



July 1, 2022

Baseline Water Project: 10-9000

Lor-Al Springs
Box 200
Rimbey, Alberta
T0C 2J0

Attn: Stacey Johnson

RE: 2022 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 24, 2022. 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), turbidity and total 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)
7.00	630	7.1	90.9

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 2022 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)
GCDWQ ¹ Criteria	250	1.5	nr ²	10	1	500	7.0-10.5	nr	nr	nr	nr	nr	nr	nr	nr	
Type of Objective (MAC, AO or OG) ³	AO	MAC	-	MAC	MAC	AO	OG	-	-	-	-	-	-	-	-	
Lor-AI Springs	07-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
	24-May-22	AGAT	78.1	0.08	0.38	0.38	<0.01	17.2	8.06	898	107	349	<5	<5	<5	286

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)
GCDWQ ¹ Criteria			nr ²	0.3	0.3	nr	0.02	0.02	nr	200	500	nr	0.1 ³	15	nr
Type of Objective (MAC, AO or OG) ⁴	-	AO	AO	-	AO	AO	-	AO	AO	-	OG	AO	-		
Lor-AI Springs	07-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
	24-May-22	AGAT	77.2	<0.1	<0.1	33.5	<0.005	<0.005	2.0	52.2	434	331	<0.2	na	90

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.
7. University of Alberta (U of A) in Edmonton, Alberta conducted the water analysis.
8. Maxxam Analytics Inc. in Edmonton, Alberta conducted the water analysis.
9. ALS Laboratory Group (ALS) in Calgary, Alberta conducted the water analysis.
10. AGAT Laboratories (AGAT) in Calgary, Alberta conducted the water analysis.
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)	Escherichia coli Bacteria (CFU/10mL)	Iron Related Bacteria (CFU/mL)	Sulfate Reducing Bacteria (CFU/mL)
GCDWQ¹ Criteria	0	0	nr²	nr		
Type of Objective (MAC, AO or OG) ³	MAC	MAC	-	-		
Lor-AI Springs	07-Dec-87	AEC ⁴	na ⁵	na	na	na
	22-May-91	AEC	na	na	na	na
	04-Jan-01	U of A ⁶	na	na	na	na
	09-Jul-04	MAI ⁷	na	na	520	<1
	18-Jul-05	MAI	na	na	na	<1
	03-Dec-06	MAI	<1	<1	9000	<200
	27-Jun-07	MAI	na	na	<30	<200
	19-Dec-07	ALS ⁸	<1	na	9000	<200
	5-Aug-08	ALS	<1	na	9000	<200
	11-Feb-09	ALS	<1	<1	500	<200
	18-May-09	ALS	<1	<1	2300	<200
	16-May-11	ALS	<1	<1	9000	<200
	10-May-12	ALS	<1	<1	9000	<200
	22-May-13	ALS	<1	<1	9000	<200
	13-May-14	ALS	<1	<1	9000	<200
	26-May-15	ALS	<1	<1	9000	<200
	12-May-16	AGAT ⁹	<1	<1	8	<1
	9-May-17	AGAT	<1	<1	150	<1
	3-May-18	AGAT	<1	<1	500	<1
	16-May-19	AGAT	<1	<1	9000	<1
	5-May-20	AGAT	2	<1	9000	<1
	13-May-21	AGAT	<1	<1	500	<1
	24-May-22	AGAT	<1	<1	na	na

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.
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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 3: Water Analytical Results: Dissolved & Total Metals (Lor-Al 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)
GCDWQ ¹ Criteria	0.1	0.006	0.01	1.0	nr ²	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-Al Springs	07-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
	04-Jan-01	U of A ⁶	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	09-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	<0.002	<0.007	<0.005	<0.009	0.033	<0.1	
	03-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	<0.01	na	na	<0.06	na	
	05-Aug-08	ALS ⁸	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
	24-May-22	AGAT	<0.004	<0.001	<0.001	0.16	<0.0005	na	0.03	na	na	<0.000016	<0.0005	<0.0009	<0.0008	<0.1	<0.0001

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.

