/L	N
November 20, 2015	Bromoxynil	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Carbaryl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Carbofuran	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Carbon tetrachloride	21/Jun/17	0.16 <MDL	ug/L	N
November 20, 2015	Chlorpyrifos	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Diazinon	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Dicamba	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	1,2-Dichlorobenzene	21/Jun/17	0.41 <MDL	ug/L	N
November 20, 2015	1,4-Dichlorobenzene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	1,2-Dichloroethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Dichloromethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenoxyacetic acid (2,4-D)	21/Jun/17	0.19 <MDL	ug/L	N
November 20, 2015	Diclofop-methyl	21/Jun/17	0.4 <MDL	ug/L	N
November 20, 2015	Dimethoate	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Diquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Diuron	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Malathion	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	MCPA	21/Jun/17	0.00012<MDL	mg/L	N
November 20, 2015	Metolachlor	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Metribuzin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Paraquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Pentachlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	Phorate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Picloram	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Polychlorinated Biphenyls (PCBs)	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Prometryne	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Simazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Terbufos	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	2,3,4,6-tetrachlorophenol	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Triallate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Trichloroethylene	21/Jun/17	0.44 <MDL	ug/L	N
November 20, 2015	2,4,6-trichlorophenol	21/Jun/17	0.25 <MDL	ug/L	N
November 20, 2015	Trifluralin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Vinyl Chloride	21/Jun/17	0.17 <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
November 20, 2015	Alkalinity	21/Jun/17	235	g/L as CaCO ₃	N
November 20, 2015	Aluminum	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Ammonia+Ammonium (N)	21/Jun/17	0.04 <MDL	mg/L	N
November 20, 2015	Azoxystrobin	21/Jun/17	NotDetected	0/Jan/00	N
November 20, 2015	Calcium	21/Jun/17	79.8	mg/L	N
November 20, 2015	Chloride	21/Jun/17	24	mg/L	N
November 20, 2015	Chlorothalonil	21/Jun/17	NotDetected	ug/L	N
November 20, 2015	Cobalt	21/Jun/17	0.709	ug/L	N
November 20, 2015	Colour	21/Jun/17	3 <MDL	TCU	N
November 20, 2015	Conductivity	21/Jun/17	541	uS/cm	N
November 20, 2015	Copper	21/Jun/17	8.43	ug/L	N
November 20, 2015	Cyanide	21/Jun/17	0.002 <MDL	mg/L	N
November 20, 2015	1,1-Dichloroethylene (vinylidene chloride)	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Dissolved Organic Carbon	21/Jun/17	1	mg/L	N
November 20, 2015	Ethylbenzene	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Escherichia Coli	21/Jun/17	0	cfu/100mL	N
November 20, 2015	Field pH	21/Jun/17	7.13	mg/L	N
November 20, 2015	Field Turbidity	21/Jun/17	0.34	NTU	N
November 20, 2015	Fludioxonil	21/Jun/17	NotDetected	0/Jan/00	N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Hardness	21/Jun/17	268	g/L as CaCO ₃	N
November 20, 2015	Heterotrophic Plate Count (HPC)	21/Jun/17	10	cfu/1mL	N
November 20, 2015	Iron	21/Jun/17	17	ug/L	N
November 20, 2015	Langelier's Index	21/Jun/17	0.49	@ 20 C	N
November 20, 2015	Magnesium	21/Jun/17	16.7	mg/L	N
November 20, 2015	Manganese	21/Jun/17	293	ug/L	N
November 20, 2015	Monochlorobenzene	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Nickel	21/Jun/17	1.2	ug/L	N
November 20, 2015	Nitrogen-Kjeldahl (N)	21/Jun/17	0.17	mg/L	N
November 20, 2015	Organic Nitrogen	21/Jun/17	0.14	mg/L	N
November 20, 2015	pH	21/Jun/17	7.86	no unit	N
November 20, 2015	Phosphorus	21/Jun/17	0.003 <MDL	mg/L	N
November 20, 2015	Potassium	21/Jun/17	2.56	mg/L	N
November 20, 2015	Silica Dioxide	21/Jun/17	8.4	mg/L	N
November 20, 2015	Silver	21/Jun/17	0.002 <MDL	ug/L	N
November 20, 2015	Solids (Total Dissolved)	21/Jun/17	337	mg/L	N
November 20, 2015	Sulphate	21/Jun/17	14	mg/L	N
November 20, 2015	Sulphide	21/Jun/17	0.006 <MDL	mg/L	N
November 20, 2015	Surr 1,2-Dichloroethane-d4	21/Jun/17	112	Surr Rec %	N
November 20, 2015	Surr 4-Bromofluorobenzene	21/Jun/17	87	Surr Rec %	N
November 20, 2015	Surr Decachlorobiphenyl	21/Jun/17	96	%	N
November 20, 2015	Tetrachloroethylene (perchloroethylene)	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Toluene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	Total Coliform	21/Jun/17	0	cfu/100mL	N



November 20, 2015	2,4,5-TP (Silvex)	21/Jun/17	0.18 <MDL	ug/L	N
November 20, 2015	Toxaphene	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Turbidity	21/Jun/17	0.16	NTU	N
November 20, 2015	Xylene (Total)	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	m/p-Xylene	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	o-xylene	21/Jun/17	0.17 <MDL	ug/L	N
November 20, 2015	Zinc	21/Jun/17	2	ug/L	N



SITE: Hyde Park Well - Raw

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
November 20, 2015	Antimony	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Arsenic	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Barium	21/Jun/17	118	ug/L	N
November 20, 2015	Boron	21/Jun/17	46	ug/L	N
November 20, 2015	Cadmium	21/Jun/17	0.004	ug/L	N
November 20, 2015	Chromium	21/Jun/17	0.72	ug/L	N
November 20, 2015	Fluoride	21/Jun/17	0.24	mg/L	N
November 20, 2015	Mercury	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Nitrate (as nitrogen)	28/Mar/17	2.94	mg/L	N
November 20, 2015	Nitrate (as nitrogen)	21/Jun/17	2.61	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	28/Mar/17	2.94	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	21/Jun/17	2.61	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	28/Mar/17	0.004	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	21/Jun/17	0.004	mg/L	N
November 20, 2015	Selenium	21/Jun/17	0.48	ug/L	N
November 20, 2015	Sodium	21/Jun/17	54.4	mg/L	N
November 20, 2015	Uranium	21/Jun/17	0.559	ug/L	N



b) ORGANIC PARAMETERS (including THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
November 20, 2015	Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Atrazine + N-dealkylated metabolites	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	De-ethylated Atrazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Azinphos-methyl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Benzene	21/Jun/17	0.32 <MDL	ug/L	N
November 20, 2015	Benzo(a)pyrene	21/Jun/17	0.004 <MDL	ug/L	N
November 20, 2015	Bromoxynil	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Carbaryl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Carbofuran	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Carbon tetrachloride	21/Jun/17	0.16 <MDL	ug/L	N
November 20, 2015	Chlorpyrifos	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Diazinon	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Dicamba	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	1,2-Dichlorobenzene	21/Jun/17	0.41 <MDL	ug/L	N
November 20, 2015	1,4-Dichlorobenzene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	1,2-Dichloroethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Dichloromethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenoxyacetic acid (2,4-D)	21/Jun/17	0.19 <MDL	ug/L	N
November 20, 2015	Diclofop-methyl	21/Jun/17	0.4 <MDL	ug/L	N
November 20, 2015	Dimethoate	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Diquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Diuron	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Malathion	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	MCPA	21/Jun/17	0.00012<MDL	mg/L	N
November 20, 2015	Metolachlor	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Metribuzin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Paraquat	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Pentachlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	Phorate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Picloram	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Polychlorinated Biphenyls (PCBs)	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Prometryne	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Simazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Terbufos	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	2,3,4,6-tetrachlorophenol	21/Jun/17	0.2 <MDL	ug/L	N
November 20, 2015	Triallate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Trichloroethylene	21/Jun/17	0.44 <MDL	ug/L	N
November 20, 2015	2,4,6-trichlorophenol	21/Jun/17	0.25 <MDL	ug/L	N
November 20, 2015	Trifluralin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Vinyl Chloride	21/Jun/17	0.17 <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
November 20, 2015	Alkalinity	21/Jun/17	297	mg/L as CaCO ₃	N
November 20, 2015	Aluminum	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Ammonia+Ammonium (N)	21/Jun/17	0.04 <MDL	mg/L	N
November 20, 2015	Calcium	21/Jun/17	97	mg/L	N
November 20, 2015	Chloride	21/Jun/17	100	mg/L	N
November 20, 2015	Cobalt	21/Jun/17	0.013	ug/L	N
November 20, 2015	Colour	21/Jun/17	3 <MDL	TCU	N
November 20, 2015	Conductivity	21/Jun/17	888	uS/cm	N
November 20, 2015	Copper	21/Jun/17	0.7	ug/L	N
November 20, 2015	Cyanide	21/Jun/17	0.002 <MDL	mg/L	N
November 20, 2015	1,1-Dichloroethylene (vinylidene chloride)	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Dissolved Organic Carbon	21/Jun/17	1 <MDL	mg/L	N
November 20, 2015	Escherichia Coli	21/Jun/17	0	cfu/100mL	N
November 20, 2015	Ethylbenzene	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Field pH	21/Jun/17	7.31	mg/L	N
November 20, 2015	Field Turbidity	21/Jun/17	0.54	NTU	N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Hardness	21/Jun/17	350	mg/L as CaCO ₃	N
November 20, 2015	Heterotrophic Plate Count (HPC)	21/Jun/17	10	cfu/1mL	N
November 20, 2015	Iron	21/Jun/17	64	ug/L	N
November 20, 2015	Langelier's Index	21/Jun/17	0.75	@ 20 C	N
November 20, 2015	Magnesium	21/Jun/17	26.2	mg/L	N
November 20, 2015	Manganese	21/Jun/17	1.33	ug/L	N
November 20, 2015	Monochlorobenzene	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Nickel	21/Jun/17	0.3	ug/L	N
November 20, 2015	Nitrogen-Kjeldahl (N)	21/Jun/17	2.6	mg/L	N
November 20, 2015	Organic Nitrogen	21/Jun/17	2.6	mg/L	N
November 20, 2015	pH	21/Jun/17	7.95	no unit	N
November 20, 2015	Phosphorus	21/Jun/17	0.003 <MDL	mg/L	N
November 20, 2015	Potassium	21/Jun/17	1.94	mg/L	N
November 20, 2015	Silica Dioxide	21/Jun/17	13.7	mg/L	N
November 20, 2015	Silver	21/Jun/17	0.002 <MDL	ug/L	N
November 20, 2015	Solids (Total Dissolved)	21/Jun/17	537	mg/L	N
November 20, 2015	Sulphate	21/Jun/17	42	mg/L	N
November 20, 2015	Sulphide	21/Jun/17	0.006 <MDL	mg/L	N
November 20, 2015	Surr 1,2-Dichloroethane-d4	21/Jun/17	114	Surr Rec %	N
November 20, 2015	Surr 4-Bromofluorobenzene	21/Jun/17	86	Surr Rec %	N
November 20, 2015	Surr Decachlorobiphenyl	21/Jun/17	87	%	N
November 20, 2015	Tetrachloroethylene (perchloroethylene)	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Toluene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	Total Coliform	21/Jun/17	1	cfu/100mL	N



