Long Sault – Ingleside Drinking Water System

Waterworks # 260066417
System Category – Large Municipal Residential

Annual Water Report

Prepared For: Township of South Stormont

Reporting Period of January 1st – December 31st 2024

Issued: February 26, 2025

Revision: 0

Operating Authority:

OCWA
ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

This report has been prepared to satisfy the annual reporting requirements in O.Reg 170/03 Section 11 and Schedule 22

Table of Contents

Revision History

Date	Revision #	Revision Notes
February 26, 2025	0	Annual report issued

Report Availability

This system does not serve more than 10,000 residence and the annual reports will be available to residents at the municipal office, located at 2 Mille Roches road, Long Sault, ON. The report will also be available on the municipal website. (www.southstormont.ca)

Compliance Report Card

Compliance Event	# of Events
Ministry of Environment Inspections	- February 14, 2024 - One (1) Non - Compliance
Ministry of Labour Inspections	- No Ministry of Labour Inspections in 2024
QEMS External Audit	- Certificate of Accreditation May 24, 2024 - Full scope scheduled for 2025
AWQI's/BWA	- No AWQI or BWA in 2024
Non-Compliance	- No non-compliance in 2024
Spills	- No spills in 2024
Watermain Breaks	- Six (6) watermain breaks in 2024

System Process Description

Raw Source

Water is drawn from the St. Lawrence River through a 360 mm diameter intake pipe equipped with a sodium hypochlorite feed system for zebra mussel control. The raw water intake crib is located off shore, south of the low lift building located on Lakeside dr Long Sault. Three vertical turbine pumps convey water from the low lift building to the water treatment plant located at 15955 Moulinette Island Causeway st, Long Sault.

Treatment

Inside the water treatment facility, water undergoes ultra-filtration through membrane cassettes (ZeeWeed membranes, manufactured by Veolia) which are housed in large concrete tanks. There are three concrete filter tanks, each of which contains two ultra-filtration cassettes. Each filter has a chemical clean and backwash system. They are each equipped with a turbidity analyzer. Three granular activated carbon (GAC) contactors provide taste and odour control. Sodium hypochlorite is used for disinfection. A multi-cell baffled clearwell provides chlorine contact time.

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Sodrox

Distribution

Water is transported through an 11 km transmission main from Long Sault to Ingleside. The water is re-chlorinated at a booster station in Ingleside. A steel elevated storage tank is located in Ingleside with a capacity of 944 m^3. The watermains are composed of PVC, cast iron and ductile iron. The combination of clear wells, the reservoir and the elevated tanks provide for peak hour demands and fire flows.

Summary of Non-Compliance

Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
There was no adverse water quality incidents reported during the reporting period.						

Non-Compliance

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
There was no non-compliance issues reported during the reporting period.				

Non-Compliance Identified in a Ministry Inspection:

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
DWWP	Missing director notification	April 30, 2024	Submitted director notification	Complete

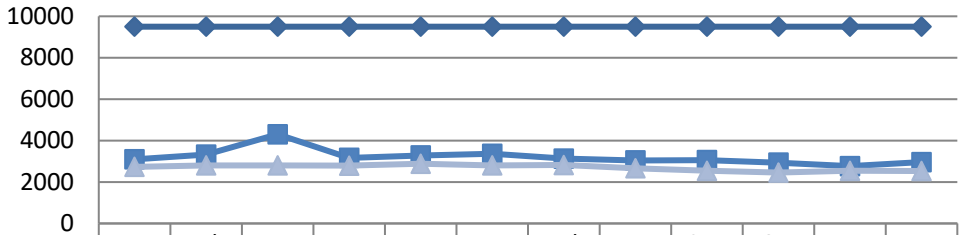
Flows

Raw Water Flows

Raw water flows are regulated under the Permit to Take Water (PTTW). The raw flow data for 2024 was submitted to the Ministry electronically under Permit #4278-9XSHHK. The submission confirmation can be found attached in Appendix A.

