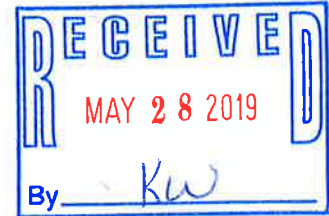




Luetje Geological Services, LLC
Ed Luetje, CG
153 Flying Point Road
Freeport, Maine 04032

May 14, 2019

Ms. Sharon Jackson
Town Manager
Town of Fryeburg
16 Lovewell Pond Road
Fryeburg, Maine 04037



RE: Q1 2019 Reporting – Rainmaker Spring Site (on behalf of Poland Spring)

INTRODUCTION

Nestle Waters North America Inc. (Poland Spring) acquired the Rainmaker Spring site in early August, 2017. This quarterly report (Q1 – January- March 2019) presents monitoring results for the site and satisfies the requirements under local Town Ordinance 17G: *Groundwater and/or Spring Water Extraction*, the Approved Land Use Authorization.

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. 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;
- Weekly flow measurements from Spring 1 and 2;
- 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.

MONITORING RESULTS

As mentioned above, Poland Spring acquired the Rainmaker Spring site in August 2017. LGS initiated monitoring of the site on August 23, 2017. Previous monitoring and reporting was conducted by the preceding owners and their consultants (CES, Inc.), whose files are available for review at the Fryeburg Town Office.

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 Q1 2019, groundwater levels rose by approximately 0.5 feet from January to the end of February. This was followed by a decline in water levels by approximately the same amount, and represents a typical winter seasonal trend whereby groundwater recharge is limited by frozen

ground conditions. At the end of March, a slight rise can be seen indicating the beginning of the spring groundwater recharge period.

SURFACE WATER

Surface water monitoring, as described in earlier reports, is conducted at two locations. SG-1, installed on October 12, 2017, 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.

Surface water levels in Wards Pond and at SG-1 are subject to natural fluctuations, and to the amount of debris clogging the culvert under Route 113 (Wards Pond outlet). It has been noted in previous reports that Wards Pond water levels have been artificially high since 2016 due to the debris build up in the culvert, causing Spring 1 to be consistently submerged and Spring 2 to be intermittently submerged. LGS began removing the debris, executed in stages, starting on 5/8/2018, and ending on 9/19/2018. These debris removal exercises are clearly seen in Figure 3. A beaver deterrent apparatus is currently being installed as of the drafting of this report.

During Q1 2019, ice conditions prevailed at both surface water stage locations. Two measurements were made at WPMP-1 beginning on the 3/20/2019 monitoring round, and represents de-icing at this station.

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.

During Q1 2019, and as shown in Figure 3, water levels in all piezometers remained relatively stable. A rise in water levels can be seen beginning at the end of March indicating the beginning of the spring groundwater recharge period.

SPRING FLOW

During Q1 2019, no flow measurements were made due to ice conditions that began as noted during the 11/30/2018 monitoring round.

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 Q1 2019 (between the dates 1/3/2019 – 3/28/2019), KIZG recorded 9.01 inches of precipitation (Figure 2 and Figure 3).

WITHDRAWALS

Poland Spring did not withdraw any water from the Rainmaker Spring site production well during Q1 2019.

CONCLUSIONS and RECOMMENDATIONS

Groundwater levels during Q1 2019 rose by approximately 0.5 feet before dropping by approximately the same amount. This decline in water levels represents a typical winter seasonal decline. A rise in water levels is seen beginning at the end of March indicating the start of the spring recharge period. Due to ice conditions, only a few surface water levels measurements were made during Q1 2019, these occurring at the end of March. Water levels in all piezometers remained relatively stable during Q1 2019, until the end of March, where a rise in water levels can be seen indicating the beginning of the spring groundwater recharge period. During Q1 2019 (between the dates 1/3/2019 – 3/28/2019), KIZG recorded 9.01 inches of precipitation. No spring flow measurements could be made due to ice conditions during Q1 2019. No withdrawal from the production well occurred during Q1 2019.

