



Corporation of the Town of Renfrew

NOTICE

Ontario Regulation 170/03 requires that the 2015 Summary Report and the Annual Report for the Town of Renfrew Drinking Water System be made available to the public. This report is now available for viewing, free of charge, during normal business hours 8:00a.m. – 4:00 p.m. at the address below. A copy of the report is also available for viewing on the internet at the following address:

http://town.renfrew.on.ca/treated_water.php

Development & Works Department – 2nd Floor
Town of Renfrew Municipal Office
127 Raglan St. S.
Renfrew, Ontario

OCWA
Annual Report



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

88 Anderson Lane, PO Box 656
Bancroft, Ontario K0L 1C0
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Mike Asselin
127 Raglan Street South
Renfrew, Ontario
K7V 1P8

February 23, 2016

RE: 2015 Annual Reports required by Ontario Regulations

Attached please find the 2015 Annual Water Report. This report is prepared to satisfy the requirements of:

- O. Reg 170/03 Section 11
- O. Reg 170/03 Schedule 22 Reports

Any orders that you have received directly from the Ministry of the Environment (MOE) should be reviewed and included with the discussion of the annual report. Where non-compliance with the Order is evident and it is not included in the attached Report, then we recommend that this information be added.

After your review and inclusion of any additional information, this Report is to be provided to the members of the municipal council. It is also important to record and keep on record that this document was reviewed in council (resolution of council).

Section 12 of O. Reg. 170/03, requires that these reports be made available for inspection by any member of the public during normal business hours, without charge. The reports are to be made available for inspection at the office of the municipality.

If you have any concerns or would like a hard copy of this report please let me know.

Sincerely,

A handwritten signature in black ink, appearing to read 'Robert LeBlanc'.

Robert LeBlanc
Operations Manager
Ontario Clean Water Agency

cc: Andrew Trader, Regional Manager, OCWA
Vanessa Greatrix, Process & Compliance Technician, OCWA
Copy to File



**Drinking-Water Systems Regulation O. Reg.170/03
Section 11 Annual Report**

System Information

Drinking-Water System Name:	Renfrew Drinking Water System
Drinking-Water System Number:	210001102
Drinking-Water System Owner:	Town of Renfrew
Operating Authority:	Ontario Clean Water Agency
Drinking-Water System Category:	Large, municipal, residential
Period being reported:	January 01 – December 31, 2015

Summary Report (170/03 Schedule 22) will be available for inspection at:

Town of Renfrew
Municipal Office
127 Raglan Street South
Renfrew, Ontario.
K7V 4G7

List all Drinking Water Systems which receive all of their drinking water from your system:

Name	Drinking Water System Number
No other system receives water from the Renfrew Drinking Water System.	

Provide a brief description of the system:

The Renfrew Drinking Water System, water treatment consists of a surface water treatment plant that has been upgraded to an Actiflo® treatment system. Actiflo® is a system where sand is used to assist the sedimentation process. Three dual media filters filter the water before chlorine is applied for disinfection. Lime is added for pH adjustment and fluoridation is practiced.

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

YES NO

If yes, is your annual report available to the public at no charge on a web site on the internet?

YES NO

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

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper**
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method: _____

Water Treatment Chemicals were used during the reporting year:

Chemical Name	Use	Supplier
Chlorine gas	Disinfection	Brenntag
PASS 8	Primary Coagulation	Kemira
Fluoride: Hydrofluosilicic Acid	Fluoridation helps to prevent tooth decay	Brenntag
Polymer: LT27AG	Coagulant aid.	BASF
Lime	pH adjustment	Solvay

Summary of any reports made to the Ministry under subsection 18 (1) of the Act or section 16-4 of Schedule 16 and reported to Spills Action Centre:

Incident Date	AWQI #	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
01/13/2015	122330	THM-running avg.	103	ug/L	Resample and test	01/22/2015
04/21/2015	123371	THM-running avg.	106	ug/L	Resample and test	04/30/2015

Sample Results Summary

Operational Testing (170/03, Sch.7, Sch.8 or Sch.9):

Parameter	Number of Samples Collected	Range of Results (min #)-(max #)	Annual Average
Turbidity: Filter 1 (NTU)	8760	0.02 – 0.799	0.095
Turbidity: Filter 2 (NTU)	8760	0.01 – 0.937	0.103
Turbidity: Filter 3 (NTU)	8760	0.01 – 0.955	0.101
Chlorine: Treated Water (free chlorine residual: mg/L)	8760	0.74 – 2.77	1.76
Chlorine: Distribution (free chlorine residual: mg/L)	8760	0.35 - 2.2	1.29
	365	0.35 – 1.50	0.86