Raw Flows

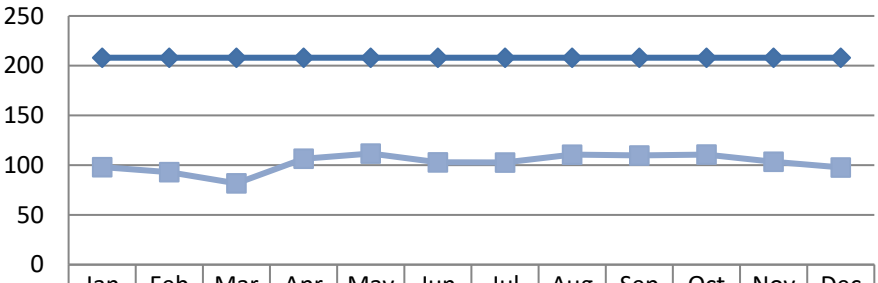
Max Allowable Flow - PTTW



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable (m3/d)	9500	9500	9500	9500	9500	9500	9500	9500	9500	9500	9500	9500
Max Flow (m3/d)	3098	3324	4305	3165	3284	3365	3132	3043	3060	2935	2770	2962
Avg (m3/d)	2736	2803	2802	2791	2884	2803	2821	2665	2546	2458	2545	2535

Maximum Flow Rates

Max Allowable Rate - PTTW



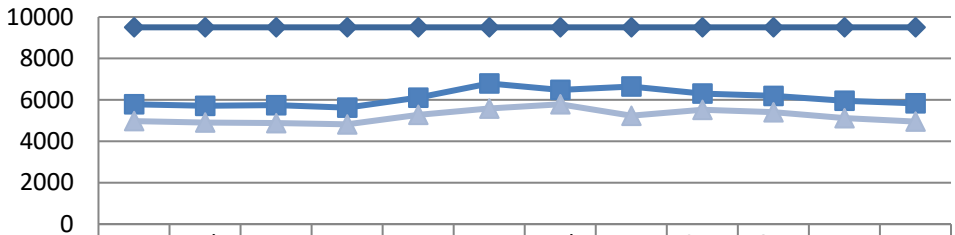
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable Rate (L/sec)	208	208	208	208	208	208	208	208	208	208	208	208
Max Rate (L/s)	98.0	93.0	81.7	106.5	111.7	102.9	102.7	110.6	109.8	110.7	103.4	97.7

Treated Water Flows

The Treated Water flows are regulated under the Municipal Licence. (MDWL)

Treated Flows

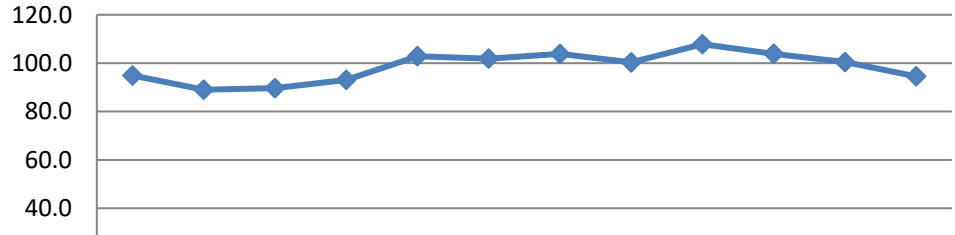
Rated Capacity - MDWL



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rated Capacity (m3/d)	9500	9500	9500	9500	9500	9500	9500	9500	9500	9500	9500	9500
Max Daily Flow (m3/d)	5787	5714	5743	5623	6107	6790	6480	6642	6304	6192	5955	5831
Avg (m3/d)	4973	4907	4878	4818	5277	5581	5785	5233	5520	5402	5118	4950

