



October 28, 2021

Ms. Katie Haley
Town Manager
Town of Fryeburg
16 Lovewell Pond Road
Fryeburg, Maine 04037

RE: Q3 2021 Reporting – Rainmaker Spring Site (on behalf of Poland Spring)

INTRODUCTION

Luetje Geological Services (LGS), an independent hydrogeologic consulting firm, has been contracted by Poland Spring to collect and compile the monitoring data from the Rainmaker Spring site. This quarterly report (Q3 – July - September 2021) presents monitoring results for the Rainmaker Spring site and satisfies the requirements under local Town Ordinance 17G: *Groundwater and/or Spring Water Extraction*, the Approved Land Use Authorization. Monitoring activities include the following:

- Weekly depth to water measurements in five monitoring wells and four piezometers;
- Weekly monitoring of surface water elevation on Wards Pond at Route 113 and west of the site proximate to Spring 2, when possible;
- Weekly flow measurements from Spring 1 and 2, when possible;
- Record of groundwater withdrawal (gallons pumped); and
- Precipitation tracking (Fryeburg Eastern Slopes Airport (ICAO Station KIZG, Northeast Regional Climate Center)).

Figure 1 (Site Map) is provided at the end of this letter report and shows all monitoring locations.

GROUNDWATER

Groundwater levels are measured in five monitoring wells at locations shown in Figure 1. All monitoring data is tabulated and located in Table 1. A graphical representation of groundwater elevations, and weekly precipitation, is provided in Figure 2.

During Q3 2021, groundwater levels showed a continuation of the downward trend seen at the end of Q2 2021. Groundwater levels dropped by approximately $\frac{3}{4}$ feet through Q3 2021. In general, groundwater levels during Q3 decline, representing the seasonal decline in groundwater levels that typically occurs throughout the summer months. During Q3 2021, the Fryeburg airport received above average precipitation in July, and below average precipitation for August and September. By the end of Q3, the Fryeburg area was experiencing an annual precipitation deficit of approximately 10 inches, leading to lower groundwater levels.

SURFACE WATER

Surface water monitoring is conducted at two locations. SG-1 is located in Wards Pond west of Spring-2. WPMP-1 is located on the upstream side of Route 113 in Wards Pond (see Figure 1). A graphical representation of surface water elevations is shown in Figure 3.

During Q3 2021, the surface water elevation at SG-1 ranged from 397.52 to 398.65 feet NAVD88. The high for Q3 2021 was recorded during the 7/22/2021 monitoring event, and was in response to above average precipitation received during July 2021. At WPMP-1, surface water levels ranged between 397.50 to 398.21 feet NAVD88 during Q3 2021.

PIEZOMETER WATER LEVELS

Water levels are measured at two piezometers located adjacent to each spring. PZ-21D and PZ-21S are located near Spring 1 and P-1 and P-2 are located near Spring 2 (see Figure 1). A graphical representation of piezometer water elevations is shown in Figure 3.

Water levels in all piezometers either remained relatively stable, or slightly declined during Q3 2021. Piezometer water elevation magnitude of change only ranged from 0.09 to 0.20 feet throughout Q3 2021. In general, it is typical for piezometer water levels to fall during the third quarter of any year.

SPRING FLOW

During Q3 2021, flow from Spring-1 ranged from 3.75 – 6.00 liters per minute, and flow from Spring-2 ranged from 0.00 – 6.00 liters per minute. Flow measurement data is presented in Table 1.

PRECIPITATION

Precipitation data has been obtained from the Fryeburg Eastern Slopes Airport (ICAO Station KIZG, Northeast Regional Climate Center), located approximately two miles to the south of the site. Missing data from the airport station are supplemented with data collected from an on-site rain gauge located at the Evergreen Spring load station. During Q3 2021 (between the dates 6/25/2021 – 9/23/2021), KIZG recorded 10.61 inches of precipitation (Figure 2 and Figure 3).

WITHDRAWALS

Poland Spring did not withdraw any water from the Rainmaker Spring site production well during Q3 2021.

CONCLUSIONS

Groundwater levels continued their seasonal summer decline, with levels dropping by approximately $\frac{3}{4}$ feet throughout Q3 2021. Piezometer water levels remained relatively stable, or dropped slightly through Q3 2021. Surface water levels at SG-1 ranged from 397.52 to 398.65 feet NAVD88, and ranged from 397.50 to 398.21 feet NAVD88 at WPMP-1 during Q3 2021.

During Q3 2021 (between the dates 6/25/2021 – 9/23/2021), KIZG recorded 10.61 inches of precipitation. During Q3 2021, flow from Spring-1 ranged from 3.75 – 6.00 liters per minute, and flow from Spring-2 ranged from 0.00 – 6.00 liters per minute. No withdrawal from the production well occurred during Q3 2021.

If you have any questions regarding the data included in this report, please do not hesitate to contact me at (207) 415-9898.

Sincerely,
Luetje Geological Services, LLC



Ed Luetje C.G.

cc: Poland Spring (Mr. Mark Dubois)
Town of Fryeburg, CEO ()