Previous Rainmaker Spring reports recommended the following to improve the monitoring effort of the Rainmaker Spring Site. Both of these recommendations have been addressed:

- *Continue to investigate beaver mitigation at the Route 113 culvert (Wards Pond outlet).* A beaver deterrent apparatus is currently being installed as of the drafting of this report; and
- *Re-develop or re-install the piezometers at Spring 1 and Spring 2 to ensure proper hydraulic connection to the aquifer.* This was conducted on 5/2/2019, and will be discussed further in the Q2 2019 report.

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, Mr. Joshua Bowe)

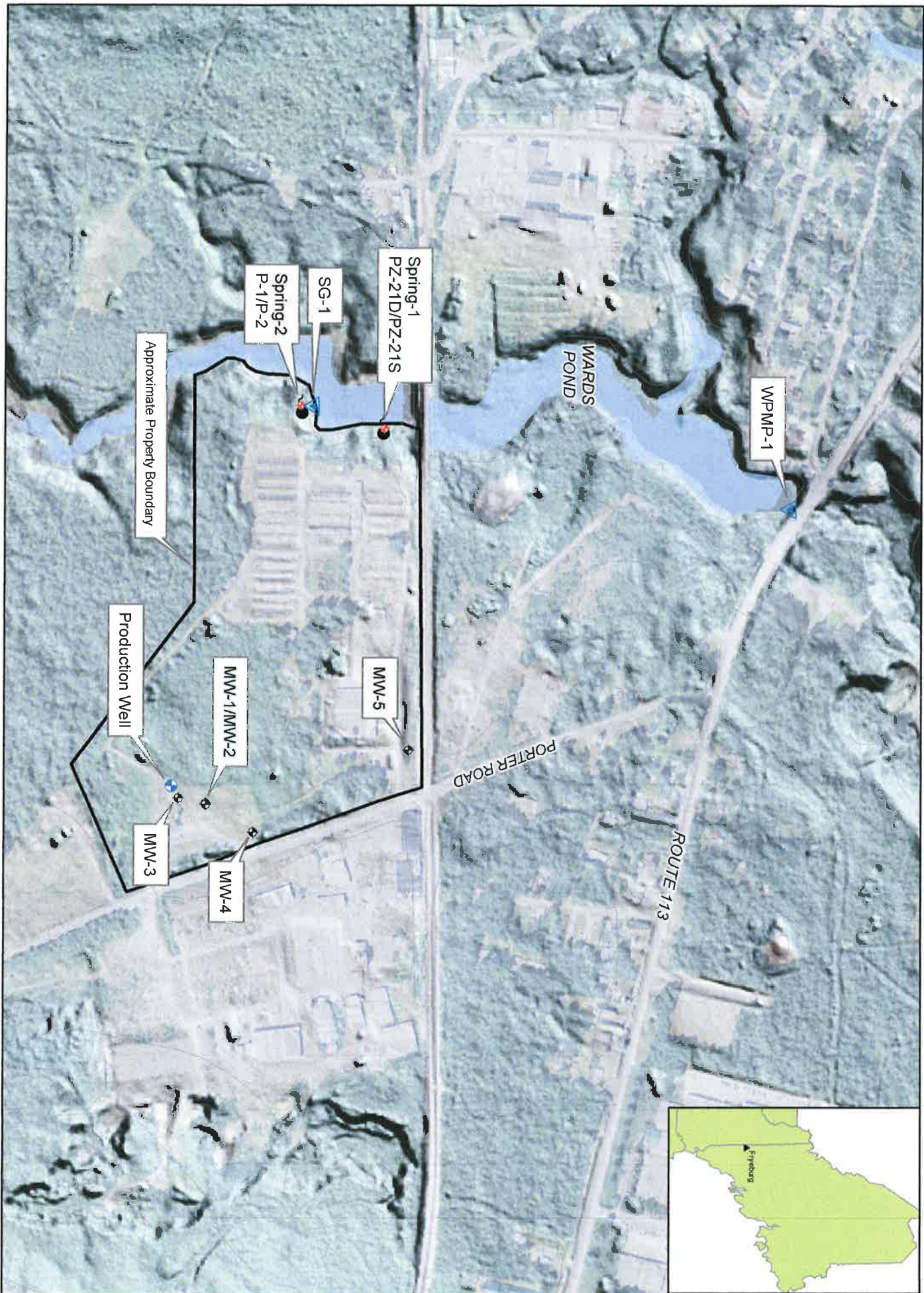


FIGURE 1
RAINMAKER SPRING SITE MAP