November 20, 2015	2,4,5-TP (Silvex)	21/Jun/17	0.18 <MDL	ug/L	N
November 20, 2015	Toxaphene	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Turbidity	21/Jun/17	0.52	NTU	N
November 20, 2015	Xylene (Total)	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	m/p-Xylene	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	o-xylene	21/Jun/17	0.17 <MDL	ug/L	N
November 20, 2015	Zinc	21/Jun/17	2	ug/L	N



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, Highbury Ave. at Dingman Dr., 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
November 20, 2015	Antimony	21/Jun/17	0.09	ug/L	N
November 20, 2015	Arsenic	21/Jun/17	0.4	ug/L	N
November 20, 2015	Barium	21/Jun/17	14.5	ug/L	N
November 20, 2015	Boron	21/Jun/17	17	ug/L	N
November 20, 2015	Cadmium	21/Jun/17	0.003 <MDL	ug/L	N
November 20, 2015	Chromium	21/Jun/17	0.69	ug/L	N
November 20, 2015	Fluoride	4/Jan/17	0.60	mg/L	N
November 20, 2015	Fluoride	11/Jan/17	0.60	mg/L	N
November 20, 2015	Fluoride	18/Jan/17	0.52	mg/L	N
November 20, 2015	Fluoride	25/Jan/17	0.50	mg/L	N
November 20, 2015	Fluoride	1/Feb/17	0.58	mg/L	N
November 20, 2015	Fluoride	8/Feb/17	0.64	mg/L	N
November 20, 2015	Fluoride	15/Feb/17	0.56	mg/L	N
November 20, 2015	Fluoride	22/Feb/17	0.55	mg/L	N
November 20, 2015	Fluoride	1/Mar/17	0.63	mg/L	N
November 20, 2015	Fluoride	8/Mar/17	0.67	mg/L	N
November 20, 2015	Fluoride	15/Mar/17	0.49	mg/L	N
November 20, 2015	Fluoride	22/Mar/17	0.56	mg/L	N
November 20, 2015	Fluoride	29/Mar/17	0.57	mg/L	N
November 20, 2015	Fluoride	12/Apr/17	0.61	mg/L	N
November 20, 2015	Fluoride	19/Apr/17	0.55	mg/L	N
November 20, 2015	Fluoride	26/Apr/17	0.57	mg/L	N
November 20, 2015	Fluoride	3/May/17	0.53	mg/L	N
November 20, 2015	Fluoride	10/May/17	0.73	mg/L	N
November 20, 2015	Fluoride	17/May/17	0.62	mg/L	N
November 20, 2015	Fluoride	24/May/17	0.67	mg/L	N
November 20, 2015	Fluoride	31/May/17	0.63	mg/L	N
November 20, 2015	Fluoride	7/Jun/17	0.70	mg/L	N
November 20, 2015	Fluoride	14/Jun/17	0.57	mg/L	N
November 20, 2015	Fluoride	21/Jun/17	0.62	mg/L	N
November 20, 2015	Fluoride	28/Jun/17	0.72	mg/L	N
November 20, 2015	Fluoride	5/Jul/17	0.55	mg/L	N



November 20, 2015	Fluoride	12/Jul/17	0.67	mg/L	N
November 20, 2015	Fluoride	19/Jul/17	0.62	mg/L	N
November 20, 2015	Fluoride	26/Jul/17	0.55	mg/L	N
November 20, 2015	Fluoride	2/Aug/17	0.66	mg/L	N
November 20, 2015	Fluoride	9/Aug/17	0.56	mg/L	N
November 20, 2015	Fluoride	16/Aug/17	0.43	mg/L	N
November 20, 2015	Fluoride	23/Aug/17	0.72	mg/L	N
November 20, 2015	Fluoride	30/Aug/17	0.69	mg/L	N
November 20, 2015	Fluoride	6/Sep/17	0.63	mg/L	N
November 20, 2015	Fluoride	13/Sep/17	0.70	mg/L	N
November 20, 2015	Fluoride	20/Sep/17	0.60	mg/L	N
September 21, 2017	Fluoride	27/Sep/17	0.79	mg/L	N
September 21, 2017	Fluoride	4/Oct/17	0.61	mg/L	N
September 21, 2017	Fluoride	11/Oct/17	0.67	mg/L	N
September 21, 2017	Fluoride	18/Oct/17	0.60	mg/L	N
September 21, 2017	Fluoride	25/Oct/17	0.65	mg/L	N
September 21, 2017	Fluoride	1/Nov/17	0.60	mg/L	N
September 21, 2017	Fluoride	8/Nov/17	0.74	mg/L	N
September 21, 2017	Fluoride	15/Nov/17	0.68	mg/L	N
September 21, 2017	Fluoride	22/Nov/17	0.69	mg/L	N
September 21, 2017	Fluoride	29/Nov/17	0.68	mg/L	N
September 21, 2017	Fluoride	13/Dec/17	0.71	mg/L	N
September 21, 2017	Fluoride	20/Dec/17	0.71	mg/L	N
September 21, 2017	Fluoride	27/Dec/17	0.66	mg/L	N
November 20, 2015	Mercury	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Nitrate (as nitrogen)	28/Mar/17	1.01	mg/L	N
November 20, 2015	Nitrate (as nitrogen)	21/Jun/17	0.442	mg/L	N
November 20, 2015	Nitrate (as nitrogen)	20/Sep/17	0.279	mg/L	N
November 20, 2015	Nitrate (as nitrogen)	13/Dec/17	0.286	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	28/Mar/17	1.01	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	21/Jun/17	0.442	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	20/Sep/17	0.279	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	13/Dec/17	0.286	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	28/Mar/17	0.003 <MDL	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	21/Jun/17	0.003 <MDL	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	20/Sep/17	0.003 <MDL	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	13/Dec/17	0.003 <MDL	mg/L	N
November 20, 2015	Selenium	21/Jun/17	0.22	ug/L	N
November 20, 2015	Sodium	21/Jun/17	10.8	mg/L	N
November 20, 2015	Uranium	21/Jun/17	0.032	ug/L	N



b) ORGANIC PARAMETERS (including THM & HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
November 20, 2015	Atrazine	21/Jun/17	0.02	ug/L	N
November 20, 2015	Atrazine + N-dealkylated metabolites	21/Jun/17	0.03	ug/L	N
November 20, 2015	De-ethylated Atrazine	21/Jun/17	0.01	ug/L	N
November 20, 2015	Azinphos-methyl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Benzene	21/Jun/17	0.32 <MDL	ug/L	N
November 20, 2015	Benzo(a)pyrene	21/Jun/17	0.004 <MDL	ug/L	N
November 20, 2015	Bromoxynil	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Carbaryl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Carbofuran	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Carbon tetrachloride	21/Jun/17	0.16 <MDL	ug/L	N
November 20, 2015	Chlorpyrifos	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Diazinon	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Dicamba	21/Jun/17	0.20 <MDL	ug/L	N
November 20, 2015	1,2-Dichlorobenzene	21/Jun/17	0.41 <MDL	ug/L	N
November 20, 2015	1,4-Dichlorobenzene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	1,2-Dichloroethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Dichloromethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenoxyacetic acid (2,4-D)	21/Jun/17	0.19 <MDL	ug/L	N
November 20, 2015	Diclofop-methyl	21/Jun/17	0.40 <MDL	ug/L	N
November 20, 2015	Dimethoate	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Diquat	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Diuron	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Malathion	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	MCPA	21/Jun/17	0.00012 <MDL	mg/L	N
November 20, 2015	Metolachlor	21/Jun/17	0.01	ug/L	N
November 20, 2015	Metribuzin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Paraquat	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Pentachlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	Phorate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Picloram	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Polychlorinated Biphenyls (PCBs)	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Prometryne	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Simazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Terbufos	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Tetrachloroethylene (perchloroethylene)	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	2,3,4,6-tetrachlorophenol	21/Jun/17	0.20 <MDL	ug/L	N
November 20, 2015	Triallate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Trichloroethylene	21/Jun/17	0.44 <MDL	ug/L	N
November 20, 2015	2,4,6-trichlorophenol	21/Jun/17	0.25 <MDL	ug/L	N
November 20, 2015	Trifluralin	21/Jun/17	0.02 <MDL	ug/L	N



