Rockland Drinking Water System

Waterworks # 210000639 System Category – Large Municipal Residential

Annual Water Report

Prepared For:
The Corporation of the City of Clarence Rockland

Reporting Period of January 1st – December 31st 2021

Issued: January 20th, 2022

Revision: 1

Operating Authority:



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 serves more than 10,000 residents therefore the annual reports shall be made available publically to residents of The Corporation of the City of Clarence-Rockland. Notification should be made available on the municipal website and copies provided free of charge if requested at the Municipal Office located at, 1560 Laurier St. Rockland On. K4K 1P7.

Compliance Report Card

Compliance Event	# of Events
Ministry of Environment Inspections	0
Ministry of Labour Inspections	0
QEMS External Audit	1
AWQIs	0
Precautionary BWA	1
Non-Compliance	2
Community Complaints	3
Watermain Breaks & Service Repairs	2

System Process Description

Raw Source

Raw water source for the Rockland Drinking Water System is the Ottawa River as per Permit to Take Water #3168-B2JK5N expiring on June 30th 2028. Raw water intake facility consists of a 630mm HDP# Series 45 pipe extending approximately 126 meters from the low lift pumping station into the Ottawa river. Water is conveyed to the water treatment facility by one of 3 vertical turbine pumps.

Treatment

The Clarence Rockland Water Treatment Plant is a 13,500 m3/day conventional filtration type treatment plant with Actiflo® pre-treatment. The Plant is located at 125 Edwards Street in Rockland and services the City of Clarence Rockland and five Hamelets(Clarence Creek, St-Pascal Baylon, Hammond, Bourget and Cheney. The facility consist of the following components; Raw water intake obtained from the Ottawa River. A low lift pumping station including three vertical turbine pumps. Water is directed to two Actiflo® units followed by two rapid dual media gravity filters of sand and anthracite. Filtered water is disinfected and passed through a UV system consisting of two units. A baffled chlorine contact tank of 233.5 m3 and two reservoirs having a total capacity of 471 m3. Secondary disinfection is achieved via chloramination at the discharge of the plant.

<u>Treatment Chemicals used during the reporting year:</u>

Chemical Name	Use	Supplier
Sodium Hydroxide 50%	Pre and Post pH adjustment	Sodrox
Aluminium Chloride Hydroxide Sulphate (PAX-XL6)	Coagulant	Kemira
Magnafloc LT27AG Polymer	Flocculation Agent	BASF
Sodium Hypochlorite	Post Disinfection	UBA
Ammonium Sulphate	Secondary Disinfection "Chloramination"	Canada Colors & Chemicals

Distribution

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Water is pumped into the distribution system by four centrifugal high lift pumps. A Booster Station with three centrifugal pumps is used for the water demand of the Hamlets. The rate of water supplied is based on the three elevated water tower storage tanks and demand from the City of Clarence-Rockland and its Hamlets.

Summary of Non-Compliance

Adverse Water Quality Incidents

Date	AWQI#	Parameter	Value	Limit	Legislation
There were no adverse water quality incidents reported during the reporting period.					

Non-Compliance

Legislation	requirement(s) system failed to meet	Details	Corrective Action	Status
O. Reg 170/03	Distribution Analyzer Failure	Analyzer at the Bouvier tower failed on Oct 8, 2021.	The on-call operator monitored the residuals at the Cheney tower. The Bouvier tower analyzer was repaired on Oct 12, 2021.	All analyzers back online
O. Reg 170/03	Distribution Communication Failure	Communication fail between the Rockland Towers and the Water Treatment Plant on December 11, 2021 due to poor weather conditions.	OIC took grab samples of the distribution chlorine while communication was down.	Communication restored once ice melted off of the antennas

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		
	No Inspections performed during this reporting period					

Flows

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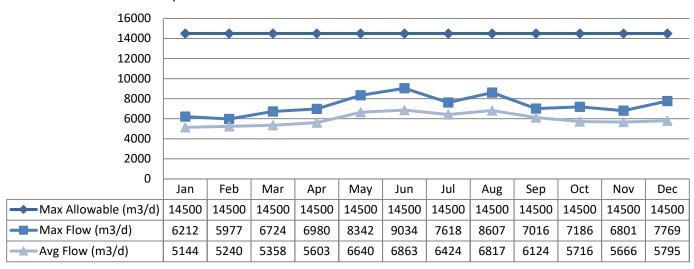
The Rockland Drinking Water System is operating on average under half the rated capacity. During summer peak demands both actiflo units are required to work in order to meet demand and fire capacity levels in the water tower reservoirs.

Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water Ontario Regulation 387/04. Water Taking and Transfers requires all water takers to report daily water taking amounts to the Water Taking Reporting System (WTRS) electronic database. The 2021 Raw Flow Data was submitted to the Ministry electronically under permit PTTW #3168-B2JK5N. The confirmation and a copy of the data that was submitted are attached in Appendix A.

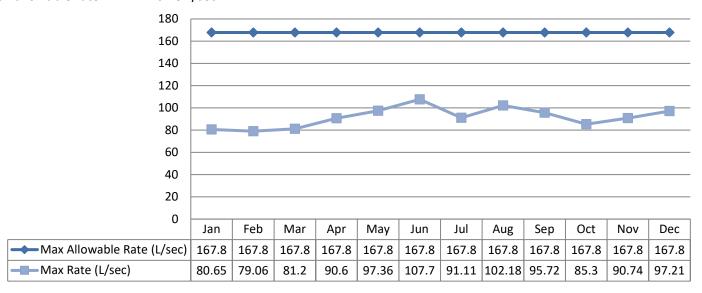
Total Monthly Flows (m3/d)

Max Allowable PTTW 14500 m3/d



Monthly Rated Flows (L/s)

Max allowable rate - PTTW 167.8 L/sec



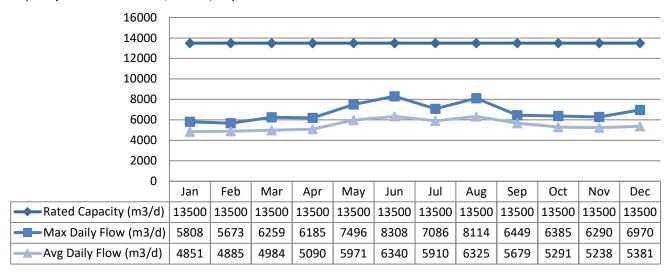
Treated Water Flows

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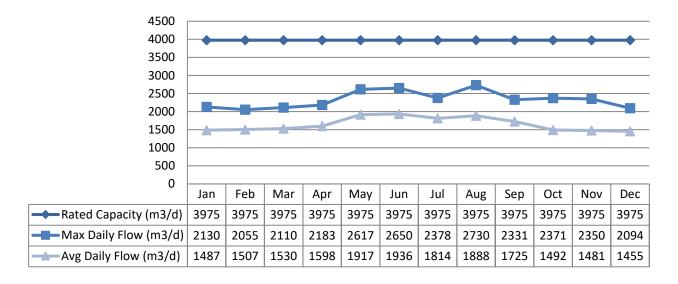
The Treated Water flows are regulated under the Municipal Drinking Water Licence Number: 175-101 Issue Number: 3

Monthly Rated Flows

Rated Capacity - MDWL WTP 13,500m3/day



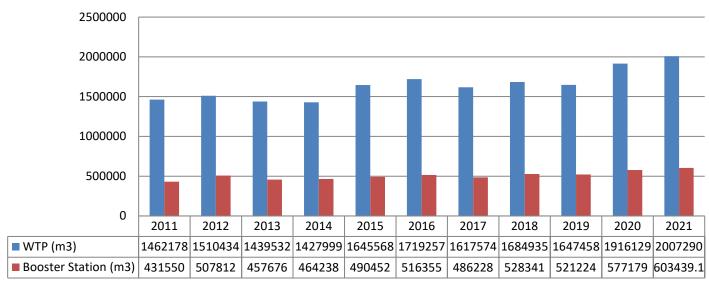
Rated Capacity - MDWL Booster Pumping Station 3,975 m3/day



Annual Total Flow Comparison

Total Annual m³

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Please note that the booster station flows are included in the treated water WTP flows

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 Water	52	0	195	0	2900		
Treated Water	52	0	0	0	0	<2	4
Distribution Water	364	0	0	0	0	<2	8

