ANNUAL REPORT

ONTARIO REGULATION 170/03
SECTION 11

ROSEMONT
DRINKING WATER SYSTEM

Township of Adjala-Tosorontio

FOR THE PERIOD:
JANUARY 1, 2021 – DECEMBER 31, 2021

Prepared for the Corporation of the Township of Adjala-Tosorontio
by the Ontario Clean Water Agency

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

Ontario Drinking-Water Systems Regulation O. Reg. 170/03

Drinking-Water System Number:	**220003859**
Drinking-Water System Name:	**Rosemont Drinking Water System**
Drinking-Water System Owner:	The Corporation of the Township of Adjala-Tosorontio
Drinking-Water System Category:	Small Municipal Residential
Period being reported:	**January 1, 2021 to December 31, 2021**

Does your Drinking-Water System serve more than 10,000 people?

No

Is your annual report available to the public at no charge on a web site on the Internet?

Yes

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Summary Report is available for inspection at the Township of Adjala-Tosorontio Municipal Office at 7855 Side Road 30, Alliston, ON or on the following website: http://www.adjtos.ca

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Not Applicable	Not Applicable

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Not Applicable

Indicate how you notified system users that your annual report is available, and is free of charge.

- **[X] Public access/notice via the web**
- **[X] Public access/notice via Government Office**
- **[ ] Public access/notice via a newspaper**
- **[X] Public access/notice via Public Request**
- **[ ] Public access/notice via a Public Library**
- **[ ] Public access/notice via other method**

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Description of Drinking-Water System:

The Rosemont water system is classified as a Small Municipal Residential water system with 47 services. Water is supplied via two (2) municipal wells, two (2) pumphouses and an in ground reservoir. Inspections and maintenance duties are conducted by Ontario Clean Water Agency staff on a regular basis to maintain compliance with Ontario Regulation 170/03 to ensure that the Rosemont water supply is safe to drink.

List of water treatment chemicals used during the reporting period:

- Sodium Hypochlorite 12% Solution NSF, Primary Disinfection

Significant expenses incurred to:

[X] Install required equipment
[X] Purchase required equipment
[X] Repair required equipment
[X] Replace required equipment

Description of significant expenses incurred:

1. Purchase and Replace Reservoir Diesel Generator Battery
2. Heater plug purchase and replacement
3. Purchase, Replacement and Installation of Pre-Chlorine Analyzer- Pumphouse

Details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre:

Incident Date (yyyy/mm/dd)	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date (yyyy/mm/dd)
Not Applicable					

Table 1: Microbiological testing done under the Schedule 11 of Regulation 170/03 during this reporting period.

Location	Number of Samples	Range of E. Coli or Fecal Results		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Samples	
		Min	Max	Min	Max		Min	Max
Raw - RW1	12	0	0	0	4	N/A	N/A	N/A
Raw - RW3	12	0	0	0	0	N/A	N/A	N/A
Distribution - DW	28	0	0	0	0	28	<10	10

Note:

- *RW1 – Raw Water Well #1A*
- *RW3 – Raw Water Well #3A*

Table 2: Operational testing done under Schedule 7 of Regulation 170/03 during the period covered by this Annual Report.

Location & Test	Number of Samples	Range of Results	
		Minimum	Maximum
Turbidity, Raw RW1A (Grab) [NTU]	12	0.41	2.77
Turbidity, Raw RW3A (Grab) [NTU]	12	0.13	0.77
Free Chlorine Residual, Treated (Continuous) [mg/L]	8760	0.00^	5.00+
Free Chlorine Residual, Treated (Grab) [mg/L]	165	0.90	3.90

Location & Test	Number of Samples	Range of Results	
		Minimum	Maximum
Total Chlorine Residual, Treated (Grab) [mg/L]	168	1.10	4.20
Free Chlorine Residual, Distribution (Grab) [mg/L]	35	1.19	3.70

Note: The number of samples used for a continuous monitoring unit is 8760.
^The minimum treated free chlorine residual did not result in an Adverse Observation because the wells were locked out during the event. Adequate CT achieved.
+The maximum treated free chlorine residual was due to a chlorine analyzer calibration; it was not an authentic chlorine residual that was distributed throughout the system.

Table 3: Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of Legal Instrument Issued	Parameter	Date Sampled	Result	Unit of Measure
Not Applicable				

Table 4: Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedances	
				MAC	½ MAC
Antimony: Sb (µg/L) - TW	2021/01/25	<MDL 0.9	6.0	No	No
Arsenic: As (µg/L) - TW	2021/01/25	<MDL 0.2	10.0	No	No
Barium: Ba (µg/L) - TW	2021/01/25	205.0	1000.0	No	No
Boron: B (µg/L) - TW	2021/01/25	289.0	5000.0	No	No
Cadmium: Cd (µg/L) - TW	2021/01/25	0.004	5.0	No	No
Chromium: Cr (µg/L) - TW	2021/01/25	0.96	50.0	No	No
Mercury: Hg (µg/L) - TW	2021/01/25	<MDL 0.01	1.0	No	No
Selenium: Se (µg/L) - TW	2021/01/25	<MDL 0.04	50.0	No	No
Uranium: U (µg/L) - TW	2021/01/25	1.39	20.0	No	No
Fluoride: F (mg/L) - TW	2017/01/11	0.1	1.5	No	No
Nitrite (mg/L) - TW	2021/01/25	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2021/05/04	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2021/07/21	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2021/10/19	<MDL 0.03	1.0	No	No
Nitrate (mg/L) - TW	2021/01/25	3.19	10.0	No	No
Nitrate (mg/L) - TW	2021/05/04	3.04	10.0	No	No
Nitrate (mg/L) - TW	2021/07/21	3.34	10.0	No	No
Nitrate (mg/L) - TW	2021/10/19	3.68	10.0	No	No
Sodium: Na (mg/L) - TW	2020/04/27	224.0	20*	N/A	N/A

