Val Harbour Subdivision Drinking Water System

Waterworks # 220010690
System Category – Small Municipal Residential

Annual Water Report

Prepared For: The Township of Ramara

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

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Report Availability

This system does not serve more than 10,000 residence and the annual reports will be available to residents at the Township Of Ramara Administration Office and on the Township's website at www.ramara.ca. Notification that reports are available free of charge will be made on the Township of Ramara website. The Township of Ramara Administration Office is located at 2297 Highway 12, Brechin, ON L0K 1B0.

Compliance Report Card

Drinking Water System Number: 220010690
Drinking Water System Name: Val Harbour DWS
Drinking Water System Owner: Township of Ramara
Drinking Water System Category: Small Municipal Residential
Period Being Reported: January 1, 2024 - December 31, 2024

Health & Safety	# of Events	Date	Details
Number of Incidents	0	N/A	N/A

Drinking Water	# of Events	Date	Details
MECP Inspections	0	Febrary 6, 2025	Inspection report for 2024 inspection cycle not yet received at time of report issuance.
			Inspection for 2023 cycle completed in February 2024. Final inspection rating of 100%
AWQI	0	N/A	N/A
Number of Non-Compliances	0	N/A	N/A
Number of Boil Water Advisories	0	N/A	N/A

System Process Description

Raw Source

The Val Harbour DWS is supplied with raw groundwater from three non-GUDI wells: Well # 1, # 2 and # 3R.

Treatment

The treatment system consists of the following:

- Sodium hypochlorite primary disinfection system
- Two (2) below grade reservoirs for potable water storage
- A high lift pumping system
- Stand-by propane generator on-site

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Brenntag

Summary of Non-Compliance

Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
There were no adverse water quality incidents 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 were 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
There were no non-compliances identified in a Ministry Inspection during the reporting period.				

Flows

The Val Harbour Drinking Water System is operating on average under half the rated capacity.

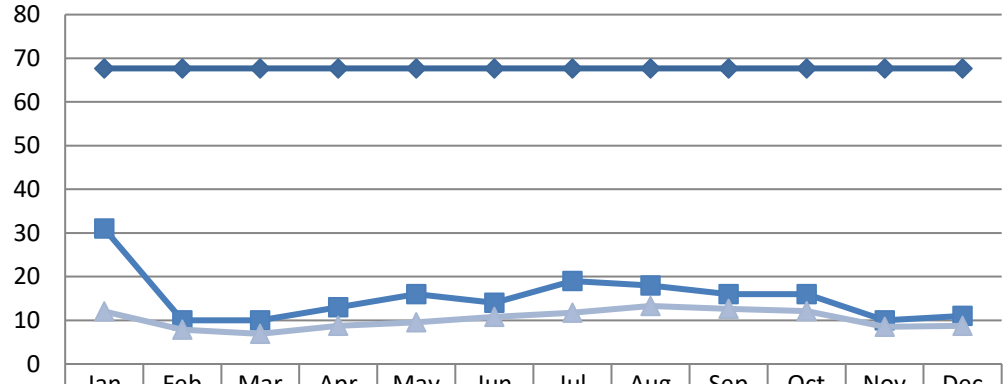
Raw Water Flows

The Permit to Take Water compliance criteria is in litres per minute (L/min) but for the purposes of this report the flow rate is reported in litres per second (L/sec) based on industry standard for flow monitoring recording. The Raw Water flows are regulated under the Permit to Take Water. 2024 Raw Flow Data was submitted to the Ministry electronically under permit No. P-300-9104539203. The confirmation and a copy of the

data that was submitted are attached in Appendix A.

Total Monthly Flows (m³/d)

