



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

*(Note: This short form may be used for communities or waterworks serving a population of less than 5000).*

**Introduction**

Saskatchewan 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 Unity water quality and sample submission compliance record for the year of 2010, from January 1, 2010 – December 31, 2010 time period. This report was completed on June 21, 2011 (must be completed before June 30 each year on a calendar year based reporting frequency). Readers should refer to Environment'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 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 and Background Bacteria	0 Organisms/100 mL Less than 200/100 mL	52	52	4 = 13%

**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	0.26-4.98	0.07-2.43	52	52	51 = 98%

**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	0.10-5.16	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	1.0	0.09-3.41	38	3.41	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 Feb 11, 2009. Sample results indicated that the provincial drinking water quality standards were not exceeded. (Use this one if review indicates that there were no exceedences). (OR) Samples exceeded provincial water quality standards for the following parameters: (Use only the applicable portions of table below for which values have been exceeded).

Parameter	Limit MAC(mg/L)	Limit IMAC (mg/L)	Sample Result(s)	# Samples Exceeding Limit	
Arsenic	0.025				* 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			
Cadmium	0.005				
Chromium	0.05				
Fluoride (avg*)	1.5				
Lead	0.01				
Nitrate (avg.)*	45.0				
Selenium	0.01				
Uranium	0.02				

**Chemical – Trihalomethanes (THMs)**

Parameter	THMs Limit (mg/L)	Sample Result (average)	# Samples Required	# Samples Submitted
Trihalomethanes	0.1		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. 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)	Sample Results (average)	# Samples Required	# Samples Submitted
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 2009 and submitted on February 11, 2009 (use this statement if a groundwater supply). The last sets of quarterly samples for General Chemical analysis were required on (insert year or sample submission period required) and were submitted on (insert dates) (use this statement if a surface source or blended source). Sample results indicated that there were no exceedences of the provincial aesthetic objectives for the General Chemical category (use this statement if there were no exceedences). (OR) Samples exceeded provincial aesthetic objectives for the General Chemical category for the following parameters: (use only the applicable portions of the table below for which values have been exceeded).

\*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/Village/Hamlet/Rural Municipality/Owner Name and Title
- Postal Address
- Telephone Number / Facsimile Number (if available)
- E-mail address (if available)

**SRC ANALYTICAL**

Town of Unity

Feb-27-2009

Date Samples Received: Feb-11-2009 Client P.O.:

SRC Lab # 5084 Sample Type: WATER

273 - 2ND AVENUE W

Analyte	Units	Results	Sask. Municipal Max. Acceptable Concentration	Sask. Municipal Aesthetic Objective
Bicarbonate	mg/L	642	none set	none set
Calcium	mg/L	72	none set	none set
Carbonate	mg/L	<1	none set	none set
Chloride	mg/L	19	none set	250
Hydroxide	mg/L	<1	none set	none set
Magnesium	mg/L	22	none set	none set
pH	pH units	8.09	none set	6.5-9.0
Potassium	mg/L	7.7	none set	none set
Sodium	mg/L	377	none set	300 ++
Specific conductivity	uS/cm	2020	none set	none set
Sulfate	mg/L	560	none set	500 ++
Sum of ions	mg/L	1700	none set	none set
Total alkalinity	mg/L	526	none set	500 ++
Total hardness	mg/L	270	none set	800
Nitrate	mg/L	1.7	45	none set
Fluoride	mg/L	0.18	1.5	none set
Total dissolved solids	mg/L	1400	none set	1500

NOTE: These guidelines ONLY apply to drinking water.

All parameters are within the maximum acceptable concentrations for drinking water.

++ Result exceeds the aesthetic objective for drinking water.

Symbol of "<" means "less than". This indicates that it was "not detected" at level stated above.

For further information please contact the laboratory.