NOTE: 8760 denotes results from continuous monitors
 ND: not detectable
 NTU: Nephelometric Turbidity Units

Parameter	Month	Month Average	Unit of Measure	Annual Average
Fluoride As monitored by continuous on-line analyzer	January	0.581	mg/L	0.548 mg/L
	February	0.573	mg/L	
	March	0.571	mg/L	
	April	0.575	mg/L	
	May	0.525	mg/L	
	June	0.549	mg/L	
	July	0.554	mg/L	
	August	0.510	mg/L	
	September	0.522	mg/L	
	October	0.565	mg/L	
	November	0.514	mg/L	
	December	0.537	mg/L	

Treated Water Parameter	Result Value Range (min – max)	Average	Unit of Measure
Aluminum: Dissolved	0.004 – 0.056	0.022	mg/L
Alkalinity	52 – 104	69.5	mg/L
Colour	< 2.0 – < 9.0	< 3.5	TCU
Conductivity	193 - 323	242.3	uS/cm
pH	7.35 – 7.75	7.62	Not applicable
Total Dissolved Solids	120 – 213	152.5	mg/L
Total Hardness	84 - 140	105.5	mg/L
Dissolved Organic Carbon (DOC)	2.8 – 18.8	6.70	mg/L
Iron	< 0.005 – < 0.06	< 0.024	mg/L
Manganese	< 0.008 – < 0.131	< 0.024	mg/L

Summary of additional samples:

Date of legal instrument issued	Parameter	Annual Avg.	Unit of Measure	Compliance Limit
MDWL (Municipal Drinking Water License)	Suspended Solids Backwash Effluent Residuals.	10.83	mg/L	25 mg/L
MDWL (Municipal Drinking Water License)	Suspended Solids Actiflo Residuals	16.33	mg/L	25 mg/L

Microbiological testing done during this reporting Period

Location	Number of Samples	E. Coli (min #) - (max #)	Total Coliform (min #) - (max #)	Number Of HPC Samples	HPC (min #) - (max #)
Raw - RW	52	0 - 498	9 - 1960		
Treated - TW	52	0 - 0	0 - 0	52	0 - 12
Distribution - DW	208	0 - 0	0 - 0	104	0 - 30

E-Coli & Total Coliform results are reported in cfu/100 mL
HPC (Heterotrophic Plate Count) results are reported in cfu/1 mL
cfu = colony forming unit

Summary of Schedule 23 & 24 sample results:

Parameter	Sample Date	Sample Result	Exceedance
Antimony: Sb (ug/L) - TW	20/01/2015	<MDL 0.5	No
Arsenic: As (ug/L) - TW	20/01/2015	<MDL 1.0	No
Barium: Ba (ug/L) - TW	20/01/2015	30	No
Boron: B (ug/L) - TW	20/01/2015	<MDL 10.0	No
Cadmium: Cd (ug/L) - TW	20/01/2015	<MDL 0.1	No
Chromium: Cr (ug/L) - TW	20/01/2015	<MDL 1.0	No
Mercury: Hg (ug/L) - TW	20/01/2015	<MDL 0.1	No
Selenium: Se (ug/L) - TW	20/01/2015	<MDL 1.0	No
Sodium: Na (mg/L) - TW	18/01/2011	4.00	No
Uranium: U (ug/L) - TW	20/01/2015	<MDL 1.0	No
Fluoride Residual: Mean (mg/L) - TW	2015	0.548	No
Nitrite (mg/L) - TW	19/01/2015	<MDL 0.1	No
Nitrite (mg/L) - TW	28/04/2015	<MDL 0.1	No
Nitrite (mg/L) - TW	14/07/2015	<MDL 0.1	No
Nitrite (mg/L) - TW	13/10/2015	<MDL 0.1	No
Nitrate (mg/L) - TW	19/01/2015	0.12	No
Nitrate (mg/L) - TW	28/04/2015	<MDL 0.1	No
Nitrate (mg/L) - TW	14/07/2015	<MDL 0.1	No
Nitrate (mg/L) - TW	13/10/2015	<MDL 0.1	No

