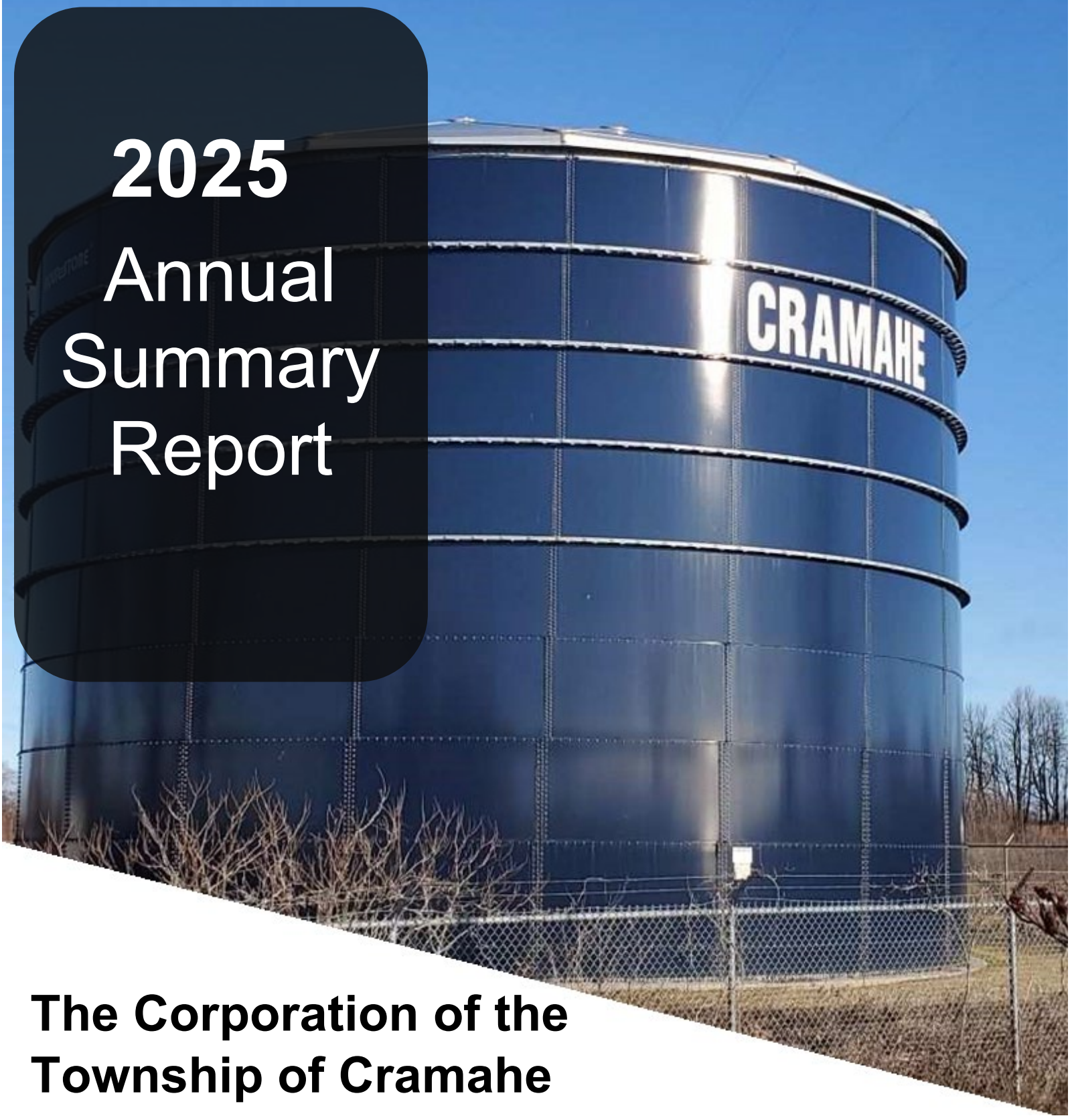
2025 Annual Summary Report



The Corporation of the Township of Cramahe

Colborne Drinking Water System

Prepared by: Lakefront Utility Services Inc.

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1. PURPOSE

The purpose of the Annual Summary Report is to provide information to residents and stakeholders of the Township of Cramahe. Furthermore, satisfying the regulatory requirements of the *Safe Drinking Water Act*, *2002* including the Drinking Water Quality Management Standard (DWQMS) reports to owner, and regulatory reporting required under *Ontario Regulation 170/03*. This Annual Summary Report fulfills all requirements of *Ontario Regulation 170/03* Section 11 Annual Reports and Schedule 22 Summary Reports for Municipalities.

