

CERTIFICATE OF ANALYSIS

REPORTED TO Cherry Ridge Management
158 North Fork Road
Cherryville, BC V0E 2G3

ATTENTION Melanie Staker

PO NUMBER

PROJECT Creek Monitoring

PROJECT INFO

WORK ORDER 8052489

RECEIVED / TEMP 2018-05-28 09:04 / 12°C

REPORTED 2018-06-06 13:09

COC NUMBER No Number

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 17025:2005 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



Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

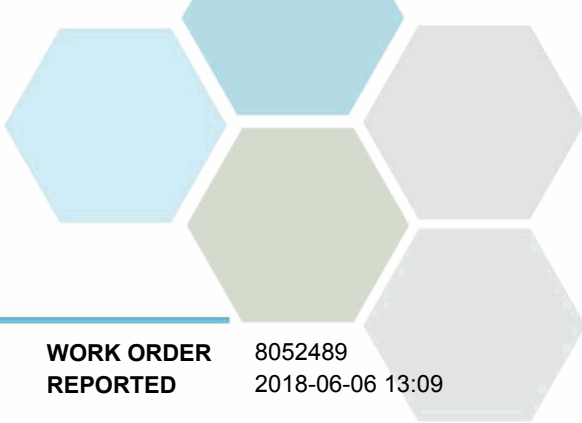
If you have any questions or concerns, please contact me at estclair@caro.ca

Authorized By:

Eilish St.Clair, B.Sc., C.I.T.
Client Service Representative

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TEST RESULTS

REPORTED TO PROJECT Cherry Ridge Management Creek Monitoring

WORK ORDER REPORTED 8052489
2018-06-06 13:09

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
North Fork Cherry Creek (8052489-01) Matrix: Water Sampled: 2018-05-27 13:50						F1, FILT

Anions

Chloride	1.48	AO ≤ 250	0.10	mg/L	2018-05-28	
Nitrate (as N)	0.019	MAC = 10	0.010	mg/L	2018-05-28	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2018-05-28	
Sulfate	4.1	AO ≤ 500	1.0	mg/L	2018-05-28	

General Parameters

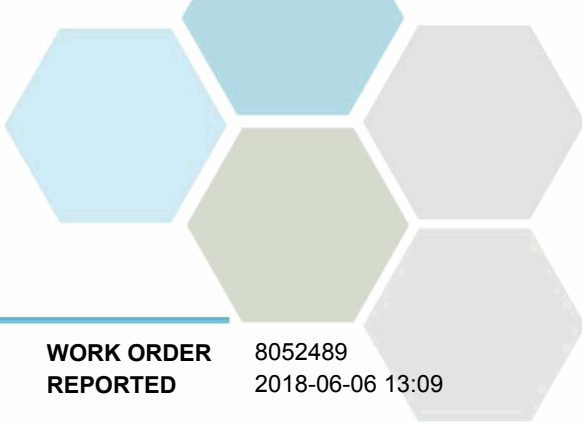
Conductivity (EC)	83.3	N/A	2.0	µS/cm	2018-05-30	
Nitrogen, Total Kjeldahl	0.219	N/A	0.050	mg/L	2018-05-31	
pH	7.72	7.0-10.5	0.10	pH units	2018-05-30	HT2
Phosphorus, Total (as P)	0.0508	N/A	0.0020	mg/L	2018-05-31	
Phosphorus, Total Dissolved	0.0089	N/A	0.0020	mg/L	2018-05-31	
Turbidity	8.78	OG < 1	0.10	NTU	2018-05-28	

Calculated Parameters

Hardness, Total (as CaCO3)	39.8	None Required	0.100	mg/L	N/A	
Nitrate+Nitrite (as N)	0.0189	N/A	0.0100	mg/L	N/A	
Nitrogen, Total	0.238	N/A	0.0500	mg/L	N/A	

Total Metals

Aluminum, total	775	OG < 100	2.0	µg/L	2018-06-04	
Antimony, total	< 0.050	MAC = 6	0.050	µg/L	2018-06-04	
Arsenic, total	0.385	MAC = 10	0.050	µg/L	2018-06-04	
Barium, total	15.6	MAC = 1000	0.10	µg/L	2018-06-04	
Beryllium, total	0.027	N/A	0.010	µg/L	2018-06-04	
Bismuth, total	< 0.010	N/A	0.010	µg/L	2018-06-04	
Boron, total	< 2.0	MAC = 5000	2.0	µg/L	2018-06-04	
Cadmium, total	0.0523	MAC = 5	0.0020	µg/L	2018-06-04	
Calcium, total	13100	N/A	40	µg/L	2018-06-04	
Chromium, total	2.72	MAC = 50	0.10	µg/L	2018-06-04	
Cobalt, total	0.652	N/A	0.0050	µg/L	2018-06-04	
Copper, total	3.14	AO ≤ 1000	0.20	µg/L	2018-06-04	
Iron, total	1130	AO ≤ 300	2.0	µg/L	2018-06-04	
Lead, total	0.390	MAC = 10	0.050	µg/L	2018-06-04	
Lithium, total	1.28	N/A	0.050	µg/L	2018-06-04	
Magnesium, total	1740	N/A	5.0	µg/L	2018-06-04	
Manganese, total	24.7	AO ≤ 50	0.050	µg/L	2018-06-04	
Mercury, total	< 0.020	MAC = 1	0.020	µg/L	2018-06-04	
Molybdenum, total	0.896	N/A	0.010	µg/L	2018-06-04	
Nickel, total	2.40	N/A	0.040	µg/L	2018-06-04	
Phosphorus, total	72	N/A	10	µg/L	2018-06-04	
Potassium, total	837	N/A	10	µg/L	2018-06-04	
Selenium, total	0.75	MAC = 50	0.10	µg/L	2018-06-04	
Silicon, total	4430	N/A	100	µg/L	2018-06-04	



