



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

2019 Client Monthly Operations Report

Lambton Area Water Supply System

August 31, 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

August:

Date	(P)reventative Capital Major Mtc (C)orrective	Description
August 1	P	Completed monthly maintenance on online fluoride analyzer.
August 6	C	Door and lighting work at West Lambton Pumping Station.
August 6	P	Completed monthly maintenance on chlorine analyzers at East and West Lambton Pumping Stations.
August 6-7	P	Completed monthly maintenance on all chlorine analyzers at the water treatment plant.
August 8	Major Mtc	Working with Elektek on first phase of annual electrical maintenance at West Lambton Pumping Station.
August 8-10	P	Completed annual maintenance on all ten filter Loss of Head pressure transmitters.
August 8	C	PAC room flooding. Reset system with no issues.
August 9	C	Removed anthracite and sand from Actiflo #2 clarifier unit.
August 12	Capital	Meeting with LAWSS GM in regards to radio project.
August 12	C	Replaced hard drive on SCADA Server 1
August 13	P	Running diesel generators at West Lambton Pumping Station.
August 13	P	Completed monthly maintenance on lab turbidity meter.
August 13	P	Completed monthly inspection of compressors at the water treatment plant.
August 13	Major Mtc	Working with Elektek on second phase of annual electrical maintenance at West Lambton Pumping Station.

Aug 13-14	P	Completed monthly maintenance on all water treatment plant online turbidity meters.
August 14	P	Conducted monthly inspection on emergency eyewash stations and safety shower.
August 14	P	Repaired sump pump discharge house at Watford Tower.
August 15	C	Replaced sand auger sleeve on the Residual Management System.
August 15	P	Running diesel generator at East Lambton Pumping Station.
August 16	C	Repaired broken valve box at Port Lambton Tower.
August 16	P	Completed annual inspection and maintenance on Pumps 1, 2 and 5 at West Lambton Pumping Station.
August 16	Capital	Meeting with LAWSS GM in regards to radio project.
August 16	P	Completed monthly inspection of the vacuum priming station at East Lambton Pumping Station.
August 19-20	C	Working with ElectroZad and Rockwell in order to troubleshoot frequency issue with the VFD running under generator power at West Lambton Pumping Station.
August 19-20	P	Completed monthly maintenance on all online pH probes at the water treatment plant.
August 21	C	Set up new torque limits on Filter #5 effluent valve actuator.
Aug 19-20	P	Completed monthly inspection of all six floc gear drives.
August 21	C	Set up new torque limits on Filter #5 surface wash valve actuator.
August 21	C	Replaced lighting in the chemical room of the water treatment plant.
August 22-23	P	Completed monthly calibration on all chlorine handheld units.
August 23	P	Completed monthly maintenance on online fluoride analyzer.
August 23	P	Completed monthly maintenance on the Residual Management System turbidity meters.
August 26	Capital	Powered up MCC room A/C units after terminations were completed.
August 26	P	Completed monthly inspection of travelling screens at the water treatment plant.
August 26-29	Capital	Assist contractors with HVAC capital project work.
August 28	P	Testing generators at water treatment plant. During test battery on generator #5 failed.
August 28	C	Clean up failed batteries from generator #5.
August 29	C	Replaced generator batteries on generator #5.
August 30	P	Alberts Generator Service on site for annual maintenance on generators at West Lambton Pumping Station.

Operations and Compliance

August:

August 1	Conducted quarterly test of critical control point alarms.
August 2	Prechlorine pump #3 failed due to air lock. Pump and panel was reset.
August 3	All 3 prechlorine pumps failed due to air lock. Changed over hypo tank, pumps and panel was reset.
August 6	South clearwell pump #2 failed due to air lock. Pump and panel was reset.
August 7	Actiflo #2 having issues with high turbidity spikes.
August 7	South clearwell pump #2 failed due to air lock. Pump and panel was reset.
August 7	Prechlorine pumps 1 and 3 failed due to air lock. Pumps and panel was reset.
August 8	Prechlorine pump failed due to air lock. Pump and panel was reset.
August 10	Running Pump #5 at West Lambton Pumping Station.
August 11	Running Pump #1 at West Lambton Pumping Station.
August 12	Switched over lead/lag pumps for Forest and Watford at East Lambton Pumping Station.
August 12	Quarterly THM, nitrates and HAA samples taken.
August 12	South clearwell pump failed due to air lock. Pump and panel was reset.
August 13	Changed over PAC bag.
August 15	Running polymer system as per SOP to test system at the water treatment plant.
August 15	Prechlorine pump #3 failed due to air lock. Pump and panel was reset.
August 16	South clearwell #1 pump failed due to air lock. Pump and panel was reset.
August 20	Prechlorine pump #3 failed due to air lock. Pump and panel was reset.
August 20	Surface wash for filter #67 failed to hit close limit.
August 29	Prechlorine pump #1 failed due to air lock. Pump and panel was reset.

