# **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 1<sup>st</sup> – December 31<sup>st</sup> 2020

Issued: January 22<sup>nd</sup>, 2021

Revision: 0

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	1
Ministry of Labour Inspections	0
QEMS External Audit	1
AWQIs	0
Precautionary BWA	0
Non-Compliance	5
Community Complaints	4
Watermain Breaks & Service Repairs	3

# **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 30<sup>th</sup> 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<sup>®</sup> 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<sup>®</sup> 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.

Treatment Chemicals used during the reporting year:

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**

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.					eriod.

## Non-Compliance

Legislation	requirement(s) system failed to meet	Details	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
DWWP	The owner/operating authority was not in compliance with the requirement to prepare Form 1 documents as required in Schedule B, sections 3.1 & 3.2 of the DWWP.	N/A	OCWA met with the Owner to review the DWWP requirements to ensure all Form 1 requirements are met prior to a watermain addition, modification, replacement or extension being placed into service.	Complete
DWWP	Where an activity has occurred that could introduce contamination, all parts of the drinking water system were not disinfected in	August 26, 2019 & September 20, 2019	Training was given to staff to ensure all requirements with respect to Schedule B, Condition 2.3 of the Drinking Water Works Permit will be met moving	Complete

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# Issued: January 22<sup>nd</sup>, 2021

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	accordance with Schedule		forward.	
	B, Condition 2.3 of the			
	Drinking Water Works			
	Permit.			
	Although the Operating			
	Authority collected			
	bacteriological samples			
	indicating that the new			
	watermain and temporary			
	mains put in place during			
	the inspection period were			
	safe with no traces of			
	contamination, proper			
	recordkeeping and			
	documentation is required			
	to fulfill the requirements			
	under SDWA 31(1)(b)			
	Records did not confirm			
	that chlorine residual tests		Training was given to staff	
O.Reg.	were being conducted at	February 25,2019 (DW)	to review regulatory	
170/03	the same time and at the	May 25, 2019 (TW)	requirements related to	Complete
170/05	same location that	Way 25, 2015 (1W)	sampling.	
	microbiological samples		Sumpling.	
	were obtained			
	All UV sensors were not			
	checked and calibrated as			
	required. Schedule E to			
	the MDWL Number 175-			
	101, Issue Number 3 for		Training was given to staff	
	the Rockland DWS		to review regulatory	
	prescribes several		requirements related to	
	requirements for the UV	N1 / A	Schedule E of the MDWL.	Complete
MDWL	disinfection treatment	N/A	Additionally, H2Flow was	Complete
	components including that		onsite to give operations staff hands on training	
	duty sensors shall be checked on at least a		related to required UV	
	monthly basis against a		sensor checks.	
	reference UV sensor or a		Sensor checks.	
	frequency as otherwise			
	recommended by the UV			
	equipment manufacturer.			
	All sampling requirements			
	for lead prescribed by			
	schedule 15.1 of O. Reg.		Training was given to staff	
O.Reg.	170/03 were not met.	July 15 to October 15	to review requirements	Complete
170/03	Two sets of lead/alkalinity	sampling period	related to lead & alkalinity	
	instead of four were		sampling.	
	taken.			
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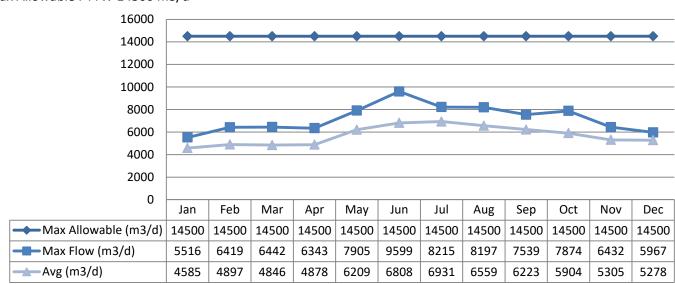
## **Flows**

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 2020 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)

