

July 21, 2021

Baseline Water Project: 10-9000

Lor-Al Springs
Ms. S. Johnson
Box 200
Rimbey, Alberta
T0C 2J0**RE: 2021 Spring Water Source Testing – SW 12-044-02 W5M****INTRODUCTION**

Baseline Water Resource Inc. (Baseline Water) was retained by Lor-Al Springs to conduct annual water sampling at a spring located within SW 12-044-02 W5M on May 13, 2021. The spring is the source of high-quality groundwater produced for an active bottled water operation.

SAMPLING PROCEDURE

Testing was completed by collecting water samples from the 4-inch source discharge pipe at the spring. Water samples were submitted to AGAT Laboratories (AGAT) in Calgary, Alberta for analysis of routine potability, microbiological (*E. coli*, Total Coliform Bacteria, Iron Related Bacteria, Sulfate Reducing Bacteria), bromide, turbidity and total/dissolved metals analysis.

WATER QUALITY RESULTS

Field parameters including electrical conductivity (EC), pH, temperature and flow rate were measured prior to water sample collection. Field parameter results are listed below.

pH	EC (µS/cm)	Temperature (°C)	Flow (L/min)
7.40	415	5.6	79.1

Water quality analytical results were compared to the “Guidelines for Canadian Drinking Water Quality” (GCDWQ) (Health Canada, 2020). Complete laboratory results are summarized in Tables 1 – 3. A copy of the 2021 laboratory analytical report is attached.

DISCLAIMER

Baseline Water has used proficient skill and diligence conducting the water testing and preparation of this report. This report is a representation of the conditions and information present and available at the time of the water testing. Information received from all other sources is considered to be accurate but cannot be guaranteed. Baseline Water Resource Inc. is not responsible for any individual interpretation of this material, nor any decisions based upon findings in this report.

CLOSURE

Baseline Water Resource Inc. is pleased to submit this report as fulfillment of Lor-Al Springs' request for spring water source testing.

Respectfully submitted,

Baseline Water Resource Inc.

APEGA Permit to Practice: P09366



S. Brent Bowerman, P.Geol.
President

REFERENCE

Health Canada. 2020. Guidelines for Canadian Drinking Water Quality - Summary Table. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario, Canada.

Table 1: Water Analytical Results: Routine Potability (Lor-AI Springs)

Water Well Name	Sample Date	Laboratory	Chloride (Cl) (mg/L)	Fluoride (F) (mg/L)	Nitrate & Nitrite as Nitrogen (mg/L)	Nitrate-Nitrogen (NO ₃ -N) (mg/L)	Nitrite-Nitrogen (NO ₂ -N) (mg/L)	Sulphate (SO ₄) (mg/L)	pH	Electrical Conductivity (EC) (µS/cm)	Ion Balance	Bicarbonate (HCO ₃) (mg/L)	Carbonate (CO ₃) (mg/L)	Hydroxide (OH) (mg/L)	P-Alkalinity (as CaCO ₃) (mg/L)	T-Alkalinity (as CaCO ₃) (mg/L)
GCDWQ¹ Criteria			250	1.5	nr²	10	1	500	7.0-10.5	nr	nr	nr	nr	nr	nr	nr
Type of Objective (MAC, AO or OG)³			AO	MAC	-	MAC	MAC	AO	OG	-	-	-	-	-	-	-
Lor-AI Springs	7-Dec-87	AEC ⁴	1.0	0.20	0.020	na ⁵	0.005	10.0	9.30	577	1.01	293	32.0	na	na	294
	22-May-91	AEC	2.0	0.08	0.798	na	0.001	7.0	8.16	442	1.00	280	na	na	na	230
	4-Jan-01	U of A ⁶	1.1	0.07	0.660	na	na	8.0	8.32	504	1.10	312	2.0	0	na	259
	9-Jul-04	MAI ⁷	16.6	0.14	0.340	0.340	<0.003	20.2	7.67	656	1.02	390	<0.5	<0.5	<0.5	320
	18-Jul-05	MAI	15.0	<0.10	0.500	0.500	<0.06	18.0	7.90	604	0.98	403	<1.0	<1.0	<1.0	330
	3-Dec-06	MAI	<0.5	0.12	0.225	0.225	<0.003	25.5	8.20	535	0.91	329	<0.5	<0.5	<0.5	270
	27-Jun-07	MAI	20.0	na	1.900	1.900	<0.06	9.0	8.30	543	0.94	304	2.0	<1.0	2.0	253
	6-Dec-07	ALS ⁸	9.9	<0.10	0.770	0.770	<0.05	12.4	8.10	538	95.3	339	<5.0	<5.0	na	278
	5-Aug-08	ALS	31.0	0.08	0.400	0.400	<0.05	14.8	8.10	658	98.0	363	<5.0	<5.0	na	297
	11-Feb-09	ALS	10.3	<0.10	0.240	0.240	<0.05	16.0	7.98	613	100	393	<5.0	<5.0	na	322
	18-May-10	ALS	49.5	<0.10	0.453	0.453	<0.050	23.7	8.00	607	95.0	395	<5.0	<5.0	na	324
	13-Aug-10	ALS	22.7	<0.10	1.400	1.400	<0.050	11.4	8.24	534	97.9	327	<5.0	<5.0	na	268
	16-May-11	ALS	30.9	<0.10	1.560	1.560	<0.050	10.6	8.16	595	93.4	317	<5.0	<5.0	na	260
	10-May-12	ALS	21.2	<0.10	0.614	0.614	<0.050	14.8	7.68	535	101.0	365	<5.0	<5.0	na	299
	22-May-13	ALS	18.3	<0.10	0.611	0.611	<0.050	12.5	8.08	587	94.3	337	<5.0	<5.0	na	276
	13-May-14	ALS	18.7	<0.10	1.210	1.210	<0.020	9.0	7.99	490	102.0	305	<5.0	<5.0	na	250
	26-May-15	ALS	31.4	0.062	0.545	0.545	<0.010	15.1	8.09	606	93.0	347	<5.0	<5.0	na	285
	12-May-16	AGAT ⁹	46	0.070	0.410	0.410	<0.01	19.0	8.27	743	107.0	364	<5.0	<5.0	<5.0	300
	9-May-17	AGAT	28	0.010	0.520	0.520	<0.01	17.0	7.88	701	93.0	387	<5.0	<5.0	<5.0	317
	3-May-18	AGAT	31	0.090	0.880	0.880	<0.01	17.0	8.16	659	97.0	377	<5.0	<5.0	<5.0	309
16-May-19	AGAT	29	0.060	0.610	0.610	<0.01	20.0	8.05	650	98.0	397	<5	<5	<5	325	
5-May-20	AGAT	20.5	<0.01	0.68	0.68	<0.01	19.6	8.13	681	116	366	<5	<5	<5	300	
13-May-21	AGAT	55.5	0.05	0.54	0.54	<0.01	18.3	8.05	785	100	361	<5	<5	<5	290	

NOTES:

1. Health Canada, 2020. "Guidelines for Canadian Drinking Water Quality Summary Table (Prepared by the Federal-Provincial-Territorial Committee on Drinking Water)"
2. 'nr' denotes parameter not directly regulated.
3. MAC denotes "Maximum Acceptable Concentration", AO denotes "Aesthetic Objective" and OG denotes "Operational Guidance Value".
4. Alberta Environmental Centre in Vegreville, Alberta conducted the water analysis.
5. 'na' denotes value not applicable or not available.
6. University of Alberta (U of A) in Edmonton, Alberta conducted the water analysis.
7. Maxxam Analytics Inc. in Edmonton, Alberta conducted the water analysis.
8. ALS Laboratory Group (ALS) in Calgary, Alberta conducted the water analysis.
9. AGAT Laboratories (AGAT) in Calgary, Alberta conducted the water analysis.
10. **BOLD** denotes an exceedance in Health Canada (2020) MAC or AO criteria.
11. 'na' and values below the laboratory reportable detection limit have been greyed-out for readability.

