

**Town of Shaunavon**  
**Annual Notice to Consumers**  
**Drinking Water Quality and Compliance**  
**2020 Calendar Year**

**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 Permit to Operate a waterworks. The following is a summary of the *Town of Shaunavon* water quality and sample submission compliance record for the 2019 calendar year. This report was completed on Jan 5 2021. Readers should refer to Water Security Agency's Municipal Drinking Water Quality Monitoring Guidelines, March 2016, EPB 202 for more information on minimum sample submission requirements and the meaning of each 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).

**1. 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	<u>52</u>	<u>0 (0%)</u>

**2. 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>0.17 – 3.26</u>	<u>0.12 – 2.16</u>	<u>52</u>	<u>52</u>	<u>52 (100%)</u>

**3. Water Disinfection - Chlorine Residual in Distribution System for Test Results taken daily.**

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>0.00-5.61</u>	<u>0.00-5.37</u>	<u>1324</u>	<u>1324</u>	<u>1258 (95%)</u>

*A minimum of 0.1 milligrams per litre (mg/L) free chlorine residual OR 0.5 milligrams per litre (mg/L) is required for water throughout 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 and total chlorine residual tests performed, the overall range of free and total chlorine residual (highest and lowest recorded values for the calendar year) and the number of tests and percentage of results not meeting the minimum requirement.*

4. **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	0.14-3.34	5	3.34	1324	1324

5. **General Chemical**

Parameter	Aesthetic Objective* Mg/l	Well 1	Well 2	Well 5	Well 6	Well 7	Well 8	Well 9	Well 10
Alkalinity	500	262	345	453	494	587	351	426	487
Bicarbonate	No Objective	314	418	553	603	712	398	520	587
Calcium	No Objective	19	19	55	27	13	4.0	32	11
Carbonate	No Objective	3.0	1.0	0.0	0.0	2.0	15	0.0	4.0
Chloride	250	4.4	8.2	9.2	3.6	3.3	2.9	2.9	3.4
Conductivity	No Objective	761	975	1386	1264	1476	997	1095	1211
Hardness	800	85	80	244	117	53	14	154	48
Magnesium	200	9	8.0	26	12	5	<1	18	5.0
pH	No Objective	8.4	8.3	8.1	8.1	8.3	8.7	8.0	8.4
Sodium	300	149	207	250	275	365	243	215	294
Sulphate	500	131.1	161.1	299.3	196.9	222.1	166.6	171.1	168.1
Total Dissolved Solids	1500	635	828	1200	1124	1328	833	966	1078

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 Town of Shaunavon is required submit a sample from each production well.

The last sample for General Chemical analysis was required in the 2019 calendar year and submitted on June 26, 2019. Samples exceeded provincial aesthetic objectives for the General Chemical category for the parameters highlighted.

\*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.

## 6. **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 Town of Shaunavon is required submit a sample from each production well.

The last sample for Chemical Health analysis was submitted on June 26, 2019. Sample results indicated that the provincial drinking water quality standards were not exceeded.

Parameter	Limit MAC Mg/l	Limit IMAC Mg/l	Well 1	Well 2	Well 5	Well 6	Well 7	Well 8	Well 9	Well 10
Arsenic	0.01		0.0005	0.0001	0.0001	0.0002	0.0001	0.0001	0.0002	0.0001
Barium	1.0		0.041	0.028	0.019	0.0188	0.014	0.0268	0.0206	0.0191
Boron		5.0	<0.1	0.1	0.2	0.3	0.3	0.1	0.4	0.3
Cadmium	0.005		<0.00015	<0.00015	<0.00015	<0.00015	<0.00015	<0.00015	<0.00015	<0.00015
Chromium	0.05		<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019
Fluoride	1.5		0.12	0.14	0.19	0.21	0.11	0.14	0.05	0.15
Lead	0.01		0.0003	0.0002	<0.00005	0.0001	0.0003	0.0001	0.0007	0.0004
Nitrate	45.0		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Selenium	0.01		<0.00113	<0.00113	<0.00113	<0.00113	<0.00113	<0.00113	<0.00113	<0.00113
Uranium	0.02		<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011	<0.00011

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

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Box 820  
Shaunavon, Sk.  
S0N 2M0



Saskatchewan  
Ministry of  
Environment

