

Town of La Ronge
Annual Notice to Consumers
Drinking-Water Quality and Water Sample Compliance
For the year ending Dec 31 2018

The Water Security Agency and the Ministry of Environment requires that, at least once each year, water works owners provide notification to consumers regarding:

- The quality of water produced and supplied; and
- Information on the performance in submitting samples required by the Minister’s Order for the La Ronge water works system

The following is a summary of the Town of La Ronge water quality data and sample submission records for 2018. This report was completed on May 28, 2019.

Refer to the Water Security Agency’s “Municipal Drinking Water Quality Monitoring Guidelines, Juner 2005, EPB 502” for more information on minimum sample submission requirements and the meaning of type of sample.

Permit requirements for a specific water works may require more sampling than outlined in the Department’s monitoring guidelines. If consumers need more information on the nature and significance of specific water tests, more information is available from:

http://www.hc-sc.gc.ca/ewhe-semt/pubs/water-eau/index_e.html.

Water Quality Standards

Bacteriological Quality

Parameter / Location	Limit	Number of Samples Required	Number of Samples Submitted	Number of Positive Samples
Total Coliform and Background Bacteria	0 Organisms / 100/ ml Less than 200 / 100 ml	104	104	0

As per the permit to operate a waterworks, issued to the town of La Ronge by the water security agency on behalf of the ministry of environment, the owner/operator of the water works is responsible to ensure that 104 water samples yearly (2 samples/ week) are submitted to an accredited lab for bacteriological analysis. The bacteriological analysis from the accredited lab ensures there are no detected bacteriological organisms in the water supply to the consumers.

Water Quality Analysis – Analysis of Chlorine Residual
From defined sample points throughout town distribution system

Parameter	Minimum Limit (no lower than)	Free Chlorine Residual Range (mg Cl/L water)	Total Chlorine Residual Range (mg Cl/L water)	Number of Tests Required	Number of Tests Submitted	Percentage of samples meeting disinfection requirements
Chlorine Residual	0.1 mg/L Free or 0.5 mg/L Total	0.28-1.7	0.51-1.93	104	104	100%

Water Quality Analysis – Free Chlorine Residual
From Town Reservoir Records

Location	Limit (mg/L)	Test Level Range (mg/L)	# Tests Performed	# Tests not Meeting Requirements
Reservoir #2 Free Chlorine Residual	Not less than 0.1 mg/L	0.31-1.62	365	0
Reservoir #3 Free Chlorine Residual	Not less than 0.1 mg/L	0.32-0.81	365	0

As per “the Permit to Operate a Waterworks” issued by the water security agency to the Town of La Ronge, daily analysis of the quality of water to the consumers is required to be performed by operators 365 days a year and records of the daily analysis must be kept and available upon request. The analysis required are the measure of the concentration of free and total chlorine in the water being distributed to consumers and returning to each water reservoir. A minimum of 0.1 milligrams chlorine per litre of water (mg/L) free chlorine residual and a minimum of 0.5 mg/L total is required for the water being distributed to consumers. In the event that concentration of total or free chlorine drops below the limit outlined, the waterworks is considered to still be in compliance as long as one parameter is within the limit and efforts are made to bring values within required concentrations.

As per <http://www.saskh2o.ca/glossary.asp>

Chlorine, free- A measurement of the amount of the chlorine available after a portion has been used up in reactions with the substances present in water.

Chlorine, total - A measurement of both free and combined chlorine.

Further

Chlorine residual - The amount of total chlorine maintained in treated drinking water as it travels through a distribution system. It can be free chlorine, combined chlorine (chloramines) or a combination of both.

Chlorine, combined - A measurement of the amount of chloramines produced as a result of the reaction of chlorine with ammonia present in water.

For more information about concentration levels of chlorine in potable drinking water please visit www.saskh2o.ca

Turbidity – From Saskatchewan Disease Control Laboratory

Parameter	Limit (NTU)	Test Level Range	# Tests Not Meeting Requirements	Maximum Turbidity	Number of Tests Required	Number of Tests Performed
Turbidity	No Standard	0.07-1.58	0	1.58	104	104

Turbidity measures the “clarity” of water and is reported in Nephelometric Turbidity Units (NTU). The Town is required to monitor turbidity at the same frequency and locations as for bacteriological sampling.

Chemical – Trihalomethanes (THM)

Trihalomethanes are formed when chlorine reacts with organic matter in water. The limit for THM is a long term objective based on an annual average of seasonal samples.

