



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

2019 Client Monthly Operations Report

Lambton Area Water Supply System

June 30, 2019

Facility Description

Facility Name:	Lambton Area Water Supply System
Facility Type:	Municipal
Classification:	Class 4 Water Treatment Class 4 Water Distribution
Title Holder:	Municipality
Operation Status:	OCWA
Sr. Operations Manager:	Dave Hunt (519) 344-7429 Ext. 251
Business Development Manager:	Susan Budden
Capacity (m3/d):	181844
Service Area:	City of Sarnia, Village of Point Edward, Township of St. Clair, Township of Warwick-Watford, Municipality of Lambton Shores, Town of Plympton-Wyoming
Service Population:	104,162
In service Date:	1975

Operational Description

The Lambton WTP is a direct filtration surface water facility consisting of chemically assisted filtration with disinfection. The facility consists of an intake system (and alternate intake), a low lift pump station, a treatment system and distribution pumping system situated in the City of Sarnia. Water is drawn into the plant (a zebra mussel system is available as needed) and screened at the surge wells (pre-disinfection is utilized). Water flows to the pump wells where a total of 4 vertical turbine pumps are located and used as needed which pump to a discharge header. Coagulant is added, flashed mixed (PAC is also applied at this location when needed) the raw water is then flocculated (Polymer is added at the flocculation trains as needed) and diverted to filtration (10 dual media filters). The gravity fed filter effluents combine into two clear wells where sodium hypochlorite is injected. To maximize the contact time the water is diverted to the two baffled reservoirs (in series). Six vertical turbine pumps are available for supplying the distribution demand as needed. The entire water treatment system is continuously monitored (via SCADA) with continuous on-line analyzers equipped throughout the processes. The utility serves a large part of Lambton County and has over 250 kilometers of pipeline of various sizes and materials. There is also the East Lambton Booster Station with 9,000 cubic meters of storage capacity which is remotely monitored and controlled from the Lambton WTP via SCADA. During the 1997 calendar year the West Lambton Pumping Station, with the largest above ground water storage in the province with a capacity of 90,000m³, was brought on-line. This pumping station is also remotely monitored and controlled from Lambton WTP via SCADA. The LAWSS distribution system has 5 towers/elevated tanks that the utility monitors via SCADA. In 2007 the Residual Management System (RMS) which treats backwash effluent was brought on-line.

Treatment Process

Pre-treatment Chemicals:	Prechlorination (sodium hypochlorite); Zebra mussel control
Coagulation/Flocculation:	Aluminum Sulphate (Clar+Ion A7)
Filtration:	Dual Media; Filter Aid polymer
Disinfection Method:	Sodium hypochlorite
Post Treatment Chemical Addition:	Fluoride
Waste Residue Management:	Filter backwash effluent is treated by an Actiflo system.
Waste effluent/residue Disposal:	Sludge is hauled to Sarnia WPCP on a needed basis.

Inspections: None

Maintenance, Operations & Distribution Works Summary 2019

Maintenance

June:

Date	(P)reventative Capital Major Mtc (C)orrective	Description
June 3	P	Pumped out water from diesel and HFS containment areas
June 3	C	Changed dechlorination filters at West Lambton Pumping Station.
June 3	P	Tested panel alarm dialers at the water treatment plant.
June 3	P	Completed six month inspection on safety spill kit at the water treatment plant.
June 3	P	Completed six month inspection of backwash pump.
June 3	P	Conducted monthly inspection of eyewash and emergency showers at the water treatment plant.
June 4	P	Completed six month inspection on safety spill kit at West Lambton Pumping Station.
June 4	P	Completed monthly calibration of chlorine analyzers at the water treatment plant and at West Lambton Pumping Station.
June 5	P	Conducted monthly inspection on water treatment plant compressor.
June 5	P	Completed monthly calibration on all filter effluent turbidity meters and on Station 5 turbidity meters.
June 5	P	Completed annual inspection on sludge holding tank mixer in the Residual Management System.
June 5-6	P	Prepping replacement fluoride analyzer probes.
June 6	P	Completed monthly inspection of vacuum priming system at East Lambton Pumping Station.