12. Results are for Total Metals beginning in 2022

Table 3: Water Analytical Results: Dissolved & Total Metals (Lor-Al Springs) Continued

Water Well Name	Sample Date	Laboratory	Lithium (Li) (mg/L)	Diss 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)
GCDWQ ¹ Criteria			nr ²	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-Al Springs	07-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
	04-Jan-01	U of A ⁶	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
	09-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
	03-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
	05-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	<0.000010	<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	<0.000010	<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	<0.000050	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	<0.000050	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	<0.00001	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	<0.00001	na	0.003	0.005	na	<0.005
	5-May-20	AGAT	na	33.2	<0.005	<0.000025	0.003	<0.003	<0.0005	<0.0001	na	<0.00001	na	0.003	0.005	na	<0.005
	13-May-21	AGAT	na	30.8	<0.005	<0.000025	0.003	<0.003	<0.0005	<0.0001	na	<0.00001	na	<0.001	0.005	na	<0.005
	24-May-22	AGAT	na	33.5	<0.005	na	0.003	<0.003	<0.0005	<0.00005	na	<0.00001	na	<0.001	0.005	na	<0.004

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.

12. Results are for Total Metals beginning in 2022

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

ATTENTION TO: Greg Farrell

PROJECT: 10-9000/SW-12-44-02W5M

AGAT WORK ORDER: 22C899021

WATER ANALYSIS REVIEWED BY: Max Dou, Report Writer

DATE REPORTED: Jun 08, 2022

PAGES (INCLUDING COVER): 11

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.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



AGAT

Laboratories

2910 12TH STREET NE
CALGARY, ALBERTA
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Certificate of Analysis

CLIENT NAME: BASELINE WATER RESOURCE INC

AGAT WORK ORDER: 22C899021

PROJECT: 10-9000/SW-12-44-02W5M

ATTENTION TO: Greg Farrell

SAMPLING SITE:

SAMPLED BY:

Metals - Total - Alberta Tier 1

SAMPLE TYPE: Water	SAMPLE ID: 3891619	DATE RECEIVED: May 24, 2022					
DATE SAMPLED: May 24, 2022						DATE REPORTED:	
SAMPLE DESCRIPTION: Lor-Al Spring SW-12-44-02W5M							
PARAMETER	UNIT	RESULT	G / S	RDL	DATE ANALYZED	INITIAL	DATE PREPARED
Total Aluminum	mg/L	<0.004		0.004	Jun 01, 2022	SC	Jun 01, 2022
Total Antimony	mg/L	<0.001		0.001	Jun 01, 2022	SC	Jun 01, 2022
Total Arsenic	mg/L	<0.001		0.001	Jun 01, 2022	SC	Jun 01, 2022
Total Barium	mg/L	0.16		0.05	Jun 01, 2022	SC	Jun 01, 2022
Total Beryllium	mg/L	<0.0005		0.0005	Jun 01, 2022	SC	Jun 01, 2022
Total Boron	mg/L	0.03		0.01	Jun 01, 2022	SC	Jun 01, 2022
Total Cadmium	mg/L	<0.000016		0.000016	Jun 01, 2022	SC	Jun 01, 2022
Total Chromium	mg/L	<0.0005		0.0005	Jun 01, 2022	SC	Jun 01, 2022
Total Cobalt	mg/L	<0.0009		0.0009	Jun 01, 2022	SC	Jun 01, 2022
Total Copper	mg/L	<0.0008		0.0008	Jun 01, 2022	SC	Jun 01, 2022
Total Iron	mg/L	<0.1		0.1	May 28, 2022	IP	May 28, 2022
Total Lead	mg/L	<0.0001		0.0001	Jun 01, 2022	SC	Jun 01, 2022
Total Manganese	mg/L	<0.005		0.005	May 28, 2022	IP	May 28, 2022
Total Molybdenum	mg/L	0.003		0.001	Jun 01, 2022	SC	Jun 01, 2022
Total Nickel	mg/L	<0.003		0.003	Jun 01, 2022	SC	Jun 01, 2022
Total Selenium	mg/L	<0.0005		0.0005	Jun 01, 2022	SC	Jun 01, 2022
Total Silver	mg/L	<0.00005		0.00005	Jun 01, 2022	SC	Jun 01, 2022
Total Sodium	mg/L	50.2		0.6	May 28, 2022	IP	May 28, 2022
Total Thallium	mg/L	<0.0001		0.0001	Jun 01, 2022	SC	Jun 01, 2022
Total Titanium	mg/L	<0.001		0.001	Jun 01, 2022	SC	Jun 01, 2022
Total Uranium	mg/L	0.005		0.001	Jun 01, 2022	SC	Jun 01, 2022
Total Zinc	mg/L	<0.004		0.004	Jun 01, 2022	SC	Jun 01, 2022

COMMENTS:

RDL - Reported Detection Limit; G / S - Guideline / Standard
< - Values refer to Report Detection Limit.