Table 1: Water Analytical Results: Routine Potability (Lor-AI Springs) Continued

Water Well Name	Sample Date	Laboratory	Calcium (Ca) - Dissolved (mg/L)	Iron (Fe) - Total (mg/L)	Iron (Fe) - Dissolved (mg/L)	Magnesium (Mg) - Dissolved (mg/L)	Manganese (Mn) - Total (mg/L)	Manganese (Mn) - Dissolved (mg/L)	Potassium (K) - Dissolved (mg/L)	Sodium (Na) - Dissolved (mg/L)	Total Dissolved Solids (TDS) (mg/L)	Hardness (as CaCO ₃) (mg/L)	Turbidity (NTU)	Colour (TCU)	Flow Rate (L/min)
GCDWQ¹ Criteria			nr²	0.3	0.3	nr	0.02	0.02	nr	200	500	nr	0.1³	15	nr
Type of Objective (MAC, AO or OG)⁴			-	AO	AO	-	AO	AO	-	AO	AO	-	OG	AO	-
Lor-AI Springs	7-Dec-87	AEC ⁵	1.0	na ⁶	0.020	1.0	na	na	0.30	139.0	328	5	na	na	na
	22-May-91	AEC	54.0	na	<0.010	22.0	na	na	1.50	8.0	236	225	na	na	na
	4-Jan-01	U of A ⁷	60.0	na	<0.020	28.0	na	na	2.00	15.0	272	263	na	na	na
	9-Jul-04	MAI ⁸	73.1	na	0.050	33.2	na	<0.0040	2.10	23.3	362	320	0.30	na	71
	18-Jul-05	MAI	70.5	na	0.033	33.8	na	<0.0010	2.00	20.8	372	320	0.20	na	na
	3-Dec-06	MAI	32.3	na	<0.060	16.0	na	<0.0040	1.70	56.0	295	150	0.20	na	na
	27-Jun-07	MAI	58.9	na	<0.060	24.2	na	<0.0040	1.70	14.2	289	250	na	na	na
	6-Dec-07	ALS ⁹	59.5	0.061	<0.030	26.4	<0.005	<0.0050	1.70	15.5	296	257	na	na	164
	5-Aug-08	ALS	69.8	<0.050	<0.050	29.8	<0.010	<0.0100	1.60	24.0	351	297	na	na	na
	11-Feb-09	ALS	67.1	<0.030	<0.030	31.5	<0.005	<0.0005	2.22	25.4	347	297	0.35	<5.0	na
	18-May-10	ALS	73.4	<0.030	<0.030	34.2	<0.005	<0.0050	2.22	33.2	413	324	<0.20	na	na
	13-Aug-10	ALS	61.7	<0.030	<0.030	26.2	<0.005	<0.0050	1.93	21.1	312	262	<0.20	na	144
	16-May-11	ALS	58.9	<0.030	<0.030	25.3	<0.005	<0.0050	1.84	20.9	311	251	<0.20	<5.0	192
	10-May-12	ALS	67.7	<0.030	<0.030	30.1	<0.005	<0.0050	2.08	24.5	342	293	0.20	<5.0	132
	22-May-13	ALS	60.1	<0.030	<0.030	23.9	<0.005	<0.0050	1.82	22.3	307	248	0.12	<5.0	227
	13-May-14	ALS	60.4	<0.030	<0.030	23.6	<0.005	<0.0050	1.91	20.3	289	248	0.16	na	176
	26-May-15	ALS	62.3	<0.030	<0.030	25.0	<0.005	<0.0050	1.82	27.1	337	261	0.12	<5.0	97
	12-May-16	AGAT ¹⁰	72.3	<0.100	<0.100	32.8	<0.005	<0.0050	2.00	43.7	440	316	<0.2	na	82
9-May-17	AGAT	61.7	<0.100	<0.100	26.6	<0.005	<0.0050	1.90	38.6	366	264	<0.2	na	111	
3-May-18	AGAT	66.2	<0.100	<0.100	27.9	<0.005	<0.0050	2.10	37.2	371	280	<0.2	na	114	
16-May-19	AGAT	68.9	<0.1	<0.1	29.7	<0.005	<0.005	2.00	38.4	386	294	<0.2	na	114	
5-May-20	AGAT	70.9	<0.1	<0.1	33.2	<0.005	<0.005	2.3	42.8	372	314	0.2	na	114	
13-May-21	AGAT	74.9	<0.1	<0.1	30.8	<0.005	<0.005	2.0	36.3	398	314	<0.2	na	79	

NOTES:

1. Health Canada, 2020. "Guidelines for Canadian Drinking Water Quality Summary Table (Prepared by the Federal-Provincial-Territorial Committee on Drinking Water)
2. 'nr' denotes parameter not directly regulated.
3. Guideline is based on conventional treatment (0.3 mg/L), slow sand or diatomaceous earth filtration (1.0 mg/L), and membrane filtration (0.1 mg/L). This guideline is intended specifically for water treatment facilities, and is not directly comparable to private water wells or springs.
4. MAC denotes "Maximum Acceptable Concentration", AO denotes "Aesthetic Objective" and OG denotes "Operational Guidance Value".
5. Alberta Environmental Centre in Vegreville, Alberta conducted the water analysis.
6. 'na' denotes value not applicable or not available.
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8. Maxxam Analytics Inc. in Edmonton, Alberta conducted the water analysis.
9. ALS Laboratory Group (ALS) in Calgary, Alberta conducted the water analysis.
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11. **BOLD** denotes an exceedance in Health Canada (2020) MAC or AO criteria.
12. 'na' and values below the laboratory reportable detection limit have been greyed-out for readability.

Table 2: Water Analytical Results: Microbiological Parameters (Lor-AI Springs)

Water Well Name		Sample Date	Laboratory	Total Coliform Bacteria (MPN/100mL)	Fecal Coliform Bacteria (MPN/100mL)	Escherichia coli Bacteria (CFU/100mL)	Iron Related Bacteria (CFU/mL)	Sulfate Reducing Bacteria (CFU/mL)
GCDWQ¹ Criteria			0	0	0	nr²	nr	
Type of Objective (MAC, AO or OG)³			MAC	MAC	MAC	-	-	
Lor-AI Springs	7-Dec-87	AEC ⁴	na ⁵	na	na	na	na	
	22-May-91	AEC	na	na	na	na	na	
	4-Jan-01	U of A ⁶	na	na	na	na	na	
	9-Jul-04	MAI ⁷	na	na	na	520	<1	
	18-Jul-05	MAI	na	na	na	na	<1	
	3-Dec-06	MAI	<1	na	<1	9000	<200	
	27-Jun-07	MAI	na	na	na	<30	<200	
	19-Dec-07	ALS ⁸	<1	<1	na	9000	<200	
	5-Aug-08	ALS	<1	<1	na	9000	<200	
	11-Feb-09	ALS	<1	na	<1	500	<200	
	18-May-09	ALS	<1	na	<1	2300	<200	
	16-May-11	ALS	<1	na	<1	9000	<200	
	10-May-12	ALS	<1	na	<1	9000	<200	
	22-May-13	ALS	<1	na	<1	9000	<200	
	13-May-14	ALS	<1	na	<1	9000	<200	
	26-May-15	ALS	<1	na	<1	9000	<200	
	12-May-16	AGAT ⁹	<1	<1	<1	8	<1	
	9-May-17	AGAT	<1	na	<1	150	<1	
	3-May-18	AGAT	<1	na	<1	500	<1	
16-May-19	AGAT	<1	na	<1	9000	<1		
5-May-20	AGAT	2	na	<1	9000	<1		
13-May-21	AGAT	<1	na	<1	500	<1		

NOTES:

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9. AGAT Laboratories (AGAT) in Calgary, Alberta conducted the water analysis.
10. **BOLD** denotes an exceedance in Health Canada (2020) MAC or AO criteria.
11. 'na' and values below the laboratory reportable detection limit have been greyed-out for readability.

