

**TABLE 3-5  
COUNTRY ROCK GROUNDWATER QUALITY**

Parameters	Units	MDL	CDWQG	ODWS	Country Rock (9 Samples) 75th Percentile
Chloride	(mg/L)	0.1	250 (AO)	250 (AO)	<b>727</b>
Conductivity	(µs/cm)	1			3020
Hardness (CaCO <sub>3</sub> )	(mg/L)	0.3		80-100 (OG)	<b>657.0</b>
Nitrate as N	(mg/L)	0.1		10 <sup>+</sup>	<0.1
Nitrite as N	(mg/L)	0.1		1	<0.1
PH			6.5-8.5	6.5-8.5	7.56
Sulphate	(mg/L)	0.1	500(AO) <sup>++</sup>	500(AO) <sup>++</sup>	380
Total alkalinity (CaCO <sub>3</sub> )	(mg/L)	1		30-500 (OG)	208
Total dissolved solids (Theo)	(mg/L)	10	500 (AO)	500 (AO)	<b>2090</b>
Total phosphorus	(mg/L)	0.01			0.09
Carbonate	(mg/L)	1			<1
Bicarbonate	(mg/L)	1			241.25
Anion sum	meq				32.5
Cation sum	meq				32.6
Ion balance (%)	(%)				1.47
Aluminum	(mg/L)	0.005	0.10(OG)	0.10 (OG)	0.011
Antimony	(mg/L)	0.001	0.006		<0.001
Arsenic	(mg/L)	0.001	0.025 *	0.025 *	<0.001
Barium	(mg/L)	0.005	1.0	1.0	0.018
Boron	(mg/L)	0.01	5.0 *	5.0 *	1.05
Cadmium	(mg/L)	0.0001	0.005	0.005	<0.0001
Calcium	(mg/L)	0.05			105.00
Chromium	(mg/L)	0.001	0.05	0.05	0.001
Cobalt	(mg/L)	0.0005			<0.0005
Copper	(mg/L)	0.001	1.0 (AO)	1.0 (AO)	<0.001
Iron	(mg/L)	0.01	0.30 (AO)	0.30 (AO)	0.240
Lead	(mg/L)	0.001	0.01	0.01	<0.001
Magnesium	(mg/L)	0.05			95.80
Manganese	(mg/L)	0.005	0.05(AO)		0.009
Mercury	(mg/L)	0.0001	0.001	0.001	<0.0001
Molybdenum	(mg/L)	0.005			<0.005
Nickel	(mg/L)	0.005			<0.005
Potassium	(mg/L)	0.05			18.0
Selenium	(mg/L)	0.001	0.010		<0.001
Silicon	(mg/L)	0.05			4.66
Sodium	(mg/L)	0.05	200 (AO) <sup>++</sup>	200 (AO) <sup>+++</sup>	<b>448</b>
Zinc	(mg/L)	0.005	5.0 (AO)	5.0 (AO)	<0.005

Note: Anomalous values no included in Observed Range, Mean, and 75th Percentile calculations

CDWQG: Canadian Directory Water Quality Guideline

ODWS: Ontario Drinking Water Standards

(OG) Operational Guideline

(AO): Aesthetic Objective

+: Where nitrate and nitrite are both present, the total of the two should not exceed 10 mg/L (as nitrogen)

\*: Interim Maximum Acceptable concentration. All other ODWS are Maximum Acceptable concentrations

++: When sulphate levels exceed 500 mg/L, water may have a laxative effect on some people

+++ : Local Medical Officer of health should be notified when sodium concentration exceeds 20 mg/L, so that physicians caring for patients on sodium-restricted diets may be informed

**Bold** Above ODWS and/or CDWQG. ODWS/CDWQG values are for general comparison purposes only. Drinking water regulation (and therefore ODWS) does not apply