June 6	P	Completed calibration of Stations 1, 3 and 7 turbidity meters.
June 6	P	Completed calibration on lab turbidity meter.
June 10	P	Conducted generator tests at East and West Lambton Pumping Stations.
June 10-11	C	Working on cleaning up all chlorine pumps at the water treatment plant.
June 12	P	Conducted monthly maintenance on travelling screens in Screens Room.
June 12	P	Annual replacement of online fluoride probe completed.
June 12	P	Conducted annual calibration of alum feed flow meters.
June 17	C	Pumped water from out of HFS and diesel containment areas.
June 17	P	Completed monthly calibration on East Lambton Pumping Station chlorine analyzers.
June 17	P	Completed monthly calibration on all portable chlorine analyzers.
June 18	C	Man down alarm now working. Issue was with a failed UPS.
June 18	C	New LED lights installed in the filter gallery.
June 18	P	Conducted calibration of all pH probes at the water treatment plant.
June 18-19	P	Conducted monthly maintenance on all flocculator gear drives.
June 19	P	Completed monthly maintenance on streaming current meters.
June 19	P	Completed monthly maintenance on the turbidity meters in the Residual Management System.
June 20	C	Installed chemical line for dechlorination of storm drains at the plant water.
June 21	C	Setting up pump for dechlorination of the storm drains at the water plant.
June 24-27	P	Iconix in to do calibration of flow meters in the distribution system.
June 24	C	Working on plumbing for the bisulphite pump for the storm drains at the water plant.
June 24	P	Completed monthly test of polymer system at the water treatment plant.
June 25	P	Cleaned and flushed out clearwell sodium hypochlorite lines at the water treatment plant.
June 26	C	Rotork in to work on Filter #5 effluent valve.
June 26	Capital	Meeting with client in regards to radio project.
June 26-27	C	Working on fluoride analyzer troubleshooting issues.
June 27	C	Removed anthracite from Actiflo #1.
June 27	C	Daymar in to look at mandown system.
June 27	C	Setting up pump for dechlorination of the storm drains at the water plant.

Operations and Compliance

June:

June 2	Filter #6 inlet valve failed to open after backwash. Valve was manually opened.
June 3	DWSP samples taken.
June 6	Pre CI pump failed with high pressure. Pump and panel was reset with no issues
June 6	Site security audits start.
June 7	Pre CI pump failed with high pressure. Pump and panel was reset with no issues
June 9	Filter #5 effluent valve failed to close prior to backwash. Valve was manually closed before backwash continued.
June 12	Pre CI pump failed with high pressure. Pump and panel was reset with no issues
June 13	Gave One Water Presentation to students at Errol Village School.
June 13	Started PAC system for the summer.
June 14	Staff meeting with DWQMS and health and safety topics.
June 16	Pre chlorine pump failed with air lock. Pump and panel was reset with no issues.
June 17	Changed contacts on Man Down SOP.
June 17	Pre chlorine pumps failed with high pressure. Pumps and panel were reset with no issues.
June 18	Daymar receiving no test signal for the water plant man down alarms.
June 18	Filter #5 effluent valve failed to close prior to backwash. Valve was closed manually and the backwash restarted.
June 18	Pre chlorine pump #2 failed with high pressure. Pump and panel was reset.
June 19	Nova Corunna taking water. Emergency feed valve opened.
June 20	Internal audit conducted by Cindy Sigurdson.
June 21	Pre chlorine pump #3 failed with high pressure. Pump and panel was reset.
June 21	Filter #5 effluent valve failed to close prior to backwash. Valve was closed manually and the backwash restarted.
June 21	Pre chlorine pump #1 failed with air lock. Pump and panel was reset with no issues.
June 27	South clearwell pump #2 failed with air lock. Pump and panel was reset with no issues.
June 28	Small power blip required the resetting and restarting of pumps.
June	Pre chlorine pump #1 and 3 failed with air lock. Pumps and panel were reset with no issues.
June	South clearwell pump failed with air lock. Pump and panel was reset with no issues.