Distribution

August:

August 1	Completed July meter reads.
August 1	Site meet on Highway 40 and LaSalle Line in regards to new drain system.
August 7	After hours emergency locate at 3565 St Clair Parkway.
August 8	Site meet on Michigan Ave.
August 12	Onsite at 1717 London Line for exposure of LAWSS line.
August 13	Flushing and hydrant inspection on St Clair Parkway in Sombra.
August 18	After hours emergency locate #2019340767.
August 22	After hours emergency locate #20190822001 in St Clair Township.
August 22	Installed valve extension at chamber at Port Lambton Tower.
August 26	Found small water main leak on the service at 3188 St Clair Parkway.
August 26	Site meet at Bickford Line for work around LAWSS main.
August 27	Site meet at Bickford Line and Moore Line for work around LAWSS main.
August 27	Installed new 7ft valve extension on valve at Front St and London Rd.
August 28	Flushing and hydrant inspection on St Clair Parkway.
August 29	Flushing and hydrant inspection on St Clair Parkway.

August 29	Site meet at Bickford Line for work around LAWSS main.
August 29	Repaired service at 3188 St Clair Parkway.
August 30	Flushing hydrants in St Clair Township.
August 30	August meter reads completed.

Call Outs 2019

August: August 4 call out to investigate possible leak near Sipkins Nursery on London Line. Issue was with Petrolia water system not LAWSS. Petrolia water system was notified.