Parameter	Sample Date	Result Value	Exceedance
Alachlor (ug/L) - TW	20/01/2015	<MDL 0.5	No
Aldicarb (ug/L) - TW	20/01/2015	<MDL 9.0	No
Aldrin+Dieldrin (ug/L) - TW	20/01/2015	<MDL 0.012	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	20/01/2015	<MDL 0.2	No
Azinphos-methyl (ug/L) - TW	20/01/2015	<MDL 2.0	No
Bendiocarb (ug/L) - TW	20/01/2015	<MDL 2.0	No
Benzene (ug/L) - TW	20/01/2015	<MDL 0.5	No
Benzo(a)pyrene (ug/L) - TW	20/01/2015	<MDL 0.01	No
Bromoxynil (ug/L) - TW	20/01/2015	<MDL 0.5	No

Parameter	Sample Date	Result Value	Exceedance
Carbaryl (ug/L) - TW	20/01/2015	<MDL 5.0	No
Carbofuran (ug/L) - TW	20/01/2015	<MDL 5.0	No
Carbon Tetrachloride (ug/L) - TW	20/01/2015	<MDL 0.2	No
Chlordane: Total (ug/L) - TW	20/01/2015	<MDL 0.018	No
Chlorpyrifos (ug/L) - TW	20/01/2015	<MDL 1.0	No
Cyanazine (ug/L) - TW	20/01/2015	<MDL 1.0	No
Diazinon (ug/L) - TW	20/01/2015	<MDL 1.0	No
Dicamba (ug/L) - TW	20/01/2015	<MDL 1.0	No
1,2-Dichlorobenzene (ug/L) - TW	20/01/2015	<MDL 0.4	No
1,4-Dichlorobenzene (ug/L) - TW	20/01/2015	<MDL 0.4	No
DDT + metabolites (ug/L) - TW	20/01/2015	<MDL 0.024	No
1,2-Dichloroethane (ug/L) - TW	20/01/2015	<MDL 0.2	No
1,1-Dichloroethylene (ug/L) - TW	20/01/2015	<MDL 0.5	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	20/01/2015	<MDL 4.0	No
2,4-Dichlorophenol (ug/L) - TW	20/01/2015	<MDL 0.5	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	20/01/2015	<MDL 1.0	No
Diclofop-methyl (ug/L) - TW	20/01/2015	<MDL 0.9	No
Dimethoate (ug/L) - TW	20/01/2015	<MDL 2.5	No
Dinoseb (ug/L) - TW	20/01/2015	<MDL 1.0	No
Diquat (ug/L) - TW	20/01/2015	<MDL 5.0	No
Diuron (ug/L) - TW	20/01/2015	<MDL 10.0	No
Glyphosate (ug/L) - TW	20/01/2015	<MDL 10.0	No
Heptachlor+hepachlor epoxide (ug/L) - TW	20/01/2015	<MDL 0.012	No
Lindane (ug/L) - TW	20/01/2015	<MDL 0.006	No
Malathion (ug/L) - TW	20/01/2015	<MDL 5.0	No
Methoxychlor (ug/L) - TW	20/01/2015	<MDL 0.006	No
Metolachlor (ug/L) - TW	20/01/2015	<MDL 1.0	No
Metribuzin (ug/L) - TW	20/01/2015	<MDL 5.0	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	20/01/2015	<MDL 0.2	No
Paraquat (ug/L) - TW	20/01/2015	<MDL 1.0	No
Parathion (ug/L) - TW	20/01/2015	<MDL 1.0	No
PCB (ug/L) - TW	20/01/2015	<MDL 0.1	No
Pentachlorophenol (ug/L) - TW	20/01/2015	<MDL 0.5	No
Phorate (ug/L) - TW	20/01/2015	<MDL 1.0	No
Picloram (ug/L) - TW	20/01/2015	<MDL 5.0	No
Prometryne (ug/L) - TW	20/01/2015	<MDL 0.25	No
Simazine (ug/L) - TW	20/01/2015	<MDL 1.0	No
Temephos (ug/L) - TW	20/01/2015	<MDL 10.0	No
Terbufos (ug/L) - TW	20/01/2015	<MDL 1.0	No
Tetrachloroethylene (ug/L) - TW	20/01/2015	<MDL 0.3	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	20/01/2015	<MDL 0.5	No

Parameter	Sample Date	Result Value	Exceedance
Triallate (ug/L) - TW	20/01/2015	<MDL 1.0	No
Trichloroethylene (ug/L) - TW	20/01/2015	<MDL 0.3	No
2,4,6-Trichlorophenol (ug/L) - TW	20/01/2015	<MDL 0.5	No
2,4,5-T (ug/L) - TW	20/01/2015	<MDL 1.0	No
Trifluralin (ug/L) - TW	20/01/2015	<MDL 1.0	No
Vinyl Chloride (ug/L) - TW	20/01/2015	<MDL 0.2	No
THM (ug/L) - DW	2015	97.825	yes

