



**REDWOOD WATER TREATMENT
Annual Report 2018**

(as per O. Reg. 170/03 – Section 11)

and

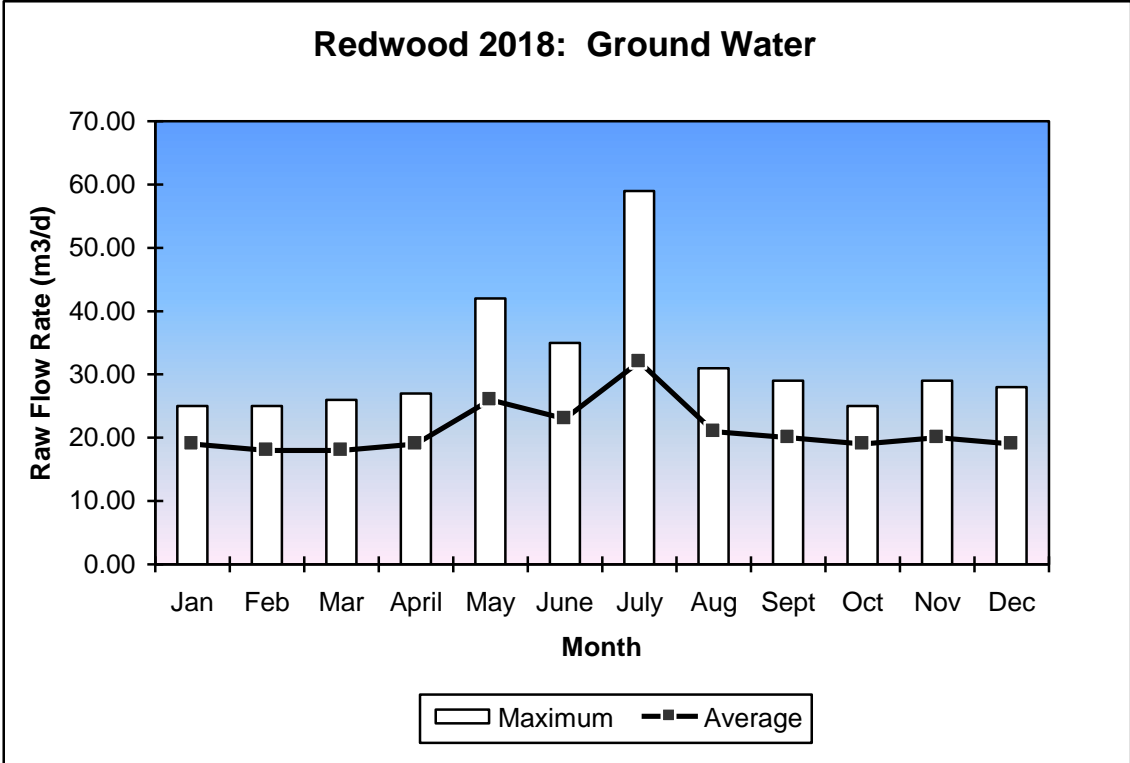
2018 Summary Report for Municipalities

(as per O. Reg. 170/03 – Schedule 22)

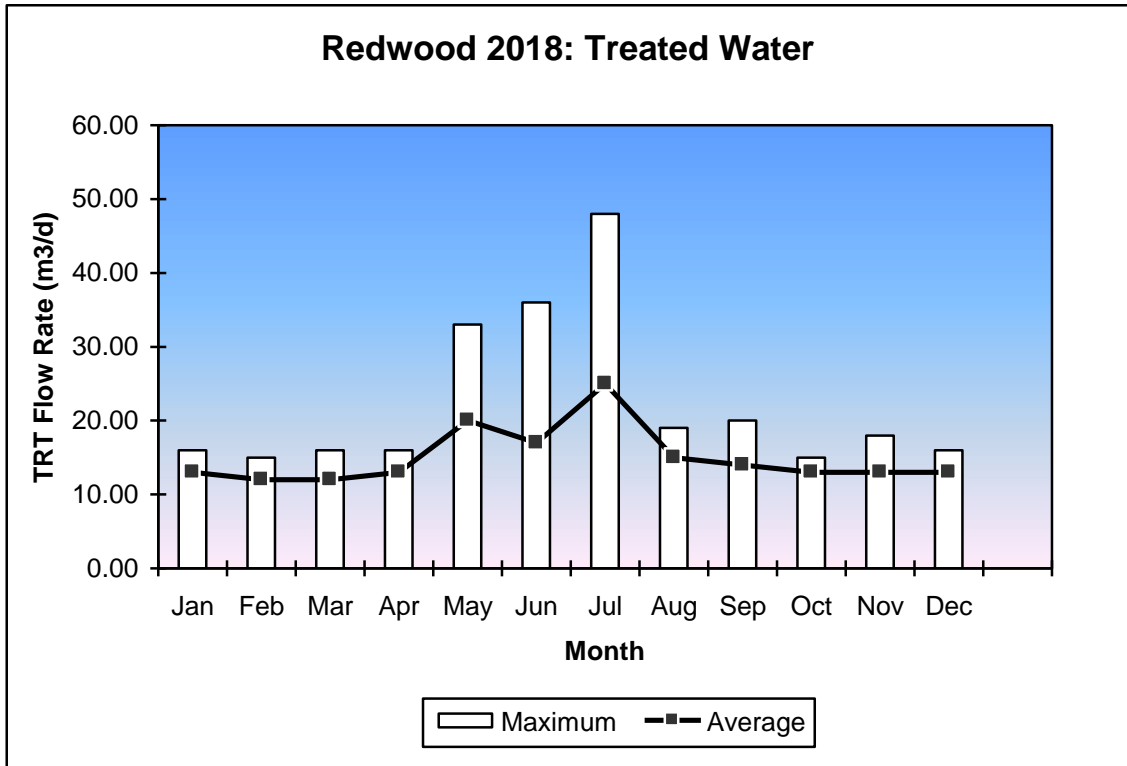
**Prepared by Shawn Killoran
Director of Water/Wastewater Operations**