TEST RESULTS

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WORK ORDER REPORTED 8052489
2018-06-06 13:09

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
North Fork Cherry Creek (8052489-01) Matrix: Water Sampled: 2018-05-27 13:50, Continued						F1, FILT

Total Metals, Continued

Silver, total	0.022	N/A	0.010	µg/L	2018-06-04	
Sodium, total	440	AO ≤ 200000	20	µg/L	2018-06-04	
Strontium, total	69.8	N/A	0.10	µg/L	2018-06-04	
Sulfur, total	1600	N/A	1000	µg/L	2018-06-04	
Tellurium, total	< 0.050	N/A	0.050	µg/L	2018-06-04	
Thallium, total	0.0152	N/A	0.0040	µg/L	2018-06-04	
Thorium, total	0.047	N/A	0.010	µg/L	2018-06-04	
Tin, total	< 0.050	N/A	0.050	µg/L	2018-06-04	
Titanium, total	45.0	N/A	0.20	µg/L	2018-06-04	
Tungsten, total	< 0.20	N/A	0.20	µg/L	2018-06-04	
Uranium, total	0.257	MAC = 20	0.0010	µg/L	2018-06-04	
Vanadium, total	2.77	N/A	0.20	µg/L	2018-06-04	
Zinc, total	5.4	AO ≤ 5000	1.0	µg/L	2018-06-04	
Zirconium, total	0.066	N/A	0.020	µg/L	2018-06-04	

Microbiological Parameters

E. coli	1	MAC = 0	1	CFU/100 mL	2018-05-28	
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South Fork Cherry Creek (8052489-02) | Matrix: Water | Sampled: 2018-05-27 12:45

F1, FILT

Anions

Chloride	1.03	AO ≤ 250	0.10	mg/L	2018-05-28	
Nitrate (as N)	0.078	MAC = 10	0.010	mg/L	2018-05-28	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2018-05-28	
Sulfate	7.6	AO ≤ 500	1.0	mg/L	2018-05-28	

General Parameters

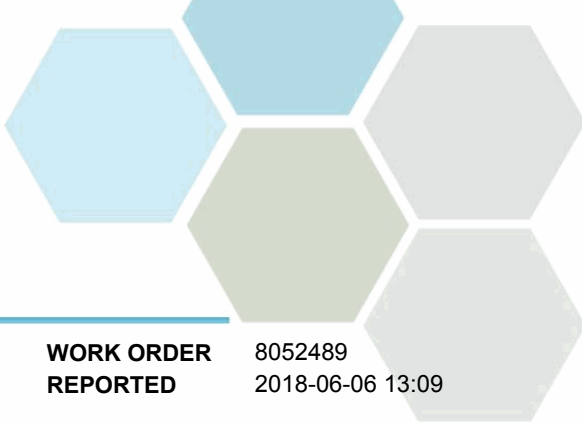
Conductivity (EC)	145	N/A	2.0	µS/cm	2018-05-30	
Nitrogen, Total Kjeldahl	0.086	N/A	0.050	mg/L	2018-05-31	
pH	7.88	7.0-10.5	0.10	pH units	2018-05-30	HT2
Phosphorus, Total (as P)	0.190	N/A	0.0020	mg/L	2018-05-31	
Phosphorus, Total Dissolved	< 0.0020	N/A	0.0020	mg/L	2018-05-31	
Turbidity	67.5	OG < 1	0.10	NTU	2018-05-28	

Calculated Parameters

Hardness, Total (as CaCO3)	80.7	None Required	0.100	mg/L	N/A	
Nitrate+Nitrite (as N)	0.0775	N/A	0.0100	mg/L	N/A	
Nitrogen, Total	0.164	N/A	0.0500	mg/L	N/A	

Total Metals

Aluminum, total	2510	OG < 100	2.0	µg/L	2018-06-04	
Antimony, total	0.314	MAC = 6	0.050	µg/L	2018-06-04	
Arsenic, total	3.45	MAC = 10	0.050	µg/L	2018-06-04	



TEST RESULTS

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2018-06-06 13:09

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
South Fork Cherry Creek (8052489-02) Matrix: Water Sampled: 2018-05-27 12:45, Continued						F1, FILT