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	182	153				

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	313	237				

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 –Q3 due October 30

Semi-Annual “Schedule G” Reconcilable Commodities Report –Due January 30, 2020

Ontario Clean Water Agency
Time Series Info Report

Report extracted 09/10/2019 10:42

From: 01/01/2019 to 31/08/2019

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	07/2019	08/2019	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	23.836	25.822			38.605	
Mean IH	26.801	24.002	23.839	22.375	22.91	21.551	20.805	20.898		22.892		
Min IH	21.912	18.131	18.009	17.868	19.041	18.452	18.086	19.041				17.868
Coagulation/Floculation / Coagulant Used - kg												
Max IH	1792	1408	1651.2	1241.6	1344	2150.4	2060.8	1804.8			2150.4	
Mean IH	1220.542	1167.086	1160.671	1009.067	1129.29	1339.307	1594.632	1397.677		1253.979		
Min IH	972.8	947.2	832	768	934.4	921.6	1088	1100.8				768
Total IH	37836.8	32678.4	35980.8	30272	35008	40179.2	49433.6	43328	304716.8			
Coagulation/Floculation / Coagulant Volume Used - m³												
Max IH	1.4	1.1	1.29	0.97	1.05	1.68	1.61	1.41			1.68	
Mean IH	0.954	0.912	0.907	0.788	0.882	1.046	1.246	1.092		0.98		
Min IH	0.76	0.74	0.65	0.6	0.73	0.72	0.85	0.86				0.6
Total IH	29560	25530	28110	23650	27350	31390	38620	33850	238060			
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			58			58	
Mean Lab		27			31.667			52.667		37.111		
Min Lab		24			25			46				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	1.36	1.29			2.49	
Mean OL	1.535	1.401	1.428	1.388	1.3	1.277	1.22	1.124		1.334		
Min OL	0	0	0	0	0	0	0	0				0
Filter Backwash / Backwash Volume - m³												
Max IH	4792	2408	2992	3006	3004	3004	2998	3002			4792	
Mean IH	2268.323	1929.786	2028.194	1927.733	1900.774	2043	2095.032	2056.903		2032.848		
Min IH	1794	1788	1794	1198	1204	1792	1788	1059				1059
HFS / Fluoride Dosage - mg/L												
Max IH	0.64	0.644	0.614	0.622	0.592	0.628	0.612	0.589			0.644	
Mean IH	0.556	0.557	0.559	0.557	0.542	0.548	0.535	0.537		0.549		
Min IH	0.46	0.417	0.482	0.487	0.486	0.464	0.486	0.49				0.417
HFS / Fluoride Used - l												
Max IH	108.877	97.419	97.419	94.553	100.284	186.246	171.916	143.263			186.246	
Mean IH	85.495	87.63	89.655	83.952	90.041	115.949	139.658	123.298		102.153		
Min IH	65.901	66.384	71.631	71.631	74.497	88.823	111.745	103.149				65.901
Total IH	2650.36	2453.634	2779.305	2518.562	2791.284	3478.466	4329.406	3822.244	24823.26			
HFS / HFS (kg) - kg												
Max IH	132.83	118.851	118.851	115.355	122.347	227.22	209.737	174.781			227.22	
Mean IH	104.304	106.908	109.379	102.422	109.851	141.458	170.383	150.424		124.627		
Min IH	80.399	80.989	87.39	87.39	90.886	108.364	136.329	125.842				80.399
Total IH	3233.439	2993.434	3390.752	3072.646	3405.367	4243.728	5281.875	4663.138	30284.38			
HFS / Treated Water Fluoride Residual - mg/L												
Max OL	0.71	0.7	0.7	2	0.84	0.82	0.79	0.7			2	
Mean OL	0.631	0.601	0.578	0.597	0.611	0.575	0.63	0.611		0.604		
Min OL	0.56	0.54	0.51	0	0.51	0.24	0.49	0.55				0
Post Disinfection / Chlorine Dosage - mg/L												
Max IH	1.668	1.854	1.682	1.832	1.795	3.071	2.185	2.463			3.071	
Mean IH	1.434	1.391	1.458	1.468	1.535	1.696	1.952	2.087		1.631		
Min IH	1.215	0.891	1.048	1.271	1.05	1.097	1.594	1.842				0.891
Post Disinfection / Hypochlorite Dosage - mg/L												
Max IH	13.899	15.45	14.016	15.268	14.96	25.593	18.208	20.526			25.593	
Mean IH	11.947	11.588	12.152	12.232	12.79	14.136	16.268	17.39		13.59		
Min IH	10.126	7.428	8.737	10.593	8.747	9.142	13.282	15.347				7.428
Post Disinfection / Hypochlorite Used - kg												
Max IH	653.3	665.05	681.5	706.175	808.4	1975.175	1590.95	1434.675			1975.175	
Mean IH	543.456	564	590.191	552.994	632.264	885.167	1241.672	1162.454		774.518		
Min IH	444.15	326.65	454.725	407.725	431.225	460.6	956.45	930.6				326.65
Total IH	16847.15	15792	18295.93	16589.83	19600.18	26555	38491.83	36036.08	188208			
Post Disinfection / Hypochlorite Volume-Total - m³												
Max IH	0.556	0.566	0.58	0.601	0.688	1.681	1.354	1.221			1.681	
Mean IH	0.463	0.48	0.502	0.471	0.538	0.753	1.057	0.989		0.659		
Min IH	0.378	0.278	0.387	0.347	0.367	0.392	0.814	0.792				0.278
Total IH	14338	13440	15571	14119	16681	22600	32759	30669	160177			

[illegible]