Table 3: Water Analytical Results: Dissolved Metals (Lor-AI Springs)

Water Well Name	Sample Date	Laboratory	Aluminum (Al) (mg/L)	Antimony (Sb) (mg/L)	Arsenic (As) (mg/L)	Barium (Ba) (mg/L)	Beryllium (Be) (mg/L)	Bismuth (Bi) (mg/L)	Boron (B) (mg/L)	Bromate (mg/L)	Bromide (mg/L)	Cadmium (Cd) (mg/L)	Chromium (Cr) (mg/L)	Cobalt (Co) (mg/L)	Copper (Cu) (mg/L)	Iron (Fe) (mg/L)	Lead (Pb) (mg/L)
GCDWQ¹ Criteria			0.1	0.006	0.01	1.0	nr²	nr	5	0.01	nr	0.005	0.05	nr	1.0	0.3	0.005
Type of Objective (MAC, AO or OG)³			OG	MAC	MAC	MAC	-	-	MAC	MAC	-	MAC	MAC	-	AO	AO	MAC
Lor-AI Springs	7-Dec-87	AEC ⁴	na ⁵	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	22-May-91	AEC	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	4-Jan-01	U of A ⁶	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	9-Jul-04	MAI ⁷	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	18-Jul-05	MAI	<0.04	<0.02	<0.02	0.128	<0.001	<0.2	<0.05	na	na	<0.002	<0.007	<0.005	<0.009	0.033	<0.1
	3-Dec-06	MAI	<0.04	<0.0002	<0.001	0.08	<0.001	na	0.06	na	na	<0.0002	<0.01	<0.0003	0.0017	<0.06	<0.0002
	27-Jun-07	MAI	<0.04	na	na	0.10	na	na	<0.02	na	na	na	<0.01	na	na	<0.06	na
	5-Aug-08	ALS ⁸	na	na	na	na	na	na	na	na	na	na	na	na	na	<0.05	na
	11-Feb-09	ALS	0.027	<0.00050	<0.00050	0.115	<0.0025	<0.0025	<0.050	<0.01	na	<0.00025	<0.0025	<0.00050	0.00089	na	0.00062
	18-May-10	ALS	<0.025	<0.00050	<0.00050	0.147	<0.0025	<0.0025	<0.050	na	<0.10	<0.00025	<0.0025	<0.00050	<0.00050	na	<0.00050
	16-May-11	ALS	<0.0050	<0.00010	0.00011	0.107	<0.00050	<0.00050	0.016	na	<0.10	<0.000050	<0.00050	<0.00010	0.00048	na	<0.00010
	10-May-12	ALS	<0.010	<0.00020	<0.00020	0.125	<0.0010	<0.0010	<0.020	na	<0.10	<0.00010	<0.0010	<0.00020	0.00045	na	<0.00020
	22-May-13	ALS	<0.0050	<0.00010	<0.00010	0.128	<0.00050	na	0.019	na	na	<0.000050	<0.00050	<0.00010	0.00034	<0.030	<0.00010
	13-May-14	ALS	<0.0010	<0.00010	<0.00010	0.115	<0.00050	na	0.013	na	na	<0.000010	0.00023	<0.00010	0.00020	<0.030	<0.000050
	26-May-15	ALS	0.0043	<0.00010	<0.00010	0.132	<0.00010	na	0.023	na	<0.10	0.0000116	0.00022	<0.00010	0.00036	<0.030	<0.000050
	12-May-16	AGAT ⁹	<0.0040	<0.0010	<0.0010	0.140	<0.0010	na	0.030	na	<0.10	<0.000016	<0.0010	na	<0.00080	<0.1	<0.00050
	9-May-17	AGAT	<0.0040	<0.0010	<0.0010	0.120	<0.0010	na	0.020	na	<0.10	<0.000016	<0.0010	na	<0.00080	<0.1	<0.00050
3-May-18	AGAT	<0.0040	<0.0010	<0.0010	0.120	<0.0010	na	0.020	na	<0.10	<0.000016	<0.001	na	<0.0008	<0.1	<0.0005	
16-May-19	AGAT	<0.004	<0.001	<0.001	0.130	<0.001	na	0.030	na	<0.1	0.0000190	<0.001	na	<0.0008	<0.1	<0.0005	
5-May-20	AGAT	<0.004	<0.001	<0.001	0.14	<0.001	na	0.02	na	<0.1	<0.000016	<0.001	<0.0009	<0.0008	<0.1	<0.0005	
13-May-21	AGAT	<0.004	<0.001	<0.001	0.15	<0.001	na	0.02	na	<0.1	<0.000016	<0.001	<0.0009	<0.0008	<0.1	<0.0005	

NOTES:

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10. **BOLD** denotes an exceedance in Health Canada (2020) MAC or AO criteria.
11. 'na' and values below the laboratory reportable detection limit have been greyed-out for readability.

Table 3: Water Analytical Results: Dissolved Metals (Lor-AI Springs) Continued

Water Well Name	Sample Date	Laboratory	Lithium (Li) (mg/L)	Magnesium (Mg) (mg/L)	Manganese (Mn) (mg/L)	Mercury (Hg) (mg/L)	Molybdenum (Mo) (mg/L)	Nickel (Ni) (mg/L)	Selenium (Se) (mg/L)	Silver (Ag) (mg/L)	Strontium (Sr) (mg/L)	Thallium (Tl) (mg/L)	Tin (Sn) (mg/L)	Titanium (Ti) (mg/L)	Uranium (U) (mg/L)	Vanadium (V) (mg/L)	Zinc (Zn) (mg/L)
GCDWQ¹ Criteria			nr²	nr	0.02	0.001	nr	nr	0.05	nr	7.0	nr	nr	nr	0.02	nr	5.0
Type of Objective (MAC, AO or OG)³			-	-	AO	MAC	-	-	MAC	-	MAC	-	-	-	MAC	-	AO
Lor-AI Springs	7-Dec-87	AEC ⁴	na ⁵	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	22-May-91	AEC	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	4-Jan-01	U of A ⁶	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	9-Jul-04	MAI ⁷	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	18-Jul-05	MAI	0.03	34.1	0.001	na	<0.00600	<0.0080	<0.03	<0.01	0.720	<0.050	<0.040	<0.006	<1.00	<0.050	<0.005
	3-Dec-06	MAI	0.03	16.0	<0.004	na	0.00500	0.0014	<0.001	<0.0001	0.380	<0.0002	<0.001	0.002	0.0033	<0.001	0.035
	27-Jul-07	MAI	<0.02	24.2	<0.004	na	na	na	na	na	0.560	na	na	na	na	na	na
	5-Aug-08	ALS ⁸	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	11-Feb-09	ALS	<0.025	na	na	<0.00005	0.00333	<0.0025	<0.0050	<0.000050	0.613	<0.00050	<0.00050	<0.0050	0.00494	<0.0050	<0.025
	18-May-10	ALS	<0.025	na	na	<0.00005	0.00327	<0.0025	<0.0050	<0.000050	0.704	<0.00050	<0.00050	<0.0050	0.00489	<0.0050	<0.025
	16-May-11	ALS	0.0176	na	na	<0.00005	0.00276	<0.0005	<0.0010	<0.000010	0.518	<0.00010	<0.00010	<0.0010	0.00337	<0.0010	<0.0050
	10-May-12	ALS	0.0200	na	na	<0.00005	0.00302	<0.0010	<0.0020	<0.000020	0.583	<0.00020	0.00025	<0.0020	0.00423	<0.0020	<0.010
	22-May-13	ALS	0.0205	23.9	<0.005	<0.00010	0.00309	<0.00050	<0.0010	<0.000010	na	<0.00010	<0.00010	<0.0010	0.00423	<0.0010	<0.0050
	13-May-14	ALS	0.0159	23.6	<0.005	<0.00005	0.00267	0.00021	0.00043	<0.000010	na	<0.000050	<0.00010	<0.00030	0.00319	0.00036	<0.0050
	26-May-15	ALS	0.0221	25.6	<0.005	<0.000005	0.00320	<0.00050	0.000687	<0.000010	na	<0.000010	<0.00010	<0.00030	0.00463	<0.00050	0.0025
	12-May-16	AGAT ⁹	na	32.8	<0.005	<0.000025	0.00300	<0.0030	0.000700	<0.000050	na	<0.00050	na	<0.001	0.00500	na	<0.01
	9-May-17	AGAT	na	26.6	<0.005	<0.000025	0.00300	<0.0030	<0.000500	<0.000050	na	<0.00050	na	0.004	0.00500	na	<0.01
3-May-18	AGAT	na	27.9	<0.005	<0.000025	0.00300	<0.0030	0.000800	<0.00005	na	<0.0001	na	0.003	0.00500	na	<0.005	
16-May-19	AGAT	na	29.7	<0.005	<0.000025	0.00300	<0.003	<0.0005	0.00007	na	<0.0001	na	0.003	0.005	na	<0.005	
5-May-20	AGAT	na	33.2	<0.005	<0.0000025	0.003	<0.003	<0.0005	<0.0001	na	<0.0001	na	0.003	0.005	na	<0.005	
13-May-21	AGAT	na	30.8	<0.005	<0.0000025	0.003	<0.003	<0.0005	<0.0001	na	<0.0001	na	<0.001	0.005	na	<0.005	