Certified By:

AGAT CERTIFICATE OF ANALYSIS (V1)

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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.

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



Certificate of Analysis

CLIENT NAME: BASELINE WATER RESOURCE INC

AGAT WORK ORDER: 22C899021

PROJECT: 10-9000/SW-12-44-02W5M

ATTENTION TO: Greg Farrell

SAMPLING SITE:

SAMPLED BY:

Microbial Analysis - E. Coli, Total Coliforms

SAMPLE TYPE: Water	SAMPLE ID: 3891619	DATE RECEIVED: May 24, 2022
--------------------	--------------------	-----------------------------

DATE SAMPLED: May 24, 2022

DATE REPORTED:

SAMPLE DESCRIPTION: Lor-AI Spring SW-12-44-02W5M

PARAMETER	UNIT	RESULT	G / S	RDL	DATE ANALYZED	INITIAL	DATE PREPARED
Total Coliforms (MPN)	MPN/100 mL	<1		1	May 26, 2022	AZ	May 25, 2022
Escherichia coli (MPN)	MPN/100 mL	<1		1	May 26, 2022	AZ	May 25, 2022

COMMENTS:

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

Certified By: 



Certificate of Analysis

CLIENT NAME: BASELINE WATER RESOURCE INC

AGAT WORK ORDER: 22C899021

PROJECT: 10-9000/SW-12-44-02W5M

ATTENTION TO: Greg Farrell

SAMPLING SITE:

SAMPLED BY:

Water Package - Routine Chemistry Water Analysis + Turbidity										
SAMPLE TYPE: Water	SAMPLE ID: 3891619			DATE RECEIVED: May 24, 2022						
DATE SAMPLED: May 24, 2022				DATE REPORTED:						
SAMPLE DESCRIPTION: Lor-AI Spring SW-12-44-02W5M										
PARAMETER	UNIT	RESULT	G / S	RDL	DATE ANALYZED	INITIAL	DATE PREPARED			
pH	pH Units	8.06	7.0-10.5	N/A	May 25, 2022	AG	May 25, 2022			
p - Alkalinity (as CaCO ₃)	mg/L	<5		5	May 25, 2022	AG	May 25, 2022			
T - Alkalinity (as CaCO ₃)	mg/L	286		5	May 25, 2022	AG	May 25, 2022			
Bicarbonate	mg/L	349		5	May 25, 2022	AG	May 25, 2022			
Carbonate	mg/L	<5		5	May 25, 2022	AG	May 25, 2022			
Hydroxide	mg/L	<5		5	May 25, 2022	AG	May 25, 2022			
Electrical Conductivity	uS/cm	898		5	May 25, 2022	AG	May 25, 2022			
Chloride	mg/L	78.1	(250)	1.0	May 26, 2022	AH	May 26, 2022			
Fluoride	mg/L	0.08	1.5	0.01	May 26, 2022	AH	May 26, 2022			
Nitrate	mg/L	1.7	45	0.5	May 26, 2022	AH	May 26, 2022			
Nitrate-N	mg/L	0.38	10	0.02	May 26, 2022	SYS	May 26, 2022			
Nitrite	mg/L	<0.05	3	0.05	May 26, 2022	AH	May 26, 2022			
Nitrite-N	mg/L	<0.01	1	0.01	May 26, 2022	SYS	May 26, 2022			
Nitrate+Nitrite - Nitrogen	mg/L	0.38		0.02	May 26, 2022	SYS	May 26, 2022			
Sulfate	mg/L	17.2	(500)	1.0	May 26, 2022	AH	May 26, 2022			
Dissolved Calcium	mg/L	77.2		0.3	Jun 07, 2022	IP	Jun 07, 2022			
Dissolved Magnesium	mg/L	33.5		0.2	Jun 07, 2022	IP	Jun 07, 2022			
Dissolved Sodium	mg/L	52.2	(200)	0.6	Jun 07, 2022	IP	Jun 07, 2022			
Dissolved Potassium	mg/L	2.0		0.6	Jun 07, 2022	IP	Jun 07, 2022			
Dissolved Iron	mg/L	<0.1	(0.3)	0.1	Jun 07, 2022	IP	Jun 07, 2022			
Dissolved Manganese	mg/L	<0.005	0.12 (0.02)	0.005	Jun 07, 2022	IP	Jun 07, 2022			
Sodium Adsorption Ratio		1.25			Jun 07, 2022	SYS	Jun 07, 2022			
Calculated TDS	mg/L	434		0.6	Jun 07, 2022	SYS	Jun 07, 2022			
Hardness	mg CaCO ₃ /L	331		0.5	Jun 07, 2022	SYS	Jun 07, 2022			
Ion Balance	%	107		1	Jun 07, 2022	SYS	Jun 07, 2022			
Turbidity	NTU	<0.2	VARIABLE	0.2	May 26, 2022	ML	May 26, 2022			