Maintenance Summary

WO#	Completion Date	Comments
3262677		Rotork Actuator (Actiflo Influent Valve). Replace- Rotork
3260046	05/20/2015	Dual Media Gravity Filters - analysis of the filter media. Anthrafilter
3260047		Chlorine Analyzer Treated total and PH. Emergency Repair. Metcon
3276304	03/05/2015	Free & Total Probe - Need spares for backup
3262674	05/20/2015	Chlorination System - PM Kits for Annual Maintenance.
3262676	04/02/2015	Backwash Tanks Sludge Pump. Xylem
3275952	01/26/2015	Scada Program Fixes, Testing & Review Fixes
3295198		Backflow Preventer repair- Pennex
3296541	05/20/2015	Post-Filter Free Chlorine Analyzer-Repair
3313821	03/18/2015	UPS Actiflo HMI Panel-Replace
3334308	04/23/2015	VFD coagulant pump #1 Repair/Replace
3337839	05/20/2015	Fibre Optic Network Malfunction-Repair
3352188	10/22/2015	Filter #2 Digital Flow Display Repair
3392680		Multi Gas Detector Replaced
3429603	12/04/2015	Actiflo #1 Turbidity Sensor Replaced
3457753	12/15/2015	Natural Gas System Plumbing upgraded]

END

Renfrew Drinking Water System

2015 SUMMARY REPORT FOR MUNICIPALITIES

Report

This report is a summary of water quality information for the Renfrew Drinking Water System, published in accordance with Schedule 22 of Ontario's Drinking-Water Systems Regulation for the reporting period of January 1 to December 31, 2015. The Renfrew Drinking Water System is categorized as a Large Municipal Residential Drinking Water System.

This report was prepared by the Ontario Clean Water Agency for the Town of Renfrew.

Who gets a copy of the Report:

- In the case of a drinking-water system owned by a municipality, the members of the municipal council;

What must the Report contain?

The report must,

- list the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence and any orders applicable to the system that were **Not** met at any time during the period covered by the report and specify the duration of the failure; and
- for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.

The following table lists the requirements that the system failed to meet and the measures taken to correct the failure:

The following table lists the requirements that the system failed to meet and the measures taken to correct the failure:

Drinking Water Legislation	List the requirement(s) the system failed to meet	Specify the duration of the failure (i.e. date(s))	Describe the measures taken to correct the failure	Status (complete or outstanding)
O. Reg. 170/03	THM-annual running avg. 100 ug/L	01/13/2015 (103 ug/L)	Resample and Test	Complete
O. Reg. 170/03	THM-annual running avg. 100 ug/L	04/21/2015 (106 ug/L)	Resample and Test	Complete

THM – Trihalomethanes

The following table lists additional items identified during the annual Ministry of Environment inspection report:

Drinking Water Legislation	List the requirement(s) the system failed to meet	Specify the duration of the failure (i.e. date(s))	Describe the measures taken to correct the failure	Status (complete or outstanding)
There were no items of non-compliance identified during the most recent inspection held November 16, 2015				

What else must the Report contain?

The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

1. A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water licence.

The table below is a summary of the flow rates and the rated capacity flow rates approved in the system's municipal drinking water licence:

2015	Month Avg. Day Volume (m3/d)	Month Max. Day Volume (m3/d)	Rated Capacity (m3/d)	Month Max Day Volume (%)
January	3899.77	5002.00	18184	27.5
February	4042.43	4578.00	18184	25.2
March	4289.39	5198.00	18184	28.6
April	4284.63	5394.00	18184	29.7
May	4341.87	5563.00	18184	30.6
June	4576.80	7857.00	18184	43.2
July	4858.58	6399.00	18184	35.2
August	5330.61	7124.00	18184	39.2
September	5080.20	7750.00	18184	42.6
October	4076.10	5790.00	18184	31.8
November	3908.20	5516.00	18184	30.3
December	3493.19	4348.00	18184	23.9

% Rated Capacity	2012	2013	2014	2015
January	42	29	25.1	27.5
February	34	30	34.3	25.2
March	32	27	25.0	28.6
April	29	28	26.0	29.7
May	33	29	26.7	30.6
June	38	32	29.3	43.2
July	37	33	27.9	35.2
August	35	31	28.7	39.2
September	37	28	28.6	42.6
October	36	30	24.4	31.8
November	26	27	25.6	30.3
December	28	28	23.6	23.9

When Does the Report Get Submitted?

If a report is prepared for a system that supplies water to a municipality under the terms of a contract, the owner of the system shall give a copy of the report to the municipality by March 31.