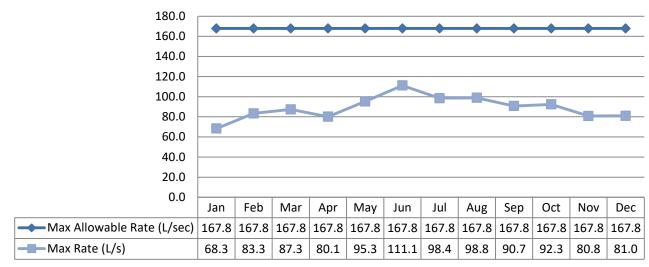


Max Allowable PTTW 14500 m3/d

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#### Monthly Rated Flows (L/s)

Max allowable rate - PTTW 167.8 L/sec

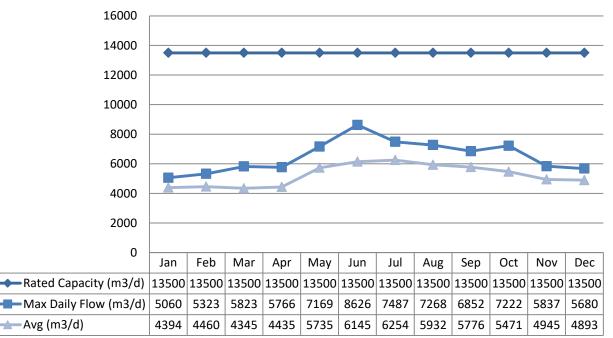


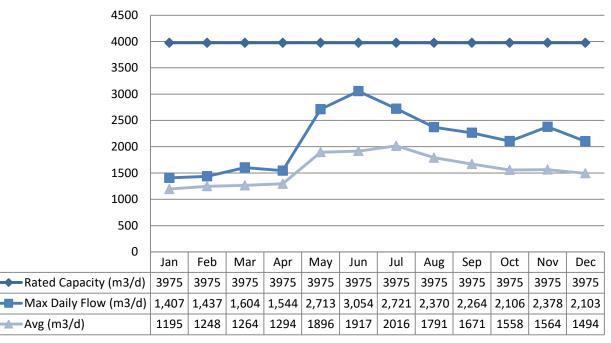
### **Treated Water Flows**

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

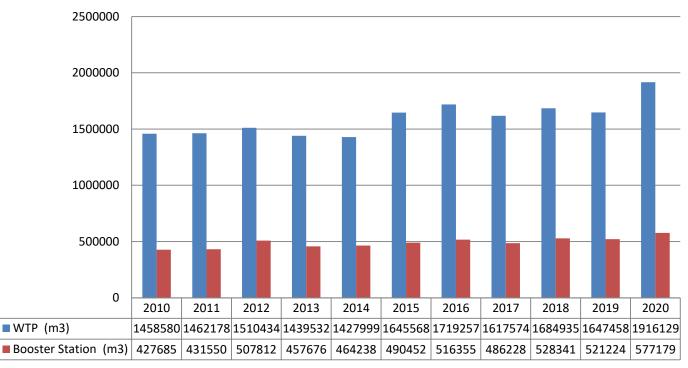




#### Rated Capacity – MDWL Booster Pumping Station 3,975 m3/day

## Annual Total Flow Comparison

Total Annual m<sup>3</sup>



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	126	0	126		
Treated Water	52	0	0	0	0	<2	<2
Distribution Water	388	0	0	0	0	<2	12

## **Operational Testing**

	No. of	Range o	f Results
	Samples Collected	Minimum	Maximum
Turbidity, In-House (NTU) - RW	8760	2.5	47
Turbidity, On-Line (NTU) - TW	8760	0.08	0.60
Turbidity, On-Line (NTU) – Filter #1	8760	0.06	0.96
Turbidity, On-Line (NTU) – Filter #2	8760	0.05	0.60
Free Chlorine Residual, On-Line (mg/L) - TW	8760	0.60	3.10
Combined Chlorine Secondary Disinfection, On-Line (mg/L) – TW	8760	0.59	2.94
Combined Chlorine Residual, On-Line (mg/L) – DW	8760	0.76	2.80