Certified By: 



Certificate of Analysis

CLIENT NAME: BASELINE WATER RESOURCE INC

AGAT WORK ORDER: 22C899021

PROJECT: 10-9000/SW-12-44-02W5M

ATTENTION TO: Greg Farrell

SAMPLING SITE:

SAMPLED BY:

Water Package - Routine Chemistry Water Analysis + Turbidity

SAMPLE TYPE: Water

SAMPLE ID: 3891619

DATE RECEIVED: May 24, 2022

DATE SAMPLED: May 24, 2022

DATE REPORTED:

SAMPLE DESCRIPTION: Lor-AI Spring SW-12-44-02W5M

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.

< - 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.

Certified By: 



Quality Assurance

CLIENT NAME: BASELINE WATER RESOURCE INC

AGAT WORK ORDER: 22C899021

PROJECT: 10-9000/SW-12-44-02W5M

ATTENTION TO: Greg Farrell

SAMPLING SITE:

SAMPLED BY:

Water Analysis													
RPT Date:			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		
							Lower	Upper	Lower		Upper		
Water Package - Routine Chemistry Water Analysis + Turbidity													

pH	3891619	3891619	8.06	8.10	0.5%	N/A	100%	90%	110%		
p - Alkalinity (as CaCO ₃)	3891619	3891619	<5	<5	NA	< 5	NA	80%	120%		
T - Alkalinity (as CaCO ₃)	3891619	3891619	286	286	0.1%	< 5	90%	80%	120%		
Bicarbonate	3891619	3891619	349	349	0.1%	< 5					
Carbonate	3891619	3891619	<5	<5	NA	< 5					
Hydroxide	3891619	3891619	<5	<5	NA	< 5					
Electrical Conductivity	3891619	3891619	898	897	0.1%	< 5	108%	90%	110%		
Chloride	3891619	3891619	78.1	78.8	0.9%	< 1.0	92%	70%	130%	89%	80% 120%
Fluoride	3891619	3891619	<0.06	<0.06	NA	< 0.01	92%	70%	130%	90%	80% 120%
Nitrate	3891619	3891619	1.6	1.6	NA	< 0.5	106%	70%	130%	90%	80% 120%
Nitrite	3891619	3891619	<0.20	<0.20	NA	< 0.05	97%	70%	130%	91%	80% 120%
Sulfate	3891619	3891619	17.2	16.3	5.2%	< 1.0	95%	70%	130%	92%	80% 120%
Dissolved Calcium	3884584		<0.3	<0.3	NA	< 0.3	104%	70%	130%	102%	80% 120%
Dissolved Magnesium	3884584		<0.2	<0.2	NA	< 0.2	102%	70%	130%	98%	80% 120%
Dissolved Sodium	3884584		<0.6	<0.6	NA	< 0.6	100%	70%	130%	99%	80% 120%
Dissolved Potassium	3884584		<0.6	<0.6	NA	< 0.6	90%	70%	130%	88%	80% 120%
Dissolved Iron	3884584		<0.1	<0.1	NA	< 0.1	108%	70%	130%	108%	80% 120%
Dissolved Manganese	3884584		<0.005	<0.005	NA	< 0.005	105%	70%	130%	107%	80% 120%
Turbidity	584	1619	< 0.2	< 0.2	0.0%	< 0.2	99%	80%	120%		

