

AGENDA

Joint Board of Management Meeting



Thursday, September 24, 2020
12:00 pm

1. Call to Order

- a. Disclosure of Pecuniary Interest
- b. Delegation: LAWSS Master Plan Update- Servicing Options Review

Benny Wan, LAWSS Master Water Plan Update Technical Lead, Hydraulic Analysis Group Manager, AECOM

Moved By _____

Seconded By _____

"That the LAWSS Joint Board of Management **RECEIVE** the presentation titled, "LAWSS Master Plan Update Servicing Options Review" presented by AECOM.

2. Adoption of Minutes

A copy of the minutes for the Thursday July 30, 2020 meeting of the LAWSS Joint Board of Management is attached to this agenda.

Moved By _____

Seconded By _____

"That the LAWSS Joint Board of Management **ADOPT** the Thursday, July 30, 2020 meeting minutes."

3. Consent Items

Moved By _____

Seconded By _____

"That the LAWSS Joint Board of Management **RECEIVE** as information the June 2020 and July 2020 Financial Statements, July 2020 and August 2020 Operational Statements, July 2020 and August 2020 Flow Summary Sheets, along with the staff information Report, dated September 24, 2020."

a. Monthly Financial Statements

The June 2020 and July 2020 LAWSS budget statement and cash balance sheets are attached.

1. June 2020 Financial Statements

2. July 2020 Financial Statements

b. Monthly Operational Statements

The July 2020 and August 2020 Monthly Operations Report are attached.

1. July Operational Reports

2. August 2020 Operational Reports

c. Information Reports

1. July 2020 Flow Sheets

2. August 2020 Flow Sheets

3. Information Reports (September 24, 2020)

4. Items for Discussion

a. Water Master Plan Update - MCEA Phase 1

Moved By _____

Seconded By _____

"That the LAWSS Joint Board of Management **RECEIVE** as information the staff report titled, "Water Master Pan Update - MCEA Phase 1", dated September 24, 2020."

b. WTP Main 5kV SWGR and Generator Replacement- Project Award

Moved By _____

Seconded By _____

"That the LAWSS Joint Board of Management **RECEIVE** staff report subject, "WTP Main 5kV SWGR and Generator Replacement- Project Award", dated September 24, 2020, and **AWARD** J.M.R Electric Limited to execute RFQ 20-131, and **INCREASE** the appropriate budget amount by \$575,892."

c. Public Dog Park Agreement - Forest Standpipe

Moved By _____

Seconded By _____

"That the LAWSS Joint Board of Management **RECEIVE** staff report subject, "Public Dog Park - Forest Standpipe", dated September 24, 2020, and **ENDORSE** the Agreement to designate an area of the the Forest Standpipe as a Public Park as outlined within."

5. Deferred Matters/Additional Business

6. Confidential

7. Adjournment

Moved By _____

Seconded By _____

"That the LAWSS Joint Board of Management **ADJOURN** the meeting to its next board meeting held of Thursday, October 29, 2020 a 12pm at the Tourism Sarnia-Lambton Assembly Room, 1455 Venetian Blvd. Point Edward."

Lambton Area Water Supply System Water Master Plan Update Servicing Options Review

Project No.: 60624749

September 24, 2020



Agenda

1. System Assessment Results Review
2. System Constraints Review
3. West Lambton Reservoir Strategy
4. Servicing Options Review
5. Next Step

1. Flow Projections – ADD (ML/d)

<i>Year</i>	<i>Sarnia</i>	<i>Point Edward</i>	<i>St. Clair</i>	<i>Plympton/ Wyoming</i>	<i>Lambton Shores</i>	<i>Watford-Warwick</i>	<i>Alvinston</i>	<i>Petrolia</i>	<i>Chatham-Kent</i>	<i>LAWSS*</i>
<i>2016</i>	29.55	1.17	13.92	2.43	1.03	1.38	0.25	0.07	0.01	49.80
<i>2017</i>	29.38	1.18	12.49	2.36	0.93	1.38	0.25	0.08	0.01	48.06
<i>2018</i>	28.45	1.17	14.51	2.43	0.94	1.26	0.25	0.10	0.02	49.11
<i>2019</i>	29.25	1.14	14.40	2.50	0.91	1.10	0.25	0.11	0.02	49.69
<i>2026</i>	31.35	1.23	16.12	2.81	1.08	1.44	0.26	0.21	0.04	54.54
<i>2031</i>	32.86	1.28	17.35	3.03	1.21	1.68	0.26	0.28	0.05	58.00
<i>2036</i>	34.36	1.34	18.58	3.26	1.33	1.92	0.26	0.35	0.06	61.47
<i>2041</i>	35.87	1.40	19.81	3.48	1.45	2.16	0.27	0.41	0.07	64.93
<i>Growth Rate (2016 – 2031)</i>	11.2%	10.0%	24.7%	25.0%	17.0%	21.7%	4.7%	-	-	16.5%

1. Flow Projections – MDD (ML/d)

<i>Year</i>	<i>Sarnia</i>	<i>Point Edward</i>	<i>St. Clair</i>	<i>Plympton/ Wyoming</i>	<i>Lambton Shores</i>	<i>Watford-Warwick</i>	<i>Alvinston</i>	<i>Petrolia</i>	<i>Chatham-Kent</i>	<i>LAWSS*</i>
2016	59.1	2.3	27.8	4.9	2.1	2.8	0.5	0.1	0.0	99.6
2017	58.8	2.4	25.0	4.7	1.9	2.8	0.5	0.2	0.0	96.1
2018	56.9	2.3	29.0	4.9	1.9	2.5	0.5	0.2	0.0	98.2
2019	58.5	2.3	28.8	5.0	1.8	2.2	0.5	0.2	0.0	99.4
2026	62.7	2.5	32.2	5.6	2.2	2.9	0.5	0.4	0.1	109.1
2031	65.7	2.6	34.7	6.1	2.4	3.4	0.5	0.6	0.1	116.0
2036	68.7	2.7	37.2	6.5	2.7	3.8	0.5	0.7	0.1	122.9
2041	71.7	2.8	39.6	7.0	2.9	4.3	0.5	0.8	0.1	129.9

* MDD Factor = 2 x AVG

2. System Assessments Summary

- Treatment Plant Capacity
 - Sufficient to meet future growth as is.
- Pumping Capacity
 - Sufficient to meet future growth as is.
- Storage Capacity
 - Sufficient to meet future growth with minor modifications to current operational practices.

3. West Lambton Reservoir Background

- Twinned 45ML steel tank (90ML total)
- Station storage provides redundancy to overall system.
- Station pumping required for St. Clair water supply sustainability

3. West Lambton Reservoir Background

- Existing Reservoirs not required to address growth but is required for system resiliency.
- Existing Reservoirs requires \$13M in rehabilitation based on recent condition assessment. (\$6.5M each)
- LAWSS current Capital Plan sets work to begin in 2021.
- Rehabilitation would only extend the service life for 20year max.

3. West Lambton Reservoir Requirements

How resilient does LAWSS want to be with respect to storage?

Option 1 : 21ML for providing peak flow events

Option 2 : 46ML for providing full redundancy to the system (2041 storage requirement for Zone 1)

3. West Lambton Reservoir Strategy

The following replacement/refurbishment strategies were reviewed based on Option 2 (45ML)

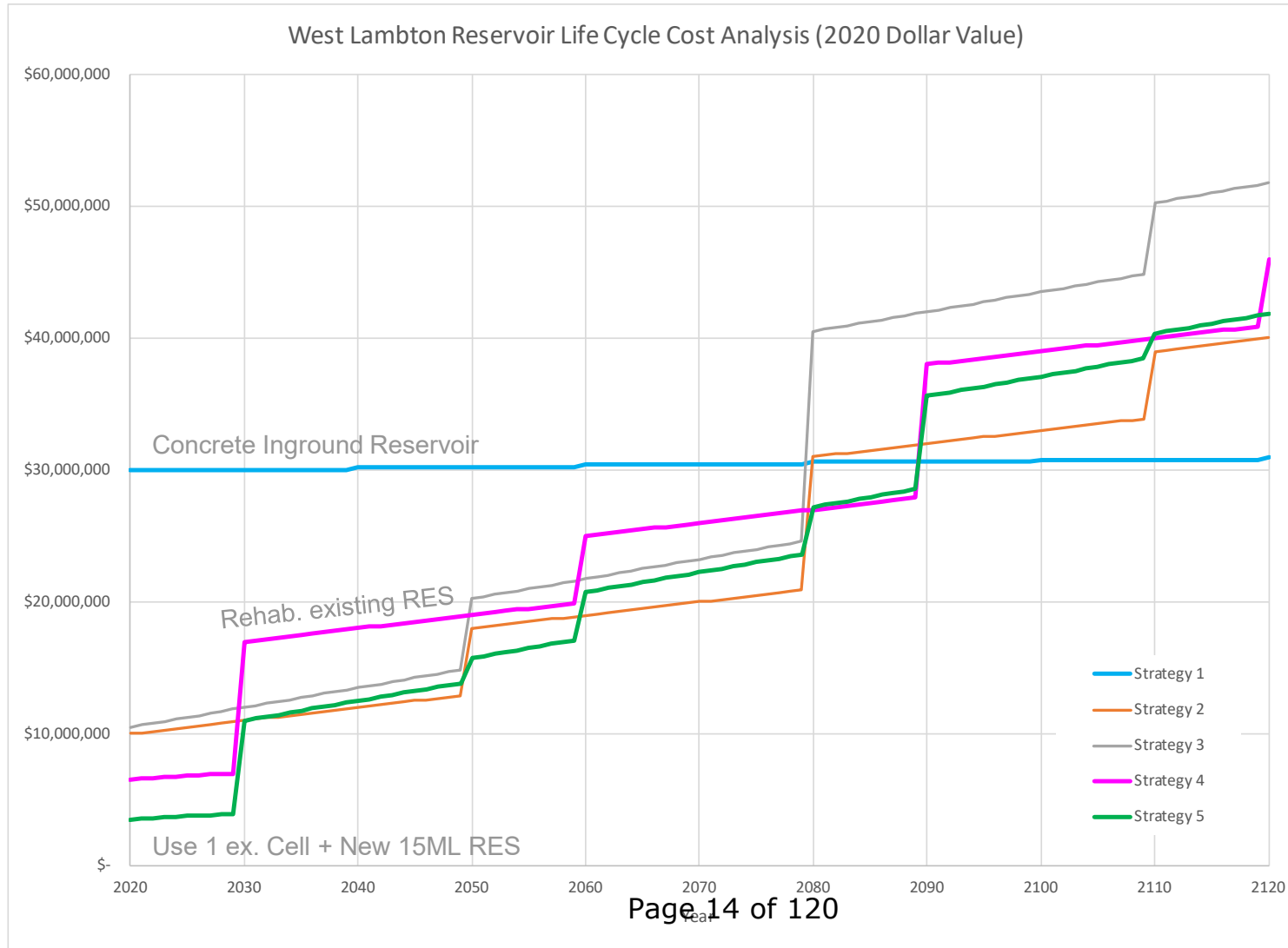
- Strategy 1: Construct New Concrete Reservoir
 - 100 yr life span & minimum O&M costs
- Strategy 2: Non-AWWA Standard Glass Line Steel Tank (23ML ea & require 2)
 - 30 yr life span & require major maintenance for every 10yr
- Strategy 3: AWWA Standard Glass Line Steel Tank (15ML ea & require 3)
 - 30 yr life span & require major maintenance for every 10yr

3. West Lambton Reservoir Strategy

- Strategy 4: Proceed with required rehabilitation
 - Rehab Cell No.1 and decommission Cell No.2
 - Remove tank redundancy
 - Extend service life for 20yr max
 - Require new tank(s) after 20yr
- Strategy 5: Install new tanks in different phasing
 - Minimize initial investment
 - Maximize the utilization of existing tank

3. West Lambton Reservoir

Life Cycle Cost Analysis Results

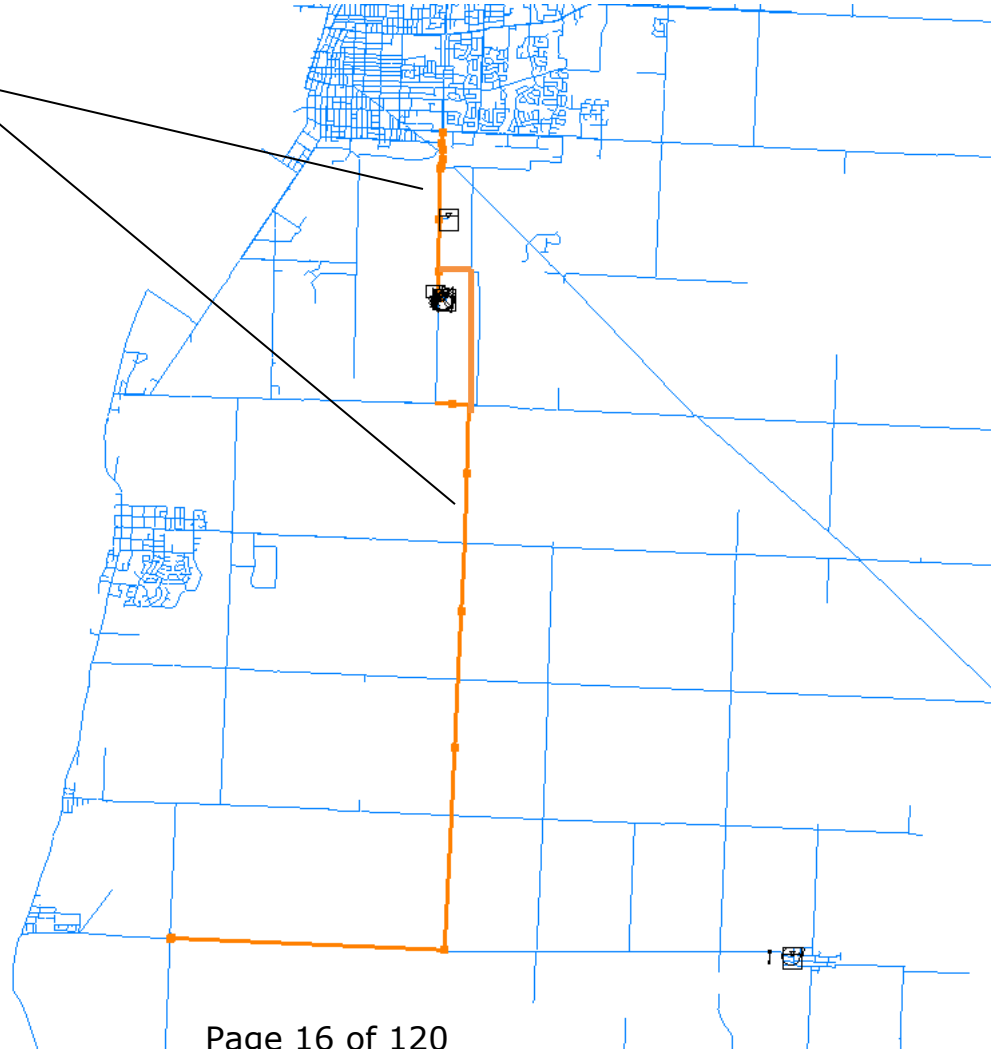


3. West Lambton Reservoir Strategy

- Recommended Strategy (No.5):
 - Decommission existing reservoir (1 cell)
 - Install AWWA standard glass line steel tank
 - 15 ML for \$3.5M
 - Replace 2nd cell with another 15ML tank(s) when life span reached
 - Life span = 30yr
 - Could be extended by another 30yr via major rehabilitation
 - Relatively low capital cost
 - Can defer capital investment
 - Use of existing foundation must be confirmed

4. 2041 MDD Baseline Scenario

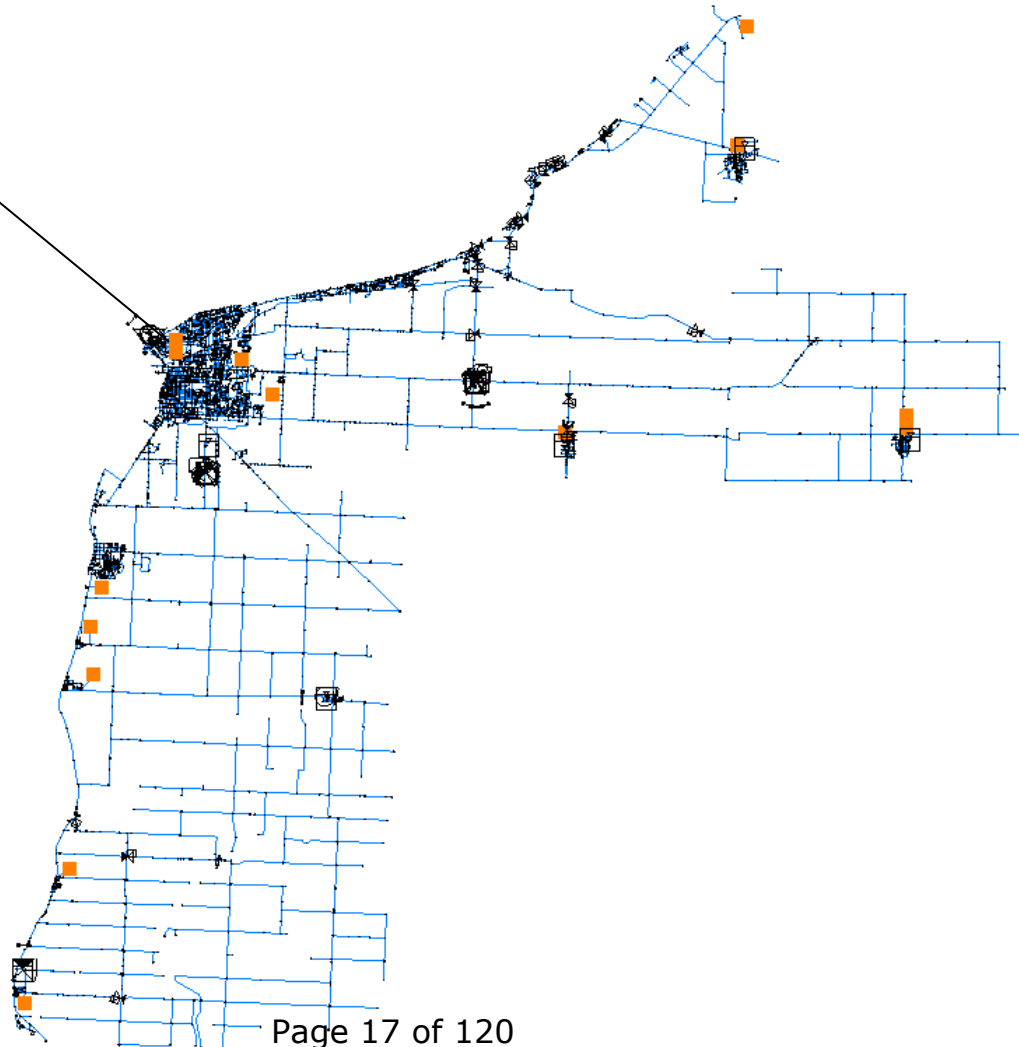
Scenario ran with Grid
Reinforcement &
Transmission Main
Twinning



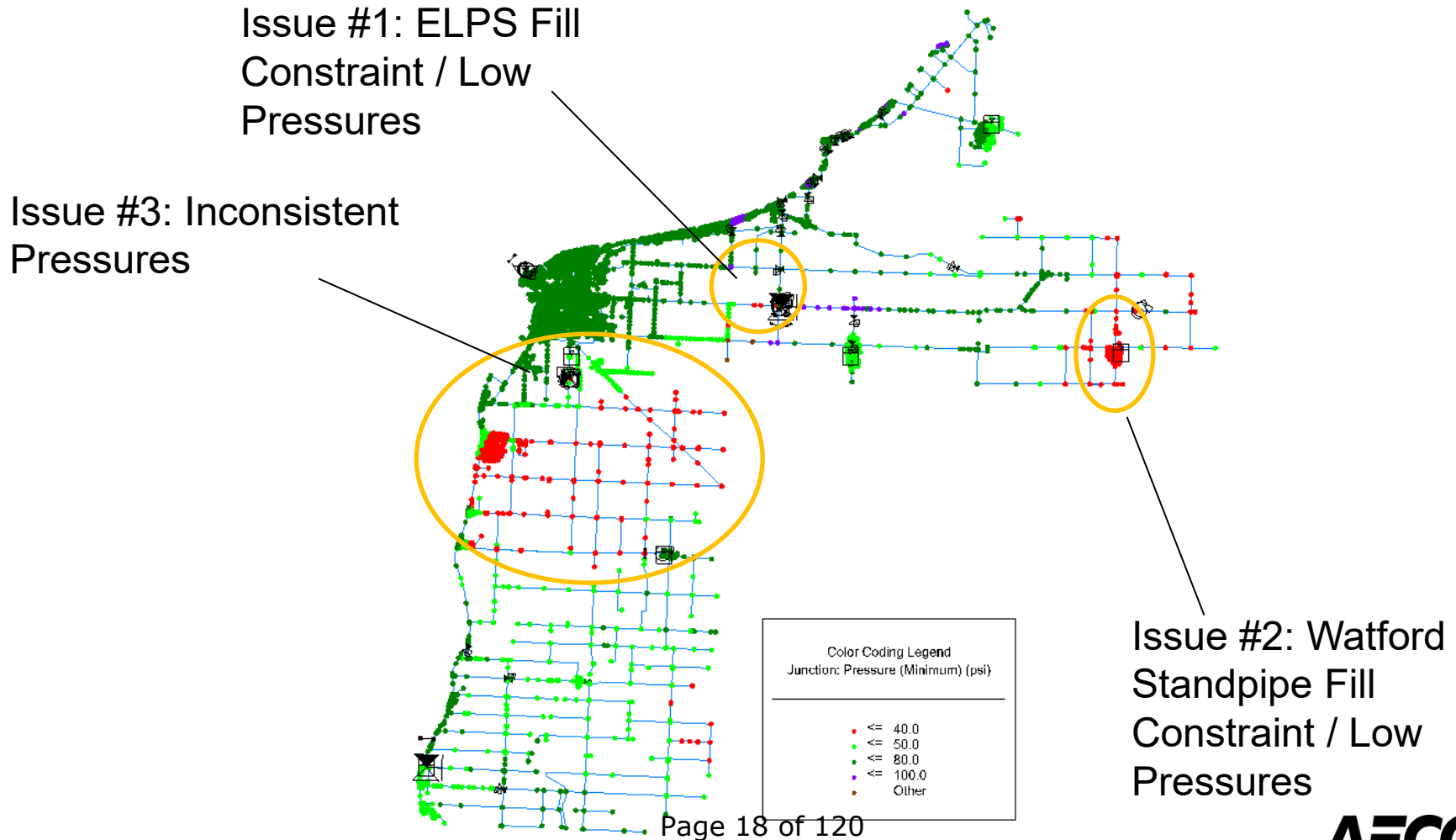
4. 2041 MDD Baseline Scenario – Future Demand Allocation

Future Demand
Growth Locations

LAWSS Member	MDD (L/s)
Sarnia	564
Point Edward	22
St. Clair	450
Future Demand Growth in Sarnia	153
Future Demand Growth in Point Edward	6
Future Demand Growth in St. Clair	125
Sarnia + St. Clair - 2019 Modelling Demand	1036
Sarnia + St. Clair - 2041 Modelling Demand	1320
Lambton Shores	21
Plympton-Wyoming	23
Future Demand Growth in Lambton Shores	12
Forest System - 2019 Modelling Demand	44
Forest System - 2041 Modelling Demand	56
Watford-Warwick	26
Plympton-Wyoming	37
Future Demand Growth in Watford	25
Future Demand Growth in Wyoming	23
Watford System - 2019 Modelling Demand	63
Watford System - 2041 Modelling Demand	111
Total 2019 Modelling Demand for LAWSS	1143
Total 2041 Modelling Demand for LAWSS	1487