Date Prepared/Submitted: February 12, 2019

**Comparison of
Daily Average and Maximum Raw Daily Flows for 2018**



**Comparison of
Daily Average and Maximum Treated Daily Flows for 2018**



**The Corporation of the Township of South Glengarry
Redwood Estates Water Treatment Plant
2018 Annual Performance Report**

OVERVIEW

The Township Of South Glengarry, Redwood Estates Water Treatment Facility is located approximately 5 kilometers east of the Village of Lancaster. The water treatment plant is a ground water system serving the Redwood Estates subdivision. The water treatment plant has a rated capacity of 151 cubic meters per day for a design population of 140 people.

The Township Of South Glengarry utilizes the following accredited laboratories to ensure safe and potable water to meet or exceed Ministry standards. Caduceon Laboratory Ottawa.

The Township Of South Glengarry operators are all certified under the Ministry of the Environment regulation 128/04 for utility operators Licensing Program.

The Township Of South Glengarry, Redwood water system uses Sodium Hypochlorite for disinfection.

EQUIPMENT

Raw water is drawn from a single well located within the pump house with a submersible pump capable of delivering 118 liters per minute. The water treatment plant consist of two Manganese greensand pressure filters, two hydro pneumatic tanks, two high lift pumps, one booster and one backwash pump. All pumps have a rated capacity of 303 liters per minute together with all associated piping, electrical equipment, controls and alarm systems all housed in a common building.

PROCESS

Raw water is drawn from the single well where Sodium Hypochlorite is introduced and flash mixed for disinfection. Following the disinfection period water then flows through the Greensand filters removing all other impurities. Water then flows to a 25 cubic meter underground storage reservoir to be pumped to the distribution system.

UPGRADES

N/A

REPORTING

A written report is prepared annually. This report is available for view at the Township Of South Glengarry Municipal office at 6 Oak Street, Lancaster or the Township Of South Glengarry Water/Wastewater Department located at 18352 County Road 2, Glen Walter. A copy of the report is also available on the Townships web site. A copy of the report is also available free of charge to any resident requesting a copy. For more information contact the Township Of South Glengarry Water/Wastewater Department at 613-931-3036 or fax 613-931-3340.

Ontario Drinking Water License# 185-103

The Township of South Glengarry Water Treatment Department operated the Redwood Estates Water Treatment Plant for the year 2018 and met all terms of the Ontario Drinking Water System Regulation 170/03. The Township of South Glengarry commitment policy is to: Provide a safe and reliable supply of drinking water to all of its customers, meet or exceed the requirements of all legislation and regulations applicable to drinking water and maintain and continually improve its quality management system.

A total of 7,944 cubic meters of water had been treated for the year 2018 with a monthly average of 21m³ per day and a maximum flow of 59m³ /day for the year. Maximum flow is equivalent to 39% of the plant capacity.

The Redwood Estates Water Treatment Plant uses Sodium Hypochlorite for disinfection. A total of 57.24 kg of chlorine had been utilized for the year at an average of 7.20mg/liter.

Attached is the data spread sheet, which identifies flows, laboratory results, number of samples taken and chemical use on a monthly basis.

REDWOOD WATER TREATMENT PLANT

INORGANIC PARAMETERS

PARAMETER	SAMPLE DATE	RESULT VALUE	MAC	UNIT OF MEASURE	EXCEEDANCE	%
<i>Antimony</i>	Jan-8-18	0.0001	0.006	mg/L	No	2
<i>Arsenic</i>	Jan-8-18	0.0008	0.025	mg/L	No	3
<i>Barium</i>	Jan-8-18	0.175	1	mg/L	No	18
<i>Boron</i>	Jan-8-18	0.19	5	mg/L	No	4
<i>Cadmium</i>	Jan-8-18	0.00002	0.005	mg/L	No	0
<i>Chromium</i>	Jan-8-18	0.002	0.05	mg/L	No	4
<i>Lead</i>	Year 2014	0.945	10	ug/L	No	9
<i>Mercury</i>	Jan-8-18	0.00002	0.001	mg/L	No	2
<i>Selenium</i>	Jan-8-18	0.001	0.01	mg/L	No	10
<i>Sodium</i>	Jan-26-16	95.1	200	mg/L	No	48
<i>Uranium</i>	Jan-8-18	0.00006	0.02	mg/L	No	0
<i>Fluoride</i>	Jan-26-16	0.2	1.5	mg/L	No	13
<i>Nitrite</i>	Year 2018	0.1	1	mg/L	No	10
<i>Nitrate</i>	Year 2018	0.1	10	mg/L	No	1
Eastern Ontario Health Unit MAC						
Sodium	Jan-26-16	95.1	20	mg/L	Yes	476