NOTES:

- Health Canada, 2020. "Guidelines for Canadian Drinking Water Quality Summary Table (Prepared by the Federal-Provincial-Territorial Committee on Drinking Water)"
- 'nr' denotes parameter not directly regulated.
- MAC denotes "Maximum Acceptable Concentration", AO denotes "Aesthetic Objective" and OG denotes "Operational Guidance Value".
- Alberta Environmental Centre in Vegreville, Alberta conducted the water analysis.
- 'na' denotes value not applicable or not available.
- University of Alberta (U of A) in Edmonton, Alberta conducted the water analysis.
- Maxxam Analytics Inc. in Edmonton, Alberta conducted the water analysis.
- ALS Laboratory Group (ALS) in Calgary, Alberta conducted the water analysis.
- AGAT Laboratories (AGAT) in Calgary, Alberta conducted the water analysis.
- BOLD** denotes an exceedance in Health Canada (2020) MAC or AO criteria.
- 'na' and values below the laboratory reportable detection limit have been greyed-out for readability.

**CLIENT NAME: BASELINE WATER RESOURCE INC
7, 3800 19 STREET N.E.
CALGARY , AB T2E6V2
(403) 282-3999**

ATTENTION TO: CLINT GANES

PROJECT: 10-9000 / SW-12-044-02W5M

AGAT WORK ORDER: 21C746927

WATER ANALYSIS REVIEWED BY: Jennifer Liu, Analyst

DATE REPORTED: Jul 07, 2021

PAGES (INCLUDING COVER): 15

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (403) 735-2005

*Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
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- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
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- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*



Certificate of Analysis

AGAT WORK ORDER: 21C746927

PROJECT: 10-9000 / SW-12-044-02W5M

2910 12TH STREET NE
 CALGARY, ALBERTA
 CANADA T2E 7P7
 TEL (403)735-2005
 FAX (403)735-2771
<http://www.agatlabs.com>

CLIENT NAME: BASELINE WATER RESOURCE INC

ATTENTION TO: CLINT GANES

SAMPLING SITE:

SAMPLED BY:

Metals - Dissolved - Alberta Tier 1 with Mercury

DATE RECEIVED: 2021-05-13

DATE REPORTED: 2021-07-07

SAMPLE DESCRIPTION: SW Lor-AI Spring
 SW-12-044-02W5M
 SAMPLE TYPE: Water
 DATE SAMPLED: 2021-05-13 12:30
 2466405

Parameter	Unit	G / S	RDL	2466405
Dissolved Aluminum	mg/L		0.004	<0.004
Dissolved Antimony	mg/L		0.001	<0.001
Dissolved Arsenic	mg/L		0.001	<0.001
Dissolved Barium	mg/L		0.05	0.15
Dissolved Beryllium	mg/L		0.001	<0.001
Dissolved Boron	mg/L		0.01	0.02
Dissolved Cadmium	mg/L		0.000016	<0.000016
Dissolved Chromium	mg/L		0.001	<0.001
Dissolved Cobalt	mg/L		0.0009	<0.0009
Dissolved Copper	mg/L		0.0008	<0.0008
Dissolved Iron	mg/L		0.1	<0.1
Dissolved Lead	mg/L		0.0005	<0.0005
Dissolved Manganese	mg/L		0.005	<0.005
Dissolved Mercury- Ultra Low Level	mg/L		0.0000025	< 2.50E-06
Dissolved Molybdenum	mg/L		0.001	0.003
Dissolved Nickel	mg/L		0.003	<0.003
Dissolved Selenium	mg/L		0.0005	<0.0005
Dissolved Silver	mg/L		0.0001	<0.0001
Dissolved Sodium	mg/L		0.6	36.3
Dissolved Thallium	mg/L		0.0001	<0.0001
Dissolved Titanium	mg/L		0.001	<0.001
Dissolved Uranium	mg/L		0.001	0.005
Dissolved Zinc	mg/L		0.005	<0.005

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 21C746927

PROJECT: 10-9000 / SW-12-044-02W5M

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TEL (403)735-2005
FAX (403)735-2771
<http://www.agatlabs.com>

CLIENT NAME: BASELINE WATER RESOURCE INC

ATTENTION TO: CLINT GANES

SAMPLING SITE:

SAMPLED BY:

Metals - Dissolved - Alberta Tier 1 with Mercury

DATE RECEIVED: 2021-05-13

DATE REPORTED: 2021-07-07

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

2466405 < - Values refer to Report Detection Limit.

** Results to follow

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 21C746927

PROJECT: 10-9000 / SW-12-044-02W5M

2910 12TH STREET NE
 CALGARY, ALBERTA
 CANADA T2E 7P7
 TEL (403)735-2005
 FAX (403)735-2771
<http://www.agatlabs.com>

CLIENT NAME: BASELINE WATER RESOURCE INC

ATTENTION TO: CLINT GANES

SAMPLING SITE:

SAMPLED BY:

Metals - Total - Alberta Tier 1 with Mercury

DATE RECEIVED: 2021-05-13

DATE REPORTED: 2021-07-07

SAMPLE DESCRIPTION: SW Lor-AI Spring
 SW-12-044-02W5M
 SAMPLE TYPE: Water
 DATE SAMPLED: 2021-05-13 12:30
 2466405

Parameter	Unit	G / S	RDL	2466405
Total Aluminum	mg/L		0.004	0.006
Total Antimony	mg/L		0.001	<0.001
Total Arsenic	mg/L		0.001	<0.001
Total Barium	mg/L		0.05	0.16
Total Beryllium	mg/L		0.0005	<0.0005
Total Boron	mg/L		0.01	0.03
Total Cadmium	mg/L		0.000016	0.000026
Total Chromium	mg/L		0.0005	<0.0005
Total Cobalt	mg/L		0.0009	<0.0009
Total Copper	mg/L		0.0008	<0.0008
Total Iron	mg/L		0.1	<0.1
Total Lead	mg/L		0.0001	<0.0001
Total Manganese	mg/L		0.005	<0.005
Total Mercury- Ultra Low Level	mg/L		0.0000025	< 2.50E-06
Total Molybdenum	mg/L		0.001	0.003
Total Nickel	mg/L		0.003	<0.003
Total Selenium	mg/L		0.0005	0.0005
Total Silver	mg/L		0.00005	0.00005
Total Sodium	mg/L		0.6	39.1
Total Thallium	mg/L		0.0005	<0.0005
Total Titanium	mg/L		0.001	<0.001
Total Uranium	mg/L		0.001	0.006
Total Zinc	mg/L		0.01	<0.01