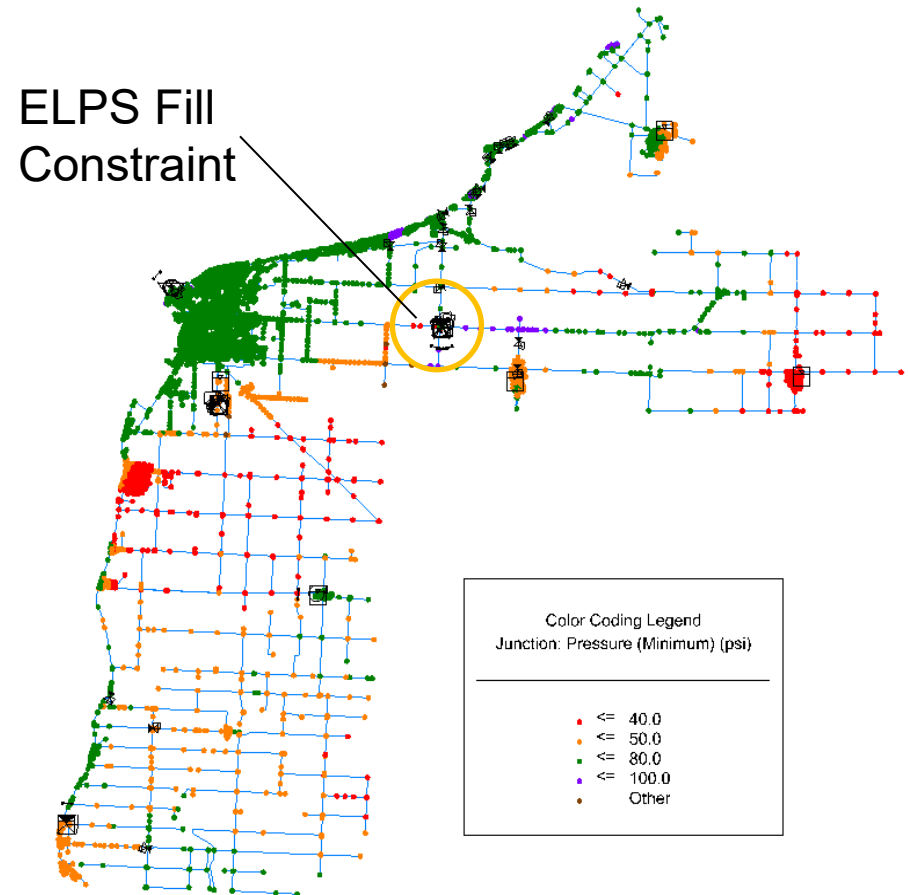
4. System Issues



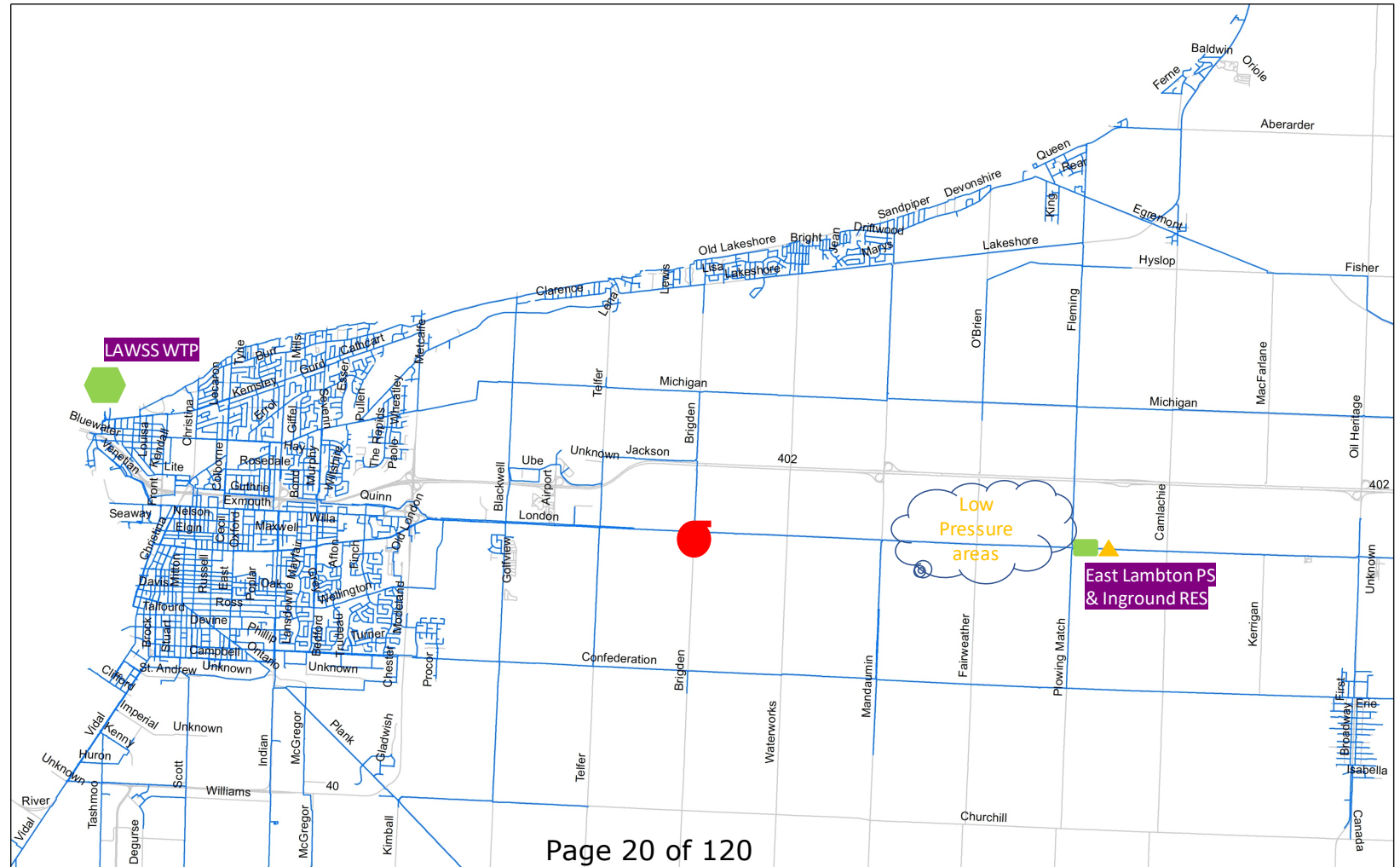
4. Issue #1: Mitigation Alternatives for ELPS Fill Constraints

- Option 1: Re-purposing an Existing Transmission Main
- Option 2: New Booster Pumping Station between WTP and ELPS
- Option 3: New Transmission Main
- Option 4: New local watermain from East Lambton PS (Forest)

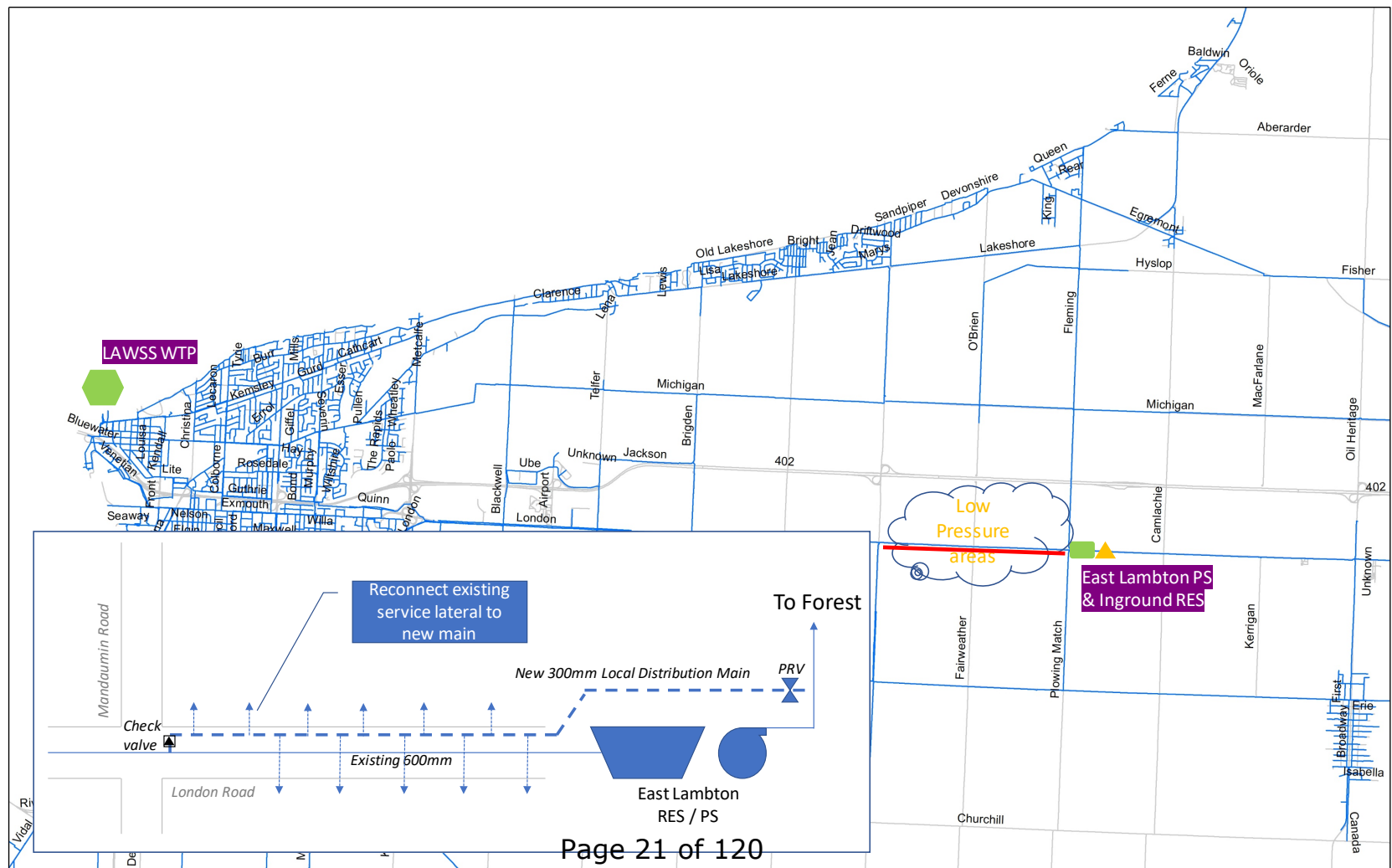
Option	Est. Costs
Option 1	\$ 3.8M
Option 2	\$ 6.0M
Option 3	\$ 58.0M
Option 4	\$ 6.0M



4. Recommended Option for Issue No.1 (Option 2)

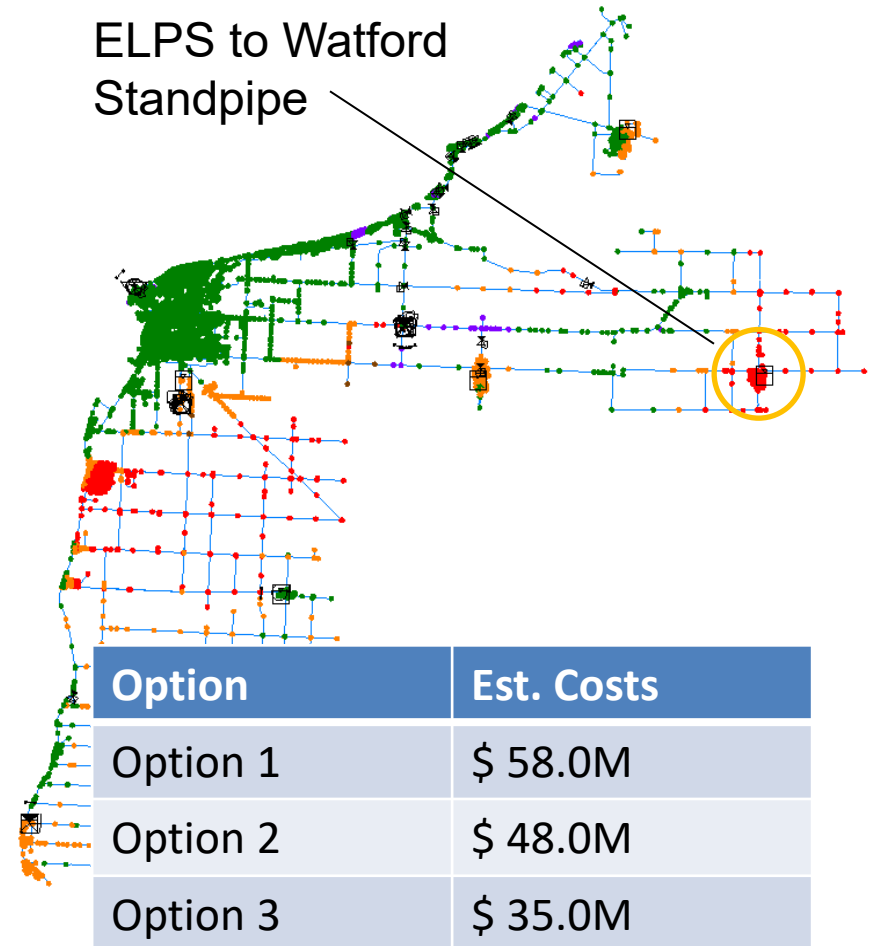


4. Recommended Option for Issue No.1 (Option 4)

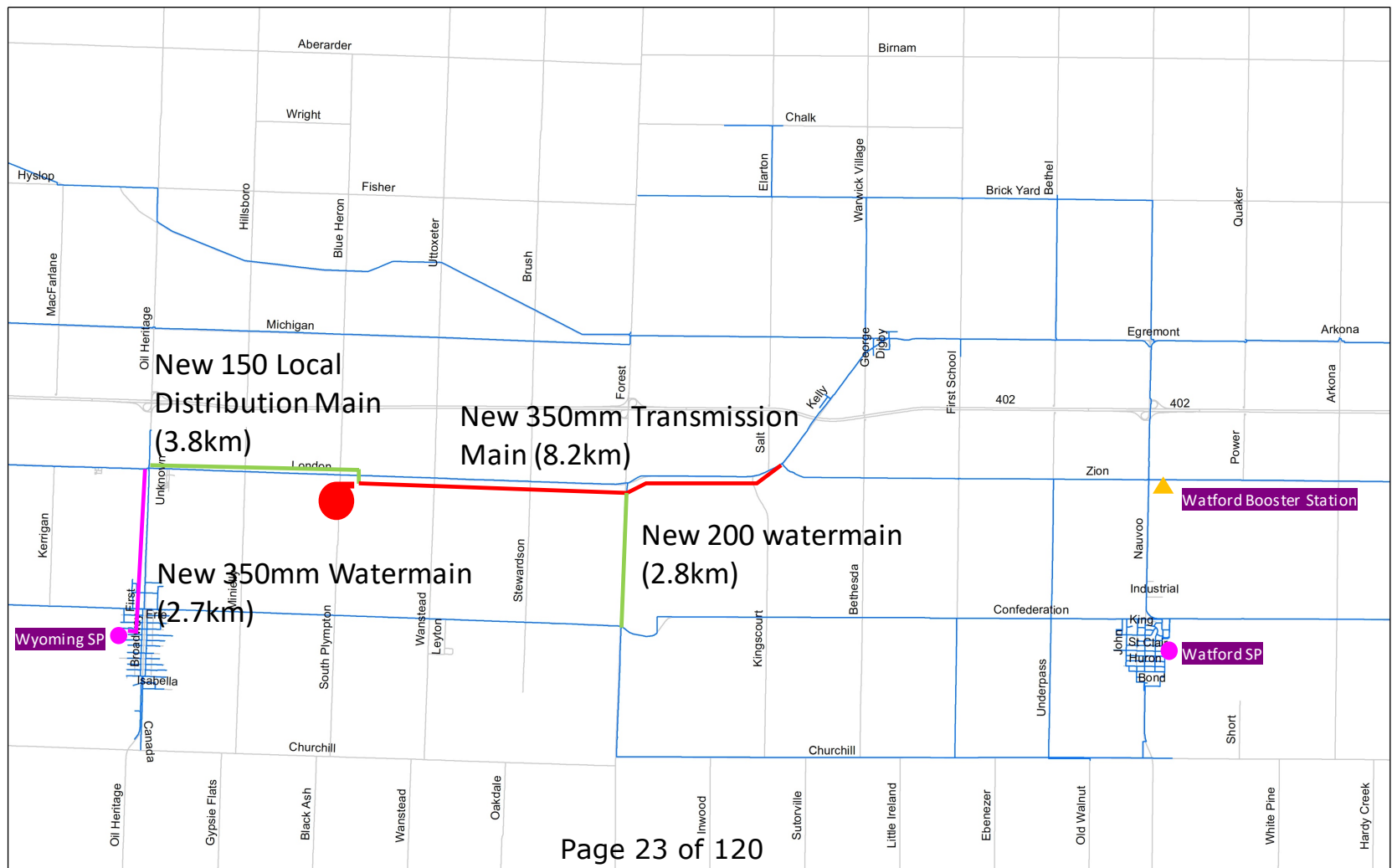


4. Issue #2: Mitigation Options for ELPS to Watford Standpipe

- Option 1: New Transmission Main along Michigan Line and Confederation Line
- Option 2: New Pressure Zone in East Lambton (Watford)
 - New Booster Station
 - New watermains
 - New Local Supply Line
 - Acquire Wyoming SP
- Option 3: New Pressure Zone in East Lambton (Watford)
 - New Booster Station
 - New watermains (less than Option 2)
 - New Local Supply Line
 - Acquire Wyoming SP

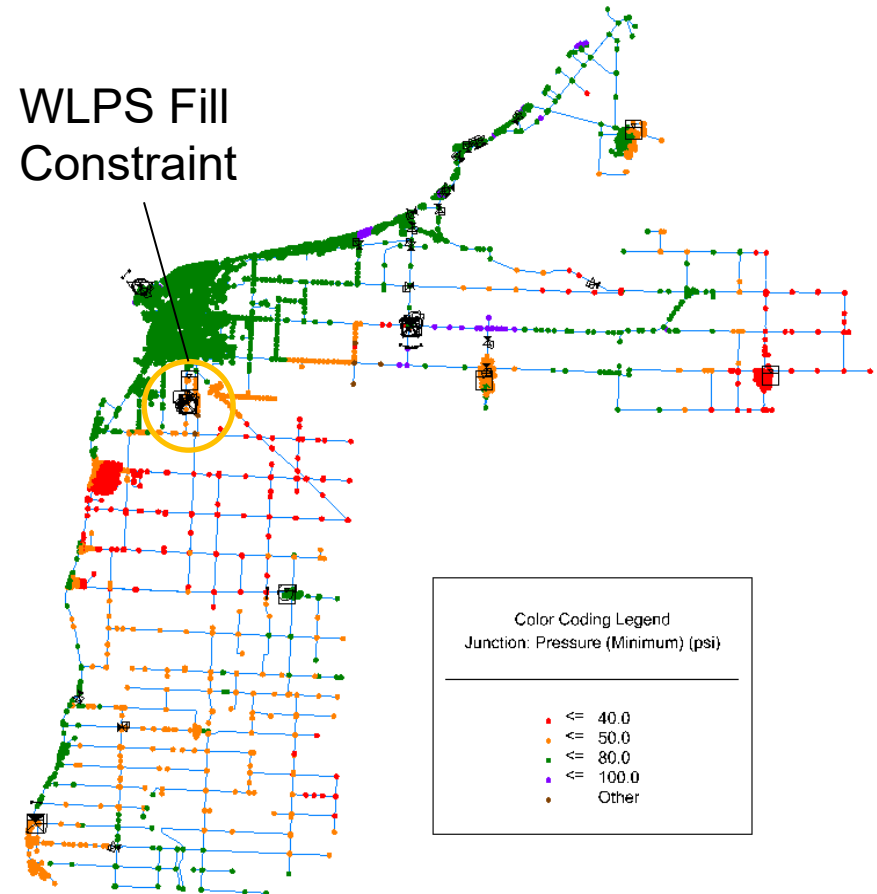


4. Recommended Option for Issue No.2 (Option 3)



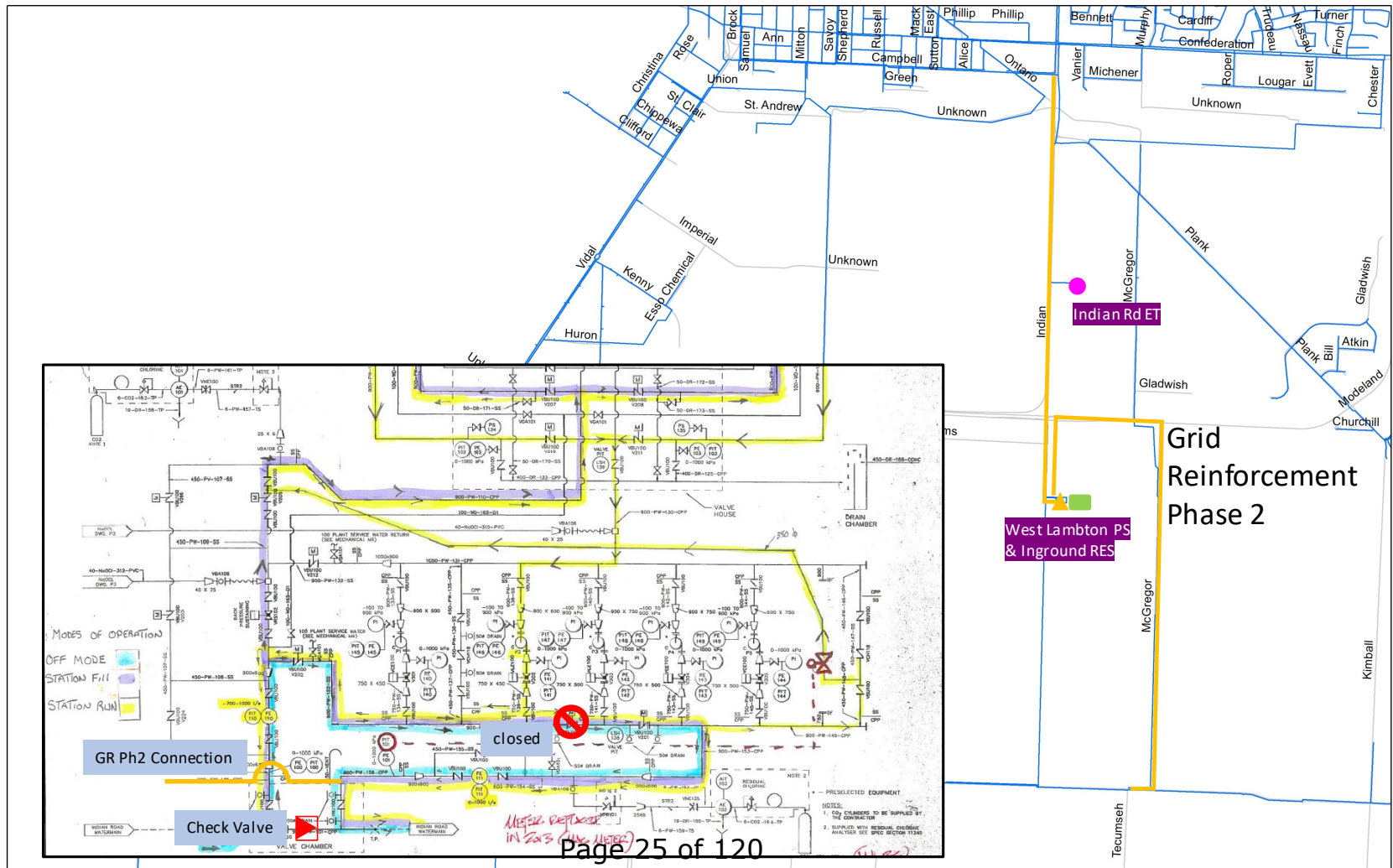
4. Issue 3: WLPS Fill Constraints

- Option 1: Zone Separation and Modifications to WLPS Fill Operations



Option	Est. Costs
Option 1	\$ 1.6M

4. Recommended Option for Issue No.3 (Option 3)



5. Next Step

- Online PIC No.1
 - present overview of LAWSS, need for improvements and potential solutions / strategies
 - Early October 2020
- Evaluate and confirm preferred solutions / strategies
- PIC No.2
 - Present preferred solution / strategy
 - Early December 2020
- Project File
 - Early 2021

Thank You



Minutes

Joint Board of Management Meeting

Thursday, July 30, 2020
12:00 pm

Members

Mayor Bev Hand, Village of Point Edward
Mayor Steve Arnold, St. Clair Township
Councillor Margaret Bird, City of Sarnia
Mayor Jackie Rombouts, Township of Warwick
Mayor Lonny Napper, Town of Plympton-Wyoming
Mayor Bill Weber, Municipality of Lambton Shores

LAWSS General Manager:

Clinton Harper

Technical Staff:

Andrew Maver, Township of Warwick
Brian Black, St. Clair Township
Adam Sobanski, Town of Plympton-Wyoming
Pratt Rawat, City of Sarnia
Jay Verstraeten, Village of Point Edward
Nick Verhoven, Municipality of Lambton Shores
Jodi Stadeski, OCWA Operational Manager

1. Call to Order

- a. Disclosure of Pecuniary Interest

2. **Adoption of Minutes**

A copy of the minutes for the Thursday, June 25, 2020 meeting of the LAWSS Joint Board of Management is attached to this agenda.

Moved by: Mayor Steve Arnold

Seconded by: Mayor Jackie Rombouts

"That the LAWSS Joint Board of Management **ADOPT** the Thursday, June 25, 2020 meeting minutes."

Carried

3. **Consent Items**

Moved by: Mayor Lonny Napper

Seconded by: Mayor Bill Weber

"That the LAWSS Joint Board of Management **RECEIVE** as information the May 2020 Financial Statements, June 2020 Operational Statements and Flow Summary Sheets, along with the staff Information Report, dated July 30, 2020."

Carried

a. Monthly Financial Statements

The May 2020 LAWSS budget statement and cash balance sheets are attached.

b. Monthly Operational Statement - June 2020

The June 2020 Monthly Operation Reports are attached.

c. Information Reports

1. June 2020 Flow Summary Sheets

2. Information Reports (July 30, 2020)

4. **Items for Discussion**

Moved by: Mayor Jackie Rombouts

Seconded by: Councillor Margaret Bird

"That the Joint Board of Management **CANCEL** the regular meeting scheduled for August 27, 2020."

a. 2020 Major Maintenance Program- Project Substitution Request

Moved by: Mayor Steve Arnold

Seconded by: Mayor Jackie Rombouts

"That the LAWSS Joint Board of Management **RECEIVE** staff report subject, "2020 Major Maintenance Project Substitution Request" and **APPROVE** the changes to the 2020 Major Maintenance Program outlined within."

Carried

b. WLPS Special Valve Project- Contractor Selection

Moved by: Mayor Steve Arnold

Seconded by: Mayor Bill Weber

"That the LAWSS Joint Board of Management **RECEIVE** staff report subject, "WLPS Special Valve Project- Contractor Selection" and **AWARD** Dielco Industrial Contractors Ltd. with project for replacement of 36" Ross Valve for the quoted amount of \$152,750+HST."

Carried

c. Supervisory Control and Data Acquisition (SCADA) Master Plan- Consultant Selection

Moved by: Mayor Jackie Rombouts

Seconded by: Mayor Bill Weber

That the LAWSS Joint Board of Management **RECEIVE** staff memo subject, "Supervisory Control and Data Acquisition (SCADA) Master Plan- Consultant Selection" and **AWARD** Eramosa with RFP 20-01 SCADA Master Plan and Associated Works for the quoted amount of \$95,534.25+HST."

Carried

d. Engineering Design and Project Management for Main Plant HVAC - Consultant Selection

Moved by: Mayor Bill Weber

Seconded by: Mayor Steve Arnold

That the LAWSS Joint Board of Management **RECEIVE** staff memo subject, "Engineering Design and Project Management for Main Plant HVAC - Consultant Selection" and **AWARD** Building Innovation with RFP 20-02 Engineering Design and Project Management for Main Plant HVAC for the quoted amount of \$75,000+HST."

Carried

e. Fieldgate Network Upgrade - System Selection

Moved by: Mayor Steve Arnold

Seconded by: Mayor Lonny Napper

"That the LAWSS Joint Board of Management **RECIEVE** staff report subject, "Fieldgate Network Upgrade - System Selection" and **HIRE** OCWA to execute Remote Flow Monitoring Upgrade Proposal dated July 7, 2020 for the quoted amount of \$84,860+HST and **INCREASE** the appropriate budget amount by \$11,353.54.

Carried

f. 2020 and 2021 Meeting Format and Schedule

Moved by: Councillor Margaret Bird

Seconded by: Mayor Bill Weber

"That the LAWSS Joint Board of Management **RECEIVE** as information staff report subject, "2020 and 2021 Meeting Format and Schedule"."

Carried

Moved by: Mayor Steve Arnold

Seconded by: Mayor Lonny Napper

"That the LAWSS Joint Board of Management **ENDORSE** amending By-Law 4-2020 a by-law to amend the proceedings of the LAWSS Joint Board of Management."

Carried

g. Fuel Storage and Delivery System- Update

Moved by: Mayor Jackie Rombouts

Seconded by: Mayor Steve Arnold

"That the LAWSS Joint Board of Management **RECEIVE** staff report subject, "Fuel Storage and Delivery System- Update" and **APPROVE** additional engineering fees in the amount of \$25,000 to incorporate the fuel system upgrade into the Generator Project, and **DESIGNATE** WELECO as preferred vendor for supply of LAWSS fuel system components/hardware and **INCREASE** overall project budget by \$275,000 to facilitate the permanent upgrade to the existing fuel storage and delivery system."