Distribution

June:

June 4	Site meet with Murray Mills Excavating in regards to culvert work on Confederation Line.
June 7	Investigating possible watermain leak at 3418 St Clair Parkway.
June 11	Onsite for watermain break repair at 3418 St Clair Parkway in St Clair Township.
June 11	Flushing hydrants on Front St, Campbell and Savoy in the City of Sarnia.
June 12	Onsite for third party work on Confederation Line in Warwick-Watford.
June 17-19	Onsite for third party work on Confederation Line for culvert work.
June 18-20	Flushing hydrants on London Line.
June 19	Onsite for third party work with Vink Network at 1880 London Line.
June 24	Onsite for crossing of 30" LAWSS watermain on Michigan Ave in the City of Sarnia.
June 25	After hours emergency locate # 20192613658 on Hill St in St Clair Township.
June 26	Hydrant flushing on London Line.
June 27	Site meet in regards to Michigan Ave project.
June 28	Onsite for crossing of LAWSS watermain on Michigan Ave.
June 28	Meter reads done.

Call Outs 2019

June: Call out on June 9th to replace sodium hypochlorite pump as the pre chlorine system was not working.

One Call Utility Locates

These numbers represent the number of locate notifications that were cleared from LAWSS assets

Number of Locates/Month

YEAR	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
2018	50	64	107	149	189	166	163	146	141	163	111	58
2019	69	62	104	164	189	149						

RMS Sludge Haulage

These numbers represent total monthly amounts of sludge produced by the Residual Management System and hauled to Sarnia WPCP

Amount of sludge produced per month in m³

YEAR	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2018	493	300	239	320	230	318	240	240	79	227	238	234
2019	236	158	237	236	216	158						

Required Monthly Reports

Monthly System Flows- see separate attached summary report

Workplace Management System Reports – see separate attached reports

Performance Data and Compliance – See separate attached report

Required Financial Reports

Quarterly Financial Summary –Q2 due July 30, 2019

Semi-Annual “Schedule G” Reconcilable Commodities Report –Due July 30, 2019.

Health & Safety Work Order Summary by Facility

Start Date: 2019-06-01

End Date: 2019-06-30

Hub: Lambton

Cluster	ORG ID	Facility ID	Health and Safety					Closure Rate		
			Initiated	Approved	Completed	Total Labor Hrs	Total Cost \$	Target	Actual	Variance
LAWSS (133000)	Lambton Area Water Treatment Plant (5544)	5544, East Lambton Distribution (5544-WDEL)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, East Lambton PS (5544-WPEL)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, Lambton Area RMS (5544-WWLA)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, Lambton Area WTP (5544-WTLA)	4	4	4	7.00	284.25	85.00%	100.00%	-15.00%
		5544, West Lambton Booster Stn (5544-WPWL)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, West ST.Clair Distribution (5544-WDWS)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		Lambton Area Water Treatment Plant (5544)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
Total			4	4	4	7.00	284.25	85.00%	100.00%	-15.00%

Key Column	Colour	Meaning
Init		No Work Orders initialized
Closed		Closure Rate between 20-50%
Closed		Closure Rate less than 20%

Health & Safety Work Order Summary by Facility

Start Date: 2019-01-01

End Date: 2019-06-30

Hub: Lambton

Cluster	ORG ID	Facility ID	Health and Safety					Closure Rate		
			Initiated	Approved	Completed	Total Labor Hrs	Total Cost \$	Target	Actual	Variance
LAWSS (133000)	Lambton Area Water Treatment Plant (5544)	5544, East Lambton Distribution (5544-WDEL)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, East Lambton PS (5544-WPEL)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, Lambton Area RMS (5544-WWLA)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, Lambton Area WTP (5544-WTLA)	24	24	24	45.00	1893.96	85.00%	100.00%	-15.00%
		5544, West Lambton Booster Stn (5544-WPWL)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, West ST.Clair Distribution (5544-WDWS)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		Lambton Area Water Treatment Plant (5544)	2	2	2	6.25	341.81	85.00%	100.00%	-15.00%
Total			26	26	26	51.25	2235.77	85.00%	100.00%	-15.00%

Key Column	Colour	Meaning
Init		No Work Orders initialized
Closed		Closure Rate between 20-50%
Closed		Closure Rate less than 20%

