

CERTIFICATE OF ANALYSIS

REPORTED TO	Glenmore Ellison Improvement District 445 Glenmore Road KELOWNA, BC V1V 1Z6	WORK ORDER	25J2423
ATTENTION	Chris Mackay	RECEIVED / TEMP REPORTED	2025-10-17 11:33 / 8.1°C 2025-10-29 16:56
PO NUMBER		COC NUMBER	eCOC#00028946
PROJECT	Drinking Water		
PROJECT INFO	Comprehensive Samples - Okanagan Lake Source		

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO/IEC 17025:2017 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks



You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry



It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve



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If you have any questions or concerns, please contact me at hhannaoui@caro.ca

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TEST RESULTS

REPORTED TO PROJECT Glenmore Ellison Improvement District
Drinking Water

WORK ORDER REPORTED 25J2423
2025-10-29 16:56

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Okanagan Lake P/S (RAW) (25J2423-01) | Matrix: Water | Sampled: 2025-10-17 10:15

Anions

Chloride	6.44	AO ≤ 250	0.10	mg/L	2025-10-18	
Fluoride	0.14	MAC = 1.5	0.10	mg/L	2025-10-18	
Nitrate (as N)	< 0.010	MAC = 10	0.010	mg/L	2025-10-18	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2025-10-18	
Sulfate	30.5	AO ≤ 500	1.0	mg/L	2025-10-18	

General Parameters

Alkalinity, Total (as CaCO ₃)	133	N/A	1.0	mg/L	2025-10-17	
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-10-17	
Alkalinity, Bicarbonate (as CaCO ₃)	133	N/A	1.0	mg/L	2025-10-17	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-10-17	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-10-17	
Conductivity (EC)	306	N/A	2.0	µS/cm	2025-10-17	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2025-10-18	
pH	8.06	7.0-10.5	0.10	pH units	2025-10-17	HT2
Turbidity	0.26	OG < 1	0.10	NTU	2025-10-17	

Total Metals

Aluminum, total	0.0056	OG < 0.1	0.0050	mg/L	2025-10-20	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2025-10-20	
Arsenic, total	0.00051	MAC = 0.01	0.00050	mg/L	2025-10-20	
Barium, total	0.0223	MAC = 2	0.0050	mg/L	2025-10-20	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2025-10-20	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2025-10-20	
Calcium, total	34.9	None Required	0.20	mg/L	2025-10-20	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2025-10-20	
Copper, total	0.00105	MAC = 2	0.00040	mg/L	2025-10-20	
Iron, total	< 0.010	AO ≤ 0.1	0.010	mg/L	2025-10-20	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2025-10-20	
Magnesium, total	10.1	None Required	0.010	mg/L	2025-10-20	
Manganese, total	0.00110	MAC = 0.12	0.00020	mg/L	2025-10-20	
Potassium, total	2.61	N/A	0.10	mg/L	2025-10-20	
Selenium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2025-10-20	
Sodium, total	12.3	AO ≤ 200	0.10	mg/L	2025-10-20	
Strontium, total	0.284	MAC = 7	0.0010	mg/L	2025-10-20	
Uranium, total	0.00254	MAC = 0.02	0.000020	mg/L	2025-10-20	
Zinc, total	< 0.0040	AO ≤ 5	0.0040	mg/L	2025-10-20	

UV Plant (PRE UV - RAW) Sink (25J2423-02) | Matrix: Water | Sampled: 2025-10-17 10:40

Anions

Chloride	6.57	AO ≤ 250	0.10	mg/L	2025-10-18	
Fluoride	0.15	MAC = 1.5	0.10	mg/L	2025-10-18	

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UV Plant (PRE UV - RAW) Sink (25J2423-02) | Matrix: Water | Sampled: 2025-10-17 10:40, Continued

Anions, Continued

Nitrate (as N)	< 0.010	MAC = 10	0.010 mg/L	2025-10-18	
Nitrite (as N)	< 0.010	MAC = 1	0.010 mg/L	2025-10-18	
Sulfate	30.1	AO ≤ 500	1.0 mg/L	2025-10-18	

General Parameters

Alkalinity, Total (as CaCO ₃)	128	N/A	1.0 mg/L	2025-10-17	
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2025-10-17	
Alkalinity, Bicarbonate (as CaCO ₃)	128	N/A	1.0 mg/L	2025-10-17	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2025-10-17	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0 mg/L	2025-10-17	
Conductivity (EC)	308	N/A	2.0 µS/cm	2025-10-17	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020 mg/L	2025-10-18	
pH	7.76	7.0-10.5	0.10 pH units	2025-10-17	HT2
Turbidity	0.21	OG < 1	0.10 NTU	2025-10-17	