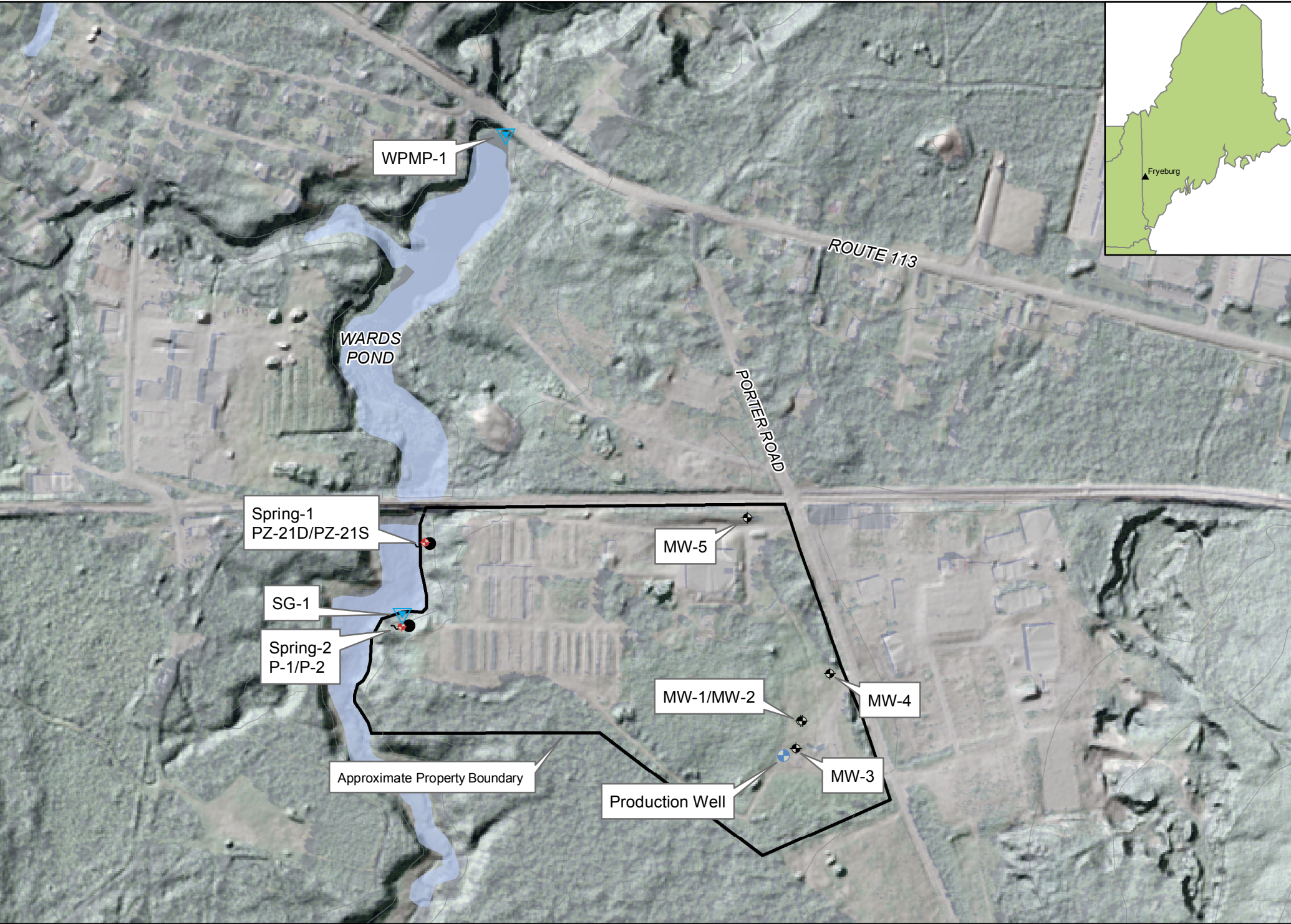


FIGURE 1
RAINMAKER SPRING SITE MAP
FRYEBURG, MAINE



FIGURE 2
GROUNDWATER ELEVATION DATA - WEEKLY PRECIPITATION

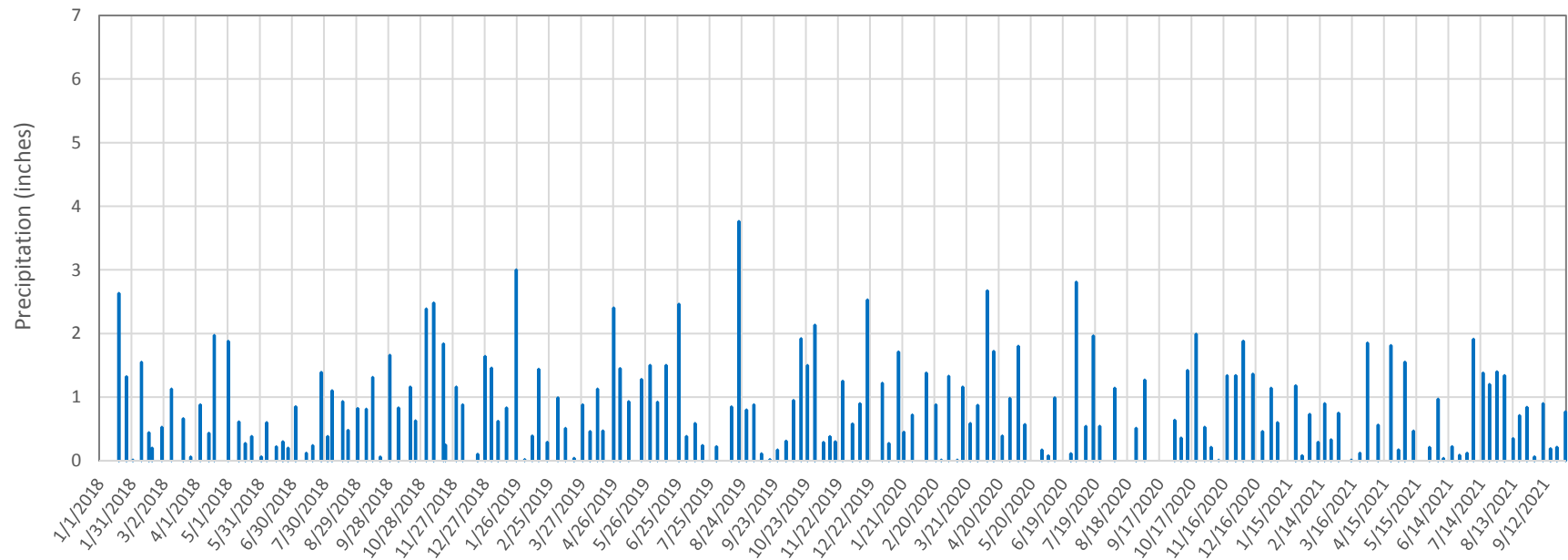
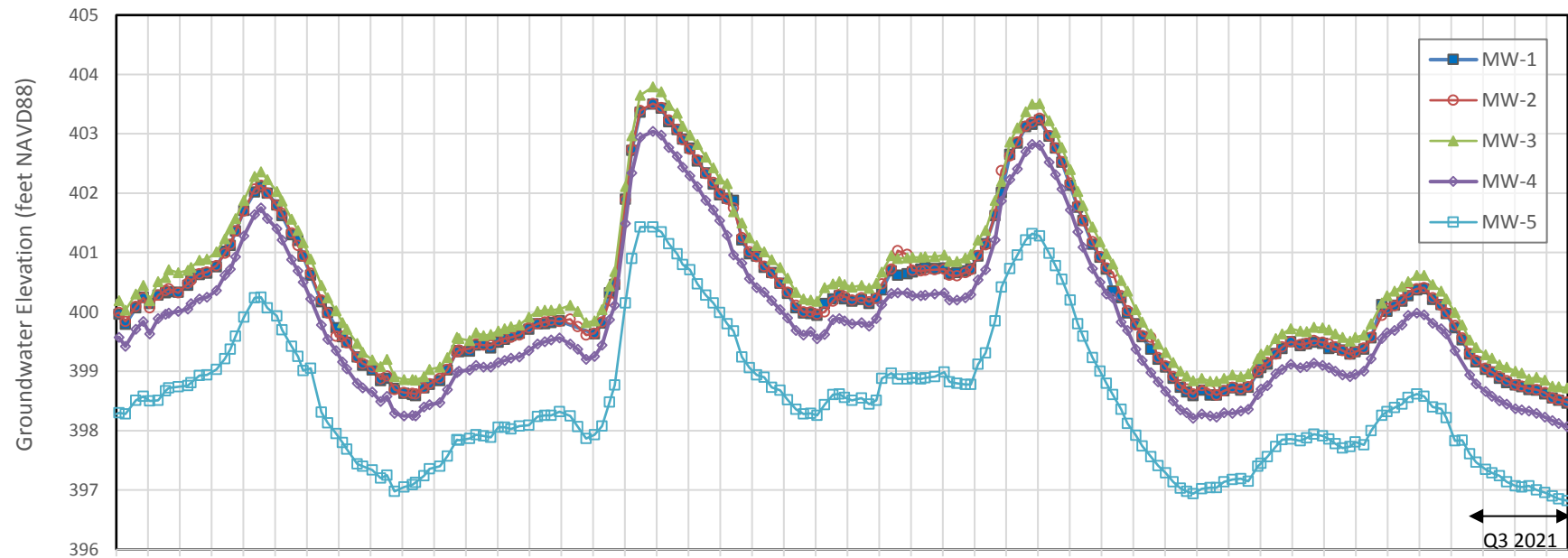