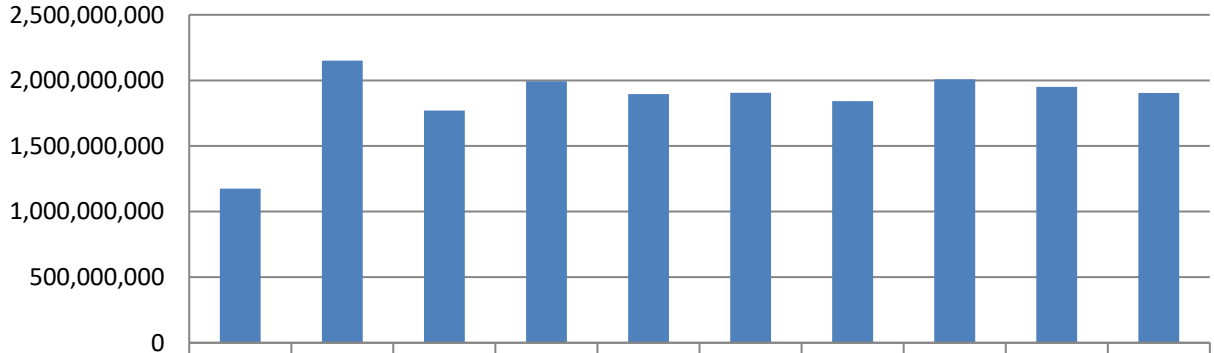
Treated Flows

Max Rate - MDWL



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Daily Flow (m3/d)	94.9	89.0	89.7	93.1	102.9	101.9	103.8	100.3	107.8	103.9	100.5	94.5

Annual Total Flow Comparison



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
WTP (m3)	1,174,5	2,150,2	1,770,5	1,993,0	1,895,3	1,905,5	1,842,3	2,007,8	1,950,0	1,904,8

Regulatory Sample Results Summary

Microbiological Testing

	No. of Samples Collected	Range of E.Coli Results		Range of Total Coliform Results		Range of HPC Results	
		Min	Max	Min	Max	Min	Max
Raw Water	53	0	4	0	4		
Treated Water	53	0	0	0	0	<2	2
Distribution Water	144	0	0	0	0	<2	2

Operational Testing

	No. of Samples Collected	Range of Results		
		Minimum	Average	Maximum
Turbidity, On-line (NTU) - RW	8760	N/A	N/A	10
Turbidity, On-Line (NTU) - TW	8760	0.28	1.19	1.54
Turbidity, On-Line (NTU) - Filt1	8760	0.01	0.03	1.00
Turbidity, On-Line (NTU) - Filt2	8760	0.01	0.03	0.94
Turbidity, On-Line (NTU) - Filt3	8760	0.01	0.03	1.00
Free Chlorine Residual, On-Line (mg/L) - TW	8760	0.28	1.19	1.54
Free Chlorine Residual, In-House (mg/L) – DW 1	53	0.60	0.79	1.24
Free Chlorine Residual, In-House (mg/L) – DW 2	53	0.74	0.99	1.20

NOTE: spikes recorded by on-line instrumentation were a result of air bubbles and various maintenance/calibration activities. All spikes are reviewed for compliance with O.Reg 170/03

Inorganic Parameters

These parameters are tested as a requirement under 170/03. Sodium and Fluoride are required to be tested every 60 months. Nitrate and Nitrite are tested quarterly and the metals are tested annually as required under 170/03. In the event any of the parameters exceed half of the maximum allowable concentration the parameter is required to be sampled quarterly.

- MAC = Maximum Allowable Concentration as per O.Reg 169/03
- MDL = Method Detection Limit

Treated Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	2024/05/13	0.1	6	No	No
Arsenic: As (ug/L) - TW	2024/05/13	0.6	10	No	No
Barium: Ba (ug/L) - TW	2024/05/13	23	1000	No	No
Boron: B (ug/L) - TW	2024/05/13	21	5000	No	No
Cadmium: Cd (ug/L) - TW	2024/05/13	< MDL 0.015	5	No	No
Chromium: Cr (ug/L) - TW	2024/05/13	< MDL 1	50	No	No

Mercury: Hg (ug/L) - TW	2024/05/13	< MDL 0.02	1	No	No
Selenium: Se (ug/L) - TW	2024/05/13	< MDL 1	50	No	No
Uranium: U (ug/L) - TW	2024/05/13	0.32	20	No	No
Additional Inorganics					
Nitrate : (mg/L) - TW	2024/02/14	0.28	10	No	No
Nitrate : (mg/L) - TW	2024/05/14	0.29	10	No	No
Nitrate : (mg/L) - TW	2024/08/12	0.17	10	No	No
Nitrate : (mg/L) - TW	2024/11/13	0.19	10	No	No
Nitrite : (mg/L) - TW	2024/02/14	< MDL 0.05	1	No	No
Nitrite : (mg/L) - TW	2024/05/14	0.06	1	No	No
Nitrite : (mg/L) - TW	2024/08/12	< MDL 0.05	1	No	No
Nitrite : (mg/L) - TW	2024/11/13	0.05	1	No	No
*There is no MAC for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.					