Total Metals, Continued

Barium, total	41.8	MAC = 1000	0.10	µg/L	2018-06-04	
Beryllium, total	0.105	N/A	0.010	µg/L	2018-06-04	
Bismuth, total	0.034	N/A	0.010	µg/L	2018-06-04	
Boron, total	< 2.0	MAC = 5000	2.0	µg/L	2018-06-04	
Cadmium, total	0.257	MAC = 5	0.0020	µg/L	2018-06-04	
Calcium, total	24600	N/A	40	µg/L	2018-06-04	
Chromium, total	6.35	MAC = 50	0.10	µg/L	2018-06-04	
Cobalt, total	2.32	N/A	0.0050	µg/L	2018-06-04	
Copper, total	8.24	AO ≤ 1000	0.20	µg/L	2018-06-04	
Iron, total	4540	AO ≤ 300	2.0	µg/L	2018-06-04	
Lead, total	2.12	MAC = 10	0.050	µg/L	2018-06-04	
Lithium, total	4.02	N/A	0.050	µg/L	2018-06-04	
Magnesium, total	4640	N/A	5.0	µg/L	2018-06-04	
Manganese, total	117	AO ≤ 50	0.050	µg/L	2018-06-04	
Mercury, total	< 0.020	MAC = 1	0.020	µg/L	2018-06-04	
Molybdenum, total	1.18	N/A	0.010	µg/L	2018-06-04	
Nickel, total	6.75	N/A	0.040	µg/L	2018-06-04	
Phosphorus, total	172	N/A	10	µg/L	2018-06-04	
Potassium, total	1130	N/A	10	µg/L	2018-06-04	
Selenium, total	1.29	MAC = 50	0.10	µg/L	2018-06-04	
Silicon, total	7520	N/A	100	µg/L	2018-06-04	
Silver, total	0.076	N/A	0.010	µg/L	2018-06-04	
Sodium, total	1130	AO ≤ 200000	20	µg/L	2018-06-04	
Strontium, total	145	N/A	0.10	µg/L	2018-06-04	
Sulfur, total	3100	N/A	1000	µg/L	2018-06-04	
Tellurium, total	< 0.050	N/A	0.050	µg/L	2018-06-04	
Thallium, total	0.0468	N/A	0.0040	µg/L	2018-06-04	
Thorium, total	0.327	N/A	0.010	µg/L	2018-06-04	
Tin, total	0.055	N/A	0.050	µg/L	2018-06-04	
Titanium, total	119	N/A	0.20	µg/L	2018-06-04	
Tungsten, total	< 0.20	N/A	0.20	µg/L	2018-06-04	
Uranium, total	0.508	MAC = 20	0.0010	µg/L	2018-06-04	
Vanadium, total	7.40	N/A	0.20	µg/L	2018-06-04	
Zinc, total	20.6	AO ≤ 5000	1.0	µg/L	2018-06-04	
Zirconium, total	0.168	N/A	0.020	µg/L	2018-06-04	

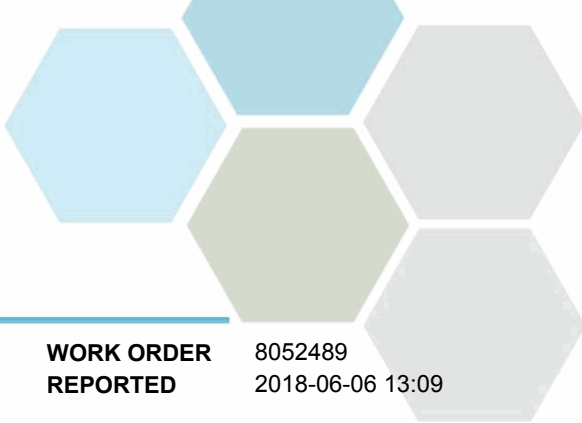
Microbiological Parameters

E. coli	2	MAC = 0	1	CFU/100 mL	2018-05-28	
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Cherry Creek at Hall (8052489-03) | Matrix: Water | Sampled: 2018-05-27 11:20

F1, FILT

Anions



TEST RESULTS

REPORTED TO PROJECT Cherry Ridge Management Creek Monitoring

WORK ORDER REPORTED 8052489
2018-06-06 13:09

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Cherry Creek at Hall (8052489-03) Matrix: Water Sampled: 2018-05-27 11:20, Continued						F1, FILT

Anions, Continued

Chloride	1.72	AO ≤ 250	0.10	mg/L	2018-05-28	
Nitrate (as N)	0.049	MAC = 10	0.010	mg/L	2018-05-28	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2018-05-28	
Sulfate	6.0	AO ≤ 500	1.0	mg/L	2018-05-28	

General Parameters

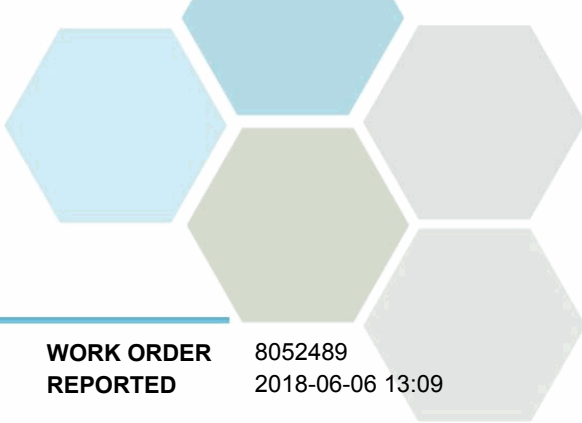
Conductivity (EC)	124	N/A	2.0	µS/cm	2018-05-30	
Nitrogen, Total Kjeldahl	0.158	N/A	0.050	mg/L	2018-06-01	
pH	7.14	7.0-10.5	0.10	pH units	2018-05-30	HT2
Phosphorus, Total (as P)	0.177	N/A	0.0020	mg/L	2018-05-31	
Phosphorus, Total Dissolved	< 0.0020	N/A	0.0020	mg/L	2018-05-31	
Turbidity	55.3	OG < 1	0.10	NTU	2018-05-28	