FIGURE 3
SURFACE WATER and PIEZOMETER ELEVATION DATA - WEEKLY PRECIPITATION

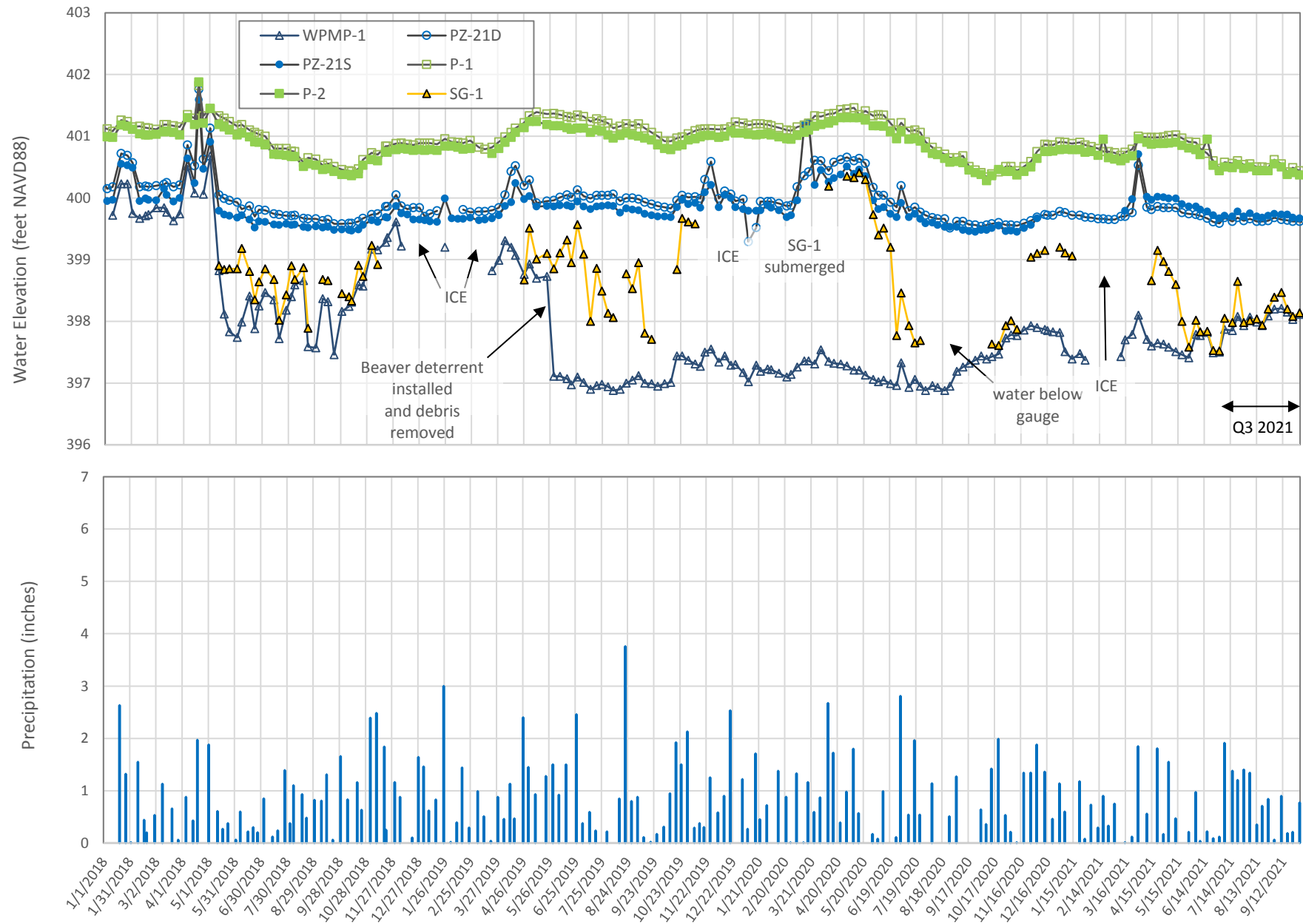


TABLE 1
MONITORING DATA
RAINMAKER SPRING SITE
FRYEBURG, MAINE

	GROUNDWATER ELEVATION (feet NAVD88)										PIEZOMETERS @ SPRING 1 (feet NAVD88)				PIEZOMETERS @ SPRING 2 (feet NAVD88)				SURFACE WATER				SPRING FLOW (lt/min)		PRECIPITATION EASTERN SLOPES AIRPORT	
	MW-1		MW-2		MW-3		MW-4		MW-5		PZ-21D		PZ-21S		P-1		P-2		WPMP-1		SG-1		Spring-1	Spring-2		KIZG
New Measuring Point (MP) Elevations (feet NAVD88)		418.75		419.59		421.26		419.75		423.11		403.99		405.40		406.03		404.35			SG-1 (2019)	400.08				
Old Measuring Point (MP) Elevation		418.27		419.10		420.79		419.30		422.53		403.27		404.76		405.35		403.67		401.22						
Date	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation			Inches	
7/5/2017																									5.12	
7/12/2017																									0.62	
7/19/2017																									1.24	
7/26/2017																									0.34	
8/2/2017																									0.13	
8/9/2017																									0.67	
8/16/2017																									0.04	
8/23/2017	18.56	400.19	19.31	400.28	20.88	400.38	19.88	399.87	24.39	398.72	3.85	400.14	5.45	399.95	5.04	400.99	3.44	400.91	1.44	399.78					1.15	
9/1/2017	18.72	400.03	19.56	400.03	21.04	400.22	20.06	399.69	24.55	398.56	3.98	400.01	5.58	399.82	5.06	400.97	3.48	400.87	NM	NM					0.00	
9/7/2017	18.79	399.96	19.61	399.98	21.10	400.16	20.12	399.63	24.61	398.50	3.30	400.69	5.00	400.40	4.65	401.38	2.99	401.36	1.41	399.81					5.78	
9/14/2017	18.88	399.87	19.70	399.89	21.18	400.08	20.22	399.53	24.75	398.36	3.95	400.04	5.55	399.85	5.02	401.01	3.42	400.93	1.43	399.79					0.03	
9/20/2017	18.89	399.86	19.79	399.80	21.26	400.00	20.30	399.45	24.81	398.30	3.90	400.09	5.58	399.82	5.06	400.97	3.48	400.87	1.46	399.76					1.25	
9/27/2017	18.98	399.77	20.03	399.56	21.35	399.91	20.39	399.36	24.86	398.25	3.85	400.14	5.61	399.79	5.10	400.93	3.50	400.85	1.51	399.71					0.45	
10/6/2017	19.28	399.47	20.11	399.48	21.60	399.66	20.80	398.95	25.06	398.05	3.77	400.22	5.55	399.85	5.11	400.92	3.54	400.81	1.55	399.67					1.00	
10/12/2017	19.46	399.29	20.30	399.29	21.80	399.46	20.78	398.97	25.23	397.88	3.60	400.39	5.18	400.22	5.08	400.95	3.49	400.86	NM	NM					0.00	
10/18/2017	19.50	399.25	20.34	399.25	21.81	399.45	20.84	398.91	25.28	397.83	3.59	400.40	5.16	400.24	5.11	400.92	3.50	400.85	1.15	400.07	1.56	400.14	400.16	UW	0.65	
10/25/2017	19.30	399.45	20.15	399.44	21.63	399.63	20.74	399.01	25.16	397.95	1.95	402.04	3.74	401.66	NM	NM	NM	NM	UW	UW	uw				0.01	
11/1/2017	19.38	399.37	20.20	399.39	21.68	399.58	20.70	399.05	25.25	397.86	1.45	402.54	2.98	402.42	NM	NM	NM	NM	UW	UW	uw				2.90	
11/8/2017	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	UW	UW	UW	UW	4.94
11/14/2017	18.86	399.89	19.71	399.88	21.13	400.13	20.21	399.54	24.72	398.39	3.57	400.42	5.17	400.23	4.83	401.20	3.25	401.10	NM	NM	ice				0.75	
11/20/2017	18.83	399.92	19.65	399.94	21.12	400.14	20.17	399.58	24.68	398.43	3.17	400.82	4.89	400.51	4.75	401.28	3.12	401.23	0.65	400.57	ice				1.20	