Schedule 15 Sampling:

The Schedule 15 Sampling is required under O.Reg 170/03. This system is under reduced sampling. Lead sampling is due between December 15 2024 – April 15 2025 and June 15 2024 – October 15 2025.

Distribution System	Number of Sampling Points	Number of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
			Minimum	Maximum		
Alkalinity (mg/L)	6	6	95	104	N/A	N/A
pH	6	6	7.25	8.14	N/A	N/A

Organic Parameters

These parameters are tested annually as a requirement under O.Reg 170/03. In the event any of the parameters exceed half of the maximum allowable concentration the parameter is required to be sampled quarterly.

MDL = method Detection Limit

Treated Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
1,1-Dichloroethylene (ug/L)-TW	2024/05/13	<MDL 0.5	14	No	No
1,2-Dichlorobenzene (ug/L)-TW	2024/05/13	<MDL 0.5	200	No	No
1,2-Dichloroethane (ug/L)-TW	2024/05/13	<MDL 0.5	5	No	No
1,4-Dichlorobenzene (ug/L)-TW	2024/05/13	<MDL 0.5	5	No	No
2,3,4,6-Tetrachlorophenol (ug/L)-TW	2024/05/13	<MDL 0.2	100	No	No

Treated Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
2,4,6-Trichlorophenol (ug/L)-TW	2024/05/13	<MDL 0.2	5	No	No
2,4-Dichlorophenol (ug/L)-TW	2024/05/13	<MDL 0.2	900	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L)-TW	2024/05/13	<MDL 1	100	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L)-TW	2024/05/13	<MDL 10	100	No	No
Alachlor (ug/L) -TW	2024/05/13	<MDL 0.3	5	No	No
Atrazine + N-dealkylated metabolites (ug/L)-TW	2024/05/13	<MDL 0.5	5	No	No
Azinphos-methyl (ug/L)-TW	2024/05/13	<MDL 1	20	No	No
Benzene (ug/L)-TW	2024/05/13	<MDL 0.5	1	No	No
Benzo(a)pyrene (ug/L)-TW	2024/05/13	<MDL 0.006	0.01	No	Yes
Bromoxynil (ug/L)-TW	2024/05/13	<MDL 0.5	5	No	No
Carbaryl (ug/L)-TW	2024/05/13	<MDL 3	90	No	No
Carbofuran (ug/L) -TW	2024/05/13	<MDL 1	90	No	No
Carbon Tetrachloride (ug/L) -TW	2024/05/13	<MDL 0.2	2	No	No
Chlorpyrifos (ug/L) -TW	2024/05/13	<MDL 0.5	90	No	No
Diazinon (ug/L)-TW	2024/05/13	<MDL 1	20	No	No
Dicamba (ug/L)-TW	2024/05/13	<MDL 1	120	No	No
Dichloromethane (Methylene Chloride) (ug/L)-TW	2024/05/13	<MDL 5	50	No	No
Diclofop-methyl (ug/L)-TW	2024/05/13	<MDL 0.9	9	No	No
Dimethoate (ug/L)-TW	2024/05/13	<MDL 1	20	No	No
Diquat (ug/L)-TW	2024/05/13	<MDL 5	70	No	No
Diuron (ug/L)-TW	2024/05/13	<MDL 5	150	No	No
Glyphosate (ug/L)-TW	2024/05/13	<MDL 25	280	No	No
Malathion (ug/L)-TW	2024/05/13	<MDL 5	190	No	No
Metolachlor (ug/L)-TW	2024/05/13	<MDL 3	50	No	No
Metribuzin (ug/L)-TW	2024/05/13	<MDL 3	80	No	No
Monochlorobenzene (Chlorobenzene) (ug/L)-TW	2024/05/13	<MDL 0.5	80	No	No
Paraquat (ug/L)-TW	2024/05/13	<MDL 1	10	No	No
PCB (ug/L)-TW	2024/05/13	<MDL 0.05	3	No	No
Pentachlorophenol (ug/L)-TW	2024/05/13	<MDL 0.2	60	No	No
Tetrachloroethylene (ug/L)-TW	2024/05/13	<MDL 0.5	10	No	No
Trichloroethylene (ug/L)-TW	2024/05/13	<MDL 0.5	10	No	No
Vinyl Chloride (ug/L)-TW	2024/05/13	<MDL 0.2	1	No	No

