

**Drinking Water Quality and Compliance  
For The Town Of Langham  
20 18 Annual Notice to Consumers**

**Introduction**

The Water Security Agency (WSA) 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 Permit to Operate a waterworks. The following is a summary of the Town of Langham water quality and sample submission compliance record for the JAN 1 - DEC 31 / 2017 time period. This report was complete on JAN 4 / 2018. Readers should refer to the Agency's Municipal Drinking Water Quality Monitoring Guidelines, November 2002, EPB 202 for more information on minimum sample submission requirements and the meaning of type of sample. Permit requirements for a specific waterworks may require more sampling than outlined in the Agency'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/ewh-semt/pubs/water-eau/index\\_e.html](http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/index_e.html).

**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 mL Less than 200/100 mL	<u>52</u>	<u>52</u>	<u>0</u>

**Water Disinfection –**

**Chlorine Residual in Distribution System for Test Results Submitted with Bacteriological Samples**

Parameter	Minimum Limit	Total Chlorine Residual Range	Free Chlorine Residual Range	# Tests Required	# Tests Submitted	#Adequate Chlorine (%)
Chlorine Residual	0.1 mg/L free OR 0.5 mg/L total	<u>0.39 - 1.87</u>	<u>0.11 - 1.69</u>	<u>52</u>	<u>52</u>	<u>100</u>

**Water Disinfection – Free Chlorine Residual for Water Entering Distribution System for 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	<u>0.96 - 1.80</u>	<u>365</u>	<u>0</u>

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 requirements 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	<u>1.0</u>	<u>0.08 - 0.14</u>	<u>0</u>	<u>0.14</u>	<u>365</u>	<u>365</u>

**Chemical – Health Category**

All Waterworks serving less than 5000 persons are required to submit water samples for WSA's Chemical Health category once every 2 years. The Chemical Health category includes analysis for arsenic, barium, boron, cadmium, chromium, fluoride, lead, nitrate, selenium and uranium.

The last sample for Chemical Health analysis was submitted on JAN 24 / 2017. Sample results indicated that the provincial drinking water quality standards were not exceeded.

Parameter	Limit MAC (mg/L)	Limit IMAC (mg/L)	Sample Result(s)	#Samples Exceeding Limit	
Arsenic	0.010		<u>&lt;0.001</u>	<u>0</u>	* Results expressed as average values for communities or waterworks that fluoridate drinking water supplies or those with elevated concentrations of fluoride or nitrates
Barium	1.0		<u>.0026</u>	<u>0</u>	
Boron		5.0	<u>0.11</u>	<u>0</u>	
Cadmium	0.005		<u>0.00002</u>	<u>0</u>	
Chromium	0.05		<u>&lt;0.0005</u>	<u>0</u>	
Fluoride (avg.*)	1.5		<u>0.03</u>	<u>0</u>	
Lead	0.01		<u>&lt;0.0001</u>	<u>0</u>	
Nitrate (avg.*)	45.0		<u>&lt;0.04</u>	<u>0</u>	
Selenium	0.01		<u>&lt;0.0001</u>	<u>0</u>	
Uranium	0.02		<u>0.011</u>	<u>0</u>	

**Chemical – Trihalomethanes (THMs)**

Parameter	THMs Limit (mg/L)	Sample Result (average)	# Samples Required	#Samples Submitted
Trihalomethanes	0.1	<u>N/A</u>	4 (1 every 3 months)	<u>N/A</u>

Note: Only water supplies derived from surface water or groundwater under the influence of surface water are required to monitor for THMs. Waterworks using groundwater sources beyond the influence of surface water do not need to report THMs since sampling/analysis will not likely have been performed.

**General Chemical**

Parameter	Aesthetic Objectives * (mg/L)	Sampling Results (average)	# Samples Required	# Samples Submitted
Alkalinity	500	<u>80 mg/L</u>	<u>EVERY 2 YRS</u>	<u>1</u>
Bicarbonate	No Objective	<u>98 mg/L</u>	<u>"</u>	<u>1</u>
Calcium	No Objective	<u>35 mg/L</u>	<u>"</u>	<u>1</u>
Carbonate	No Objective	<u>&lt;1 mg/L</u>	<u>"</u>	<u>1</u>
Chloride	250	<u>5 mg/L</u>	<u>"</u>	<u>1</u>
Conductivity	No Objective	<u>349 US/cm</u>	<u>"</u>	<u>1</u>
Hardness	800	<u>149 mg/L</u>	<u>"</u>	<u>1</u>
Magnesium	200	<u>15 mg/L</u>	<u>"</u>	<u>1</u>
pH	No Objective	<u>7.23</u>	<u>"</u>	<u>1</u>
Sodium	300	<u>8.6 mg/L</u>	<u>"</u>	<u>1</u>
Sulphate	500	<u>86 mg/L</u>	<u>"</u>	<u>1</u>
Total dissolved Solids	1500	<u>216 mg/L</u>	<u>"</u>	<u>1</u>

All waterworks serving less than 5000 persons are required to submit water samples for WSA'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 CaCO<sub>3</sub>), magnesium, sodium, sulphate and total dissolved solids.

The last sample for General Chemical analysis was required on 2017 and submitted on JAN 24/2017.

\*Objectives apply to certain characteristics of substances found in water for human consumptive or hygienic use. The presence of these substances will affect the acceptance of water by consumers and/or interfere with the practice of supplying good quality water. Compliance with drinking water aesthetic objectives is not mandatory as these objectives are in the range where they do not constitute a health hazard. The aesthetic objectives for several parameters (including hardness as CaCO<sub>3</sub>, magnesium, sodium and total dissolved solids) consider regional differences in drinking water sources and quality.

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

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