Calculated Parameters

Hardness, Total (as CaCO3)	68.4	None Required	0.100	mg/L	N/A	
Nitrate+Nitrite (as N)	0.0493	N/A	0.0100	mg/L	N/A	
Nitrogen, Total	0.207	N/A	0.0500	mg/L	N/A	

Total Metals

Aluminum, total	2640	OG < 100	2.0	µg/L	2018-06-04	
Antimony, total	0.257	MAC = 6	0.050	µg/L	2018-06-04	
Arsenic, total	2.72	MAC = 10	0.050	µg/L	2018-06-04	
Barium, total	38.0	MAC = 1000	0.10	µg/L	2018-06-04	
Beryllium, total	0.089	N/A	0.010	µg/L	2018-06-04	
Bismuth, total	0.036	N/A	0.010	µg/L	2018-06-04	
Boron, total	< 2.0	MAC = 5000	2.0	µg/L	2018-06-04	
Cadmium, total	0.218	MAC = 5	0.0020	µg/L	2018-06-04	
Calcium, total	20600	N/A	40	µg/L	2018-06-04	
Chromium, total	6.78	MAC = 50	0.10	µg/L	2018-06-04	
Cobalt, total	2.27	N/A	0.0050	µg/L	2018-06-04	
Copper, total	8.54	AO ≤ 1000	0.20	µg/L	2018-06-04	
Iron, total	4660	AO ≤ 300	2.0	µg/L	2018-06-04	
Lead, total	1.97	MAC = 10	0.050	µg/L	2018-06-04	
Lithium, total	3.89	N/A	0.050	µg/L	2018-06-04	
Magnesium, total	4140	N/A	5.0	µg/L	2018-06-04	
Manganese, total	117	AO ≤ 50	0.050	µg/L	2018-06-04	
Mercury, total	< 0.020	MAC = 1	0.020	µg/L	2018-06-04	
Molybdenum, total	1.12	N/A	0.010	µg/L	2018-06-04	
Nickel, total	6.90	N/A	0.040	µg/L	2018-06-04	
Phosphorus, total	163	N/A	10	µg/L	2018-06-04	
Potassium, total	1170	N/A	10	µg/L	2018-06-04	
Selenium, total	1.02	MAC = 50	0.10	µg/L	2018-06-04	
Silicon, total	7570	N/A	100	µg/L	2018-06-04	



TEST RESULTS

REPORTED TO PROJECT Cherry Ridge Management Creek Monitoring

WORK ORDER REPORTED 8052489
2018-06-06 13:09

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Cherry Creek at Hall (8052489-03) Matrix: Water Sampled: 2018-05-27 11:20, Continued						F1, FILT

Total Metals, Continued

Silver, total	0.087	N/A	0.010	µg/L	2018-06-04	
Sodium, total	1010	AO ≤ 200000	20	µg/L	2018-06-04	
Strontium, total	118	N/A	0.10	µg/L	2018-06-04	
Sulfur, total	2300	N/A	1000	µg/L	2018-06-04	
Tellurium, total	< 0.050	N/A	0.050	µg/L	2018-06-04	
Thallium, total	0.0433	N/A	0.0040	µg/L	2018-06-04	
Thorium, total	0.311	N/A	0.010	µg/L	2018-06-04	
Tin, total	0.087	N/A	0.050	µg/L	2018-06-04	
Titanium, total	130	N/A	0.20	µg/L	2018-06-04	
Tungsten, total	< 0.20	N/A	0.20	µg/L	2018-06-04	
Uranium, total	0.441	MAC = 20	0.0010	µg/L	2018-06-04	
Vanadium, total	8.01	N/A	0.20	µg/L	2018-06-04	
Zinc, total	19.1	AO ≤ 5000	1.0	µg/L	2018-06-04	
Zirconium, total	0.196	N/A	0.020	µg/L	2018-06-04	

Microbiological Parameters

E. coli	6	MAC = 0	1	CFU/100 mL	2018-05-28	
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Shuswap River Picnic Site (8052489-04) | Matrix: Water | Sampled: 2018-05-27 10:30

F1, FILT

Anions

Chloride	1.49	AO ≤ 250	0.10	mg/L	2018-05-28	
Nitrate (as N)	0.063	MAC = 10	0.010	mg/L	2018-05-28	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2018-05-28	
Sulfate	3.1	AO ≤ 500	1.0	mg/L	2018-05-28	

General Parameters

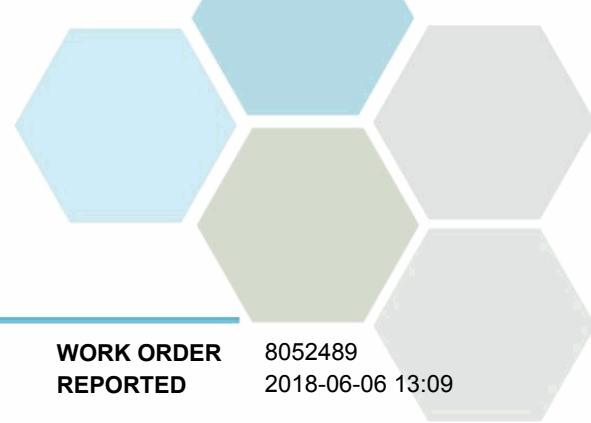
Conductivity (EC)	78.2	N/A	2.0	µS/cm	2018-05-30	
Nitrogen, Total Kjeldahl	0.125	N/A	0.050	mg/L	2018-06-01	
pH	7.62	7.0-10.5	0.10	pH units	2018-05-30	HT2
Phosphorus, Total (as P)	0.0193	N/A	0.0020	mg/L	2018-05-31	
Phosphorus, Total Dissolved	0.0023	N/A	0.0020	mg/L	2018-05-31	
Turbidity	11.3	OG < 1	0.10	NTU	2018-05-28	