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**

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	МАС	No. of Exc	eedances
	(yyyy/mm/dd)	Sample Result	IVIAC	MAC	1/2 MAC
Treated Water					
Antimony: Sb (ug/L) - TW	2020/07/15	<mdl 0.1<="" td=""><td>6.0</td><td>No</td><td>No</td></mdl>	6.0	No	No
Arsenic: As (ug/L) - TW	2020/07/15	0.3	10.0	No	No
Barium: Ba (ug/L) - TW	2020/07/15	12.0	1000.0	No	No
Boron: B (ug/L) - TW	2020/07/15	<mdl 5.0<="" td=""><td>5000</td><td>No</td><td>No</td></mdl>	5000	No	No
Cadmium: Cd (ug/L) - TW	2020/07/15	<mdl 0.02<="" td=""><td>5.0</td><td>No</td><td>No</td></mdl>	5.0	No	No
Chromium: Cr (ug/L) - TW	2020/07/15	<mdl 2.0<="" td=""><td>50.0</td><td>No</td><td>No</td></mdl>	50.0	No	No
Mercury: Hg (ug/L) - TW	2020/07/15	<mdl 0.02<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Selenium: Se (ug/L) - TW	2020/07/15	<mdl 1.0<="" td=""><td>50.0</td><td>No</td><td>No</td></mdl>	50.0	No	No
Uranium: U (ug/L) - TW	2020/07/15	<mdl 0.05<="" td=""><td>20.0</td><td>No</td><td>No</td></mdl>	20.0	No	No

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	Sample Date	Comple Desult	MAC	No. of Exceedances	
	(yyyy/mm/dd)	Sample Result	MAC	MAC	1/2 MAC
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	2020/02/04	<mdl 0.1<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Nitrite (mg/L) - TW	2020/04/24	<mdl 0.1<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Nitrite (mg/L) - TW	2020/07/15	<mdl 0.1<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Nitrite (mg/L) - TW	2020/10/06	<mdl 0.1<="" td=""><td>1.0</td><td>No</td><td>No</td></mdl>	1.0	No	No
Nitrate (mg/L) - TW	2020/02/04	0.2	10.0	No	No
Nitrate (mg/L) - TW	2020/04/24	0.2	10.0	No	No
Nitrate (mg/L) - TW	2020/07/15	0.2	10.0	No	No
Nitrate (mg/L) - TW	2020/10/06	0.2	10.0	No	No
Sodium: Na (mg/L) - TW	2019/04/12	25.4	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 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 o	f Results	MAC	Number of	
Distribution system	Points	Number of Sumples	Minimum	Maximum	(ug/L)	Exceedances	
Alkalinity (mg/L)	8	8	22	30	N/A	N/A	
рН	8	8	6.8	7.1	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	Sample	MAC	Number of Exceedances	
	(yyyy/mm/dd)	Result		MAC	1/2 MAC
Treated Water					
Alachlor (ug/L) - TW	2020/07/15	BDL	5.00	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2020/07/15	BDL	5.00	No	No
Azinphos-methyl (ug/L) - TW	2020/07/15	BDL	20.00	No	No
Benzene (ug/L) - TW	2020/07/15	BDL	1.00	No	No
Benzo(a)pyrene (ug/L) - TW	2020/07/15	BDL	0.01	No	No
Bromoxynil (ug/L) - TW	2020/07/15	BDL	5.00	No	No
Carbaryl (ug/L) - TW	2020/07/15	BDL	90.00	No	No
Carbofuran (ug/L) - TW	2020/07/15	BDL	90.00	No	No
Carbon Tetrachloride (ug/L) - TW	2020/07/15	BDL	2.00	No	No
Chlorpyrifos (ug/L) - TW	2020/07/15	BDL	90.00	No	No
Diazinon (ug/L) - TW	2020/07/15	BDL	20.00	No	No