Note: MDL = Minimum Detection Limit
**There is no "MAC" for Sodium. The aesthetic objective 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. Sodium exceedances are only reportable every 60 months, the last Sodium exceedance reported to the MOH was on January 2017. No further recommendations were made by the MOH.*

Table 5: Summary of lead testing under Schedule 15.1 during this reporting period

Location Type	Number of Samples	Range of Lead Results		MAC	Exceedances
		Minimum	Maximum		
Lead – Plumbing (µg/L)	Not Applicable - Relief from all Plumbing Requirements*				
Lead – Distribution** (µg/L)	2	0.04	0.38	10	0

Note: The Alkalinity results for 2021 were 296 and 311 mg/L as $CaCO_3$. The pH results for 2021 were 7.0. The aesthetic objective/operational guideline for pH is 6.5-8.5.
**This system qualifies for the plumbing exemption as per O. Regulation 170/03 Schedule 15.1-5 (9) (10).*
***Distribution lead samples are taken every 36 months. The last set of distribution lead samples were taken in 2021. The next set of distribution lead samples is scheduled for 2024.*

Table 6: Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedances	
				MAC	½ MAC
Alachlor (µg/L) - TW	2021/01/25	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (µg/L) - TW	2021/01/25	<MDL 0.01	5.0	No	No
Azinphos-methyl (µg/L) - TW	2021/01/25	<MDL 0.05	20.0	No	No
Benzene (µg/L) - TW	2021/01/25	<MDL 0.32	1.0	No	No
Benzo(a)pyrene (µg/L) - TW	2021/01/25	<MDL 0.004	0.01	No	No
Bromoxynil (µg/L) - TW	2021/01/25	<MDL 0.33	5.0	No	No
Carbaryl (µg/L) - TW	2021/01/25	<MDL 0.05	90.0	No	No
Carbofuran (µg/L) - TW	2021/01/25	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (µg/L) - TW	2021/01/25	<MDL 0.17	2.0	No	No
Chlorpyrifos (µg/L) - TW	2021/01/25	<MDL 0.02	90.0	No	No
Diazinon (µg/L) - TW	2021/01/25	<MDL 0.02	20.0	No	No
Dicamba (µg/L) - TW	2021/01/25	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (µg/L) - TW	2021/01/25	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (µg/L) - TW	2021/01/25	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (µg/L) - TW	2021/01/25	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (µg/L) - TW	2021/01/25	<MDL 0.33	14.0	No	No
Dichloromethane (Methylene Chloride) (µg/L) - TW	2021/01/25	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (µg/L) - TW	2021/01/25	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (µg/L) - TW	2021/01/25	<MDL 0.19	100.0	No	No
Diclofop-methyl (µg/L) - TW	2021/01/25	<MDL 0.4	9.0	No	No
Dimethoate (µg/L) - TW	2021/01/25	<MDL 0.06	20.0	No	No
Diquat (µg/L) - TW	2021/01/25	<MDL 1.0	70.0	No	No
Diuron (µg/L) - TW	2021/01/25	<MDL 0.03	150.0	No	No
Glyphosate (µg/L) - TW	2021/01/25	<MDL 1.0	280.0	No	No
Malathion (µg/L) - TW	2021/01/25	<MDL 0.02	190.0	No	No
Metolachlor (µg/L) - TW	2021/01/25	<MDL 0.01	50.0	No	No
Metribuzin (µg/L) - TW	2021/01/25	<MDL 0.02	80.0	No	No

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedances	
				MAC	½ MAC
Monochlorobenzene (Chlorobenzene) (µg/L) - TW	2021/01/25	<MDL 0.3	80.0	No	No
Paraquat (µg/L) - TW	2021/01/25	<MDL 1.0	10.0	No	No
PCB (µg/L) - TW	2021/01/25	<MDL 0.04	3.0	No	No
Pentachlorophenol (µg/L) - TW	2021/01/25	<MDL 0.15	60.0	No	No
Phorate (µg/L) - TW	2021/01/25	<MDL 0.01	2.0	No	No
Picloram (µg/L) - TW	2021/01/25	<MDL 1.0	190.0	No	No
Prometryne (µg/L) - TW	2021/01/25	<MDL 0.03	1.0	No	No
Simazine (µg/L) - TW	2021/01/25	<MDL 0.01	10.0	No	No
Terbufos (µg/L) - TW	2021/01/25	<MDL 0.01	1.0	No	No
Tetrachloroethylene (µg/L) - TW	2021/01/25	<MDL 0.35	10.0	No	No
2,3,4,6-Tetrachlorophenol (µg/L) - TW	2021/01/25	<MDL 0.2	100.0	No	No
Triallate (µg/L) - TW	2021/01/25	<MDL 0.01	230.0	No	No
Trichloroethylene (µg/L) - TW	2021/01/25	<MDL 0.44	5.0	No	No
2,4,6-Trichlorophenol (µg/L) - TW	2021/01/25	<MDL 0.25	5.0	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (µg/L) - TW	2021/01/25	<MDL 0.12	100.0	No	No
Trifluralin (µg/L) - TW	2021/01/25	<MDL 0.02	45.0	No	No
Vinyl Chloride (µg/L) - TW	2021/01/25	<MDL 0.17	1.0	No	No
Trihalomethane: Total Annual Average (µg/L) - DW	4 Quarters of 2021	32.25	100.00	No	No
Haloacetic Acid: Total Annual Average (µg/L) - DW	4 Quarters of 2021	6.2	80.00	No	No

Note: MDL = Minimum Detection Limit

Table 7: List of 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
Not Applicable			