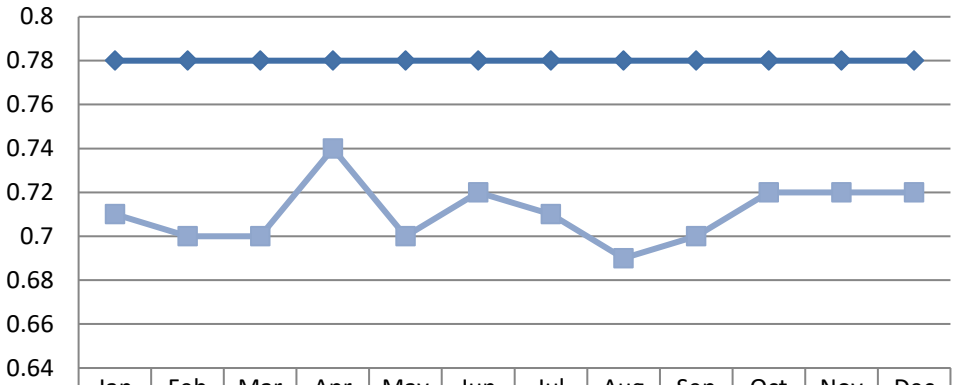
Max Allowable PTTW − Well # 1



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable (m³/d)	67.68	67.68	67.68	67.68	67.68	67.68	67.68	67.68	67.68	67.68	67.68	67.68
Max Flow (m³/d)	31	10	10	13	16	14	19	18	16	16	10	11
Avg (m³/d)	12.1	7.9	6.9	8.8	9.6	10.8	11.7	13.3	12.6	12.1	8.5	8.7

Monthly Rated Flows (L/s)

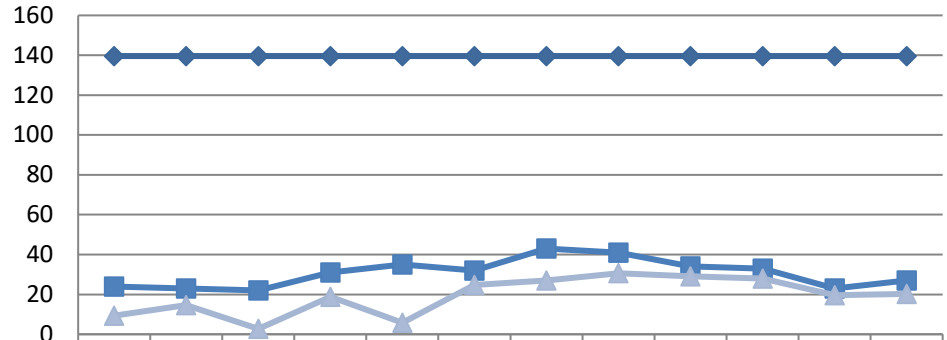
Max allowable rate – PTTW − Well # 1



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable Rate (L/sec)	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Max Rate (L/s)	0.71	0.7	0.7	0.74	0.7	0.72	0.71	0.69	0.7	0.72	0.72	0.72

Total Monthly Flows (m³/d)

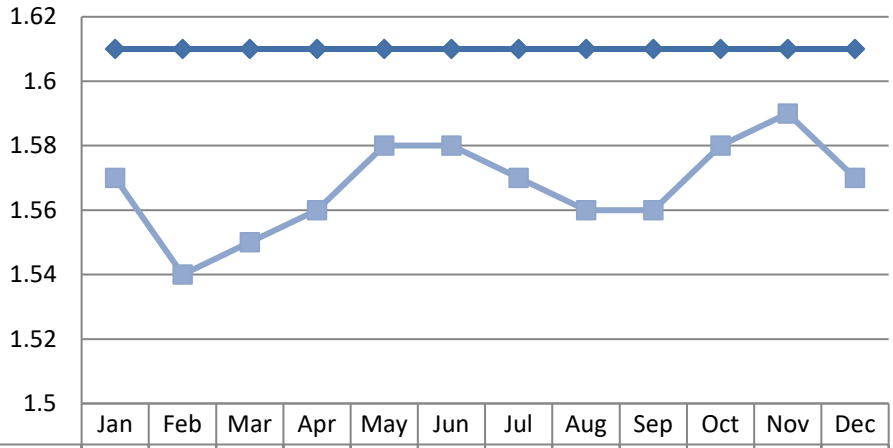
Max Allowable PTTW − Well # 2



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable (m³/d)	139.6	139.6	139.6	139.6	139.6	139.6	139.6	139.6	139.6	139.6	139.6	139.6
Max Flow (m³/d)	24	23	22	31	35	32	43	41	34	33	23	27
Avg (m³/d)	9.3	14.7	2.7	18.8	5.9	24.8	26.9	30.6	29.1	28.0	19.6	20.2

Monthly Rated Flows (L/s)