Calculated Parameters

Hardness, Total (as CaCO3)	34.2	None Required	0.100	mg/L	N/A	
Nitrate+Nitrite (as N)	0.0633	N/A	0.0100	mg/L	N/A	
Nitrogen, Total	0.188	N/A	0.0500	mg/L	N/A	

Total Metals

Aluminum, total	308	OG < 100	2.0	µg/L	2018-06-04	
Antimony, total	< 0.050	MAC = 6	0.050	µg/L	2018-06-04	
Arsenic, total	0.412	MAC = 10	0.050	µg/L	2018-06-04	



TEST RESULTS

REPORTED TO PROJECT Cherry Ridge Management
Creek Monitoring

WORK ORDER REPORTED 8052489
2018-06-06 13:09

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Shuswap River Picnic Site (8052489-04) | Matrix: Water | Sampled: 2018-05-27 10:30, Continued

F1, FILT

Total Metals, Continued

Barium, total	11.4	MAC = 1000	0.10	µg/L	2018-06-04	
Beryllium, total	0.016	N/A	0.010	µg/L	2018-06-04	
Bismuth, total	< 0.010	N/A	0.010	µg/L	2018-06-04	
Boron, total	< 2.0	MAC = 5000	2.0	µg/L	2018-06-04	
Cadmium, total	0.0305	MAC = 5	0.0020	µg/L	2018-06-04	
Calcium, total	11200	N/A	40	µg/L	2018-06-04	
Chromium, total	1.14	MAC = 50	0.10	µg/L	2018-06-04	
Cobalt, total	0.271	N/A	0.0050	µg/L	2018-06-04	
Copper, total	1.97	AO ≤ 1000	0.20	µg/L	2018-06-04	
Iron, total	478	AO ≤ 300	2.0	µg/L	2018-06-04	
Lead, total	0.262	MAC = 10	0.050	µg/L	2018-06-04	
Lithium, total	0.735	N/A	0.050	µg/L	2018-06-04	
Magnesium, total	1510	N/A	5.0	µg/L	2018-06-04	
Manganese, total	25.5	AO ≤ 50	0.050	µg/L	2018-06-04	
Mercury, total	< 0.020	MAC = 1	0.020	µg/L	2018-06-04	
Molybdenum, total	0.501	N/A	0.010	µg/L	2018-06-04	
Nickel, total	1.09	N/A	0.040	µg/L	2018-06-04	
Phosphorus, total	21	N/A	10	µg/L	2018-06-04	
Potassium, total	941	N/A	10	µg/L	2018-06-04	
Selenium, total	0.30	MAC = 50	0.10	µg/L	2018-06-04	
Silicon, total	3500	N/A	100	µg/L	2018-06-04	
Silver, total	0.015	N/A	0.010	µg/L	2018-06-04	
Sodium, total	836	AO ≤ 200000	20	µg/L	2018-06-04	
Strontium, total	51.0	N/A	0.10	µg/L	2018-06-04	
Sulfur, total	1300	N/A	1000	µg/L	2018-06-04	
Tellurium, total	< 0.050	N/A	0.050	µg/L	2018-06-04	
Thallium, total	0.0076	N/A	0.0040	µg/L	2018-06-04	
Thorium, total	0.043	N/A	0.010	µg/L	2018-06-04	
Tin, total	< 0.050	N/A	0.050	µg/L	2018-06-04	
Titanium, total	13.1	N/A	0.20	µg/L	2018-06-04	
Tungsten, total	< 0.20	N/A	0.20	µg/L	2018-06-04	
Uranium, total	0.323	MAC = 20	0.0010	µg/L	2018-06-04	
Vanadium, total	1.04	N/A	0.20	µg/L	2018-06-04	
Zinc, total	3.5	AO ≤ 5000	1.0	µg/L	2018-06-04	
Zirconium, total	0.108	N/A	0.020	µg/L	2018-06-04	

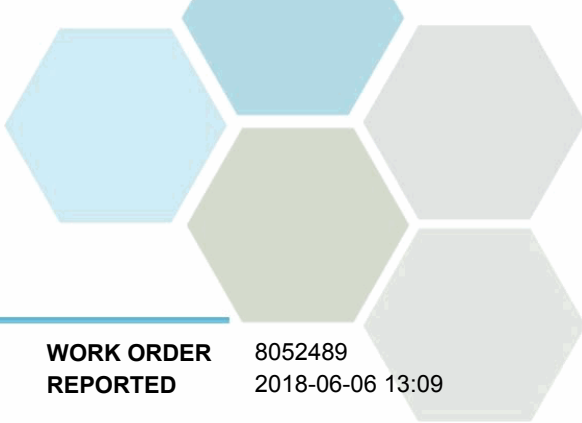
Microbiological Parameters

E. coli	46	MAC = 0	1	CFU/100 mL	2018-05-28	
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Ferry Creek (8052489-05) | Matrix: Water | Sampled: 2018-05-27 11:00