November 20, 2015	Total Haloacetic Acids	21/Jun/17	8	ug/L	N
November 20, 2015	Bromoacetic Acid	21/Jun/17	2.9 <MDL	ug/L	N
November 20, 2015	Chloroacetic Acid	21/Jun/17	4.7 <MDL	ug/L	N
November 20, 2015	Dibromoacetic Acid	21/Jun/17	2 <MDL	ug/L	N
November 20, 2015	Dichloroacetic Acid	21/Jun/17	8	ug/L	N
November 20, 2015	Trichloroacetic Acid	21/Jun/17	5.3 <MDL	ug/L	N
November 20, 2015	Total Haloacetic Acids	20/Sep/17	9.4	ug/L	N
November 20, 2015	Bromoacetic Acid	20/Sep/17	2.9 <MDL	ug/L	N
November 20, 2015	Chloroacetic Acid	20/Sep/17	4.7 <MDL	ug/L	N
November 20, 2015	Dibromoacetic Acid	20/Sep/17	2 <MDL	ug/L	N
November 20, 2015	Dichloroacetic Acid	20/Sep/17	2.8	ug/L	N
November 20, 2015	Trichloroacetic Acid	20/Sep/17	6.6	ug/L	N
November 20, 2015	Total Haloacetic Acids	13/Dec/17	5.3 <MDL	ug/L	N
November 20, 2015	Bromoacetic Acid	13/Dec/17	2.9 <MDL	ug/L	N
November 20, 2015	Chloroacetic Acid	13/Dec/17	4.7 <MDL	ug/L	N
November 20, 2015	Dibromoacetic Acid	13/Dec/17	2 <MDL	ug/L	N
November 20, 2015	Dichloroacetic Acid	13/Dec/17	2.8	ug/L	N
November 20, 2015	Trichloroacetic Acid	13/Dec/17	5.3 <MDL	ug/L	N
November 20, 2015	Trihalomethanes (total)	28/Mar/17	19	ug/L	N
November 20, 2015	Bromodichloromethane	28/Mar/17	5.1	ug/L	N
November 20, 2015	Bromoform	28/Mar/17	0.34 <MDL	ug/L	N
November 20, 2015	Chloroform	28/Mar/17	12	ug/L	N
November 20, 2015	Dibromochloromethane	28/Mar/17	1.4	ug/L	N
November 20, 2015	Trihalomethanes (total)	21/Jun/17	33	ug/L	N
November 20, 2015	Bromodichloromethane	21/Jun/17	9.1	ug/L	N
November 20, 2015	Bromoform	21/Jun/17	0.34 <MDL	ug/L	N
November 20, 2015	Chloroform	21/Jun/17	20	ug/L	N
November 20, 2015	Dibromochloromethane	21/Jun/17	3.6	ug/L	N
November 20, 2015	Trihalomethanes (total)	20/Sep/17	48	ug/L	N
November 20, 2015	Bromodichloromethane	20/Sep/17	12	ug/L	N
November 20, 2015	Bromoform	20/Sep/17	0.34 <MDL	ug/L	N
November 20, 2015	Chloroform	20/Sep/17	31	ug/L	N
November 20, 2015	Dibromochloromethane	20/Sep/17	4.6	ug/L	N
November 20, 2015	Trihalomethanes (total)	13/Dec/17	17	ug/L	N
November 20, 2015	Bromodichloromethane	13/Dec/17	6.1	ug/L	N
November 20, 2015	Bromoform	13/Dec/17	0.34 <MDL	ug/L	N
November 20, 2015	Chloroform	13/Dec/17	8	ug/L	N
November 20, 2015	Dibromochloromethane	13/Dec/17	3	ug/L	N
November 20, 2015	Vinyl Chloride	21/Jun/17	0.17 <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
November 20, 2015	Alkalinity	21/Jun/17	82	mg/L as CaCO ₃	N
September 21, 2017	Alkalinity	19/Dec/17	79	mg/L as CaCO ₃	N
November 20, 2015	Aluminum	21/Jun/17	41.8	ug/L	N
November 20, 2015	Ammonia+Ammonium (N)	21/Jun/17	0.04 <MDL	mg/L	N
November 20, 2015	Calcium	21/Jun/17	26.0	mg/L	N
November 20, 2015	Chloride	21/Jun/17	9.5	mg/L	N
November 20, 2015	Cobalt	21/Jun/17	0.004	ug/L	N
November 20, 2015	Colour	21/Jun/17	3 <MDL	TCU	N
November 20, 2015	Conductivity	21/Jun/17	251	uS/cm	N
November 20, 2015	Copper	21/Jun/17	2.47	ug/L	N
November 20, 2015	Cyanide	21/Jun/17	0.002 <MDL	mg/L	N
November 20, 2015	1,1-Dichloroethylene (vinylidene chloride)	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Dissolved Organic Carbon	21/Jun/17	1	mg/L	N
November 20, 2015	Ethylbenzene	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Hardness	21/Jun/17	96.8	mg/L as CaCO ₃	N
November 20, 2015	Iron	21/Jun/17	7 <MDL	ug/L	N
November 20, 2015	Langelier's Index	21/Jun/17	-0.28	no unit	N
November 20, 2015	Magnesium	21/Jun/17	7.78	mg/L	N
November 20, 2015	Manganese	21/Jun/17	0.26	ug/L	N
November 20, 2015	Monochlorobenzene	21/Jun/17	0.3 <MDL	ug/L	N
November 20, 2015	Nickel	21/Jun/17	0.4	ug/L	N
November 20, 2015	Nitrogen-Kjeldahl (N)	21/Jun/17	0.05 <MDL	mg/L	N
November 20, 2015	Organic Nitrogen	21/Jun/17	0.05 <MDL	mg/L	N
November 20, 2015	pH	21/Jun/17	7.99	no unit	N
November 20, 2015	Phosphorus	21/Jun/17	0.003 <MDL	mg/L	N
November 20, 2015	Potassium	21/Jun/17	1.03	mg/L	N
November 20, 2015	Silica	21/Jun/17	0.92	mg/L	N
November 20, 2015	Silver	21/Jun/17	0.002 <MDL	ug/L	N
November 20, 2015	Solids (Total Dissolved)	21/Jun/17	140	mg/L	N
November 20, 2015	Sulphate	21/Jun/17	27	mg/L	N
November 20, 2015	Sulphide	21/Jun/17	0.006 <MDL	mg/L	N
November 20, 2015	Surr 1,2-Dichloroethane-d4	21/Jun/17	112	Surr Rec %	N
November 20, 2015	Surr 4-Bromofluorobenzene	21/Jun/17	87	Surr Rec %	N
November 20, 2015	Surr Decachlorobiphenyl	21/Jun/17	82	%	N
November 20, 2015	Tetrachloroethylene (perchloroethylene)	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Toluene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	2,4,5-TP (Silvex)	21/Jun/17	0.18 <MDL	ug/L	N
November 20, 2015	Toxaphene	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Turbidity	21/Jun/17	0.13	NTU	N
November 20, 2015	Xylene (Total)	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	m/p-Xylene	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	o-xylene	21/Jun/17	0.17 <MDL	ug/L	N
November 20, 2015	Zinc	21/Jun/17	2	ug/L	N



SITE: Highbury Ave. at Dingman Dr. - 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
November 20, 2015	Antimony	21/Jun/17	0.12	ug/L	N
November 20, 2015	Arsenic	21/Jun/17	0.40	ug/L	N
November 20, 2015	Barium	21/Jun/17	21.80	ug/L	N
November 20, 2015	Boron	21/Jun/17	22.00	ug/L	N
November 20, 2015	Cadmium	21/Jun/17	0.01	ug/L	N
November 20, 2015	Chromium	21/Jun/17	0.81	ug/L	N
November 20, 2015	Fluoride	4/Jan/17	0.50	mg/L	N
November 20, 2015	Fluoride	11/Jan/17	0.47	mg/L	N
November 20, 2015	Fluoride	18/Jan/17	0.48	mg/L	N
November 20, 2015	Fluoride	25/Jan/17	0.48	mg/L	N
November 20, 2015	Fluoride	1/Feb/17	0.49	mg/L	N
November 20, 2015	Fluoride	8/Feb/17	0.51	mg/L	N
November 20, 2015	Fluoride	15/Feb/17	0.48	mg/L	N
November 20, 2015	Fluoride	22/Feb/17	0.50	mg/L	N
November 20, 2015	Fluoride	1/Mar/17	0.50	mg/L	N
November 20, 2015	Fluoride	8/Mar/17	0.51	mg/L	N
November 20, 2015	Fluoride	15/Mar/17	0.51	mg/L	N
November 20, 2015	Fluoride	22/Mar/17	0.52	mg/L	N
November 20, 2015	Fluoride	29/Mar/17	0.50	mg/L	N
November 20, 2015	Fluoride	12/Apr/17	0.51	mg/L	N
November 20, 2015	Fluoride	19/Apr/17	0.53	mg/L	N
November 20, 2015	Fluoride	26/Apr/17	0.49	mg/L	N
November 20, 2015	Fluoride	3/May/17	0.53	mg/L	N
November 20, 2015	Fluoride	10/May/17	0.52	mg/L	N
November 20, 2015	Fluoride	17/May/17	0.53	mg/L	N
November 20, 2015	Fluoride	24/May/17	0.50	mg/L	N
November 20, 2015	Fluoride	31/May/17	0.50	mg/L	N
November 20, 2015	Fluoride	7/Jun/17	0.51	mg/L	N
November 20, 2015	Fluoride	14/Jun/17	0.52	mg/L	N
November 20, 2015	Fluoride	21/Jun/17	0.53	mg/L	N
November 20, 2015	Fluoride	28/Jun/17	0.46	mg/L	N
November 20, 2015	Fluoride	5/Jul/17	0.49	mg/L	N
November 20, 2015	Fluoride	12/Jul/17	0.62	mg/L	N
November 20, 2015	Fluoride	19/Jul/17	0.47	mg/L	N
November 20, 2015	Fluoride	26/Jul/17	0.50	mg/L	N
November 20, 2015	Fluoride	2/Aug/17	0.52	mg/L	N
November 20, 2015	Fluoride	9/Aug/17	0.53	mg/L	N
November 20, 2015	Fluoride	16/Aug/17	0.50	mg/L	N
November 20, 2015	Fluoride	23/Aug/17	0.47	mg/L	N
November 20, 2015	Fluoride	30/Aug/17	0.51	mg/L	N
November 20, 2015	Fluoride	6/Sep/17	0.52	mg/L	N