11/29/2017	18.85	399.90	19.66	399.93	21.14	400.12	20.21	399.54	24.79	398.32	3.70	400.29	5.27	400.13	4.87	401.16	3.30	401.05	1.33	399.89	ice				0.28	
12/6/2017	18.79	399.96	19.63	399.96	21.08	400.18	20.18	399.57	24.86	398.25	3.41	400.58	5.12	400.28	4.81	401.22	3.21	401.14	0.81	400.41	ice				1.24	
12/15/2017	18.90	399.85	19.68	399.91	21.17	400.09	20.23	399.52	24.97	398.14	3.63	400.36	5.22	400.18	4.90	401.13	3.31	401.04	1.30	399.92	ice				0.86	
12/21/2017	18.87	399.88	19.68	399.91	21.13	400.13	20.26	399.49	24.98	398.13	3.75	400.24	5.38	400.02	4.91	401.12	3.34	401.01	1.42	399.80	ice				0.06	
12/29/2017	18.80	399.95	19.64	399.95	21.06	400.20	20.19	399.56	24.85	398.26	3.72	400.27	5.35	400.05	4.90	401.13	3.33	401.02	1.41	399.81	ice				1.12	
1/3/2018	18.79	399.96	19.60	399.99	21.07	400.19	20.18	399.57	24.81	398.30	3.84	400.15	5.45	399.95	4.91	401.12	3.36	400.99	ice	ice					0.85	
1/9/2018	18.96	399.79	19.75	399.84	21.23	400.03	20.33	399.42	24.83	398.28	3.81	400.18	5.43	399.97	4.95	401.08	3.37	400.98	1.50	399.72	ice				0.00	
1/19/2018	18.68	400.07	19.50	400.09	20.96	400.30	20.04	399.71	24.60	398.51	3.27	400.72	4.85	400.55	4.77	401.26	3.17	401.18	0.99	400.23	ice				0.81	
1/26/2018	18.50	400.25	19.35	400.24	20.81	400.45	19.91	399.84	24.53	398.58	3.30	400.69	4.87	400.53	4.79	401.24	3.19	401.16	0.99	400.23	ice				2.32	
2/1/2018	18.61	400.14	19.52	400.07	21.07	400.19	20.12	399.63	24.61	398.50	3.42	400.57	4.91	400.49	4.88	401.15	3.24	401.11	1.47	399.75	ice				0.01	
2/9/2018	18.47	400.28	19.31	400.28	20.75	400.51	19.86	399.89	24.60	398.51	3.81	400.18	5.45	399.95	4.87	401.16	3.31	401.04	1.55	399.67	ice				1.55	
2/16/2018	18.43	400.32	19.23	400.36	20.68	400.58	19.79	399.96	24.44	398.67	3.80	400.19	5.41	399.99	4.89	401.14	3.33	401.02	1.51	399.71	ice				0.44	
2/19/2018	18.41	400.34	19.20	400.39	20.55	400.71	19.77	399.98	24.39	398.72	3.81	400.18	5.43	399.97	4.90	401.13	3.33	401.02	1.49	399.73	ice				0.20	
2/28/2018	18.42	400.33	19.27	400.32	20.60	400.66	19.74	400.01	24.37	398.74	3.79	400.20	5.44	399.96	4.92	401.11	3.32	401.03	1.38	399.84	ice	uw			0.53	
3/9/2018	18.30	400.45	19.11	400.48	20.56	400.70	19.70	400.05	24.35	398.76	3.77	400.22	5.25	400.15	4.84	401.19	3.28	401.07	1.38	399.84	ice	uw			1.13	
3/12/2018	18.17	400.58	19.06	400.53	20.51	400.75	19.61	400.14	24.30	398.81	3.74	400.25	5.35	400.05	4.84	401.19	3.27	401.08	1.45	399.77	ice	uw			0.00	
3/20/2018	18.12	400.63	18.95	400.64	20.39	400.87	19.53	400.22	24.18	398.93	3.81	400.18	5.46	399.94	4.86	401.17	3.29	401.06	1.59	399.63	ice	uw			0.66	
3/27/2018	18.10	400.65	18.92	400.67	20.37	400.89	19.50	400.25	24.17	398.94	3.78	400.21	5.40	400.00	4.88	401.15	3.33	401.02	1.48	399.74	ice	uw			0.06	
4/5/2018	17.99	400.76	18.81	400.78	20.25	401.01	19.39	400.36	24.08	399.03	3.13	400.86	4.76	400.64	4.68	401.35	3.05	401.30	0.70	400.52	uw				0.88	
4/13/2018	17.73	401.02	18.60	400.99	20.03	401.23	19.13	400.62	23.90	399.21	3.47	400.52	5.16	400.24	4.74	401.29	3.16	401.19	1.14	400.08	uw				0.43	
4/18																										