Work Order Summary by Facility

Start Date: 2019-06-01
End Date: 2019-06-30
Hub: Lambton

Key Col	Colour	Meaning
Init		No Work Orders initialized
Closed		Closure Rate between 20-50%
Closed		Closure Rate less than 20%

			Corrective Maintenance					Emergency Maintenance					Call Back				
			Init	Approved	Completed	Total Labor Hrs	Total Cost \$	Init	Approved	Completed	Total Labor Hrs	Total Cost \$	Init	Approved	Completed	Total Labor Hrs	Total Cost \$
LAWSS (133000)	Lambton Area Water Treatment Plant (5544)	5544, East Lambton Distribution (5544-WDEL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, East Lambton PS (5544-WPEL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, Lambton Area RMS (5544-WWLA)	2	2	2	12	512.86	0	0	0	0	0	0	0	0	0	0
		5544, Lambton Area WTP (5544-WTLA)	3	3	0	13	554.13	0	0	0	0	0	1	1	1	18	736.92
		5544, West Lambton Booster Stn (5544-WPWL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, West ST.Clair Distribution (5544-WDWS)	0	0	0	0	0	1	1	1	17	1296.79	0	0	0	0	0
		Lambton Area Water Treatment Plant (5544)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Grand Total	5	5	2	25	1066.99	1	1	1	17.00	1296.79	1	1	1	18.00	736.92

* NOTE: Capital/Project Work is not included in the calculation of the Closure Rate
17/07/19 14:09:22

Work Order Summary by Facility

Start Date: 2019-06-01
End Date: 2019-06-30
Hub: Lambton

Key Col	Colour	Meaning
Init		No Work Orders initialized
Closed		Closure Rate between 20-50%
Closed		Closure Rate less than 20%

			Preventive Maintenance					Operational					Capital/Project Work					Closure Rate		
			Init	Approved	Completed	Total Labor Hrs	Total Cost \$	Init	Approved	Completed	Total Labor Hrs	Total Cost \$	Init	Approved	Completed	Total Labor Hrs	Total Cost \$	Target	Actual	Variance
LAWSS (133000)	Lambton Area Water Treatment Plant (5544)	5544, East Lambton Distribution (5544-WDEL)	0	0	0	0	0	4	4	4	5	207.72	0	0	0	0	0	85%	100%	-15.0%
		5544, East Lambton PS (5544-WPEL)	4	4	4	10.75	543.04	3	3	3	9.5	455.06	0	0	0	0	0	85%	100%	-15.0%
		5544, Lambton Area RMS (5544-WWLA)	3	3	3	3.5	144.94	2	2	2	2.5	100.42	0	0	0	0	0	85%	100%	-15.0%
		5544, Lambton Area WTP (5544-WTLA)	32	32	29	110.75	4541.13	13	13	11	1433	39153.1	0	0	0	0	0	85%	83.67%	1.326%
		5544, West Lambton Booster Stn (5544-WPWL)	3	3	3	5	262.94	2	2	2	25.75	1212.69	0	0	0	0	0	85%	100%	-15.0%
		5544, West ST.Clair Distribution (5544-WDWS)	0	0	0	0	0	2	2	2	5.75	263.51	0	0	0	0	0	85%	100%	-15.0%
		Lambton Area Water Treatment Plant (5544)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
Grand Total			42	42	39	130	5492.05	26	26	24	1481.5	41392.5	0	0	0	0	0	85%	89.33%	10.66%

* NOTE: Capital/Project Work is not included in the calculation of the Closure Rate
17/07/19 14:09:22

Work Order Summary by Facility

Start Date: 2019-01-01
End Date: 2019-06-30
Hub: Lambton

Key Col	Colour	Meaning
Init		No Work Orders initialized
Closed		Closure Rate between 20-50%
Closed		Closure Rate less than 20%