Parameter	Limit (mg/L)	Average (mg/L)	# Samples Required	# Samples Submitted
Trihalomethane	0.08	0.08	4	4

Chemical – Haloacetic Acids (HAAs)

Haloacetic acids are formed when chlorine reacts with organic matter in water. The limit for HAAs is a long term objective based on an annual average of quarterly samples.

Parameter	Limit (mg/L)	Average (mg/L)	# Samples Required	# Samples Submitted
Haloacetic Acids	0.080	0.06	4	4

Chemical Health Category

All waterworks serving less than 5,000 persons are required to submit water samples for the Ministry of Environment’s “Chemical Health” category once every two years. The source of water that the Town of La Ronge distributes comes from a regional water treatment plant run by Saskwater and governed by The Lac La Ronge Regional Water Corporation the (LLRRWC). LLRWC is responsible for monitoring and reporting as per their Permit to operate a waterworks. For more information about the quality of the water source, the water quality report to consumers from LLRRWC is attached.

For more information contact:

Town of La Ronge
 Box 5680
 La Ronge, Saskatchewan S0J 1L0
 306-425-2066 (Phone)
 425-3883 (Fax)

	Collection Date	Location	Free	Total	Turb	Fluoride	Total Coliform	E.Coli
1	Jan 2 2018	SPS2	0.53	0.8	0.16	0.49	No Detectable	No Detectable
2	Jan 2 2018	SPS5	0.55	0.84	0.09	0.49	No Detectable	No Detectable
3	Jan 8 2018	SPS1	0.57	0.88	0.16	0.49	No Detectable	No Detectable
4	Jan 8 2018	SPS7	0.41	0.65	0.18	0.49	No Detectable	No Detectable
5	Jan 15 2018	SPS8	0.34	0.69	0.11	0.47	No Detectable	No Detectable
6	Jan 15 2018	SPS11	0.78	1.18	0.12	0.5	No Detectable	No Detectable
7	Jan 22 2018	Res 3	0.38	0.71	0.26	0.47	No Detectable	No Detectable
8	Jan 22 2018	Res 2	0.48	0.81	0.63	0.49	No Detectable	No Detectable
9	Jan 29 2018	SPS5	0.68	1.12	0.66	0.47	No Detectable	No Detectable
10	Jan 29 2018	SPS2	0.57	0.94	1.03	0.48	No Detectable	No Detectable
11	Feb 5 2018	SPS7	0.68	0.94	0.87	0.42	No Detectable	No Detectable
12	Feb 5 2018	SPS1	0.9	1.17	0.78	0.36	No Detectable	No Detectable
13	Feb 12 2018	SPS11	0.65	1	0.48	0.48	No Detectable	No Detectable
14	Feb 12 2018	SPS8	0.55	0.85	0.57	0.51	No Detectable	No Detectable
15	Feb 20 2018	Res 2	0.36	0.68	0.57	0.5	No Detectable	No Detectable
16	Feb 20 2018	Res 3	0.44	0.79	0.63	0.47	No Detectable	No Detectable
17	Feb 26 2018	SPS2	0.7	1.07	0.29	0.5	No Detectable	No Detectable
18	Feb 26 2018	SPS5	1.06	1.47	0.95	0.48	No Detectable	No Detectable
19	Mar 5 2018	SPS1	0.62	0.91	0.77	0.47	No Detectable	No Detectable
20	Mar 5 2018	SPS7	0.42	0.77	0.51	0.41	No Detectable	No Detectable
21	Mar 12 2018	SPS8	0.37	0.66	0.37	0.49	No Detectable	No Detectable
22	Mar 12 2018	SPS11	0.56	0.86	0.25	0.51	No Detectable	No Detectable
23	Mar 19 2018	Res 3	0.41	0.72	0.66	0.5	No Detectable	No Detectable
24	Mar 19 2018	Res 2	0.42	0.68	0.43	0.5	No Detectable	No Detectable
25	Mar 26 2018	SPS2	0.47	0.67	0.23	0.36	No Detectable	No Detectable