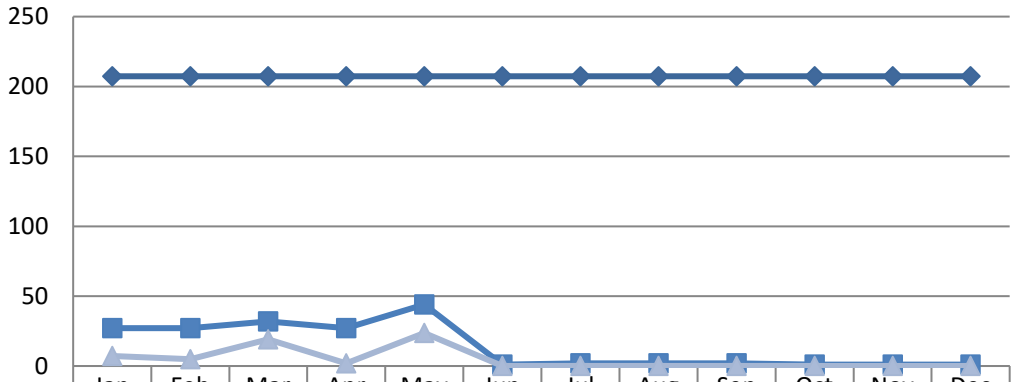
Max allowable rate – PTTW − Well # 2



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable Rate (L/sec)	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61
Max Rate (L/s)	1.57	1.54	1.55	1.56	1.58	1.58	1.57	1.56	1.56	1.58	1.59	1.57

Total Monthly Flows (m³/d)

Max Allowable PTTW − Well # 3R

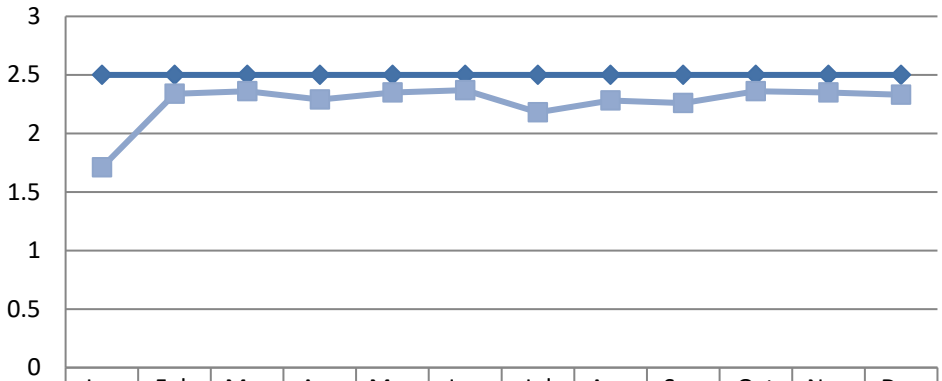


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable (m³/d)	207.3	207.3	207.3	207.3	207.3	207.3	207.3	207.3	207.3	207.3	207.3	207.3
Max Flow (m³/d)	27	27	32	27	44	1	2	2	2	1	1	1
Avg (m³/d)	7.2	4.9	19.0	1.8	23.6	0.0	0.1	0.1	0.1	0.0	0.0	0.0

Note: Well # 3R not in production from June through December other than for sampling purposes.

Monthly Rated Flows (L/s)

Max allowable rate – PTTW − Well # 3R



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable Rate (L/sec)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Max Rate (L/s)	1.71	2.34	2.36	2.29	2.35	2.37	2.18	2.28	2.26	2.36	2.35	2.33

Note: Well # 3R not in production from June through December other than for sampling purposes.

Treated Water Flows

The Treated Water flows are regulated under the Municipal Licence. The average water consumption for the Val Harbour Drinking Water System during 2024 was: 37 m³/day.

Val Harbour Drinking Water System Historical Demands

Year	Number of Connections	Average Daily Demand (m^3)	Maximum Daily Demand (m^3/day)	Rated Capacity	Per Capita Consumption* (L/p/day)	
					Average	Maximum
2014	62	30	82	207	188	509
2015	63	31	63	207	190	385
2016	63	32	74	207	195	452
2017	64	30	64	207	182	385
2018	64	37	89	207	224	536
2019	65	31	55	207	186	325
2020	66	35	81	207	207	479
2021	66	39	80	207	231	473
2022	69	34	71	207	198	396
2023	70	37	74	207	203	407
2024	70	39	70	207	214	385
3 Year Average/Max		37	74	207	205	407

*Based on 2.6 people per dwelling
Note: Excluding pipe leaks/breaks & system flushing
Note: This calculation was completed based on current connections in the system, growth within the drinking water system has not been considered.