Carried

5. **Deferred Matters/Additional Business**

6. **Confidential**

7. **Adjournment**

Moved by: Mayor Jackie Rombouts

Seconded by: Mayor Bill Weber

"That the LAWSS Joint Board of Management **ADJOURN** the meeting to its next board meeting held on Thursday, September 24, 2020 at 12pm at the Tourism Sarnia-Lambton Assembly Room, 1455 Venetian Blvd. Point Edward."

Carried

		June Actual	Month Budget	YTD - ACTUAL	YTD - Budget	Annual Budget	Variance	Percent of Budget Used
Municipality Revenue								
4050	Municipality Revenue	-810,316.25	-810,316.25	-4,861,897.22	-4,861,897.22	-9,823,795.00	0.00	49%
	Sarnia	-472,738.50	-472,738.50	-2,836,431.00	-2,836,431.00	-5,672,862.00	0.00	50%
	St. Clair Township	-241,312.17	-241,312.17	-1,447,873.00	-1,447,873.00	-2,895,746.00	0.00	50%
	Plympton-Wyoming	-40,353.75	-40,353.75	-242,122.50	-242,122.50	-484,245.00	0.00	50%
	Lambton Shores	-15,639.08	-15,639.08	-93,834.50	-93,834.50	-187,669.00	0.00	50%
	Warwick	-20,825.17	-20,825.17	-124,950.72	-124,950.72	-249,902.00	0.00	50%
	Point Edward	-19,447.58	-19,447.58	-116,685.50	-116,685.50	-233,371.00	0.00	50%
	Bluewater Power Distribution Corp.			0.00	0.00		0.00	
4120	Brooke-Alvinston Revenue		0.00	0.00	0.00	-100,000.00	0.00	0%
	Total Municipalities Revenue	-810,316.25	-810,316.25	-4,861,897.22	-4,861,897.22	-9,823,795.00	0.00	49%
Other Revenue								
4130	Emergency Water Taking		0.00	0.00	0.00	0.00	0.00	0%
4150	LAWSS Other Revenue		0.00	0.00	0.00	0.00	0.00	0%
	Canada Coast Guard		0.00	0.00	0.00	-7,000.00	0.00	0%
	County of Lambton		0.00	0.00	0.00	-7,000.00	0.00	0%
	Bluewater Power- Reimbursement Progra,		0.00	0.00	0.00	0.00	0.00	
4430	Misc. Revenue (HST Rebate)		0.00	0.00	0.00	0.00	0.00	#DIV/0!
4430	Misc. Revenue from OCWA		0.00	0.00	0.00	0.00	0.00	0%
4430	Misc. Revenue from St. Clair		0.00	0.00	0.00	0.00	0.00	0%
	Misc. Revenue from OMWA		0.00	0.00	0.00	0.00	0.00	0%
4430	Misc. Revenue from OPA		0.00	0.00	0.00		0.00	
	Total Other Revenue	0.00	0.00	0.00	0.00	-14,000.00	0.00	0%
Investment Interest								
4420	Interest Earned	-10,206.51	-22,000.00	-106,514.21	0.00	-58,000.00	-106,514.21	184%
Project Expenses								
	Total Revenue	-820,522.76	-832,316.25	-4,968,411.43	-4,861,897.22	-9,895,795.00	-106,514.21	50%
5100	Project Expenses	43,689.68	700,000.00	1,507,730.09	1,083,199.29	12,430,313.20	846,271.37	12%
	20-1 5kV Motor Control Group A & B (Engineering)		0.00	0.00	0.00	90,000.00	-90,000.00	0%
	20-2 WTP Main Plant HVAC Repair (Engineerin Design)		0.00	0.00	0.00	111,000.00	-111,000.00	0%
	20-3 WLPS Reservoir Rehabilitation (Engineering Design)		0.00	0.00	0.00	120,000.00	-120,000.00	0%
	20-4 Indian Road WT Rehabilitation (Engineering Design)		0.00	0.00	0.00	30,000.00	-30,000.00	0%
	20-5 WTP PLC Conversion/Upgrade Construction		7,000.00	7,171.03	0.00	150,000.00	-142,828.97	5%
	20-6 Field Gate 4G Network Upgrade		0.00	0.00	0.00	75,000.00	-75,000.00	0%
	ES20-01 System - Master Plan Rebuild	14,145.70	0.00	39,211.13				
	ES20-02 Condition Assessment		0.00	0.00				
	ES20-03 Jacob's Loop Study		0.00	0.00				
	ES20-04 Jacob's Corrison Control Impact Study		0.00	0.00				
	ES20-05 Watermain Condition Assessment Approach	18,438.91	0.00	18,438.91				
	ES20-06 Twinning & Grid Reinforcement Class EA		0.00	0.00				
	R20-1 Financial Plan		0.00	2,003.15	0.00	0.00		
	R20-2 WTP Reservoir		0.00	44,281.59				
	Tasks carried over from 2018	11,105.07	0.00	1,396,624.28	529,013.05	6,348,156.60	846,271.37	22%
	17-05 Engineering Design for Emergency Generators		0.00	6,614.40	22,166.67	266,000.00	-15,552.27	2%
	18-01 Rebuild 32" Ross Valve at WLBS		0.00	0.00	5,833.33	70,000.00	-5,833.33	0%
	18-02 New Generators Replacement (Including Air Louvers	11,105.07	700,000.00	1,389,747.79	458,333.33	5,500,000.00	931,414.46	25%
	18-03 SCADA Radio Replacement Work (Installation)		0.00	262.09	64,019.58	512,156.60	-63,757.49	0%
	19-05 WTP PLC Conversion /upgrade construction		0.00	0.00	0.00	150,000.00	-150,000.00	0%
					0.00			
5150	Distribution Repairs	5,524.76	3,000.00	17,324.68	16,666.67	200,000.00	658.01	9%
5175	Facility Maintenance		0.00	1,865.52	2,500.00	30,000.00	-634.48	6%

5125

	June Actual	Month Budget	YTD - ACTUAL	YTD - Budget	Annual Budget	Variance	Percent of Budget Used
Major Maintenance	13,788.48	0.00	29,952.59	26,000.00	312,000.00	10,619.26	10%
MM20-01 WTO - Filter Core Sampling		0.00	0.00	1,250.00	15,000.00	-1,250.00	0%
MM20-02 WTP - VFD Flocc Mixers		0.00	0.00	3,750.00	45,000.00	-3,750.00	0%
MM20-03 WTP - Replace 7 Chlorine On-Line Analyzers		0.00	0.00	1,666.67	20,000.00	-1,666.67	0%
MM20-04 WTP - Traveling Screen Assessment and Inspection		0.00	0.00	1,000.00	12,000.00	-1,000.00	0%
MM20-05 WTP - Chemical Feed Pumps (3)		0.00	14,134.46	1,333.33	16,000.00	12,801.13	88%
MM20-06 WTP - Gearbox Refub at Floc Tanks 2/yr		0.00	0.00	3,500.00	42,000.00	-3,500.00	0%
MM20-07 WTP - Lab pH meter replacement		0.00	2,029.65	208.33	2,500.00	1,821.32	81%
MM20-08 WTP - Vibration Monitoring Program		0.00	0.00	125.00	1,500.00	-125.00	0%
MM20-09 WTP - Valve gat isolation (3) 10Inch		0.00	0.00	2,083.33	25,000.00	-2,083.33	0%
MM20-10 WTP - Low Lift Wet Well Cleanout		0.00	0.00	1,250.00	15,000.00	-1,250.00	0%
MM20-11 WLPS - Crack Injection (West Wall)		0.00	0.00	416.67	5,000.00	-416.67	0%
MM20-12 WLPS - Valve Discharge P1 Refurbish		0.00	0.00	2,083.33	25,000.00	-2,083.33	0%
MM20-13 Hydrant Installation London Lin (blow off) 6622 London Line	13,788.48	0.00	13,788.48	1,666.67	20,000.00	12,121.81	69%
MM20-14 Energy Conservation and efficiency studies		0.00	0.00	666.67	8,000.00	-666.67	0%
MM20-15 Chamber (Flow) Abandonment		0.00	0.00	1,666.67	20,000.00	-1,666.67	0%
MM20-16 Air Relief valves Relocate Air Valve		0.00	0.00	1,250.00	15,000.00	-1,250.00	0%
MM20-17 Hydrant Isolation valve x (3) (Gland bolts)		0.00	0.00	1,250.00	15,000.00	-1,250.00	0%
MM20-18 Repair Clamps & Appurtenances		0.00	0.00	833.33	10,000.00	-833.33	0%
General & Administrative Expenses							
5200 OCWA Operating & Maintenance	362,769.93	362,769.93	2,176,619.58	362,769.92	4,353,239.00	1,813,849.66	50%
5300 Flow Reconciliations		0.00	0.00	12,500.00	150,000.00	-12,500.00	0%
5400 LAWSS Wages & Benefits	11,529.38	20,833.33	77,757.69	20,833.33	250,000.00	56,924.36	31%
5450 WSIB	551.91	0.00	797.61	125.00	1,500.00	672.61	53%
5500 Audit Fees		0.00	14,696.69	1,166.67	14,000.00	13,530.02	105%
5505 Consulting		0.00	0.00	208.33	2,500.00		
5510 Accounting & Legal	1,444.38	0.00	7,402.46	1,666.67	20,000.00	5,735.79	37%
5515 Advertising & Promotions	108.38	0.00	108.38	16.67	200.00	91.71	0%
5520 Membership Fees		0.00	507.04	166.67	2,000.00	340.37	25%
5522 Education / Conference		0.00	1,905.70	333.33	4,000.00	1,572.37	48%
5535 Courier & Postage		0.00	24.39	41.67	500.00	-17.28	5%
5540 Income Taxes		0.00	0.00	0.00	0.00	0.00	0%
5545 Property Taxes		0.00	82,816.20	15,000.00	180,000.00	67,816.20	46%
5550 Property Administration	1,613.07	0.00	2,180.24	1,250.00	15,000.00	930.24	15%
5555 Insurance		0.00	25,568.28	1,750.00	21,000.00	23,818.28	122%
5560 Interest & Bank Charges		0.00	10.85	8.33	100.00	2.52	11%
5565 Office Supplies	761.63	0.00	1,314.95	250.00	3,000.00	1,064.95	44%
5566 Computer Software	7,835.52	0.00	7,835.52	2,000.00	24,000.00	5,835.52	33%
5570 Internet	85.43	0.00	427.15	125.00	1,500.00	302.15	28%
5571 GIS and Internet Services		0.00	0.00	183.33	2,200.00	-183.33	0%
5575 Travel (Includes Mileage)	65.52	0.00	224.01	125.00	1,500.00	99.01	15%
5576 Vehicle Expenses		0.00	91.47	1,041.67	12,500.00	-950.20	1%
5580 Telephone	108.84	0.00	765.03	125.00	1,500.00	640.03	51%
5585 Mobile Phone	177.34	0.00	700.19	125.00	1,500.00	575.19	47%
5590 Meals & Entertainment		0.00	557.32	208.33	2,500.00	348.99	22%
5600 Miscellaneous Expense		0.00	0.00	166.67	2,000.00	-166.67	0%
St.Clair Conservation Consult	14,080.00	0.00	0.00	2,916.67	35,000.00		
Total Expenses	464,134.25	1,086,603.26	3,959,183.63	2,079,982.26	24,391,708.80	1,980,332.50	16%

Lambton Area Water Supply System
Cash Balance Sheet as at June 30, 2020

LAWSS Bank Account on June 1, 2020	<u>12,008,058.01</u>
LAWSS Accounts Receivable - Received	<u>820,603.76</u>
	<u>12,828,661.77</u>
LAWSS Accounts Payable - Paid	1,196,489.01
LAWSS Accounts Payable - Outstanding	<u>393,878.93</u>
	<u>1,590,367.94</u>
LAWSS Bank Account on June 30, 2020	<u>11,632,172.76</u>
Adjusted Bank Balance on June 30, 2020	<u>11,238,293.83</u>
Cash in Reserve	<u>1,994,873.22</u>

Capital Project	Budget Approved	Board Approved	Total	Consultant/Contractor	PO/Contract Fee	Spent	Unspent	Start Date	End Date	Status
20-1 5kV Motor Control Group A & B (Engineering)	\$ 90,000.00		\$ 90,000.00				\$90,000.00			
20-2 WTP Main Plant HVAC Repair (Engineerin Design)	\$ 111,000.00		\$ 111,000.00				\$111,000.00			
20-3 WLPS Reservoir Rehabilitation (Engineering Design)	\$ 120,000.00		\$ 120,000.00				\$120,000.00			
20-4 Indian Road WT Rehabilitation (Engineering Design)	\$ 30,000.00		\$ 30,000.00				\$30,000.00			
20-5 WTP PLC Conversion/Upgrade Construction	\$ 150,000.00		\$ 150,000.00			\$7,171.03	\$142,828.97			In Progress
20-6 Field Gate 4G Network Upgrade	\$ 75,000.00		\$ 75,000.00				\$75,000.00			
ES20-01 System - Master Plan Rebuild	\$ 250,000.00		\$ 250,000.00			\$39,211.13	\$210,788.87			In Progress
ES20-02 Condition Assessment	\$ 30,000.00		\$ 30,000.00				\$30,000.00			
ES20-03 Jacob's Loop Study	\$ 300,000.00		\$ 300,000.00				\$300,000.00			
ES20-04 Jacob's Corrosion Control Impact Study	\$ 113,000.00		\$ 113,000.00				\$113,000.00			
ES20-05 Watermain Condition Assessment Approach	\$ 35,000.00		\$ 35,000.00			\$18,438.91	\$16,561.09			In Progress
ES20-06 Twinning & Grid Reinforcement Class EA	\$ 105,000.00		\$ 105,000.00				\$105,000.00			
R20-1 LAWSS Water Financial Plan				Watson & Associations Economists		\$11,568.08	\$0.00			In Progress
R20-2 WTP Reservoir						\$44,281.59	\$0.00			In Progress
Projects Carry forward										
17-05 Engineering Design for Emergency Generators	\$250,000.00	\$116,000.00	\$ 366,000.00	EXP Services Inc.,	PO0228	\$114,976.31	\$251,023.69			In Progress
18-01 Rebuild 32" Ross Valve at WLBS	\$ 70,000.00		\$ 70,000.00	OCWA		\$0.00	\$70,000.00			In Progress
18-02 New Generators Replacement (Including Air Louvers)	\$ 4,000,000.00	\$ 1,500,000.00	\$ 5,500,000.00	Toromont Cat, EXP, Bibico Eletric		\$2,768,272.50	\$2,731,727.50			In Progress
18-03 SCADA Radio Replacement Work (Installation)	\$ 150,000.00	\$ 362,156.60	\$ 512,156.60	Experteers	PO00237, P00233	\$380,846.03	\$131,310.57			In Progress
19-05 WTP PLC Conversion /upgrade construction	\$ 150,000.00		\$ 150,000.00			\$0.00	\$150,000.00			Planning
Major Maintenance										
MM20-01 WTO - Filter Core Sampling	\$ 15,000.00		\$ 15,000.00			\$0.00	\$15,000.00			In Progress
MM20-02 WTP - VFD Flocc Mixers	\$ 45,000.00		\$ 45,000.00			\$0.00	\$45,000.00			In Progress
MM20-03 WTP - Replace 7 Chlorine On-Line Analyzers	\$ 20,000.00		\$ 20,000.00			\$0.00	\$20,000.00			In Progress
MM20-04 WTP - Traveling Screen Assessment and Inspection	\$ 12,000.00		\$ 12,000.00			\$0.00	\$12,000.00			In Progress
MM20-05 WTP - Chemical Feed Pumps (3)	\$ 16,000.00		\$ 16,000.00			\$14,134.46	\$1,865.54			In Progress
MM20-06 WTP - Gearbox Refub at Floc Tanks 2/yr	\$ 42,000.00		\$ 42,000.00			\$0.00	\$42,000.00			In Progress
MM20-07 WTP - Lab pH meter replacement	\$ 2,500.00		\$ 2,500.00			\$2,029.65	\$470.35			In Progress
MM20-08 WTP - Vibration Monitoring Program	\$ 1,500.00		\$ 1,500.00			\$0.00	\$1,500.00			In Progress
MM20-09 WTP - Valve gat isolation (3) 10Inch	\$ 25,000.00		\$ 25,000.00			\$0.00	\$25,000.00			In Progress
MM20-10 WTP - Low Lift Wet Well Cleanout	\$ 15,000.00		\$ 15,000.00			\$0.00	\$15,000.00			In Progress
MM20-11 WLPS - Crack Injection (West Wall)	\$ 5,000.00		\$ 5,000.00			\$0.00	\$5,000.00			In Progress
MM20-12 WLPS - Valve Discharge P1 Refurbish	\$ 25,000.00		\$ 25,000.00			\$0.00	\$25,000.00			In Progress
MM20-13 Hyddrant Installation London Lin (blow off) 6622 London Line	\$ 20,000.00		\$ 20,000.00			\$0.00	\$20,000.00			In Progress
MM20-14 Energy Conservation and efficiency studies	\$ 8,000.00		\$ 8,000.00			\$0.00	\$8,000.00			In Progress
MM20-15 Chamber (Flow) Abandonment	\$ 20,000.00		\$ 20,000.00			\$0.00	\$20,000.00			In Progress
MM20-16 Air Relief valves Relocate Air Valve	\$ 15,000.00		\$ 15,000.00			\$0.00	\$15,000.00			In Progress
MM20-17 Hydrant Isolation valve x (3) (Gland bolts)	\$ 15,000.00		\$ 15,000.00			\$0.00	\$15,000.00			In Progress
MM20-18 Repair Clamps & Appurtenances	\$ 10,000.00		\$ 10,000.00			\$0.00	\$10,000.00			In Progress

		July Actual	Month Budget	YTD - ACTUAL	YTD - Budget	Annual Budget	Variance	Percent of Budget Used
Municipality Revenue								
4050	Municipality Revenue	-855,451.25	-810,316.25	-5,717,348.47	-5,717,348.47	-9,823,795.00	0.00	58%
	Sarnia	-472,738.50	-472,738.50	-3,309,169.50	-3,309,169.50	-5,672,862.00	0.00	58%
	St. Clair Township	-241,312.17	-241,312.17	-1,689,185.17	-1,689,185.17	-2,895,746.00	0.00	58%
	Plympton-Wyoming	-40,353.75	-40,353.75	-282,476.25	-282,476.25	-484,245.00	0.00	58%
	Lambton Shores	-15,639.08	-15,639.08	-109,473.58	-109,473.58	-187,669.00	0.00	58%
	Warwick	-20,825.17	-20,825.17	-145,775.89	-145,775.89	-249,902.00	0.00	58%
	Point Edward	-19,447.58	-19,447.58	-136,133.08	-136,133.08	-233,371.00	0.00	58%
	Bluewater Power Distribution Corp.			0.00	0.00		0.00	
4120	Brooke-Alvinston Revenue	-45,135.00	0.00	-45,135.00	0.00	-100,000.00	-45,135.00	45%
	Total Municipalities Revenue	-855,451.25	-810,316.25	-5,717,348.47	-5,672,213.47	-9,823,795.00	-45,135.00	58%
Other Revenue								
4130	Emergency Water Taking		0.00	0.00	0.00	0.00	0.00	0%
4150	LAWSS Other Revenue		0.00	0.00	0.00	0.00	0.00	0%
	Canada Coast Guard		0.00	0.00	0.00	-7,000.00	0.00	0%
	County of Lambton		0.00	0.00	0.00	-7,000.00	0.00	0%
	Bluewater Power- Reimbursement Progra,		0.00	0.00	0.00	0.00	0.00	
4430	Misc. Revenue (HST Rebate)		0.00	0.00	0.00	0.00	0.00	#DIV/0!
4430	Misc. Revenue from OCWA		0.00	0.00	0.00	0.00	0.00	0%
4430	Misc. Revenue from St. Clair		0.00	0.00	0.00	0.00	0.00	0%
	Misc. Revenue from OMWA		0.00	0.00	0.00	0.00	0.00	0%
4430	Misc. Revenue from OPA		0.00	0.00	0.00		0.00	
	Total Other Revenue	0.00	0.00	0.00	0.00	-14,000.00	0.00	0%
Investment Interest								
4420	Interest Earned		-22,000.00	-106,514.21	0.00	-58,000.00	-106,514.21	184%
Project Expenses								
	Total Revenue	-855,451.25	-832,316.25	-5,823,862.68	-5,672,213.47	-9,895,795.00	-151,649.21	59%
5100	Project Expenses	156,862.65	700,000.00	1,664,592.74	1,083,199.29	12,430,313.20	1,003,134.02	13%
	20-1 5kV Motor Control Group A & B (Engineering)		0.00	0.00	0.00	90,000.00	-90,000.00	0%
	20-2 WTP Main Plant HVAC Repair (Engineerin Design)		0.00	0.00	0.00	111,000.00	-111,000.00	0%
	20-3 WLPS Reservoir Rehabilitation (Engineering Design)		0.00	0.00	0.00	120,000.00	-120,000.00	0%
	20-4 Indian Road WT Rehabilitation (Engineering Design)		0.00	0.00	0.00	30,000.00	-30,000.00	0%
	20-5 WTP PLC Conversion/Upgrade Construction		7,000.00	7,171.03	0.00	150,000.00	-142,828.97	5%
	20-6 Field Gate 4G Network Upgrade		0.00	0.00	0.00	75,000.00	-75,000.00	0%
	ES20-01 System - Master Plan Rebuild		0.00	39,211.13				
	ES20-02 Condition Assessment		0.00	0.00				
	ES20-03 Jacob's Loop Study		0.00	0.00				
	ES20-04 Jacob's Corrison Control Impact Study		0.00	0.00				
	ES20-05 Watermain Condition Assessment Approach		0.00	18,438.91				
	ES20-06 Twinning & Grid Reinforcement Class EA		0.00	0.00				
	R20-1 Financial Plan		0.00	2,003.15	0.00	0.00		
	R20-2 WTP Reservoir		0.00	44,281.59				
	Tasks carried over from 2018	156,862.65	0.00	1,553,486.93	529,013.05	6,348,156.60	1,003,134.02	24%
	17-05 Engineering Design for Emergency Generators		0.00	6,614.40	22,166.67	266,000.00	-15,552.27	2%
	18-01 Rebuild 32" Ross Valve at WLBS		0.00	0.00	5,833.33	70,000.00	-5,833.33	0%
	18-02 New Generators Replacement (Including Air Louvers	146,047.33	700,000.00	1,535,795.12	458,333.33	5,500,000.00	1,077,461.79	28%
	18-03 SCADA Radio Replacement Work (Installation)	10,815.32	0.00	11,077.41	64,019.58	512,156.60	-52,942.17	2%
	19-05 WTP PLC Conversion /upgrade construction		0.00	0.00	0.00	150,000.00	-150,000.00	0%
					0.00			
5150	Distribution Repairs		3,000.00	17,324.68	16,666.67	200,000.00	658.01	9%
5175	Facility Maintenance		0.00	1,865.52	2,500.00	30,000.00	-634.48	6%

5125

	July Actual	Month Budget	YTD - ACTUAL	YTD - Budget	Annual Budget	Variance	Percent of Budget Used
Major Maintenance	0.00	0.00	29,952.59	26,000.00	312,000.00	10,619.26	10%
MM20-01 WTO - Filter Core Sampling		0.00	0.00	1,250.00	15,000.00	-1,250.00	0%
MM20-02 WTP - VFD Flocc Mixers		0.00	0.00	3,750.00	45,000.00	-3,750.00	0%
MM20-03 WTP - Replace 7 Chlorine On-Line Analyzers		0.00	0.00	1,666.67	20,000.00	-1,666.67	0%
MM20-04 WTP - Travelling Screen Assessment and Inspection		0.00	0.00	1,000.00	12,000.00	-1,000.00	0%
MM20-05 WTP - Chemical Feed Pumps (3)		0.00	14,134.46	1,333.33	16,000.00	12,801.13	88%
MM20-06 WTP - Gearbox Refub at Floc Tanks 2/yr		0.00	0.00	3,500.00	42,000.00	-3,500.00	0%
MM20-07 WTP - Lab pH meter replacement		0.00	2,029.65	208.33	2,500.00	1,821.32	81%
MM20-08 WTP - Vibration Monitoring Program		0.00	0.00	125.00	1,500.00	-125.00	0%
MM20-09 WTP - Valve gat isolation (3) 10Inch		0.00	0.00	2,083.33	25,000.00	-2,083.33	0%
MM20-10 WTP - Low Lift Wet Well Cleanout		0.00	0.00	1,250.00	15,000.00	-1,250.00	0%
MM20-11 WLPS - Crack Injection (West Wall)		0.00	0.00	416.67	5,000.00	-416.67	0%
MM20-12 WLPS - Valve Discharge P1 Refurbish		0.00	0.00	2,083.33	25,000.00	-2,083.33	0%
MM20-13 Hydrant Installation London Lin (blow off) 6622 London Line		0.00	13,788.48	1,666.67	20,000.00	12,121.81	69%
MM20-14 Energy Conservation and efficiency studies		0.00	0.00	666.67	8,000.00	-666.67	0%
MM20-15 Chamber (Flow) Abandonment		0.00	0.00	1,666.67	20,000.00	-1,666.67	0%
MM20-16 Air Relief valves Relocate Air Valve		0.00	0.00	1,250.00	15,000.00	-1,250.00	0%
MM20-17 Hydrant Isolation valve x (3) (Gland bolts)		0.00	0.00	1,250.00	15,000.00	-1,250.00	0%
MM20-18 Repair Clamps & Appurtenances		0.00	0.00	833.33	10,000.00	-833.33	0%
General & Administrative Expenses							
5200 OCWA Operating & Maintenance	362,769.93	362,769.93	2,539,389.51	362,769.92	4,353,239.00	2,176,619.59	58%
5300 Flow Reconciliations		0.00	0.00	12,500.00	150,000.00	-12,500.00	0%
5400 LAWSS Wages & Benefits		20,833.33	77,757.69	20,833.33	250,000.00	56,924.36	31%
5450 WSIB		0.00	797.61	125.00	1,500.00	672.61	53%
5500 Audit Fees		0.00	14,696.69	1,166.67	14,000.00	13,530.02	105%
5505 Consulting		0.00	0.00	208.33	2,500.00		
5510 Accounting & Legal	1,444.38	0.00	8,846.84	1,666.67	20,000.00	7,180.17	44%
5515 Advertising & Promotions		0.00	108.38	16.67	200.00	91.71	0%
5520 Membership Fees		0.00	507.04	166.67	2,000.00	340.37	25%
5522 Education / Conference		0.00	1,905.70	333.33	4,000.00	1,572.37	48%
5535 Courier & Postage		0.00	24.39	41.67	500.00	-17.28	5%
5540 Income Taxes		0.00	0.00	0.00	0.00	0.00	0%
5545 Property Taxes	5,145.99	0.00	87,962.19	15,000.00	180,000.00	72,962.19	49%
5550 Property Administration	3,638.99	0.00	5,819.23	1,250.00	15,000.00	4,569.23	39%
5555 Insurance		0.00	25,568.28	1,750.00	21,000.00	23,818.28	122%
5560 Interest & Bank Charges		0.00	10.85	8.33	100.00	2.52	11%
5565 Office Supplies		0.00	1,314.95	250.00	3,000.00	1,064.95	44%
5566 Computer Software		0.00	7,835.52	2,000.00	24,000.00	5,835.52	33%
5570 Internet		0.00	427.15	125.00	1,500.00	302.15	28%
5571 GIS and Internet Services		0.00	0.00	183.33	2,200.00	-183.33	0%
5575 Travel (Includes Mileage)		0.00	224.01	125.00	1,500.00	99.01	15%
5576 Vehicle Expenses		0.00	91.47	1,041.67	12,500.00	-950.20	1%
5580 Telephone		0.00	765.03	125.00	1,500.00	640.03	51%
5585 Mobile Phone		0.00	700.19	125.00	1,500.00	575.19	47%
5590 Meals & Entertainment		0.00	557.32	208.33	2,500.00	348.99	22%
5600 Miscellaneous Expense		0.00	0.00	166.67	2,000.00	-166.67	0%
St.Clair Conservation Consult		0.00	0.00	2,916.67	35,000.00		
Total Expenses	529,861.94	1,086,603.26	4,489,045.57	2,079,982.26	24,391,708.80	2,353,331.79	18%



Ontario Clean Water Agency
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2020 Client Monthly Operations Report

Lambton Area Water Supply System

July 31, 2020

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: Mark Harris (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

July: ESA inspection at LAWSS and East Lambton Pumping Station on July 10th.

