CANTON
d'ARMSTRONG
TOWNSHIP
EARLTON

January 07/2026

SUMMARY & COMPLIANCE REPORT
FOR THE YEAR
2025
Earlton Drinking Water System

 # 220003662

COUNCIL MEMBERS SIGNATURES

Mayor: _____

COUNCILOR: _____

COUNCILOR: _____

COUNCILOR: _____

COUNCILOR: _____

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January 07/2026

ANNUAL REPORT

FOR THE YEAR

2025

EARLTON DRINKING

WATER SYSTEM

220003662

The Drinking Water Works Permit (DWWP) #269-201 and Municipal Drinking Water License (MDWL) #269-101.

EARLTON DRINKING WATER SYSTEM REPORT
FOR THE YEAR 2025

Well # 1: has produced a total of 25461.63 cub meter at an average rate of 3.22 L/sec. (flow rate) and 2196.82 total hours of run time.

Well # 3: has produced a total of 50300.46 cub meter at an average rate of 8.77 L/sec. (flow rate) and 1592.85 total hours of run time.

Well # 4: has produced a total of 25216.53 cub meter at an average rate of 3.19 L/sec. (flow rate) and 2197.53 total hours of run time.

SUMMARY OF WATER TAKING PERMIT

(Permit # 6562-CZRPLJ)

Source Name	Well # 1	Well # 3	Well # 4
Max amount taken in 1 minute	205 L/min	546 L/min	205 L/min
Max amount taken in 1 day	295,000 L	786,000 L	295,000 L
Max number of hours taking in one day	24 hours	24 hours	24 hours

SUMMARY OF WELL OPERATION
FOR THE YEAR 2025

Source Name	Well # 1	Well # 3	Well # 4
Max amount taken in 1 minute	185.06 L/min.	509.99 L/min.	182.04 L/min
Max amount taken in 1 day	159000 L 159.00 m^3	367190 L 367.19 m^3	156410 L 156.41 m^3
Max number of hours taking in one day	14.32 hours 859.2 minutes	12.00 hours 720 minutes	14.32 hours 859.2 minutes

CONCLUSION OF SUMMARY

A) The maximum amount of water taken from the aquifer in any day did not exceed the water taking permit limit.

B) The maximum production rate of each well did not exceed the water taking permit limit.

C) The wells produced less water than the water-taking permit provided for.

EARLTON WATER TREATMENT PLANT PERFORMANCE FOR THE YEAR 2025

Daily Flow Record Review:

Records show that the Total Volume of water used in **2025** is 98688.67 m³, 683.13 m³ less than **2024** which was at 99371.8 m³.

Records also show that the month of **August** was our peak month of the year with a total of 9400.34 m³, which averages to 303.24 cub meter per day.
October 06, with 588.36 cub meters was the maximum in any one day.

Records also show that we exceeded the **design peak flow demand** of 18.9 L/sec. as stated on the Certificate of Approval on 2 occasions during the year. 1 was directly related to Fire Department having a practice with a hydrant, The other was during a fire pump test done by Operators.

MAXIMUM DAY DEMAND of the year was October 06, at 588.36 cub meter. The demand was directly related to the construction crew that requested water to help in the curing of the cement for the overpass bridge directly behind the Waterplant.

A maximum flow rate of 588.36 cub meter/day which represents a flow rate of 6.81 l/sec., compared to the 12.50 l/sec. maximum day demand noted on the Certificate of Approval.

In conclusion, water consumption over the year has stayed fairly consistently below the maximum day demand allowed on the Certificate of Approval.

AVERAGE DAY DEMAND

Noted on the Certificate of Approval is 432.60m3/day while the observed "AVERAGE DAY DEMAND "for the water supply system in 2025 was 270.38 m3/day, which represents an average flow rate of 3.13 l/sec.

FILTER PERFORMANCE:

The filters performed well in 2025. The total production for the year for the Water Treatment Plant was 98688.67 cub. Meters. Turbidity has been maintained below ≤1.0 N.T.U. maintaining the 95% rule throughout the year. We have calibrated our turbidity analyzer units and also calibrated chart recorder for the turbidity at each filter unit. Calibrations done once a year by Hach and Quarterly calibrations performed by trained Operators.

CHLORINATION SYSTEM PERFORMANCE:

Our Certificate of Approval allows for a minimum FREE Chlorine Residual Requirement in treated water leaving the plant to distribution of 0.2 mg/L. Records show that Free Chlorine Residual leaving the plant was maintained at an average over the year at 0.83 mg/L.