November 20, 2015	Fluoride	13/Sep/17	0.54	mg/L	N
November 20, 2015	Mercury	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Nitrate (as nitrogen)	28/Mar/17	0.170	mg/L	N
November 20, 2015	Nitrate (as nitrogen)	21/Jun/17	0.180	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	28/Mar/17	0.170	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	21/Jun/17	0.180	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	28/Mar/17	0.003 <MDL	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	21/Jun/17	0.003 <MDL	mg/L	N
November 20, 2015	Selenium	21/Jun/17	0.21	ug/L	N
November 20, 2015	Sodium	21/Jun/17	18.10	mg/L	N
November 20, 2015	Uranium	21/Jun/17	0.04	ug/L	N



b) ORGANIC PARAMETERS (including THM & HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
November 20, 2015	Atrazine	21/Jun/17	0.03	ug/L	N
November 20, 2015	Atrazine + N-dealkylated metabolites	21/Jun/17	0.05	ug/L	N
November 20, 2015	De-ethylated Atrazine	21/Jun/17	0.01	ug/L	N
November 20, 2015	Azinphos-methyl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Benzene	21/Jun/17	0.32 <MDL	ug/L	N
November 20, 2015	Benzo(a)pyrene	21/Jun/17	0.004 <MDL	ug/L	N
November 20, 2015	Bromoxynil	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Carbaryl	21/Jun/17	0.05 <MDL	ug/L	N
November 20, 2015	Carbofuran	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Carbon tetrachloride	21/Jun/17	0.16 <MDL	ug/L	N
November 20, 2015	Chlorpyrifos	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Diazinon	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Dicamba	21/Jun/17	0.20 <MDL	ug/L	N
November 20, 2015	1,2-Dichlorobenzene	21/Jun/17	0.41 <MDL	ug/L	N
November 20, 2015	1,4-Dichlorobenzene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	1,2-Dichloroethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	Dichloromethane	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	2,4-dichlorophenoxyacetic acid (2,4-D)	21/Jun/17	0.19 <MDL	ug/L	N
November 20, 2015	Diclofop-methyl	21/Jun/17	0.40 <MDL	ug/L	N
November 20, 2015	Dimethoate	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Diquat	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Diuron	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Glyphosate	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Malathion	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	MCPA	21/Jun/17	0.00012<MDL	mg/L	N
November 20, 2015	Metolachlor	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Metribuzin	21/Jun/17	0.02 <MDL	ug/L	N
November 20, 2015	Paraquat	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Pentachlorophenol	21/Jun/17	0.15 <MDL	ug/L	N
November 20, 2015	Phorate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Picloram	21/Jun/17	1 <MDL	ug/L	N
November 20, 2015	Polychlorinated Biphenyls (PCBs)	21/Jun/17	0.04 <MDL	ug/L	N
November 20, 2015	Prometryne	21/Jun/17	0.03 <MDL	ug/L	N
November 20, 2015	Simazine	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Terbufos	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Tetrachloroethylene (perchloroethylene)	21/Jun/17	0.35 <MDL	ug/L	N
November 20, 2015	2,3,4,6-tetrachlorophenol	21/Jun/17	0.20 <MDL	ug/L	N
November 20, 2015	Triallate	21/Jun/17	0.01 <MDL	ug/L	N
November 20, 2015	Trichloroethylene	21/Jun/17	0.44 <MDL	ug/L	N
November 20, 2015	2,4,6-trichlorophenol	21/Jun/17	0.25 <MDL	ug/L	N
November 20, 2015	Trifluralin	21/Jun/17	0.02 <MDL	ug/L	N



November 20, 2015	Total Haloacetic Acids	21/Jun/17	7.4	ug/L	N
November 20, 2015	Bromoacetic Acid	21/Jun/17	2.9 <MDL	ug/L	N
November 20, 2015	Chloroacetic Acid	21/Jun/17	4.7 <MDL	ug/L	N
November 20, 2015	Dibromoacetic Acid	21/Jun/17	2 <MDL	ug/L	N
November 20, 2015	Dichloroacetic Acid	21/Jun/17	7.4	ug/L	N
November 20, 2015	Trichloroacetic Acid	21/Jun/17	5.3 <MDL	ug/L	N
November 20, 2015	Trihalomethanes (total)	28/Mar/17	12	ug/L	N
November 20, 2015	Bromodichloromethane	28/Mar/17	4	ug/L	N
November 20, 2015	Bromoform	28/Mar/17	0.34 <MDL	ug/L	N
November 20, 2015	Chloroform	28/Mar/17	5.8	ug/L	N
November 20, 2015	Dibromochloromethane	28/Mar/17	2.3	ug/L	N
November 20, 2015	Trihalomethanes (total)	21/Jun/17	25	ug/L	N
November 20, 2015	Bromodichloromethane	21/Jun/17	7.8	ug/L	N
November 20, 2015	Bromoform	21/Jun/17	0.34 <MDL	ug/L	N
November 20, 2015	Chloroform	21/Jun/17	14	ug/L	N
November 20, 2015	Dibromochloromethane	21/Jun/17	3.6	ug/L	N
November 20, 2015	Vinyl Chloride	21/Jun/17	0.17 <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
November 20, 2015	Alkalinity	21/Jun/17	95	mg/L as CaCO ₃	N
November 20, 2015	Aluminum	21/Jun/17	31.1	ug/L	N
November 20, 2015	Ammonia+Ammonium (N)	21/Jun/17	0.04 <MDL	mg/L	N
November 20, 2015	Calcium	21/Jun/17	32.3	mg/L	N
November 20, 2015	Chloride	21/Jun/17	18	mg/L	N
November 20, 2015	Cobalt	21/Jun/17	0.01	ug/L	N
November 20, 2015	Colour	21/Jun/17	3 <MDL	TCU	N
November 20, 2015	Conductivity	21/Jun/17	310	uS/cm	N
November 20, 2015	Copper	21/Jun/17	2	ug/L	N
November 20, 2015	Cyanide	21/Jun/17	0.002 <MDL	mg/L	N
November 20, 2015	1,1-Dichloroethylene (vinylidene chloride)	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Dissolved Organic Carbon	21/Jun/17	2	mg/L	N
November 20, 2015	Ethylbenzene	21/Jun/17	0.33 <MDL	ug/L	N
November 20, 2015	Hardness	21/Jun/17	117	mg/L as CaCO ₃	N
November 20, 2015	Iron	21/Jun/17	7.00 <MDL	ug/L	N
November 20, 2015	Langelier's Index	21/Jun/17	-0.12	no unit	N
November 20, 2015	Magnesium	21/Jun/17	8.7	mg/L	N
November 20, 2015	Manganese	21/Jun/17	0.61	ug/L	N
November 20, 2015	Monochlorobenzene	21/Jun/17	0.30 <MDL	ug/L	N
November 20, 2015	Nickel	21/Jun/17	0.6	ug/L	N
November 20, 2015	Nitrogen-Kjeldahl (N)	21/Jun/17	0.05 <MDL	mg/L	N
November 20, 2015	Organic Nitrogen	21/Jun/17	0.05 <MDL	mg/L	N
November 20, 2015	pH	21/Jun/17	8.00	no unit	N
November 20, 2015	Phosphorus	21/Jun/17	0.003 <MDL	mg/L	N
November 20, 2015	Potassium	21/Jun/17	1.5	mg/L	N
November 20, 2015	Silica	21/Jun/17	0.51	mg/L	N
November 20, 2015	Silver	21/Jun/17	0.002 <MDL	ug/L	N
November 20, 2015	Solids (Total Dissolved)	21/Jun/17	174	mg/L	N
November 20, 2015	Sulphate	21/Jun/17	33	mg/L	N
November 20, 2015	Sulphide	21/Jun/17	0.01	mg/L	N
November 20, 2015	Surr 1,2-Dichloroethane-d4	21/Jun/17	110	Surr Rec %	N
November 20, 2015	Surr 4-Bromofluorobenzene	21/Jun/17	87	Surr Rec %	N
November 20, 2015	Surr Decachlorobiphenyl	21/Jun/17	76	%	N
November 20, 2015	Toluene	21/Jun/17	0.36 <MDL	ug/L	N
November 20, 2015	2,4,5-TP (Silvex)	21/Jun/17	0.18 <MDL	ug/L	N
November 20, 2015	Toxaphene	21/Jun/17	5 <MDL	ug/L	N
November 20, 2015	Turbidity	21/Jun/17	0.14	NTU	N
November 20, 2015	Xylene (Total)	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	m/p-Xylene	21/Jun/17	0.43 <MDL	ug/L	N
November 20, 2015	o-xylene	21/Jun/17	0.17 <MDL	ug/L	N
November 20, 2015	Zinc	21/Jun/17	1	ug/L	N