			Corrective Maintenance					Emergency Maintenance					Call Back					
			Init	Approved	Completed	Total Labor Hrs	Total Cost \$	Init	Approved	Completed	Total Labor Hrs	Total Cost \$	Init	Approved	Completed	Total Labor Hrs	Total Cost \$	
LAWSS (133000)	Lambton Area Water Treatment Plant (5544)	5544, East Lambton Distribution (5544-WDEL)	6	6	6	98.75	4716.08	5	5	4	12.5	669.28	0	0	0	0	0	
		5544, East Lambton PS (5544-WPEL)	2	2	2	10	416.82	0	0	0	0	0	0	0	0	0	0	
		5544, Lambton Area RMS (5544-WWLA)	5	5	5	52	2243.33	0	0	0	0	0	0	0	0	0	0	
		5544, Lambton Area WTP (5544-WTLA)	24	24	19	192.25	7882.71	1	1	1	1	46.68	4	4	4	36	1505.9	
		5544, West Lambton Booster Stn (5544-WPWL)	7	7	5	19.25	896.02	0	0	0	0	0	1	1	1	54.75	2521.45	
		5544, West ST.Clair Distribution (5544-WDWS)	2	2	2	8.25	389.73	2	2	2	26.5	1867.46	0	0	0	0	0	0
		Lambton Area Water Treatment Plant (5544)	7	7	6	65.75	2972.86	0	0	0	0	0	0	0	0	0	0	0
Grand Total			53	53	45	446.25	19517.55	8	8	7	40.00	2583.42	5	5	5	90.75	4027.35	

* NOTE: Capital/Project Work is not included in the calculation of the Closure Rate
17/07/19 14:14:16

Work Order Summary by Facility

Start Date: 2019-01-01
End Date: 2019-06-30
Hub: Lambton

Key Col	Colour	Meaning
Init		No Work Orders initialized
Closed		Closure Rate between 20-50%
Closed		Closure Rate less than 20%

			Preventive Maintenance					Operational					Capital/Project Work					Closure Rate		
			Init	Approved	Completed	Total Labor Hrs	Total Cost \$	Init	Approved	Completed	Total Labor Hrs	Total Cost \$	Init	Approved	Completed	Total Labor Hrs	Total Cost \$	Target	Actual	Variance
LAWSS (133000)	Lambton Area Water Treatment Plant (5544)	5544, East Lambton Distribution (5544-WDEL)	9	9	4	16	945.67	24	24	24	71.5	3082.27	5	4	1	36.25	11116.61	85%	86.36%	-1.36%
		5544, East Lambton PS (5544-WPEL)	33	33	32	66.25	3295.14	13	13	13	48.75	2226.7	0	0	0	0	0	85%	97.91%	-12.9%
		5544, Lambton Area RMS (5544-WWLA)	15	15	15	26.25	1175.3	12	12	12	24	968.38	1	1	0	6	291.56	85%	100%	-15.0%
		5544, Lambton Area WTP (5544-WTLA)	213	213	199	756	40335.53	78	78	75	9779.75	257361.2	4	4	0	119.75	12875.71	85%	93.12%	-8.12%
		5544, West Lambton Booster Stn (5544-WPWL)	41	41	38	61.25	2922.03	12	12	12	111.75	5031.79	0	0	0	0	0	85%	91.80%	-6.80%
		5544, West St.Clair Distribution (5544-WDWS)	3	3	1	4	161.84	12	12	12	36	1537.49	0	0	0	0	0	85%	89.47%	-4.47%
		Lambton Area Water Treatment Plant (5544)	3	3	3	17.5	922.92	0	0	0	0	0	5	5	4	178.5	59173.76	85%	90%	-5.00%
Grand Total			317	317	292	947.25	49758.43	151	151	148	10071.75	270207.8	15	14	5	340.5	83457.64	85%	93.07%	6.928%

* NOTE: Capital/Project Work is not included in the calculation of the Closure Rate
17/07/19 14:14:16

**Ontario Clean Water Agency
Time Series Info Report**

From: 01/01/2019 to 30/06/2019

Report extracted 07/18/2019 12:26

Facility Org Number: 5544
Facility Works Number: 210000906
Facility Name: LAMBTON AREA WATER SUPPLY SYSTEM (LAWSS)
Facility Owner: Local Services Board: LAMBTON AREA WATER SUPPLY SYSTEM
Facility Classification: Class 4 Water Treatment
Receiver:
Service Population: 100000.0
Total Design Capacity: 181844.0 m3/day