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

2466405 < - Values refer to Report Detection Limit.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 21C746927

PROJECT: 10-9000 / SW-12-044-02W5M

2910 12TH STREET NE
 CALGARY, ALBERTA
 CANADA T2E 7P7
 TEL (403)735-2005
 FAX (403)735-2771
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CLIENT NAME: BASELINE WATER RESOURCE INC

ATTENTION TO: CLINT GANES

SAMPLING SITE:

SAMPLED BY:

Microbial Analysis - E. Coli, Total Coliforms

DATE RECEIVED: 2021-05-13

DATE REPORTED: 2021-07-07

SAMPLE DESCRIPTION: SW Lor-AI
 Spring
 SW-12-044-02W5M
 SAMPLE TYPE: Water
 DATE SAMPLED: 2021-05-13
 12:30

2466405

Parameter	Unit	G / S	RDL	2466405
Total Coliforms (MPN)	MPN/100 mL		1	<1
Escherichia coli (MPN)	MPN/100 mL		1	<1

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
 Analysis performed at AGAT Calgary (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 21C746927

PROJECT: 10-9000 / SW-12-044-02W5M

2910 12TH STREET NE
 CALGARY, ALBERTA
 CANADA T2E 7P7
 TEL (403)735-2005
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CLIENT NAME: BASELINE WATER RESOURCE INC

ATTENTION TO: CLINT GANES

SAMPLING SITE:

SAMPLED BY:

Routine Chemistry Water Analysis

DATE RECEIVED: 2021-05-13

DATE REPORTED: 2021-07-07

SAMPLE DESCRIPTION: SW Lor-AI Spring
SAMPLE TYPE: SW-12-044-02W5M Water
DATE SAMPLED: 2021-05-13 12:30
2466405

Parameter	Unit	G / S	RDL	2466405
pH	pH Units	7.0-10.5	N/A	8.05
p - Alkalinity (as CaCO3)	mg/L		5	<5
T - Alkalinity (as CaCO3)	mg/L		5	290
Bicarbonate	mg/L		5	361
Carbonate	mg/L		5	<5
Hydroxide	mg/L		5	<5
Electrical Conductivity	uS/cm		5	785
Chloride	mg/L	(250)	1.0	55.5
Fluoride	mg/L	1.5	0.01	0.05
Nitrate	mg/L	45	0.5	2.4
Nitrate-N	mg/L	10	0.02	0.54
Nitrite	mg/L	3	0.05	<0.05
Nitrite-N	mg/L	1	0.01	<0.01
Nitrate+Nitrite - Nitrogen	mg/L		0.02	0.54
Sulfate	mg/L	(500)	1.0	18.3
Dissolved Calcium	mg/L		0.3	74.9
Dissolved Magnesium	mg/L		0.2	30.8
Dissolved Sodium	mg/L	(200)	0.6	36.3
Dissolved Potassium	mg/L		0.6	2.0
Dissolved Iron	mg/L	(0.3)	0.1	<0.1
Dissolved Manganese	mg/L	0.12 (0.02)	0.005	<0.005
Sodium Adsorption Ratio				0.89
Calculated TDS	mg/L		0.6	398
Hardness	mg CaCO3/L		1	314
Ion Balance	%		1	100

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 21C746927

PROJECT: 10-9000 / SW-12-044-02W5M

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CANADA T2E 7P7
TEL (403)735-2005
FAX (403)735-2771
<http://www.agatlabs.com>

CLIENT NAME: BASELINE WATER RESOURCE INC

ATTENTION TO: CLINT GANES

SAMPLING SITE:

SAMPLED BY:

Routine Chemistry Water Analysis

DATE RECEIVED: 2021-05-13

DATE REPORTED: 2021-07-07

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to 2020 Canadian Drinking Water Quality MAC (AO)
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

2466405 < - Values refer to Report Detection Limits.
SAR is a calculated parameter. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
If sodium results in mg/L are less than detection, SAR is non-calculable and is reported as 0.
Ion Balance is a calculated parameter. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
Hardness is a calculated parameter. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
Calculated TDS is a calculated parameter. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 21C746927

PROJECT: 10-9000 / SW-12-044-02W5M

2910 12TH STREET NE
 CALGARY, ALBERTA
 CANADA T2E 7P7
 TEL (403)735-2005
 FAX (403)735-2771
<http://www.agatlabs.com>

CLIENT NAME: BASELINE WATER RESOURCE INC

ATTENTION TO: CLINT GANES

SAMPLING SITE:

SAMPLED BY:

Water Analysis - Bromide, Turbidity

DATE RECEIVED: 2021-05-13

DATE REPORTED: 2021-07-07

SAMPLE DESCRIPTION: SW Lor-AI
 Spring
 SW-12-044-
 02W5M
 SAMPLE TYPE: Water
 DATE SAMPLED: 2021-05-13
 12:30

Parameter	Unit	G / S	RDL	2466405
Bromide	mg/L		0.1	<0.1
Turbidity	NTU		0.2	<0.2

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Certified By:

Quality Assurance

CLIENT NAME: BASELINE WATER RESOURCE INC
PROJECT: 10-9000 / SW-12-044-02W5M
SAMPLING SITE:

AGAT WORK ORDER: 21C746927
ATTENTION TO: CLINT GANES
SAMPLED BY:

Water Analysis																
RPT Date: Jul 07, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

Routine Chemistry Water Analysis

pH	2478087		9.04	9.04	0.0%	N/A	100%	90%	110%						
p - Alkalinity (as CaCO3)	2478087		115	116	0.8%	< 5	NA	80%	120%						
T - Alkalinity (as CaCO3)	2478087		1070	1070	0.4%	6	93%	80%	120%						
Bicarbonate	2478087		1060	1050	0.6%	9	NA								
Carbonate	2478087		138	139	0.8%	< 5	NA								
Hydroxide	2478087		<5	<5	NA	< 5	NA								
Electrical Conductivity	2478087		8560	8520	0.5%	< 5	102%	90%	110%						
Chloride	2459368		87.2	87.3	0.1%	< 1.0	96%	70%	130%	96%	80%	120%	96%	70%	130%
Fluoride	2459368		<0.3	<0.3	NA	< 0.01	97%	70%	130%	94%	80%	120%	97%	70%	130%
Nitrate	2459368		4.1	3.4	NA	< 0.5	98%	70%	130%	95%	80%	120%	95%	70%	130%
Nitrite	2459368		<1.0	<1.0	NA	< 0.05	96%	70%	130%	95%	80%	120%	96%	70%	130%
Sulfate	2459368		3530	3550	0.4%	< 1.0	99%	70%	130%	96%	80%	120%	NA	70%	130%
Dissolved Calcium	2459372		41.7	45.0	7.6%	< 0.3	110%	70%	130%	106%	80%	120%	NA	70%	130%
Dissolved Magnesium	2459372		16.5	17.5	6.0%	< 0.2	109%	70%	130%	104%	80%	120%	NA	70%	130%
Dissolved Sodium	2459372		11.7	12.2	4.0%	< 0.6	111%	70%	130%	110%	80%	120%	NA	70%	130%
Dissolved Potassium	2459372		3.6	3.8	6.1%	< 0.6	101%	70%	130%	98%	80%	120%	87%	70%	130%
Dissolved Iron	2459372		<0.1	<0.1	NA	< 0.1	117%	70%	130%	107%	80%	120%	108%	70%	130%
Dissolved Manganese	2459372		<0.005	<0.005	NA	< 0.005	115%	70%	130%	107%	80%	120%	107%	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.
 Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

pH has been analyzed past the recommended holding time of 15 minutes from sampling (field measurement ideal if more accurate data required)

Nitrate and Nitrite: The regulatory hold time for the analysis of nitrate and/or nitrite in water is 72 hours.