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 - Total - Alberta Tier 1

Total Aluminum	3881878	<0.020	<0.020	NA	< 0.004	NA	70%	130%	117%	80% 120%	115% 70% 130%
Total Antimony	3881878	<0.001	<0.001	NA	< 0.001	NA	70%	130%	97%	80% 120%	99% 70% 130%
Total Arsenic	3881878	<0.002	<0.002	NA	< 0.001	NA	70%	130%	101%	80% 120%	101% 70% 130%
Total Barium	3881878	0.08	0.08	NA	< 0.05	NA	70%	130%	100%	80% 120%	103% 70% 130%
Total Beryllium	3881878	<0.0005	<0.0005	NA	< 0.0005	NA	70%	130%	102%	80% 120%	103% 70% 130%
Total Boron	3881878	0.09	0.09	NA	< 0.01	NA	70%	130%	107%	80% 120%	108% 70% 130%
Total Cadmium	3881878	<0.00016	<0.00016	NA	< 0.000016	NA	70%	130%	101%	80% 120%	101% 70% 130%
Total Chromium	3881878	(-0.0014)	(-0.0015)	NA	< 0.0005	NA	70%	130%	103%	80% 120%	100% 70% 130%
Total Cobalt	3881878	<0.0009	<0.0009	NA	< 0.0009	NA	70%	130%	106%	80% 120%	102% 70% 130%
Total Copper	3881878	0.0204	0.0208	2.1%	< 0.0008	NA	70%	130%	108%	80% 120%	104% 70% 130%
Total Iron	3881878	<0.1	<0.1	NA	< 0.1	107%	70%	130%	110%	80% 120%	110% 70% 130%
Total Lead	3881878	<0.0007	<0.0007	NA	< 0.0001	NA	70%	130%	97%	80% 120%	97% 70% 130%
Total Manganese	3881878	0.035	0.035	0.7%	< 0.005	107%	70%	130%	109%	80% 120%	106% 70% 130%
Total Molybdenum	3881878	<0.001	<0.001	NA	< 0.001	NA	70%	130%	99%	80% 120%	98% 70% 130%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 6 of 11

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

AGAT WORK ORDER: 22C899021

PROJECT: 10-9000/SW-12-44-02W5M

ATTENTION TO: Greg Farrell

SAMPLING SITE:

SAMPLED BY:

Water Analysis (Continued)

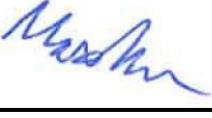
RPT Date:			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper	Lower		Lower	Upper	Lower	Upper	Lower	Upper	Recovery	Lower	Upper
Total Nickel	3881878		<0.003	<0.003	NA	< 0.003	NA	70%	130%	107%	80%	120%	104%	70%	130%
Total Selenium	3881878		<0.005	<0.005	NA	< 0.0005	NA	70%	130%	101%	80%	120%	102%	70%	130%
Total Silver	3881878		<0.00010	<0.00010	NA	< 0.00005	NA	70%	130%	102%	80%	120%	100%	70%	130%
Total Sodium	3881878		45.6	45.7	0.2%	< 0.6	92%	70%	130%	95%	80%	120%	NA	70%	130%
Total Thallium	3881878		<0.0001	<0.0001	NA	< 0.0001	NA	70%	130%	93%	80%	120%	92%	70%	130%
Total Titanium	3881878		<0.005	<0.005	NA	< 0.001	NA	70%	130%	98%	80%	120%	96%	70%	130%
Total Uranium	3881878		0.011	0.011	1.1%	< 0.001	NA	70%	130%	93%	80%	120%	94%	70%	130%
Total Zinc	3881878		<0.04	<0.04	NA	< 0.004	NA	70%	130%	100%	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.

Microbial Analysis - E. Coli, Total Coliforms

Total Coliforms (MPN)	2828	619	< 1	< 1	0.0%	< 1
Escherichia coli (MPN)	2828	619	< 1	< 1	0.0%	< 1

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

Certified By: 



Method Summary

CLIENT NAME: BASELINE WATER RESOURCE INC

AGAT WORK ORDER: 22C899021

PROJECT: 10-9000/SW-12-44-02W5M

ATTENTION TO: Greg Farrell

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
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 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
p - Alkalinity (as CaCO3)	INST-0100, INST-0101	SM 2320 B	TITRATION
T - Alkalinity (as CaCO3)	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



Method Summary

CLIENT NAME: BASELINE WATER RESOURCE INC

PROJECT: 10-9000/SW-12-44-02W5M

SAMPLING SITE:

AGAT WORK ORDER: 22C899021

ATTENTION TO: Greg Farrell

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Turbidity	WATR-0500	SM 2130 B	NEPHELOMETER



AGAT

Laboratories

24 MAY '22 14:00

2910 12 Street NE

Calgary, Alberta T2E 7P7

P: 403-735-2005 • F: 403-735-2771

webearth.agatlabs.com

Laboratory Use Only

Arrival Temperature:

7C

1 Small

Cooler Quantity:

□ Yes □ No □ N/A

Custody Seal Intact:

□ Yes □ No □ N/A

AGAT Job Number:

22C899021

Chain of Custody Record

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

Report Information

Company: Baseline Water Resource Inc.
 Contact: Greg Farrell
 Address: #7, 3800-19 ST NE CAMP 72E6V2
 Phone: 403-282-3999

Project Information

Client Project #: 10-9000
 Site Location: SW 12-44-02 W5M
 Sample By: Greg Farrell
 AGAT Quote #:

If a quotation number is not provided, client will be billed at standard rates.
 See terms and conditions of quote for full details.