	01/2019	02/2019	03/2019	04/2019	05/2019	06/2019	Total	Avg	Max	Min
Coagulation/Floculation / Coagulant Dosage-Calculated - mg/L										
Max IH	38.605	29.517	32.268	31.172	26.559	26.095			38.605	
Mean IH	26.801	24.002	23.839	22.375	22.91	21.551		23.591		
Min IH	21.912	18.131	18.009	17.868	19.041	18.452				17.868
Coagulation/Floculation / Coagulant Used - kg										
Max IH	1792	1408	1651.2	1241.6	1344	2150.4			2150.4	
Mean IH	1220.542	1167.086	1160.671	1009.067	1129.29	1339.307		1171.023		
Min IH	972.8	947.2	832	768	934.4	921.6				768
Total IH	37836.8	32678.4	35980.8	30272	35008	40179.2	211955.2			
Coagulation/Floculation / Coagulant Volume Used - m³										
Max IH	1.4	1.1	1.29	0.97	1.05	1.68			1.68	
Mean IH	0.954	0.912	0.907	0.788	0.882	1.046		0.915		
Min IH	0.76	0.74	0.65	0.6	0.73	0.72				0.6
Total IH	29560	25530	28110	23650	27350	31390	165590			
Coagulation/Floculation / Polymer Dosage - mg/L										
Max IH	0.042			0.024					0.042	
Mean IH	0.02			0.024				0.021		
Min IH	0.002			0.024						0.002
Coagulation/Floculation / Polymer Used - kg										
Max IH	2.1			1.1					2.1	
Mean IH	1.025			1.1				1.04		
Min IH	0.1			1.1						0.1
Total IH	4.1			1.1			5.2			
DW THM Data / Trihalomethane: Total - µg/l										
Max Lab		30			37				37	
Mean Lab		27			31.667			29.333		

Min Lab			24				25						24	
East Lambton Booster Station / Cl Residual: Inlet Free - mg/L														
Max OL	1.74	2.49	1.68	1.58	1.43	1.4					2.49			
Mean OL	1.535	1.401	1.428	1.388	1.3	1.277				1.388				
Min OL	0	0	0	0	0	0							0	
Filter Backwash / Backwash Volume - m³														
Max IH	4792	2408	2992	3006	3004	3004					4792			
Mean IH	2268.323	1929.786	2028.194	1927.733	1900.774	2043				2018.077				
Min IH	1794	1788	1794	1198	1204	1792							1198	
HFS / Fluoride Dosage - mg/L														
Max IH	0.64	0.644	0.614	0.622	0.592	0.628					0.644			
Mean IH	0.556	0.557	0.559	0.557	0.542	0.548				0.553				
Min IH	0.46	0.417	0.482	0.487	0.486	0.464							0.417	
HFS / Fluoride Used - l														
Max IH	108.877	97.419	97.419	94.553	100.284	186.246					186.246			
Mean IH	85.495	87.63	89.655	83.952	90.041	115.949				92.108				
Min IH	65.901	66.384	71.631	71.631	74.497	88.823							65.901	
Total IH	2650.36	2453.634	2779.305	2518.562	2791.284	3478.466	16671.61							
HFS / HFS (kg) - kg														
Max IH	132.83	118.851	118.851	115.355	122.347	227.22					227.22			
Mean IH	104.304	106.908	109.379	102.422	109.851	141.458				112.372				
Min IH	80.399	80.989	87.39	87.39	90.886	108.364							80.399	
Total IH	3233.439	2993.434	3390.752	3072.646	3405.367	4243.728	20339.37							
HFS / Treated Water Fluoride Residual - mg/L														
Max OL	0.71	0.7	0.7	2	0.84	0.82					2			
Mean OL	0.631	0.601	0.578	0.597	0.611	0.575				0.599				
Min OL	0.56	0.54	0.51	0	0.51	0.24							0	
Post Disinfection / Chlorine Dosage - mg/L														
Max IH	1.668	1.854	1.682	1.832	1.795	3.071					3.071			
Mean IH	1.434	1.391	1.458	1.468	1.535	1.696				1.498				
Min IH	1.215	0.891	1.048	1.271	1.05	1.097							0.891	
Post Disinfection / Hypochlorite Dosage - mg/L														
Max IH	13.899	15.45	14.016	15.268	14.96	25.593					25.593			
Mean IH	11.947	11.588	12.152	12.232	12.79	14.136				12.481				
Min IH	10.126	7.428	8.737	10.593	8.747	9.142							7.428	
Post Disinfection / Hypochlorite Used - kg														
Max IH	653.3	665.05	681.5	706.175	808.4	1975.175					1975.175			
Mean IH	543.456	564	590.191	552.994	632.264	885.167				628.067				
Min IH	444.15	326.65	454.725	407.725	431.225	460.6							326.65	
Total IH	16847.15	15792	18295.93	16589.83	19600.18	26555	113680.1							
Post Disinfection / Hypochlorite Volume-Total - m³														
Max IH	0.556	0.566	0.58	0.601	0.688	1.681					1.681			
Mean IH	0.463	0.48	0.502	0.471	0.538	0.753				0.535				