Operational Testing

	No. of	Range o	of Results
	Samples Collected	Minimum	Maximum
Turbidity, In-House (NTU) - RW	8760	1.4	50
Turbidity, On-Line (NTU) - TW	8760	0.09	0.28
Turbidity, On-Line (NTU) – Filter #1	8760	0.02	0.67
Turbidity, On-Line (NTU) – Filter #2	8760	0.03	0.68
Free Chlorine Residual, On-Line (mg/L) - TW	8760	0.9	2.86
Combined Chlorine Secondary Disinfection, On-Line (mg/L) – TW	8760	0.66	2.97
Combined Chlorine Residual, On-Line (mg/L) – DW	8760	0.3	2.9

NOTE: 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

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These parameters are tested as a requirement under 170/03. Sodium and Fluoride are required to be tested every 5 years. Nitrate and Nitrite are tested quarterly and the metals are tested annually as required under 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 = Below the laboratory detection level

	Sample Date	Sample Result	MAC	No. of Exc	ceedances
	(yyyy/mm/dd)	Sample Result	IVIAC	MAC	1/2 MAC
Treated Water					
Antimony: Sb (ug/L) - TW	2021/07/28	<mdl 0.1<="" td=""><td>6.0</td><td>No</td><td>No</td></mdl>	6.0	No	No
Arsenic: As (ug/L) - TW	2021/07/28	0.3	10.0	No	No
Barium: Ba (ug/L) - TW	2021/07/28	14.0	1000.0	No	No
Boron: B (ug/L) - TW	2021/07/28	6.0	5000	No	No
Cadmium: Cd (ug/L) - TW	2021/07/28	<mdl 0.02<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
Chromium: Cr (ug/L) - TW	2021/07/28	<mdl 2.0<="" td=""><td>50.0</td><td>No</td><td>No</td></mdl>	50.0	No	No
Mercury: Hg (ug/L) - TW	2021/07/28	<mdl 0.02<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Selenium: Se (ug/L) - TW	2021/07/28	<mdl 1.0<="" td=""><td>50.0</td><td>No</td><td>No</td></mdl>	50.0	No	No
Uranium: U (ug/L) - TW	2021/07/28	<mdl 0.05<="" td=""><td>20.0</td><td>No</td><td>No</td></mdl>	20.0	No	No
Additional Inorganics					
Fluoride (mg/L) - TW	2019/04/12	<mdl 0.1<="" td=""><td>1.5</td><td>No</td><td>No</td></mdl>	1.5	No	No
Nitrite (mg/L) - TW	2021/01/25	<mdl 0.1<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Nitrite (mg/L) - TW	2021/04/06	<mdl 0.1<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Nitrite (mg/L) - TW	2021/07/26	<mdl 0.1<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Nitrite (mg/L) - TW	2021/10/25	<mdl 0.1<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Nitrate (mg/L) - TW	2021/02/25	0.3	10.0	No	No
Nitrate (mg/L) - TW	2021/04/06	0.4	10.0	No	No
Nitrate (mg/L) - TW	2021/07/26	0.2	10.0	No	No
Nitrate (mg/L) - TW	2021/10/25	0.2	10.0	No	No
Sodium: Na (mg/L) - TW	2019/04/12	25.4	20	N/A	N/A

^{*}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 mg/L 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	Number of Sampling	Number of Samples	Range of Results		MAC	Number of	
Distribution system	Points	Number of Samples	Minimum	Maximum	(ug/L)	Exceedances	
Alkalinity (mg/L)	8	8	25	39	N/A	N/A	
рН	8	8	7.5	7.7	N/A	N/A	
Lead (mg/L)	N/A	N/A	N/A	N/A	0.01	N/A	