Mean IH		44841	46364	46748.23	44048.37	48460.74	61126.97	76220.23	67154.84		54484.07			
Min IH		41397	41527	41284	39452	41184	41283	60988	56137					39452
Total IH		1390071	1298192	1449195	1321451	1502283	1833809	2362827	2081800	13239628				
Treated Water / HPC - cfu/mL														
Max Lab	<	10	<	10	<	10	<	10	<	10	<	10	<	10
Mean Lab	<	10	<	10	<	10	<	10	<	10	<	10	<	10
Min Lab	<	10	<	10	<	10	<	10	<	10	<	10	<	10
Treated Water / Total Coliform: TC - cfu/100mL														
Max Lab		0	0	0	0	0	0	0	0	0		0		
Mean Lab		0	0	0	0	0	0	0	0	0	0			
Min Lab		0	0	0	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	0.096	0.097			0.117		
Mean OL		0.062	0.063	0.065	0.063	0.064	0.066	0.066	0.067		0.064			
Min OL		0.043	0.047	0.046	0.047	0.046	0.046	0.049	0.052					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	4.99	1.67			4.99		
Mean OL		1.684	1.685	1.595	1.586	1.429	1.413	1.395	1.395		1.523			
Min OL		0	0	0	0	0	0	0	0					0
Zebra Mussel Control / Chlorine Dosage - mg/L														
Max IH					1.125	1.173	1.25	1.327	1.29			1.327		
Mean IH					1.125	1.068	1.127	1.158	1.206		1.14			
Min IH					1.125	0.955	1.01	1.028	1.113					0.955
Zebra Mussel Control / Cl Residual: Free - mg/L														
Max IH					0.36	0.67	0.66	0.63	0.64			0.67		
Mean IH					0.36	0.6	0.588	0.559	0.586		0.582			
Min IH					0.36	0.44	0.52	0.39	0.52					0.36
Zebra Mussel Control / Cl Residual: Total - mg/L														
Max IH					0.54	0.81	0.8	0.79	0.79			0.81		
Mean IH					0.54	0.746	0.712	0.679	0.72		0.713			
Min IH					0.54	0.55	0.63	0.51	0.66					0.51
Zebra Mussel Control / Hypochlorite Dosage - mg/L														
Max IH					9.374	9.777	10.417	11.057	10.753			11.057		
Mean IH					9.374	8.898	9.392	9.649	10.049		9.497			
Min IH					9.374	7.961	8.418	8.569	9.277					7.961
Zebra Mussel Control / Hypochlorite Used - kg														
Max IH					433.575	514.65	848.35	851.875	774.325			851.875		
Mean IH					433.575	439.147	582.408	735.512	670.735		605.75			
Min IH					433.575	336.05	444.15	619.225	538.15					336.05
Total IH					433.575	13613.55	17472.25	22800.88	20792.8	75113.05				
Zebra Mussel Control / Hypochlorite Volume-Total-1 - m³														
Max IH					0.369	0.438	0.722	0.725	0.659			0.725		
Mean IH					0.369	0.374	0.496	0.626	0.571		0.516			
Min IH					0.369	0.286	0.378	0.527	0.458					0.286
Total IH					369	11586	14870	19405	17696	63926				

Health & Safety Work Order Summary by Facility

Start Date: 2019-08-01

End Date: 2019-08-31

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)	3	3	3	5.75	217.98	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)	1	1	1	0.50	28.45	85.00%	100.00%	-15.00%
Total			4	4	4	6.25	246.43	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: 2019-08-31

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)	30	30	30	57.50	2389.01	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)	3	3	3	6.75	370.26	85.00%	100.00%	-15.00%
Total			33	33	33	64.25	2759.27	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: 2019-08-01
End Date: 2019-08-31
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)	1	1	1	2.5	113.5	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	14	492.68	0	0	0	0	0	0	0	0	0	0
		5544, Lambton Area WTP (5544-WTLA)	5	5	1	11	789.29	0	0	0	0	0	0	0	0	0	0
		5544, West Lambton Booster Stn (5544-WPWL)	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
		5544, West ST.Clair Distribution (5544-WDWS)	1	1	1	15.75	955.56	1	1	1	8.5	369.94	0	0	0	0	0
		Lambton Area Water Treatment Plant (5544)	2	2	1	8.5	467.86	0	0	0	0	0	0	0	0	0	0
Grand Total			11	11	6	51.75	2818.89	2	2	1	8.50	369.94	0	0	0	0.00	0.00

* NOTE: Capital/Project Work is not included in the calculation of the Closure Rate
9/17/19 08:56:43