REDWOOD WATER TREATMENT PLANT							
ORGANIC PARAMETERS							
PARAMETER	SAMPLE DATE	RESULT VALUE	MAC	UNIT OF MEASURE	EXCEEDANCE	%	MAC mg/L
Benzene	Jan-8-18	0.5	5	µg/L	No	10	0.005
Carbon Tetrachloride	Jan-8-18	0.2	5	µg/L	No	4	0.005
Dichlorobenzene, 1,2-	Jan-8-18	0.1	200	µg/L	No	0	0.2
Dichlorobenzene, 1,4-	Jan-8-18	0.2	5	µg/L	No	4	0.005
Dichloroethane, 1,2-	Jan-8-18	0.1	5	µg/L	No	2	0.005
Dichloroethene, 1,1-	Jan-8-18	0.1	14	µg/L	No	1	0.014
Dichloromethane (Methylene Chloride)	Jan-8-18	0.3	5	µg/L	No	6	0.005
Monochlorobenzene (Chlorobenzene)	Jan-8-18	0.02	80	µg/L	No	0	0.08
Tetrachloroethylene	Jan-8-18	0.2	30	µg/L	No	1	0.03
Trichloroethylene	Jan-8-18	0.1	5	µg/L	No	2	0.005
Vinyl Chloride	Jan-8-18	0.2	2	µg/L	No	10	0.002
Alachlor	Jan-8-18	0.3	5	µg/L	No	6	0.005
Atrazine + Metabolites	Jan-8-18	0.5	5	µg/L	No	10	0.005
Azinphos-methyl	Jan-8-18	1	20	µg/L	No	5	0.02
Benzo (a) pyrene	Jan-8-18	0.005	0.01	µg/L	No	50	0.00001
Bromoxynil	Jan-8-18	0.3	5	µg/L	No	6	0.005
Carbaryl	Jan-8-18	3	90	µg/L	No	3	0.09
Carbofuran	Jan-8-18	1	90	µg/L	No	1	0.09
Chlorpyrifos	Jan-8-18	0.5	90	µg/L	No	1	0.09
Diazinon	Jan-8-18	1	20	µg/L	No	5	0.02
Dicamba	Jan-8-18	5	120	µg/L	No	4	0.12
Dichlorophenol,2,4-	Jan-8-18	0.1	900	µg/L	No	0	0.9
Dichlorophenoxy acetic acid,2,4- (2,4-D)	Jan-8-18	5	100	µg/L	No	5	0.1
Diclofop-methyl	Jan-8-18	0.5	9	µg/L	No	6	0.009
Dimethoate	Jan-8-18	1	20	µg/L	No	5	0.02
Diquat	Jan-8-18	5	70	µg/L	No	7	0.07
Diuron	Jan-8-18	5	150	µg/L	No	3	0.15
Glyphosate	Jan-8-18	25	280	µg/L	No	9	0.28
Malathion	Jan-8-18	5	190	µg/L	No	3	0.19
Metolachlor	Jan-8-18	3	50	µg/L	No	6	0.05
Metribuzin	Jan-8-18	3	80	µg/L	No	4	0.08
Paraquat	Jan-8-18	1	10	µg/L	No	10	0.01
Pentachlorophenol	Jan-8-18	0.1	60	µg/L	No	0	0.06
Phorate	Jan-8-18	0.3	2	µg/L	No	15	0.002
Picloram	Jan-8-18	5	190	µg/L	No	3	0.19
Poly-Chlorinated Biphenyls (PCBs)	Jan-8-18	0.05	3	µg/L	No	2	0.003
Prometryne	Jan-8-18	0.1	1	µg/L	No	10	0.001
Simazine	Jan-8-18	0.5	10	µg/L	No	5	0.01
Terbufos	Jan-8-18	0.3	1	µg/L	No	30	0.001
Tetrachlorophenol,2,3,4,6-	Jan-8-18	0.1	100	µg/L	No	0	0.1
Triallate	Jan-8-18	10	230	µg/L	No	4	0.23
Trichlorophenol, 2,4,6-	Jan-8-18	0.1	5	µg/L	No	2	0.005
Trifluralin	Jan-8-18	0.5	45	µg/L	No	1	0.045
THM (NOTE: Show Latest Annual Average)	Year 2018		100	ug/L	No	0	0.1
MCPA	Year 2018		100	ug/L	No	0	0.1
HAA	Year 2018		80	ug/L	No	0	0.08