Maintenance, Operations & Distribution Works Summary 2020

Maintenance

July:

Date	(P)reventative Capital Major Mtc (C)orrective	Description
July 2	P	Completed annual inspection of highlift #2 discharge valve.
July 2	P	Completed monthly inspection of eyewash stations and safety showers.
July 2	Capital	Reviewed radio project communications.
July 2	P	Completed monthly calibration checks on all online chlorine analyzers at the water treatment plant.
July 3	P	Conducted monthly calibration checks on East and West Lambton Pumping Station chlorine analyzers.
July 6	Capital	Prep for radio project cut over.
July 7	C	Replaced belts on air handling unit #1 in the high lift pump room.
July 7	Capital	Working with Experteers to install modems for radio project.
July 7	P	Completed monthly inspection of water treatment plant compressors.
July 7	C	Installed foam seal around sand hopper to prevent dust.
July 8-9	P	Five year inspection on freight elevator.
July 9	Capital	Testing communications at Watford and Forest standpipes and East Lambton Pumping Station as part of radio project.
July 9	C	Rotork in to inspect surface wash valve on Filter #5.

July 10	P	Tested generator at East Lambton Pumping Station.
July 10	Capital	Installed cell booster at water treatment plant as part of radio project.
July 10	C	Completed repairs required for the Watford site security audit report.
July 13	C	Repaired fire alarm panel in generator room.
July 13	C	Repaired leaking chlorine injector at East Lambton Pumping Station.
July 13	Capital	Working with WSP at water treatment plant as part of the radio project.
July 13	C	Completing repairs at East Lambton Pumping Station and the water treatment as required by the ESA inspection.
July 14	P	Annual vibration analysis conducted by J.A. Tech.
July 14	P	Completed monthly inspection of vacuum priming system at East Lambton Pumping Station.
July 14	Capital	Working on cut over at Wyoming and Port Lambton standpipes as part of the radio project.
July 14	P	PW Makar onsite at Port Lambton Standpipe to conduct annual site security audit.
July 15	Capital	Completed radio/SCADA switchover at East Lambton Pumping Station as part of the Radio Project.
July 15	P	Completed monthly test of generator at East Lambton Pumping Station.
July 15	P	Completed monthly test of alarm system at East Lambton Pumping Station.
July 16	Capital	Completed radio/SCADA switchover at West Lambton Pumping Station as part of the Radio Project.
July 16	P	Completed test of generators at West Lambton Pumping Station.
July 17	Capital	Working on HMI cut over for radio project.
July 17	Capital	Working on Forest and Watford standpipes cutover.
July 21	P	Conducted monthly chlorine residual test of Residual Management System.
July 21	P	Conducted monthly test of diesel generators at the water treatment plant.
July 21	C	Replaced leaking fitting on cooling piping on generator 2 at the water treatment plant.
July 21	P	Pumped out diesel and fluoride containments at the water treatment.
July 22	P	Conducted monthly test of water treatment plant polymer system.
July 22	P	Tested man down system at the water treatment plant.
July 22	C	Replaced UPS on man down system at the water treatment plant.
July 22	C	Removed and lubricated fan for polymer dosing pump #3.
July 22	P	Conducted monthly inspection of travelling screens.
July 22	P	Completed monthly inspection of elevator.

July 23	C	Installed second keyed entry into West Lambton Pumping Station.
July 23-24	P	Completed monthly inspection of all floc gear drives.
July 28	C	Due to multiple pump failures, the PRV on all chlorine discharge valves were cleaned.
July 28	C	Replaced new check valve on Sombra pit sump pump.
July 28-31	Capital	Working on correcting communications fault at Forest radio system.
July 30	P	Completed monthly verification of handheld chlorine analyzers.
July 31	P	Confirmed calibration of Stations 1, 2, 5 and 7 pH analyzers.
July 31	Capital	At East Lambton Pumping Station with WSP to work on radio project.

Operations and Compliance

July:

July 2	Switched from Actiflo 1 to Actiflo 2 in the Residual Management System.
July 6	Customer complaint at 3551 London Line. The issue was with 'foamy' water. Jodi responded to the complaint and there have been no further issues and the issue seemed to be a one-time occurrence. Homeowner was asked to contact the water plant should it occur again.
July 6	Air handling unit #1 in the highlift pump room belts have failed.
July 6	South clearwell chlorine pump failed. Pump and panel was reset.
July 7	Monthly TSS sample was taken from the Residual Management System effluent.
July 7	Filter #5 surface wash valve failed to reach stop limit. Valve was manually closed.
July 9	Pre chlorine pump #3 failed. Pump and panel were reset.
July 9	South clearwell chlorine pump failed. Pump and panel was reset.
July 13	Filter #3 surface wash valve failed to close. Valve was closed manually.
July 13	South clearwell chlorine pump failed. Pump and panel was reset.
July 16	Filter #5 surface wash valve failed to open. Valve was opened manually.
July 16	Filter #3 surface wash valve failed to close. Valve was closed manually.
July 17	Updated SCADA/PLC failure contingency.
July 17	South clearwell pump #2 failed with P+. Pump and panel was reset.
July 19	Power failure at West Lambton Pumping Station. Pumps had to be restarted but no issues.
July 20	Updated Form 2 for the radio project as the project has been installed.
July 21	Filter #3 surface wash valve failed to close. Valve was closed manually.
July 22	Man down alarm not working.
July 22	South clearwell pump #2 failed with P+. Pump and panel was reset.
July 23	Filter #5 surface wash valve failed to close. Valve was closed manually.
July 24	Filter #3 surface wash valve failed to close. Valve was closed manually.
July 26	South clearwell pumps 1 and 2 failed with airlock. Pumps and panel were reset.

July 26	Filter #5 surface wash valve failed to close. Valve was closed manually.
July 26	Filter #9 surface wash valve failed to close. Valve was closed manually.
July 27	Sent out annual essential services letter to all essential service providers.
July 28	South clearwell pumps 1 and 2 failed with airlock. Pumps and panel were reset.
July 29	Non-compliance caused by the flow valve for Filter #2 turbidity meter being turned to off after calibration and the filter being returned to service. Client, OCWA management and the MECP were notified. Letter to MECP was sent out July 30 th .
July 29	Provided LAWSS GM with highlift flows for COVID study.
July 30	Filter #2 inlet valve failed to open.
July 30	Filter #3 backwash valve failed to close.

Distribution

July:

July 2	Flushing hydrants on Murphy Rd in the City of Sarnia.
July 2	Onsite for meter pit decommissioning at Confederation Line and Wanstead Rd.
July 6	Onsite for third party work at 3638 St Clair Parkway for directional drill near LAWSS watermain.
July 9	Emergency locate #2020218095 in Camlachie.
July 9	Notified of service lateral leak at 259 Moore Line.
July 10	Leak of lateral at 259 Moore Line repaired.
July 14	Onsite for third party work with Bluewater Power at Murphy and Exmouth.
July 16	Onsite for third party work at Country Corners (3962 Lakeshore) for directional bore over LAWSS watermain with Pickard Construction.
July 21	Hydrant flushing in City of Sarnia and St Clair Township on White and Wilkesport Line.
July 22	Onsite for third party work with Bluewater Power at Murphy and Exmouth.
July 27	Onsite for third party work with Lambton County Roads at Lakeshore and Douglass.
July 28	Hydrant flushing on London Line in the City of Sarnia.
July 28	Chamber checks and valve operations in on Hill St and Rokeby Line in St Clair Township.
July 28	Changed out check valve in chamber on Bentpath and St Clair Parkway.
July 30	Onsite for third party work at Highway 40 and Holt Line work for daylighting of LAWSS watermain for the MTO.
July 31	Conducted monthly meter reads.

Call Outs 2020

July: No call outs for July

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
2019	69	62	104	164	189	149	182	153	121	148	81	50
2020	57	54	107	131	165	162	155					

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
2019	236	158	237	236	216	158	313	237	160	160	159	163
2020	241	228	231	240	230	237	309					

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, 2020.

Annual “Schedule G” Reconcilable Commodities Report – Due January 30, 2021.

Health & Safety Work Order Summary by Facility

Start Date: 2020-07-01

End Date: 2020-07-31

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	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, Forrest Standpipe (5544-WDFS)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, Indian Road Tower (5544-WDIR)	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)	2	2	2	5.00	231.56	85.00%	100.00%	-15.00%
		5544, Port Lambton Standpipe (5544-WDPL)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, Watford Standpipe (5544-WDWF)	0	0	0	0.00	0.00	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.Claire Distribution (5544-WDWS)	1	1	1	2.00	97.95	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			3	3	3	7.00	329.51	85.00%

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

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Health & Safety Work Order Summary by Facility

Start Date: 2020-01-01

End Date: 2020-07-31

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	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, Forrest Standpipe (5544-WDFS)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, Indian Road Tower (5544-WDIR)	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)	23	23	23	42.75	1808.75	85.00%	100.00%	-15.00%
		5544, Port Lambton Standpipe (5544-WDPL)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, Watford Standpipe (5544-WDWF)	0	0	0	0.00	0.00	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)	6	6	6	7.25	301.41	85.00%	100.00%	-15.00%
		Lambton Area Water Treatment Plant (5544)	3	3	3	4.50	218.76	85.00%	100.00%	-15.00%
Total			32	32	32	54.50	2328.92	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%

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Work Order Summary by Facility

Start Date: 2020-07-01
End Date: 2020-07-31
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)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, East Lambton PS (5544-WPEL)	1	1	1	5	231.55	0	0	0	0	0	0	0	0	0	0
		5544, Forrest Standpipe (5544-WDFS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, Indian Road Tower (5544-WDIR)	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, Lambton Area RMS (5544-WWLA)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, Lambton Area WTP (5544-WTLA)	10	10	6	24.5	1749.06	0	0	0	0	0	0	0	0	0	0
		5544, Port Lambton Standpipe (5544-WDPL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, Watford Standpipe (5544-WDWF)	1	1	1	4.5	214.27	0	0	0	0	0	0	0	0	0	0
		5544, West Lambton Booster Stn (5544-WPWL)	1	1	1	2.25	440.8	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	9	319.89	0	0	0	0	0
		Lambton Area Water Treatment Plant (5544)	3	3	2	3.5	223.13	0	0	0	0	0	0	0	0	0	0
Grand Total			17	17	11	39.75	2858.81	1	1	1	9.00	319.89	0	0	0	0.00	0.00

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Work Order Summary by Facility

Start Date: 2020-07-01
End Date: 2020-07-31
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	8.5	353.03	0	0	0	0	0	85%	100%	-15.0%
		5544, East Lambton PS (5544-WPEL)	6	6	4	5.25	232.72	2	2	2	5	221.51	0	0	0	0	0	85%	77.77%	7.222%
		5544, Forrest Standpipe (5544-WDFS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, Indian Road Tower (5544-WDIR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	0%	85%
		5544, Lambton Area RMS (5544-WWLA)	2	2	2	2.75	160.33	2	2	2	12	642.34	0	0	0	0	0	85%	100%	-15.0%
		5544, Lambton Area WTP (5544-WTLA)	38	38	26	53.5	2565.71	10	10	10	1612.5	50506.31	0	0	0	0	0	85%	72.41%	12.58%
		5544, Port Lambton Standpipe (5544-WDPL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, Watford Standpipe (5544-WDWF)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, West Lambton Booster Stn (5544-WPWL)	10	10	3	5	221.14	2	2	2	7.25	327.38	0	0	0	0	0	85%	46.15%	38.84%
		5544, West ST.Clair Distribution (5544-WDWS)	0	0	0	0	0	3	3	3	14.75	692.15	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%	66.66%	18.33%
Grand Total			56	56	35	66.5	3179.9	23	23	23	1660	52742.72	0	0	0	0	0	85%	100%	-15.0%

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Work Order Summary by Facility

Start Date: 2020-01-01
End Date: 2020-07-31
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)	133000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, East Lambton Distribution (5544-WDEL)	3	3	3	30.75	1321.87	1	1	1	13.25	545.45	2	2	2	16	3764.87
		5544, East Lambton PS (5544-WPEL)	5	5	5	31.5	1354.23	0	0	0	0	0	1	1	1	8	527.2
		5544, Forrest Standpipe (5544-WDFS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, Indian Road Tower (5544-WDIR)	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, Lambton Area RMS (5544-WWLA)	2	2	2	13.5	580.55	0	0	0	0	0	0	0	0	0	0
		5544, Lambton Area WTP (5544-WTLA)	30	30	23	215.5	14629.99	0	0	0	0	0	2	2	2	8	395.4
		5544, Port Lambton Standpipe (5544-WDPL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, Watford Standpipe (5544-WDWF)	1	1	1	4.5	214.27	0	0	0	0	0	0	0	0	0	0
		5544, West Lambton Booster Stn (5544-WPWL)	6	6	6	19.25	1178.25	0	0	0	0	0	0	0	0	0	0
		5544, West ST.Clair Distribution (5544-WDWS)	2	2	1	22.5	1073.26	1	1	1	9	319.89	1	1	1	6	211.62
		Lambton Area Water Treatment Plant (5544)	7	7	6	12.25	2102.68	0	0	0	0	0	0	0	0	0	0
Grand Total			57	57	47	349.75	22455.1	2	2	2	22.25	865.34	6	6	6	38	4899.09

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Work Order Summary by Facility

Start Date: 2020-01-01
End Date: 2020-07-31
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)	133000	0	0	0	0	0	0	0	0	0	0	1	1	0	148.75	8690.07	85%	100%	-15.0%
		5544, East Lambton Distribution (5544-WDEL)	6	6	0	0	0	28	28	28	77.75	3011.8	1	1	1	17.25	14528.39	85%	85%	0%
		5544, East Lambton PS (5544-WPEL)	41	41	37	52	2502.87	16	16	16	71	2950.36	0	0	0	0	0	85%	93.65%	-8.65%
		5544, Forrest Standpipe (5544-WDFS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, Indian Road Tower (5544-WDIR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	0%	85%
		5544, Lambton Area RMS (5544-WWLA)	20	20	20	50.75	2460.31	14	14	14	107	5414.55	0	0	0	0	0	85%	100%	-15.0%
		5544, Lambton Area WTP (5544-WTLA)	254	254	229	738.5	33734.51	88	88	85	10994.75	321095.3	4	4	2	23	17209.88	85%	90.64%	-5.64%
		5544, Port Lambton Standpipe (5544-WDPL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, Watford Standpipe (5544-WDWF)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, West Lambton Booster Stn (5544-WPWL)	58	58	47	60	2755.11	14	14	14	90.5	4344.92	0	0	0	0	0	85%	85.89%	-0.89%
		5544, West ST.Clair Distribution (5544-WDWS)	3	3	0	0.5	18.21	21	21	20	57.75	2508.95	1	1	0	10.5	651.94	85%	82.14%	2.857%
		Lambton Area Water Treatment Plant (5544)	8	8	5	46.25	2279.54	1	1	1	30.75	1513.28	1	1	0	0	0	85%	75%	9.999%
Grand Total			390	390	338	948	43750.55	182	182	178	11429.5	340839.1	8	8	3	199.5	41080.28	85%	89.63%	10.36%

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Ontario Clean Water Agency
Time Series Info Report

Report extracted 08/07/2020 09:32

From: 01/01/2020 to 31/07/2020

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

	01/2020	02/2020	03/2020	04/2020	05/2020	06/2020	07/2020	Total	Avg	Max	Min
Coagulation/Floculation / Coagulant Dosage-Calculated - mg/L											
Max IH	26.437	30.355	29.818	28.267	27.141	23.142	23.13			30.355	
Mean IH	20.802	24.673	25.189	23.287	21.491	19.913	20.225		22.209		
Min IH	15.602	20.415	20.129	16.333	16.002	17.122	15.408				15.408
Coagulation/Floculation / Coagulant Used - kg											
Max IH	1241.6	1459.2	1638.4	1190.4	1459.2	1779.2	2163.2			2163.2	
Mean IH	964.129	1110.069	1104.103	979.2	1063.226	1296.64	1533.11		1150.558		
Min IH	691.2	870.4	793.6	780.8	832	908.8	1139.2				691.2
Total IH	29888	32192	34227.2	29376	32960	38899.2	47526.4	245068.8			
Coagulation/Floculation / Coagulant Volume Used - m³											
Max IH	0.97	1.14	1.28	0.93	1.14	1.39	1.69			1.69	
Mean IH	0.753	0.867	0.863	0.765	0.831	1.013	1.198		0.899		
Min IH	0.54	0.68	0.62	0.61	0.65	0.71	0.89				0.54
Total IH	23350	25150	26740	22950	25750	30390	37130	191460			
DW / Trihalomethane: Total - µg/l											
Max Lab	31				39					39	
Mean Lab	29.667				34.667				32.167		
Min Lab	28				28						28
East Lambton Booster Station / Cl Residual: Inlet Free - mg/L											
Max OL	1.49	1.49	1.83	1.63	1.58	1.52	1.47			1.83	
Mean OL	1.359	1.372	1.434	1.424	1.419	1.382	1.296		1.384		
Min OL	0	0	0	0	0	0	0				0
Filter Backwash / Backwash Volume - m³											
Max IH	2988	4208	3666	2702	2716	3016	3020			4208	
Mean IH	2017.581	2051.793	2001.742	1775.2	1903.613	2066.133	2190.516		2001.216		
Min IH	1208	1200	0	602	1204	1206	1794				0
HFS / Fluoride Dosage - mg/L											
Max IH	0.63	0.633	0.647	0.645	0.685	0.594	0.87			0.87	
Mean IH	0.55	0.556	0.555	0.554	0.551	0.534	0.532		0.547		
Min IH	0.477	0.516	0.433	0.491	0.41	0.399	0.459				0.399
HFS / Fluoride Used - l											
Max IH	88.823	94.553	91.689	88.823	120.341	137.533	171.932			171.932	
Mean IH	83.185	82.796	81.437	77.934	90.587	114.818	132.568		94.858		
Min IH	68.766	77.361	63.295	68.762	71.631	85.957	106.015				63.295
Total IH	2578.73	2401.087	2524.546	2338.016	2808.208	3444.541	4109.602	20204.73			
HFS / HFS (kg) - kg											
Max IH	108.364	115.355	111.86	108.364	146.816	167.79	209.757			209.757	
Mean IH	101.486	101.011	99.353	95.079	110.517	140.078	161.733		115.727		
Min IH	83.895	94.38	77.22	83.89	87.39	104.868	129.338				77.22
Total IH	3146.051	2929.326	3079.946	2852.38	3426.014	4202.34	5013.714	24649.77			
HFS / Treated Water Fluoride Residual - mg/L											
Max OL	2	0.81	0.92	0.8	0.81	0.81	0.75			2	
Mean OL	0.544	0.63	0.692	0.666	0.673	0.661	0.599		0.638		
Min OL	0	0.23	0.51	0.55	0.56	0.21	0.44				0
Post Disinfection / Chlorine Dosage - mg/L											
Max IH	2.078	1.897	2.157	2.232	2.063	2.016	3.085			3.085	
Mean IH	1.449	1.561	1.676	1.599	1.618	1.796	1.955		1.666		
Min IH	0.822	1.03	1.288	0.933	1.134	1.582	1.109				0.822
Post Disinfection / Hypochlorite Dosage - mg/L											
Max IH	17.316	15.809	17.977	18.596	17.191	16.797	25.705			25.705	
Mean IH	12.072	13.011	13.971	13.325	13.483	14.971	16.289		13.88		
Min IH	6.854	8.586	10.733	7.779	9.447	13.18	9.244				6.854
Post Disinfection / Hypochlorite Used - kg											
Max IH	777.85	680.325	1083.35	707.35	1025.775	1294.85	1834.175			1834.175	
Mean IH	559.262	585.231	615.927	560.867	672.782	972.927	1237.768		744.805		
Min IH	254.975	358.375	440.625	420.65	425.35	701.475	566.35				254.975
Total IH	17337.13	16971.7	19093.75	16826	20856.25	29187.82	38370.8	158643.4			
Post Disinfection / Hypochlorite Volume-Total - m³											
Max IH	0.662	0.579	0.922	0.602	0.873	1.102	1.561			1.561	
Mean IH	0.476	0.498	0.524	0.477	0.573	0.828	1.053		0.634		
Min IH	0.217	0.305	0.375	0.358	0.362	0.597	0.482				0.217
Total IH	14755	14444	16250	14320	17750	24840.7	32656	135015.7			
Post Disinfection / Station 7 Cl Residual: Free - mg/L											
Max OL	5	1.75	3.1	1.84	1.85	1.8	1.82			5	
Mean OL	1.608	1.636	1.816	1.664	1.662	1.613	1.62		1.66		
Min OL	0	1.45	1.45	0	1.4	0	1.33				0

[illegible]

Mean IH	0.597	0.599	0.634	0.61	0.627	0.609	0.617		0.614			
Min IH	0.46	0.44	0.51	0.42	0.43	0.44	0.44				0.42	
Zebra Mussel Control / Cl Residual: Total - mg/L												
Max IH	0.84	0.82	0.86	0.83	0.84	0.803	0.88			0.88		
Mean IH	0.759	0.754	0.785	0.746	0.756	0.728	0.736		0.752			
Min IH	0.61	0.6	0.67	0.53	0.52	0.53	0.55				0.52	
Zebra Mussel Control / Hypochlorite Dosage - mg/L												
Max IH	10.423	10.787	10.696	12.413	10.77	9.805	10.575			12.413		
Mean IH	8.812	9.472	9.521	9.375	9.095	8.684	8.918		9.123			
Min IH	8.102	8.095	8.656	6.916	6.906	7.468	7.841				6.906	
Zebra Mussel Control / Hypochlorite Used - kg												
Max IH	470	492.325	667.4	504.075	635.675	791.95	1110.375			1110.375		
Mean IH	407.081	425.512	418.262	393.938	451.882	565.998	677.141		477.574			
Min IH	339.575	358.375	278.475	312.55	323.125	381.875	489.975				278.475	
Total IH	12619.5	12339.85	12966.13	11818.15	14008.35	16979.93	20991.38	101723.3				
Zebra Mussel Control / Hypochlorite Volume-Total-1 - m³												
Max IH	0.4	0.419	0.568	0.429	0.541	0.674	0.945			0.945		
Mean IH	0.346	0.362	0.356	0.335	0.385	0.482	0.576		0.406			
Min IH	0.289	0.305	0.237	0.266	0.275	0.325	0.417				0.237	
Total IH	10740	10502	11035	10058	11922	14451	17865	86573				
Filter Backwash / Backwash Volume - m³												
Total IH	62545	59502	62054	53256	59012	61984	67906	426259				

Lambton Area WT 2020

For the period of Jan 1, 2020 to December 31, 2020

Org. # : 5544
Project # : LAWSSM5544W-002
Date : 7/31/20

	2019 Actuals	2020 Budget	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	YTD Budget	YTD Actuals	Variance (< YTD budget)
OPERATING CHARGES									
OCWA Service Fee	2,166,229.00	2,214,969.15	553,742.29	553,742.29			2,214,969.15	1,107,484.58	-1,107,484.58
Diesel	5,119.97	9,000.00	0.00	0.00			9,000.00	0.00	-9,000.00
Insurance**	91,050.24	90,960.00	24,076.66	24,076.66			90,960.00	48,153.32	-42,806.68
Point Edward Sewage	85,869.98	92,450.00	0.00	0.00			92,450.00	0.00	-92,450.00
Chemicals	243,931.95	265,860.00	59,055.53	58,368.73			265,860.00	117,424.26	-148,435.74
Hydro	1,328,357.92	1,525,000.00	314,438.06	295,310.53			1,525,000.00	609,748.59	-915,251.41
Sludge Haulage	99,794.49	150,000.00	29,418.82	29,713.01			150,000.00	59,131.83	-90,868.17
TOTAL OPERATING COSTS	4,020,353.55	4,348,239.15	980,731.36	961,211.22	0.00	0.00	4,348,239.15	1,941,942.58	-2,406,296.58
TOTAL OPERATING CHARGES	4,020,353.55	4,348,239.15	980,731.36	961,211.22	0.00	0.00	4,348,239.15	1,941,942.58	-2,406,296.58

Note: The information contained in this report is current as at June 30, 2020



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

2020 Client Monthly Operations Report

Lambton Area Water Supply System

August 31, 2020

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:	Mark Harris (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

August: Internal audit report completed on August 6th.