The Annual Summary Report is prepared by Lakefront Utility Services Inc. (operating authority) on behalf of the Township of Cramahe (owner).

Scope

This Annual Summary Report includes information pertaining to the Village of Colborne's Drinking Water System (Colborne DWS) for the period of January 1, 2025 to December 31, 2025. *Ontario Regulation 170/03* requires reported information be provided to:

- **Drinking Water System Owners (Mayor and Council)**
- **Owner and Operating Authority Top Management**
- **The Public**

Availability

The Colborne DWS is a large municipal residential system that serves approximately 2,000 people. Copies of this Annual Summary Report are available online at https://www.lakefrontutilities.com/regulatory-water/. Hard copies are also available at the LUSI's office at 207 Division St, Cobourg ON, K9A 4L3.

Customers of the Colborne DWS are notified that the Annual Summary Report is available via "What's New" https://www.lakefrontutilities.com/whats-new/, social media posts and "Stay Connected" LUSI bill insert.

Council Resolution

Ontario Regulation 170/03 requires Summary Reports be distributed to municipal council no later than March 31 of each year. The Township of Cramahe must provide LUSI with a copy of council resolution indicating the report has been accepted.

2. COLBORNE DRINKING WATER SYSTEM OVERVIEW

The Colborne Water Treatment Plant (WTP) takes water from two wells, Well #1a and Well #2, located approximately 25m apart from each other. *Sodium hypochlorite* is injected for disinfection and *sodium silicate* is used as an iron sequestering agent. Primary disinfection is achieved via the 215m serpentine (buried east of the plant). Water is conveyed to the distribution system and the elevated storage tank, which has a capacity of 2,342m3.

The distribution system is split into two pressure zones that are regulated by two pressure reducing valves that maintain the pressure between 20 and 90 PSI. There are a total of 1028 metered customers. Water is conveyed to customers by approximately 27 km of watermain ranging from 25 mm to 250 mm, made of PVC, ductile iron and cast iron. There are 138 fire hydrants located within the system.

3. 2025 COMPLIANCE

3.1 MECP INSPECTION

The Colborne Drinking Water System underwent an announced focused MECP compliance inspection starting July 10, 2025 and achieved an inspection rating of 100%.