Organic Parameters

These parameters are tested annually 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		MAC	Numb	
TREATED WATER	(yyyy/mm/dd)	Sample Result		Exceed	
				MAC	1/2 MAC
Alachlor (ug/L) - TW1	2021/07/28	<mdl 0.3<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
Azinphos-methyl (ug/L) - TW1	2021/07/28	<mdl 1.0<="" td=""><td>20.0</td><td>No</td><td>No</td></mdl>	20.0	No	No
Benzene (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Benzo(a)pyrene (ug/L) - TW1	2021/07/28	<mdl 0.006<="" td=""><td>0.01</td><td>No</td><td>No</td></mdl>	0.01	No	No
Bromoxynil (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
Carbaryl (ug/L) - TW1	2021/07/28	<mdl 3.0<="" td=""><td>90.0</td><td>No</td><td>No</td></mdl>	90.0	No	No
Carbofuran (ug/L) - TW1	2021/07/28	<mdl 1.0<="" td=""><td>90.0</td><td>No</td><td>No</td></mdl>	90.0	No	No
Carbon Tetrachloride (ug/L) - TW1	2021/07/28	<mdl 0.2<="" td=""><td>2.0</td><td>No</td><td>No</td></mdl>	2.0	No	No
Chlorpyrifos (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>90.0</td><td>No</td><td>No</td></mdl>	90.0	No	No
Diazinon (ug/L) - TW1	2021/07/28	<mdl 1.0<="" td=""><td>20.0</td><td>No</td><td>No</td></mdl>	20.0	No	No
Dicamba (ug/L) - TW1	2021/07/28	<mdl 10.0<="" td=""><td>120.0</td><td>No</td><td>No</td></mdl>	120.0	No	No
1,2-Dichlorobenzene (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>200.0</td><td>No</td><td>No</td></mdl>	200.0	No	No
1,4-Dichlorobenzene (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
1,2-Dichloroethane (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
1,1-Dichloroethylene (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>14.0</td><td>No</td><td>No</td></mdl>	14.0	No	No
Dichloromethane (Methylene	2021/07/28	<mdl 5.0<="" td=""><td>50.0</td><td>No</td><td>No</td></mdl>	50.0	No	No
Chloride) (ug/L) - TW1					
2,4-Dichlorophenol (ug/L) - TW1	2021/07/28	<mdl 0.2<="" td=""><td>900.0</td><td>No</td><td>No</td></mdl>	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW1	2021/07/28	<mdl 10.0<="" td=""><td>100.0</td><td>No</td><td>No</td></mdl>	100.0	No	No
Diclofop-methyl (ug/L) - TW1	2021/07/28	<mdl 0.9<="" td=""><td>9.0</td><td>No</td><td>No</td></mdl>	9.0	No	No
Dimethoate (ug/L) - TW1	2021/07/28	<mdl 1.0<="" td=""><td>20.0</td><td>No</td><td>No</td></mdl>	20.0	No	No
Diquat (ug/L) - TW1	2021/07/28	<mdl 5.0<="" td=""><td>70.0</td><td>No</td><td>No</td></mdl>	70.0	No	No
Diuron (ug/L) - TW1	2021/07/28	<mdl 5.0<="" td=""><td>150.0</td><td>No</td><td>No</td></mdl>	150.0	No	No
Glyphosate (ug/L) - TW1	2021/07/28	<mdl 25.0<="" td=""><td>280.0</td><td>No</td><td>No</td></mdl>	280.0	No	No
Malathion (ug/L) - TW1	2021/07/28	<mdl 5.0<="" td=""><td>190.0</td><td>No</td><td>No</td></mdl>	190.0	No	No
Metolachlor (ug/L) - TW1	2021/07/28	<mdl 3.0<="" td=""><td>50.0</td><td>No</td><td>No</td></mdl>	50.0	No	No
Metribuzin (ug/L) - TW1	2021/07/28	<mdl 3.0<="" td=""><td>80.0</td><td>No</td><td>No</td></mdl>	80.0	No	No
Monochlorobenzene	2021/07/28	<mdl 0.5<="" td=""><td>80.0</td><td>No</td><td>No</td></mdl>	80.0	No	No
(Chlorobenzene) (ug/L) - TW1					
Paraquat (ug/L) - TW1	2021/07/28	<mdl 1.0<="" td=""><td>10.0</td><td>No</td><td>No</td></mdl>	10.0	No	No
PCB (ug/L) - TW1	2021/07/28	<mdl 0.05<="" td=""><td>3.0</td><td>No</td><td>No</td></mdl>	3.0	No	No
Pentachlorophenol (ug/L) - TW1	2021/07/28	<mdl 0.2<="" td=""><td>60.0</td><td>No</td><td>No</td></mdl>	60.0	No	No
Phorate (ug/L) - TW1	2021/07/28	<mdl 0.3<="" td=""><td>2.0</td><td>No</td><td>No</td></mdl>	2.0	No	No
Picloram (ug/L) - TW1	2021/07/28	<mdl 15.0<="" td=""><td>190.0</td><td>No</td><td>No</td></mdl>	190.0	No	No
Prometryne (ug/L) - TW1	2021/07/28	<mdl 0.1<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Simazine (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>10.0</td><td>No</td><td>No</td></mdl>	10.0	No	No
Terbufos (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Tetrachloroethylene (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>10.0</td><td>No</td><td>No</td></mdl>	10.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW1	2021/07/28	<mdl 0.2<="" td=""><td>100.0</td><td>No</td><td>No</td></mdl>	100.0	No	No
Triallate (ug/L) - TW1	2021/07/28	<mdl 10.0<="" td=""><td>230.0</td><td>No</td><td>No</td></mdl>	230.0	No	No
Trichloroethylene (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No

