

Ontario Drinking-Water Systems Regulation O. Reg. 170-03 (s)11

Creemore 2021 Annual Report

Drinking-Water System Number: 220001101
Drinking-Water System Name: Creemore Drinking Water System
Drinking-Water System Owner: The Corporation of the Township of Clearview
Drinking-Water System Category: Large Municipal Residential
Period being reported: January – December 2021

This Drinking-Water System does not serve more than 10,000 people.

This annual report is available to the public at no charge on the Clearview website at www.clearview.ca

The Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection at the Clearview Municipal Office 217 Gideon Street, Stayner and at the Clearview public works building at 5833 County Road 96, Stayner.

No other Drinking Water Systems receive their drinking water from this system.

This annual report is available free of charge on our website, and at the locations listed above. Notice of the report availability is provided on the Clearview website and social media accounts. Report availability is also advertised in the local newspaper.

Description of the system:

The water source for this system is two groundwater source wells. Disinfection is provided with sodium hypochlorite. Water storage is a single cell concrete reservoir with a total capacity of 1,570 m³. There are approximately 545 active service connections. There are 65 hydrants throughout the system for fire protection.

Chemicals used for treatment include 12% Sodium Hypochlorite.

Significant expenses incurred to install, repair, or replace equipment:

- Well # 1 Rehabilitation - \$34,000
- Well # 1 Pump Replacement – \$14,570
- Well # 1 Well Level Probe - \$1,400
- Standby Generator - \$ 91,500

Provide 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	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
07/21/2021	Total Coliform	1	CFU/100 mL	Resample	07/21/2021
08/18/2021	Total Coliform	NDOGT	CFU/100 mL	Resample	08/18/2021

¹ NDOGT = No Data; Overgrown with target bacteria.

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

Type of Sample	Number of Samples	Range of E.coli Or Fecal Results (min #)- (max #) CFU/100 mL	Range of Total Coliform Results (min #)- (max #) CFU/100 mL	Number of HPC Samples	Range of HPC Results (min #)- (max #) CFU/100 mL
Raw – Well # 1	49	0 – 0	0 – 24	0	NA
Raw – Well # 2	52	0 – 0	0 – 4	0	NA
Treated	53	0 – 0	0 – 1	52	<10 – 90
Distribution	161	0 – NDOGT ¹	0 – NDOGT	40	<10 – 50

¹ NDOGT = No Data; Overgrown with target bacteria.

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

Parameter	Number of Grab Samples	Range of Results (min #)-(max #)	Unit of Measure
System Chlorine	416	0.27 – 1.82	mg/L
Chlorine	8760	0.40 – 1.93	mg/L
Turbidity			
Raw – Well # 1	12	0.38 – 1.13	NTU
Raw – Well # 2	12	0.44 – 1.34	NTU

NOTE: For continuous monitors use 8760 as the number of samples.

Summary of lead testing under Schedule 15.1 during this reporting period (applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Plumbing	0	NA	mg/L	NA
Distribution	0	NA	mg/L	NA

Samples required under Schedule 13

Parameter	Date Sampled	Result	Unit of Measure
THM's (annual running average)	2021	0.0108	mg/L
HAA's (annual running average)	2021	<0.0053	mg/L
Nitrate	01/18/2021	1.0	mg/L
	04/15/2021	1.2	
	07/15/2021	1.2	
	10/21/2021	0.9	
Nitrite	01/18/2021	<0.1	mg/L
	04/15/2021	<0.1	
	07/15/2021	<0.1	
	10/21/2021	<0.1	
Sodium	11/25/2021	45.3	mg/L
Fluoride	07/18/2017	<0.1	mg/L

Other sampling

Parameter	Date Sampled	Result	Unit of Measure
Chloride	11/25/2021	78.3	mg/L
Hardness	08/28/2019	409	mg/L

The most recent sample results of Inorganic parameters tested during this reporting period.

- Appendix - A

The most recent sample results of Organic parameters sampled during this reporting period.

- Appendix - B

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards. - Sodium 45.3 mg/L

APPENDIX A
INORGANIC PARAMETERS
(SCHEDULE 23)

C.O.C.: DW191203S23B

REPORT No. B19-39040

Report To:

Clearview, Township of
 217 Gideon Street, Box 200
 Stayner Ontario L0M 1S0 Canada

Attention: Todd Patton

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 03-Dec-19

JOB/PROJECT NO.: Creemore W.S.