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
November 20, 2015	Fluoride	20/Sep/17	0.55	mg/L	N
September 21, 2017	Fluoride	27/Sep/17	0.57	mg/L	N
September 21, 2017	Fluoride	4/Oct/17	0.52	mg/L	N
September 21, 2017	Fluoride	11/Oct/17	0.50	mg/L	N
September 21, 2017	Fluoride	18/Oct/17	0.53	mg/L	N
September 21, 2017	Fluoride	25/Oct/17	0.45	mg/L	N
September 21, 2017	Fluoride	1/Nov/17	0.54	mg/L	N
September 21, 2017	Fluoride	8/Nov/17	0.55	mg/L	N
September 21, 2017	Fluoride	15/Nov/17	0.53	mg/L	N
September 21, 2017	Fluoride	22/Nov/17	0.57	mg/L	N
September 21, 2017	Fluoride	29/Nov/17	0.55	mg/L	N
September 21, 2017	Fluoride	13/Dec/17	0.54	mg/L	N
September 21, 2017	Fluoride	20/Dec/17	0.51	mg/L	N
September 21, 2017	Fluoride	27/Dec/17	0.56	mg/L	N
September 21, 2017	Lead	19/Dec/17	0.02	ug/L	N
September 21, 2017	Nitrate (as nitrogen)	20/Sep/17	0.178	mg/L	N
November 20, 2015	Nitrate (as nitrogen)	13/Dec/17	0.129	mg/L	N
September 21, 2017	Nitrate + Nitrite (as nitrogen)	20/Sep/17	0.178	mg/L	N
November 20, 2015	Nitrate + Nitrite (as nitrogen)	13/Dec/17	0.129	mg/L	N
September 21, 2017	Nitrite (as nitrogen)	20/Sep/17	0.003 <MDL	mg/L	N
November 20, 2015	Nitrite (as nitrogen)	13/Dec/17	0.003 <MDL	mg/L	N



b) ORGANIC PARAMETERS (including THM & HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
November 20, 2015	Total Haloacetic Acids	20/Sep/17	17	ug/L	N
November 20, 2015	Bromoacetic Acid	20/Sep/17	2.9 <MDL	ug/L	N
November 20, 2015	Chloroacetic Acid	20/Sep/17	4.7 <MDL	ug/L	N
November 20, 2015	Dibromoacetic Acid	20/Sep/17	2 <MDL	ug/L	N
November 20, 2015	Dichloroacetic Acid	20/Sep/17	10.9	ug/L	N
November 20, 2015	Trichloroacetic Acid	20/Sep/17	6.1	ug/L	N
September 21, 2017	Total Haloacetic Acids	13/Dec/17	8.6	ug/L	N
September 21, 2017	Bromoacetic Acid	13/Dec/17	2.9 <MDL	ug/L	N
September 21, 2017	Chloroacetic Acid	13/Dec/17	4.7 <MDL	ug/L	N
September 21, 2017	Dibromoacetic Acid	13/Dec/17	2 <MDL	ug/L	N
September 21, 2017	Dichloroacetic Acid	13/Dec/17	8.6	ug/L	N
September 21, 2017	Trichloroacetic Acid	13/Dec/17	5.3 <MDL	ug/L	N
November 20, 2015	Trihalomethanes (total)	20/Sep/17	44	ug/L	N
November 20, 2015	Bromodichloromethane	20/Sep/17	12	ug/L	N
November 20, 2015	Bromoform	20/Sep/17	0.42	ug/L	N
November 20, 2015	Chloroform	20/Sep/17	27	ug/L	N
November 20, 2015	Dibromochloromethane	20/Sep/17	4.9	ug/L	N
September 21, 2017	Trihalomethanes (total)	13/Dec/17	26	ug/L	N
September 21, 2017	Bromodichloromethane	13/Dec/17	8.1	ug/L	N
September 21, 2017	Bromoform	13/Dec/17	0.34 <MDL	ug/L	N
September 21, 2017	Chloroform	13/Dec/17	15	ug/L	N
September 21, 2017	Dibromochloromethane	13/Dec/17	2.9	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	19/Dec/17	89	mg/L as CaCO3	N



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

As outlined below, sampling was carried out for THM's & HAA's at 214 Rathowan St. and 4318 Colonel Talbot Rd.

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
November 20, 2015	Total Haloacetic Acids	21/Jun/17	7.8	ug/L	N
November 20, 2015	(Bromoacetic Acid)	21/Jun/17	2.9 <MDL	ug/L	N
November 20, 2015	(Chloroacetic Acid)	21/Jun/17	4.7 <MDL	ug/L	N
November 20, 2015	(Dibromoacetic Acid)	21/Jun/17	2 <MDL	ug/L	N
November 20, 2015	(Dichloroacetic Acid)	21/Jun/17	7.8	ug/L	N
November 20, 2015	(Trichloroacetic Acid)	21/Jun/17	5.3 <MDL	ug/L	N
November 20, 2015	Total Haloacetic Acids	20/Sep/17	10	ug/L	N
November 20, 2015	(Bromoacetic Acid)	20/Sep/17	2.9 <MDL	ug/L	N
November 20, 2015	(Chloroacetic Acid)	20/Sep/17	4.7 <MDL	ug/L	N
November 20, 2015	(Dibromoacetic Acid)	20/Sep/17	2 <MDL	ug/L	N
November 20, 2015	(Dichloroacetic Acid)	20/Sep/17	4.5	ug/L	N
November 20, 2015	(Trichloroacetic Acid)	20/Sep/17	5.5	ug/L	N
September 21, 2017	Total Haloacetic Acids	13/Dec/17	5.3 <MDL	ug/L	N
September 21, 2017	(Bromoacetic Acid)	13/Dec/17	2.9 <MDL	ug/L	N
September 21, 2017	(Chloroacetic Acid)	13/Dec/17	4.7 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	13/Dec/17	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	13/Dec/17	4.8	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	13/Dec/17	5.3 <MDL	ug/L	N
November 20, 2015	Trihalomethanes (total)	28/Mar/17	23	ug/L	N
November 20, 2015	(bromodichloromethane)	28/Mar/17	5.8	ug/L	N
November 20, 2015	(bromoform)	28/Mar/17	0.34 <MDL	ug/L	N
November 20, 2015	(chloroform)	28/Mar/17	15	ug/L	N
November 20, 2015	(dibromochloromethane)	28/Mar/17	1.6	ug/L	N
November 20, 2015	Trihalomethanes (total)	21/Jun/17	33	ug/L	N
November 20, 2015	(bromodichloromethane)	21/Jun/17	8.8	ug/L	N
November 20, 2015	(bromoform)	21/Jun/17	0.34 <MDL	ug/L	N
November 20, 2015	(chloroform)	21/Jun/17	21	ug/L	N
November 20, 2015	(dibromochloromethane)	21/Jun/17	3.5	ug/L	N
November 20, 2015	Trihalomethanes (total)	20/Sep/17	33	ug/L	N
November 20, 2015	(bromodichloromethane)	20/Sep/17	9	ug/L	N
November 20, 2015	(bromoform)	20/Sep/17	0.34 <MDL	ug/L	N
November 20, 2015	(chloroform)	20/Sep/17	21	ug/L	N
November 20, 2015	(dibromochloromethane)	20/Sep/17	3.6	ug/L	N
September 21, 2017	Trihalomethanes (total)	13/Dec/17	20	ug/L	N
September 21, 2017	(bromodichloromethane)	13/Dec/17	6.6	ug/L	N
September 21, 2017	(bromoform)	13/Dec/17	0.34 <MDL	ug/L	N
September 21, 2017	(chloroform)	13/Dec/17	10	ug/L	N
September 21, 2017	(dibromochloromethane)	13/Dec/17	3.2	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
November 20, 2015	Total Haloacetic Acids	21/Jun/17	17.7	ug/L	N
November 20, 2015	(Bromoacetic Acid)	21/Jun/17	2.9 <MDL	ug/L	N
November 20, 2015	(Chloroacetic Acid)	21/Jun/17	4.7 <MDL	ug/L	N
November 20, 2015	(Dibromoacetic Acid)	21/Jun/17	2 <MDL	ug/L	N
November 20, 2015	(Dichloroacetic Acid)	21/Jun/17	11.8	ug/L	N
November 20, 2015	(Trichloroacetic Acid)	21/Jun/17	5.9	ug/L	N
November 20, 2015	Total Haloacetic Acids	20/Sep/17	14.2	ug/L	N
November 20, 2015	(Bromoacetic Acid)	20/Sep/17	2.9 <MDL	ug/L	N
November 20, 2015	(Chloroacetic Acid)	20/Sep/17	4.7 <MDL	ug/L	N
November 20, 2015	(Dibromoacetic Acid)	20/Sep/17	2 <MDL	ug/L	N
November 20, 2015	(Dichloroacetic Acid)	20/Sep/17	6.2	ug/L	N
November 20, 2015	(Trichloroacetic Acid)	20/Sep/17	8	ug/L	N
September 21, 2017	Total Haloacetic Acids	13/Dec/17	18.1	ug/L	N
September 21, 2017	(Bromoacetic Acid)	13/Dec/17	2.9 <MDL	ug/L	N
September 21, 2017	(Chloroacetic Acid)	13/Dec/17	4.7 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	13/Dec/17	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	13/Dec/17	12.6	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	13/Dec/17	5.5	ug/L	N
November 20, 2015	Trihalomethanes (total)	28/Mar/17	27	ug/L	N
November 20, 2015	(bromodichloromethane)	28/Mar/17	6.6	ug/L	N
November 20, 2015	(bromoform)	28/Mar/17	0.34 <MDL	ug/L	N
November 20, 2015	(chloroform)	28/Mar/17	18	ug/L	N
November 20, 2015	(dibromochloromethane)	28/Mar/17	2	ug/L	N
November 20, 2015	Trihalomethanes (total)	21/Jun/17	45	ug/L	N
November 20, 2015	(bromodichloromethane)	21/Jun/17	11	ug/L	N
November 20, 2015	(bromoform)	21/Jun/17	0.34 <MDL	ug/L	N
November 20, 2015	(chloroform)	21/Jun/17	30	ug/L	N
November 20, 2015	(dibromochloromethane)	21/Jun/17	4	ug/L	N
November 20, 2015	Trihalomethanes (total)	20/Sep/17	56	ug/L	N
November 20, 2015	(bromodichloromethane)	20/Sep/17	13	ug/L	N
November 20, 2015	(bromoform)	20/Sep/17	0.38	ug/L	N
November 20, 2015	(chloroform)	20/Sep/17	37	ug/L	N
November 20, 2015	(dibromochloromethane)	20/Sep/17	5.1	ug/L	N
September 21, 2017	Trihalomethanes (total)	13/Dec/17	32	ug/L	N
September 21, 2017	(bromodichloromethane)	13/Dec/17	9.4	ug/L	N
September 21, 2017	(bromoform)	13/Dec/17	0.34 <MDL	ug/L	N
September 21, 2017	(chloroform)	13/Dec/17	20	ug/L	N
September 21, 2017	(dibromochloromethane)	13/Dec/17	3.3	ug/L	N



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

None.