Invoice To Same as Report to
 Company:
 Contact:
 Email:
 Address:
 Phone:
 PO/CC #:

Report Information

1. Name: Greg
 Email: lab@baselinewater.com
 2. Name: _____
 Email: _____
 3. Name: _____
 Email: _____

Requirements (Selection may impact detection limits)

CCME

- Agricultural
- Industrial
- Residential/Park
- Commercial
- FWAL

AB Tier 1

- Agricultural
- Industrial
- Residential/Park
- Commercial
- Natural Area

Alberta Surface Water

- Chronic
- Acute
- SK Notice of Site Cond.
- Drinking Water
- 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:

Turnaround Time Required (TAT)

Regular TAT

5 to 7 Business Days

<24 Hours (200%)

Next Business Day (100%)

2 Business Days (50%)

3 Business Days(25%)

Rush TAT

Date Required:

Field Filtered (Y/N)	<input type="checkbox"/>	Preserved (Y/N)	<input type="checkbox"/>	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: BTEXS/VPH/EPH <input type="checkbox"/> BC: LEPH/HEPH	SK: BTEX/TNH/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⁺	<input type="checkbox"/> Dissolved <input checked="" type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶⁺	<input type="checkbox"/> Water Metals: <input type="checkbox"/> Dissolved <input checked="" type="checkbox"/> Total <input type="checkbox"/> Hg <input type="checkbox"/> Cr ⁶⁺	<input type="checkbox"/> Routine Water Chemistry <input checked="" type="checkbox"/> Turbidity	<input type="checkbox"/> Landfill: <input type="checkbox"/> AB Class 2 <input type="checkbox"/> BC <input type="checkbox"/> SK	<input type="checkbox"/> Coliforms: <input checked="" type="checkbox"/> Total <input type="checkbox"/> Sieve (75μm) <input type="checkbox"/> Fecal <input checked="" type="checkbox"/> E.coli	<input type="checkbox"/> Particle Size: <input type="checkbox"/> Sieve (75μm) <input type="checkbox"/> Texture <input checked="" type="checkbox"/> Turbidity	Hold For 30 Days No Analysis (Additional Fee)
														Long Term Storage - 6 Months	
															Long Term Storage - 1 Year
															Hazardous (Y/N)

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	DEPTH	DATE/TIME SAMPLED	SAMPLE MATRIX	COMMENTS	# OF CONTAINERS		
						VIALS / JARS	BAGS	BOTTLES
1	<u>Lox-Al Spring</u>	-	<u>05/24/2022 17:00h</u>					
2								
3								
4								
5								
6								
7								
8								
9								
10								

Samples Relinquished By (Print Name and Sign): <i>Greg Farrell</i>	Date/Time: <i>05/24/2022 17:00h</i>	Samples Received By (Print Name and Sign): <i>John Hamilton</i>	Date/Time: <i>May 24/2022 1:00pm</i>	Pink Copy - Client	Page <u>1</u> of <u>1</u>
Samples Relinquished By (Print Name and Sign): <i>John Hamilton</i>	Date/Time: <i>May 24/2022 4:00</i>	Samples Received By (Print Name and Sign): <i>John Hamilton</i>	Date/Time: <i>May 24/2022 4:00</i>	Yellow Copy - AGAT	N°: AB <u>207140</u>
Samples Relinquished By (Print Name and Sign): <i>John Hamilton</i>	Date/Time: <i>May 24/2022 4:00</i>	Samples Received By (Print Name and Sign): <i>John Hamilton</i>	Date/Time: <i>May 24/2022 4:00</i>	White Copy- AGAT	Date Revised: Oct 14, 2021



AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: *Baseline Water Resource*

Courier: *JARDO* Prepaid Collect

Waybill# *N8*

Branch: EDM GP FN FM RD VAN LYD FSJ EST SASK Other: _____

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 25/22 @ 17:00*

Hydrocarbons: Earliest Expiry *N/A*

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) *68+36+56=7* °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: *22C 899021*

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)