F1, FILT

Anions



TEST RESULTS

REPORTED TO PROJECT Cherry Ridge Management Creek Monitoring

WORK ORDER REPORTED 8052489
2018-06-06 13:09

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Ferry Creek (8052489-05) | Matrix: Water | Sampled: 2018-05-27 11:00, Continued

F1, FILT

Anions, Continued

Chloride	2.04	AO ≤ 250	0.10	mg/L	2018-05-28	
Nitrate (as N)	< 0.010	MAC = 10	0.010	mg/L	2018-05-28	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2018-05-28	
Sulfate	4.4	AO ≤ 500	1.0	mg/L	2018-05-28	

General Parameters

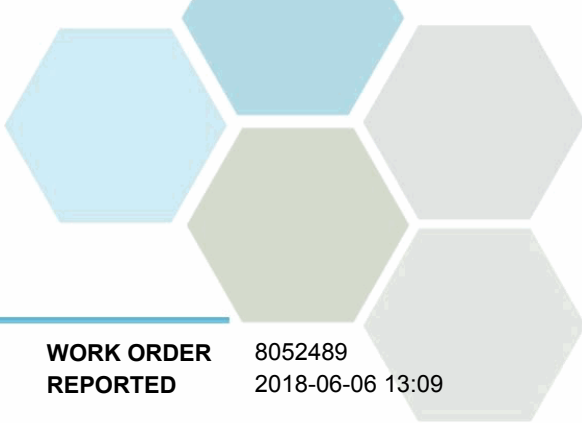
Conductivity (EC)	70.9	N/A	2.0	µS/cm	2018-05-30	
Nitrogen, Total Kjeldahl	0.133	N/A	0.050	mg/L	2018-05-31	
pH	7.57	7.0-10.5	0.10	pH units	2018-05-30	HT2
Phosphorus, Total (as P)	0.0443	N/A	0.0020	mg/L	2018-05-31	
Phosphorus, Total Dissolved	0.0058	N/A	0.0020	mg/L	2018-05-31	
Turbidity	6.12	OG < 1	0.10	NTU	2018-05-28	

Calculated Parameters

Hardness, Total (as CaCO3)	33.0	None Required	0.100	mg/L	N/A	
Nitrate+Nitrite (as N)	< 0.0100	N/A	0.0100	mg/L	N/A	
Nitrogen, Total	0.133	N/A	0.0500	mg/L	N/A	

Total Metals

Aluminum, total	512	OG < 100	2.0	µg/L	2018-06-04	
Antimony, total	< 0.050	MAC = 6	0.050	µg/L	2018-06-04	
Arsenic, total	0.502	MAC = 10	0.050	µg/L	2018-06-04	
Barium, total	10.9	MAC = 1000	0.10	µg/L	2018-06-04	
Beryllium, total	0.022	N/A	0.010	µg/L	2018-06-04	
Bismuth, total	< 0.010	N/A	0.010	µg/L	2018-06-04	
Boron, total	< 2.0	MAC = 5000	2.0	µg/L	2018-06-04	
Cadmium, total	0.0147	MAC = 5	0.0020	µg/L	2018-06-04	
Calcium, total	9310	N/A	40	µg/L	2018-06-04	
Chromium, total	0.88	MAC = 50	0.10	µg/L	2018-06-04	
Cobalt, total	0.369	N/A	0.0050	µg/L	2018-06-04	
Copper, total	3.08	AO ≤ 1000	0.20	µg/L	2018-06-04	
Iron, total	798	AO ≤ 300	2.0	µg/L	2018-06-04	
Lead, total	0.220	MAC = 10	0.050	µg/L	2018-06-04	
Lithium, total	1.16	N/A	0.050	µg/L	2018-06-04	
Magnesium, total	2350	N/A	5.0	µg/L	2018-06-04	
Manganese, total	23.6	AO ≤ 50	0.050	µg/L	2018-06-04	
Mercury, total	< 0.020	MAC = 1	0.020	µg/L	2018-06-04	
Molybdenum, total	0.386	N/A	0.010	µg/L	2018-06-04	
Nickel, total	0.967	N/A	0.040	µg/L	2018-06-04	
Phosphorus, total	51	N/A	10	µg/L	2018-06-04	
Potassium, total	986	N/A	10	µg/L	2018-06-04	
Selenium, total	0.19	MAC = 50	0.10	µg/L	2018-06-04	
Silicon, total	6160	N/A	100	µg/L	2018-06-04	



TEST RESULTS

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Ferry Creek (8052489-05) Matrix: Water Sampled: 2018-05-27 11:00, Continued						F1, FILT