2,4,6-Trichlorophenol (ug/L) - TW1	2021/07/28	<mdl 0.2<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
2-methyl-4-chlorophenoxyacetic acid	2021/07/28	<mdl 10.0<="" td=""><td>100.0</td><td>No</td><td>No</td></mdl>	100.0	No	No
(MCPA) (ug/L) - TW1					
Trifluralin (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>45.0</td><td>No</td><td>No</td></mdl>	45.0	No	No
Vinyl Chloride (ug/L) - TW1	2021/07/28	<mdl 0.2<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual	2021/01/01	49.75	100.0	No	No
Average - DW					
HAA Total (ug/L) Annual Average -	2021/01/01	32.45	80.0*	No	No
DW					

MAC = Maximum Allowable Concentration as per O.Reg 169/03

BDL = Below the laboratory detection level

Additional Legislated Samples

Summary of additional testing and sampling carried out in accordance with the requirement of an approval or order.

Date of order or Municipal Drinking Water Licence	Parameter	Date Sampled	Result	Unit of Measure
Municipal Drinking Water Licence #175-101	Suspended Solids	Jan 4, 2021	6	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Feb 1, 2021	17	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Mar 1, 2021	6	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Apr 8, 2021	7	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	May 25, 2021	8	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Jun 28, 2021	6	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Jul 26, 2021	6	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Aug 16, 2021	3	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Sep 29, 2021	4	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Oct 25, 2021	3	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Nov 29, 2021	5	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Dec 20, 2021	10	mg/L

Major Maintenance Summary

Water Treatment Plant Maintenance

Date	Details
2021	Capital Controls was onsite at the WTP numerous times throughout the 2021 reporting year to perform various repairs, modifications, and upgrades to the PLC and SCADA system.
Jan/Feb -21	Replaced two treated water turbidity analyzers because supplier advised us that parts for the current units would not be available in the near future. Considered a compliance risk.
10-Mar-21	Replaced defective spectrophotometer in lab at plant due to lack of replacement parts (discontinued)
12-Mar-21	Acu-Tec in to do the annual lifting/safety device inspections
5-May-21	Annual backflow preventer inspection

27-May-21	Replaced 16" flow meter for backwash supply pumps. Meter failed and required to	
03-Jun-21	process operation and filter backwashes Annual inspection and service of chemical feed pumps by Chloratech.	
15-Jun-21	TV 22 on site with Julien Lenhart at WTP to produce short report on water consumption and restrictions	
	Annual monitoring equipment inspection/calibrations by HACH.	
23-Jun-21	Valve actuator for backwash water supply line failed and was replaced	
Jun/Aug-21	Remove and replace pump in the Backwash water wet well	
13-Aug-21	Change battery of generator at Booster station	
09-Nov-21	Annual UV system maintenance by H2Flow.	
24-Nov-21	Annual cleaning and inspection of low lift wet well, grease pump	
14-Dec-21	Annual maintenance and inspection on Actiflo #1, fix polymer line and inspect mixer blades	
03-Dec-21	Annual fire extinguisher inspections by Fire Alert.	

Distribution System Maintenance

Date	Location Reference	Details	
20-Jan-21	St-Joseph St	Broken hydrant by plow at water tower on St-Joseph street. Repaired by Hydra-Spec on March 8 th	
26-Mar-21	Clarence-Creek and Cheney distribution	Cathodic protection maintenance done on both towers	
29-Mar-21	Rockland and Cheney distribution	MISCO completed safety upgrades to ladders identified in 2019 report and budgeted for 2021.	
Apr-May-21	Clarence-Rockland distribution	Distribution dead end flushing completed in all villages and Rockland	
22-Apr-22	Cheney, St Pascal	New Hydrants - Cheney, St-pascal	
May-Jun-21	Rockland Distribution	Preliminary meetings/discussions for the Edwards street water main replacement project	
3-May-21	Lalonde Street	Repair service connection	
20-May-21	Catherine Street	Live tap, new 2" service connection	
26-May-21	Clarence-Rockland distribution	STP were hired to install two new fire hydrants to facilitate maintenance, one at the end of Ouelette street in St-Pascal and one at the end of Grand-Tronc street in Cheney	
23-Jun-21	1322 Lacroix Street (Hammond Distribution)	New water service connection, municipality did fusion connection.	
Jun-Aug-21	Distribution	New water main EQ Home Robert Excavation	
Jul-Sep-21	Clarence-Rockland Distribution	Distribution dead end flushing completed in all villages and Rockland	
5-Jul-21	Rockland Distribution	STP installed temporary water main on Edwards street north of Albert to permit replacement of old water main, PBWA posted till water main work	