# SRC ANALYTICAL

422 Downey Road  
Saskatoon, Saskatchewan S7N 4N1  
(306) 933-6932 1-800-240-8808

Town of Unity  
Box 1030  
300 1st Ave W.  
Unity, Saskatchewan S0K 4L0  
Attn: Jim Dunn

Feb-27-2009

Date Samples Received: Feb-11-2009 Client P.O.:

SRC Lab # 5083 Sample Type: WATER

NEW HORIZONS

Analyte	Units	Results	Sask. Municipal Max. Acceptable Concentration	Sask. Municipal Aesthetic Objective
Bicarbonate	mg/L	645	none set	none set
Calcium	mg/L	73	none set	none set
Carbonate	mg/L	<1	none set	none set
Chloride	mg/L	19	none set	250
Hydroxide	mg/L	<1	none set	none set
Magnesium	mg/L	22	none set	none set
pH	pH units	8.07	none set	6.5-9.0
Potassium	mg/L	7.7	none set	none set
Sodium	mg/L	382	none set	300 ++
Specific conductivity	uS/cm	2030	none set	none set
Sulfate	mg/L	570	none set	500 ++
Sum of ions	mg/L	1720	none set	none set
Total alkalinity	mg/L	529	none set	500 ++
Total hardness	mg/L	273	none set	800
Nitrate	mg/L	1.9	45	none set
Fluoride	mg/L	0.18	1.5	none set
Total dissolved solids	mg/L	1370	none set	1500

NOTE: These guidelines ONLY apply to drinking water.

All parameters are within the maximum acceptable concentrations for drinking water.

++ Result exceeds the aesthetic objective for drinking water.

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SRC Group: 2008-10500

**SRC ANALYTICAL**

422 Downey Road  
 Saskatoon, Saskatchewan S7N 4N1  
 (306) 933-6932 1-800-240-8808

Town of Unity  
 Box 1030  
 300 1st Ave W.  
 Unity, Saskatchewan S0K 4L0  
 Attn: Jim Dunn

Dec-15-2008

Date Samples Received: Nov-25-2008 Client P.O.:

SRC Lab # 50587 Sample Type: WATER

11/24/2008 TOWN OF UNITY - P.W. SHOP

Analyte	Units	Results	Sask. Municipal Max. Acceptable Concentration	Sask. Municipal Aesthetic Objective
Bicarbonate	mg/L	661	none set	none set
Calcium	mg/L	73	none set	none set
Carbonate	mg/L	<1	none set	none set
Chloride	mg/L	18	none set	250
Hydroxide	mg/L	<1	none set	none set
Magnesium	mg/L	21	none set	none set
pH	pH units	7.82	none set	6.5-9.0
Potassium	mg/L	9.6	none set	none set
Sodium	mg/L	390	none set	300 ++
Specific conductivity	uS/cm	2020	none set	none set
Sulfate	mg/L	530	none set	500 ++
Sum of ions	mg/L	1700	none set	none set
Total alkalinity	mg/L	542	none set	500 ++
Total hardness	mg/L	268	none set	800
Nitrate	mg/L	1.6	45	none set
Aluminum	mg/L	0.0020	none set	none set
Arsenic	ug/L	2.8	25	none set
Barium	mg/L	0.0067	1	none set
Boron	mg/L	0.77	5	none set
Cadmium	mg/L	<0.0001	0.005	none set
Chromium	mg/L	<0.0005	0.05	none set
Copper	mg/L	0.0086	none set	1
Iron	mg/L	0.022	none set	0.3
Lead	mg/L	0.0001	0.01	none set
Manganese	mg/L	0.026	none set	0.05
Selenium	mg/L	0.0002	0.01	none set
Uranium	ug/L	1.1	20	none set

SRC Group: 2008-10500

**SRC ANALYTICAL**

Town of Unity

Dec-15-2008

Date Samples Received: Nov-25-2008 Client P.O.:

SRC Lab # 50587 Sample Type: WATER

11/24/2008 TOWN OF UNITY - P.W. SHOP

Analyte	Units	Results	Sask. Municipal Max. Acceptable Concentration	Sask. Municipal Aesthetic Objective
Zinc	mg/L	0.0051	none set	5
Fluoride	mg/L	0.24	1.5	none set
Total dissolved solids	mg/L	1350	none set	1500

NOTE: These guidelines ONLY apply to drinking water.

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For further information please contact the laboratory.