Maintenance, Operations & Distribution Works Summary 2020

Maintenance

August:

Date	(P)reventative Capital Major Mtc (C)orrective	Description
August 4	C	Rotork in to look at actuator on Filter #3 surface wash valve.
August 4	P	Conducted 2 year inspection on MCCs at the water treatment plant.
August 4	P	Conducted annual inspection of floc actuator at the water treatment plant.
August 5	C	Polair in at East Lambton Pumping Station to look at air conditioning system.
August 6	Capital	Contractors in for walkthrough for generator project.
August 6	P	Completed annual inspection of PLC panels at West Lambton Pumping Station.
August 6	P	Completed annual inspection of PLC panels at the water treatment plant.
August 6	C	Replaced faulty power supply in the bisulphite control panel for the Residual Management System.
August 6	C	Hydrant #46 in Plympton Wyoming back in service after getting closing nut back on threads.
August 6-7	P	Completed monthly maintenance on chlorine analyzers at the water treatment plant.
August 7	P	Completed monthly maintenance on chlorine analyzer at

		West Lambton Pumping Station.
August 10	C	Repaired sodium hypo leak at West Lambton Pumping Station.
August 10	P	Completed monthly maintenance on streaming current meters.
August 10	P	Completed monthly maintenance on portable turbidity meter.
August 10	P	Completed monthly maintenance on Residual Management System turbidity meters.
August 10	P	Conducted quarterly test of critical control point limit alarms.
August 10	C	Replaced control fuse on filter #3 backwash valve.
August 10	P	Completed monthly inspection of fluoride analyzer.
August 11	C	Repaired small leak on sand auger in the Residual Management System.
August 11	C	Rotork has completed repairs on the backwash valve for Filter #3.
August 11	P	Conducted monthly maintenance on pH probes at the water treatment plant.
August 11	C	Breaker on inlet valve #2 now operational.
August 11	P	Pumped out diesel and HFS containment areas.
August 12	Major Mtc	Repaired hydrant isolation valve on hydrant #74 at 2977 St Clair Parkway.
August 12	P	Conducted monthly test of eyewash and emergency shower stations.
August 13	P	Working on annual flow meter calibrations in Point Edward.
August 13	C	Replaced belt on #2 air handling unit at the water treatment plant.
August 13	P	Completed six month inspection on Pumps 1, 2 and 5 at West Lambton Pumping Station.
August 13-14	C	Looking into deficiencies from site security audit at Indian Rd Tower.
August 14	Capital	Meeting with LAWSS GM in regards to LAWSS Master Plan.
August 17	C	Reset card reader for entry and exit at the water treatment plant.
August 17	P	Completed monthly inspection on vacuum system at East Lambton Pumping Station.
August 18	P	Completed monthly inspection and calibration of chlorine analyzers at East Lambton Pumping Station.
August 18-19	Major Mtc	Crack injection completed at West Lambton Pumping Station and the water treatment plant.
August 18	C	Polair in to work on the HVAC system in the MCC room at the water treatment plant.
August 18	Capital	Meeting with contractors in regards to the new generator project.
August 19	P	Completed monthly calibration on hand held chlorine analyzers.
August 20	P	Conducted monthly test of polymer system at the water

		treatment plant.
August 20	P	Completed monthly maintenance on floc gear drives.
August 21	C	Work required as part of the site security audit at Port Lambton has been completed.
August 21	P	Completed annual inspection of PLC panels at East Lambton Pumping Station.
August 24	Major Mtc	Replaced hydrocyclone wear parts on Actiflo #1.
August 24	P	Annual inspection of PLC panels in the Residual Management System is complete.
August 24	P	Completed monthly maintenance on Hach handheld chlorine analyzers.
August 24	C	Made repairs to leaking chlorine line at West Lambton Pumping Station.
August 24-25	P	Completed monthly calibration of all online turbidity analyzers at the water treatment plant.
August 25	Major Mtc	Replaced hydrocyclone wear parts on Actiflo #2.
August 25	P	Completed monthly maintenance on Hach portable turbidity meter.
August 25	C	Rotork in to look at filter inlet valves 1 and 2.
August 26	P	Completed monthly maintenance on travelling screens at the water treatment plant.
August 26-31	C	Correcting deficiencies of the LAWSS radio project.
August 27	C	Ainsworth in to clear potential blockage of thickener effluent to EQ tank pipe.
August 31	C	Ainsworth in to repair MCC air conditioner system at the water treatment plant.

Operations and Compliance

August:

August 2	South clearwell pump #2 failed with airlock. Pump and panel were reset and restarted.
August 5	Filter #6 inlet valve failed to close prior to backwash. Valve was manually closed.
August 6	Internal audit report completed.
August 9	South clearwell pumps 1 and 2 failed with airlock. Pump and panel were reset and restarted.
August 10	Quarterly THM, HAA and nitrate samples taken.
August 10	Monthly Total Suspended Solids taken in the Residual Management System.
August 10	During weekly checks found small sodium hypo leak at West Lambton Pumping Station.
August 10	South clearwell pump failed with airlock. Pump and panel were reset and restarted.
August 11	Pre chlorine pump failed with a P+ alarm. Pump and panel were reset and

	restarted.
August 12	Filter #2 inlet valve failed to close in both auto and manual mode.
August 15	Pre chlorine pump failed with a P+ alarm. Pump and panel were reset and restarted.
August 15	South clearwell pump #2 failed with airlock. Pump and panel were reset and restarted.
August 16	South clearwell pumps 1 and 2 failed with airlock. Pump and panel were reset and restarted.
August 16	Power outages at the water treatment plant due to storm. No major issues. Pumps had to be reset.
August 17	South clearwell pump failed with airlock. Pump and panel were reset and restarted.
August 17	Filter #4 inlet valve failed to open or close in automatic or manual.
August 18	Power failure at East Lambton Pumping Station. Generator on with no issues.
August 18	Switched over sample pumps for Station 1, 5 and 6.
August 18	Switched from alum pump 1 to alum pump 2.
August 19	Reviewed WSIB certificates for commonly used contractors at LAWSS. No changes required.
August 24	South clearwell pumps 1 and 2 failed with airlock. Pump and panel were reset and restarted.
August 25	South clearwell pump failed with a P+ alarm. Pump and panel were reset and restarted.
August 26	Testing both Actiflo systems after install of hydrocyclone wear parts. Both Actiflos running well and retaining sand.
August 26	Created THM and HAA reports for third quarter.
August 26	Notified of provisional adverse for Point Edward and St Clair Township. Resamples taken.
August 28	Second set of samples taken for adverse results.
August 27	City of Sarnia has large watermain break increasing treated water flow rate.
August 29	Ran pump 1 at West Lambton Pumping Station.
August 30	Pre Chlorine pump failed with airlock. Pump and panel were reset and restarted.
August 30	Ran pump 2 at West Lambton Pumping Station.

Distribution

August:

August 5	Flushing hydrants on London Line in Sarnia and Plympton Wyoming.
August 5	Hydrant #46 in Plympton Wyoming on London Line will not close.
August 6	Hydrant #46 in Plympton Wyoming back in service after repairs.
August 7	Valve operations and chamber check on London Line in Plympton Wyoming.
August 13	Endress and Hauser in to calibrate flow meters in Point Edward.
August 14	Hydrant flushing in St Clair Township on Wilkesport Line.
August 16	Emergency locate #2020340331.

August 17	Emergency locate #2020346549 at 3675 Confederation Line.
August 25	Flushing hydrants on the St Clair Parkway in St Clair Township.
August 25	Flushing hydrants on London Line in Plympton-Wyoming.
August 26	On site for third party work on London Line in the City of Sarnia.
August 26	On site for third party work on Confederation and Brock in the City of Sarnia for work being done by Vink.
August 27	On site for third party work on London Rd and Murphy for work being done by Bluewater Power.
August 27	Flushing hydrants on St Clair Parkway in St Clair Township.
August 28	Site visit for work being done on Hwy 40 and LaSalle Line.
August 31	Site visit for work being done on Hwy 40 and LaSalle Line.

Call Outs 2020

August: Call out for sodium bisulphite pump failure in the Residual Management System on August 3rd. Issue was with a faulty 24V power supply to the pump relays. Pump was placed in hand and operated in hand until power supply was restored.

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
2019	69	62	104	164	189	149	182	153	121	148	81	50
2020	57	54	107	131	165	162	155	158				

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
2019	236	158	237	236	216	158	313	237	160	160	159	163
2020	241	228	231	240	230	237	309	156				

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, 2020.

Annual “Schedule G” Reconcilable Commodities Report – Due January 30, 2021.

Health & Safety Work Order Summary by Facility

Start Date: 2020-08-01

End Date: 2020-08-31

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	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, Forrest Standpipe (5544-WDFS)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, Indian Road Tower (5544-WDIR)	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)	2	2	2	5.75	288.09	85.00%	100.00%	-15.00%
		5544, Port Lambton Standpipe (5544-WDPL)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, Watford Standpipe (5544-WDWF)	0	0	0	0.00	0.00	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)	1	1	1	1.00	38.16	85.00%	100.00%	-15.00%
		Lambton Area Water Treatment Plant (5544)	1	1	1	1.50	89.69	85.00%	100.00%	-15.00%
		Total			4	4	4	8.25	415.94	85.00%

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

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Health & Safety Work Order Summary by Facility

Start Date: 2020-01-01

End Date: 2020-08-31

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	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, Forrest Standpipe (5544-WDFS)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, Indian Road Tower (5544-WDIR)	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)	25	25	25	48.50	2096.84	85.00%	100.00%	-15.00%
		5544, Port Lambton Standpipe (5544-WDPL)	0	0	0	0.00	0.00	85.00%	100.00%	-15.00%
		5544, Watford Standpipe (5544-WDWF)	0	0	0	0.00	0.00	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)	7	7	7	8.25	339.57	85.00%	100.00%	-15.00%
		Lambton Area Water Treatment Plant (5544)	4	4	4	6.00	308.45	85.00%	100.00%	-15.00%
		Total	36	36	36	62.75	2744.86	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%

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Work Order Summary by Facility

Start Date: 2020-08-01
End Date: 2020-08-31
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	6.5	414.38	0	0	0	0	0	0	0	0	0	0
		5544, East Lambton PS (5544-WPEL)	1	1	1	1	46.31	0	0	0	0	0	0	0	0	0	0
		5544, Forrest Standpipe (5544-WDFS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, Indian Road Tower (5544-WDIR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, Lambton Area RMS (5544-WWLA)	2	2	1	6	404.29	0	0	0	0	0	1	1	1	8	551.88
		5544, Lambton Area WTP (5544-WTLA)	2	2	1	0.5	21.69	0	0	0	0	0	0	0	0	0	0
		5544, Port Lambton Standpipe (5544-WDPL)	1	1	1	6	277.86	0	0	0	0	0	0	0	0	0	0
		5544, Watford Standpipe (5544-WDWF)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		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)	6	6	6	16.5	2220.42	1	1	1	3	191.25	0	0	0	0	0
		Lambton Area Water Treatment Plant (5544)	5	5	2	27.25	1768.61	0	0	0	0	0	0	0	0	0	0
Grand Total			18	18	13	63.75	5153.56	1	1	1	3.00	191.25	1	1	1	8.00	551.88

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Work Order Summary by Facility

Start Date: 2020-08-01
End Date: 2020-08-31
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	310.56	0	0	0	0	0	85%	100%	-15.0%
		5544, East Lambton PS (5544-WPEL)	3	3	3	6	357.14	2	2	2	6.5	293.93	0	0	0	0	0	85%	100%	-15.0%
		5544, Forrest Standpipe (5544-WDFS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, Indian Road Tower (5544-WDIR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, Lambton Area RMS (5544-WWLA)	3	3	3	5	290.46	2	2	2	7.75	446.53	2	2	2	20	1061	85%	87.5%	-2.50%
		5544, Lambton Area WTP (5544-WTLA)	30	30	27	56.75	2723.08	11	11	10	1562	43571.98	0	0	0	0	0	85%	88.37%	-3.37%
		5544, Port Lambton Standpipe (5544-WDPL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, Watford Standpipe (5544-WDWF)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, West Lambton Booster Stn (5544-WPWL)	7	7	6	12.5	746.42	2	2	2	10	537.56	0	0	0	0	0	85%	88.88%	-3.88%
		5544, West ST.Clair Distribution (5544-WDWS)	1	1	0	0	0	5	5	5	20.5	918.85	1	1	0	7.25	345.83	85%	92.30%	-7.30%
		Lambton Area Water Treatment Plant (5544)	1	1	1	1.5	89.69	1	1	0	12.5	762	0	0	0	0	0	85%	42.85%	42.14%
Grand Total			45	45	40	81.75	4206.79	27	27	25	1626.5	46841.41	3	3	2	27.25	1406.83	85%	100%	-15.0%

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Work Order Summary by Facility

Start Date: 2020-01-01
End Date: 2020-08-31
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)	133000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, East Lambton Distribution (5544-WDEL)	4	4	4	37.25	1736.25	1	1	1	13.25	545.45	2	2	2	16	3764.87
		5544, East Lambton PS (5544-WPEL)	6	6	6	32.5	1400.54	0	0	0	0	0	1	1	1	8	527.2
		5544, Forrest Standpipe (5544-WDFS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5544, Indian Road Tower (5544-WDIR)	1	1	0	6.25	289.44	0	0	0	0	0	0	0	0	0	0
		5544, Lambton Area RMS (5544-WWLA)	4	4	3	19.5	984.84	0	0	0	0	0	1	1	1	8	551.88
		5544, Lambton Area WTP (5544-WTLA)	32	32	25	231.75	15761.94	0	0	0	0	0	2	2	2	8	395.4
		5544, Port Lambton Standpipe (5544-WDPL)	1	1	1	6	277.86	0	0	0	0	0	0	0	0	0	0
		5544, Watford Standpipe (5544-WDWF)	1	1	1	4.5	214.27	0	0	0	0	0	0	0	0	0	0
		5544, West Lambton Booster Stn (5544-WPWL)	6	6	6	19.25	1178.25	0	0	0	0	0	0	0	0	0	0
		5544, West ST.Claire Distribution (5544-WDWS)	8	8	8	48.25	10393.36	2	2	2	12	511.14	1	1	1	6	211.62
Grand Total			63	63	54	405.25	32236.75	3	3	3	25.25	1056.59	7	7	7	46.00	5450.97

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Work Order Summary by Facility

Start Date: 2020-01-01
End Date: 2020-08-31
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)	133000	0	0	0	0	0	0	0	0	0	1	1	0	148.75	8690.07	85%	100%	-15.0%	
		5544, East Lambton Distribution (5544-WDEL)	6	6	3	4.25	270.94	32	32	32	85	3322.36	1	1	1	17.25	14528.39	85%	93.33%	-8.33%
		5544, East Lambton PS (5544-WPEL)	44	44	40	58	2860.01	18	18	18	77.5	3244.29	0	0	0	0	0	85%	94.20%	-9.20%
		5544, Forrest Standpipe (5544-WDFS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, Indian Road Tower (5544-WDIR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	0%	85%
		5544, Lambton Area RMS (5544-WWLA)	23	23	23	55.75	2750.77	16	16	16	114.75	5861.08	2	2	2	20	1061	85%	97.72%	-12.7%
		5544, Lambton Area WTP (5544-WTLA)	284	284	257	839.25	49733.95	99	99	96	12578.25	365835.1	4	4	2	23	17209.88	85%	91.12%	-6.12%
		5544, Port Lambton Standpipe (5544-WDPL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, Watford Standpipe (5544-WDWF)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85%	100%	-15.0%
		5544, West Lambton Booster Stn (5544-WPWL)	65	65	53	72.5	3501.53	16	16	16	100.5	4882.48	0	0	0	0	0	85%	86.20%	-1.20%
		5544, West ST.Clair Distribution (5544-WDWS)	4	4	0	0.5	18.21	26	26	25	78.25	3427.8	2	2	0	17.75	997.77	85%	87.80%	-2.80%
Grand Total			426	426	376	1030.25	59135.41	207	207	203	13034.25	386573.1	10	10	5	226.75	42487.11	85%	100%	-15.0%

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Ontario Clean Water Agency
Time Series Info Report

Report extracted 09/04/2020 15:34

From: 01/01/2020 to 31/08/2020

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

	01/2020	02/2020	03/2020	04/2020	05/2020	06/2020	07/2020	08/2020	Total	Avg	Max	Min
Coagulation/Floculation / Coagulant Dosage-Calculated - mg/L												
Max IH	26.437	30.355	29.818	28.267	27.141	23.142	23.13	24.456			30.355	
Mean IH	20.802	24.673	25.189	23.287	21.491	19.913	20.225	20.231		21.957		
Min IH	15.602	20.415	20.129	16.333	16.002	17.122	15.408	17.292				15.408
Coagulation/Floculation / Coagulant Used - kg												
Max IH	1241.6	1459.2	1638.4	1190.4	1459.2	1779.2	2163.2	1740.8			2163.2	
Mean IH	964.129	1110.069	1104.103	979.2	1063.226	1296.64	1533.11	1302.297		1169.836		
Min IH	691.2	870.4	793.6	780.8	832	908.8	1139.2	1024				691.2
Total IH	29888	32192	34227.2	29376	32960	38899.2	47526.4	40371.2	285440			
Coagulation/Floculation / Coagulant Volume Used - m³												
Max IH	0.97	1.14	1.28	0.93	1.14	1.39	1.69	1.36			1.69	
Mean IH	0.753	0.867	0.863	0.765	0.831	1.013	1.198	1.017		0.914		
Min IH	0.54	0.68	0.62	0.61	0.65	0.71	0.89	0.8				0.54
Total IH	23350	25150	26740	22950	25750	30390	37130	31540	223000			
DW / Trihalomethane: Total - µg/l												
Max Lab	31				39			64			64	
Mean Lab	29.667				34.667			54.333		39.556		
Min Lab	28				28			43				28
East Lambton Booster Station / Cl Residual: Inlet Free - mg/L												
Max OL	1.49	1.49	1.83	1.63	1.58	1.52	1.47	1.48			1.83	
Mean OL	1.359	1.372	1.434	1.424	1.419	1.382	1.296	1.244		1.366		
Min OL	0	0	0	0	0	0	0	1.05				0
Filter Backwash / Backwash Volume - m³												
Max IH	2988	4208	3666	2702	2716	3016	3020	3378			4208	
Mean IH	2017.581	2051.793	2001.742	1775.2	1903.613	2066.133	2190.516	2167.968		2022.402		
Min IH	1208	1200	0	602	1204	1206	1794	1200				0
HFS / Fluoride Dosage - mg/L												
Max IH	0.63	0.633	0.647	0.645	0.685	0.594	0.87	0.589			0.87	
Mean IH	0.55	0.556	0.555	0.554	0.551	0.534	0.532	0.52		0.544		
Min IH	0.477	0.516	0.433	0.491	0.41	0.399	0.459	0.351				0.351
HFS / Fluoride Used - l												
Max IH	88.823	94.553	91.689	88.823	120.341	137.533	171.932	160.451			171.932	
Mean IH	83.185	82.796	81.437	77.934	90.587	114.818	132.568	113.887		97.275		

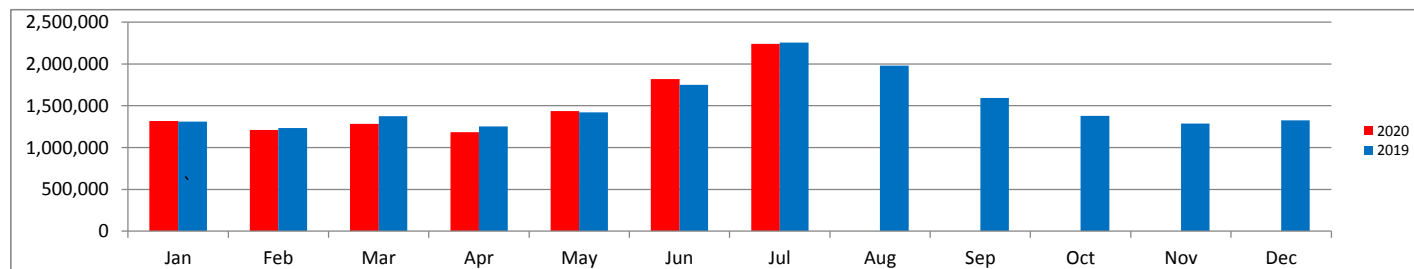
Min IH	68.766	77.361	63.295	68.762	71.631	85.957	106.015	83.582					63.295
Total IH	2578.73	2401.087	2524.546	2338.016	2808.208	3444.541	4109.602	3530.489	23735.22				
HFS / HFS (kg) - kg													
Max IH	108.364	115.355	111.86	108.364	146.816	167.79	209.757	195.75			209.757		
Mean IH	101.486	101.011	99.353	95.079	110.517	140.078	161.733	138.942		118.676			
Min IH	83.895	94.38	77.22	83.89	87.39	104.868	129.338	101.97					77.22
Total IH	3146.051	2929.326	3079.946	2852.38	3426.014	4202.34	5013.714	4307.197	28956.97				
HFS / Treated Water Fluoride Residual - mg/L													
Max OL	2	0.81	0.92	0.8	0.81	0.81	0.75	0.71			2		
Mean OL	0.544	0.63	0.692	0.666	0.673	0.661	0.599	0.605		0.633			
Min OL	0	0.23	0.51	0.55	0.56	0.21	0.44	0.48					0
Post Disinfection / Chlorine Dosage - mg/L													
Max IH	2.078	1.897	2.157	2.232	2.063	2.016	3.085	2.566			3.085		
Mean IH	1.449	1.561	1.676	1.599	1.618	1.796	1.955	2.276		1.743			
Min IH	0.822	1.03	1.288	0.933	1.134	1.582	1.109	1.802					0.822
Post Disinfection / Hypochlorite Dosage - mg/L													
Max IH	17.316	15.809	17.977	18.596	17.191	16.797	25.705	21.38			25.705		
Mean IH	12.072	13.011	13.971	13.325	13.483	14.971	16.289	18.963		14.526			
Min IH	6.854	8.586	10.733	7.779	9.447	13.18	9.244	15.014					6.854
Post Disinfection / Hypochlorite Used - kg													
Max IH	777.85	680.325	1083.35	707.35	1025.775	1294.85	1834.175	1595.65			1834.175		
Mean IH	559.262	585.231	615.927	560.867	672.782	972.927	1237.768	1222.948		805.553			
Min IH	254.975	358.375	440.625	420.65	425.35	701.475	566.35	830.725					254.975
Total IH	17337.13	16971.7	19093.75	16826	20856.25	29187.82	38370.8	37911.38	196554.8				
Post Disinfection / Hypochlorite Volume-Total - m³													
Max IH	0.662	0.579	0.922	0.602	0.873	1.102	1.561	1.358			1.561		
Mean IH	0.476	0.498	0.524	0.477	0.573	0.828	1.053	1.041		0.686			
Min IH	0.217	0.305	0.375	0.358	0.362	0.597	0.482	0.707					0.217
Total IH	14755	14444	16250	14320	17750	24840.7	32656	32265	167280.7				
Post Disinfection / Station 7 Cl Residual: Free - mg/L													
Max OL	5	1.75	3.1	1.84	1.85	1.8	1.82	1.87			5		
Mean OL	1.608	1.636	1.816	1.664	1.662	1.613	1.62	1.636		1.657			
Min OL	0	1.45	1.45	0	1.4	0	1.33	0					0
PrTr / P.A.C. Dosage - mg/L													
Max IH						0.594	0.39	0.501			0.594		
Mean IH						0.386	0.29	0.358		0.344			
Min IH						0.187	0.191	0.274					0.187
PrTr / P.A.C. Used - kg													
Max IH						29.461	22.09	29.28			29.461		
Mean IH						24.607	21.526	22.645		22.889			
Min IH						12.27	12.27	21.271					12.27
Total IH						713.612	667.309	702.005	2082.926				
Raw Water / Background - cfu/100mL													
Max Lab	10	5	0	0	11	270	2000	2200			2200		
Mean Lab	2.5	1.25	0	0	2.75	58	528.75	845.25		170.941			
Min Lab	0	0	0	0	0	0	3	1					0
Raw Water / Conductivity - µS/cm													
Max IH	223.4	235.2	231.1	229.8	244.9	234.5	231.8	257.3			257.3		
Mean IH	220.597	226.503	222.677	222.918	227.515	229.864	229.078	231.924		226.383			

Min IH	217.1	217.6	217.8	218.65	176.9	227.8	199.2	223.5					176.9
Raw Water / E. Coli: EC - cfu/100mL													
Max Lab	0	0	0	0	0	2	2	20				20	
Mean Lab	0	0	0	0	0	0.4	0.75	5.75			0.824		
Min Lab	0	0	0	0	0	0	0	0					0
Raw Water / Raw Flow Daily - m³/d													
Max IH	51462	49347	68210	54076	68792	89737	105002	80612				105002	
Mean IH	46223.13	45011.1	43968.16	42331.93	49718.13	65201.9	75955.06	64405.61			54179.14		
Min IH	37203	38233	26615	30479	41407	44210	56658	51308					26615
Raw Water / Raw Flow Rate - l/s													
Max IH	595.62	571.15	789.47	600.16	796.2	1038.62	1215.3	933.01				1215.3	
Mean IH	534.99	523.03	508.89	482.67	575.45	754.15	878.95	749.35			626.84		
Min IH	430.59	442.51	308.04	352.77	479.24	511.69	655.76	593.84					308.04
Raw Water / Raw Water Turbidity - NTU													
Max OL	14	11.4	23	6.6	3.4	3.79	4.93	6.5				23	
Mean OL	2.445	3.495	3.194	1.747	1.714	1.035	0.86	1.009			1.937		
Min OL	0.26	0.51	0.587	0.41	0.65	0.354	0.3	0.29					0.26
Raw Water / Raw Water pH - ---													
Max IH	8.27	8.16	8.13	8.16	8.29	8.46	8.45	8.46				8.46	
Mean IH	8.114	8.051	8.051	8.065	8.153	8.252	8.357	8.395			8.181		
Min IH	8.02	7.98	7.96	7.9	8.03	8.14	8.26	8.31					7.9
Raw Water / Temperature - °C													
Max IH	10	8	12	11.7	14	17.9	23	24				24	
Mean IH	7.466	6.083	9.203	9.432	11.392	15.318	20.93	22.701			12.875		
Min IH	5.5	3	5.9	6.87	8.025	12.8	17.9	21.5					3
Raw Water / Total Coliform: TC - cfu/100mL													
Max Lab	0	0	0	0	0	5	10	230				230	
Mean Lab	0	0	0	0	0	1	4.75	103			12.824		
Min Lab	0	0	0	0	0	0	0	0					0
Treated Water / Background - cfu/100mL													
Max Lab	0	0	0	0	0	0	0	5				5	
Mean Lab	0	0	0	0	0	0	0	1.25			0.147		
Min Lab	0	0	0	0	0	0	0	0					0
Treated Water / E. Coli: EC - cfu/100mL													
Max Lab	0	0	0	0	0	0	0	0				0	
Mean Lab	0	0	0	0	0	0	0	0			0		
Min Lab	0	0	0	0	0	0	0	0					0
Treated Water / Electrical Consumption - kWh													
Total IH	1060323	1063396	1033647	1058808	936374.9	923041.1	932801.3	1087759	8096150				
Treated Water / Flow: Total of All Sources - m³/d													
Max IH	48147	47888	47433	45327	65796	79186	97657	81049				97657	
Mean IH	44815.48	44078.86	43484.03	41675.97	48893.58	63849.17	74404.65	64862.68			53337.35		
Min IH	37737	38449	35292	38147	38491	47877	43853	47559					35292
Total IH	1389280	1278287	1348005	1250279	1515701	1915475	2306544	2010743	13014314				
Treated Water / HPC - cfu/mL													
Max Lab	< 10	< 40	< 10	< 10	< 10	< 10	< 10	< 10				< 40	
Mean Lab	< 10	< 17.5	< 10	< 10	< 10	< 10	< 10	< 10			< 10.968		
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	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	0.094	0.11	0.741	0.1	0.089	0.6	0.091	0.09				0.741		
Mean OL	0.069	0.069	0.082	0.072	0.069	0.069	0.065	0.066			0.07			
Min OL	0.052	0.052	0.048	0.05	0.05	0.045	0.044	0.048					0.044	
West Lambton Booster Station / Cl Residual: Outlet Free - mg/L														
Max OL	4.98	1.88	2.22	2.26	1.84	3	1.71	1.67				4.98		
Mean OL	1.666	1.694	1.735	1.63	1.626	1.5	1.451	1.453			1.594			
Min OL	0	0	0	0	0	0	0	0					0	
Zebra Mussel Control / Chlorine Dosage - mg/L														
Max IH	1.251	1.294	1.283	1.49	1.292	1.177	1.269	1.807				1.807		
Mean IH	1.057	1.137	1.143	1.125	1.091	1.042	1.07	1.172			1.105			
Min IH	0.972	0.971	1.039	0.83	0.829	0.896	0.941	1.032					0.829	
Zebra Mussel Control / Cl Residual: Free - mg/L														
Max IH	0.66	0.67	0.71	0.71	0.68	0.7	0.77	0.64				0.77		
Mean IH	0.597	0.599	0.634	0.61	0.627	0.609	0.617	0.579			0.609			
Min IH	0.46	0.44	0.51	0.42	0.43	0.44	0.44	0.45					0.42	
Zebra Mussel Control / Cl Residual: Total - mg/L														
Max IH	0.84	0.82	0.86	0.83	0.84	0.803	0.88	0.8				0.88		
Mean IH	0.759	0.754	0.785	0.746	0.756	0.728	0.736	0.723			0.748			
Min IH	0.61	0.6	0.67	0.53	0.52	0.53	0.55	0.56					0.52	
Zebra Mussel Control / Hypochlorite Dosage - mg/L														
Max IH	10.423	10.787	10.696	12.413	10.77	9.805	10.575	15.054				15.054		
Mean IH	8.812	9.472	9.521	9.375	9.095	8.684	8.918	9.763			9.204			
Min IH	8.102	8.095	8.656	6.916	6.906	7.468	7.841	8.6					6.906	
Zebra Mussel Control / Hypochlorite Used - kg														
Max IH	470	492.325	667.4	504.075	635.675	791.95	1110.375	871.85				1110.375		
Mean IH	407.081	425.512	418.262	393.938	451.882	565.998	677.141	627.185			496.582			
Min IH	339.575	358.375	278.475	312.55	323.125	381.875	489.975	492.325					278.475	
Total IH	12619.5	12339.85	12966.13	11818.15	14008.35	16979.93	20991.38	19442.73	121166					
Zebra Mussel Control / Hypochlorite Volume-Total-1 - m³														
Max IH	0.4	0.419	0.568	0.429	0.541	0.674	0.945	0.742				0.945		
Mean IH	0.346	0.362	0.356	0.335	0.385	0.482	0.576	0.534			0.423			
Min IH	0.289	0.305	0.237	0.266	0.275	0.325	0.417	0.419					0.237	
Total IH	10740	10502	11035	10058	11922	14451	17865	16547	103120					
Filter Backwash / Backwash Volume - m³														
Total IH	62545	59502	62054	53256	59012	61984	67906	67207	493466					