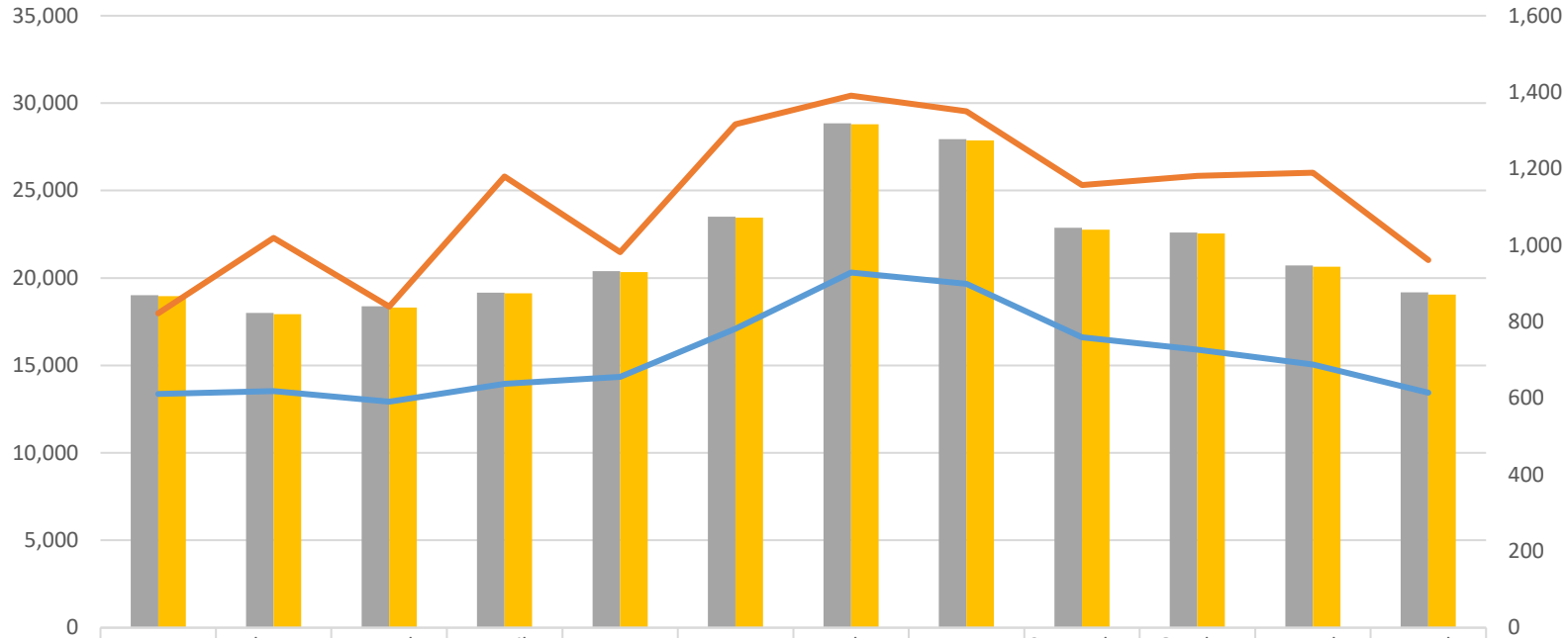
3.2 LICENSE & PERMIT COMPLIANCE

The Colborne DWS maintained compliance with all applicable legislation, and all terms and conditions of the Municipal Drinking Water License (138-101, Issue 4, November 5, 2021), Drinking Water Works Permit (138-201, Issue 3, November 5, 2021), and Permit to Take Water (Permit No. 8612-BNENBH, April, 2020) in 2025.

The Colborne DWS Permit to Take Water allows the taking of 3,283.2 m^3 of water from each well per day at a rate of 2,280 L/min. The average flow rate from the production wells was 787 L/min.

The total quantity of water taken and discharged from the WTP is illustrated in Figure 1, Table 1 and Table 2. In July 2025, the WTP operated at 42.96% of its maximum rated capacity, as shown in Figure 2. The labels presented in Figure 2 are representative of the maximum flow observed for the respective month (m^3).

Figure 1 - Flow Quantities Colborne Drinking Water System



	January	February	March	April	May	June	July	August	September	October	November	December
Water Taken (m3)	19,014	18,006	18,385	19,169	20,394	23,507	28,839	27,936	22,870	22,605	20,716	19,187
WTP Discharge (m3)	18,956	17,932	18,318	19,119	20,342	23,457	28,785	27,873	22,770	22,540	20,654	19,048
Daily Average Discharge (m3)	611	618	591	637	656	782	929	899	759	727	688	614
Maximum Daily Discharge (m3)	822	1,019	840	1,180	981	1,317	1,391	1,350	1,157	1,182	1,189	962

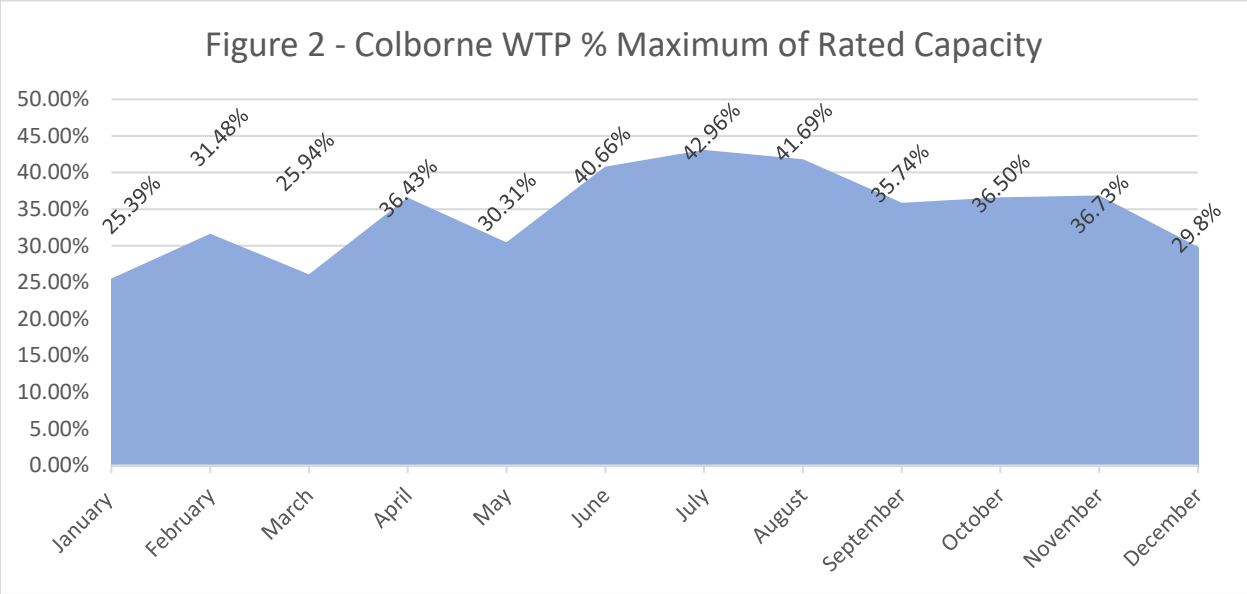


Table 1 - Raw Water Flows (m3)

