

**Drinking Water Quality and Compliance  
Town Short Form – A Template for Annual Notice to Consumers**

**Introduction**

The Water Security Agency and the Ministry of 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 Town of Wilkie's water quality and sample submission compliance record for the year of 2017 time period. This report was completed on February 21, 2018. Readers should refer to Water Security Agency's Municipal Drinking Water Quality Monitoring Guidelines, June 2015, EPB 502 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 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/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	0 Organisms/100 mL	52	52	0.00%
E. coli	0 Organisms/100 mL			
Background Bacteria	Less than 200/100 mL			

**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	1.30 to 2.46	.88 to 1.70	52	52	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	.88 to 1.70	365	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	.03 to .22	0	.22	365	365

**Chemical – Health Category**

All waterworks serving less than 5000 persons are required to submit water samples for SE'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 December 19, 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	(see attached)
Arsenic	0.010				* 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				
Boron		5.0			
Bromate	0.01				
Cadmium	0.005				
Chlorate	1.0				
Chlorite	1.0				
Chromium	0.05				
Fluoride (avg*)	1.5				
Lead	0.01				
Nitrate (avg.*)	45.0				
Selenium	0.01				
Uranium	0.02				

**Chemical – Trihalomethanes (THMs) and Haloacetic Acids (HAAs)**

Parameter	THMs Limit (mg/L)	Sample Result (average)	# Samples Required	# Samples Submitted
Trihalomethanes	0.1	n/a	4 (1 every 3 months)	
Haloacetic Acids	0.08	n/a	4 (1 every 3 months)	

*Note: Only water supplies derived from surface water or groundwater under the influence of surface water are required to monitor for THMs and HAAs. Waterworks using groundwater sources beyond the influence of surface water do not need to report THMs or HAAs since sampling/analysis will not likely have been performed unless otherwise noted in the waterworks permit to operate*

**General Chemical**

Parameter	Aesthetic Objectives * (mg/L)	Sample Results (average)	# Samples Required	# Samples Submitted	(see attached)
Alkalinity	500				
Bicarbonate	No Objective				
Calcium	No Objective				
Carbonate	No Objective				
Chloride	250				
Conductivity	No Objective				
Hardness	800				
Magnesium	200				
PH	No Objective				
Sodium	300				
Sulphate	500				
Total dissolved Solids	1500				

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 CaCO<sub>3</sub>), magnesium, sodium, sulphate and total dissolved solids.

The last sample for General Chemical analysis was required in December 2016 and submitted on December 5, 2016. Sample results indicated that there were no exceedences of the provincial aesthetic objectives for the General Chemical category.

\*Objectives apply to certain characteristics of or 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 hazards. 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:**

Town of Wilkie  
Box 580  
WILKIE, SK S0K 4W0  
(306) 843-2692  
(306) 843-3151 fax  
Email: [wilkieoffice@sasktel.net](mailto:wilkieoffice@sasktel.net)

June 2015    EPB 536D



**Saskatchewan  
Ministry of  
Environment**





## Environmental Services Analysis Report - Final

<b>Invoice Number:</b>	1093526	<b>Collected Date:</b>	19-Dec-2017 2:06 PM
<b>Sample Location:</b>	WTP large reservoir distribution system	<b>Received:</b>	20-Dec-2017 8:34 AM
<b>Collected by:</b>	Blair Winterhalt	<b>Reported:</b>	22-Dec-2017 2:21 PM
<b>Station #:</b>	SK05GC0012	<b>Water Source:</b>	Distributed
	<b>Permit:</b> 2579		
	WILKIE DIST.SYSTEM		

**Submitted By:**

WILKIE TOWN OF  
BOX 580  
WILKIE, SK  
S0K 4W0

**Invoice:**

WILKIE TOWN OF  
BOX 580  
WILKIE, SK  
S0K 4W0

Analysis	Result	Unit	Sask Guideline	Test Comment	Fee
Health and Toxicity Panel					92.50
Boron	0.1	mg/L	< 5.0		
Iron	<0.1	mg/L	< 0.3		
Manganese	<0.01	mg/L	< 0.05		
Aluminum (ICPMS)	<6.96	µg/L	No Guideline		
Arsenic (ICPMS)	0.30	µg/L	< 10		
Barium (ICPMS)	19.1	µg/L	< 1000		
Cadmium (ICPMS)	<0.15	µg/L	< 5		
Chromium (ICPMS)	<0.19	µg/L	< 50		
Copper (ICPMS)	12.2	µg/L	< 1000		
Lead (ICPMS)	0.10	µg/L	< 10		
Selenium (ICPMS)	1.3	µg/L	< 10		
Uranium (ICPMS)	1.6	µg/L	< 20		
Zinc (ICPMS)	4.5	µg/L	< 5000		
Antimony (ICPMS)	<0.16	µg/L	No Guideline		
Silver (ICPMS)	<0.20	µg/L	No Guideline		



### Environmental Services Analysis Report - Amended

<b>Invoice Number:</b> 1081666	<b>Collected Date:</b> 05-Dec-2016 8:55 AM
<b>Sample Location:</b> WTP Large Reservoir	<b>Received:</b> 06-Dec-2016 8:41 AM
<b>Collected by:</b> Blair Winterhalt	<b>Reported:</b> 08-Dec-2016 4:36 PM
<b>Station #:</b> SK05GC0014	<b>Water Source:</b> Distributed

**Permit:** 2579  
WILKIE -WTP-FILTER EFFLUENT

<b>Submitted By:</b>	<b>Invoice:</b>
WILKIE TOWN OF	WILKIE TOWN OF
BOX 580	BOX 580
WILKIE, SK	WILKIE, SK
S0K 4W0	S0K 4W0

Analysis	Result	Unit	Sask Guideline	Test Comment	Fee
General Chemistry/Water Quality Panel					94.50
Conductivity	1113	µS/cm	< 2300		
pH	7.4	pH Units	6.5 - 9.0		
Total Alkalinity	355	mg/L CaCO3	< 500		
Phenol Alkalinity	0.000	mg/L CaCO3	No Guideline		
Bicarbonate	433	mg/L	No Guideline		
Carbonate	0	mg/L	No Guideline		
Hydroxide	0	mg/L	No Guideline		
Chloride Dissolved	13.6	mg/L	< 250		
Fluoride Dissolved	0.20	mg/L	< 1.5		
Nitrate Dissolved	2.5	mg/L	< 45		
Sulfate Dissolved	264.8	mg/L	< 500		
Total Hardness (Calculated)	538	mg/L CaCO3	< 800		
Total Dissolved Solids	948	mg/L	< 1500		
Iron	<0.1	mg/L	< 0.3		
Manganese	<0.01	mg/L	< 0.05		
Calcium	118	mg/L	No Guideline		
Magnesium	59	mg/L	< 200		
Potassium	7	mg/L	No Guideline		
Sodium	50	mg/L	< 300		