LAWSS Flow Summary

Total Flows as of Jul 2020														Total	% Total
LAWSS Member		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year To Date for: Jan - Jul	
Sarnia	2020	776,102	727,623	774,972	747,178	919,009	1,158,038	1,392,746	0	0	0	0	0	6,495,669	62.22
	2019	763,540	710,071	793,833	772,802	859,360	928,004	1,306,982	1,232,482	954,642	843,767	740,144	786,066	10,691,693	59.34
Point Edward	2020	27,526	23,425	23,101	18,471	23,805	33,792	42,303	0	0	0	0	0	192,423	1.84
	2019	27,627	25,262	28,086	27,709	32,081	38,498	50,463	53,100	36,311	31,273	40,091	26,845	417,348	2.32
St. Clair	2020	387,392	342,521	355,870	291,512	331,343	427,767	573,794	0	0	0	0	0	2,710,199	25.96
	2019	407,497	389,310	437,481	329,430	376,717	607,849	669,638	489,505	436,191	363,446	370,260	379,175	5,256,498	29.18
Plympton/Wyoming	2020	61,058	58,397	57,610	64,989	88,435	114,393	132,217	0	0	0	0	0	577,098	5.53
	2019	60,624	55,794	61,245	63,800	73,513	86,825	126,745	108,289	79,740	69,076	65,525	62,935	914,109	5.07
Lambton Shores	2020	30,090	24,113	26,482	25,177	31,052	37,083	42,459	0	0	0	0	0	216,457	2.07
	2019	12,193	15,213	12,491	14,747	28,233	32,872	43,978	43,586	42,789	28,509	31,238	28,078	333,927	1.85
Watford/Warwick	2020	30,802	28,896	33,215	29,760	35,096	41,810	47,862	0	0	0	0	0	247,442	2.37
	2019	29,976	28,550	30,013	31,163	35,804	35,885	41,573	41,590	34,374	33,837	29,148	30,712	402,627	2.23
														2020	10439288
Others														2019	18016202
Alvinston	2020	6,170	5,675	6,309	5,821	7,041	7,234	7,281	0	0	0	0	0	45,531	0.43
	2019	7,072	6,668	10,291	12,120	16,322	18,398	15,460	11,028	8,694	9,193	10,813	10,829	136,888	0.75
Petrolia	2020	0	0	6,120	0	0	0	0	0	0	0	0	0	6,120	0.06
	2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Chatham-Kent	2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
	2019	0	1,072	0	778	129	0	0	0	0	0	0	0	1,979	0.01
Totals		2020	1,319,140	1,210,650	1,283,680	1,182,910	1,435,780	1,820,117	2,238,662	0	0	0	0	10,490,939	
		2019	1,308,530	1,231,940	1,373,440	1,252,550	1,422,160	1,748,330	2,254,838	1,979,580	1,592,740	1,379,100	1,287,220	13,246,640	18,155,069



Note:

Work Sheet Revision Date: 04-Feb-2020

Current Year 2020
Last month entered Jul

Year to Date
Total

LAWSS Members	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan - Jul
City of Sarnial:	776,102	727,623	774,972	747,178	919,009	1,158,038	1,392,746	0	0	0	0	0	6,495,669
Point Edward:	27,526	23,425	23,101	18,471	23,805	33,792	42,303	0	0	0	0	0	192,423
St. Clair Township:	387,392	342,521	355,870	291,512	331,343	427,767	573,794	0	0	0	0	0	2,710,199
Plympton/Wyoming:	61,058	58,397	57,610	64,989	88,435	114,393	132,217	0	0	0	0	0	577,098
Lambton Shores:	30,090	24,113	26,482	25,177	31,052	37,083	42,459	0	0	0	0	0	216,457
Watford/Warwick:	30,802	28,896	33,215	29,760	35,096	41,810	47,862	0	0	0	0	0	247,442
	1,312,970	1,204,975	1,271,252	1,177,089	1,428,739	1,812,883	2,231,381	0	0	0	0	0	10,439,288
Others													
Town of Alvinston:	6,170	5,675	6,309	5,821	7,041	7,234	7,281	0	0	0	0	0	45,531
Town of Petrolia:	0	0	6,120	0	0	0	0	0	0	0	0	0	6,120
Chatham-Kent:	0	0	0	0	0	0	0	0	0	0	0	0	0
	1,319,140	1,210,650	1,283,680	1,182,910	1,435,780	1,820,117	2,238,662	0	0	0	0	0	
	1,319,140	1,210,650	1,283,680	1,182,910	1,435,780	1,820,117	2,238,662	0	0	0	0	0	10,490,939

Last Years Data 2019

LAWSS Members													
City of Sarnial:	763,540	710,071	793,833	772,802	859,360	928,004	1,306,982	1,232,482	954,642	843,767	740,144	786,066	10,691,693
Point Edward:	27,627	25,262	28,086	27,709	32,081	38,498	50,463	53,100	36,311	31,273	40,091	26,845	417,348
St. Clair Township:	407,497	389,310	437,481	329,430	376,717	607,849	669,638	489,505	436,191	363,446	370,260	379,175	5,256,498
Plympton/Wyoming:	60,624	55,794	61,245	63,800	73,513	86,825	126,745	108,289	79,740	69,076	65,525	62,935	914,109
Lambton Shores:	12,193	15,213	12,491	14,747	28,233	32,872	43,978	43,586	42,789	28,509	31,238	28,078	333,927
Watford/Warwick:	29,976	28,550	30,013	31,163	35,804	35,885	41,573	41,590	34,374	33,837	29,148	30,712	402,627
	1,301,458	1,224,200	1,363,150	1,239,652	1,405,708	1,729,932	2,239,379	1,968,552	1,584,046	1,369,907	1,276,407	1,313,811	18,016,202
Others													
Town of Alvinston:	7,072	6,668	10,291	12,120	16,322	18,398	15,460	11,028	8,694	9,193	10,813	10,829	136,888
Town of Petrolia:	0	0	0	0	0	0	0	0	0	0	0	0	0
Chatham-Kent:	0	1,072	0	778	129	0	0	0	0	0	0	0	1,979
	1,308,530	1,231,940	1,373,440	1,252,550	1,422,160	1,748,330	2,254,838	1,979,580	1,592,740	1,379,100	1,287,220	1,324,640	
	1,308,530	1,231,940	1,373,440	1,252,550	1,422,160	1,748,330	2,254,838	1,979,580	1,592,740	1,379,100	1,287,220	1,324,640	18,155,069

Work Sheet Revision Date: 04-Feb-2020

LAWSS Water used by the

Lambton Area Water Supply System

1215 Fort St. Sarnia, On N7V 1M1

Phone:(519)344-7429

Fax: (519)344-4337

City of Sarnia

For the Month of: July 2020

Meter num	Meter Location	Read date	Last Read date	Calibration Adjustments		X	Flow
		31-Jul-20	30-Jun-20	Difference	As Found	As Left	
15	HighL High Net Flow Totalizer	2,135,956	1,929,524	206,432			1 206,432
13	HighL Low Net Flow Totalizer	201,705,490	199,673,260	2,032,230			1 2,032,230

Entering Sarnia: 2,238,662
Members Monthly % Used

Leaving Sarnia to LAWSS Members:

Village of Point Edward - Grand Total:	42,303	1.9
St. Clair Township - Grand Total:	573,794	25.7
Plympton/Wyoming - Grand Total:	132,217	5.9
Lambton Shores - Grand Total:	42,459	1.9
Village of Watford/Township of Warwick - Grand Total:	47,862	2.1

Leaving Sarnia to Others:

Town of Alvinston - Grand Total:	7,281
Town of Petrolia - Grand Total:	0
Chatham-Kent Area Water - Grand Total:	0

Metered Consumption: 1,392,746

Reason for Adjustment:

Adjustments:

City of Sarnia - Total Consumption:	1,392,746	
Leakage rate adjustment 0%	0	
<u>City of Sarnia - Grand Total:</u>	1,392,746	62.4
Overall Grand Total:	2,238,662	100.0



Mark Harris (Operations Manager)

LAWSS Water used by the

Village of Point Edward

For the Month of: July 2020

Lambton Area Water Supply System

1215 Fort St. Sarnia, On N7V 1M1

Phone: (519) 344-7429

Fax: (519) 344-4337

Meter		Read date	Last Read date	Calibration Adjustments					
num	Meter Location	31-Jul-20	30-Jun-20	Difference	As Found	As Left	X	Flow	%
CH01	Venetian Vill (Mag)	517,491	509,724	7,767			1	7,767	19.1
CH02	Ven & Exmouth (Mag)	44,265	44,196	69			1	69	0.2
CH03	Michigan & Monk (Mag)	1,201,705	1,169,121	32,584			1	32,584	80.1
CH04	Michigan & Front (Mag)	142,643	142,386	256			1	256	0.6

Metered Consumption: 40,676 100.0

Reason for Adjustment:

Adjustments:

Village of Point Edward - Total Consumption: 40,676

Leakage rate adjustment 4% 1,627

Village of Point Edward - Grand Total: 42,303



Mark Harris (Operations Manager)

LAWSS Water used by the

St. Clair Township

For the Month of: July 2020

Lambton Area Water Supply System

1215 Fort St. Sarnia, On N7V 1M1

Phone:(519)344-7429

Fax: (519)344-4337

Meter num	Meter Location	Read date 31-Jul-20	Last Read date 30-Jun-20	Difference	Calibration Adjustments		X	Flow	%
					As Found	As Left			
WL-O 3100	WL High Net Flow - West Lambton Plank Road (3/4)	40,695,460 4,215	40,143,704 4,215	551,756 0			1 1	551,756 0	100.0
	Back to Sarnia								
1100	LaSalle & Parkway	9,162	9,161	1			1	1	0.0
1090	LaSalle & Tashmoo	5,113	5,083	30			1	30	0.0
								Entering St. Clair Township:	551,756 100.0
								Leaving St. Clair Township	
								Back to Sarnia:	31 0.0
								Chatham-Kent Area Water - Total Consumption:	0
								Metered Consumption:	551,725 100.0
								Adjustments:	
								St. Clair Township - Total Consumption:	551,725
								Leakage rate adjustment 4%	22,069
								St. Clair Township - Grand Total:	573,794

Reason for Adjustment:



Mark Harris (Operations Manager)

LAWSS Water used by the

Township of Plympton / Village of Wyoming

For the Month of: July 2020

Lambton Area Water Supply System
1215 Fort St. Sarnia, On N7V 1M1
 Phone: (519)344-7429
 Fax: (519)344-4337

Meter num	Meter Location	Read date 31-Jul-20	Last Read date 30-Jun-20	Difference	Calibration Adjustments		X	Flow	%	
					As Found	As Left				
Entering Plympton										
5001	Ch05 Low Net Flow - Maundaumin	57,811	57,811	0			1	0		
5002	Ch05 High Net Flow - Maundaumin	19,184,568	18,963,308	221,260			1	221,260		
Village of Wyoming										
8001	Wyoming	432,670	432,670	0			1	0		
8002	Wyoming	1,682	8,826	2,856			10	28,560		
Back to Sarnia										
1005	Brights Grove (Sarnia)	610	610	0			0.1	0		
1006	Brights Grove (Sarnia)	81,540	81,540	0			10	0		

Entering Plympton: 221,260

Leaving Plympton

Village of Wyoming: 28,560

Back to Sarnia: 0

Lambton Shores - Total Consumption: 40,826

Watford/Warwick - Total Consumption: 46,022

Town of Alvinston - Total Consumption: 7,281

Town of Petrolia - Total Consumption: 0

Metered Consumption For Plympton: 98,571

Village of Wyoming: 28,560

Reason for Adjustment:

Adjustments:

Plympton/Wyoming - Total Consumption: 127,131

Leakage rate adjustment 4% 5,085

Plympton/Wyoming - Grand Total: 132,217



Mark Harris (Operations Manager)

LAWSS Water used by the

Lambton Shores

For the Month of: July 2020

Lambton Area Water Supply System

1215 Fort St. Sarnia, On N7V 1M1

Phone:(519)344-7429

Fax: (519)344-4337

Meter num	Meter Location	Read date	Last Read date	Difference	Calibration Adjustments		X	Flow	%
		31-Jul-20	30-Jun-20		As Found	As Left			
7003	Ch07 High Net Flow - Townsend	3,801,982	3,763,058	38,924			1	38,924	
7004	Ch07 Low Net Flow - Townsend	257,591	255,688	1,902			1	1,902	
								<u>Metered Consumption:</u>	40,826

Reason for Adjustment:

Adjustments:



Mark Harris (Operations Manager)

Lambton Shores - Total Consumption: 40,826

Leakage rate adjustment 4% 1,633

Lambton Shores - Grand Total: 42,459

LAWSS Water used by the

Village of Watford/Township of Warwick

For the Month of: July 2020

Lambton Area Water Supply System
1215 Fort St. Sarnia, On N7V 1M1
 Phone: (519)344-7429
 Fax: (519)344-4337

Meter num	Meter Location	Read date 31-Jul-20	Last Read date 30-Jun-20	Difference	Calibration Adjustments As Found As Left	X	Flow	%
Entering Watford/Warwick								
9001	Ch10 High Net Flow - London Line	7,017,018	6,955,701	61,317			1	61,317
9002	Ch10 Low Net Flow - London Line	660,232	655,187	5,046			1	5,046
9003	Ch11 High Net Flow - Confederation	1,178,817	1,174,091	4,726			1	4,726
9004	Ch11 Low Net Flow - Confederation	62,618	59,493	3,126			1	3,126
Leaving Watford/Warwick								
5013	Ch09 High Net Flow - Egremont	2,845,322	2,824,410	20,912			1	20,912
AF	Alvin High Net Flow Totalizer	1,581,148	1,573,867	7,281			1	7,281

Entering Watford/Warwick:	74,214
Leaving Watford/Warwick:	28,192
Metered Consumption:	46,022
Adjustments:	

Reason for Adjustment:

Watford/Warwick - Total Consumption:	46,022
Leakage rate adjustment 4%	1,841
<u>Village of Watford/Township of Warwick - Grand Total:</u>	47,862



Mark Harris (Operations Manager)

LAWSS Water used by the

Town of Alvinston

For the Month of: July 2020

Lambton Area Water Supply System

1215 Fort St. Sarnia, On N7V 1M1

Phone:(519)344-7429

Fax: (519)344-4337

Meter num	Meter Location	Read date	Last Read date	Difference	Calibration Adjustments		X	Flow	%
		31-Jul-20	30-Jun-20		As Found	As Left			
AF	Alvin High Net Flow Totalizer	1,581,148	1,573,867	7,281			1	7,281	

Metered Consumption: 7,281

Reason for Adjustment:

Adjustments:

Town of Alvinston - Total Consumption: 7,281

Leakage rate adjustment 0% 0

Town of Alvinston - Grand Total: 7,281



Mark Harris (Operations Manager)

LAWSS Water used by the

Town of Petrolia

For the Month of: July 2020

Lambton Area Water Supply System

1215 Fort St. Sarnia, On N7V 1M1

Phone:(519)344-7429

Fax: (519)344-4337

Meter num	Meter Location	Read date	Last Read date	Difference	Calibration Adjustments		X	Flow	%
		31-Jul-20	30-Jun-20		As Found	As Left			
PF	Petrolia Flows	139,669	139,669	0			1	0	

Metered Consumption: 0

Reason for Adjustment:

Adjustments:

Town of Petrolia - Total Consumption: 0

Leakage rate adjustment 0% 0

Town of Petrolia - Grand Total: 0



Mark Harris (Operations Manager)

LAWSS Water used by the

Chatham-Kent Area Water

For the Month of: July 2020

Meter num	Meter Location	Read date	Last Read date	Difference	Calibration Adjustments		X	Flow	%
		31-Jul-20	30-Jun-20		As Found	As Left			
CKF	Chatham-Kent Flows	907	907	0			1	0	

Metered Consumption: 0**Reason for Adjustment:****Adjustments:****Chatham-Kent Area Water - Total Consumption:** 0

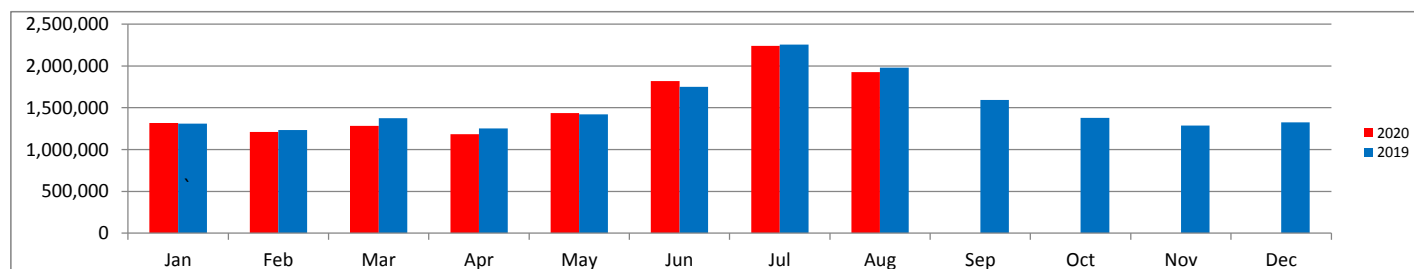
Leakage rate adjustment 0% 0

Chatham-Kent Area Water - Grand Total: 0**Mark Harris (Operations Manager)**

LAWSS Flow Summary

Draft

Total Flows as of Aug 2020														Year To Date for:	
LAWSS Member		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan - Aug	
Sarnia	2020	776,102	727,623	774,972	747,178	919,009	1,158,038	1,391,997	1,145,092	0	0	0	0	7,640,012	61.82
	2019	763,540	710,071	793,833	772,802	859,360	928,004	1,306,982	1,232,482	954,642	843,767	740,144	786,066	10,691,693	59.34
Point Edward	2020	27,526	23,425	23,101	18,471	23,805	33,792	42,303	41,292	0	0	0	0	233,715	1.89
	2019	27,627	25,262	28,086	27,709	32,081	38,498	50,463	53,100	36,311	31,273	40,091	26,845	417,348	2.32
St. Clair	2020	387,392	342,521	355,870	291,512	331,343	427,767	574,543	547,757	0	0	0	0	3,258,704	26.37
	2019	407,497	389,310	437,481	329,430	376,717	607,849	669,638	489,505	436,191	363,446	370,260	379,175	5,256,498	29.18
Plympton/Wyoming	2020	61,058	58,397	57,610	64,989	88,435	114,393	132,217	104,660	0	0	0	0	681,758	5.52
	2019	60,624	55,794	61,245	63,800	73,513	86,825	126,745	108,289	79,740	69,076	65,525	62,935	914,109	5.07
Lambton Shores	2020	30,090	24,113	26,482	25,177	31,052	37,083	42,459	40,768	0	0	0	0	257,225	2.08
	2019	12,193	15,213	12,491	14,747	28,233	32,872	43,978	43,586	42,789	28,509	31,238	28,078	333,927	1.85
Watford/Warwick	2020	30,802	28,896	33,215	29,760	35,096	41,810	47,862	40,344	0	0	0	0	287,786	2.33
	2019	29,976	28,550	30,013	31,163	35,804	35,885	41,573	41,590	34,374	33,837	29,148	30,712	402,627	2.23
Others													2020	12359200	
													2019	18016202	
Alvinston	2020	6,170	5,675	6,309	5,821	7,041	7,234	7,281	7,537	0	0	0	0	53,069	0.43
	2019	7,072	6,668	10,291	12,120	16,322	18,398	15,460	11,028	8,694	9,193	10,813	10,829	136,888	0.75
Petrolia	2020	0	0	6,120	0	0	0	0	0	0	0	0	0	6,120	0.05
	2019	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Chatham-Kent	2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
	2019	0	1,072	0	778	129	0	0	0	0	0	0	0	1,979	0.01
Totals	2020	1,319,140	1,210,650	1,283,680	1,182,910	1,435,780	1,820,117	2,238,662	1,927,450	0	0	0	0	12,418,389	
	2019	1,308,530	1,231,940	1,373,440	1,252,550	1,422,160	1,748,330	2,254,838	1,979,580	1,592,740	1,379,100	1,287,220	1,324,640	18,155,069	



Note:

Work Sheet Revision Date: 04-Feb-2020

Current Year 2020
Last month entered Aug

Year to Date
Total

LAWSS Members	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan - Aug
City of Sarnial:	776,102	727,623	774,972	747,178	919,009	1,158,038	1,391,997	1,145,092	0	0	0	0	7,640,012
Point Edward:	27,526	23,425	23,101	18,471	23,805	33,792	42,303	41,292	0	0	0	0	233,715
St. Clair Township:	387,392	342,521	355,870	291,512	331,343	427,767	574,543	547,757	0	0	0	0	3,258,704
Plympton/Wyoming:	61,058	58,397	57,610	64,989	88,435	114,393	132,217	104,660	0	0	0	0	681,758
Lambton Shores:	30,090	24,113	26,482	25,177	31,052	37,083	42,459	40,768	0	0	0	0	257,225
Watford/Warwick:	30,802	28,896	33,215	29,760	35,096	41,810	47,862	40,344	0	0	0	0	287,786
	1,312,970	1,204,975	1,271,252	1,177,089	1,428,739	1,812,883	2,231,381	1,919,913	0	0	0	0	12,359,200
Others													
Town of Alvinston:	6,170	5,675	6,309	5,821	7,041	7,234	7,281	7,537	0	0	0	0	53,069
Town of Petrolia:	0	0	6,120	0	0	0	0	0	0	0	0	0	6,120
Chatham-Kent:	0	0	0	0	0	0	0	0	0	0	0	0	0
	1,319,140	1,210,650	1,283,680	1,182,910	1,435,780	1,820,117	2,238,662	1,927,450	0	0	0	0	
	1,319,140	1,210,650	1,283,680	1,182,910	1,435,780	1,820,117	2,238,662	1,927,450	0	0	0	0	12,418,389

Last Years Data 2019

LAWSS Members													
City of Sarnial:	763,540	710,071	793,833	772,802	859,360	928,004	1,306,982	1,232,482	954,642	843,767	740,144	786,066	10,691,693
Point Edward:	27,627	25,262	28,086	27,709	32,081	38,498	50,463	53,100	36,311	31,273	40,091	26,845	417,348
St. Clair Township:	407,497	389,310	437,481	329,430	376,717	607,849	669,638	489,505	436,191	363,446	370,260	379,175	5,256,498
Plympton/Wyoming:	60,624	55,794	61,245	63,800	73,513	86,825	126,745	108,289	79,740	69,076	65,525	62,935	914,109
Lambton Shores:	12,193	15,213	12,491	14,747	28,233	32,872	43,978	43,586	42,789	28,509	31,238	28,078	333,927
Watford/Warwick:	29,976	28,550	30,013	31,163	35,804	35,885	41,573	41,590	34,374	33,837	29,148	30,712	402,627
	1,301,458	1,224,200	1,363,150	1,239,652	1,405,708	1,729,932	2,239,379	1,968,552	1,584,046	1,369,907	1,276,407	1,313,811	18,016,202
Others													
Town of Alvinston:	7,072	6,668	10,291	12,120	16,322	18,398	15,460	11,028	8,694	9,193	10,813	10,829	136,888
Town of Petrolia:	0	0	0	0	0	0	0	0	0	0	0	0	0
Chatham-Kent:	0	1,072	0	778	129	0	0	0	0	0	0	0	1,979
	1,308,530	1,231,940	1,373,440	1,252,550	1,422,160	1,748,330	2,254,838	1,979,580	1,592,740	1,379,100	1,287,220	1,324,640	
	1,308,530	1,231,940	1,373,440	1,252,550	1,422,160	1,748,330	2,254,838	1,979,580	1,592,740	1,379,100	1,287,220	1,324,640	18,155,069