Sample Date (yyyy/mm/dd)	Sample Result	MAC

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	Sample Date	Sample	MAC		nber of edances
	(yyyy/mm/dd)	Result		MAC	1/2 MAC
Dicamba (ug/L) - TW	2020/07/15	BDL	120.00	No	No
1,2-Dichlorobenzene (ug/L) - TW	2020/07/15	BDL	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW	2020/07/15	BDL	5.00	No	No
1,2-Dichloroethane (ug/L) - TW	2020/07/15	BDL	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW	2020/07/15	BDL	14.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2020/07/15	BDL	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW	2020/07/15	BDL	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2020/07/15	BDL	100.00	No	No
Diclofop-methyl (ug/L) - TW	2020/07/15	BDL	9.00	No	No
Dimethoate (ug/L) - TW	2020/07/15	BDL	20.00	No	No
Diquat (ug/L) - TW	2020/07/15	BDL	70.00	No	No
Diuron (ug/L) - TW	2020/07/15	BDL	150.00	No	No
Glyphosate (ug/L) - TW	2020/07/15	BDL	280.00	No	No
Malathion (ug/L) - TW	2020/07/15	BDL	190.00	No	No
2-Methyl-4chlorophenoxyacetic Acid (MCPA) ug/L) - TW	2020/07/15	BDL	100	No	No
Metolachlor (ug/L) - TW	2020/07/15	BDL	50.00	No	No
Metribuzin (ug/L) - TW	2020/07/15	BDL	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2020/07/15	BDL	80.00	No	No
Paraquat (ug/L) - TW	2020/07/15	BDL	10.00	No	No
PCB (ug/L) - TW	2020/07/15	BDL	3.00	No	No
Pentachlorophenol (ug/L) - TW	2020/07/15	BDL	60.00	No	No
Phorate (ug/L) - TW	2020/07/15	BDL	2.00	No	No
Picloram (ug/L) - TW	2020/07/15	BDL	190.00	No	No
Prometryne (ug/L) - TW	2020/07/15	BDL	1.00	No	No
Simazine (ug/L) - TW	2020/07/15	BDL	10.00	No	No
Terbufos (ug/L) - TW	2020/07/15	BDL	1.00	No	No
Tetrachloroethylene (ug/L) - TW	2020/07/15	BDL	10.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2020/07/15	BDL	100.00	No	No
Triallate (ug/L) - TW	2020/07/15	BDL	230.00	No	No
Trichloroethylene (ug/L) - TW	2020/07/15	BDL	5.00	No	No
2,4,6-Trichlorophenol (ug/L) – TW	2020/07/15	BDL	5.00	No	No
Trifluralin (ug/L) – TW	2020/07/15	BDL	45.00	No	No
Vinyl Chloride (ug/L) – TW	2020/07/15	BDL	1.00	No	No
Distribution Water					
Trihalomethane: Total (ug/L) Annual Average - DW	2020/10/05	44.25	100	No	Yes
HAA Total (ug/L) Annual Average – DW	2020/10/05	39.325	80	No	No

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 7,2020	7	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Feb 3, 2020	9	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Mar 2, 2020	5	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Apr 14, 2020	5	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	May 19, 2020	12	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Jun 8, 2020	5	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Jul 13, 2020	6	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Aug 10, 2020	8	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Sep 8, 2020	23	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Oct 5, 2020	5	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Nov 2, 2020	5	mg/L
Municipal Drinking Water Licence #175-101	Suspended Solids	Dec 7, 2020	4	mg/L

# **Major Maintenance Summary**

## Water Treatment Plant Maintenance

Date	Details
2020	Capital Control was onsite at the WTP numerous times throughout the 2020 reporting year to perform various repairs, modifications, and upgrades to the PLC and SCADA system.
23-May-20	Annual backflow preventer inspection.
17-Jun-20	Annual monitoring equipment inspection/calibrations by HACH.
30-Jun-20	Receive two new 20" replacement valves for filters.
28-Aug-20	Clean backwash tanks.
02-Sep-20	Replace backwash waste pump.
10-Sep-20	Receive new UV transmittance unit.
22-Oct-20	Annual UV system maintenance by H2Flow.
26-Oct-20	Clean and inspect sodium hypochlorite storage tank.
06-Nov-20	Annual inspection and service of chemical feed pumps by Chloratech.
03-Dec-20	Annual fire extinguisher inspections by Fire Alert.