System Reserve Capacity

In accordance with the MECP Procedure D-5-1, the reserve capacity is calculated by the following formula:

Reserve Capacity= Design Flow- Committed Flow

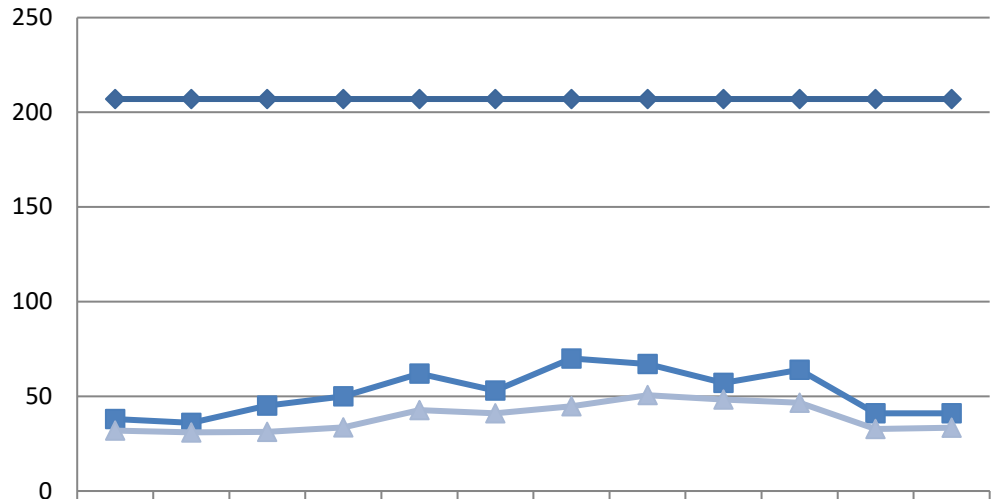
Design flow is the maximum permissible flow approved by the MDWL and/or PTTW. Val Harbour Water Works maximum daily rated capacity is 207 m^3/day.

The committed flow is the total expected water demand from the existing and proposed connections based on the previous three years of data. The committed number of service connections is: 74. The three-year (2022-2024) maximum per capita water consumption is: 407 L/p/day. At this water consumption rate, the committed flow is: 74 m^3/day.

As a result, the calculated reserve capacity is: 133 m^3/day.

Monthly Rated Flows

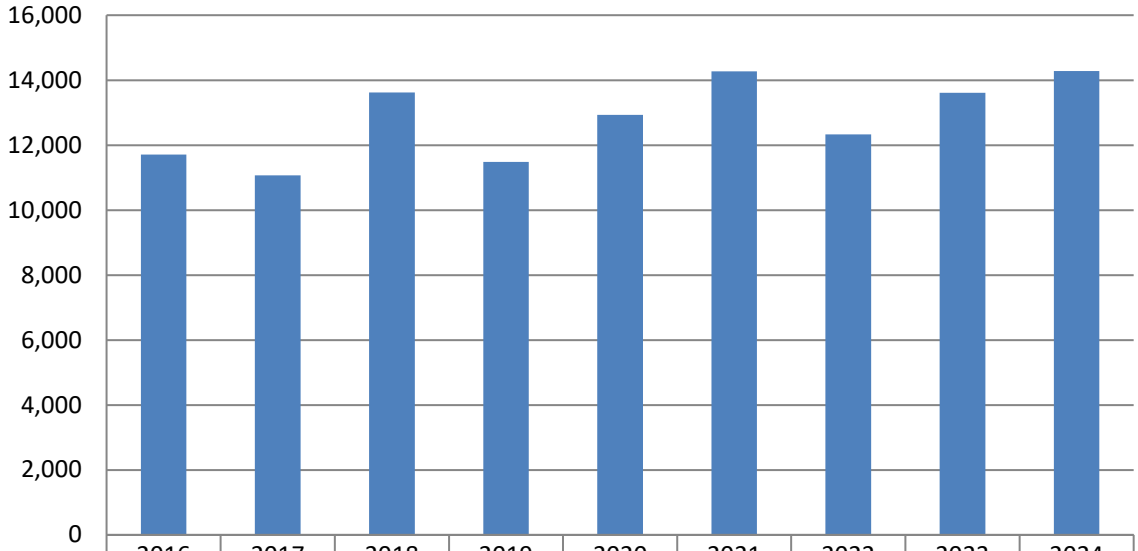
Rated Capacity – MDWL



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rated Capacity (m^3/d)	207	207	207	207	207	207	207	207	207	207	207	207
Max Daily Flow (m^3/d)	38	36	45	50	62	53	70	67	57	64	41	41
Avg (m^3/d)	32	31	31	34	43	41	45	51	48	47	33	33