The FREE Chlorine Residual in the distribution system was monitored by sampling at various homes and businesses while collecting water samples for BACTERIA testing and the extra samples of free chlorine taken on 4/3 weekly split with 48 hours in between samples.

The average FREE Chlorine Residual for 2025 in the distribution system was 0.79 mg/L with a minimum of 0.44 mg/L.

12% Sodium Hypochlorite and ferric sulphate used in 2025

	Well #1	Well #3	Plant	Ferric	Year total Chlorine
Jan.	47.3	83.31	51.06	29.03	**181.67**
Feb.	48.38	65.04	72.03	20.43	**185.45**
Mar	68.80	94.60	53.75	36.55	**217.15**
April	52.14	63.43	68.8	45.15	**184.37**
May	51.6	69.88	68.8	27.95	**190.28**
June	56.98	80.63	84.93	46.23	**222.54**
July	43.00	81.70	83.85	51.6	**208.55**
Aug.	69.88	89.23	79.01	64.5	**238.12**
Sept.	52.68	68.8	66.65	36.55	**188.13**
Oct.	58.05	95.68	74.71	25.8	**228.44**
Nov.	33.33	76.33	66.65	32.25	**176.31**
Dec.	53.75	54.83	60.2	45.15	**168.78**
Total	**635.89**	**923.46**	**830.44**	**461.19**	**2389.79**

MICROBIOLOGICAL SAMPLE SUMMARY FOR THE YEAR 2025

Sample Source	Total Number Of Samples	Number of Samples with Total Coliform Detected	Number of Samples with E Coli Detected	Number of Samples with background Bacteria detected over 200/ml.	Number of Samples with HPC Detected over 500CFU/ml.
Well # 1	52	0	0	0	0
Well # 3	52	0	0	0	0
Well # 4	52	0	0	0	0
Water Treat. Plant	52	0	0	0	0
Homes/Businesses	104	0	0	0	0

There was no sign of E-Coli or Total Coliforms in raw water (3 Wells). The distribution System and Water Plant also showed no signs of E-coli or Total Coliforms.

There were no signs of HPC over (500CFU/ml.) throughout the Distribution System and the treatment plant samples, over the year 2025.

FILTER BACKWASH WATER TREATMENT FOR 2025

The filters are backwashed on a daily basis and the resulting backwash water is treated in a series of settling tanks, the treated wastewater is discharged to the storm sewer in Earlton. Phippen Waste Management who are licensed to handle contaminated waste, dispose the sludge remains in the town lagoon system. Sampling of the wastewater is done quarterly as a composite sample and tested for suspended solids and should not exceed 25mg/L, the maximum acceptable level.

Records show that samples have not exceeded 25mg/L. of Total Suspended Solids for the year 2025.

2025 Quarterly Lab. Report

	Water plant	WP	WP	Distr.	Distr.
	T.S.S. mg/l	Nitrite mg/l	Nitrate mg/l	THM ug/l	HAA ug/l
Jan.	6.3	<0.01	<0.1	10.5	<8
Feb.					
March					
April	7.67	<0.01	0.3	10.2	<8
May					
June					
July	11.7	<0.01	0.3	9.6	<8
August					
Sept.					
Oct.	8.67	<0.01	<0.1	9	<8
Nov.					
Dec.					
Average	8.59	<0.01	<0.1	9.825	<8
Maximum	11.7	0	0.3	10.5	0
Minimum	6.3	0	0.3	9	0
MAC	25 mg/l	1.0 mg/l	10 mg/l	100 ug/l	80 ug/l

*MAC: maximum acceptable concentration

WATER DISTRIBUTION REPORT

The Town had 3 new water connection for 2025. Operators closed and open all 109 water main valves with Valve Turning Unit as part of the yearly maintenance. One main valve had to be dug out by Vacuum Truck and repaired. Operators also performed the regular yearly hydrant maintenance and water main flushing through the distribution system.
There was one water quality complaint from the public in 2025 which was resolved by Operators.

All complaints, connections and repairs are attended by competent operators and reports are logged and kept on file.

WATER TREATMENT PLANT RESERVE CAPACITY CALCULATION FOR 2025

The Hydraulic Reserve Capacity of the Earlton Water treatment Plant has been calculated in accordance with Ministry of Environment guidelines.

In 2025 we had 28 unconnected units in town plus 12 new ones at the Jules Gravel subdivision, a total of 40 unconnected units, 366 Residential units, 26 commercial units, and 15 institutions, for an estimated population of 812.