Work Sheet Revision Date: 04-Feb-2020

LAWSS Water used by the

Lambton Area Water Supply System

1215 Fort St. Sarnia, On N7V 1M1

Phone:(519)344-7429

Fax: (519)344-4337

City of Sarnia

For the Month of: **August 2020**

Meter num	Meter Location	Read date 31-Aug-20	Last Read date 31-Jul-20	Difference	Calibration Adjustments		X	Flow
					As Found	As Left		
15	HighL High Net Flow Totalizer	2,135,956	2,135,956	0			1	0
13	HighL Low Net Flow Totalizer	203,632,940	201,705,490	1,927,450			1	1,927,450

Entering Sarnia: 1,927,450
Members Monthly % Used

Leaving Sarnia to LAWSS Members:

Village of Point Edward - Grand Total:	41,292	2.2
St. Clair Township - Grand Total:	547,757	28.5
Plympton/Wyoming - Grand Total:	104,660	5.5
Lambton Shores - Grand Total:	40,768	2.1
Village of Watford/Township of Warwick - Grand Total:	40,344	2.1

Leaving Sarnia to Others:

Town of Alvinston - Grand Total:	7,537
Town of Petrolia - Grand Total:	0
Chatham-Kent Area Water - Grand Total:	0

Metered Consumption: 1,145,092

Adjustments:

Reason for Adjustment:

City of Sarnia - Total Consumption:	1,145,092	
Leakage rate adjustment 0%	0	
<u>City of Sarnia - Grand Total:</u>	1,145,092	59.6
Overall Grand Total:	1,927,450	100.0



Mark Harris (Operations Manager)

Village of Point EdwardFor the Month of: **August 2020**

Meter num	Meter Location	Read date 31-Aug-20	Last Read date 31-Jul-20	Difference	Calibration Adjustments		X	Flow	%
					As Found	As Left			
CH01	Venetian Vill (Mag)	525,969	517,491	8,478	521,376	521,385	1	8,470	21.3
CH02	Ven & Exmouth (Mag)	44,641	44,265	376	44,468	44,494	1	350	0.9
CH03	Michigan & Monk (Mag)	1,231,236	1,201,705	29,531	1,214,572	1,214,580	1	29,523	74.4
CH04	Michigan & Front (Mag)	143,990	142,643	1,348	143,428	143,431	1	1,345	3.4

Metered Consumption:	39,687	100.0
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Reason for Adjustment:**Adjustments:**

CH01	13 Aug 2020 Meter Calibrations	Estimated flow	5	0.0
CH02	13 Aug 2020 Meter Calibrations	Estimated flow	0	
CH03	13 Aug 2020 Meter Calibrations	Estimated flow	12	0.0
CH04	13 Aug 2020 Meter Calibrations	Estimated flow	0	

Village of Point Edward - Total Consumption:	39,704
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Leakage rate adjustment 4%	1,588
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<u>Village of Point Edward - Grand Total:</u>	41,292
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Mark Harris (Operations Manager)

LAWSS Water used by the

St. Clair Township

For the Month of: August 2020

Lambton Area Water Supply System

1215 Fort St. Sarnia, On N7V 1M1

Phone: (519) 344-7429

Fax: (519) 344-4337

Meter num	Meter Location	Read date 31-Aug-20	Last Read date 31-Jul-20	Difference	Calibration Adjustments		X	Flow	%
					As Found	As Left			
WL-O	WL High Net Flow - West Lambton	41,222,048	40,695,460	526,588			1	526,588	100.0
3100	Plank Road (3/4)	5,400	4,935	465			1	465	0.1
	Back to Sarnia								
1100	LaSalle & Parkway	9,468	9,162	306			1	306	0.1
1090	LaSalle & Tashmoo	5,171	5,113	58			1	58	0.0
Entering St. Clair Township:								527,053	100.1
Leaving St. Clair Township									
Back to Sarnia:								364	0.1
Chatham-Kent Area Water - Total Consumption:								0	
Metered Consumption:								526,689	100.0
Adjustments:									
St. Clair Township - Total Consumption:								526,689	
Leakage rate adjustment 4%								21,068	
St. Clair Township - Grand Total:								547,757	

Reason for Adjustment:



Mark Harris (Operations Manager)

Township of Plympton / Village of Wyoming

For the Month of: August 2020

Meter num	Meter Location	Read date 31-Aug-20	Last Read date 31-Jul-20	Difference	Calibration Adjustments		X	Flow	%	
					As Found	As Left				
Entering Plympton										
5001	Ch05 Low Net Flow - Maundaumin	57,811	57,811	0			1	0		
5002	Ch05 High Net Flow - Maundaumin	19,370,732	19,184,568	186,164			1	186,164		
Village of Wyoming										
8001	Wyoming	432,670	432,670	0			1	0		
8002	Wyoming	3,808	1,682	2,126			10	21,260		
Back to Sarnia										
1005	Brights Grove (Sarnia)	610	610	0			0.1	0		
1006	Brights Grove (Sarnia)	81,540	81,540	0			10	0		

Entering Plympton: 186,164**Leaving Plympton**

Village of Wyoming: 21,260

Back to Sarnia: 0

Lambton Shores - Total Consumption: 39,200

Watford/Warwick - Total Consumption: 38,792

Town of Alvinston - Total Consumption: 7,537

Town of Petrolia - Total Consumption: 0

Metered Consumption For Plympton: 79,374

Village of Wyoming: 21,260

Reason for Adjustment:

Adjustments:**Plympton/Wyoming - Total Consumption:** 100,634

Leakage rate adjustment 4% 4,025

Plympton/Wyoming - Grand Total: 104,660

Mark Harris (Operations Manager)

LAWSS Water used by the

Lambton Shores

For the Month of: August 2020

Lambton Area Water Supply System

1215 Fort St. Sarnia, On N7V 1M1

Phone:(519)344-7429

Fax: (519)344-4337

Meter num	Meter Location	Read date	Last Read date	Difference	Calibration Adjustments		X	Flow	%
		31-Aug-20	31-Jul-20		As Found	As Left			
7003	Ch07 High Net Flow - Townsend	3,839,331	3,801,982	37,348			1	37,348	
7004	Ch07 Low Net Flow - Townsend	259,443	257,591	1,852			1	1,852	

Metered Consumption: 39,200

Reason for Adjustment:

Adjustments:

Lambton Shores - Total Consumption: 39,200

Leakage rate adjustment 4% 1,568

Lambton Shores - Grand Total: 40,768



Mark Harris (Operations Manager)

LAWSS Water used by the
Village of Watford/Township of Warwick
For the Month of: August 2020

Lambton Area Water Supply System
1215 Fort St. Sarnia, On N7V 1M1
Phone: (519) 344-7429
Fax: (519) 344-4337

Meter num	Meter Location	Read date 31-Aug-20	Last Read date 31-Jul-20	Difference	Calibration Adjustments		X	Flow	%
					As Found	As Left			
Entering Watford/Warwick									
9001	Ch10 High Net Flow - London Line	7,071,476	7,017,018	54,459			1	54,459	
9002	Ch10 Low Net Flow - London Line	664,679	660,232	4,446			1	4,446	
9003	Ch11 High Net Flow - Confederation	1,185,020	1,178,817	6,203			1	6,203	
9004	Ch11 Low Net Flow - Confederation	64,403	62,618	1,785			1	1,785	
Leaving Watford/Warwick									
5013	Ch09 High Net Flow - Egremont	2,865,885	2,845,322	20,563			1	20,563	
AF	Alvin High Net Flow Totalizer	1,588,685	1,581,148	7,537			1	7,537	

<u>Entering Watford/Warwick:</u>	66,892
<u>Leaving Watford/Warwick:</u>	28,100
<u>Metered Consumption:</u>	38,792
Adjustments:	

Reason for Adjustment:

Watford/Warwick - Total Consumption:	38,792
Leakage rate adjustment 4%	1,552
<u>Village of Watford/Township of Warwick - Grand Total:</u>	<u>40,344</u>



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Mark Harris (Operations Manager)

LAWSS Water used by the

Town of Alvinston

For the Month of: August 2020

Lambton Area Water Supply System

1215 Fort St. Sarnia, On N7V 1M1

Phone:(519)344-7429

Fax: (519)344-4337

Meter num	Meter Location	Read date	Last Read date	Difference	Calibration Adjustments		X	Flow	%
		31-Aug-20	31-Jul-20		As Found	As Left			
AF	Alvin High Net Flow Totalizer	1,588,685	1,581,148	7,537			1	7,537	

Metered Consumption: 7,537

Reason for Adjustment:

Adjustments:

Town of Alvinston - Total Consumption: 7,537

Leakage rate adjustment 0% 0

Town of Alvinston - Grand Total: 7,537



Mark Harris (Operations Manager)

LAWSS Water used by the

Town of Petrolia

For the Month of: August 2020

Lambton Area Water Supply System

1215 Fort St. Sarnia, On N7V 1M1

Phone:(519)344-7429

Fax: (519)344-4337

Meter num	Meter Location	Read date	Last Read date	Difference	Calibration Adjustments		X	Flow	%
		31-Aug-20	31-Jul-20		As Found	As Left			
PF	Petrolia Flows	139,669	139,669	0			1	0	

Metered Consumption: 0

Reason for Adjustment:

Adjustments:

Town of Petrolia - Total Consumption: 0

Leakage rate adjustment 0% 0

Town of Petrolia - Grand Total: 0



Mark Harris (Operations Manager)

LAWSS Water used by the

Chatham-Kent Area WaterFor the Month of: **August 2020**

Meter num	Meter Location	Read date	Last Read date	Difference	Calibration Adjustments		X	Flow	%
		31-Aug-20	31-Jul-20		As Found	As Left			
CKF	Chatham-Kent Flows	907	907	0			1	0	

Metered Consumption: 0**Reason for Adjustment:****Adjustments:****Chatham-Kent Area Water - Total Consumption:** 0

Leakage rate adjustment 0% 0

Chatham-Kent Area Water - Grand Total: 0**Mark Harris (Operations Manager)**

Report No.: 2020-09-01
Report Page: Page 1 of 3
Meeting Date: September 24, 2020
File No.:



To: Chair and Members
Lambton Area Water Supply System Joint Board of Management

From: Clinton Harper
General Manager

Subject: Information Reports (September 24, 2020)

Recommendation

That the LAWSS Joint Board of Management receive the following as information.

Items:

1. LAWSS Flag Plaza Signage

The Rotary Club of Sarnia manages the sale and installation of custom bricks installed at the Flag Plaza located off Fort St. on the St. Clair River. The bricks are part of the walking surface of the LAWSS waterfront pedestrian facility and are often engraved with names of family and friends as memorial. In light of recent events, the Rotary Club of Sarnia is working with LAWSS to develop and install discrete signage that discourages patrons from leaving monuments along on the walking surface of the flag plaza. Once the signage has been installed, the monuments will be automatically relocated to adjacent edging stones and out of the walking area.

2. Project List – Engineering Services for the Generator Project

In 2017, \$250,000 was budgeted for engineering services related to the generator replacement project. Beginning in 2020, this amount was incorrectly presented as \$150,000 on the Project List Report. To rectify the error the Project List Report has been changed from \$150,000 to \$250,000 for this item to represent the original budget approval in 2017. This change has no financial implications as this money was already budgeted and received in previous years.

3. Watermain Condition Assessment Approach and Prioritization Study

At staff's recommendation, the LAWSS Joint Board of Management approved \$35,000 in 2020 for an Engineering Study aimed at developing a prioritization plan for watermain condition assessments going forward. LAWSS approached OCWA Engineering group with a request to quote this work. In February 2020, OCWA was awarded the project and

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began work. The project is nearing completion and will feed into the upcoming LAWSS Asset Management Plan that is scheduled for update in 2021.

4. WLPS – 36” dia. BPS Valve Replacement Project

At staff’s recommendation, the LAWSS Joint Board of Management awarded Dielco Industrial Contractor Ltd. with a project to complete work at the West Lambton Pumping Station to address an issue with an existing 36” back pressure sustaining valve. OCWA Engineering group is providing project management and is coordinating with OCWA-LAWSS to execute this project. Work is tentatively scheduled for November 2020.

The West Lambton Pumping Station is a LAWSS facility located at 12 Indian Road in Sarnia. It consists of pumping, above ground storage and re-chlorination equipment. The station is primarily used as an intermediate storage facility providing pressure stabilization and system redundancy. A major system component, a 36” diameter backpressure sustaining valve, used to regulate pressure in the transmission/distribution network is needed to be brought offline and replaced. OCWA Engineering group was hired to finalize the project scope, tender the project, provide project management and oversee final commissioning to either rebuild or replace the existing valve. A subsequent project proposal recommended the installation of a new 36” Singer single chamber diaphragm valve and was endorsed by the LAWSS Board, at staff recommendation at the May 28, 2020 meeting. The recommendation was reached by building a comparison between a rebuild of the existing Ross Valve against three new valves. The 36” Singer single chamber diaphragm valve is the clear choice from a capital cost, suitability and maintenance standpoint. At the Board’s direction, OCWA was directed to proceed to the tendering portion of the project.

5. WTP Main Plant HVAC Repair

Design work is well underway. A progress meeting on September 9, 2020 between Building Innovation, OCWA and LAWSS confirmed that the project is on track and on schedule. A WTP Main Plant HVAC replacement project is outlined in the Capital Plan in 2021 and was estimated at \$738,000. An updated project estimate will be provided by the October budget meeting to be included in 2021.

6. Forest SP Warranty Work

In 2017, LAWSS re-coated the Forest Standpipe (SP) and installed a new mixing system. The work has reached the end of its warranty period and a recent inspection has identified a few items within the SP that need to be addressed. Total project is expected to take three weeks. AWWA C651-11 procedures will be followed to ensure disinfection of the water storage facility prior to bringing it back into service. OCWA-LAWSS will be in

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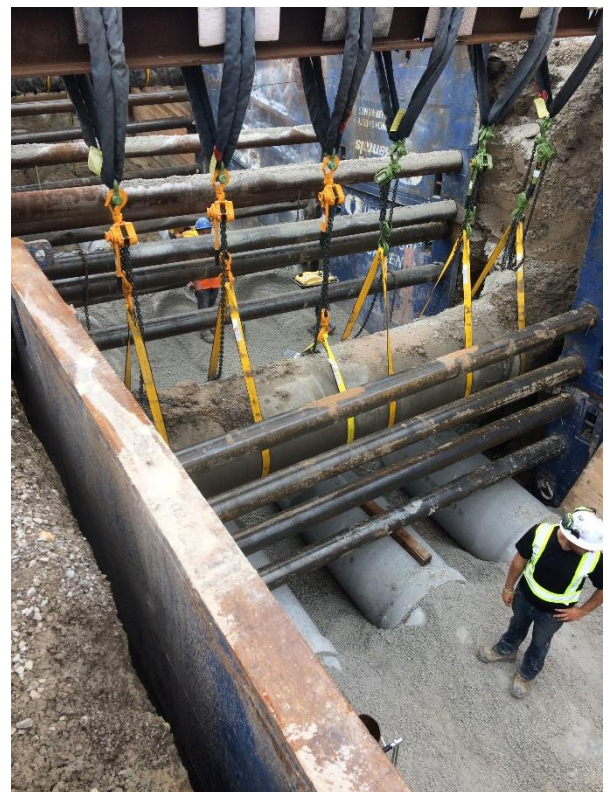
contact with Operations at both Plympton-Wyoming and Lambton Shores throughout the process.

7. Field Gate 4G Network Upgrade

At staff's recommendation, the Board hired OCWA to complete a Fieldgate Network Upgrade in 2020. Project budget is \$84,860 +H.S.T. The project's goal is to upgrade the communication equipment utilized to transmit flow data from LAWSS remote metering sites. Work on the project is underway.

8. MTO Drain Project at Intersection of Highway 40 and LaSalle Line

In an effort to alleviate a drainage issue to the north of LaSalle Line on Highway 40, the MTO proposed a project that involved crossing the LAWSS WM on LaSalle with a large diameter drain. OCWA was included in the project development that involved daylighting the WM. Work included the temporary suspension of the LAWSS 900mm dia. CPP to allow for the crossing. Beginning the week of August 27, 2020, the MTO's contractor began working around the LAWSS 900mm dia. WM. Work was completely backfilled and all adjacent trench support was removed by September 9, 2020.



9. COVID-19 Update

No major changes to report. The Contractor screening tool remains in place which requires that contractors wear masks and maintain physical distancing while at LAWSS.

The LAWSS GM continues to be in continual communication with the OCWA Operational Manager on all matters related to the ongoing situation and will advise the Board immediately if a situation arises that will affect the continual operation of LAWSS.

This report was prepared by Clinton Harper, LAWSS General Manager

Attachment(s):

Report No.:	2020-09-03
Report Page:	Page 1 of 5
Meeting Date:	September 24, 2020
File No.:	



To: Chair and Members
Lambton Area Water Supply System Joint Board of Management

From: Clinton Harper
General Manager

Subject: LAWSS Master Water Plan Update- Municipal Class
Environmental Assessment (MCEA) Phase 1

Recommendation

It is recommended that the LAWSS Joint Board of Management receive this report as information.

Background:

The Environmental Assessment Act was established in 1990 for the “betterment of the people of Ontario by providing for the protection, conservation and wise management of Ontario’s environment (Part I- Section 2).” The Act makes it illegal to build municipal infrastructure without EA Act approval. The overall objective of the Act is to ensure environmental effects are minimized and appropriate mitigation efforts are proposed. The Municipal Class Environmental Assessment (MCEA) provides a framework for applying the act.

The MCEA recognizes the need for Municipalities to develop Master Plans. Unlike site specific projects, Master Plans are broad and usually include an analysis of a system in order to outline a framework for future works and developments. Master Plans typically recommend a set of works which are distributed geographically throughout a study area and which are to be implemented over an extended period of time.

“The work undertaken in the preparation of Master Plans should recognize the Planning and Design process of this Class EA, and should incorporate the key principals of successful environmental assessment planning identified within. It is imperative that public and agency consultation take place during each phase of the study process, specifically, at the initiation of the Master Plan study so that the scope and purpose of the study is understood, and at the selection of the preferred set of alternatives (Part A 2.4.1).”

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Report Page: Page 2 of 5
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File No.:

Schedules

The MCEA separates projects into three categories based on their anticipated level of environmental impact. In the Act these categories are referred to as “Schedules”.

Schedule A/A+

Projects in this category are typically limited in scale and have minimum adverse environmental effects. Projects include normal or emergency operational and maintenance activities and can be pre-approved. A+ projects advise the public prior to implementation.

Examples include:

- Normal operation and on-going maintenance of water treatment plants.
- Replace/expand existing water storage facilities provided all such facilities are in either an existing road allowance or an existing utility corridor or where no land acquisition is required.
- Establish, extend or enlarge a water distribution system and all works necessary to connect the system to an existing system or water source, provided all such facilities are in either an existing road allowance or an existing utility corridor, including the use of Trenchless Technology for water crossings.

Schedule B

Projects in this category have the potential for adverse environmental effects and generally include improvements and minor expansions to existing facilities. A screening process must be undertaken that includes mandatory contact directly with affected public and relevant review agencies. Projects in this category require a 30-day public review.

Examples include:

- Establish, extend or enlarge a water distribution system and all works necessary to connect the system to an existing system or water source, where such facilities are not in either an existing road allowance or an existing utility corridor.
- Establish new or expand/replace existing water storage facilities.

Schedule C

Projects in this category have the potential for significant environmental impact and generally include the construction of new facilities and major expansions. These projects must proceed under the full procedures specified in the Class EA including Environmental Study Report which must undergo a 30-day public review.

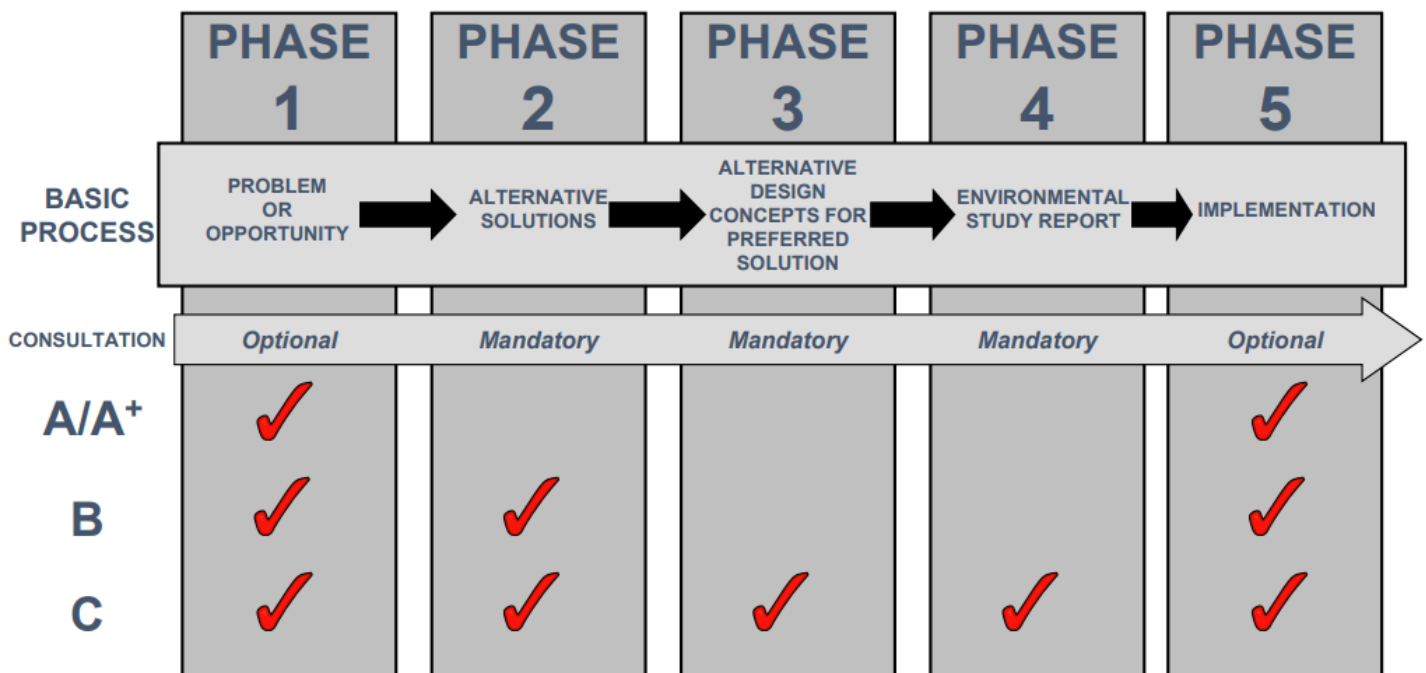
Examples include:

- Construct a new water treatment plant or expand existing water treatment plant beyond existing rated capacity
- Establish new surface water source

Planning and Design Process

Depending on the project schedule, there can be up to five phases that could be required prior to project approval under the Act. The “checkmarks” in Figure A indicate which phase must be completed to satisfy the Act’s requirements for a given schedule. A breakdown of each phase is provided in Appendix A.

Figure #1



Comments

Previous efforts made by LAWSS identified the following issues in the distribution network:

1. East Lambton Booster Station (ELBS) Fill Constraints,
2. ELBS to Watford Standpipe Capacity, and
3. ELBS to Forest Standpipe Capacity.

The environmental impact of addressing each of these three issues is not expected to exceed a Schedule B type project. In January 2020, AECOM was hired to complete an update of the LAWSS Master Water Plan that included MECA Master Planning “Approach 2” for a Schedule B project for each issue. AECOM’s scope also includes development of an addendum for the existing grid reinforcement and twining MCEA. The addendum will

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extend the MCEA for the previously approved project and incorporate it into the Master Plan strategy.

LAWSS Master Plan Update is moving into Phase 1 of the MCEA process related to the x3 schedule B projects.

Phase 1 – Define problem opportunity and begin public engagement.

The official Problem/Opportunity Statement that fulfils Phase 1 of the MCEA Planning Process is attached to this report. It was reviewed with member municipality representatives and will be presented at Public Information Centre (PIC) 1 scheduled for early October 2020.

PIC 1 will be online (no face to face meeting) which involves posting a slide deck on LAWSS website with a fillable comment card. PIC 1 will present LAWSS background including introduction to the system, overview of hydraulic analysis-need for infrastructure improvements and existing study area conditions. PIC 1 will also present preliminary preferred solutions for each issue and evaluation criteria for comment as well as next steps.

AECOM is working directly with CCI, LAWSS website provider, to ensure PIC 1 efficiently goes online as planned.

Consultation

AECOM, and OCWA Management were consulted in the development of this report.

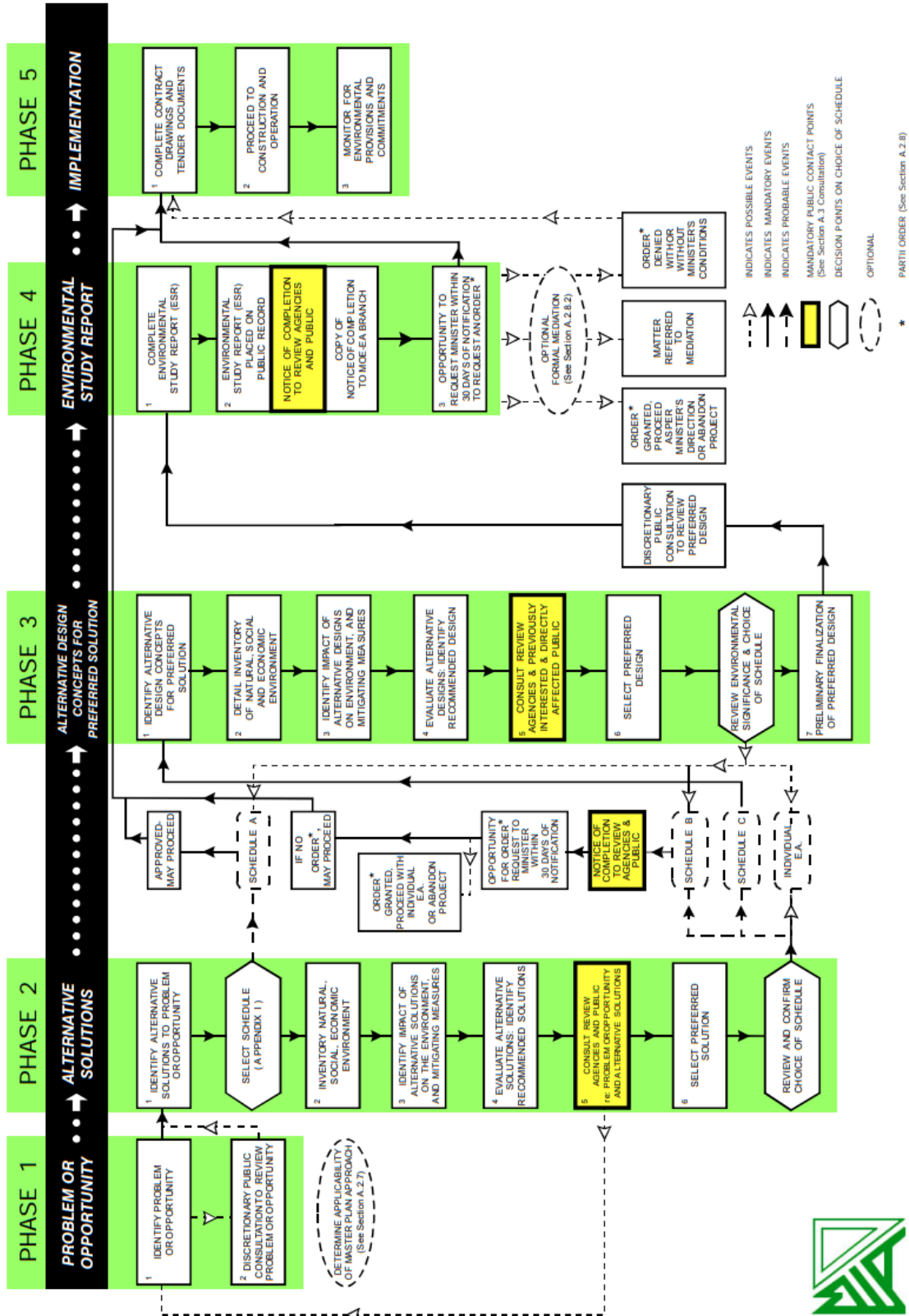
Financial Implications:

There is no financial impact related to this report. All work is progressing within budget. It is not expected that sufficient information will be available to update the LAWSS Capital Plan. The 2021 budget proposal in October will include an undefined amount based on the best information available.