TABLE 1
MONITORING DATA
RAINMAKER SPRING SITE
FRYEBURG, MAINE

TABLE 1 CONT.	GROUNDWATER ELEVATION (feet NAVD88)										PIEZOMETERS @ SPRING 1 (feet NAVD88)				PIEZOMETERS @ SPRING 2 (feet NAVD88)				SURFACE WATER				SPRING FLOW (lt/min)		PRECIPITATION EASTERN SLOPES AIRPORT	
	MW-1		MW-2		MW-3		MW-4		MW-5		PZ-21D		PZ-21S		P-1		P-2		WPMP-1		SG-1		Spring-1	Spring-2		KIZG
New Measuring Point (MP) Elevations (feet NAVD88)		418.75		419.59		421.26		419.75		423.11		403.99		405.40		406.03		404.35				SG-1 (2019)	400.08			
Old Measuring Point (MP) Elevation		418.27		419.10		420.79		419.30		422.53		403.27		404.76		405.35		403.67		401.22			SG-1A (2019)	399.49		
Date	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation			inches	
10/7/2018	20.14	398.61	20.96	398.63	22.40	398.86	21.49	398.26	26.02	397.09	4.40	399.59	5.92	399.48	5.59	400.44	3.97	400.38	2.98	398.24	1.70	398.40	5.45	2.48	0.83	
10/10/2018	20.16	398.59	20.97	398.62	22.41	398.85	21.50	398.25	25.98	397.13	4.40	399.59	5.93	399.47	5.60	400.43	3.99	400.36	2.91	398.31	1.77	398.33	4.29	1.50	0.00	
10/18/2018	20.03	398.72	20.87	398.72	22.35	398.91	21.35	398.40	25.87	397.24	4.37	399.62	5.91	399.49	5.56	400.47	3.96	400.39	2.63	398.59	1.19	398.91	4.29	3.75	1.16	
10/23/2018	19.97	398.78	20.80	398.79	22.23	399.03	21.31	398.44	25.75	397.36	4.32	399.67	5.84	399.56	5.41	400.62	3.82	400.53	2.65	398.57	1.09	398.73	3.75	2.14	0.63	
11/2/2018	19.91	398.84	20.71	398.88	22.19	399.07	21.28	398.47	25.71	397.40	4.26	399.73	5.76	399.64	5.30	400.73	3.73	400.62	2.05	399.17	0.59	399.23	UW	UW	2.39	
11/9/2018	19.73	399.02	20.56	399.03	22.03	399.23	21.06	398.69	25.54	397.57	4.25	399.74	5.79	399.61	5.33	400.70	3.75	400.60	2.06	399.16	0.90	398.92	UW	1.33	2.48	
11/18/2018	19.40	399.35	20.26	399.33	21.69	399.57	20.77	398.98	25.26	397.85	4.13	399.86	5.71	399.69	5.19	400.84	3.60	400.75	1.94	399.28	ice	ice	UW	UW	1.84	
11/20/2018	19.42	399.33	20.23	399.36	21.71	399.55	20.75	399.00	25.27	397.84	4.13	399.86	5.72	399.68	5.19	400.84	3.61	400.74	1.86	399.36	ice	ice	UW	UW	0.25	
11/30/2018	19.41	399.34	20.21	399.38	21.74	399.52	20.73	399.02	25.24	397.87	3.94	400.05	5.53	399.87	5.15	400.88	3.57	400.78	1.61	399.61	ice	ice	ice	ice	1.16	
12/6/2018	19.31	399.44	20.13	399.46	21.61	399.65	20.65	399.10	25.18	397.93	4.12	399.87	5.65	399.75	5.14	400.89	3.55	400.80	2.00	399.22	ice	ice	ice	ice	0.88	
12/13/2018	19.29	399.46	20.15	399.44	21.66	399.60	20.68	399.07	25.20	397.91	4.17	399.82	5.67	399.73	5.16	400.87	3.56	400.79	ice	ice	ice	ice	ice	ice	0.00	
12/20/2018	19.36	399.39	20.15	399.44	21.64	399.62	20.68	399.07	25.22	397.89	4.15	399.84	5.75	399.65	5.17	400.86	3.58	400.77	ice	ice	ice	ice	ice	ice	0.10	
12/27/2018	19.26	399.49	20.07	399.52	21.58	399.68	20.60	399.15	25.05	398.06	4.15	399.84	5.75	399.65	5.14	400.89	3.57	400.78	ice	ice	ice	ice	ice	ice	1.64	
1/2/2019	19.21	399.54	20.04	399.55	21.54	399.72	20.57	399.18	25.05	398.06	4.29	399.70	5.76	399.64	5.14	400.89	3.58	400.77	ice	ice	ice	ice	ice	ice	1.46	
1/8/2019	19.15	399.60	20.02	399.57	21.51	399.75	20.53	399.22	25.08	398.03	4.25	399.74	5.78	399.62	5.14	400.89	3.57	400.78	ice	ice	ice	ice	ice	ice	0.62	
1/16/2019	19.11	399.64	19.98	399.61	21.48	399.78	20.51	399.24	25.03	398.08	4.20	399.79	5.79	399.61	5.16	400.87	3.58	400.77	ice	ice	ice	ice	ice	ice	0.83	
1/25/2019	19.04	399.71	19.86	399.73	21.35	399.91	20.40	399.35	25.02	398.09	ice	ice	5.41	399.99	5.07	400.96	3.51	400.84	2.02	399.20	ice	ice	ice	ice	3.00	
2/2/2019	18.95	399.80	19.79	399.80	21.25	400.01	20.29	399.46	24.87	398.24	ice	ice	5.73	399.67	5.12	400.91	3.51	400.84	ice	ice	ice	ice	ice	ice	0.02	
2/9/2019	18.95	399.80	19.76	399.83	21.23	400.03	20.25	399.50	24.85	398.26	ice	ice	5.74	399.66	5.13	400.90	3.53	400.82	ice	ice	ice	ice	ice	ice	0.39	
2/15/2019	18.93	399.82	19.73	399.86	21.23	400.03	20.22	399.53	24.85	398.26	4.18	399.81	5.74	399.66	5.14	400.89	3.56	400.79	ice	ice	ice	ice	ice	ice	1.44	
2/23/2019	18.90	399.85	19.75	399.84	21.21	400.05	20.19	399.56	24.79	398.32	4.22	399.77	5.72	399.68	5.10	400.93	3.55	400.80	ice	ice	ice	ice	ice	ice	0.29	
3/5/2019	could not locate		19.71	399.88	21.15	400.11	20.29	399.46	24.86	398.25	4.21	399.78	5.76	399.64	5.21	400.82	ice	ice	ice	ice	ice	ice	ice	ice	0.99	
3/12/2019	could not locate		19.84	399.75	21.25	400.01	20.38	399.37	25.04	398.07	4.21	399.78	5.75	399.65	5.24	400.79	ice	ice	ice	ice	ice	ice	ice	ice	0.51	
3/20/2019	could not locate		19.98	399.61	21.44	399.82	20.55	399.20	25.24	397.87	4.19	399.80	5.73	399.67	5.21	400.82	3.63	400.72	2.40	398.82	ice	ice	ice	ice	0.04	
3/28/2019	19.12	399.63	19.95	399.64	21.41	399.85	20.50	399.25	25.18	397.93	4.15	399.84	5.68	399.72	5.12	400.91	3.55	400.80	2.23	398.99	ice	ice	ice	ice	0.88	
4/4/2019	18.94	399.81	19.76	399.83	21.22	400.04	20.31	399.44	25.03	398.08	3.94	400.05	5.53	399.87	5.04	400.99	3.45	400.90	1.91	399.31	ice	ice	uw	uw	0.46	
4/11/2019	18.43	400.32	19.40	400.19	20.82	400.44	19.88	399.87	24.63	398.48	3.56	400.43	5.47	399.93	4.97	401.06	3.37	400.98	2.02	399.20	uw	uw	uw	uw	1.13	
4/16/2019	18.29	400.46	19.11	400.48	20.58	400.68	19.64	400.11	24.34	398.77	3.47	400.52	5.16	400.24	4.90	401.13	3.29	401.06	2.15	399.07	uw	uw	uw	uw	0.47	
4/26/2019	16.85	401.90	17.70	401.89	19.15	402.11	18.26	401.49	22.96	400.15	3.79	400.20	5.42	399.98	4.81	401.22	3.21	401.14	2.46	398.76	-0.82	398.67	10.00	2.50	2.40	
5/2/2019	16.03	402.72	16.85	402.74	18.29	402.97	17.41	402.34	22.21	400.90	3.70	400.29	5.37	400.03	4.70	401.33	3.11	401.24	2.29	398.93	0.02	399.51	uw	5.00	1.45	
5/10/2019	15.39	403.36	16.20	403.39	17.61	403.65	16.81	402.94	21.68	401.43	4.07	399.92	5.54	399.86	4.64	401.39	3.11	401.24	2.52	398.70	-0.48	399.01	uw	8.00	0.93	
5/22/2019	15.25	403.50	16.08	403.51	17.47	403.79	16.71	403.04	21.68	401.43	4.04	399.95	5.53	399.87	4.67	401.36	3.16	401.19	2.49	398.73	-0.39	399.10	17.22	4.29	1.28	
5/30/2019	15.32	403.43	16.15	403.44	17.55	403.71	16.77	402.98	21.76	401.35	4.03	399.96	5.54	399.86	4.66	401.37	3.18	401.17	4.11	397.11	-0.64	398.85	15.00	3.00	1.50	
6/6/2019	15.55	403.20	16.36	403.23	17.78	403.48	16.98	402.77	21.96	401.15	3.98	400.01	5.52	399.88	4.68	401.35	3.18	401.17	4.11	397.11	-0.38	399.11	16.67	4.41	0.92	
6/14/2019	15.68	403.07	16.52	403.07	17.91	403.35	17.13	402.62	22.13	400.98	3.94	400.05	5.52	399.88	4.71	401.32	3.21	401.14	4.15	397.07	-0.76	399.32	10.71	2.31	1.50	
6/19/2019	15.84	402.91	16.69	402.90	18.13	403.13	17.31	402.44	22.31	400.80	3.98	400.01	5.54	399.86	4.73	401.30	3.24	401.11	4.25	396.97	-1.13	398.95	12.00	4.11	0.00	
6/26/2019																										