Month	Monthly Total	Monthly Total Well 1a	Monthly Total Well 2	Daily Average	Minimum	Maximum	% Max PTTW
January	19,014	58	18,957	613	389	822	25.4%
February	18,006	71	17,935	643	358	1,036	32.0%
March	18,385	67	18,318	593	364	840	25.9%
April	19,169	50	19,119	639	278	1,180	36.4%
May	20,394	51	20,342	658	418	981	30.3%
June	23,507	50	23,457	784	333	1,317	40.7%
July	28,839	54	28,785	930	431	1,391	43.0%
August	27,936	63	27,873	901	427	1,350	41.7%
September	22,870	100	22,770	762	371	1,157	35.7%
October	22,605	64	22,541	729	331	1,182	36.5%
November	20,716	61	20,655	691	267	1,189	36.7%
December	19,187	65	19,123	619	207	965	29.8%
Total	**260,628**	**754**	**259,875**	-	-	-	-
Average	**21,719**	**63**	**21.656**	**714**	**348**	**1,391**	**34%**

Table 2 - Treated Water Flows (m3)

Month	Monthly Total	Daily Average	Daily Maximum	Daily Minimum
January	18,956	611	822	389
February	17,932	618	1,019	0
March	18,318	591	840	349
April	19,119	637	1,180	278
May	20,342	656	981	418
June	23,457	782	1,317	333
July	28,785	929	1,391	431
August	27,873	899	1,350	427
September	22,770	759	1,157	371
October	22,540	727	1,182	331
November	20,654	688	1,189	267
December	19,048	614	962	204
Total	**259,796**	**-**	**-**	**-**
Average	**21,650**	**709**	**1,391**	**317**

3.3 ADVERSE WATER QUALITY INCIDENT(S)

There were no adverse water quality incidents in 2025.

4. CONTINUAL IMPROVEMENT

LUSI's commitment to continual improvement requires investigating and investing in, where appropriate, methods and technologies to improve

- The quality of processes used to ensure production of ample clean water, and
- The quality and effectiveness of the distribution system.

During the 2025 reporting year, LUSI demonstrated this commitment by completing all the activities listed in Table 1. Table 1 also satisfies O. Reg 170/03 requirement to describe major expenses occurred during the reporting period.

Table 3 - 2025 Major Expenses Incurred at Colborne WTP, Distribution System and Misc. Activities		
Colborne DWS	Meter Replacement	$113,910
	Old Percy Watermain	$94,458
	Hydrant Replacement – King St.	$14,791
	WPT Building Upgrades	$173,135

5. SAMPLING AND ANALYSIS

The Colborne DWS exhibited compliance with all sampling and testing as required by *Ontario Regulation 170/03* in the 2025 calendar year. Table 2 illustrates all microbiological testing done under Schedule 10 of *Ontario Regulation 170/03*. There were no instances of adverse water quality results as a result of a parameter exceeding its respective maximum acceptable concentration.

Table 4 – Colborne DWS Microbiological Sampling

	E. Coli, (cfu/100mL)		**Total Coliform**, (cfu/100mL)		**HPC**, (cfu/1mL)	
	# of Samples	Range of Results (min # - max #)	# of Samples	Range of Results (min # - max #)	# of Samples	Range of Results (min # - max #)
Raw Well 1a	52	0 - 0	52	0 - 0	0	N/A
Raw Well 2	52	0 – 0	52	0 – 0	0	N/A
Treated	52	0 - 0	52	0 - 0	52	0 – 1
Distribution	156	0 - 0	156	0 - 0	104	0 – 6

Operational testing done under Schedule 7 of Ontario Regulation 170/03 during the 2025 reporting period are tabulated in Table 3.