Min IH	0.378	0.278	0.387	0.347	0.367	0.392			0.278				
Total IH	14338	13440	15571	14119	16681	22600	96749						
Post Disinfection / Station 7 Cl Residual: Free - mg/L													
Max OL	1.89	1.85	1.92	1.78	1.71	1.75			1.92				
Mean OL	1.699	1.712	1.716	1.608	1.521	1.504		1.626					
Min OL	1.52	1.54	1.53	1.4	1.29	0					0		
PrTr / P.A.C. Dosage - mg/L													
Max IH						0.464			0.464				
Mean IH						0.338		0.338					
Min IH						0.176					0.176		
PrTr / P.A.C. Used - kg													
Max IH						28.9			28.9				
Mean IH						22.199		22.199					
Min IH						12.27					12.27		
Total IH						377.381	377.381						
Pre-chlorination / Chlorine Dosage - mg/L													
Max IH	1.248	1.52	1.193	1.467					1.52				
Mean IH	1.173	1.106	1.07	1.111				1.115					
Min IH	1.061	0.931	0.91	0.972							0.91		
Pre-chlorination / Cl Residual: Free - mg/L													
Max IH	0.74	0.74	0.68	0.7					0.74				
Mean IH	0.632	0.657	0.623	0.623				0.634					
Min IH	0.55	0.59	0.5	0.56							0.5		
Pre-chlorination / Cl Residual: Total - mg/L													
Max IH	0.91	0.89	0.83	0.84					0.91				
Mean IH	0.783	0.824	0.774	0.783				0.79					
Min IH	0.69	0.78	0.66	0.72							0.66		
Pre-chlorination / Hypochlorite Dosage - mg/L													
Max IH	10.399	12.665	9.939	12.221					12.665				
Mean IH	9.773	9.216	8.92	9.258				9.294					
Min IH	8.838	7.76	7.581	8.098							7.581		
Pre-chlorination / Hypochlorite Used - kg													
Max IH	524.05	556.95	511.125	560.475					560.475				
Mean IH	443.657	447.717	433.461	417.692				435.629					
Min IH	383.05	394.8	340.75	338.4							338.4		
Total IH	13753.38	12536.08	13437.3	12113.08			51839.83						
Pre-chlorination / Hypochlorite Volume-Total-1 - m³													
Max IH	0.446	0.474	0.435	0.477					0.477				
Mean IH	0.378	0.381	0.369	0.355				0.371					
Min IH	0.326	0.336	0.29	0.288							0.288		
Total IH	11705	10669	11436	10309			44119						
Raw Water / Background - cfu/100mL													
Max Lab	160	82	82	410	260	720			720				