TABLE 1
MONITORING DATA
RAINMAKER SPRING SITE
FRYEBURG, MAINE

TABLE 1 CONT.		GROUNDWATER ELEVATION (feet NAVD88)								PIEZOMETERS @ SPRING 1 (feet NAVD88)				PIEZOMETERS @ SPRING 2 (feet NAVD88)				SURFACE WATER				SPRING FLOW (lt/min)		PRECIPITATION EASTERN SLOPES AIRPORT		
		MW-1		MW-2		MW-3		MW-4		MW-5		PZ-21D		PZ-21S		P-1		P-2		WPMP-1		SG-1		Spring-1	Spring-2	KIZG
New Measuring Point (MP)Elevations (feet NAVD88)		418.75		419.59		420.79		419.75		423.11		403.99		405.40		406.03		404.35				SG-1 (2020)		400.25		
Old Measuring Point (MP)Elevation		418.27		419.10		421.26		419.30		422.53		403.27		404.76		405.35		403.67		401.22		SG-1A (2020)		398.75		
Date	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation	Depth to Water below mp (ft)	Water Elevation			Inches	
1/2/2020	18.06	400.69	18.87	400.72	20.31	400.95	19.44	400.31	24.14	398.97	4.01	399.98	5.58	399.82	4.82	401.21	3.30	401.05	4.05	397.17	ice		uw	uw	1.22	
1/8/2020	18.13	400.62	18.56	401.03	20.36	400.90	19.43	400.32	24.24	398.87	4.70	399.29	5.61	399.79	4.85	401.18	3.32	401.03	4.20	397.02	ice		11.11	uw	0.27	
1/17/2020	18.11	400.64	18.62	400.97	20.35	400.91	19.43	400.32	24.24	398.87	4.47	399.52	5.61	399.79	4.83	401.20	3.33	401.02	3.93	397.29	ice		12.00	uw	1.71	
1/22/2020	18.08	400.67	18.89	400.70	20.34	400.92	19.48	400.27	24.22	398.89	4.05	399.94	5.60	399.80	4.83	401.20	3.32	401.03	4.03	397.19	ice		12.00	uw	0.45	
1/30/2020	18.03	400.72	18.90	400.69	20.34	400.92	19.48	400.27	24.24	398.87	4.05	399.94	5.52	399.88	4.84	401.19	3.31	401.04	3.99	397.23	ice		12.00	uw	0.72	
2/3/2020	18.00	400.75	18.89	400.70	20.33	400.93	19.47	400.28	24.22	398.89	4.05	399.94	5.56	399.84	4.86	401.17	3.33	401.02	4.00	397.22	ice		10.91	uw	0.00	
2/12/2020	18.02	400.73	18.88	400.71	20.33	400.93	19.45	400.30	24.20	398.91	4.08	399.91	5.60	399.80	4.89	401.14	3.36	400.99	4.06	397.16	ice		10.91	uw	1.38	
2/21/2020	18.01	400.74	18.87	400.72	20.30	400.96	19.43	400.32	24.12	398.99	4.12	399.87	5.71	399.69	4.93	401.10	3.39	400.96	4.12	397.10	ice		10.91	uw	0.88	
2/26/2020	18.11	400.64	18.97	400.62	20.41	400.85	19.55	400.20	24.29	398.82	4.11	399.88	5.68	399.72	4.94	401.09	3.40	400.95	4.08	397.14	ice		15.00	uw	0.01	
3/4/2020	18.09	400.66	18.98	400.61	20.41	400.85	19.55	400.20	24.31	398.80	3.81	400.18	5.44	399.96	4.88	401.15	3.34	401.01	3.96	397.26	uw		uw	uw	1.33	
3/12/2020	18.06	400.69	18.93	400.66	20.35	400.91	19.51	400.24	24.33	398.78	3.63	400.36	4.21	401.19	4.85	401.18	3.29	401.06	3.86	397.36	uw		uw	uw	0.01	
3/17/2020	18.02	400.73	18.88	400.71	20.29	400.97	19.46	400.29	24.33	398.78	3.57	400.42	4.18	401.22	4.82	401.21	3.25	401.10	3.86	397.36	uw		uw	uw	1.16	
3/24/2020	17.81	400.94	18.64	400.95	20.05	401.21	19.21	400.54	23.99	399.12	3.38	400.61	5.19	400.21	4.70	401.33	3.19	401.16	3.91	397.31	uw		uw	uw	0.59	
3/31/2020	17.60	401.15	18.46	401.13	19.89	401.37	19.04	400.71	23.80	399.31	3.39	400.60	4.95	400.45	4.71	401.32	3.16	401.19	3.68	397.54	uw		uw	uw	0.87	
4/9/2020	17.13	401.62	17.95	401.64	19.38	401.88	18.54	401.21	23.26	399.85	3.55	400.44	5.14	400.26	4.67	401.36	3.14	401.21	3.87	397.35	-0.06	400.19	uw	uw	2.67	
4/15/2020	16.74	402.01	17.21	402.38	19.06	402.20	17.88	401.87	22.69	400.42	3.41	400.58	5.08	400.32	4.66	401.37	3.10	401.25	3.90	397.32	uw		uw	uw	1.72	