Metals - Dissolved - Alberta Tier 1 with Mercury

Dissolved Aluminum	2466405	2466405	<0.004	<0.004	NA	< 0.004	97%	70%	130%	97%	80%	120%	97%	70%	130%
Dissolved Antimony	2466405	2466405	<0.001	<0.001	NA	< 0.001	97%	70%	130%	98%	80%	120%	96%	70%	130%
Dissolved Arsenic	2466405	2466405	<0.001	<0.001	NA	< 0.001	110%	70%	130%	99%	80%	120%	100%	70%	130%
Dissolved Barium	2466405	2466405	0.15	0.15	NA	< 0.05	103%	70%	130%	103%	80%	120%	99%	70%	130%
Dissolved Beryllium	2466405	2466405	<0.001	<0.001	NA	< 0.001	103%	70%	130%	102%	80%	120%	101%	70%	130%
Dissolved Boron	2466405	2466405	0.02	0.02	NA	< 0.01	124%	70%	130%	99%	80%	120%	100%	70%	130%
Dissolved Cadmium	2466405	2466405	<0.	<0.	NA	< 0.000016	102%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Chromium	2466405	2466405	<0.001	<0.001	NA	< 0.001	99%	70%	130%	106%	80%	120%	103%	70%	130%
Dissolved Cobalt	2466405	2466405	<0.0009	<0.0009	NA	< 0.0009	104%	70%	130%	103%	80%	120%	101%	70%	130%
Dissolved Copper	2466405	2466405	<0.0008	<0.0008	NA	< 0.0008	106%	70%	130%	106%	80%	120%	102%	70%	130%
Dissolved Iron	2459372		<0.1	<0.1	NA	< 0.1	117%	70%	130%	107%	80%	120%	108%	70%	130%
Dissolved Lead	2466405	2466405	<0.0005	<0.0005	NA	< 0.0005	103%	70%	130%	100%	80%	120%	99%	70%	130%
Dissolved Manganese	2459372		<0.005	<0.005	NA	< 0.005	115%	70%	130%	107%	80%	120%	107%	70%	130%
Dissolved Mercury- Ultra Low Level	2466405	2466405	<0.	<0.	NA	< 2.50E-06	105%	70%	130%	103%	80%	120%	125%	70%	130%
Dissolved Molybdenum	2466405	2466405	0.003	0.003	NA	< 0.001	103%	70%	130%	100%	80%	120%	100%	70%	130%

Quality Assurance

CLIENT NAME: BASELINE WATER RESOURCE INC
AGAT WORK ORDER: 21C746927
PROJECT: 10-9000 / SW-12-044-02W5M
ATTENTION TO: CLINT GANES
SAMPLING SITE:
SAMPLED BY:

Water Analysis (Continued)

RPT Date: Jul 07, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Dissolved Nickel	2466405	2466405	<0.003	<0.003	NA	< 0.003	103%	70%	130%	108%	80%	120%	103%	70%	130%
Dissolved Selenium	2466405	2466405	0.0010	<0.0005	NA	< 0.0005	91%	70%	130%	99%	80%	120%	96%	70%	130%
Dissolved Silver	2466405	2466405	<0.0001	<0.0001	NA	< 0.0001	90%	70%	130%	94%	80%	120%	87%	70%	130%
Dissolved Sodium	2459372		11.7	12.2	4.0%	< 0.6	111%	70%	130%	110%	80%	120%	NA	70%	130%
Dissolved Thallium	2466405	2466405	<0.0001	<0.0001	NA	< 0.0001	100%	70%	130%	98%	80%	120%	99%	70%	130%
Dissolved Titanium	2466405	2466405	0.006	0.006	0.1%	< 0.001	103%	70%	130%	101%	80%	120%	101%	70%	130%
Dissolved Uranium	2466405	2466405	0.005	0.005	1.8%	< 0.001	102%	70%	130%	97%	80%	120%	97%	70%	130%
Dissolved Zinc	2466405	2466405	<0.005	<0.005	NA	< 0.004	102%	70%	130%	105%	80%	120%	104%	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.
 Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Metals - Total - Alberta Tier 1 with Mercury

Total Aluminum	2448902		0.089	0.091	2.1%	< 0.004	106%	70%	130%	96%	80%	120%	110%	70%	130%
Total Antimony	2448902		<0.001	<0.001	NA	< 0.001	100%	70%	130%	108%	80%	120%	108%	70%	130%
Total Arsenic	2448902		<0.001	<0.001	NA	< 0.001	101%	70%	130%	97%	80%	120%	101%	70%	130%
Total Barium	2448902		0.11	0.12	NA	< 0.05	100%	70%	130%	106%	80%	120%	107%	70%	130%
Total Beryllium	2448902		<0.0005	<0.0005	NA	< 0.0005	106%	70%	130%	103%	80%	120%	108%	70%	130%
Total Boron	2448902		<0.01	<0.01	NA	< 0.01	121%	70%	130%	107%	80%	120%	109%	70%	130%
Total Cadmium	2448902		<0.	<0.	NA	< 0.000016	99%	70%	130%	99%	80%	120%	98%	70%	130%
Total Chromium	2448902		<0.0005	<0.0005	NA	< 0.0005	100%	70%	130%	101%	80%	120%	105%	70%	130%
Total Cobalt	2448902		<0.0009	<0.0009	NA	< 0.0009	104%	70%	130%	107%	80%	120%	106%	70%	130%
Total Copper	2448902		0.0011	0.0013	NA	< 0.0008	102%	70%	130%	104%	80%	120%	103%	70%	130%
Total Iron	2448902		<0.1	<0.1	NA	< 0.1	107%	70%	130%	102%	80%	120%	99%	70%	130%
Total Lead	2448902		<0.0001	<0.0001	NA	< 0.0001	105%	70%	130%	112%	80%	120%	113%	70%	130%
Total Manganese	2448902		<0.005	<0.005	NA	< 0.005	105%	70%	130%	102%	80%	120%	98%	70%	130%
Total Molybdenum	2448902		<0.001	<0.001	NA	< 0.001	99%	70%	130%	103%	80%	120%	103%	70%	130%
Total Nickel	2448902		<0.003	<0.003	NA	< 0.003	95%	70%	130%	103%	80%	120%	106%	70%	130%
Total Selenium	2448902		<0.0005	<0.0005	NA	< 0.0005	95%	70%	130%	102%	80%	120%	97%	70%	130%
Total Silver	2448902		0.00029	0.00017	NA	< 0.00005	90%	70%	130%	100%	80%	120%	100%	70%	130%
Total Sodium	2448902		13.2	13.4	1.5%	< 0.6	105%	70%	130%	107%	80%	120%	NA	70%	130%
Total Thallium	2448902		<0.0005	<0.0005	NA	< 0.0005	100%	70%	130%	107%	80%	120%	110%	70%	130%
Total Titanium	2448902		<0.001	<0.001	NA	< 0.001	101%	70%	130%	106%	80%	120%	108%	70%	130%
Total Uranium	2448902		<0.001	<0.001	NA	< 0.001	103%	70%	130%	108%	80%	120%	113%	70%	130%
Total Zinc	2448902		<0.01	<0.01	NA	< 0.01	100%	70%	130%	95%	80%	120%	96%	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.
 Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Microbial Analysis - E. Coli, Total Coliforms
AGAT QUALITY ASSURANCE REPORT (V1)

Page 10 of 15

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

Quality Assurance

CLIENT NAME: BASELINE WATER RESOURCE INC
PROJECT: 10-9000 / SW-12-044-02W5M
SAMPLING SITE:

AGAT WORK ORDER: 21C746927
ATTENTION TO: CLINT GANES
SAMPLED BY:

Water Analysis (Continued)

RPT Date: Jul 07, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Total Coliforms (MPN)	2551	405	< 1	< 1	NA	< 1										
Escherichia coli (MPN)	2551	405	< 1	< 1	NA	< 1										

Comments: Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.