2017 Summary of Water Pumpage



London
CANADA

DAY	DATE	ELGIN PUMPAGE (m ³)	ARVA PUMPAGE (m ³)	TOTAL LONDON CONSUMPTION (m ³)
Rated Capacity	-	95,800 m ³ / day	318,000 m ³ / day	413,800 m ³ / day
Sunday	1/Jan/17	19,190	95,978	102,992
Monday	2/Jan/17	19,156	91,216	111,049
Tuesday	3/Jan/17	24,184	90,707	112,862
Wednesday	4/Jan/17	24,189	86,840	118,695
Thursday	5/Jan/17	24,296	91,253	121,862
Friday	6/Jan/17	24,231	100,694	117,259
Saturday	7/Jan/17	24,220	91,802	118,953
Sunday	8/Jan/17	24,135	95,643	123,386
Monday	9/Jan/17	24,243	99,582	119,090
Tuesday	10/Jan/17	24,193	91,201	118,325
Wednesday	11/Jan/17	24,212	94,831	121,749
Thursday	12/Jan/17	24,351	99,305	120,950
Friday	13/Jan/17	24,301	100,176	119,291
Saturday	14/Jan/17	24,221	95,395	118,714
Sunday	15/Jan/17	24,236	95,913	126,012
Monday	16/Jan/17	24,301	100,176	118,614
Tuesday	17/Jan/17	24,212	94,799	116,982
Wednesday	18/Jan/17	24,202	95,679	118,979
Thursday	19/Jan/17	10,209	104,785	118,602
Friday	20/Jan/17	24,204	94,098	112,214
Saturday	21/Jan/17	24,262	90,662	116,276
Sunday	22/Jan/17	24,240	96,166	122,887
Monday	23/Jan/17	24,083	97,419	115,414
Tuesday	24/Jan/17	24,876	86,927	120,792
Wednesday	25/Jan/17	24,321	95,618	117,038
Thursday	26/Jan/17	24,215	90,891	118,488
Friday	27/Jan/17	24,237	95,682	116,537
Saturday	28/Jan/17	24,230	91,665	116,571
Sunday	29/Jan/17	24,251	100,908	126,287
Monday	30/Jan/17	24,260	101,141	126,077
Tuesday	31/Jan/17	0	118,811	118,360
January 2017 Monthly Max		24,876	118,811	126,287
January 2017 Monthly Average		22,809	96,000	118,944
January 2017 Total		684,271	2,879,985	3,568,315

DAY	DATE	ELGIN PUMPAGE (m ³)	ARVA PUMPAGE (m ³)	TOTAL LONDON CONSUMPTION (m ³)
Rated Capacity	-	95,800 m ³ / day	318,000 m ³ / day	413,800 m ³ / day
Wednesday	1/Feb/17	24,242	95,969	119,835
Thursday	2/Feb/17	24,252	95,878	121,634
Friday	3/Feb/17	24,267	89,396	112,310
Saturday	4/Feb/17	24,288	100,875	123,810
Sunday	5/Feb/17	24,247	101,007	123,675
Monday	6/Feb/17	24,206	95,884	117,610
Tuesday	7/Feb/17	24,273	93,823	121,253
Wednesday	8/Feb/17	24,186	93,007	115,840
Thursday	9/Feb/17	24,223	91,143	119,876
Friday	10/Feb/17	24,215	95,943	114,070
Saturday	11/Feb/17	24,299	95,267	117,085
Sunday	12/Feb/17	24,386	91,822	122,296
Monday	13/Feb/17	24,221	104,780	120,884
Tuesday	14/Feb/17	22,820	64,728	116,832
Wednesday	15/Feb/17	56,609	35,384	112,061
Thursday	16/Feb/17	45,174	116,003	125,805
Friday	17/Feb/17	24,254	100,048	113,253
Saturday	18/Feb/17	24,209	89,702	113,460
Sunday	19/Feb/17	24,209	87,276	111,034
Monday	20/Feb/17	24,226	83,015	116,486
Tuesday	21/Feb/17	24,112	91,749	113,832
Wednesday	22/Feb/17	24,226	91,761	115,085
Thursday	23/Feb/17	24,214	91,336	114,197
Friday	24/Feb/17	24,218	87,024	110,340
Saturday	25/Feb/17	24,202	86,130	114,616
Sunday	26/Feb/17	24,276	91,478	121,166
Monday	27/Feb/17	24,254	98,997	116,712
Tuesday	28/Feb/17	18,202	99,486	116,335
February 2017 Monthly Max		56,609	116,003	125,805
February 2017 Monthly Max		25,875	91,390	117,193
February 2017 Total		724,510	2,558,911	3,281,392

DAY	DATE	ELGIN PUMPAGE (m ³)	ARVA PUMPAGE (m ³)	TOTAL LONDON CONSUMPTION (m ³)
Rated Capacity	-	95,800 m³ / day	318,000 m³ / day	413,800 m³ / day
Wednesday	1/Mar/17	24,212	93,637	119,878
Thursday	2/Mar/17	18,057	93,357	118,630
Friday	3/Mar/17	24,061	94,859	115,988
Saturday	4/Mar/17	24,235	95,776	117,982
Sunday	5/Mar/17	24,279	95,735	123,171
Monday	6/Mar/17	24,226	99,142	117,505
Tuesday	7/Mar/17	24,270	104,540	125,879
Wednesday	8/Mar/17	0	107,441	111,725
Thursday	9/Mar/17	0	118,771	118,320
Friday	10/Mar/17	24,204	91,713	115,692
Saturday	11/Mar/17	24,375	93,714	114,030
Sunday	12/Mar/17	24,140	91,889	117,382
Monday	13/Mar/17	24,114	95,440	115,270
Tuesday	14/Mar/17	24,119	91,567	116,813
Wednesday	15/Mar/17	24,126	83,689	117,736
Thursday	16/Mar/17	23,554	94,592	116,117
Friday	17/Mar/17	24,051	86,556	111,283
Saturday	18/Mar/17	24,171	85,021	113,677
Sunday	19/Mar/17	24,219	108,749	126,680
Monday	20/Mar/17	0	119,324	122,029
Tuesday	21/Mar/17	10,135	117,482	121,980
Wednesday	22/Mar/17	10,086	111,808	120,090
Thursday	23/Mar/17	24,128	97,701	120,702
Friday	24/Mar/17	10,087	100,612	114,081
Saturday	25/Mar/17	24,146	91,239	116,287
Sunday	26/Mar/17	24,132	100,236	122,113
Monday	27/Mar/17	24,116	95,648	117,735
Tuesday	28/Mar/17	24,122	93,300	120,128
Wednesday	29/Mar/17	24,101	93,523	119,428
Thursday	30/Mar/17	24,122	79,851	117,276
Friday	31/Mar/17	24,140	97,549	115,601
March 2017 Monthly Max		24,375	119,324	126,680
March 2017 Monthly Average		20,249	97,563	118,103
March 2017 Total		627,728	3,024,461	3,661,208

DAY	DATE	ELGIN PUMPAGE (m ³)	ARVA PUMPAGE (m ³)	TOTAL LONDON CONSUMPTION (m ³)
Rated Capacity	-	95,800 m³ / day	318,000 m³ / day	413,800 m³ / day
Saturday	1/Apr/17	23,751	100,273	115,681
Sunday	2/Apr/17	24,160	95,910	124,129
Monday	3/Apr/17	24,154	99,846	118,137
Tuesday	4/Apr/17	24,132	94,609	117,614
Wednesday	5/Apr/17	24,118	92,297	115,062
Thursday	6/Apr/17	19,112	91,672	117,323
Friday	7/Apr/17	24,167	90,654	113,017
Saturday	8/Apr/17	24,149	91,948	116,774
Sunday	9/Apr/17	24,051	100,132	123,055
Monday	10/Apr/17	24,149	100,646	117,835
Tuesday	11/Apr/17	24,146	91,783	119,762
Wednesday	12/Apr/17	24,120	90,878	118,831
Thursday	13/Apr/17	24,134	104,699	114,622
Friday	14/Apr/17	24,113	100,726	117,722
Saturday	15/Apr/17	24,115	91,476	114,399
Sunday	16/Apr/17	24,106	81,747	114,457
Monday	17/Apr/17	24,122	91,731	123,526
Tuesday	18/Apr/17	24,140	105,053	121,520
Wednesday	19/Apr/17	23,691	95,714	120,584
Thursday	20/Apr/17	19,105	100,171	118,982
Friday	21/Apr/17	24,109	87,721	114,779
Saturday	22/Apr/17	24,155	91,481	118,586
Sunday	23/Apr/17	24,156	95,403	125,141
Monday	24/Apr/17	24,144	99,852	123,703
Tuesday	25/Apr/17	24,146	101,089	120,536
Wednesday	26/Apr/17	24,057	99,777	125,012
Thursday	27/Apr/17	24,150	100,769	123,741
Friday	28/Apr/17	24,136	94,140	118,571
Saturday	29/Apr/17	24,164	94,911	116,715
Sunday	30/Apr/17	24,169	96,419	120,883
April 2017 Monthly Max		24,169	105,053	125,141
April 2017 Monthly Average		23,771	95,784	119,023
April 2017 Total		713,121	2,873,527	3,570,699