Treated Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Chlorobenzene (ug/L)-TW	2024/05/13	< MDL 0.5	80	No	No
Phorate (ug/L)-TW	2024/05/13	< MDL 0.3	2	No	No
Prometryne (ug/L)-TW	2024/0513	<MDL 0.1	1	No	No

Additional Legislated Samples

Document	Parameter	Limit (mg/L)	Result (mg/L)
MDWL # 186-102	Filter Backwash Supernatant Suspended Solids	Annual Average < 25	5.39

Major Maintenance Summary

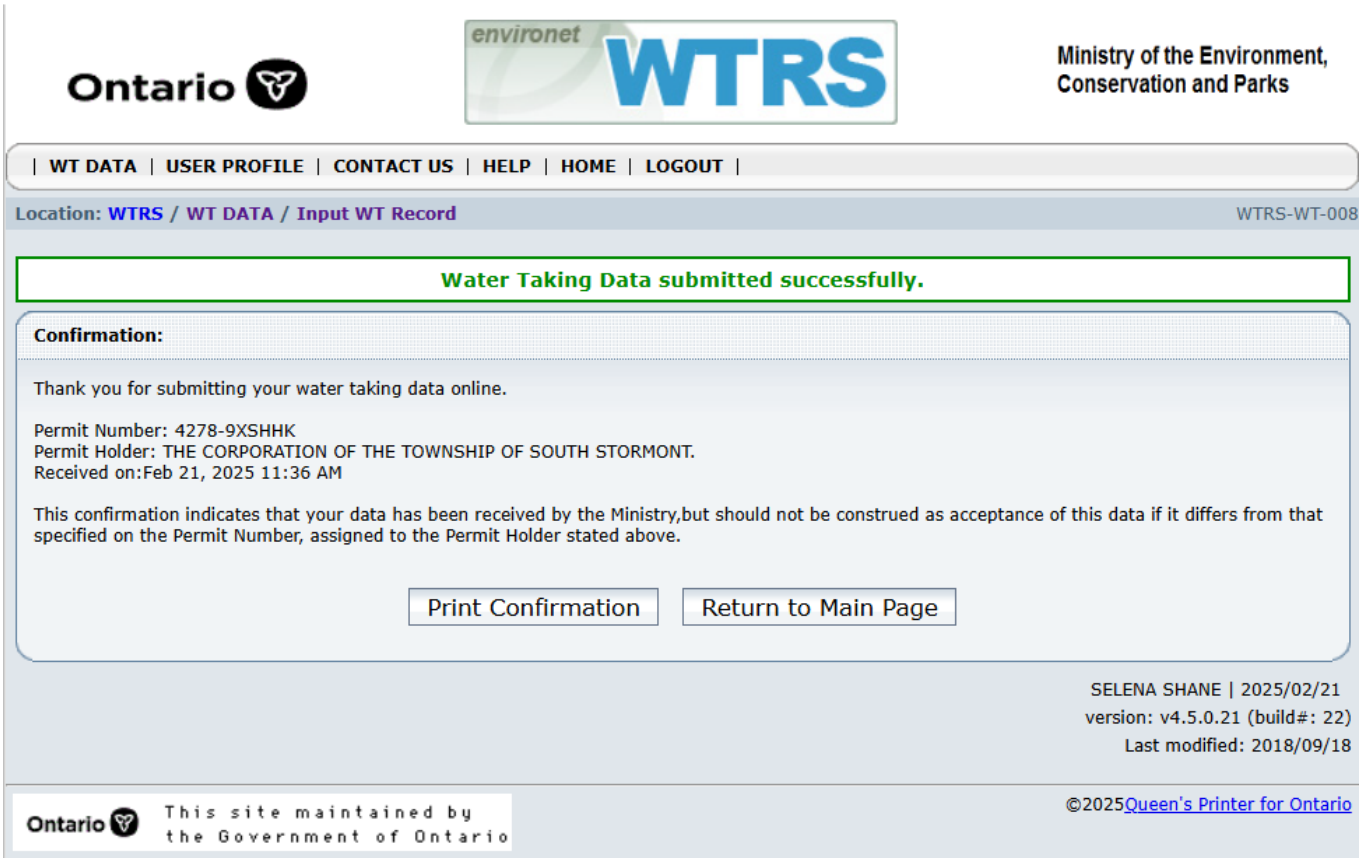
Description
- Backpulse tank replaced - Removed 1720DTurbidimeter and AquaTrend/SOM controller on raw water line and replaced with a 1720E Turbidimeter and sc200 controller - Added secondary air removal system for water treatment plant. Secondary system is an air ejector system (venturi)

