

ORGANIZED HAMLET OF LIVELONG

Drinking Water Quality and Compliance

Annual Notice to Consumers

Saskatchewan Environment requires that at least once each year waterworks owners provide notification to consumers of the quality of water produced and supplied as well as information on the performance of the waterworks in submitting samples as required by a Minister's Order or Permit to Operate a waterworks. The following is a summary of the Organized Hamlet of Livelong water quality and sample submission compliance record of the **January 1 - December 31, 2016** time period. This report was completed on March 13, 2017. Readers should refer to Saskatchewan Environment's "Municipal Drinking Water Quality Monitoring Guidelines, Edition 3, October 2012, EPB 202" for more information on minimum sample submission requirements. Permit requirements for a specific waterworks 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, for example, "what is the significance of selenium in a water supply", more detailed information is available from: <http://www.hc-sc.gc.ca/hecs-sesc/water/dwgsup.htm>.

Water Quality Standards Bacteriological Quality

Parameter/Location	Limit	Regular Samples Required	Regular Samples Submitted	# of Positive Regular Submitted (%)
Total Coliform and Background Bacteria	0 Organisms/100 mg/L Less than 200 Organisms/100 mL	24	24	0

Water Disinfection - Chlorine Residual in Distribution System for Test Results Submitted with Bacteriological Samples

Parameter	Minimum Limit (mg/L)	Free Chlorine Residual Range	Total Chlorine Residual Range	#Tests Required	#Tests Submitted	#Adequate Chlorine (%)
Chlorine Residual	0.1 mg/L free OR 0.5 mg/L total	0.12-1.47	0.22-1.65	24	24	100%

Water Disinfection - Free Chlorine Residual for Water Entering Distribution System from Waterworks Records - From Water Treatment Plant Records

Parameter	Limit (mg/L)	Test Level Range	# Tests Performed	# Tests Not Meeting Requirements
Free Chlorine Residual	at least 0.1	0.12-3.98	366	0

A minimum of 0.1 milligrams per litre (mg/L) free chlorine residual is required for water entering the distribution system. Tests are normally performed on a daily basis by the waterworks operator and are to be recorded in operation records. This data includes the number of free chlorine residual tests performed, the overall range of free chlorine residual (highest and lowest recorded values) and the number of tests and percentage of results not meeting the minimum requirement of 0.1 mg/L free chlorine residual.

Turbidity - From Water Treatment Plant Records

Parameter	Limit (NTU)	Test Level Range	#Tests Not Meeting Requirements	Maximum Turbidity (NTU)	# Tests Required	# Tests Performed
Turbidity	1.0	.17-1.49	3	1.49	366	369

Chemical - Health Category

Parameter	Limit MAC (mg/L)	Limit IMAC (mg/L)	Sample Results	# Samples Exceeding Limit
Arsenic	0.025 (25 ug/l)		0.00506 mg/l	0
Barium	1.0		0.0245	0
Boron	5.0		0.104	0
Cadmium	0.005		< 0.0000050	0
Chromium	0.05		< 0.00010	0
Fluoride	1.5		0.24	0
Lead	0.01		0.000102	0
Nitrate	45.0		<0.50	0
Selenium	0.01		<0.000050	0
Uranium	0.02 (20 ug/l)		0.00227 mg/l	0

Substances within the chemical health category may be naturally occurring in drinking water sources or may be the result of human activities. These substances may represent a long-term health risk if the Maximum Acceptable Concentration (MAC) or Interim Maximum Acceptable Concentration (IMAC) is exceeded. All drinking water supplies are required to monitor for substances in the "Chemical-Health" category, the frequency of monitoring depends on the population served by the waterworks. Some waterworks will add fluoride to drinking water as a means to aid in the prevention of dental decay.

General Chemical

Parameter	Aesthetic Objectives * (mg/L)	Sample Results	# Samples Required	# Samples Submitted
Alkalinity	No Objective	419	1	1
Bicarbonate	No Objective	511.	1	1
Calcium	No Objective	114	1	1
Carbonate	No Objective	<10.	1	1
Chloride	250	11.1	1	1
Conductivity	No Objective	931	1	1
Hardness	800	448	1	1
Magnesium	No Objective	39.7	1	1
PH	6.5 – 9.0	7.75	1	1
Sodium	300	37.3	1	1
Sulphate	500	94.5	1	1
Total dissolved Solids	1500	561	1	1

All waterworks serving less than 5000 persons are required to submit water samples for SE's General Chemical category once every two years if a ground water source and once per three months every second year if a surface water or blended surface/groundwater source. The General Chemical category includes analysis for alkalinity, bicarbonate, calcium, carbonate, chloride, conductivity, hardness (as CaCO₃), magnesium, sodium, sulphate and total dissolved solids.

Chemical-Health and General Chemical sampling was conducted on March 24, 2016.

More information on water quality and sample submission performance may be obtained from:

The Rural Municipality of Mervin No. 499
 Box 130
 Turtleford, Sask.
 S0M 2Y0
 Telephone: 306-845-2045
 Facsimile: 306-845-2950
 E-mail: rm499@rmofmervin.com