Annual Total Flow Comparison

Total Annual m^3



	2016	2017	2018	2019	2020	2021	2022	2023	2024
WTP (m^3)	11,713	11,067	13,622	11,483	12,934	14,275	12,327	13,614	14,281

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 Well 1	12	0	0	0	0		
Raw Well 2	12	0	0	0	0		
Raw Well 3R	12	0	0	0	6		
Distribution	27	0	0	0	0	0	2

Operational Testing

	No. of Samples Collected	Range of Results	
		Minimum	Maximum
Turbidity Well 1 (NTU)	12	0.12	0.56
Turbidity Well 2 (NTU)	12	0.13	0.51
Turbidity Well 3R (NTU)	12	0.22	3.35
Turbidity – Treated Water (NTU)	8760	0.06	2.08
Treated Water Chlorine	8760	0.25	2.62
Distribution Water Chlorine	91	0.36	1.88
Fluoride (If the DWS provides fluoridation)	N/A	N/A	N/A

Note: Record the unit of measure if it is **not** milligrams per litre.
Note: For continuous monitors 8760 is used as the number of samples**.** 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 O. Reg. 170/03. Sodium and Fluoride are required to be tested every 5 years. Nitrate and Nitrite are tested quarterly and the metals are tested every 5 years as required 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.

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

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedances	
				MAC	1/2 MAC
Treated Water					
Antimony: Sb (ug/L) - TW	2024/08/07	<MDL 0.09	6.0	No	No
Arsenic: As (ug/L) - TW	2024/08/07	<MDL 0.2	10.0	No	No
Barium: Ba (ug/L) - TW	2024/08/07	115	1000.0	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedances	
				MAC	1/2 MAC
Boron: B (ug/L) - TW	2024/08/07	59	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2024/08/07	0.005	5.0	No	No
Chromium: Cr (ug/L) - TW	2024/08/07	0.27	50.0	No	No
Mercury: Hg (ug/L) - TW	2024/08/07	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2024/08/07	0.06	50.0	No	No
Uranium: U (ug/L) - TW	2024/08/07	0.331	20.0	No	No
Additional Inorganics					
Fluoride (mg/L) - TW	2022/08/04	0.13	1.5	No	No
Nitrite (mg/L) - TW	2024/02/07	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2024/05/06	0.004	1.0	No	No
Nitrite (mg/L) - TW	2024/08/07	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2024/11/04	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2024/02/07	1.45	10.0	No	No
Nitrate (mg/L) - TW	2024/05/06	1.9	10.0	No	No
Nitrate (mg/L) - TW	2024/08/07	1.64	10.0	No	No
Nitrate (mg/L) - TW	2024/11/04	1.04	10.0	No	No
Sodium: Na (mg/L) - TW	2020/08/12	26.0	20*	Yes	Yes
Sodium: Na (mg/L) - TW	2020/08/24	21.4	20*	Yes	Yes

*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. No plumbing samples were collected.

Distribution System	No. of Samples	Range of Results Minimum	Range of Results Maximum	MAC (ug/L)	No. of Exceedances
Alkalinity (mg/L)	2	262	270	N/A	N/A
pH	2	7.50	7.70	N/A	N/A
Lead (ug/l)	0	-	-	10	0

Note: Lead is only required to be sample every 3 years and was last sampled in 2022.

Organic Parameters

These parameters are tested every 5 years 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.