Distribution Maintenance

Date	Location Reference	Category	Details	Corrective Repair
15/01/24	13 Stranchan Ave, Long Sault	1	6” ductile iron, Circumferential break	Repair clamp
29/01/24	20 Dickinson Dr, Ingleside	1	8” ductile iron, Circumferential break	Repair clamp
08/02/24	42 Elm St, Ingleside	1	6” ductile iron, Circumferential break	Repair clamp
06/12/24	3400 Vincent Massey Dr, Cornwall	1	8” ductile iron, Broken fitting	Repair clamp
09/12/24	Hoople Creek Dr, Ingleside	1	16” ductile iron, leaking joint	Repair clamp, replaced section of pipe and repaired joint
26/12/24	87 St Lawrence St, Ingleside	1	6” ductile iron, Circumferential break	Repair clamps

Appendix A

WTRS Data and Submission Confirmation



Ontario

environet WTRS

Ministry of the Environment, Conservation and Parks

| WT DATA | USER PROFILE | CONTACT US | HELP | HOME | LOGOUT |

Location: WTRS / WT DATA / Input WT Record WTRS-WT-008

Water Taking Data submitted successfully.

Confirmation:

Thank you for submitting your water taking data online.

Permit Number: 4278-9XSHHK
Permit Holder: THE CORPORATION OF THE TOWNSHIP OF SOUTH STORMONT.
Received on:Feb 21, 2025 11:36 AM

This confirmation indicates that your data has been received by the Ministry,but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

Print Confirmation | Return to Main Page

SELENA SHANE | 2025/02/21
version: v4.5.0.21 (build#: 22)
Last modified: 2018/09/18