# **Distribution System Maintenance**

Date	Location Reference	Details
06-Jan-20	233 Edwards St. (Rockland)	Out of service water line froze, split, and started leaking. Service line was temporarily repaired, but will need to be properly decommissioned.
16-Jan-20	Rockland WDS	Hydra Spec onsite to repair hydrants R-144,R-222, R-266 and R-314
21-Feb-20	Cercle Henrie (Rockland)	Repair 6" cast iron watermain with Beaver Construction. Replacing the watermain with PVC should be considered in the future.
13-Mar-20	Co-op Rochelondaise	Hydra Spec onsite to perform hydrant repairs.
29-Apr-20	213 Onyx (Rockland)	Repair hydrant damaged by Centennial Construction in February.
12-May-20	Wallace St. (Rockland)	Start of watermain replacement.
12-May-20	Caron St. (Rockland)	Watermain connection to new housing project.
Jun-20	WDS	Dead end hydrant flushing throughout entire distribution system.
22-Jun-20	3093 Bouvier St. (Clarence-Creek)	Installation of new service connection.
26-Jun-20	2008 Landry St. (Clarence-Creek)	Water service inspection.
30-Jun-20	Cheney Water Tower	Evoqua onsite to perform maintenance/repairs on chlorine analyzer.
09-Jul-20	837 lacroix (Hammond)	Installation of new service connection.
Aug-20	WDS	ZT Restorations onsite to paint fire hydrants within all water distribution systems. (They will return in 2021 to complete remaining hydrants in new subdivisions.)
21-Aug-20 to 25-Sept-20	Cheney	6840 m <sup>3</sup> of water hauled by the Nation Municipality to help supplement the Limoges DWS.
17-Aug-20	Caron St.	Watermain chlorination and sampling of new subdivision connected off Caron St.
Sep/Oct-20	WDS	Flushing and winterization of all distribution system fire hydrants.
29-Sep-20	Turquoise/Quartz	New watermain chlorination and sampling with Landrock.
30-Oct-20	2370 Laurier St. (Rockland)	Repaired water service connection and watermain leak with Beaver Construction.
30-Oct-20	Bouvier Tower (Clarence-Creek)	Repair driveway entrance.
09-Nov-20	WDS	Hydra Spec onsite to perform repairs on various fire hydrants.
12-Nov-20	1131 Diane St. (Rockland)	Repair stand post with Hydrocam.
30-Nov-20	Home Hardware (Bourget)	Chlorinate and sample new water service.
02-Dec-20	WDS	Hydra Spec onsite to complete fire hydrant repairs.