Table 5 – Colborne DWS Schedule 7 Operational Monitoring Samples

	Number of Grab Samples	Range of Results (min # - max #)
Turbidity, Raw Water Well 1a (NTU)	12	0.11-0.55
Turbidity, Raw Water Well 2 (NTU)	12	0.18-0.57
Turbidity, Treated Water (NTU)	12	0.11-0.42
Treated Water Free Chlorine Residual (mg/L)	8760 (continuous monitoring)	0 – 5.0

Summary of additional testing and sampling:

Table 6 – Colborne DWS Summary of additional testing and sampling

Location	Date Sampled	Parameter	Result	Unit of Measure
No additional testing or sampling was completed				

In addition to the microbiological sampling and testing requirements, sampling and testing is required for chemical, inorganic and organic parameters. Table 4 illustrates Schedule 13, Schedule 23 and Schedule 24 sample analysis results, with no exceedances during the reporting period. If there were multiple samples

taken during the reporting period, the most recent sample result is provided. A parameter below the method detection limit indicated by (<) or an ND, cannot be detected as the concentration is lower than minimum concentration that can be measured and reported with 99% certainty.

Table 7 – Colborne DWS Schedule 13, 23 and 24 Sampling

PARAMETER	STANDARD (µg/L)	SAMPLE RESULT (µg/L)	SAMPLE DATE
Antimony	6	0.6 <MDL	6-Jan-25
Arsenic	10	0.6	
Barium	1000	137	
Boron	5000	7	
Cadmium	5	0.003 <MDL	
Chromium	50	0.24	
Mercury	1	0.01 <MDL	
Selenium	50	0.09	
Uranium	20	4.37	
Benzene	1	0.32 <MDL	
Carbon tetrachloride	2	0.17 <MDL	
1,2-Dichlorobenzene	200	0.41 <MDL	
1,4-Dichlorobenzene	5	0.36 <MDL	
1,1-Dichloroethylene (vinylidene chloride)	14	0.33 <MDL	
1,2-Dichloroethane	5	0.35 <MDL	
Dichloromethane	50	0.35 <MDL	
Monochlorobenzene	80	0.3 <MDL	
Tetrachloroethylene (perchloroethylene)	10	0.35 <MDL	
Trichloroethylene	5	0.44 <MDL	
Vinyl Chloride	1	0.17 <MDL	
Diquat	70	1 <MDL	
Paraquat	10	1 <MDL	
Glyphosate	280	1 <MDL	
Polychlorinated Biphenyls (PCBs) - Total	3	0.04 <MDL	
Benzo(a)pyrene	0.01	0.004 <MDL	
Alachlor	5	0.02 <MDL	
Atrazine + N-dealkylated metabolites	5	0.01 <MDL	
Atrazine	-	0.01 <MDL	
Desethyl atrazine	-	0.01 <MDL	
Azinphos-methyl	20	0.05 <MDL	
Carbaryl	90	0.05 <MDL	
Carbofuran	90	0.01 <MDL	
Chlorpyrifos	90	0.02 <MDL	

Table 7 – Colborne DWS Schedule 13, 23 and 24 Sampling			
PARAMETER	**STANDARD (µg/L)**	**SAMPLE RESULT (µg/L)**	**SAMPLE DATE**
Diazinon	20	0.02 <MDL	
Dimethoate	20	0.06 <MDL	
Diuron	150	0.03 <MDL	
Malathion	190	0.02 <MDL	
Metolachlor	50	0.01 <MDL	
Metribuzin	80	0.02 <MDL	
Phorate	2	0.01 <MDL	
Prometryne	1	0.03 <MDL	
Simazine	10	0.01 <MDL	
Terbufos	1	0.01 <MDL	
Triallate	230	0.01 <MDL	
Trifluralin	45	0.02 <MDL	
2,4-dichlorophenoxyacetic acid (2,4,-D)	100	0.19 <MDL	
Bromoxynil	5	0.033 <MDL	
Dicamba	120	0.2 <MDL	
Diclofop-methyl	9	0.4 <MDL	
MCPA	0.1	0.00012 <MDL	
Picloram	190	1 <MDL	
2,4-dichlorophenol	900	0.15 <MDL	
2,4,6-trichlorophenol	5	0.25 <MDL	
2,3,4,6-tetrachlorophenol	100	0.2 <MDL	
Pentachlorophenol	60	0.15 <MDL	
Fluoride	1.5	0.06 <MDL	14-Apr-25
Sodium	20	7.4	14-Apr-25
THM: Annual Average	100	3.90	14-Oct-25
HAA: Annual Average	80	5.3 < MDL	
Nitrite	1	< 0.003 MDL	
Nitrate	10	1.64	

Summary of lead testing under Schedule 15.1 during this reporting period

Table 8 – Colborne DWS Schedule 15.1 Lead Sampling				
Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Plumbing	Not required, plumbing exemption and only pH and Alkalinity required in distribution samples			
Distribution	4	pH (7.05-8.00), Alkalinity (193-202 mg/L)		