4/23/2020	16.10	402.65	16.96	402.63	18.40	402.86	17.52	402.23	22.38	400.73	3.37	400.62	5.02	400.38	4.60	401.43	3.05	401.30	3.91	397.31	uw		uw	uw	0.39	
4/30/2020	15.91	402.84	16.73	402.86	18.16	403.10	17.34	402.41	22.15	400.96	3.33	400.66	4.89	400.51	4.59	401.44	3.05	401.30	3.94	397.28	0.10	400.35	uw	uw	0.98	
5/8/2020	15.63	403.12	16.46	403.13	17.89	403.37	17.05	402.70	21.90	401.21	3.39	400.60	5.01	400.39	4.57	401.46	3.05	401.30	4.01	397.21	0.08	400.33	uw	uw	1.80	
5/14/2020	15.59	403.16	16.40	403.19	17.76	403.50	16.93	402.82	21.79	401.32	3.35	400.64	4.94	400.46	4.68	401.35	3.05	401.30	4.01	397.21	0.16	400.41	uw	uw	0.57	
5/21/2020	15.52	403.23	16.33	403.26	17.75	403.51	16.94	402.81	21.83	401.28	3.43	400.56	5.05	400.35	4.62	401.41	3.09	401.26	4.09	397.13	0.05	400.30	uw	uw	0.00	
5/30/2020	15.79	402.96	16.62	402.97	18.04	403.22	17.23	402.52	22.12	400.99	3.82	400.17	5.44	399.96	4.70	401.33	3.18	401.17	4.16	397.06	-0.52	399.73	uw	1.81	0.17	
6/5/2020	15.99	402.76	16.83	402.76	18.24	403.02	17.44	402.31	22.33	400.78	3.95	400.04	5.58	399.82	4.68	401.35	3.18	401.17	4.20	397.02	-0.85	399.40	12.00	1.50	0.08	
6/11/2020	16.23	402.52	17.06	402.53	18.49	402.77	17.68	402.07	22.56	400.55	3.95	400.04	5.55	399.85	4.69	401.34	3.19	401.16	4.17	397.05	-0.74	399.51	uw	1.50	0.99	
6/19/2020	16.62	402.13	17.42	402.17	18.86	402.40	18.03	401.72	22.91	400.20	4.06	399.93	5.66	399.74	4.82	401.21	3.28	401.07	4.23	396.99	-1.05	399.20	12.00	1.50	0.00	
6/26/2020	16.99	401.76	17.81	401.78	19.23	402.03	18.40	401.35	23.31	399.80	4.14	399.85	5.71	399.69	4.93	401.10	3.39	400.96	4.26	396.96	-0.94	397.77	25.00	1.58	0.11	
7/1/2020	17.21	401.54	18.05	401.54	19.47	401.79	18.66	401.09	23.52	399.59	3.79	400.20	5.48	399.92	4.81	401.22	3.28	401.07	3.89	397.33	-0.25	398.46	uw	1.71	2.81	
7/10/2020	17.61	401.14	18.41	401.18	19.83	401.43	19.02	400.73	23.88	399.23	4.20	399.79	5.71	399.69	4.95	401.08	3.40	400.95	4.29	396.93	-0.78	397.93	10.00	1.71	0.54	
7/17/2020	17.83	400.92	18.66	400.93	20.08	401.18	19.25	400.50	24.11	399.00	4.14	399.85	5.66	399.74	4.93	401.10	3.39	400.96	4.16	397.06	-1.06	397.65	10.00	1.58	1.96	
7/23/2020	18.03	400.72	18.85	400.74	20.28	400.98	19.45	400.30	24.31	398.80	4.22	399.77	5.74	399.66	4.97	401.06	3.43	400.92	4.27	396.95	-1.02	397.69	10.00	5.00	0.54	
7/29/2020	18.40	400.35	18.93	400.66	20.45	400.81	19.51	400.24	24.50	398.61	4.27	399.72	5.81	399.59	5.12	400.91	3.54	400.81	4.34	396.88	dry	dry	10.00	2.00	0.00	
8/6/2020	18.51	400.24	19.32	400.27	20.73	400.53	19.92	399.83	24.75	398.36	4.31	399.68	5.80	399.60	5.21	400.82	3.63	400.72	4.26	396.96	dry	dry	10.00	1.67	1.14	
8/12/2020	18.77	399.98	19.57	400.02	20.91	400.35	20.06	399.69	24.99	398.12	4.33	399.66	5.84	399.56	5.28	400.75	3.65	400.70	4.29	396.93	dry	dry	10.00	2.00	0.00	
8/20/2020	18.95	399.80	19.81	399.78	21.22	400.04	20.38	399.37	25.19	397.92	4.33	399.66	5.87	399.53	5.32	400.71	3.71	400.64	4.34	396.88	dry	dry	10.00	3.75	0.00	
8/26/2020	19.17	399.58	19.99	399.60	21.43	399.83	20.57	399.18	25.37	397.74	4.48	399.51	5.87	399.53	5.38	400.65	3.77	400.58	4.27	396.95	dry	dry	4.29	2.40	0.51	
9/3/2020	19.38	399.37	20.02	399.57	21.63	399.63	20.77	398.98	25.55	397.56	4.37	399.62	5.87	399.43	5.38	400.65	3.76	400.59	4.03	397.19	dry	dry	4.00	2.00	1.27	
9/10/2020	19.55	399.20	20.36	399.23	21.80	399.46	20.93	398.82	25.70	397.41	4.37	399.62	5.92	399.38	5.35	400.68	3.78.									