Total IH		963849.2		1042697		1022817		1067361		931726.5		922742.6		5951193						
Treated Water / Flow: Total of All Sources - m³/d																				
Max IH		51137		53292		51967		49343		52401		97988				97988				
Mean IH		44841		46364		46748.23		44048.37		48460.74		61126.97		48591.17						
Min IH		41397		41527		41284		39452		41184		41283						39452		
Total IH		1390071		1298192		1449195		1321451		1502283		1833809		8795001						
Treated Water / HPC - cfu/mL																				
Max Lab	<	10	<	10	<	10	<	10	<	10	<	10	<	10	<	10				
Mean Lab	<	10	<	10	<	10	<	10	<	10	<	10	<	10	<	10				
Min Lab	<	10	<	10	<	10	<	10	<	10	<	10	<	10	<	10			<	10
Treated Water / Total Coliform: TC - cfu/100mL																				
Max Lab		0		0		0		0		0		0				0				
Mean Lab		0		0		0		0		0		0		0						
Min Lab		0		0		0		0		0		0						0		
Treated Water / Turbidity - NTU																				
Max OL		0.117		0.08		0.1		0.082		0.11		0.095				0.117				
Mean OL		0.062		0.063		0.065		0.063		0.064		0.066		0.064						
Min OL		0.043		0.047		0.046		0.047		0.046		0.046						0.043		
West Lambton Booster Station / Cl Residual: Outlet Free - mg/L																				
Max OL		2.19		1.86		1.83		1.8		1.6		1.62				2.19				
Mean OL		1.684		1.685		1.595		1.586		1.429		1.413		1.565						
Min OL		0		0		0		0		0		0						0		
Zebra Mussel Control / Chlorine Dosage - mg/L																				
Max IH								1.125		1.173		1.25				1.25				
Mean IH								1.125		1.068		1.127		1.097						
Min IH								1.125		0.955		1.01						0.955		
Zebra Mussel Control / Cl Residual: Free - mg/L																				
Max IH								0.36		0.67		0.66				0.67				
Mean IH								0.36		0.6		0.588		0.591						
Min IH								0.36		0.44		0.52						0.36		
Zebra Mussel Control / Cl Residual: Total - mg/L																				
Max IH								0.54		0.81		0.8				0.81				
Mean IH								0.54		0.746		0.712		0.726						
Min IH								0.54		0.55		0.63						0.54		
Zebra Mussel Control / Hypochlorite Dosage - mg/L																				
Max IH								9.374		9.777		10.417				10.417				
Mean IH								9.374		8.898		9.392		9.145						
Min IH								9.374		7.961		8.418						7.961		
Zebra Mussel Control / Hypochlorite Used - kg																				
Max IH								433.575		514.65		848.35				848.35				
Mean IH								433.575		439.147		582.408		508.377						
Min IH								433.575		336.05		444.15						336.05		
Total IH								433.575		13613.55		17472.25		31519.38						

[illegible]

Lambton Area WT 2019

For the period of Jan 1, 2019 to June 30, 2019

Org. # : 5544

Project # : LAWSSM5544W-002

Date : 6/30/19

	2018 Actuals	2019 Budget	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	YTD Budget	YTD Actuals	Variance (< YTD budget)
OPERATING CHARGES									
OCWA Service Fee	2,112,364.00	2,252,914.00	563,228.50	563,228.50			1,126,457.00	1,126,457.00	0.00
Diesel	5,416.15	9,000.00	0.00	0.00			4,500.00	0.00	-4,500.00
Insurance**	94,276.44	91,050.24	22,762.56	22,762.56			45,525.12	45,525.12	0.00
Point Edward Sewage	89,354.82	91,000.00	0.00	0.00			0.00	0.00	0.00
Chemicals	246,867.34	266,463.00	48,878.91	52,888.97			133,231.50	101,767.88	-31,463.62
Hydro	1,369,006.60	1,640,000.00	338,436.26	328,673.94			820,000.00	667,110.20	-152,889.80
Sludge Haulage	129,507.29	155,401.00	25,876.85	25,034.58			77,700.50	50,911.43	-26,789.07
TOTAL OPERATING COSTS	4,046,792.64	4,505,828.24	999,183.08	992,588.55	0.00	0.00	2,207,414.12	1,991,771.63	-215,642.49
TOTAL OPERATING CHARGES	4,046,792.64	4,505,828.24	999,183.08	992,588.55	0.00	0.00	2,207,414.12	1,991,771.63	-215,642.49

Note: The information contained in this report is current as at June 30, 2019