26	Mar 26 2018	SPS5	0.59	0.88	1.34		No Detectable	No Detectable
27	Apr 3 2018	SPS7	0.46	0.73	0.43	0.48	No Detectable	No Detectable
28	Apr 3 2018	SPS1	0.5	0.8	0.4	0.5	No Detectable	No Detectable
29	Apr 9 2018	SPS8	0.57	0.85	0.32	0.46	No Detectable	No Detectable
30	Apr 9 2018	SPS11	0.58	0.93	0.17	0.49	No Detectable	No Detectable
31	Apr 16 2018	Res 2	0.53	0.78	0.4	0.54	No Detectable	No Detectable
32	Apr 16 2018	Res 3	0.65	0.96	0.31	0.53	No Detectable	No Detectable
33	Apr 23 2018	SPS2	0.46	0.75	0.324	0.5	No Detectable	No Detectable
34	Apr 23 2018	SPS5	0.63	0.95	0.82	0.49	No Detectable	No Detectable
35	Apr 30 2018	SPS7	0.64	0.9	0.31	0.51	No Detectable	No Detectable
36	Apr 30 2018	SPS1	0.28	0.55	0.32	0.52	No Detectable	No Detectable
37	May 7 2018	SPS 11	1.09	1.36	1.58	0.48	No Detectable	No Detectable
38	May 7 2018	SPS8	0.71	0.98	0.83	0.51	No Detectable	No Detectable
39	May 14 2018	Res 2	0.65	0.68	0.28	0.33	No Detectable	No Detectable
40	May 14 2018	Res 3	0.65	0.89	0.33	0.41	No Detectable	No Detectable
41	May 22 2018	SPS5	0.68	0.86	0.8	0.45	No Detectable	No Detectable
42	May 22 2018	SPS2	0.59	0.77	0.16	0.48	No Detectable	No Detectable
43	May 28 2018	SPS1	0.77	0.96	0.13	0.48	No Detectable	No Detectable
44	May 28 2018	SPS7	0.61	0.81	0.33	0.49	No Detectable	No Detectable
45	Jun 5 2018	SPS 8	0.64	0.85	0.14	0.45	No Detectable	No Detectable
46	Jun 5 2018	SPS 11	0.82	0.98	0.15	0.21	No Detectable	No Detectable
47	Jun 11 2018	Res 2	0.37	0.56	0.3	0.46	No Detectable	No Detectable
48	Jun 11 2018	Res 3	0.44	0.62	0.24	0.46	No Detectable	No Detectable
49	Jun 18 2018	SPS2	0.6	0.78	0.13	0.46	No Detectable	No Detectable
50	Jun 18 2018	SPS5	0.66	0.81	0.17	0.47	No Detectable	No Detectable
51	Jun 25 2018	SPS7	0.41	0.65	0.16	0.45	No Detectable	No Detectable

52	Jun 25 2018	SPS1	0.55	0.77	0.15	0.45	No Detectable	No Detectable
53	Jul 3 2018	SPS11	1.03	1.25	0.11	0.13	No Detectable	No Detectable
54	Jul 3 2018	SPS8	0.38	0.59	0.13	0.31	No Detectable	No Detectable
55	Jul 9 2018	Res 2	0.4	0.68	0.13	0.23	No Detectable	No Detectable
56	Jul 9 2018	Res 3	0.33	0.57	0.1	0.3	No Detectable	No Detectable
57	Jul 16 2018	SPS2	0.65	0.87	0.07	0.48	No Detectable	No Detectable
58	Jul 16 2018	SPS5	0.91	1.02	0.12	0.48	No Detectable	No Detectable
59	Jul 23 2018	SPS1	0.43	0.63	0.12	0.46	No Detectable	No Detectable
60	Jul 23 2018	SPS7	0.52	0.72	0.12	0.46	No Detectable	No Detectable
61	Jul 30 2018	SPS8	0.3	0.51	0.12	0.43	No Detectable	No Detectable
62	Jul 30 2018	SPS11	1.06	1.25	0.08	0.24	No Detectable	No Detectable
63	Aug 7 2018	Res 2	0.39	0.56	0.09	0.4	No Detectable	No Detectable
64	Aug 7 2018	Res 3	0.32	0.53	0.12	0.4	No Detectable	No Detectable
65	Aug 13 2018	SPS2	0.44	0.66	0.1	0.47	No Detectable	No Detectable
66	Aug 13 2018	SPS5	0.78	1	0.12	0.47	No Detectable	No Detectable
67	Aug 20 2018	SPS1	0.45	0.58	0.1	0.46	No Detectable	No Detectable
68	Aug 20 2018	SPS7	0.44	0.58	0.15	0.45	No Detectable	No Detectable
69	Aug 27 2018	SPS11	0.78	1.06	0.09	0.25	No Detectable	No Detectable
70	Aug 27 2018	SPS 8	0.35	0.59	0.11	0.47	No Detectable	No Detectable
71	Sept 4 2018	Res 2	0.5	0.7	0.11	0.45	No Detectable	No Detectable
72	Sept 4 2018	Res 3	0.43	0.63	0.12	0.46	No Detectable	No Detectable
73	Sept 10 2018	SPS 5	0.56	0.76	0.58	0.47	No Detectable	No Detectable
74	Sept 10 2018	SPS2	0.37	0.62	0.1	0.46	No Detectable	No Detectable
75	Sept 17 2018	SPS1	0.83	0.99	0.21	0.5	No Detectable	No Detectable
76	Sept 17 2018	SPS7	0.65	0.88	0.22	0.49	No Detectable	No Detectable
77	Sept 24 2018	SPS8	0.36	0.56	0.15	0.45	No Detectable	No Detectable

