

**City of Meadow Lake  
Drinking Water Quality and Compliance  
Annual Notice to Consumers 2009**

**Introduction**

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 City of Meadow Lake's water quality and sample submission compliance records for the January 1<sup>st</sup> to December 31<sup>st</sup> 2009 time period. This report was completed on January 6, 2010. Readers should refer to Saskatchewan 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: Website [www.saskh20.ca](http://www.saskh20.ca)

**Water Quality Standards**

**Bacteriological Quality**

Parameter	Limit	Regular samples required	Regular Samples Submitted	# of Positive samples
Total Bacteria and Background Bacteria	Organisms/100 mL	156	156	4
	Less than 200/100 mL	156	156	4

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

Parameter	Minimum (mg/L)	Test Range Level	# Tests Performed	# Tests Not Meeting Requirements
Chlorine Residual	0.1 mg/L free or 0.5 mg/L total	0.5 – 2.5 mg/L free	156	0

**Water Disinfection – Free Chlorine Residual for Water Entering Distribution System – From Water Treatment Plant Records**

Parameter	Minimum (mg/L)	Test Range Level	# Tests Performed	# Tests Not Meeting Requirements
Free Chlorine Residual	0.1 mg/L	1.0 – 2.5 mg/L	>365	0

**Turbidity**

Parameter	Limit (NTU)	Test Level Range (NTU)	# of Tests Not Meeting Requirements	# of Tests
Turbidity	0.3	0.065 – 0.46	3%	Continuous Monitoring

### Chemical – Trihalomethanes

Parameter	Limit (mg/L)	SampleResult (average)	# Samples Required	# Samples Submitted
Trihalomethanes	0.1	0.22	8	8

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

### Chemical – Health Category

All waterworks serving 5000 persons or more are required to submit water samples for Saskatchewan Environment's "Chemical Health" based on population size. The "Chemical Health" category includes analysis for arsenic, barium, boron, cadmium, chromium, fluoride, lead, nitrate, selenium and uranium. Sample results indicated that the provincial drinking water quality standards were not exceeded.

Parameter	Limit MAC (mg/L)	Limit IMAC (mg/L)	Sample Results (mg/L)	# Samples Exceeding Limit	# Samples Required	# Sample Submitted
Arsenic	0.025		0.001	None	1	1
Barium	1.0		0.041	None	1	1
Boron		5.0	0.04	None	1	1
Cadmium	0.005		<0.0001	None	1	1
Chromium	0.05		<0.0005	None	1	1
Fluoride (avg*)	1.5		0.62	None	52	50
Lead	0.01		0.0009	None	1	1
Nitrate (avg*)	45.0		0.30	None	1	1
Selenium	0.01		0.0001	None	1	1
Uranium	0.02		0.0005	None	1	1

\* Results expressed as average values for communities or waterworks which fluoridate drinking water supplies or those with elevated concentrations of fluoride or nitrates.

### Chemical – Pesticides

All waterworks serving 5000 persons or more are required to submit water samples for Saskatchewan Environment's "Pesticides" category. The frequency of sample submission depends on the number of persons supplied by the waterworks. The "Pesticides" category includes analysis for atrazine, bromoxynil, carbofuran, chlorpyrifos, dicamba, 2,4-D, diclofop-methyl, dimethoate, malathion, pentachlorophenol, picloram and trifluralin. Samples were submitted in 2008 and are required to be resubmitted in 2010.

Parameter	Limit MAC (mg/L)	Sample Results (mg/L)	# Samples Exceeding Limit	# Samples Required	# Sample Submitted
Atrazine	0.005	<0.002	None	1	1
Bromoxynil	0.005	<0.0005	None	1	1
Carbofuran	0.09	<0.002	None	1	1

Chlorpyrifos	0.09	<0.002	None	1	1
Dicamba	0.12	<0.0005	None	1	1
2,4-D	0.10	<0.0005	None	1	1
Diclofop-Methyl	0.009	<0.001	None	1	1
Dimethoate	0.02	<0.005	None	1	1
Malathion	0.19	<0.002	None	1	1
Picloram	0.19	<0.001	None	1	1
Trifluralin	0.045	<0.001	None	1	1
Pentachlorophenol	0.06	<0.0005	None	1	1

#### **Chemical – Cyanide and Mercury**

<b>Parameter</b>	<b>LIMIT MAC (mg/L)</b>	<b>Sample Results (mg/L)</b>	<b># Samples Exceeding Limit</b>	<b># Samples Required</b>	<b># Sample Submitted</b>
Cyanide	0.2	0.002	None	1	1
Mercury	0.001	<0.0005	None	1	1

#### **Chemical – Synthetic Organic Chemicals**

All waterworks serving 5000 persons or more are required to submit water samples for Saskatchewan Environment's "Synthetic Organic Chemicals" category. The frequency of sample submission depends on the number of persons supplied by the waterworks. The "Synthetic Organic Chemicals" category includes analysis for Benzene, Benzo(a)pyrene, Carbon tetrachloride, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichloroethane, 1,1-Dichloroethylene, Dichloromethane, 2,4-Dichlorophenol, Monochlorobenzene, 2,3,4,6-Tetrachlorophenol, Trichloroethylene, 2,4,6-Trichlorophenol and Vinyl Chloride. Samples were submitted in 2008 and are required to be resubmitted in 2010.

<b>Parameter</b>	<b>LIMIT MAC (ug/L)</b>	<b>Sample Results (ug/L)</b>	<b># Samples Exceeding Limit</b>	<b># Samples Required</b>	<b># Sample Submitted</b>
Benzene		<0.2	None	1	1
Benzo(a)pyrene		<0.01	None	1	1
Carbontetrachloride		<0.05	None	1	1
dichlorobenzene		<0.5	None	1	1
1,4-Dichlorobenzene		<0.5	None	1	1
1,2 - Dichloroethane		<0.5	None	1	1
1,1 - Dichloroethylene		<0.5	None	1	1
Dichloromethane		<0.5	None	1	1
2,4 Dichlorophenol		<0.2	None	1	1
Ethylbenzene		<0.2	None	1	1
Monochlorobenzene		<0.5	None	1	1
2,3,4,6 Tetrachlorophenol		<0.5	None	1	1
toluene		<0.2	None	1	1
Trichloroethylene		<0.5	None	1	1
2,4,6 Trichlorophenol		<0.2	None	1	1
Vinyl chloride		<0.5	None	1	1
Xylene		<0.2	None	1	1
NTA		<0.1	None	1	1

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

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