This report was prepared by: Clinton Harper, LAWSS General Manager

Attachment(s): LAWSS Master Plan Update MCEA Problem/Opportunity Statement

Appendix A



To: Clinton Harper, General Manager, Lambton Area Water Supply System

Date: August 14, 2020

Project #: 60624749

From: Karl Grueneis

cc: Benny Wan, AECOM
Semyon Chaymann, AECOM

Memorandum

Subject: Master Plan Updates for Lambton Area Water Supply System: MCEA Phase 1

1. Purpose

The purpose of this memorandum is to present the Problem / Opportunity Statement for the Lambton Area Water Supply System (LAWSS) Master Plan Update. Once final, it will form the problem/opportunity statement chapter of the Municipal Class Environmental Assessment (MCEA) Master Plan Update report.

In developing the Problem/Opportunity statement, the following key messages and the 2041 growth hydraulic analysis, as outlined below, were considered.

2. About LAWSS

- The Lambton Area Water Supply System (LAWSS) is owned by its member municipalities and operated by the Ontario Clean Water Agency (OCWA) on behalf of the LAWSS joint Board of Management. The municipalities that own LAWSS are City of Sarnia, Township of St. Clair, Town of Plympton-Wyoming, Township of Warwick, Village of Point Edward and Municipality of Lambton Shores.
- For emergency supply purposes, LAWSS is connected to the Chatham-Kent, Petrolia, and the Lambton Shores systems. Three water storage facilities are managed directly by member municipalities; Brigden Water Tower (St Clair Township), Alvinston Standpipe (Municipality of Brooke Alvinston), and Wyoming Standpipe (Town of Plympton-Wyoming).
- LAWSS existing infrastructure includes:
 - Lambton Water Treatment Plant
 - East Lambton Pumping Station and Reservoir
 - West Lambton Pumping Station and Reservoir
 - Indian Road Elevated Storage Tank
 - Forest Standpipe
 - Watford Standpipe
 - Port Lambton Standpipe
 - Over 250 km of watermain/transmission main of various sizes
- LAWSS currently supplies water to over 1,000 customers in the following municipalities:
 - City of Sarnia

- Village of Point Edward
- Township of St. Clair
- Town of Plympton-Wyoming
- Township of Warwick
- Municipality of Brooke-Alvinston
- a portion of the Municipality of Lambton Shores

3. How Does LAWSS Plan for Future Growth?

- In January 2015, Lambton Area Water Supply System (LAWSS) completed the Lambton Area Water Supply Master Plan, as a strategic planning tool to provide direction to the long-term management and operational policies with regards to their water infrastructure by identifying servicing policies, key study projects and operational changes.
- The recent 2019 LAWSS 20-year Growth Plan reviewed the current water supply system with the purpose of identifying and addressing any data gaps, evaluating the system performance and capacity, and establishing demands for hydraulic modelling. Modelling results outlined several areas of improvements and provided a list of alternatives to mitigate noted issues.

4. Why This MCEA Study and Why Now?

- LAWSS is initiating a MCEA Master Plan study to review and update the 2015 servicing strategy and identify capital project upgrades needed to provide sustainable municipal water and accommodate future growth over the next 20 years and beyond.
- The study is growth focused and provides an efficient and cost-effective maintenance and expansion program for the LAWSS municipal potable water supply system that will also support capital works planning.
- The proposed servicing strategy – capital upgrades will ensure sustainable water supply to its members and customers over the next 20 years and beyond, as well as new potential customers in Lambton County.
- The study will allow for and ensure that there is a clear road map in place for the implementation of the proposed capital works that can be easily updated.

5. Water System Hydraulic Analysis

2041 growth hydraulic analysis has identified the following water storage and distribution system constraints:

- Inability to meet planned growth for the community of Watford
- Inadequate pressure in distribution system on west side of East Lambton Pumping Station/Reservoir
- Inadequate pressure in St Clair Township, even with planned GRID reinforcement project

6. MCEA Phase 1: Problem/Opportunity Statement

Phase 1 of the MCEA planning process requires the proponent of an undertaking (i.e., LAWSS) to document factors leading to the conclusion that the proposed improvement is needed, and to develop a clear statement of the identified problems or opportunities to be addressed. The Problem/Opportunity Statement is the first phase in undertaking a MCEA study and assists in establishing the study's scope.

Following a review of the existing water servicing infrastructure and a review of the existing and anticipated future demands, the following summarizes the problem and / or opportunities to be addressed by this MCEA study:

Problem:

- Moderate near and long term growth is expected in specific areas of the LAWSS distribution system. As such, there is a need for improving water servicing in a sustainable manner that can be logically phased. Additional infrastructure and improvements to the existing system must be in place in a timely and orderly manner to service approved growth.
- A detailed cost phasing and implementation plan is required to allow the LAWSS Joint Management Board to develop a capital works program and budget.

Opportunities:

- To develop a water utility-infrastructure master plan or “road map” that will support future capital works planning including funding opportunities and meet the needs of existing and future water customers.
- There is also the potential to reconfigure the West Lambton Pumping Station/Reservoir and avoid expensive rehabilitation.

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To: Chair and Members
Lambton Area Water Supply System Joint Board of Management

From: Clinton Harper
General Manager

Subject: WTP Main Switchgear & Generator Replacement- Project Award

Recommendation

It is recommended that the LAWSS Joint Board;

1. Increase the total budget for Project 20-131 Replacement of 5kV Switchgear and Emergency Generators at LAWSS from \$6,141,000 to \$6,716,892. A total increase of \$575,892.
2. Award the General Contracting component, as outlined in RFQ 20-131 Replacement of 5kV Switchgear and Emergency Generators at LAWSS, to J.M.R. Electric Limited for the amount of \$2,751,910 +H.S.T.

Background:

With the assistance of EXP Services, engineering design for replacement of the water treatment plant's emergency standby power system and 5kV switchgear has been ongoing since late 2018. To save costs and to streamline the design process it was decided that the two major pieces of equipment, the gensets and the switchgear, would be bought out-right by LAWSS and supplied to a successful General Contractor capable of executing the project scope. In July 2020, a rebuild of the existing fuel system was added to the project's scope at staff's recommendation. The addon was necessary to address major deficiencies in the existing fuel system that were expected to impact LAWSS ability to connect the new diesel power system.

Due to the criticality of the systems that will be affected during the project, an effort was made to prequalify the contractors authorized to bid on the General Contracting (GC) component. The general contractors approved to bid on the GC component of the project were pre-qualified based on the following criteria:

- Demonstration of a specified level of overall Company qualifications and experience.
- Availability of specialized staff required for the project.
- Past Company safety performance.
- Commitment to communication.

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The prequalification tendering process yielded three contractors with the sufficient experience and the necessary qualifications to successfully complete the LAWSS Generator and Switchgear Replacement Project. However, during the actual tender process one of the two contractors was disqualified from bidding on the project and only two submissions were received.

Financial Implications:

LAWSS Board established an overall budget of \$6,141,000 to replace the standby power system, the main 5kV Switchgear and to address TSSA requirement related to the existing WTP fuel system. Of this initial budget, \$2,224,452 remains available to cover the remaining contract costs related to overall demolition, construction and commissioning (GC Component).

On September 10, 2020, a LAWSS RFQ for the GC component of the project closed after a 4-week tender period. The submissions were reviewed for completeness and the results are described in Table #1. The GC Contract includes the work necessary to achieve the three main project goal outlines of Table #2. A comprehensive list of necessary project spending, and how spending relates to the overall budget, is outlined in Table #3.

Table #1: Results

Bid Price	K&L Construction Limited	JMR Electric Limited
Base Bid	\$3,821,400	\$2,490,000
Provisional item #1	\$46,500	\$61,910
Contingency Allowance	\$200,000	\$200,000
Total Price	\$4,067,900	\$2,751,910
Total Price (incl. HST)	\$4,139,496	\$2,800,344

Table #2: Approved Budget

Description	Approved Budget
Generator Replacement Project Budget (including Engineering)	\$4,250,000
Main SWGR Replacement Project Budget (including Engineering)	\$1,616,000
Fuel System Replacement (including Engineering)	\$275,000
Total Project Budget including Engineering	\$6,141,000

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Table #3: Remaining Budget (including non-rebatable H.S.T.)

Total Project Budget (including Engineering)		\$6,141,000
Board Approved Engineering	\$344,458	
Additional Necessary Engineering:		
SCADA Integration	\$12,211	
Fuel System Audit/TSSA	\$6,695	
Existing Stack Structural Assessment	\$10,176	
SCR Exhaust Stack Bracing	\$5,902	
Air Emissions Modeling	\$5,495	
Approved Equipment	3,495,982	
Additional Necessary Equipment:		
Genset Switchgear deliverable refinement.	-\$11,986	
OCWA- Genset Factory Testing	\$2,427	
Main Switchgear L/R Switch Addition	\$7,288	
Crank Case Ventilation Emissions Absorber	\$19,080	
Equipment Storage	\$18,821	
Total Cost:	3,916,548	-\$3,916,548
Remaining Overall Budget Available for General Construction (GC) Contract		\$2,224,452
GC Contract (Pending)		\$2,800,344
Balance		-\$575,892

Consultation:

This report was completed in consultation with the LAWSS General Accountant, EXP Services Inc., and OCWA Operational Staff.

Conclusion

Attached to this report is a letter prepared by EXP Services Inc. that verifies both bids we received were complete in their entirety and submitted as per tendering instructions with the appropriate documentation. They are recommending that J.M.R. Electric Limited, a reputable Electrical Contractor that has demonstrated their ability on projects of similar size and complexity, be awarded as they were the lowest price we received for the work. A combination of the following factors may have contributed to the budget shortfall:

1. The extent of SCADA integration was not clearly defined at that time of the budget preparation. It was solidified during our final design stage.

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2. The tendering timeline for the GC component was not ideal due to delays caused by COVID-19.
3. The evolution of the overall project scope affected project complexity in a way that was difficult to quantify from an engineering standpoint.
4. COVID-19 protocols that limit the number or workers that are permitted within proximity to each other are expected to be driving up costs across the industry.

I have reviewed their recommendation against the budgetary constraints outlined above and based on this review I also recommend that LAWSS proceed with the project for the following reasons:

1. It is unlikely that re-tendering will result in a better outcome.
2. Sufficient effort was undertaken to secure a competitive price for all aspects of this project.
3. There will be additional costs incurred related to storage of built equipment if the project is delayed.

By postponing current projects and adjusting the capital plan, staff can take reasonable steps to address the budget shortfall without severely impacting current and future cashflow. If the recommendations are accepted, changes to the capital plan will be presented to the LAWSS Board at the budget proposal in October and will include postponement of \$120,000 in approved engineering in 2020. Over the next 5 years, approximately \$1.76 million is designated to upgrade/replace the major electrical equipment downstream of the 5kV Switchgear. This plan will need to be altered to accommodate the 2020 budget shortfall related to this project.

This report was prepared by Clinton Harper, LAWSS General Manager

Attachment(s): EXP Recommendation letter- Tendering Results.



September 14, 2020

Clinton Harper
General Manager
Lambton Area Water Supply System
1215 Fort Street
Sarnia, ON N7V 1M1

Re: EXP Project SCL-00018051-00 LAWSS – Emergency Generator and Main 5kV Switchgear
Replacement - Tender Results

Dear Clinton:

We have reviewed the received tenders for the above mentioned project; as forwarded electronically to our office. Out of the three contractors (JMR, K&L, Selectra) who were invited to bid, only two tenders were submitted as Selectra was disqualified during the tender period due to non-attendance at the mandatory pre-bid walk through. We can confirm that both JMR and K&L attended the mandatory pre-bid site walk-through.

Both bids were complete in their entirety and were submitted in the correct format and order as requested in the tendering instructions. Both bids included the three (3) financial documents requested in the Tendering Instructions, which were:

- Bid Bond
- Agreement to Bond
- Proof of Insurance

Upon comparison of the bid values as submitted by JMR and K&L respectively, it is noted that K&L's base bid is significantly higher than JMR's (approximately 53% higher).

Below is a summary of the bid prices received from both the qualified bidders.

Bid Price (HST Extra)	K&L Construction Limited	JMR Electric Limited
Base Bid	\$ 3,821,400	\$ 2,490,000
Contingency Allowance	\$ 200,000	\$ 200,000
Total Stipulated Price	\$ 4,021,400	\$ 2,690,000
Separate Price Item # 1	\$ 46,500	\$ 61,910
Total (including Separate Price Item # 1)	\$ 4,067,900	\$ 2,751,910

On the basis of the tenders submitted and the above-noted bid values, we recommend that JMR Electric be awarded the contract for the Emergency Generator and Main 5kV Switchgear Replacement at LAWSS for the following stipulated price:

\$ 2,751,910.00 (HST extra)

We shall refrain from informing the bidders of the results until instructed to do so by your office. If you have any questions, please do not hesitate to contact our office.

Sincerely,



Arka Mukherjee, P.E., P.Eng.
Manager, MEP Services
EXP Services Inc.

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To: Chair and Members
Lambton Area Water Supply System Joint Board of Management

From: Clinton Harper
General Manager

Subject: Park Agreement – LAWSS Forest Standpipe

Recommendation

It is recommended that the LAWSS Joint Board of Management endorse the attached agreement.

Background:

In 2019, LAWSS was approached by an advocacy group in The Municipality of Lambton Shores requesting that a section of the green space on the north side of the Forest Standpipe, within the Forest Standpipe compound, be repurposed as a dog park and make accessible to area residents.

There is approximately 0.5 acres of green space on the north side of the Forest Standpipe that may be re-purposed for the requested use without affecting the operation or maintenance of the Facility. In 2019, the LAWSS Joint Board of Management agreed in principal to re-purposing an area of LAWSS property as a dog park and directed staff to work with the local municipality and advocacy group to establish an agreement to this effect.

Comments:

With the assistance of LAWSS legal council, an acceptable agreement between the “club” and the advocacy group. The finalized agreement is attached to this report and awaits a final endorsement by the Board.

Consultation:

An associate at George Murray Shipley Bell, LLP, along with OCWA-LAWSS Operational Staff, were consulted in the development of the attached agreement.

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Financial Implications:

The agreement is designed in a way that protects LAWSS from liability and to ensure that LAWSS is not financially impacted by the construction, ongoing maintenance and operation.

This report was prepared by Clinton Harper, LAWSS General Manager

Attachment(s):

DRAFT Forest SP Public Dog Park Agreement (Rev. Sept 17, 2020)

Forest Standpipe – Site Aerial

THIS MAINTENANCE AGREEMENT is made the _____ day of _____, 2020

BETWEEN:

Lambton Area Water Supply System
Hereinafter called the "LAWSS"
OF THE FIRST PART

AND

Hereinafter called "The Club"
OF THE SECOND PART

WHEREAS LAWSS is the owner of the property located at 6282 Townsend Line, Forest, in the Municipality of Lambton Shores, in the County of Lambton;

AND WHEREAS the Club has been given permission by the LAWSS to develop a dog park, hereinafter referred to as the "park" on the above noted property;

AND WHEREAS it is deemed expedient to outline the roles and responsibilities of each of the parties;

NOW THEREFORE WITNESSETH that for and in consideration of the premises and mutual covenants hereinafter set forth, the parties agree with the terms and conditions set out herein.

1. Term of Agreement

The maintenance agreement is for a term of twenty (20) years from the date of signing.

2. Responsibilities of LAWSS

LAWSS will:

- Allocate a space at the Forest Standpipe for the purposes of developing a dog park, as identified on the site plan (Appendix A).

3. Responsibilities of the Club

The Club will:

- Provide and maintain vehicular parking adjacent to the park to the satisfaction of the municipal parking requirements.
- Supply, install and maintain new and existing fencing installed around the perimeter of the park as outlined in Appendix B
- Install and maintain gated access.
- Remove existing cherry trees and replace 1:1 with new trees supplied by LAWSS, maintain new trees.
- Remove all existing surface discontinuity and maintain area free of tripping hazards.
- Perform all property maintenance within the park.
- Purchase and maintain dog waste removal bas and stations

- Regularly remove all dog waste from inside the park
- Ensure that reasonable rules are in place at all times for the use of the Park including but not limited to hours of access, disposing of animal waste, removal of garbage, limiting park use to vaccinated dogs, etc. A copy all rules and regulations for the park shall be provide to LAWSS for review prior to being posted at the park by the Club.
- Ensure that rules and regulations regarding the use of the park are displayed at all entrances to the park.

4. Maintenance

The Club is solely responsible for paying any and all costs associated with maintaining the park. Should the Club cease to maintain park, it is LAWSS sole discretion to either continue maintenance or remove the park and to terminate this Agreement.

5. Ownership of Improvements

The parties agree that any and all improvements, facilities, and landscaping installed at the park under this Agreement are the property of LAWSS.

6. Reporting and LAWSS Rules and Regulations.

Any issues relating to the safety of the park shall be reported to LAWSS immediately.

LAWSS may require the Club to implement additional rules and regulations at any point during the term of this Agreement. Upon written notice from LAWSS that additional rules or regulations are required for the continued use of the park the Club shall have 30 days from receipt of such notice to comply with the additional rules and regulations.

7. Insurance

The Club shall carry liability insurance in an amount not less than \$2 million on a per occurrence basis which includes LAWSS as an additionally insured, and will provide a copy of the policy and a certificate of insurance which evidences all of the coverage requirements to LAWSS on an annual basis. The Club's policy should include: bodily injury, property damage, products and completed operations, tenant's legal liability, cross liability and severability of interest and blanket contractual coverage.

The Club shall provide LAWSS with 30 days prior written notice of any policy cancellation or termination.

8. Default

If either party shall be in default in the performance of any of the terms or conditions of this Agreement, then the party not in default must serve the defaulting party thirty (30) days to cure the default. In the event the default is not cured within the thirty (30) day period, or if the default is of such a nature that it cannot reasonably be cured within such thirty (30) day period, if the defaulting party has not commenced curing such default within such thirty (30) day period and diligently taken all steps necessary to complete the curing of such default within a reasonable time thereafter, then the party not in default may give the defaulting

party written notice of the termination of this Agreement. Any such termination shall be effective only after fourteen (14) days from the date of notice from the party not in default.

9. Notice of Termination

If either the Club or LAWSS wishes to terminate this Agreement prior to the end of the term created by this Agreement, notice to that affect will be given in writing NOT LESS THAN SIXTY (60) DAYS. The Club agrees and acknowledges that a notice to terminate the Agreement as described above shall be delivered or mailed to the offices of the Municipality at:

Lambton Area Water Supply System
1215 Fort Street
Sarnia, ON N7V 1M1 Attention: General Manager Services

LAWSS agrees that a notice to terminate the Agreement as described above shall be delivered or mailed to:

EXCEPTION: In the case that the "site" is required by the LAWSS for LAWSS purposes, LAWSS can give notice of termination of the Agreement to the Club, providing LESS THAN SIXTY (60) DAYS notice.

10. Indemnity

The Club agrees to indemnify and save the LAWSS and the LAWSS's employees, officers and agents harmless from any claims, prosecutions, actions, proceedings and judgments of any type relating to the use of the licensed area by the Club. The Club shall respond to any such matter by engaging legal counsel to represent LAWSS' interest and will promptly satisfy any settlement amount, fine, bill of costs or judgment imposed with respect to same.

The Club is required to indemnify LAWSS for expenses incurred. If a claim arises, the Club shall indemnify the LAWSS to the extent that the LAWSS has not acted with negligence or willful intent.

11. No Assignment

The Club shall not assign this agreement and LAWSS may arbitrarily refuse any request to such assignment.

12. Counterparts.

This Agreement may be executed in any number of counterparts, each of which is deemed an original, and all of which taken together constitute one and the same agreement. Notwithstanding anything to the contrary in Section 9], a counterpart may be delivered by facsimile [, email attachment (of a PDF document), or other electronic means, which shall be as effective as hand delivery of the original executed counterpart.

13. Registration.

The Club shall not at any time register notice, caveat, or memorial (or any similar document) or a copy of this Agreement on title to the property of which the park forms part.

14. Successors & Assigns

This Agreement shall ensure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.

15. Interpretation.

- a. The words importing the singular number only shall include the plural, and vice versa, and words importing the masculine gender shall include the feminine gender, and words importing persons shall include firms and corporations and vice versa.
- b. Unless the context otherwise requires, the word "LAWSS" and the word "Club" wherever used herein shall be construed to include the executors, administrators, successors and assigns of LAWSS and Club, respectively.

IN WITNESS WHEREOF the Parties hereto have hereunto caused to be affixed their respective seals, attested by the hands of their proper officers duly authorized in that behalf

SIGNED, SEALED AND DELIVERED
In the presence of

Club

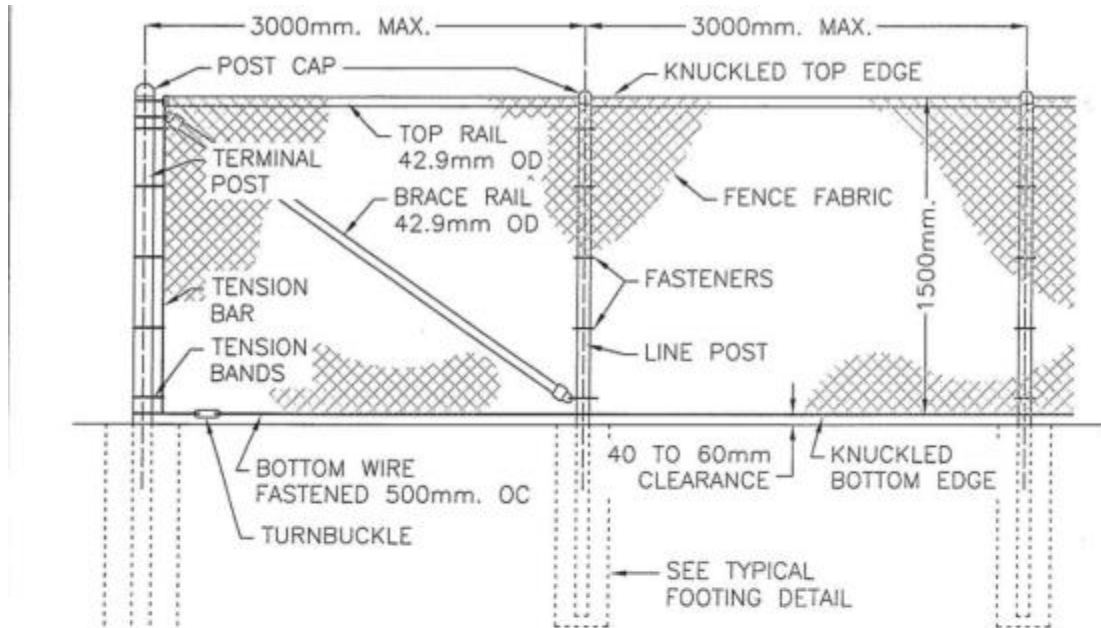
Lambton Area Water Supply System

Clinton Harper, General Manager

Appendix B

Chain link fences are to comply with the requirements of OPSS-541 and OPSD-900.01 except for the following amendments:

- the height of the fence shall match the exiting's fence already partially installed around the designated area.
- the footing detail, part a: shall read in concrete.
- the new fence installed to separate the Standpipe from the park shall be installed 300mm below grade.

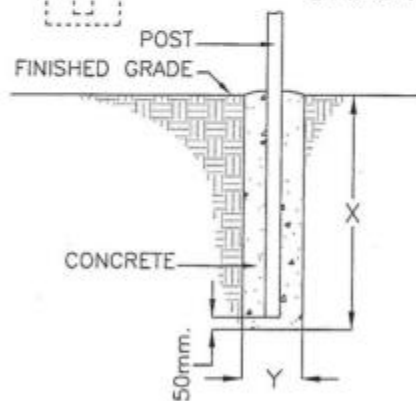


CHAIN-LINK FENCE DETAIL

N.T.S.

NOTES:

1. FENCE POSTS, RAILS AND HARDWARE SHALL BE BLACK POWDER COATED. FASTENERS SHALL BE HOT DIP GALVANIZED.
2. FENCE FABRIC SHALL BE BLACK VINYL COATED STEEL FABRIC 3.76mm. WITH A UNIFORM 38mm. OR 50mm. MAX. OPENING DIAMOND PATTERN.
3. FENCE FABRIC SHALL BE INSTALLED ON "CITY" SIDE OF FENCE.
4. POST CAPS SHALL BE WATER PROOF AND MECHANICALLY SECURED TO POSTS.
5. STRAINING POSTS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 150M. ADDITIONAL STRAINING POSTS SHALL BE INSTALLED WHERE CHANGES IN VERTICAL GRADE EXCEED 30 DEGREES.
6. CONCRETE SHALL BE 20MPa @ 28 DAYS IN ACCORDANCE WITH O.P.S.S. 904.
7. FENCE SHALL BE INSTALLED ON PROPERTY LINES, UNLESS OTHERWISE DIRECTED BY CONTRACT ADMINISTRATOR.
8. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.



TYPICAL FOOTING DETAIL

N.T.S.

POST AND FOOTING DETAILS TABLE (IN mm.)				
POST TYPE	POST OD	POST LENGTH	FOOTING DEPTH "X"	FOOTING DIA. "Y"
LINE POST	60.3	2400	915	250
TERMINAL POST	88.9	2900	1370	350



84

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42

84

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Metres

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