

**TABLE 3-7**  
**SHALLOW GROUNDWATER QUALITY AND SURFACE WATER QUALITY (75th Percentile)**

Lab # Sample ID Date Collected	Unit	MDL	CEQG PAL	PWQO	CDWQG	ODWS	S2003-01902 V-03-327E (03/03/03)	S2003-07289 V-03-295E (14/07/03)	S2003-07290 V-03-323E (14/07/03)	S2003-07291 V-03-325E (14/07/03)	S2003-07292 V-03-327E (14/07/03)	S2003-07293 V-03-290E (14/07/03)	North Granny Creek	South Granny Creek
<b>Parameters</b>														
Ammonia	(mg/L)	0.01					-	0.34	0.02	0.81	0.43	0.58	0.251	0.098
Un-ionized ammonia	(mg/L)	0.001					-	0.003	<0.001	0.003	0.002	0.004		
Conductivity	(µs/cm)	1					558	603	551	550	530	543	88	69
Hardness (CaCO <sub>3</sub> )	(mg/L)	0.3			80-100(OG)		290	276	256	271	238	236	38.0	36
Nitrate as N	(mg/L)	0.1				10 <sup>+</sup>	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	(mg/L)	0.1				1 <sup>+</sup>	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH			6.5-9.0	6.5-8.5	6.5-8.5	6.5-8.5	7.83	7.32	7.26	7.07	7.17	7.23	6.55	6.48
Sulphate	(mg/L)	0.1			500(AO)**	500(AO)**	1	0.6	2.5	3.4	1.8	0.2	0.2	0.1
Total Alkalinity (CaCO <sub>3</sub> )	(mg/L)	1				30-500(OG)	315	359	326	335	318	317	45	34
Total dissolved solids	(mg/L)	10			500(AO)	500(AO)	385	351	341	392	354	346	103	104
Bromide	(mg/L)	0.1					0.1	<0.1	<0.1	<0.1	<0.1	<0.1		
Chloride	(mg/L)	0.1				250(AO)	7.1	3.4	3.2	2.0	1.7	5.0	5.3	3.7
Fluoride	(mg/L)	0.1					-	0.2	0.2	<0.1	0.2	0.2		
Total phosphorus	(mg/L)	0.01		0.03 <sup>1</sup>			0.03	0.03	0.04	0.06	0.07	0.18	0.04	0.04
Total suspended solids	(mg/L)	2					1720	4170	3710	8430	2850	475	8	5
Cation sum	(meq)						6.09	6.33	5.67	5.56	5.11	5.44		
Anion sum	(meq)						6.51	7.29	6.68	6.83	6.44	6.49		
Ion balance	(%)						-3.35	7.04	-8.24	-10.2	-11.5	-8.72		
<b>Filtered Metals</b>														
Aluminum	(mg/L)	0.005		0.075*	0.10 (OG)	0.1(OG)	0.005	<0.005	0.007	0.008	<0.005	0.015	0.064	0.048
Arsenic	(mg/L)	0.001		0.1	0.025 <sup>1</sup>	0.025**	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	(mg/L)	0.005			1.0		0.064	0.170	0.090	0.031	0.066	0.106		
Boron	(mg/L)	0.02		0.2 <sup>1</sup>	5.0 <sup>1</sup>		0.06	0.10	0.07	0.02	0.02	0.08		
Cadmium	(mg/L)	0.0001		0.0002	0.005	0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium	(mg/L)	0.05					77.8	62.6	82.5	114	89.4	72.5	12.33	9.9
Chromium	(mg/L)	0.001		0.0089	0.05	0.05	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001
Cobalt	(mg/L)	0.0005		0.0009			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper	(mg/L)	0.001		0.005	1.0(AO)	1.0(AO)	<0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	(mg/L)	0.01		0.30	0.30(AO)	0.3(AO)	0.07	<0.01	<0.01	0.07	<0.01	0.02	1.32	1.26
Lead	(mg/L)	0.001		0.01	0.01	0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium	(mg/L)	0.05					8.34	31.8	18.4	6.12	12.5	19.5	2.25	2.46
Manganese	(mg/L)	0.005			0.05(AO)		0.037	0.120	0.023	0.088	<0.005	0.057	0.13	0.057
Mercury	(mg/L)	0.0001		0.0002*	0.001	0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	(mg/L)	0.005		0.025			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Potassium	(mg/L)	0.05					2.17	12.8	6.42	0.90	3.77	8.00	0.34	0.65
Sodium	(mg/L)	0.05			200 (AO), (20) <sup>2</sup>	200 (AO), (20) <sup>2</sup>	4.12	9.81	7.91	2.31	5.72	11.4	6.19	4.4
Zinc	(mg/L)	0.005		0.03	5.0(AO)	5.0(AO)	<0.005	<0.005	0.050	<0.005	<0.005	<0.005	0.006	0.006

NOTE: Anomalous values not included in Observed Range, Mean, and 75th Percentile calculations.

CEQG PAL: Canadian Environmental Water Quality Guidelines for the Protection of Aquatic Life

CDWQG: Canadian Drinking Water Quality Guidelines

OG: Operational Guideline

AO: Aesthetic Objective

PWQO: Provincial Water Quality Objectives

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)

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

<sup>1</sup> Interim PWQO

\* PWQO is based on a filtered sample. PWQO for aluminum is an interim value.

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

Note 2 The lower ODWS for sodium is for persons on a sodium restricted diet. 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.