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Analytical Report

Bill To: Rosen Lake Ratepayers
113 Aspen Meadows Hill SW
Calgary, AB, Canada
T3H 0G3

Attn: Sampled By: Company: Scott Cote

Project ID: Project Name: Project Location: LSD:
P.O.:
Proj. Acct. code: 1741413

Lot ID: Control Number: **1741413**
Date Received: Jun 25, 2024
Date Reported: Jul 17, 2024
Report Number: 3019130
Report Type: Final Report

Reference Number	1741413-1
Sample Date	June 24, 2024
Sample Time	14:00
Sample Location	
Sample Description	Rosen Lake Water / 3.3°C
Sample Matrix	Water

Analyte		Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Microbiological Analysis						
Total Coliforms	Membrane Filtration	CFU/100 mL	<1	1	0	Absent - Below MAC
Physical and Aggregate Properties						
Colour	Apparent, Potable	Colour units	<5	5	15	Below AO
Turbidity		NTU	0.4	0.1	0.1/0.3/1.0 OG	
Routine Water						
pH			8.33	1	7.0-10.5	Within OG Range
Temp. of observed pH		°C	21.0			
Electrical Conductivity	at 25 °C	µS/cm	253	1		
Calcium	Extractable	mg/L	32.3	0.2		
Magnesium	Extractable	mg/L	11.6	0.2		
Sodium	Extractable	mg/L	2.3	0.4	200	Below AO
Potassium	Extractable	mg/L	<0.4	0.4		
Iron	Extractable	mg/L	<0.01	0.01	0.3	Below AO
Manganese	Extractable	mg/L	<0.005	0.005	0.02 AO; 0.12 MAC	Below AO
Chloride	Dissolved	mg/L	1.1	0.4	250	Below AO
Fluoride		mg/L	0.07	0.05	1.5	Below MAC
Nitrate - N		mg/L	<0.01	0.01	10	Below MAC
Nitrite - N		mg/L	<0.005	0.005	1	Below MAC
Nitrate and Nitrite - N		mg/L	<0.01	0.01	10	Below MAC
Sulfate (SO4)	Extractable	mg/L	13	0.9	500	Below AO
Hydroxide		mg/L	<5			
Carbonate		mg/L	<6			
Bicarbonate		mg/L	151			
P-Alkalinity	as CaCO3	mg/L	<5	5		
T-Alkalinity	as CaCO3	mg/L	124	5		
Total Dissolved Solids		mg/L	135	1	500	Below AO
Hardness	as CaCO3	mg/L	129.0			
Ionic Balance		%	96			

Approved by:
David Kapiczowski, BSc Operations Customer Support

Data have been validated by Analytical

	SAMPLE IDENTIFICATION												Canadian Drinking Water Quality*	BCMOECC Drinking Water Quality
	Rosen Lake													
Location	Inlet		Centre								Outlet			
Sample Date	8-Jun-2014	10-Aug-2014	8-Jun-2014	10-Aug-2014	17-Aug-2020	6-Sep-2021	12-Jun-2022	2-Oct-2022	6-Jun-2023	24-Jun-2024	8-Jun-2014	10-Aug-2014		
Microbiological														
Escherichia coli	NM	NM	NM	NM	NM	NM	1	<1	NM	NM	NM	NM	**0 per 100 mL**	**<=10 per 100 mL**
Total coliforms	<1	<1	<1	<1	NM	NM	1	10.9	<1	<1	<1	<1	**0 per 100 mL**	**<=10 per 100 mL**
Routine Parameters														
pH	NM	NM	NM	NM	8.22	8.12	8.19	NM	8.34	8.33	NM	NM	**7.0 - 10.5**	**---**
EC	NM	NM	NM	NM	0.27	0.266	0.262	NM	0.263	0.253	NM	NM	**---**	**---**
T-Alkalinity ($CaCO_3$)	NM	NM	NM	NM	120	130	129	NM	132	124	NM	NM	**---**	**---**
TDS	NM	NM	NM	NM	130	149	144	NM	146	135	NM	NM	**500**	**500**
Hardness (as $CaCO_3$)	NM	NM	NM	NM	139	146	140	NM	142	129	NM	NM	**NGR**	**NGR**
Colour (colour units)	NM	NM	NM	NM	NM	<5	<5	NM	<5	<5	NM	NM	**15**	**15**
Turbidity (NTU)	NM	NM	NM	NM	NM	0.8	0.9	NM	1.1	0.4	NM	NM	**1**	**1**
Calcium	NM	NM	NM	NM	33.8	36.7	36.1	NM	35.8	32.3	NM	NM	**NGR**	**NGR**
Chloride	NM	NM	NM	NM	0.845	0.8	0.9	NM	0.9	1.1	NM	NM	**250**	**250**
Fluoride	NM	NM	NM	NM	<DL	0.16	0.07	NM	0.09	0.07	NM	NM	**1.5**	**1.5**
Iron	NM	NM	NM	NM	<DL	<0.01	<0.01	NM	<0.01	<0.01	NM	NM	**0.3**	**0.3**
Potassium	NM	NM	NM	NM	2.35	0.5	<0.4	NM	<0.4	<0.4	NM	NM	**---**	**---**
Magnesium	NM	NM	NM	NM	13.3	13.1	12.2	NM	12.7	11.6	NM	NM	**NGR**	**NGR**
Manganese	NM	NM	NM	NM	<DL	<0.005	<0.005	NM	<0.005	<0.005	NM	NM	**0.12**	**0.12**
Nitrate-N	0.03	<0.01	0.01	<0.01	0.31	0.01	0.01	NM	0.01	<0.01	0.02	<0.01	**45**	**45**
Nitrite-N	NM	NM	NM	NM	NM	<0.005	<0.005	NM	<0.005	<0.005	NM	NM	**3.2**	**3**
Orthophosphate	<0.01	<0.01	<0.01	<0.01	0.086	<0.01	<0.01	NM	NM	NM	<0.01	<0.01	**---**	**---**
Sodium	NM	NM	NM	NM	27.6	2.6	2.3	NM	2.2	2.3	NM	NM	**200**	**---**
Sulphate	NM	NM	NM	NM	5.42	17	15	NM	15	13	NM	NM	**500**	**500**
Metals														
Zinc	NM	NM	NM	NM	<DL	<0.004	<0.004	NM	NM	NM	NM	NM	**5**	**3**

Health Canada Guidelines for Canadian Drinking Water Quality (2022) (all concentrations in mg/L = ppm, unless noted)
EC = Electrical Conductivity (dS/m) NM = Not Measured
NGR = No Guideline Required TDS = Total Dissolved Solids
--- = No Value Provided in Guidelines