Total Metals

Aluminum, total	< 0.0050	OG < 0.1	0.0050 mg/L	2025-10-20	
Antimony, total	< 0.00020	MAC = 0.006	0.00020 mg/L	2025-10-20	
Arsenic, total	0.00053	MAC = 0.01	0.00050 mg/L	2025-10-20	
Barium, total	0.0225	MAC = 2	0.0050 mg/L	2025-10-20	
Boron, total	< 0.0500	MAC = 5	0.0500 mg/L	2025-10-20	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010 mg/L	2025-10-20	
Calcium, total	35.2	None Required	0.20 mg/L	2025-10-20	
Chromium, total	< 0.00050	MAC = 0.05	0.00050 mg/L	2025-10-20	
Copper, total	0.00115	MAC = 2	0.00040 mg/L	2025-10-20	
Iron, total	< 0.010	AO ≤ 0.1	0.010 mg/L	2025-10-20	
Lead, total	< 0.00020	MAC = 0.005	0.00020 mg/L	2025-10-20	
Magnesium, total	10.1	None Required	0.010 mg/L	2025-10-20	
Manganese, total	0.00096	MAC = 0.12	0.00020 mg/L	2025-10-20	
Potassium, total	2.59	N/A	0.10 mg/L	2025-10-20	
Selenium, total	< 0.00050	MAC = 0.05	0.00050 mg/L	2025-10-20	
Sodium, total	12.3	AO ≤ 200	0.10 mg/L	2025-10-20	
Strontium, total	0.283	MAC = 7	0.0010 mg/L	2025-10-20	
Uranium, total	0.00250	MAC = 0.02	0.000020 mg/L	2025-10-20	
Zinc, total	< 0.0040	AO ≤ 5	0.0040 mg/L	2025-10-20	

Clearwell Outflow (25J2423-03) | Matrix: Drinking Water | Sampled: 2025-10-17 10:50

Anions

Chloride	8.33	AO ≤ 250	0.10 mg/L	2025-10-18	
Fluoride	0.15	MAC = 1.5	0.10 mg/L	2025-10-18	
Nitrate (as N)	< 0.010	MAC = 10	0.010 mg/L	2025-10-18	
Nitrite (as N)	< 0.010	MAC = 1	0.010 mg/L	2025-10-18	

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Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Clearwell Outflow (25J2423-03) | Matrix: Drinking Water | Sampled: 2025-10-17 10:50, Continued

Anions, Continued

Sulfate	29.6	AO ≤ 500	1.0	mg/L	2025-10-18	
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General Parameters

Alkalinity, Total (as CaCO ₃)	127	N/A	1.0	mg/L	2025-10-17	
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-10-17	
Alkalinity, Bicarbonate (as CaCO ₃)	127	N/A	1.0	mg/L	2025-10-17	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-10-17	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-10-17	
Conductivity (EC)	308	N/A	2.0	µS/cm	2025-10-17	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2025-10-18	
pH	7.67	7.0-10.5	0.10	pH units	2025-10-17	HT2
Turbidity	0.32	OG < 1	0.10	NTU	2025-10-17	

Total Metals

Aluminum, total	< 0.0050	OG < 0.1	0.0050	mg/L	2025-10-20	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2025-10-20	
Arsenic, total	0.00050	MAC = 0.01	0.00050	mg/L	2025-10-20	
Barium, total	0.0220	MAC = 2	0.0050	mg/L	2025-10-20	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2025-10-20	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2025-10-20	
Calcium, total	35.1	None Required	0.20	mg/L	2025-10-20	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2025-10-20	
Copper, total	0.00124	MAC = 2	0.00040	mg/L	2025-10-20	
Iron, total	< 0.010	AO ≤ 0.1	0.010	mg/L	2025-10-20	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2025-10-20	
Magnesium, total	9.88	None Required	0.010	mg/L	2025-10-20	
Manganese, total	0.00092	MAC = 0.12	0.00020	mg/L	2025-10-20	
Potassium, total	2.57	N/A	0.10	mg/L	2025-10-20	
Selenium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2025-10-20	
Sodium, total	12.2	AO ≤ 200	0.10	mg/L	2025-10-20	
Strontium, total	0.282	MAC = 7	0.0010	mg/L	2025-10-20	
Uranium, total	0.00254	MAC = 0.02	0.000020	mg/L	2025-10-20	
Zinc, total	< 0.0040	AO ≤ 5	0.0040	mg/L	2025-10-20	

Sample Qualifiers:

HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT Glenmore Ellison Improvement District
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Analysis Description	Method Ref.	Technique	Accredited	Location
Alkalinity in Water	SM 2320 B* (2021)	Titration with H2SO4	✓	Kelowna
Anions in Water	SM 4110 B (2020)	Ion Chromatography	✓	Kelowna
Conductivity in Water	SM 2510 B (2021)	Conductivity Meter	✓	Kelowna
Cyanide, SAD in Water	ASTM D7511-12	Flow Injection with In-Line UV Digestion and Amperometry	✓	Kelowna
pH in Water	SM 4500-H+ B (2021)	Electrometry	✓	Kelowna
Total Metals in Water	EPA 200.2 / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
Turbidity in Water	SM 2130 B (2020)	Nephelometry	✓	Kelowna

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
AO	Aesthetic Objective
MAC	Maximum Acceptable Concentration (health based)
mg/L	Milligrams per litre
NTU	Nephelometric Turbidity Units
OG	Operational Guideline (treated water)
pH units	pH < 7 = acidic, pH > 7 = basic
µS/cm	Microsiemens per centimetre
ASTM	ASTM International Test Methods
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

General Comments:

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