

Sampling Results Aug. 4, 2014, Quesnel Lake by site compared to Aquatic Life Guidelines

Parameter	Units	Quesnel Lk North Shore East of Cedar Creek	Quesnel Lk, North Shore, West of 4 Cabins	Quesnel R @ Likely Townsite	BC Aquatic Life Guidelines	
					Chronic	Acute
pH	pH units	7.79	7.81	7.82		6.5-9.0
Conductivity	µS/cm	94.5	94.8	95.3		
Turbidity	NTU	0.18	0.18	0.19		Change of 5
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	Change of 5	Change of 25
Total Dissolved Solids	mg/L					
Hardness - Total	mg/L	50.5	46.4	45.8		
Hardness - Dissolved	mg/L	45.3	45.1	47		
Microbiology						
E.coli	CFU/100mL	1	<1	1		
General Inorganics						
Alkalinity Total (CaCO ₃)	mg/L	44.1	43.5	43.8		
Anions						
Bromide - Dissolved	mg/L					
Chloride -Dissolved	mg/L				150	600
Sulphate	mg/L				218	
Nutrients						
Total Kjeldahl Nitrogen	mg/L					
Total Nitrogen	mg/L					
Total Organic Nitrogen	mg/L					
Ammonia Nitrogen	mg/L				1	2.5
Nitrate+Nitrite	mg/L				1.07	7.82
Nitrate Nitrogen	mg/L				3	32.8
Nitrite Nitrogen	mg/L				0.02	0.06
Total Phosphorus	mg/L					0.005 - 0.015
Total Metals						
Aluminum	µg/L	20.7	12.3	13.7		
Antimony	µg/L	<0.5	<0.5	<0.5		20
Arsenic	µg/L	<0.1	0.11	0.14		5
Barium	µg/L	5.5	5	5.3	1000	5000
Beryllium	µg/L	<0.1	<0.1	<0.1	5.3	
Bismuth	µg/L	<1.0	<1.0	<1.0		
Boron	µg/L	<50	<50	<50		1200
Cadmium	µg/L	<0.010	<0.010	<0.010		0.002
Calcium	mg/L	16.9	15.6	15.4		
Chromium	µg/L	<1.0	<1.0	<1.0		1
Cobalt	µg/L	<0.5	<0.5	<0.5	4	110
Copper	µg/L	<0.5	0.65	0.57	2	7
Iron	µg/L	24	<10	16		1000
Lead	µg/L	<0.20	<0.20	<0.20	21	4
Lithium	µg/L	N/A	<5.0	<5.0	14	870
Magnesium	mg/L	2	1.81	1.78		
Manganese	µg/L	1.1	1	1.2	800	1100
Mercury	µg/L	N/A	<0.01	<0.01	0.02	0.1
Molybdenum	µg/L	<1.0	<1.0	<1.0	1000	2000
Nickel	µg/L	<1.0	<1.0	<1.0		25
Phosphorus	µg/L	<10	<10	<10		
Potassium	mg/L	0.509	0.518	0.469		373
Selenium	µg/L	0.17	0.15	0.17	2	

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					Chronic	Acute
Silicon	µg/L	1850	1660	1670		
Silver	µg/L	<0.02	<0.02	<0.02	0.05	0.1
Sodium	mg/L	0.905	0.877	0.847		
Strontium	µg/L	116	108	113		
Sulfur	mg/L	<3.0	<3.0	<3.0		
Tellurium	µg/L					
Thallium	µg/L	<0.05	<0.05	<0.05		0.3
Tin	µg/L	<5.0	<5.0	<5.0		
Titanium	µg/L	<5.0	<5.0	<5.0		2000
Uranium	µg/L	0.14	0.14	0.13		300
Vanadium	µg/L	<5.0	<5.0	<5.0		6
Zinc	µg/L	<5.0	<5.0	<5.0	0.033	0.75
Zirconium	µg/L	<0.5	N/A	N/A		
Dissolved Metals						
Aluminum	µg/L	12.3	10	11.1	50	100
Antimony	µg/L	<0.5	<0.5	<0.5		
Arsenic	µg/L	0.11	0.11	0.13		
Barium	µg/L	5	4.8	5.2		
Beryllium	µg/L	<0.1	<0.1	<0.1		
Bismuth	µg/L	<1.0	<1.0	<1.0		
Boron	µg/L	<50	<50	<50		
Cadmium	µg/L	<0.01	<0.01	<0.01		
Calcium	mg/L	15.1	15.1	15.7		
Chromium	µg/L	<1.0	<1.0	<1.0		
Cobalt	µg/L	<0.5	<0.5	<0.5		
Copper	µg/L	0.79	0.71	0.5		
Iron	µg/L	<5.0	<5.0	<5.0		350
Lead	µg/L	<0.2	<0.2	<0.2		
Lithium	µg/L	<5.0	<5.0	<5.0		
Magnesium	mg/L	1.85	1.8	1.92		
Manganese	µg/L	<1.0	<1.0	<1.0		
Mercury	µg/L	N/A	<0.010	<0.010		
Molybdenum	µg/L	<1.0	<1.0	<1.0		
Nickel	µg/L	<1.0	<1.0	<1.0		
Phosphorus	µg/L	<10	<10	<10		
Potassium	mg/L	0.471	0.475	0.485		
Selenium	µg/L	0.17	0.11	0.14		
Silicon	µg/L	1530	1600	1670		
Silver	µg/L	<0.02	<0.02	<0.02		
Sodium	mg/L	0.803	0.845	0.862		
Strontium	µg/L	110	104	113		
Sulfur	mg/L	3.8	<3.0	<3.0		
Thallium	µg/L	<0.05	<0.05	<0.05		
Tin	µg/L	<5.0	<5.0	<5.0		
Titanium	µg/L	<5.0	<5.0	<5.0		
Uranium	µg/L	0.12	0.12	0.13		
Vanadium	µg/L	<5.0	<5.0	<5.0		
Zinc	µg/L	<5.0	<5.0	<5.0		
Zirconium	µg/L	N/A	N/A	N/A		