DATE REPORTED: 09-Dec-19

P.O. NUMBER: CR Schedule 23

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220001101

Client I.D.:	CR Treated		ODWS	
Sample I.D.:	B19-39040-1		Objective	Type of Objective
Date Collected:	03-Dec-19			

Parameter	Units	R.L.	Reference Method	Date/Site Analyzed				
Antimony	mg/L	0.0001	EPA 200.8	06-Dec-19/O	< 0.0001		0.006,0.006	IMAC,MAC
Arsenic	mg/L	0.0001	EPA 200.8	06-Dec-19/O	< 0.0001		0.025,0.01	IMAC,MAC
Barium	mg/L	0.001	SM 3120	05-Dec-19/O	0.126		1	MAC
Boron	mg/L	0.005	SM 3120	05-Dec-19/O	0.037		5,5	IMAC,MAC
Cadmium	mg/L	0.000015	EPA 200.8	06-Dec-19/O	< 0.000015		0.005	MAC
Chromium	mg/L	0.002	SM 3120	05-Dec-19/O	< 0.002		0.05	MAC
Mercury	mg/L	0.00002	SM 3112 B	06-Dec-19/O	< 0.00002		0.001	MAC
Selenium	mg/L	0.001	EPA 200.8	06-Dec-19/O	< 0.001		0.05	MAC
Uranium	mg/L	0.00005	EPA 200.8	06-Dec-19/O	0.00128		0.02	MAC
Free Chlorine	mg/L		n/a	03-Dec-19/B	0.95			

1 Free chlorine results provided by client.

ODWS - Ontario Drinking Water Standards
 AO - Aesthetic Objectives
 IMAC - Interim Maximum Acceptable Concentration
 MAC - Maximum Acceptable Concentration
 OG - Operational Guidelines

R.L. = Reporting Limit

Test methods may be modified from specified reference method unless indicated by an *

Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie



Christine Burke
 Lab Manager

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

APPENDIX B
ORGANIC PARAMETERS
(SCHEDULE 24)

C.O.C.: DWTOC210208A1

REPORT No. B21-03737

Report To:

Clearview, Township of
 217 Gideon Street, Box 200
 Stayner Ontario L0M 1S0 Canada

Attention: Todd Patton

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 08-Feb-21

JOB/PROJECT NO.: Creemore W.S.

DATE REPORTED: 22-Feb-21

P.O. NUMBER: Schedule 24

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220001101

Client I.D.	CR Treated		
Sample I.D.	B21-03737-1		
Date Collected	08-Feb-21		

Parameter	Units	R.L.	Reference Method	Date/Site Analyzed			
Alachlor	µg/L	0.3	EPA 8270	12-Feb-21/K	< 0.3		
Atrazine + Metabolites	µg/L	0.5	Calc.	12-Feb-21/K	< 0.5		
Azinphos-methyl	µg/L	1	EPA 8270	12-Feb-21/K	< 1		
Benzo(a)pyrene	µg/L	0.006	EPA 8270	12-Feb-21/K	< 0.006		
Bromoxynil	µg/L	0.5	EPA 8270	12-Feb-21/K	< 0.5		
Carbaryl	µg/L	3	EPA 8270	12-Feb-21/K	< 3		
Carbofuran	µg/L	1	EPA 8270	12-Feb-21/K	< 1		
Chlorpyrifos	µg/L	0.5	EPA 8270	12-Feb-21/K	< 0.5		
Diazinon	µg/L	1	EPA 8270	12-Feb-21/K	< 1		
Dicamba	µg/L	10	EPA 8270	12-Feb-21/K	< 10		
Dichlorophenol, 2,4-	µg/L	0.2	EPA 8270	12-Feb-21/K	< 0.2		
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	µg/L	10	EPA 8270	12-Feb-21/K	< 10		
Diclofop-methyl	µg/L	0.9	EPA 8270	12-Feb-21/K	< 0.9		
Dimethoate	µg/L	1	EPA 8270	12-Feb-21/K	< 1		
Diquat	µg/L	5	EPA 549.1	16-Feb-21/K	< 5		
Diuron	µg/L	5	EPA 8270	12-Feb-21/K	< 5		
Glyphosate	µg/L	25	EPA 547	11-Feb-21/K	< 25		
Malathion	µg/L	5	EPA 8270	12-Feb-21/K	< 5		
Metolachlor	µg/L	3	EPA 8270	12-Feb-21/K	< 3		
Metribuzin	µg/L	3	EPA 8270	12-Feb-21/K	< 3		
Paraquat	µg/L	1	EPA 549.1	16-Feb-21/K	< 1		
Pentachlorophenol	µg/L	0.2	EPA 8270	12-Feb-21/K	< 0.2		
Phorate	µg/L	0.3	EPA 8270	12-Feb-21/K	< 0.3		
Picloram	µg/L	15	EPA 8270	12-Feb-21/K	< 15		