DAY	DATE	ELGIN PUMPAGE (m ³)	ARVA PUMPAGE (m ³)	TOTAL LONDON CONSUMPTION (m ³)
Rated Capacity	-	95,800 m ³ / day	318,000 m ³ / day	413,800 m ³ / day
Monday	1/May/17	24,114	95,500	117,844
Tuesday	2/May/17	24,112	95,187	118,414
Wednesday	3/May/17	24,113	95,460	118,983
Thursday	4/May/17	24,124	95,072	116,247
Friday	5/May/17	24,101	86,567	111,553
Saturday	6/May/17	24,119	87,340	112,638
Sunday	7/May/17	24,134	91,889	121,923
Monday	8/May/17	24,123	100,519	118,447
Tuesday	9/May/17	24,112	102,430	123,883
Wednesday	10/May/17	0	114,628	121,712
Thursday	11/May/17	24,118	93,773	121,133
Friday	12/May/17	24,137	99,564	120,459
Saturday	13/May/17	21,247	99,581	123,776
Sunday	14/May/17	24,143	105,153	123,693
Monday	15/May/17	24,121	97,156	128,054
Tuesday	16/May/17	18,124	104,610	126,548
Wednesday	17/May/17	24,049	114,120	134,648
Thursday	18/May/17	24,048	113,514	136,682
Friday	19/May/17	24,032	104,715	122,852
Saturday	20/May/17	24,114	99,280	121,919
Sunday	21/May/17	24,116	97,431	113,255
Monday	22/May/17	24,127	93,464	131,488
Tuesday	23/May/17	0	133,084	135,729
Wednesday	24/May/17	0	136,595	130,410
Thursday	25/May/17	0	135,417	123,281
Friday	26/May/17	0	117,012	114,632
Saturday	27/May/17	0	120,343	126,875
Sunday	28/May/17	0	129,818	137,212
Monday	29/May/17	14,473	119,770	135,423
Tuesday	30/May/17	9,891	124,214	136,170
Wednesday	31/May/17	16,432	127,244	138,366
May 2017 Monthly Max		24,143	136,595	138,366
May 2017 Monthly Average		17,362	107,434	124,653
May 2017 Total		538,224	3,330,450	3,864,249

DAY	DATE	ELGIN PUMPAGE (m ³)	ARVA PUMPAGE (m ³)	TOTAL LONDON CONSUMPTION (m ³)
Rated Capacity	-	95,800 m³ / day	318,000 m³ / day	413,800 m³ / day
Thursday	1/Jun/17	28,436	108,518	137,249
Friday	2/Jun/17	26,304	104,752	137,546
Saturday	3/Jun/17	23,536	114,067	137,898
Sunday	4/Jun/17	26,089	106,724	138,094
Monday	5/Jun/17	26,876	104,882	130,878
Tuesday	6/Jun/17	26,135	118,980	131,568
Wednesday	7/Jun/17	26,119	105,105	140,075
Thursday	8/Jun/17	25,800	108,566	144,921
Friday	9/Jun/17	26,123	122,866	144,597
Saturday	10/Jun/17	26,722	127,110	150,898
Sunday	11/Jun/17	26,274	131,051	162,312
Monday	12/Jun/17	25,885	141,417	163,782
Tuesday	13/Jun/17	26,148	145,690	161,832
Wednesday	14/Jun/17	26,268	141,198	160,662
Thursday	15/Jun/17	12,912	136,257	153,319
Friday	16/Jun/17	27,000	127,865	158,994
Saturday	17/Jun/17	26,897	127,278	141,744
Sunday	18/Jun/17	27,565	113,578	141,439
Monday	19/Jun/17	26,119	113,219	138,152
Tuesday	20/Jun/17	26,060	111,565	136,135
Wednesday	21/Jun/17	26,217	105,684	141,696
Thursday	22/Jun/17	26,056	113,585	141,413
Friday	23/Jun/17	26,163	104,814	128,908
Saturday	24/Jun/17	26,040	110,007	125,953
Sunday	25/Jun/17	26,119	95,828	130,855
Monday	26/Jun/17	27,637	104,736	133,263
Tuesday	27/Jun/17	19,983	91,311	128,368
Wednesday	28/Jun/17	26,356	117,499	139,160
Thursday	29/Jun/17	26,096	113,577	136,148
Friday	30/Jun/17	26,484	109,331	134,045
June 2017 Monthly Max		28,436	145,690	163,782
June 2017 Monthly Average		25,681	115,902	141,730
June 2017 Total		770,419	3,477,060	4,251,904

DAY	DATE	ELGIN PUMPAGE (m ³)	ARVA PUMPAGE (m ³)	TOTAL LONDON CONSUMPTION (m ³)
Rated Capacity	-	95,800 m ³ / day	318,000 m ³ / day	413,800 m ³ / day
Saturday	1/Jul/17	26,380	105,523	126,594
Sunday	2/Jul/17	26,185	105,109	132,768
Monday	3/Jul/17	26,841	109,465	144,556
Tuesday	4/Jul/17	22,779	127,035	150,694
Wednesday	5/Jul/17	29,313	132,309	166,610
Thursday	6/Jul/17	23,326	144,455	152,779
Friday	7/Jul/17	25,985	119,406	134,421
Saturday	8/Jul/17	27,002	101,001	131,565
Sunday	9/Jul/17	26,043	104,262	139,187
Monday	10/Jul/17	26,917	105,257	134,829
Tuesday	11/Jul/17	19,837	105,511	144,938
Wednesday	12/Jul/17	32,918	109,199	145,727
Thursday	13/Jul/17	29,318	122,892	136,362
Friday	14/Jul/17	26,832	113,687	141,986
Saturday	15/Jul/17	26,539	118,149	141,168
Sunday	16/Jul/17	26,661	117,491	143,272
Monday	17/Jul/17	26,295	122,295	144,761
Tuesday	18/Jul/17	26,117	123,760	153,706
Wednesday	19/Jul/17	26,284	126,165	153,329
Thursday	20/Jul/17	26,110	134,219	153,555
Friday	21/Jul/17	26,064	131,552	152,893
Saturday	22/Jul/17	26,034	116,212	130,362
Sunday	23/Jul/17	26,070	109,467	145,642
Monday	24/Jul/17	16,366	112,687	141,742
Tuesday	25/Jul/17	18,199	126,833	155,867
Wednesday	26/Jul/17	34,938	109,230	152,611
Thursday	27/Jul/17	26,876	131,977	155,662
Friday	28/Jul/17	26,105	133,249	148,548
Saturday	29/Jul/17	27,561	132,178	160,512
Sunday	30/Jul/17	26,839	141,419	158,377
Monday	31/Jul/17	26,247	147,090	170,682
July 2017 Monthly Max		34,938	147,090	170,682
July 2017 Monthly Average		26,096	120,616	146,636
July 2017 Total		808,981	3,739,084	4,545,705

DAY	DATE	ELGIN PUMPAGE (m ³)	ARVA PUMPAGE (m ³)	TOTAL LONDON CONSUMPTION (m ³)
Rated Capacity	-	95,800 m³ / day	318,000 m³ / day	413,800 m³ / day
Tuesday	1/Aug/17	19,295	140,266	164,869
Wednesday	2/Aug/17	26,216	142,362	160,911
Thursday	3/Aug/17	11,572	146,327	149,008
Friday	4/Aug/17	22,089	91,636	126,155
Saturday	5/Aug/17	26,053	114,547	130,543
Sunday	6/Aug/17	26,090	104,774	132,940
Monday	7/Aug/17	26,320	105,473	142,724
Tuesday	8/Aug/17	27,435	114,336	151,749
Wednesday	9/Aug/17	26,100	129,021	158,039
Thursday	10/Aug/17	20,584	124,067	154,546
Friday	11/Aug/17	25,600	132,892	138,053
Saturday	12/Aug/17	26,058	118,946	140,292
Sunday	13/Aug/17	26,051	118,130	152,413
Monday	14/Aug/17	26,048	132,437	157,019
Tuesday	15/Aug/17	26,262	139,168	153,650
Wednesday	16/Aug/17	26,060	126,470	159,314
Thursday	17/Aug/17	26,052	118,691	140,908
Friday	18/Aug/17	26,303	123,541	137,999
Saturday	19/Aug/17	26,942	106,760	131,618
Sunday	20/Aug/17	27,190	104,624	152,227
Monday	21/Aug/17	26,078	123,532	152,837
Tuesday	22/Aug/17	26,669	114,354	139,262
Wednesday	23/Aug/17	26,042	118,861	143,143
Thursday	24/Aug/17	26,037	118,267	139,294
Friday	25/Aug/17	26,474	113,609	140,673
Saturday	26/Aug/17	26,236	113,372	143,148
Sunday	27/Aug/17	26,029	122,355	147,184
Monday	28/Aug/17	26,260	118,036	142,546
Tuesday	29/Aug/17	26,198	120,255	143,208
Wednesday	30/Aug/17	26,075	115,283	146,668
Thursday	31/Aug/17	22,131	118,283	143,353
August 2017 Monthly Max		27,435	146,327	164,869
August 2017 Monthly Average		25,114	120,344	145,687
August 2017 Total		778,549	3,730,675	4,516,293