The Hydraulic Reserve Capacity was calculated using the following equation:

$$Cu = Cr - \frac{L \times F \times P}{H}$$

Cr = Plant Design Capacity	432.60 m3/day
Average Daily Flow over 3 years	260.55 m3/day
	172.05 m3/day

So Hydraulic Reserve Capacity is Cr = 172.05 m3/day

(Cu) Uncommitted Reserve Capacity is:

$$Cu = Cr - \frac{L \times F \times P}{H}$$

L = 40 units

$$F = \frac{\text{Avg.m3/day}}{\text{People}} = 0.32 \text{ m3/day/person}$$

$Cu = 172.05 - \frac{10393.6}{366}$ P = 812 people
H= 366 units

Cu = 172.05 – 28.40 Cr = 172.05 m3/day

Cu = 143.65 m3/day Cu = 143.65 m3/day

$Cu = \frac{P \times F}{H}$

$Cu = \frac{812 \times 0.32}{366}$

Cu = 0.71

$Cu = \frac{143.65}{0.71}$

Therefore CU = 202.32 units rounded up to 202 units.

CONCLUSION:

- The Water Supply System and Treatment Plant performed satisfactorily.
- The average water consumption in 2025 was 0.32 cub. Meter/day/person.
- The average 3-year plant production rate in 2025 was 260.55 cub. Meter/day compared to the Certificate of Approval production rate of 432.6m3/day.
- Calculations indicate that the Water Treatment plant has uncommitted hydraulic reserve capacity of 143.65 cub. Meters/day based on a Per Capita Consumption in 2025. There is an uncommitted reserve capacity of 202 units.

COMPLIANCE AND NON-COMPLIANCE REPORT FOR 2025:

There was NO "noncompliance" issued during the 2024-25 MECP yearly inspection. An Inspection rating of 100% was given to the Water System.

There were no adverse test results or notice of issues at our drinking water system during year period 2025.

- All our operators are trained and licensed to be Class II Water treatment and Class I Water Distribution Certificate.

  Guy Laurin - Class 2 Water Treatment License # 64148

  Caleb Fotheringham- Class 2 Water Treatment License # 86673

  David Holeksa- Class 2 Water Treatment License #97961

  Jacob Connelly- Class 1 Water Treatment License # 132474

  Dillan Knott- OIT. License # OT131647

WATER QUALITY RESULT
CHEMICAL SAMPLING AND TESTING

CHEMICAL & MICROBIOLOGICAL	TESTED HOW OFTEN AND FROM WHERE
Schedule 23 – Inorganic Parameters	Every 36 months from plant – last tested April 09/2024
Schedule 24 – Organic Parameters	Every 36 months from plant – last tested April 09/2024
Sodium	Every 60 months from plant – last tested April 11/2023
Fluoride	Every 60 months from plant – last tested April 11/2023
Nitrite & Nitrate	Every 3 months from plant – last tested Oct.07/2025
Trihalomethanes	Every 3 months at Earlton Arena – last tested Oct.07/2025
HAA	Every 3 months in Distribution – last tested Oct.07/2025
Lead in drinking water sampling; O.Reg. 170/03 Requirements.	10 Houses Batches, June 2011/ October 2011
	1 Commercial Samples, June 2011/ October 2011
	2 Distribution Samples, March 18/2025

MICROBIOLOGICAL SAMPLING AND TESTING

Distribution Samples: - 8 samples per month with at least two samples being taken each week.

Tested for: a) Escherichia coli or Fecal Coliform
b) Total Coliform and that 25 per cent of samples taken during that month are tested for general bacteria population: background colony count or Heterotrophic plate counts.

Treated Samples: once every week and tested for
a) Escherichia coli or Fecal Coliform
b) Total Coliforms
c) Background colony counts or Heterotrophic plate count

Raw Samples: once every week and tested for
a) Escherichia coli or Fecal Coliform
b) Total Coliform

Operational check in Distribution:
Shall ensure that one sample is taken at least once every day and tested for Free Chlorine Residual method, or four samples one day and three samples another day 48 hours apart method.

I confirm with this report that the **Earlton Drinking Water System** has complied with all the rules and regulation, {*samples, quality, quantity etc.*}.

The annual report is available to the public at no cost, at the Town Office. (Notice is posted outside Town Office)

Copy of the summary report is also available for inspection in the "Water/Wastewater Office" with copies of all the 2025 sample results.

This concludes the Earlton Water Treatment System's compliance/non-compliance report for the year 2025.

If you have any questions concerning this report, please do not hesitate to contact me at your convenience.

Guy Laurin
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Fax: 705-563-2093
Cell: 705-676-7703
Email: guy.laurin@armstrong.ca

Copy of all sample results are available upon request. Thank you.

Guy Laurin **DATE**