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		completed on October 15 th when all the residents were connected to new main.
13-Jul-21	Rockland Distribution	Chlorination of new main at Clarence-Crossing subdivision, flushed and sampled on the 14 th and 15 th and final connection on the 20 th
15-Jul-21	Rockland Distribution	Hydrant repaired at the corner of Edwards/Albert
27-Jul-21	Rockland Distribution	Chlorination of new water main Phase 5 Morris village
29-Jul-21	322 Charron Street	Water main break near 322 Charron street, Laurent Leblanc const. called to repair
4-Aug-21	Masters st	Live tap by STP
August 2021	Clarence-Creek Distribution	Flow tests with Forbes near Roger-Séguin Centre
Aug-21	Distribution	New water main Morris village Phase 5 FG
Aug-21?	Edwards-Albert	New water main (and sani)
24-Aug-21	Rockland Distribution	Chlorination of new water main on Edwards street, sampling/testing with final connection on the 29 th
30-Aug-21	Ave. du Parc	Major 12" water main failure on avenue DuParc, reported to MECP, MOH. Laurent Leblanc construction called in to repair pipe and road.
Aug-Oct-21	Laurier St	Live tap Landrock
8-Sep-21	Laurier St	Chlorination/connection of new water main near Landrock off Laurier street

Appendix A

WTRS Data and Submission Confirmation

Appendix A

WTRS Data and Submission Confirmation

2,4,6-Trichlorophenol (ug/L) - TW1	2021/07/28	<mdl 0.2<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
2-methyl-4-chlorophenoxyacetic acid	2021/07/28	<mdl 10.0<="" td=""><td>100.0</td><td>No</td><td>No</td></mdl>	100.0	No	No
(MCPA) (ug/L) - TW1					
Trifluralin (ug/L) - TW1	2021/07/28	<mdl 0.5<="" td=""><td>45.0</td><td>No</td><td>No</td></mdl>	45.0	No	No
Vinyl Chloride (ug/L) - TW1	2021/07/28	<mdl 0.2<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual	2021/01/01	49.75	100.0	No	No
Average - DW					
HAA Total (ug/L) Annual Average -	2021/01/01	32.45	80.0*	No	No
DW					

MAC = Maximum Allowable Concentration as per O.Reg 169/03

BDL = Below the laboratory detection level

Additional Legislated Samples

Summary of additional testing and sampling carried out in accordance with the requirement of an approval or order.

Date of order or Municipal Drinking Water Licence	Parameter	Date Sampled	Result	Unit of Measure
Municipal Drinking Water Licence #175-101	Suspended Solids	Jan 4, 2021	6	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Feb 1, 2021	17	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Mar 1, 2021	6	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Apr 8, 2021	7	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	May 25, 2021	8	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Jun 28, 2021	6	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Jul 26, 2021	6	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Aug 16, 2021	3	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Sep 29, 2021	4	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Oct 25, 2021	3	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Nov 29, 2021	5	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Dec 20, 2021	10	mg/L

Major Maintenance Summary

Water Treatment Plant Maintenance

Date	Details
2021	Capital Controls was onsite at the WTP numerous times throughout the 2021 reporting year to perform various repairs, modifications, and upgrades to the PLC and SCADA system.
Jan/Feb -21	Replaced two treated water turbidity analyzers because supplier advised us that parts for the current units would not be available in the near future. Considered a compliance risk.
10-Mar-21	Replaced defective spectrophotometer in lab at plant due to lack of replacement parts (discontinued)
12-Mar-21	Acu-Tec in to do the annual lifting/safety device inspections
5-May-21	Annual backflow preventer inspection