Water Analysis - Bromide, Turbidity

Bromide	2459368		<1	<1	NA	< 0.1	100%	70%	130%	95%	80%	120%	97%	70%	130%
Turbidity	390	6405	<0.2	<0.2	NA	< 0.2	100%	80%	120%						

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By: _____



Method Summary

CLIENT NAME: BASELINE WATER RESOURCE INC
AGAT WORK ORDER: 21C746927
PROJECT: 10-9000 / SW-12-044-02W5M
ATTENTION TO: CLINT GANES
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Aluminum	INST 0141	SM 3125 B	ICP-MS
Dissolved Antimony	INST 0141	SM 3125 B	ICP-MS
Dissolved Arsenic	INST 0141	SM 3125 B	ICP-MS
Dissolved Barium	INST 0141	SM 3125 B	ICP-MS
Dissolved Beryllium	INST 0141	SM 3125 B	ICP-MS
Dissolved Boron	INST 0141	SM 3125 B	ICP-MS
Dissolved Cadmium	INST 0141	SM 3125 B	ICP-MS
Dissolved Chromium	INST 0141	SM 3125 B	ICP-MS
Dissolved Cobalt	INST 0141	SM 3125 B	ICP-MS
Dissolved Copper	INST 0141	SM 3125 B	ICP-MS
Dissolved Iron	INST 0140	SM 3120 B	ICP/OES
Dissolved Lead	INST 0141	SM 3125 B	ICP-MS
Dissolved Manganese	INST 0140	SM 3120 B	ICP/OES
Dissolved Mercury- Ultra Low Level	INST 0162	EPA 1631	CV/AFS
Dissolved Molybdenum		SM 3125 B	ICP-MS
Dissolved Nickel	INST 0141	SM 3125 B	ICP-MS
Dissolved Selenium	INST 0141	SM 3125 B	ICP-MS
Dissolved Silver	INST 0141	SM 3125 B	ICP-MS
Dissolved Sodium	INST 0140	SM 3120 B	ICP/OES
Dissolved Thallium	INST 0141	SM 3125 B	ICP-MS
Dissolved Titanium	INST 0141	SM 3125 B	ICP-MS
Dissolved Uranium	INST 0141	SM 3125 B	ICP-MS
Dissolved Zinc	INST 0141	SM 3125 B	ICP-MS
Total Aluminum	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Antimony	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Arsenic	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Barium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Beryllium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Boron	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Cadmium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Chromium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Cobalt	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Copper	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Iron	WATR 0200; INST 0140	SM 3030 E; SM 3120 B	ICP/OES
Total Lead	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Manganese	WATR 0200; INST 0140	SM 3030 E; SM 3120 B	ICP/OES
Total Mercury- Ultra Low Level	INST-0162	EPA 1631	CV/AFS
Total Molybdenum	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP/MS
Total Nickel	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Selenium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Silver	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Sodium	WATR 0200; INST 0140	SM 3030 E; SM 3120 B TW	ICP/OES
Total Thallium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Titanium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Uranium	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Zinc	WATR 0200; INST 0141	SM 3030 E; SM 3125 B	ICP-MS
Total Coliforms (MPN)	MIC 0205	SM 9223	INCUBATOR
Escherichia coli (MPN)	MIC-0205	SM 9223	INCUBATOR
pH	INST 0101, INST 0104	SM 4500 H+	PH METER

Method Summary

CLIENT NAME: BASELINE WATER RESOURCE INC
AGAT WORK ORDER: 21C746927
PROJECT: 10-9000 / SW-12-044-02W5M
ATTENTION TO: CLINT GANES
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
p - Alkalinity (as CaCO ₃)	INST-0100, INST-0101	SM 2320 B	TITRATION
T - Alkalinity (as CaCO ₃)	INST 0101	SM 2320 B	TITRATION
Bicarbonate	INST 0101	SM 2320 B	PC TITRATE
Carbonate	INST 0101	SM 2320 B	PC TITRATE
Hydroxide	INST 0101	SM 2320 B	PC TITRATE
Electrical Conductivity	INST 0101, INST 0120	SM 2510 B	CONDUCTIVITY METER
Chloride	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Fluoride	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Nitrate	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Nitrate-N	INST 0150	SM 4110 B	CALCULATION
Nitrite	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Nitrite-N	INST 0150	SM 4110 B	CALCULATION
Nitrate+Nitrite - Nitrogen	INST 0150	SM 4110 B	CALCULATION
Sulfate	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Dissolved Calcium	INST 0140	SM 3120B – R	ICP/OES
Dissolved Magnesium	INST 0140	SM 3120B – R	ICP/OES
Dissolved Sodium	INST 0140	SM 3120B – R	ICP/OES
Dissolved Potassium	INST 0140	SM 3120B – R	ICP/OES
Dissolved Iron	INST 0140	SM 3120B – R	ICP/OES
Dissolved Manganese	INST 0140	SM 3120B – R	ICP/OES
Sodium Adsorption Ratio		CARTER & GREGORICH 2007	CALCULATION
Calculated TDS		SM 1030E	CALCULATION
Hardness		SM 2340 B	CALCULATION
Ion Balance		SM 1030E	CALCULATION
Bromide	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Turbidity	WATR-0500	SM 2130 B	NEPHELOMETER



AGAT Laboratories

2910 12 Street NE
 Calgary, Alberta T2E 7P7
 P: 403-735-2005 • F: 403-735-2771
 webearth.agatlabs.com

Laboratory Use Only

Arrival Temperature: 1.3°C
 AGAT Job Number: 21C746927
 Date and Time: 13 MAY '21 PM 6:06

Chain of Custody Record

Emergency Support Services Hotline **1-855-AGAT 245 (1-855-242-8245)**

Report Information

Company: Baseline Water Resources Inc.
 Contact: Clint Barnes
 Address: #7-3800 14st NE
Calgary AB, T2E 6V2
 Phone: _____ Fax: _____
 LSD: SW 12-044-02 WSM
 Client Project #: 10-9000
 Sampled By: NSH

Report Information

1. Name: Nav Hari
 Email: labs@baselinewater.com
 2. Name: _____
 Email: _____
 3. Name: _____
 Email: _____

Turnaround Time Required (TAT)

Regular TAT: 5 to 7 Business Days
 <24 Hours (200%)
 Two Day / Next Day (100%)
 Rush TAT: Three Day (50%)
 Four Day (25%)
 Date Required: _____

Report Format

Single sample per page
 Multiple samples per page
 Export

Invoice To Same Yes / No

Company: _____
 Contact: _____
 Address: _____
 Phone: _____ Fax: _____
 PO/AFE#: _____
 AGAT ID/Quote #: _____

Requirements (Selection may impact detection limits)

CCME AB Tier 1 Alberta Surface Water
 Agricultural Agricultural Chronic
 Industrial Industrial Acute
 Residential/Park Residential/Park SK Notice of Site Condition
 Commercial Commercial Drinking Water
 FWAL Natural Area Other:
 Is this part of the Alberta SRP program? YES NO (If yes, please fill below)
 Application Number: _____
 Grant Amount: _____
 Well/Facility/Location ID: _____
 UWI: _____