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedances	
				MAC	1/2 MAC
Treated Water					
Alachlor (ug/L) - TW	2024/08/07	<MDL 0.02	5.00	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2024/08/07	<MDL 0.01	5.00	No	No
Azinphos-methyl (ug/L) - TW	2024/08/07	<MDL 0.05	20.00	No	No
Benzene (ug/L) - TW	2024/08/07	<MDL 0.32	1.00	No	No
Benzo(a)pyrene (ug/L) - TW	2024/08/07	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2024/08/07	<MDL 0.33	5.00	No	No
Carbaryl (ug/L) - TW	2024/08/07	<MDL 0.05	90.00	No	No
Carbofuran (ug/L) - TW	2024/08/07	<MDL 0.01	90.00	No	No
Carbon Tetrachloride (ug/L) - TW	2024/08/07	<MDL 0.17	2.00	No	No
Chlorpyrifos (ug/L) - TW	2024/08/07	<MDL 0.02	90.00	No	No
Diazinon (ug/L) - TW	2024/08/07	<MDL 0.02	20.00	No	No
Dicamba (ug/L) - TW	2024/08/07	<MDL 0.20	120.00	No	No
1,2-Dichlorobenzene (ug/L) - TW	2024/08/07	<MDL 0.41	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW	2024/08/07	<MDL 0.36	5.00	No	No
1,2-Dichloroethane (ug/L) - TW	2024/08/07	<MDL 0.35	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW	2024/08/07	<MDL 0.33	14.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2024/08/07	<MDL 0.35	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW	2024/08/07	<MDL 0.15	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2024/08/07	<MDL 0.19	100.00	No	No
Diclofop-methyl (ug/L) - TW	2024/08/07	<MDL 0.4	9.00	No	No
Dimethoate (ug/L) - TW	2024/08/07	<MDL 0.06	20.00	No	No
Diquat (ug/L) - TW	2024/08/07	<MDL 1.0	70.00	No	No
Diuron (ug/L) - TW	2024/08/07	<MDL 0.03	150.00	No	No
Glyphosate (ug/L) - TW	2024/08/07	<MDL 1.0	280.00	No	No
Malathion (ug/L) - TW	2024/08/07	<MDL 0.02	190.00	No	No
2-Methyl-4chlorophenoxyacetic Acid (MCPA) (ug/L)	2024/08/07	<MDL 0.12	100	No	No
Metolachlor (ug/L) - TW	2024/08/07	<MDL 0.01	50.00	No	No
Metribuzin (ug/L) - TW	2024/08/07	<MDL 0.02	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2024/08/07	<MDL 0.3	80.00	No	No
Paraquat (ug/L) - TW	2024/08/07	<MDL 1.0	10.00	No	No
PCB (ug/L) - TW	2024/08/07	<MDL 0.04	3.00	No	No
Pentachlorophenol (ug/L) - TW	2024/08/07	<MDL 0.15	60.00	No	No
Phorate (ug/L) - TW	2024/08/07	<MDL 0.01	2.00	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedances	
				MAC	1/2 MAC
Picloram (ug/L) - TW	2024/08/07	<MDL 1.0	190.00	No	No
Prometryne (ug/L) - TW	2024/08/07	<MDL 0.03	1.00	No	No
Simazine (ug/L) - TW	2024/08/07	<MDL 0.01	10.00	No	No
Terbufos (ug/L) - TW	2024/08/07	<MDL 0.01	1.00	No	No
Tetrachloroethylene (ug/L) - TW	2024/08/07	<MDL 0.35	10.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2024/08/07	<MDL 0.2	100.00	No	No
Triallate (ug/L) - TW	2024/08/07	<MDL 0.01	230.00	No	No
Trichloroethylene (ug/L) - TW	2024/08/07	<MDL 0.44	5.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2024/08/07	<MDL 0.25	5.00	No	No
Trifluralin (ug/L) - TW	2024/08/07	<MDL 0.02	45.00	No	No
Vinyl Chloride (ug/L) - TW	2024/08/07	<MDL 0.17	1.00	No	No
Distribution Water					
Trihalomethane: Total (ug/L) Annual Average - DW	2024	16.25	100	No	No
HAA Total (ug/L) Annual Average - DW	2024	17.25	80	No	No

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

Additional Legislated Samples

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
No additional legislated samples required.				

Inorganic or Organic Parameter Exceedances

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
No exceedances.			

Major Maintenance Summary incurred to install, repair or replace required equipment

Item #	Description
1	Static well sensor replaced
2	Chemical pump replaced

Appendix A

WTRS Submission Confirmation

Certify Submission

Permit/EASR Registration Number:
P-300-9104539203

Permit Holder/Registrant Name:
CORPORATION OF THE TOWNSHIP OF RAMARA

All days with no data entered are considered as days when no water was taken.

I agree that days with no data entered are days when no water was taken.

Cancel

I, the undersigned, hereby declare that the information provided in this Report is complete and accurate.

First Name
Megan

Last Name
Lockwood

Company Name
Ontario Clean Water Agency

Date
15/01/2025

Reporting Year
2024

Your data has been successfully submitted