Christine Burke
 Lab Manager

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C.O.C.: DWTOC210208A1

REPORT No. B21-03737

Report To:

Clearview, Township of
 217 Gideon Street, Box 200
 Stayner Ontario L0M 1S0 Canada

Attention: Todd Patton

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 08-Feb-21

JOB/PROJECT NO.: Creemore W.S.

DATE REPORTED: 22-Feb-21

P.O. NUMBER: Schedule 24

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220001101

Client I.D.	CR Treated			
Sample I.D.	B21-03737-1			
Date Collected	08-Feb-21			

Parameter	Units	R.L.	Reference Method	Date/Site Analyzed			
Poly-Chlorinated Biphenyls (PCB's)	µg/L	0.05	EPA 8082	11-Feb-21/K	< 0.05		
Prometryne	µg/L	0.1	EPA 8270	12-Feb-21/K	< 0.1		
Simazine	µg/L	0.5	EPA 8270	12-Feb-21/K	< 0.5		
Terbufos	µg/L	0.5	EPA 8270	12-Feb-21/K	< 0.5		
Tetrachlorophenol, 2,3,4,6-	µg/L	0.2	EPA 8270	12-Feb-21/K	< 0.2		
Triallate	µg/L	10	EPA 8270	12-Feb-21/K	< 10		
Trichlorophenol 2,4,6-	µg/L	0.2	EPA 8270	12-Feb-21/K	< 0.2		
Trifluralin	µg/L	0.5	EPA 8270	12-Feb-21/K	< 0.5		
MCPA	µg/L	10	EPA 8151A	22-Feb-21/K	< 10		
Free Chlorine	mg/L		n/a	08-Feb-21/B	1.06		

1 Free chlorine results provided by client.



Christine Burke
 Lab Manager

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C.O.C.: DWTOC210208A2

REPORT No. B21-03738

Report To:

Clearview, Township of
 217 Gideon Street, Box 200
 Stayner Ontario L0M 1S0 Canada

Attention: Todd Patton

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 08-Feb-21

JOB/PROJECT NO.: Creemore W.S.

DATE REPORTED: 16-Feb-21

P.O. NUMBER: Schedule 24

SAMPLE MATRIX: Drinking Water

WATERWORKS NO. 220001101

Client I.D.	CR Treated			
Sample I.D.	B21-03738-1			
Date Collected	08-Feb-21			

Parameter	Units	R.L.	Reference Method	Date/Site Analyzed				
Benzene	µg/L	0.5	EPA 8260	12-Feb-21/R	< 0.5			
Carbon Tetrachloride	µg/L	0.2	EPA 8260	12-Feb-21/R	< 0.2			
Dichlorobenzene, 1,2-	µg/L	0.5	EPA 8260	12-Feb-21/R	< 0.5			
Dichlorobenzene, 1,4-	µg/L	0.5	EPA 8260	12-Feb-21/R	< 0.5			
Dichloroethylene, 1,1-	µg/L	0.5	EPA 8260	12-Feb-21/R	< 0.5			
Dichloroethane, 1,2-	µg/L	0.5	EPA 8260	12-Feb-21/R	< 0.5			
Dichloromethane (Methylene Chloride)	µg/L	5	EPA 8260	12-Feb-21/R	< 5			
Monochlorobenzene (Chlorobenzene)	µg/L	0.5	EPA 8260	12-Feb-21/R	< 0.5			
Tetrachloroethylene	µg/L	0.5	EPA 8260	12-Feb-21/R	< 0.5			
Trichloroethylene	µg/L	0.5	EPA 8260	12-Feb-21/R	< 0.5			
Vinyl Chloride	µg/L	0.2	EPA 8260	12-Feb-21/R	< 0.2			
Free Chlorine	mg/L		n/a	08-Feb-21/B	1.06			

1 Free chlorine results provided by client.



Christine Burke
 Lab Manager

R.L. = Reporting Limit

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