Total Metals, Continued

Silver, total	0.016	N/A	0.010	µg/L	2018-06-04	
Sodium, total	1530	AO ≤ 200000	20	µg/L	2018-06-04	
Strontium, total	62.0	N/A	0.10	µg/L	2018-06-04	
Sulfur, total	1800	N/A	1000	µg/L	2018-06-04	
Tellurium, total	< 0.050	N/A	0.050	µg/L	2018-06-04	
Thallium, total	0.0077	N/A	0.0040	µg/L	2018-06-04	
Thorium, total	0.046	N/A	0.010	µg/L	2018-06-04	
Tin, total	< 0.050	N/A	0.050	µg/L	2018-06-04	
Titanium, total	27.2	N/A	0.20	µg/L	2018-06-04	
Tungsten, total	< 0.20	N/A	0.20	µg/L	2018-06-04	
Uranium, total	0.246	MAC = 20	0.0010	µg/L	2018-06-04	
Vanadium, total	1.67	N/A	0.20	µg/L	2018-06-04	
Zinc, total	4.7	AO ≤ 5000	1.0	µg/L	2018-06-04	
Zirconium, total	0.443	N/A	0.020	µg/L	2018-06-04	

Microbiological Parameters

E. coli	1	MAC = 0	1	CFU/100 mL	2018-05-28	
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Heckman Creek (8052489-06) | Matrix: Water | Sampled: 2018-05-27 11:45

F1, FILT

Anions

Chloride	1.42	AO ≤ 250	0.10	mg/L	2018-05-29	
Nitrate (as N)	< 0.010	MAC = 10	0.010	mg/L	2018-05-29	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2018-05-29	
Sulfate	19.6	AO ≤ 500	1.0	mg/L	2018-05-29	

General Parameters

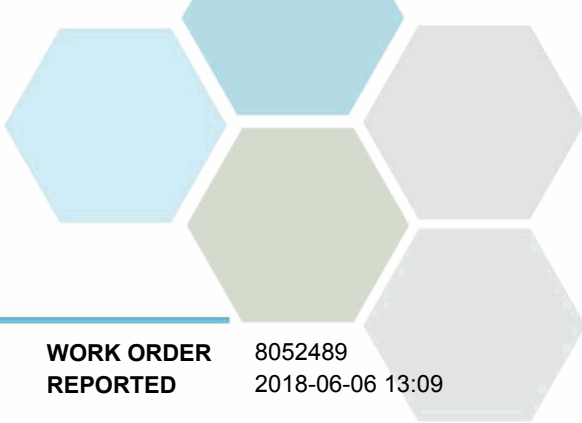
Conductivity (EC)	305	N/A	2.0	µS/cm	2018-05-30	
Nitrogen, Total Kjeldahl	0.054	N/A	0.050	mg/L	2018-06-01	
pH	8.11	7.0-10.5	0.10	pH units	2018-05-30	HT2
Phosphorus, Total (as P)	< 0.0020	N/A	0.0020	mg/L	2018-05-31	
Phosphorus, Total Dissolved	< 0.0020	N/A	0.0020	mg/L	2018-05-31	
Turbidity	0.33	OG < 1	0.10	NTU	2018-05-28	

Calculated Parameters

Hardness, Total (as CaCO3)	151	None Required	0.100	mg/L	N/A	
Nitrate+Nitrite (as N)	< 0.0100	N/A	0.0100	mg/L	N/A	
Nitrogen, Total	0.0540	N/A	0.0500	mg/L	N/A	

Total Metals

Aluminum, total	10.6	OG < 100	2.0	µg/L	2018-06-04	
Antimony, total	0.154	MAC = 6	0.050	µg/L	2018-06-04	
Arsenic, total	0.877	MAC = 10	0.050	µg/L	2018-06-04	



TEST RESULTS

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2018-06-06 13:09

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Heckman Creek (8052489-06) | Matrix: Water | Sampled: 2018-05-27 11:45, Continued