Ontario This site maintained by the Government of Ontario

©2025Queen's Printer for Ontario

KNA Annual Summary

Station:	Long Sault Ingleside DWS							Daily Max:	6790.0 on June 05			
Day	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
1	4943.00	4627.00	5030.00	5288.00	4728.00	6166.00	5744.00	562.00	5637.00	5851.00	5045.00	5596.00
2	4657.00	5025.00	5203.00	4594.00	5305.00	6171.00	5575.00	5895.00	5067.00	4615.00	5744.00	5570.00
3	4770.00	5067.00	4462.00	4239.00	5490.00	6523.00	6206.00	6364.00	5527.00	5405.00	5170.00	5554.00
4	4893.00	4652.00	5384.00	4563.00	4755.00	6147.00	6242.00	5104.00	4675.00	6192.00	5157.00	5669.00
5	4979.00	5714.00	5164.00	5417.00	5401.00	6790.00	5769.00	5843.00	6020.00	5111.00	5513.00	5253.00
6	4984.00	5713.00	5081.00	4979.00	5229.00	5320.00	6450.00	4799.00	5427.00	5163.00	5223.00	5755.00
7	4477.00	5567.00	5136.00	4564.00	5365.00	5459.00	6199.00	5443.00	5912.00	5570.00	4813.00	4954.00
8	5471.00	4737.00	4544.00	5039.00	5014.00	5193.00	6440.00	4375.00	4667.00	5517.00	5575.00	4590.00
9	4359.00	5206.00	5511.00	5187.00	4167.00	5189.00	6018.00	5407.00	4965.00	5180.00	5078.00	5230.00
10	4578.00	4938.00	4397.00	4773.00	5227.00	4435.00	4740.00	4412.00	5860.00	4482.00	5257.00	5454.00
11	4569.00	4686.00	4897.00	5274.00	4759.00	4557.00	5590.00	4270.00	5296.00	5717.00	5955.00	5831.00
12	4584.00	5155.00	4240.00	4481.00	4448.00	4689.00	5243.00	5424.00	5073.00	5834.00	4748.00	5752.00
13	5145.00	5163.00	5026.00	4846.00	4991.00	5272.00	6404.00	4493.00	5740.00	5262.00	4740.00	4616.00
14	5565.00	4657.00	4751.00	4556.00	4848.00	5490.00	5504.00	5890.00	5892.00	4171.00	5211.00	5613.00
15	5182.00	5482.00	4986.00	4787.00	4668.00	4900.00	6480.00	5963.00	5441.00	4827.00	4727.00	4532.00
16	4636.00	4507.00	4958.00	4633.00	5973.00	6114.00	4609.00	6642.00	6304.00	5676.00	5348.00	4509.00
17	4933.00	4796.00	4958.00	4733.00	5949.00	5678.00	4708.00	6221.00	5659.00	5825.00	4953.00	4747.00
18	4981.00	4881.00	4666.00	5623.00	5581.00	6544.00	5179.00	5826.00	5490.00	5176.00	5262.00	4343.00
19	5343.00	4699.00	4573.00	4297.00	5869.00	6251.00	6245.00	5534.00	5465.00	5716.00	4510.00	4240.00
20	5198.00	4337.00	4951.00	4310.00	6107.00	6011.00	5621.00	4751.00	6190.00	5125.00	4817.00	5057.00
21	4937.00	4645.00	4850.00	5153.00	4831.00	5523.00	5989.00	5175.00	5287.00	5867.00	4758.00	4233.00
22	5787.00	4623.00	4650.00	4738.00	5410.00	5699.00	6075.00	4875.00	5215.00	5786.00	5582.00	5059.00
23	4883.00	4584.00	4302.00	4635.00	5775.00	5404.00	6320.00	6024.00	6163.00	5456.00	4873.00	4893.00
24	5299.00	5362.00	5109.00	5288.00	5792.00	5783.00	5343.00	4948.00	5433.00	5796.00	5550.00	4311.00
25	5270.00	4821.00	4591.00	4498.00	5076.00	5026.00	5339.00	5696.00	5540.00	5765.00	5187.00	5016.00
26	5012.00	4784.00	4751.00	5048.00	5785.00	5628.00	5872.00	5970.00	4664.00	5226.00	4950.00	4484.00
27	5152.00	4318.00	4839.00	4489.00	4978.00	5844.00	6114.00	5608.00	6017.00	5664.00	4836.00	4170.00
28	4970.00	5087.00	5743.00	5046.00	5704.00	4639.00	5872.00	5125.00	5613.00	5484.00	4560.00	5582.00
29	5355.00	4470.00	4655.00	5214.00	4979.00	5199.00	6152.00	4935.00	5381.00	5533.00	5446.00	4029.00
30	4746.00		4910.00	4241.00	5363.00	5794.00	5783.00	5792.00	5978.00	5329.00	4964.00	4817.00
31	4507.00		4908.00		6024.00		5504.00	4872.00		5131.00		3991.00
Min	4359.00	4318.00	4240.00	4239.00	4167.00	4435.00	4609.00	562.00	4664.00	4171.00	4510.00	3991.00
Mean	4973.06	4907.00	4878.26	4817.77	5277.13	5581.27	5784.81	5233.48	5519.93	5401.68	5118.40	4950.00
Max	5787.00	5714.00	5743.00	5623.00	6107.00	6790.00	6480.00	6642.00	6304.00	6192.00	5955.00	5831.00