Kalamalka Lake Intake Water Quality 2022

Water System: Greater Vernon Water

Source: Kalamalka Lake

Sampling Point: Kal Intake

Date of Sample: 7/12/2021



		Canadian Drinking Water Guidelines	
Anions	Results (mg/L)	Maximum Acceptable Concentration (MAC)	Aesthetic Objective (AO) Operational Guideline (OG)
Chloride	9.99	•	<250
Fluoride	0.34	1.5	
Nitrate (As N)	0.058	10	
Nitrite (as N)	<0.010	1	
Sulphate	51.4		<u><</u> 500
General Parameters	Results (mg/L)	Maximum Acceptable Concentration (MAC)	Aesthetic Objective (AO) Operational Guideline (OG)
Alkalinity, Bicarbonate (as CaCO3)	176	N/A	
Alkalinity, Carbonate (as CaCO3)	<1.0	N/A	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	
Alkalinity, Total (as CaCO3)	176	N/A	
Carbon, Dissolved Organic	3.48	N/A	
Carbon, Total Organic	3.8	N/A	
Chlorophyll a	3.5	N/A	
Colour, True	<5.0	N/A	<15 TCU
Conductivity (EC)	403	N/A	
Cyanide, Total	< 0.0020	0.2	
Nitrogen, Total Kjeldahl	0.267	N/A	
pH	8.2	N/A	7.0 - 10.5
Phosphorus, Total (as P)	0.0155	N/A	
Phosphorus, Total Dissolved	0.0143	N/A	
Turbidity	0.72		OG <1
UV Transmittance @ 254nm	89.9	N/A	
Calculated Parameters	Results (mg/L)	Maximum Acceptable Concentration (MAC)	Aesthetic Objective (AO) Operational Guideline (OG)
Hardness, Total	177		• , ,
	177	N/A	
Total Dissolved Solids	222	N/A	<u>≤</u> 500
Total Dissolved Solids Total Metals		Maximum Acceptable Concentration (MAC)	≤500 Aesthetic Objective (AO) Operational Guideline (OG)
	222	Maximum Acceptable	Aesthetic Objective (AO)
Total Metals	222 Results (mg/L unless noted)	Maximum Acceptable Concentration (MAC)	Aesthetic Objective (AO) Operational Guideline (OG)
Total Metals Aluminum, total	222 Results (mg/L unless noted) 0.0067	Maximum Acceptable Concentration (MAC) N/A	Aesthetic Objective (AO) Operational Guideline (OG)
Total Metals Aluminum, total Antimony, total	222 Results (mg/L unless noted) 0.0067 < 0.00020	Maximum Acceptable Concentration (MAC) N/A 0.006	Aesthetic Objective (AO) Operational Guideline (OG)
Total Metals Aluminum, total Antimony, total Arsenic, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01	Aesthetic Objective (AO) Operational Guideline (OG)
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1	Aesthetic Objective (AO) Operational Guideline (OG)
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5	Aesthetic Objective (AO) Operational Guideline (OG)
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.000010	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005	Aesthetic Objective (AO) Operational Guideline (OG)
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.000010 39.1	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A	Aesthetic Objective (AO) Operational Guideline (OG)
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.000010 39.1 <0.00050	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05	Aesthetic Objective (AO) Operational Guideline (OG)
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total Cobalt, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.000010 39.1 <0.00050 < 0.00010	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05 N/A	Aesthetic Objective (AO) Operational Guideline (OG) OG <0.1
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total Cobalt, total Copper, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.000010 39.1 <0.00050 < 0.00010 0.00262	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05 N/A 2	Aesthetic Objective (AO) Operational Guideline (OG) OG ≤0.1
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total Cobalt, total Copper, total Iron, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.000010 39.1 <0.00050 < 0.00010 0.00262 < 0.010	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05 N/A 2 N/A	Aesthetic Objective (AO) Operational Guideline (OG) OG <0.1
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total Cobalt, total Copper, total Iron, total Lead, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.000010 39.1 <0.00050 < 0.00010 0.00262 < 0.010 < 0.00020	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05 N/A 2 N/A 0.005	Aesthetic Objective (AO) Operational Guideline (OG) OG <0.1
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total Cobalt, total Copper, total Iron, total Lead, total Magnesium, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.000010 39.1 <0.00050 < 0.00010 0.00262 < 0.010 < 0.00020 19.2	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05 N/A 2 N/A 0.005 N/A 0.005 N/A	Aesthetic Objective (AO) Operational Guideline (OG) OG ≤0.1 <1 ≤0.3