DAY	DATE	ELGIN PUMPAGE (m ³)	ARVA PUMPAGE (m ³)	TOTAL LONDON CONSUMPTION (m ³)
Rated Capacity	-	95,800 m³ / day	318,000 m³ / day	413,800 m³ / day
Friday	1/Sep/17	22,481	118,950	140,844
Saturday	2/Sep/17	22,724	113,986	131,998
Sunday	3/Sep/17	23,320	113,224	127,973
Monday	4/Sep/17	23,520	117,987	142,991
Tuesday	5/Sep/17	24,230	118,315	135,426
Wednesday	6/Sep/17	22,513	109,139	141,434
Thursday	7/Sep/17	16,007	113,492	130,678
Friday	8/Sep/17	12,948	113,728	128,741
Saturday	9/Sep/17	21,714	113,521	132,580
Sunday	10/Sep/17	23,057	118,658	143,190
Monday	11/Sep/17	14,674	119,338	135,782
Tuesday	12/Sep/17	25,099	113,792	140,661
Wednesday	13/Sep/17	25,880	113,945	144,824
Thursday	14/Sep/17	27,046	119,756	144,455
Friday	15/Sep/17	21,914	106,290	138,752
Saturday	16/Sep/17	21,106	126,448	141,406
Sunday	17/Sep/17	21,074	130,651	149,378
Monday	18/Sep/17	22,465	127,491	145,546
Tuesday	19/Sep/17	21,504	117,327	139,716
Wednesday	20/Sep/17	20,594	121,748	147,041
Thursday	21/Sep/17	19,557	131,905	151,169
Friday	22/Sep/17	19,339	136,539	148,817
Saturday	23/Sep/17	21,035	130,780	151,225
Sunday	24/Sep/17	21,836	135,632	163,652
Monday	25/Sep/17	21,771	139,057	156,119
Tuesday	26/Sep/17	21,491	139,967	158,803
Wednesday	27/Sep/17	18,133	140,946	151,387
Thursday	28/Sep/17	23,410	105,795	138,962
Friday	29/Sep/17	23,799	110,613	127,621
Saturday	30/Sep/17	18,873	108,599	130,723
September 2017 Monthly Max		27,046	140,946	163,652
September 2017 Monthly Average		21,437	120,921	142,063
September 2017 Total		643,114	3,627,619	4,261,894

DAY	DATE	ELGIN PUMPAGE (m ³)	ARVA PUMPAGE (m ³)	TOTAL LONDON CONSUMPTION (m ³)
Rated Capacity	-	95,800 m ³ / day	318,000 m ³ / day	413,800 m ³ / day
Sunday	1/Oct/17	18,707	113,331	141,170
Monday	2/Oct/17	18,893	117,997	138,944
Tuesday	3/Oct/17	18,361	126,484	140,737
Wednesday	4/Oct/17	21,666	126,283	140,576
Thursday	5/Oct/17	20,827	113,571	141,183
Friday	6/Oct/17	19,101	117,826	131,617
Saturday	7/Oct/17	19,741	107,985	127,136
Sunday	8/Oct/17	20,769	100,194	120,078
Monday	9/Oct/17	19,991	109,113	129,989
Tuesday	10/Oct/17	20,672	108,390	129,357
Wednesday	11/Oct/17	22,142	104,378	125,635
Thursday	12/Oct/17	22,207	99,386	128,083
Friday	13/Oct/17	22,453	99,131	120,109
Saturday	14/Oct/17	22,711	104,411	120,043
Sunday	15/Oct/17	22,746	100,234	128,879
Monday	16/Oct/17	22,585	105,072	126,772
Tuesday	17/Oct/17	22,356	103,204	127,920
Wednesday	18/Oct/17	18,664	109,051	129,483
Thursday	19/Oct/17	15,953	112,838	129,672
Friday	20/Oct/17	16,881	117,604	125,642
Saturday	21/Oct/17	16,872	113,446	126,468
Sunday	22/Oct/17	26,272	118,332	142,824
Monday	23/Oct/17	32,777	83,151	112,369
Tuesday	24/Oct/17	44,817	27,668	121,658
Wednesday	25/Oct/17	31,625	126,862	138,766
Thursday	26/Oct/17	19,446	117,486	124,631
Friday	27/Oct/17	23,333	113,034	126,335
Saturday	28/Oct/17	19,984	95,574	118,807
Sunday	29/Oct/17	19,946	104,438	127,629
Monday	30/Oct/17	19,876	103,573	123,449
Tuesday	31/Oct/17	20,240	104,887	119,818
October 2017 Monthly Max		44,817	126,862	142,824
October 2017 Monthly Average		22,020	106,611	128,574
October 2017 Total		682,614	3,304,934	3,985,779

DAY	DATE	ELGIN PUMPAGE (m ³)	ARVA PUMPAGE (m ³)	TOTAL LONDON CONSUMPTION (m ³)
Rated Capacity	-	95,800 m³ / day	318,000 m³ / day	413,800 m³ / day
Wednesday	1/Nov/17	21,107	94,331	122,812
Thursday	2/Nov/17	21,159	104,009	122,808
Friday	3/Nov/17	21,162	100,193	118,405
Saturday	4/Nov/17	21,187	106,293	120,671
Sunday	5/Nov/17	21,665	95,825	125,479
Monday	6/Nov/17	21,137	105,112	120,633
Tuesday	7/Nov/17	21,333	99,425	120,165
Wednesday	8/Nov/17	22,945	81,858	121,603
Thursday	9/Nov/17	23,186	99,749	122,058
Friday	10/Nov/17	24,311	98,749	121,863
Saturday	11/Nov/17	23,339	98,403	120,589
Sunday	12/Nov/17	23,162	113,327	127,945
Monday	13/Nov/17	23,027	99,926	124,428
Tuesday	14/Nov/17	23,409	104,940	124,218
Wednesday	15/Nov/17	23,622	103,082	123,738
Thursday	16/Nov/17	23,701	64,530	111,770
Friday	17/Nov/17	36,085	109,420	126,996
Saturday	18/Nov/17	22,946	94,328	118,456
Sunday	19/Nov/17	22,649	104,871	126,046
Monday	20/Nov/17	22,678	104,249	122,189
Tuesday	21/Nov/17	21,621	100,091	122,602
Wednesday	22/Nov/17	22,617	94,970	124,384
Thursday	23/Nov/17	22,459	97,731	122,845
Friday	24/Nov/17	22,519	99,955	117,754
Saturday	25/Nov/17	22,619	100,281	119,354
Sunday	26/Nov/17	22,564	96,052	124,817
Monday	27/Nov/17	22,491	99,945	121,256
Tuesday	28/Nov/17	22,578	99,771	122,644
Wednesday	29/Nov/17	21,801	99,044	125,270
Thursday	30/Nov/17	21,996	108,030	125,306
November 2017 Monthly Max		36,085	113,327	127,945
November 2017 Monthly Average		22,903	99,283	122,303
November 2017 Total		687,075	2,978,490	3,669,104

DAY	DATE	ELGIN PUMPAGE (m ³)	ARVA PUMPAGE (m ³)	TOTAL LONDON CONSUMPTION (m ³)
Rated Capacity	-	95,800 m³ / day	318,000 m³ / day	413,800 m³ / day
Friday	1/Dec/17	22,002	99,605	122,197
Saturday	2/Dec/17	18,678	95,781	115,639
Sunday	3/Dec/17	21,837	98,679	123,466
Monday	4/Dec/17	20,607	106,220	121,812
Tuesday	5/Dec/17	18,884	99,044	124,998
Wednesday	6/Dec/17	14,830	109,625	125,052
Thursday	7/Dec/17	17,242	113,127	129,479
Friday	8/Dec/17	17,208	113,077	124,393
Saturday	9/Dec/17	17,523	108,642	123,216
Sunday	10/Dec/17	17,065	104,101	130,007
Monday	11/Dec/17	16,777	115,745	126,335
Tuesday	12/Dec/17	17,378	88,765	126,666
Wednesday	13/Dec/17	22,367	102,098	129,407
Thursday	14/Dec/17	26,045	106,488	129,185
Friday	15/Dec/17	21,249	103,405	123,752
Saturday	16/Dec/17	17,925	106,248	119,438
Sunday	17/Dec/17	18,639	107,108	128,227
Monday	18/Dec/17	18,788	105,321	120,727
Tuesday	19/Dec/17	19,316	103,067	124,863
Wednesday	20/Dec/17	11,573	94,617	121,974
Thursday	21/Dec/17	19,491	129,474	122,103
Friday	22/Dec/17	18,005	86,540	113,594
Saturday	23/Dec/17	15,685	96,068	116,037
Sunday	24/Dec/17	15,747	99,914	115,886
Monday	25/Dec/17	15,922	99,058	108,441
Tuesday	26/Dec/17	17,273	99,606	113,272
Wednesday	27/Dec/17	22,861	98,956	113,474
Thursday	28/Dec/17	22,210	90,829	122,509
Friday	29/Dec/17	16,896	94,547	113,472
Saturday	30/Dec/17	16,948	99,192	114,337
Sunday	31/Dec/17	15,802	95,271	114,229
December 2017 Monthly Max		26,045	129,474	130,007
December 2017 Monthly Average		18,477	102,265	121,232
December 2017 Total		572,773	3,170,218	3,758,187

2017 Annual Report – EMPS London



London
CANADA



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, 2017 through December 31, 2017

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

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

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, which is located to the east of Port Stanley. 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 encompassing a twin celled reservoir with a total capacity of 54,600m³. 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

List all water treatment chemicals used over this reporting period

No re-treatment of water destined for London took place at the EMPS in 2017.

Were any significant expenses incurred to?

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

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

- Pumps 4 & 5 replacement
• Roof repairs
• Transformer repair
• All related pump electrical systems replaced
• Surge building sump pumps replacement
• Oil separator system for air compressors
• Pump and surge systems PLC and SCADA upgrade
• Discharge pressure transmitter replacement

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	52	(0) – (0)	(0) – (0)	52	(<10) – (1260)

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	0.59	1.94	0.91

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 10, 2017 April 11, 2017 July 4, 2017 October 17, 2017	12 16 24 30	µg/L µg/L µg/L µg/L	NO
THM Running Annual Average (RAA)	2017	20.5	µg/L	NO
HAA (NOTE: result value is based on one sample)	January 24, 2017 April 11, 2017 July 4, 2017 October 17, 2017	ND ND 5.6 7.4	µg/L µg/L µg/L µg/L	NO
HAA Running Annual Average (RAA)	2017	3.3	µg/L	NO

ND = Non-detect