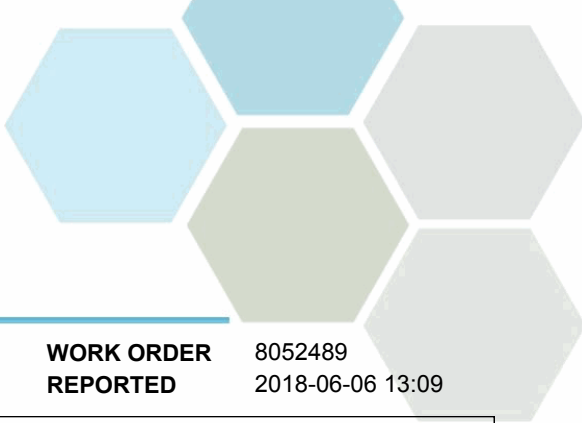
F1, FILT

Total Metals, Continued

Barium, total	12.8	MAC = 1000	0.10	µg/L	2018-06-04	
Beryllium, total	< 0.010	N/A	0.010	µg/L	2018-06-04	
Bismuth, total	< 0.010	N/A	0.010	µg/L	2018-06-04	
Boron, total	< 2.0	MAC = 5000	2.0	µg/L	2018-06-04	
Cadmium, total	< 0.0020	MAC = 5	0.0020	µg/L	2018-06-04	
Calcium, total	48900	N/A	40	µg/L	2018-06-04	
Chromium, total	0.50	MAC = 50	0.10	µg/L	2018-06-04	
Cobalt, total	0.0221	N/A	0.0050	µg/L	2018-06-04	
Copper, total	0.57	AO ≤ 1000	0.20	µg/L	2018-06-04	
Iron, total	9.8	AO ≤ 300	2.0	µg/L	2018-06-04	
Lead, total	< 0.050	MAC = 10	0.050	µg/L	2018-06-04	
Lithium, total	1.04	N/A	0.050	µg/L	2018-06-04	
Magnesium, total	7030	N/A	5.0	µg/L	2018-06-04	
Manganese, total	< 0.050	AO ≤ 50	0.050	µg/L	2018-06-04	
Mercury, total	< 0.020	MAC = 1	0.020	µg/L	2018-06-04	
Molybdenum, total	1.05	N/A	0.010	µg/L	2018-06-04	
Nickel, total	0.107	N/A	0.040	µg/L	2018-06-04	
Phosphorus, total	< 10	N/A	10	µg/L	2018-06-04	
Potassium, total	1190	N/A	10	µg/L	2018-06-04	
Selenium, total	0.92	MAC = 50	0.10	µg/L	2018-06-04	
Silicon, total	6430	N/A	100	µg/L	2018-06-04	
Silver, total	< 0.010	N/A	0.010	µg/L	2018-06-04	
Sodium, total	2200	AO ≤ 200000	20	µg/L	2018-06-04	
Strontium, total	263	N/A	0.10	µg/L	2018-06-04	
Sulfur, total	7400	N/A	1000	µg/L	2018-06-04	
Tellurium, total	< 0.050	N/A	0.050	µg/L	2018-06-04	
Thallium, total	< 0.0040	N/A	0.0040	µg/L	2018-06-04	
Thorium, total	< 0.010	N/A	0.010	µg/L	2018-06-04	
Tin, total	< 0.050	N/A	0.050	µg/L	2018-06-04	
Titanium, total	0.39	N/A	0.20	µg/L	2018-06-04	
Tungsten, total	< 0.20	N/A	0.20	µg/L	2018-06-04	
Uranium, total	0.305	MAC = 20	0.0010	µg/L	2018-06-04	
Vanadium, total	0.72	N/A	0.20	µg/L	2018-06-04	
Zinc, total	2.1	AO ≤ 5000	1.0	µg/L	2018-06-04	
Zirconium, total	< 0.020	N/A	0.020	µg/L	2018-06-04	

Microbiological Parameters

E. coli	< 1	MAC = 0	1	CFU/100 mL	2018-05-28	
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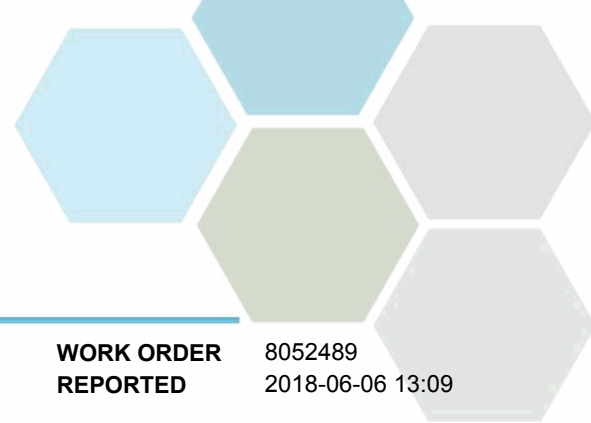
TEST RESULTS

REPORTED TO Cherry Ridge Management
PROJECT Creek Monitoring

WORK ORDER 8052489
REPORTED 2018-06-06 13:09

Sample Qualifiers:

- F1 The sample was not field-filtered and was therefore filtered through a 0.45 µm membrane in the laboratory and preserved with HNO3 prior to analysis for dissolved metals.
- FILT The sample has been filtered for DP in the laboratory. Results may not reflect conditions at the time of sampling.
- 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 Cherry Ridge Management Creek Monitoring

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2018-06-06 13:09

Analysis Description	Method Ref.	Technique	Location
Anions in Water	SM 4110 B (2011)	Ion Chromatography	Kelowna
Conductivity in Water	SM 2510 B (2011)	Conductivity Meter	Kelowna
E. coli in Water	SM 9222 G (2006)	Membrane Filtration / Nutrient Agar with MUG	Kelowna
Hardness in Water	SM 2340 B* (2011)	Calculation: 2.497 [total Ca] + 4.118 [total Mg] (Est)	N/A
Nitrogen, Total Kjeldahl in Water	SM 4500-Norg D* (2011)	Block Digestion and Flow Injection Analysis	Kelowna
pH in Water	SM 4500-H+ B (2011)	Electrometry	Kelowna
Phosphorus, Total Dissolved in Water	SM 4500-P B.5* (2011) / SM 4500-P F (2011)	Persulfate Digestion / Automated Colorimetry (Ascorbic Acid)	Kelowna
Phosphorus, Total in Water	SM 4500-P B.5* (2011) / SM 4500-P F (2011)	Persulfate Digestion / Automated Colorimetry (Ascorbic Acid)	Kelowna
Total Metals in Water	EPA 200.2* / EPA 6020B	HNO ₃ +HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	Richmond
Turbidity in Water	SM 2130 B (2011)	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
CFU/100 mL	Colony Forming Units per 100 millilitres
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
µg/L	Micrograms per litre
µS/cm	Microsiemens per centimetre
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

Guidelines Referenced in this Report:

[Guidelines for Canadian Drinking Water Quality \(Health Canada, Feb 2017\)](#)

Note: In some cases, the values displayed on the report represent the lowest guideline and are to be verified by the end user

General Comments:

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Samples will be disposed of 30 days after the test report has been issued unless otherwise agreed to in writing. The quality control (QC) data is available upon request