Work Order Summary by Facility

Start Date: 2019-08-01
End Date: 2019-08-31
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	7.25	336.01	0	0	0	0	0	85%	100%	-15.0%
		5544, East Lambton PS (5544-WPEL)	4	4	4	12.5	649.91	2	2	2	5	228.9	0	0	0	0	0	85%	100%	-15.0%
		5544, Lambton Area RMS (5544-WWLA)	3	3	3	4	193.2	2	2	2	3	124.09	0	0	0	0	0	85%	100%	-15.0%
		5544, Lambton Area WTP (5544-WTLA)	33	33	30	65.25	2809.79	12	12	11	1473.75	36645.6	0	0	0	0	0	85%	84%	1.000%
		5544, West Lambton Booster Stn (5544-WPWL)	7	7	7	15.5	828.21	2	2	2	15.5	704.44	0	0	0	0	0	85%	90%	-5.00%
		5544, West ST.Clair Distribution (5544-WDWS)	2	2	1	9.25	530.66	2	2	2	15.75	713.94	0	0	0	0	0	85%	83.33%	1.666%
		Lambton Area Water Treatment Plant (5544)	1	1	1	0.5	28.45	0	0	0	0	0	1	1	0	19.5	1150.82	85%	66.66%	18.33%
Grand Total			50	50	46	107	5040.22	24	24	23	1520.25	38752.98	1	1	0	19.5	1150.82	85%	87.35%	12.64%

* NOTE: Capital/Project Work is not included in the calculation of the Closure Rate
9/17/19 08:56:43

Work Order Summary by Facility

Start Date: 2019-01-01
End Date: 2019-08-31
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)	9	9	9	108.5	5111.97	5	5	4	12.5	669.28	0	0	0	0	0	
		5544, East Lambton PS (5544-WPEL)	4	4	4	18	709.42	0	0	0	0	0	0	0	0	0	0	
		5544, Lambton Area RMS (5544-WWLA)	7	7	7	66	2758.86	0	0	0	0	0	0	0	0	0	0	
		5544, Lambton Area WTP (5544-WTLA)	32	32	26	223.5	9747.28	1	1	1	1	46.68	4	4	4	36	1505.9	
		5544, West Lambton Booster Stn (5544-WPWL)	8	8	6	38.25	1594.27	1	1	0	0	0	1	1	1	54.75	2521.45	
		5544, West ST.Clair Distribution (5544-WDWS)	3	3	3	24	1345.29	3	3	3	35	2237.4	0	0	0	0	0	0
		Lambton Area Water Treatment Plant (5544)	10	10	9	92.75	4563.12	0	0	0	0	0	0	0	0	0	0	0
Grand Total			73	73	64	571	25830.21	10	10	8	48.50	2953.36	5	5	5	90.75	4027.35	

* NOTE: Capital/Project Work is not included in the calculation of the Closure Rate
9/17/19 08:53:00

Work Order Summary by Facility

Start Date: 2019-01-01
End Date: 2019-08-31
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	6	17	1006.35	34	34	34	102.25	4482.4	5	4	1	36.25	11116.61	85%	92.98%	-7.98%
		5544, East Lambton PS (5544-WPEL)	42	42	41	91.5	4551.57	17	17	17	64.5	2952.99	0	0	0	0	0	85%	98.41%	-13.4%
		5544, Lambton Area RMS (5544-WWLA)	20	20	20	33.75	1551.21	16	16	16	28	1135.64	1	1	1	27.25	22007.7	85%	100%	-15.0%
		5544, Lambton Area WTP (5544-WTLA)	276	276	264	1051.25	56335.77	101	101	98	12877.75	333786.8	5	4	2	125.25	51857.22	85%	94.92%	-9.92%
		5544, West Lambton Booster Stn (5544-WPWL)	51	51	48	85.75	4235.64	16	16	16	149.75	6856.78	0	0	0	0	0	85%	92.20%	-7.20%
		5544, West St.Clair Distribution (5544-WDWS)	5	5	3	13.75	713.71	16	16	16	59.25	2591.93	0	0	0	0	0	85%	92.59%	-7.59%
		Lambton Area Water Treatment Plant (5544)	5	5	5	20.5	1103.05	0	0	0	0	0	6	6	4	198	60324.58	85%	93.33%	-8.33%
Grand Total			408	408	387	1313.5	69497.3	200	200	197	13281.5	351806.6	17	15	8	386.75	145306.1	85%	94.97%	5.028%

* NOTE: Capital/Project Work is not included in the calculation of the Closure Rate
9/17/19 08:53:00