27-May-21	Replaced 16" flow meter for backwash supply pumps. Meter failed and required to process operation and filter backwashes		
03-Jun-21	Annual inspection and service of chemical feed pumps by Chloratech.		
15-Jun-21	TV 22 on site with Julien Lenhart at WTP to produce short report on water consumption and restrictions		
	Annual monitoring equipment inspection/calibrations by HACH.		
23-Jun-21	Valve actuator for backwash water supply line failed and was replaced		
Jun/Aug-21	Remove and replace pump in the Backwash water wet well		
13-Aug-21	Change battery of generator at Booster station		
09-Nov-21	Annual UV system maintenance by H2Flow.		
24-Nov-21	Annual cleaning and inspection of low lift wet well, grease pump		
14-Dec-21	Annual maintenance and inspection on Actiflo #1, fix polymer line and inspect mixer blades		
03-Dec-21	Annual fire extinguisher inspections by Fire Alert.		

Distribution System Maintenance

Date	Location Reference	Details	
20-Jan-21	St-Joseph St	Broken hydrant by plow at water tower on St-Joseph street. Repaired by Hydra-Spec on March 8 th	
26-Mar-21	Clarence-Creek and Cheney distribution	Cathodic protection maintenance done on both towers	
29-Mar-21	Rockland and Cheney distribution	MISCO completed safety upgrades to ladders identified in 2019 report and budgeted for 2021.	
Apr-May-21	Clarence-Rockland distribution	Distribution dead end flushing completed in all villages and Rockland	
22-Apr-22	Cheney, St Pascal	New Hydrants - Cheney, St-pascal	
May-Jun-21	Rockland Distribution	Preliminary meetings/discussions for the Edwards street water main replacement project	
3-May-21	Lalonde Street	Repair service connection	
20-May-21	Catherine Street	Live tap, new 2" service connection	
26-May-21	Clarence-Rockland distribution	STP were hired to install two new fire hydrants to facilitate maintenance, one at the end of Ouelette street in St-Pascal and one at the end of Grand-Tronc street in Cheney	
23-Jun-21	1322 Lacroix Street (Hammond Distribution)	New water service connection, municipality did fusion connection.	
Jun-Aug-21	Distribution	New water main EQ Home Robert Excavation	
Jul-Sep-21	Clarence-Rockland Distribution	Distribution dead end flushing completed in all villages and Rockland	
5-Jul-21	Rockland Distribution	STP installed temporary water main on Edwards street north of Albert to permit replacement of old water main, PBWA posted till water main work	

	completed on October 15 th when all the residents were connected to new
	main.
Rockland	Chlorination of new main at Clarence-Crossing subdivision, flushed and
Distribution	sampled on the 14 th and 15 th and final connection on the 20 th
Rockland	The description of the second of Educards (Albert
Distribution	Hydrant repaired at the corner of Edwards/Albert
Rockland	
Distribution	Chlorination of new water main Phase 5 Morris village
	Water main break near 322 Charron street, Laurent Leblanc const. called to
322 Charron Street	repair
	Геран
Masters st	Live tap by STP
Clarence-Creek	Flow tests with Forbes near Roger-Séguin Centre
Distribution	
Distribution	New water main Morris village Phase 5 FG
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Edwards-Albert	New water main (and sani)
Rockland	Chlorination of new water main on Edwards street, sampling/testing with final
Distribution	connection on the 29 th
	Major 12" water main failure on avenue DuParc, reported to MECP, MOH.
Ave. du Parc	Laurent Leblanc construction called in to repair pipe and road.
Laurier St	Live tap Landrock
Laurier St	Chlorination/connection of new water main near Landrock off Laurier street
	Rockland Distribution Rockland Distribution 322 Charron Street Masters st Clarence-Creek Distribution Distribution Edwards-Albert Rockland Distribution Ave. du Parc Laurier St

Appendix A

WTRS Data and Submission Confirmation



Location: WTRS / WT DATA / Input WT Record

WTRS-WT-008

Water Taking Data submitted successfully.

Confirmation:

Thank you for submitting your water taking data online.

Permit Number: 3168-B2JK5N

Permit Holder: THE CORPORATION OF THE CITY OF CLARENCE-ROCKLAND.

Received on: Feb 7, 2022 12:10 PM

This confirmation indicates that your data has been received by the Ministry, but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

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