TABLE 1
MONITORING DATA
RAINMAKER SPRING SITE
FRYEBURG, MAINE

TABLE 1 CONT.	GROUNDWATER ELEVATION (feet NAVD88)										PIEZOMETERS @ SPRING 1 (feet NAVD88)				PIEZOMETERS @ SPRING 2 (feet NAVD88)				SURFACE WATER				SPRING FLOW (lt/min)		PRECIPITATION EASTERN SLOPES AIRPORT
	MW-1		MW-2		MW-3		MW-4		MW-5		PZ-21D		PZ-21S		P-1		P-2		WPMP-1		SG-1		Spring-1	Spring-2	KI2G
Measuring Point (MP) Elevations (feet NAVD88)		418.75		419.59		421.26		419.75		423.11		403.99		404.32		406.03		404.35			SG-1 (2020)		400.25		
Date	Depth to Water below mg. (ft)	Water Elevation	Depth to Water below mg. (ft)	Water Elevation	Depth to Water below mg. (ft)	Water Elevation	Depth to Water below mg. (ft)	Water Elevation	Depth to Water below mg. (ft)	Water Elevation	Depth to Water below mg. (ft)	Water Elevation	Depth to Water below mg. (ft)	Water Elevation	Depth to Water below mg. (ft)	Water Elevation	Depth to Water below mg. (ft)	Water Elevation	Depth to Water below mg. (ft)	Water Elevation	Depth to Water below mg. (ft)	Water Elevation			Inches
1/5/2021	19.37	399.38	20.18	399.41	21.63	399.63	20.72	399.03	25.26	397.85	4.23	399.76			5.13	400.90	3.56	400.79	3.71	397.51	-1.14	399.11	6.00	uw	0.60
1/13/2021	19.25	399.50	20.09	399.50	21.54	399.72	20.63	399.12	25.25	397.86	4.27	399.72			5.15	400.88	3.57	400.78	3.83	397.39	-1.19	399.06	5.45	2.00	0.00
1/22/2021	19.32	399.43	20.14	399.45	21.58	399.68	20.69	399.06	25.28	397.83	4.27	399.72			5.13	400.90	3.57	400.78	3.74	397.48	ice		ice	ice	1.18
1/28/2021	19.29	399.46	20.12	399.47	21.59	399.67	20.67	399.08	25.23	397.88	4.30	399.69			5.17	400.86	3.61	400.74	3.85	397.37	ice		ice	ice	0.08
2/4/2021	19.26	399.49	20.07	399.52	21.52	399.74	20.61	399.14	25.17	397.94	4.31	399.68			5.20	400.83	3.60	400.75		ice	ice		ice	ice	0.73
2/12/2021	19.28	399.47	20.10	399.49	21.53	399.73	20.65	399.10	25.20	397.91	4.33	399.66			5.23	400.80	3.66	400.69	ice		ice		ice	ice	0.29
2/18/2021	19.37	399.38	20.13	399.46	21.56	399.70	20.69	399.06	25.25	397.86	4.33	399.66			5.28	400.75	3.40	400.95	ice		ice		ice	ice	0.90
2/24/2021	19.35	399.40	20.18	399.41	21.63	399.63	20.75	399.00	25.33	397.78	4.34	399.65			5.28	400.75	3.70	400.65	ice		ice		ice	ice	0.33
3/3/2021	19.39	399.36	20.24	399.35	21.69	399.57	20.81	398.94	25.40	397.71	4.34	399.65			5.30	400.73	3.72	400.63	ice		ice		ice	ice	0.75
3/10/2021	19.46	399.29	20.30	399.29	21.75	399.51	20.84	398.91	25.38	397.73	4.29	399.70			5.34	400.69	3.75	400.60		3.79			ice	ice	0.00
3/15/2021	19.42	399.33	20.26	399.33	21.69	399.57	20.80	398.95	25.30	397.81	4.29	399.70	4.53	399.79	5.29	400.74	3.71	400.64		3.52			ice	ice	0.01
3/23/2021	19.38	399.37	20.20	399.39	21.65	399.61	20.75	399.00	25.35	397.76	4.23	399.76	4.34	399.98	5.24	400.79	3.67	400.68		3.43			ice	ice	0.12
3/30/2021	19.19	399.56	20.02	399.57	21.46	399.80	20.54	399.21	25.11	398.00	3.46	400.53	3.61	400.71	5.03	401.00	3.39	400.96		3.12			flooded	flooded	1.85
4/9/2021	18.63	400.12	19.65	399.94	21.11	400.15	20.30	399.55	24.85	398.26	4.14	399.85	4.30	400.02	5.05	400.98	3.45	400.90		3.51			398.10	flooded	0.56
4/14/2021	18.74	400.01	19.53	400.06	20.99	400.27	20.10	399.65	24.79	398.32	4.18	399.81	4.35	399.97	5.05	400.98	3.48	400.87		3.62			397.60	-2.48	0.00
4/21/2021	18.64	400.11	19.49	400.10	20.91	400.35	20.06	399.69	24.72	398.39	4.13	399.86	4.30	400.02	5.05	400.98	3.47	400.88		3.57			397.65	-1.99	1.81
4/28/2021	18.57	400.18	19.39	400.20	20.83	400.43	19.97	399.78	24.66	398.45	4.15	399.84	4.31	400.01	5.04	400.99	3.47	400.88		3.59			397.63	-2.17	0.17
5/4/2021	18.48	400.27	19.26	400.33	20.75	400.51	19.81	399.94	24.55	398.56	4.15	399.84	4.33	399.99	5.02	401.01	3.46	400.89		3.64			397.58	-2.33	1.55
5/12/2021	18.38	400.37	19.20	400.39	20.64	400.62	19.77	399.98	24.49	398.62	4.15	399.84	4.33	399.99	5.01	401.02	3.45	400.90		3.71			397.51	-2.54	0.47
5/19/2021	18.36	400.39	19.18	400.41	20.64	400.62	19.80	399.95	24.53	398.58	4.23	399.76	4.42	399.90	5.06	400.97	3.50	400.85		3.76			397.46	-3.14	0.00
5/27/2021	18.54	400.21	19.35	400.24	20.80	400.46	19.94	399.81	24.71	398.40	4.25	399.74	4.46	399.86	5.12	400.91	3.54	400.81		3.81			397.41	-3.56	0.21
6/4/2021	18.63	400.12	19.48	400.11	20.91	400.35	20.03	399.72	24.74	398.37	4.26	399.73	4.46	399.86	5.13	400.90	3.57	400.78		3.43			397.79	-3.12	0.97
6/9/2021	18.78	399.97	19.61	399.98	21.04	400.22	20.12	399.63	24.89	398.22	4.28	399.71	4.51	399.81	5.23	400.80	3.65	400.70		3.45			397.77	-3.31	0.04
6/17/2021	19.02	399.73	19.82	399.77	21.27	399.99	20.40	399.35	25.28	397.83	4.32	399.67	4.54	399.78	5.31	400.72	3.40	400.95		3.40			397.82	-3.30	0.22
6/24/2021	19.22	399.53	20.03	399.56	21.48	399.78	NM	NM	25.27	397.84	4.38	399.61	4.60	399.72	5.43	400.60	3.82	400.53		3.73			397.49	-3.61	0.09
7/1/2021	19.46	399.29	20.29	399.30	21.73	399.53	20.81	398.94	25.50	397.61	4.40	399.59	4.65	399.67	5.55	400.48	3.91	400.44		3.72			397.50	-3.62	0.12
7/7/2021	19.59	399.16	20.41	399.18	21.86	399.40	20.96	398.79	25.64	397.47	4.31	399.68	4.61	399.71	5.45	400.58	3.85	400.50		3.35			397.87	-3.09	1.91
7/16/2021	19.72	399.03	20.54	399.05	21.98	399.28	21.09	398.66	25.76	397.35	4.37	399.62	4.62	399.70	5.47	400.56	3.86	400.49		3.37			397.85	-3.16	1.38
7/22/2021	19.76	398.99	20.60	398.99	22.04	399.22	21.17	398.58	25.82	397.29	4.31	399.68	4.54	399.78	5.43	400.60	3.81	400.54		3.14			398.08	-2.49	1.20
7/29/2021	19.87	398.88	20.68	398.91	22.15	399.11	21.25	398.50	25.87	397.24	4.36	399.63	4.62	399.70	5.49	400.54	3.87	400.48		3.29			397.93	-3.16	1.40
8/5/2021	19.94	398.81	20.75	398.84	22.19	399.07	21.30	398.45	25.97	397.14	4.33	399.66	4.57	399.75	5.48	400.55	3.85	400.50		3.15			398.07	-3.13	1.34
8/13/2021	19.98	398.77	20.82	398.77	22.26	399.00	21.38	398.37	26.04	397.07	4.37	399.62	4.62	399.70	5.53	400.50	3.91	400.44		3.23			397.99	-3.10	0.35
8/19/2021	20.01	398.74	20.84	398.75	22.29	398.97	21.40	398.35	26.06	397.05	4.37	399.62	4.64	399.68	5.53	400.50	3.91	400.44		3.29			397.93	-3.20	0.71
8/26/2021	20.06	398.69	20.88	398.71	22.39	398.87	21.42	398.33	26.04	397.07	4.36	399.63	4.61	399.71	5.54	400.49	3.91	400.44		3.13			398.09	-2.94	0.84
9/2/2021	20.07	398.68	20.90	398.69	22.36	398.90	21.46	398.29	26.11	397.00	4.31	399.68	4.58	399.74	5.41	400.62	3.80	400.55		3.02			398.20	-2.75	0.06
9/10/2021	20.13	398.62	20.95	398.64	22.41	398.85	21.52	398.23	26.15	396.96	4.34	399.65	4.59	399.73	5.48	400.55	3.85	400.50		3.01			398.21	-2.67	0.90
9/17/2021	20.20	398.55	21.04	398.55	22.51	398.75	21.58	398.17	26.21	396.90	4.35	399.64	4.59	399.73	5.61	400.42	3.97	400.38		3.07			398.15	-2.94	0.19
9/23/2021	20.24	398.51	21.07	398.52	22.52	398.74	21.63	398.12	26.26	396.85	4.37	399.62	4.64	399.68	5.54	400.49	3.94	400.41		3.19			398.03	-3.06	0.21

Notes:
NM = no measurement
UW = under water
nf = no flow