Detailed Salinity: <input type="checkbox"/> AB <input type="checkbox"/> SK <input type="checkbox"/> BC <input type="checkbox"/> D50	<input type="checkbox"/> CCME/AB: BTEX/F1-F4	<input type="checkbox"/> CCME/AB: BTEX/F1-F2	<input type="checkbox"/> BC: BTEX/VPH/EPH	<input type="checkbox"/> BC: LEPH/HEPH	SK: BTEX/TVH/C11-C22, C23-C60	Soil Metals: <input type="checkbox"/> HWS-B <input type="checkbox"/> SP-B <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶⁺	Water Metals: <input type="checkbox"/> Dissolved <input checked="" type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶⁺	Routine Water Chemistry	Landfill: <input type="checkbox"/> AB Class 2 <input type="checkbox"/> BC <input type="checkbox"/> SK	Coliforms: <input checked="" type="checkbox"/> Total <input type="checkbox"/> Fecal <input checked="" type="checkbox"/> E.coli	Particle Size: <input type="checkbox"/> Sieve (75µm) <input type="checkbox"/> Texture	<u>Turbidity</u>	<u>Bromide</u>	<u>IRB/SRB</u>	HOLD FOR 30 DAYS NO ANALYSIS (Additional Fee)	HOLD FOR 30 DAYS AFTER ANALYSIS (Additional Fee)
---	--	--	---	--	-------------------------------	---	--	-------------------------	---	--	---	------------------	----------------	----------------	---	--

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	DEPTH	DATE/TIME SAMPLED	SAMPLE MATRIX	COMMENTS (FILTERED, PRESERVED, HAZARDOUS*) *ADDITIONAL FEE	# OF CONTAINERS		
						VIALS / JARS	BAGS	BOTTLES
<u>2166405</u>	<u>SW Lor-Al Spring</u>	<u>-</u>	<u>May 13, '21</u> <u>@ 12:30</u>	<u>Water</u>	<u>Total and Diss. Metals not filtered or preserved in the field</u>	<u>-</u>	<u>-</u>	<u>8</u>
3								
4								
5								
6								
7								
8								
9								
10								

Samples Relinquished By (Print Name and Sign): <u>Nav Hari</u>	Date/Time: <u>May 13, 2021 @ 16:00H</u>	Samples Received By (Print Name and Sign): <u>JOHN LUMBRES</u>	Date/Time: <u>MAY 13 2021</u>	Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT	Page <u>1</u> of <u>1</u> Nº: AB 135001
Samples Relinquished By (Print Name and Sign):	Date/Time:	Samples Received By (Print Name and Sign):	Date/Time:		
Samples Relinquished By (Print Name and Sign):	Date/Time:	Samples Received By (Print Name and Sign):	Date/Time:		



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: BASELINE WATER
 Courier: D/O Prepaid Collect
 Waybill# _____
 Branch: EDM GP FN FM RD VAN LYD FSJ EST SASK Other: C
 If multiple sites were submitted at once: Yes No
 Custody Seal Intact: Yes No NA
 TAT: <24hr 24-48hr 48-72hr Reg Other _____
 Cooler Quantity: 1

TIME SENSITIVE ISSUES - Shipping

ALREADY EXCEEDED HOLD TIME? Yes No
 Inorganic Tests (Please Circle) Mibi, BOD, Nitrate/Nitrite, Turbidity, Color, Microtox, Ortho PO4, Tedlar Bag, Residual Chlorine, Chlorophyll*, Chloroamines*
 Earliest Expiry: MAY 14 @ 18:30
 Hydrocarbons: Earliest Expiry _____

SAMPLE INTEGRITY - Shipping

Hazardous Samples: YES NO Precaution Taken: _____
 Legal Samples: Yes No
 International Samples: Yes No
 Tape Sealed: Yes No
 Coolant Used: Icepack Bagged Ice Free Ice Free Water None

Temperature (Bottles/Jars only) N/A if only Soil Bags Received

FROZEN (Please Circle if samples received Frozen)

1 (Bottle/Jar) 1 + 2 + 1 = 1.3 °C 2 (Bottle/Jar) _____ + _____ + _____ = _____ °C
 3 (Bottle/Jar) _____ + _____ + _____ = _____ °C 4 (Bottle/Jar) _____ + _____ + _____ = _____ °C
 5 (Bottle/Jar) _____ + _____ + _____ = _____ °C 6 (Bottle/Jar) _____ + _____ + _____ = _____ °C
 7 (Bottle/Jar) _____ + _____ + _____ = _____ °C 8 (Bottle/Jar) _____ + _____ + _____ = _____ °C
 9 (Bottle/Jar) _____ + _____ + _____ = _____ °C 10 (Bottle/Jar) _____ + _____ + _____ = _____ °C

(If more than 10 coolers are received use another sheet of paper and attach)

LOGISTICS USE ONLY

Workorder No: 211746927
 Samples Damaged: Yes No If YES why?
 No Bubble Wrap Frozen Courier
 Other: _____
 Account Project Manager: _____ have they been notified of the above issues: Yes No
 Whom spoken to: _____ Date/Time: _____
 CPM Initial _____
 General Comments: _____

* Subcontracted Analysis (See CPM)

PB1A 21W747049A
Container Identification *Sample Point Code* *Meter Code* *AGAT WDMS Number* *Previous Number* *Laboratory Number*

BASELINE WATER RESOURCE INC NOT AVAILABLE NOT AVAILABLE
Operator Name *Sampling Point* *Unique Well Identifier*

NOT AVAILABLE LSD
Well Name *Well License* *Well Status* *Well Fluid Status*

NOT AVAILABLE BASELINE WATER RESOURCES INC. NOT AVAILABLE
Field or Area *Pool or Zone* *Sampler's Company* *Name of Sampler*

Test Interval (mKB)	Elevation (m)	Pressure (kPa)	Temperature (°C)
From : To:	KB GRD	Source Received	Source Received
May 13, 2021 12:30	May 27, 2021	Calgary - Tin Tin Ma - Reporter	
<i>Date/Time Sampled</i>	<i>Date Analyzed</i>	<i>Location - Approved By - Title</i>	

Other Information : **SAMPLE ID: 2466405K ; CLIENT ID: SW Lor-AL Spring**

CATIONS

ANIONS

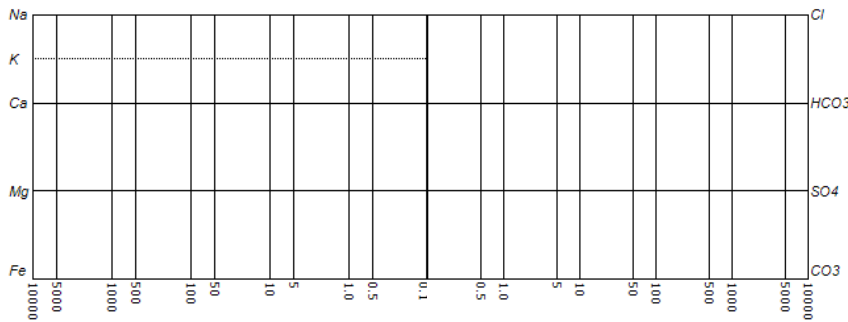
OTHER MEASUREMENTS

Ion	mg/L	mmol/L	meq/L	Ion	mg/L	mmol/L	meq/L
Total				0.0			

0
Cation/Anion Ratio

TDS (Calculated) mg/L

Stiff Diagram (meq/L)



500
Iron Reducing Bacteria (cfU/mL)

<1
Sulphur Reducing Bacteria (cfU/mL)

Results relate only to the items tested. Cations were determined according to: ASTM D 4691, EPA 200.7, EPA SW-846 6010C, ASTM D1067, SM 2320B. Anions were determined according to: SM 4-66 to 4-71, SM 4110B, ASTM D1067, SM 2320B.