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total Cobalt, total Copper, total Iron, total Lead, total Magnesium, total Manganese, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.000010 39.1 <0.00050 < 0.00010 0.00262 < 0.010 < 0.00020 19.2 0.0041	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05 N/A 2 N/A 0.005 N/A 0.005 N/A 0.12	Aesthetic Objective (AO) Operational Guideline (OG) OG ≤0.1 <1 ≤0.3
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total Chromium, total Copper, total Iron, total Lead, total Magnesium, total Manganese, total Mercury, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.000010 39.1 <0.00050 < 0.00010 0.00262 < 0.010 < 0.00020 19.2 0.0041 < 0.000010	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05 N/A 2 N/A 0.005 N/A 0.005 N/A 0.010 0.005 N/A 0.005 0.001	Aesthetic Objective (AO) Operational Guideline (OG) OG ≤0.1 <1 ≤0.3
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total Cobalt, total Copper, total Iron, total Lead, total Magnesium, total Manganese, total Mercury, total Molybdenum, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.000010 39.1 <0.00050 < 0.00010 0.00262 < 0.010 < 0.00020 19.2 0.0041 < 0.000010 <0.000010 <0.000010	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05 N/A 2 N/A 0.005 N/A 0.005 N/A 0.001 N/A 0.005 N/A 0.005 N/A	Aesthetic Objective (AO) Operational Guideline (OG) OG ≤0.1 <1 ≤0.3
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total Cobalt, total Copper, total Iron, total Lead, total Magnesium, total Magnese, total Mercury, total Molybdenum, total Nickel, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.000010 39.1 <0.00050 < 0.00010 0.00262 < 0.010 < 0.00020 19.2 0.0041 < 0.000010 <0.000010 <0.000010 <0.000010 <0.000010 <0.000010	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05 N/A 2 N/A 0.005 N/A 0.005 N/A 0.001 N/A 0.005 N/A 0.005 N/A 0.005 N/A 0.005 N/A	Aesthetic Objective (AO) Operational Guideline (OG) OG ≤0.1 <1 ≤0.3
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total Cobalt, total Copper, total Iron, total Lead, total Magnesium, total Marcury, total Molybdenum, total Nickel, total Potassium, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.00010 39.1 <0.00050 < 0.00010 0.00262 < 0.010 < 0.00020 19.2 0.0041 < 0.000010 <0.000010 <0.000010 <0.000010 <0.000010 <0.000010 <0.000010 <0.000010 <0.000010 <0.000010 <0.000010	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05 N/A 2 N/A 0.005 N/A 0.005 N/A 0.001 N/A 0.005 N/A 0.005 N/A 0.005 N/A 0.005 N/A 0.005 N/A 0.005 N/A 0.006 N/A 0.007	Aesthetic Objective (AO) Operational Guideline (OG) OG ≤0.1 <1 ≤0.3
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total Cobalt, total Copper, total Iron, total Lead, total Magnesium, total Manganese, total Mercury, total Mickel, total Potassium, total Selenium, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.00010 39.1 <0.00050 < 0.00010 0.00262 < 0.010 < 0.00020 19.2 0.0041 < 0.000010 <0.000010 <0.000010 <0.000010 <0.000010 <0.000010 <0.00010 <0.00010 <0.00010 <0.00010 <0.00010	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05 N/A 0.12 0.001 N/A N/A N/A N/A N/A N/A N/A N/	Aesthetic Objective (AO) Operational Guideline (OG) OG ≤0.1 <1 ≤0.3 <0.02
Total Metals Aluminum, total Antimony, total Arsenic, total Barium, total Boron, total Cadmium, total Calcium, total Chromium, total Cobalt, total Copper, total Iron, total Lead, total Magnesium, total Magnese, total Mercury, total Mickel, total Potassium, total Selenium, total Selenium, total	222 Results (mg/L unless noted) 0.0067 < 0.00020 0.00086 0.0268 < 0.0500 < 0.00010 39.1 <0.00050 < 0.00010 0.00262 < 0.010 < 0.00020 19.2 0.0041 < 0.000010 <0.000010 <0.000010 <0.000010 <19.2 0.0041 < 0.000010 <0.000010 <19.2 0.00011 17.5	Maximum Acceptable Concentration (MAC) N/A 0.006 0.01 1 5 0.005 N/A 0.05 N/A 0.005 N/A 0.12 0.001 N/A N/A N/A N/A N/A N/A N/A N/	Aesthetic Objective (AO) Operational Guideline (OG) OG ≤0.1 <1 ≤0.3 <0.02

Notes: No current Guideline ; Reference Health Canada

Hardness - no guideline - "Hardness Levels between 80 and 100 mg/L as CaCo3 are considered acceptable; levels greater than 200 are considered poor but can be tolerated; those in excess of 500 are normally considered unacceptable.

Turbidity - 1 NTU when disinfection required; <5 NTU aesthetic clarity

[&]quot;<" = less than detection limit shown

[&]quot;>" = greater than upper range limit shown

[&]quot; α " = less than number shown (Detected)

[&]quot;»" = greater than number shown (Detected)

^{*} Criteria Exceeded