78	Sept 24 2018	SPS 11	0.59	0.93	0.09	0.42	No Detectable	No Detectable
79	Oct 1 2018	Res 2	0.64	0.88	0.12	0.5	No Detectable	No Detectable
80	Oct 1 2018	Res 3	0.39	0.62	0.1	0.5	No Detectable	No Detectable
81	Oct 9 2018	SPS5	0.65	0.88	0.15	0.47	No Detectable	No Detectable
82	Oct 9 2018	SPS2	0.58	0.8	0.14	0.48	No Detectable	No Detectable
83	Oct 15 2018	SPS7	0.6	0.85	0.1	0.47	No Detectable	No Detectable
84	Oct 15 2018	SPS1	0.56	0.8	0.16	0.47	No Detectable	No Detectable
85	Oct 23 2018	SPS11	0.61	0.82	0.08	0.44	No Detectable	No Detectable
86	Oct 23 2018	SPS8	0.43	0.64	0.11	0.47	No Detectable	No Detectable
87	Oct 29 2018	Res 2	0.56	0.81	0.1	0.47	No Detectable	No Detectable
88	Oct 29 2018	Res 3	0.35	0.55	0.36	0.47	No Detectable	No Detectable
89	Nov 5 2018	SPS2	0.44	0.68	0.1	0.48	No Detectable	No Detectable
90	Nov 5 2018	SPS5	0.57	0.78	0.12	0.48	No Detectable	No Detectable
91	Nov 13 2018	SPS1	0.39	0.62	0.09	0.51	No Detectable	No Detectable
92	Nov 13 2018	SPS7	0.7	0.91	0.1	0.49	No Detectable	No Detectable
93	Nov 19 2018	SPS8	0.38	0.62	0.13	0.46	No Detectable	No Detectable
94	Nov 19 2018	SPS11	0.96	1.32	0.12	0.47	No Detectable	No Detectable
95	Nov 26 2018	Res 2	0.47	0.72	0.12	0.47	No Detectable	No Detectable
96	Nov 26 2018	Res 3	0.4	0.66	0.09	0.47	No Detectable	No Detectable
97	Dec 3 2018	SPS2	0.58	0.75	0.09	0.5	No Detectable	No Detectable
98	Dec 3 2018	SPS5	0.57	0.86	0.1	0.47	No Detectable	No Detectable
99	Dec 10 2018	SPS7	0.58	0.85	0.11	0.5	No Detectable	No Detectable
100	Dec 10 2018	SPS1	0.54	0.83	0.09	0.5	No Detectable	No Detectable
101	Dec 17 2018	SPS8	0.56	0.7	0.15	0.49	No Detectable	No Detectable
102	Dec 17 2018	SPS11	0.74	1.1	0.09	0.48	No Detectable	No Detectable
103	Dec 27 2018	Res 2	1.7	1.93	0.08	0.47	No Detectable	No Detectable

104	Dec 27 2018	Res3	0.4	0.69	0.09	0.48	No Detectable	No Detectable
		Average	0.573365	0.823654	0.283019	0.455437		
		Peak	1.7	1.93	1.58	0.54		
		Low	0.28	0.51	0.07	0.13		

Collection Date	Location	Total Trihalomethane ($\mu\text{g/L}$)	Total Haloacetic acids ($\mu\text{g/L}$)
Mar 20 2018	Res 2	67.7	59
June 11 2018	Res 2	56.8	35
Sept 26 2018	Res 2	103	60
Dec 3 2018	Res 2	92.6	87
	Average(mg/L)	0.080025	0.06025