# **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:Jan 21, 2021 1:49 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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	ROCKLAND DRINKING WATER SYSTEM / Raw Water											
	Yearly Summary (Flow) 2020											
	Annual Value	es and Summ	ary				Units:	cubic meter p	er day	Report extra	cted 01/12/20	21 13:45
Sta	tion:							Daily	Max:	9598.9 on Ju	ne 17	
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	4247.60	5152.00	5281.20	4276.90	4804.80	5868.80	5464.60	6499.00	7162.20	5644.10	5007.60	5318.80
2	4345.30	5152.40	5179.60	5150.00	6014.30	4856.50	7359.30	6485.90	5732.50	5892.10	6432.20	5966.60
3	4583.10	5019.10	4718.80	4704.60	5145.20	5387.90	7489.40	4585.70	6684.90	5480.90	4757.10	4694.70
4	4215.80	4311.70	2605.90	5059.20	5921.00	6061.00	7289.30	7766.90	6649.30	6341.70	5932.60	5192.10
5	4972.50	4477.40	6441.80	4969.40	5008.90	6193.30	7725.50	5899.20	4625.80	5796.60	4664.70	5162.00
6	5101.70	4622.00	5128.10	4996.90	5335.90	6215.80	8042.70	6851.90	6017.10	5160.20	4900.10	5219.00
7	4817.00	4339.40	4907.40	4703.20	4254.80	6054.50	8037.90	6301.40	5432.10	6251.60	6157.40	5555.20
8	4385.80	4857.30	5211.10	4721.40	6339.40	6621.90	6787.80	7406.40	7512.90	5521.90	5142.80	5052.80
9	4108.70	4121.00	4557.70	4712.90	5546.00	6099.00	7725.80	7294.20	7539.30	6061.90	5266.60	5004.70
10	4604.80	5141.40	5079.20	4516.10	5305.80	6106.10	8078.60	5925.40	5511.00	5962.60	6002.80	5542.20
11	5039.30	4493.60	4561.30	5003.10	5499.00	6519.50	6198.20	6829.40	6323.80	5335.70	4826.90	4951.70
12	4314.20	4447.00	4761.80	4681.10	5041.10	6394.40	6270.50	7217.10	6161.70	6343.90	5313.90	5351.30
13	5061.30	4222.00	4769.90	4782.00	5513.70	6490.60	6087.20	7902.20	5790.30	6049.90	5343.20	5706.40
14	4373.70	4680.10	5008.70	4759.20	7904.80	6397.00	7016.40	7019.30	6633.40	6435.00	4697.10	4899.10
15	3955.10	5332.30	4232.30	3944.20	5259.60	8026.00	7002.50	8196.60	5915.70	5415.20	5790.60	5364.60
16	4800.70	4575.70	5382.80	5113.10	5770.50	7217.20	6156.80	6027.60	6284.20	6162.70	6284.40	5403.90
17	4084.20	5317.30	4714.10	4725.10	6424.50	9598.90	6365.50	7506.20	6416.50	4949.80	4807.90	5697.30
18	4871.50	4939.10	4614.70	5256.90	6785.50	8476.10	7285.20	5891.90	6092.20	5674.10	4960.10	4875.10
19	4185.20	6419.00	4741.30	4897.20	6692.20	9096.70	6818.00	6311.30	5968.10	7874.20	4930.80	5352.90
20	5265.40	4969.30	4488.80	4992.70	6944.70	9296.20	5991.20	6949.90	6121.40	5770.60	5795.50	5458.50
21	3278.50	5583.30	5061.30	4753.60	7287.90	8434.20	7283.40	6962.80	6664.30	5810.60	5102.40	5349.70
22	5516.00	4962.90	5206.20	4943.50	7510.90	8288.70	4970.70	6019.20	6202.90	6056.50	5355.10	5455.50
23	4991.30	4684.90	4621.90	4473.00	7646.90	7383.20	7880.80	6656.60	6519.10	6103.60	4988.00	5718.40
24	4262.20	5369.20	4772.20	4811.70	7622.50	5762.50	5806.20	6287.70	6620.60	6013.50	5563.10	5043.00
25	5017.10	5366.20	4853.80	4864.80	7126.90	5955.00	8214.70	6077.10	5923.60	5406.90	4130.40	5001.00
26	4896.60	4768.10	4845.80	6342.60	7195.90	6717.10	7073.10	6486.80	5957.40	6210.50	5695.60	5371.90
27	4056.20	4366.00	4891.60	5133.20	7330.90	6095.90	6136.20	5709.70	6798.00	6137.40	5421.60	5470.20
28	4840.40	4935.20	4986.90	5038.60	7867.00	6385.50	7851.50	5994.00	6084.80	6760.80	5161.40	5429.20
29	4700.00	5390.20	5031.90	5218.30	6205.40	6151.70	7149.90	5693.00	5687.60	5466.60	6187.00	5158.60
30	4636.70		4267.00	4810.40	5820.50	6091.20	5751.10	6150.90	5643.80	5695.80	4519.70	4831.90
31	4600.00		5313.60		5357.70		7537.40	6430.10		5240.30		5026.10
Min	3278.50	4121.00	2605.90	3944.20	4254.80	4856.50	4970.70	4585.70	4625.80	4949.80	4130.40	4694.70
Mean	4584.77	4897.07	4846.41	4878.50	6209.17	6808.08	6930.56	6559.21	6222.55	5904.10	5304.62	5278.21
Max	5516.00	6419.00	6441.80	6342.60	7904.80	9598.90	8214.70	8196.60	7539.30	7874.20	6432.20	5966.60