FRYEBURG, MAINE

0 250 500 1,000
Feet

FIGURE 2
GROUNDWATER ELEVATION DATA - WEEKLY PRECIPITATION

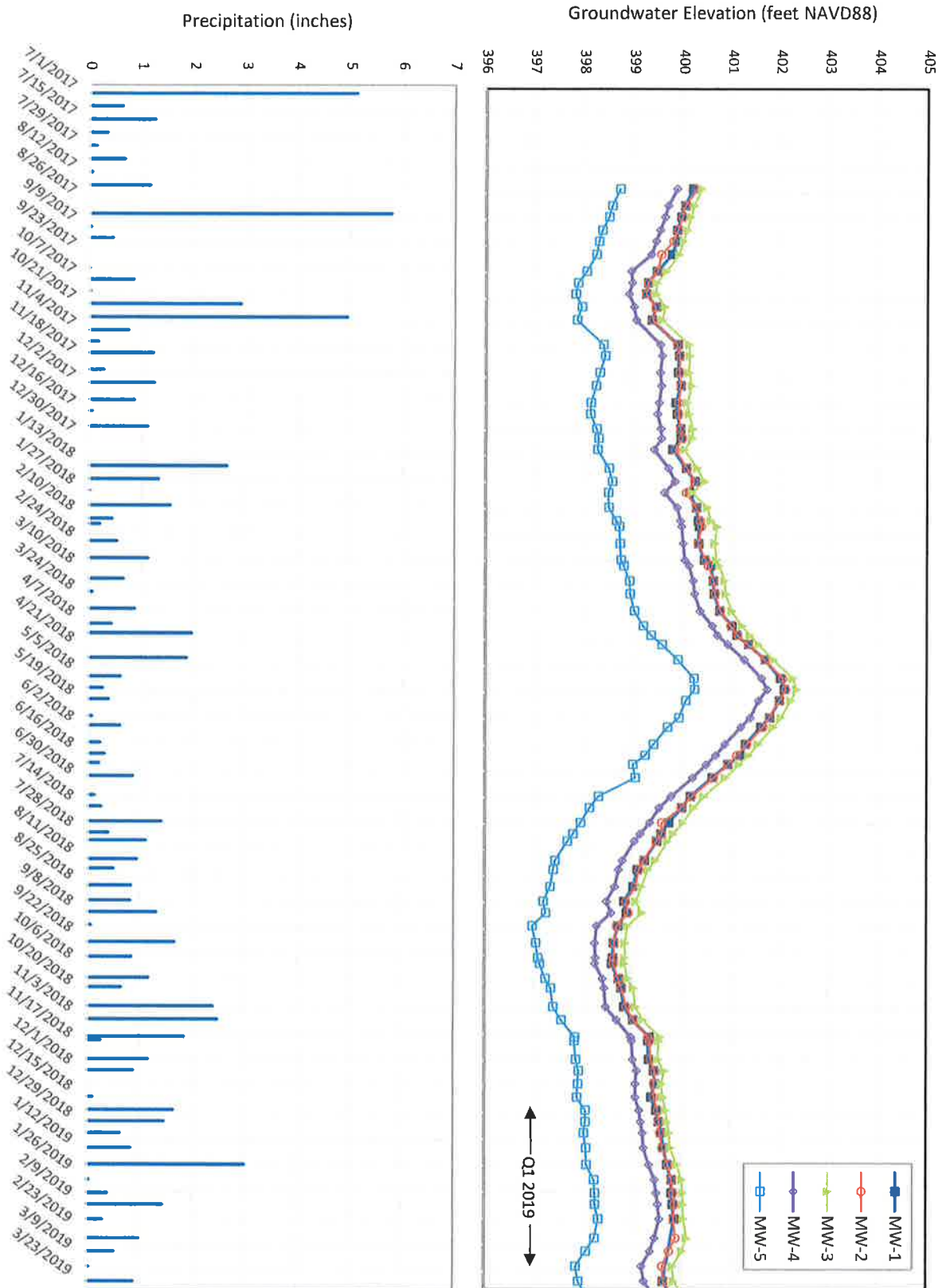


FIGURE 3
SURFACE WATER and PIEZOMETER ELEVATION DATA - WEEKLY PRECIPITATION

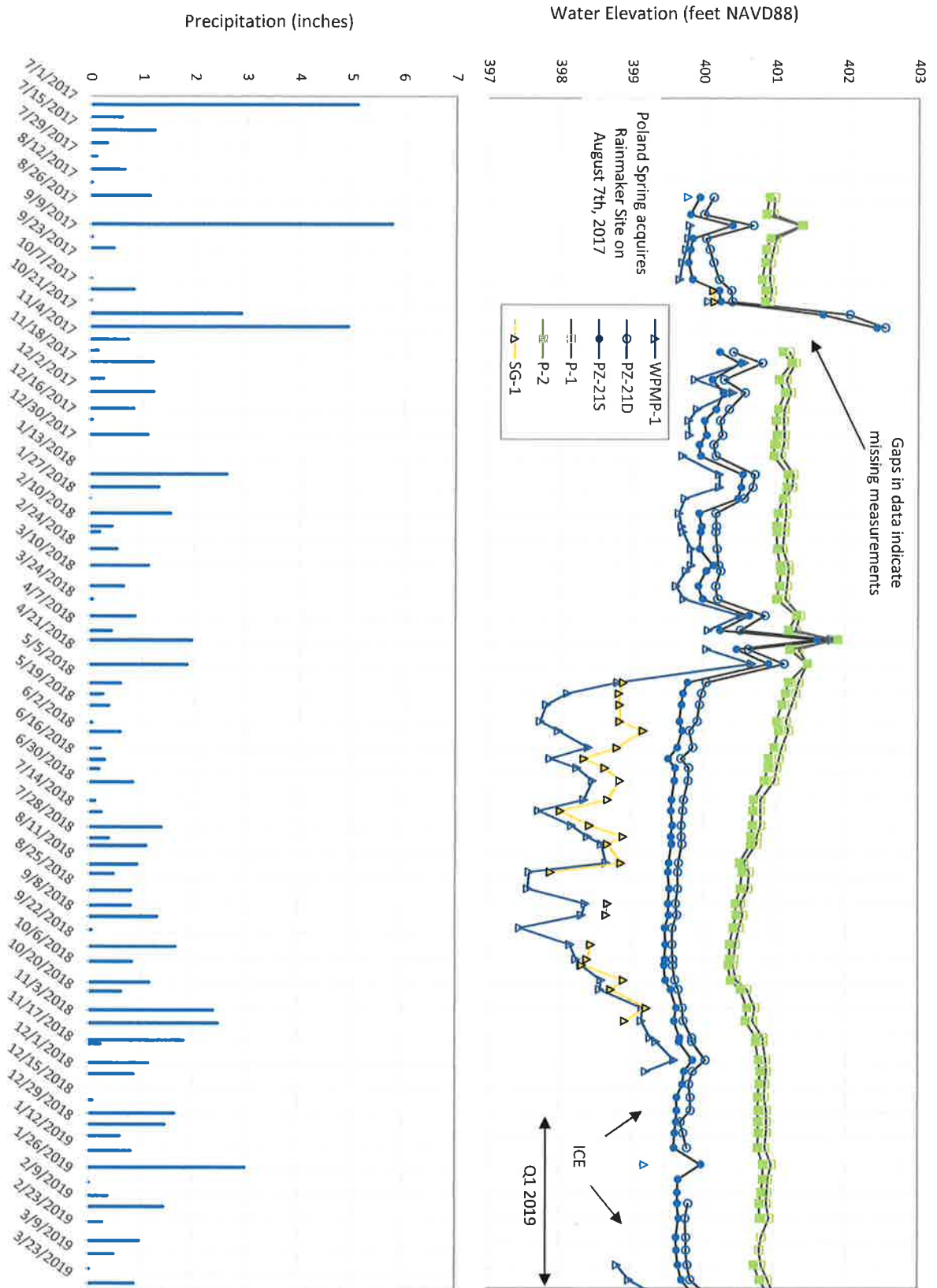


TABLE 1
MONITORING DATA
RAINMAKER SPRING SIT
FRYEBURG, MAINE

[illegible]

Notes:
NIM = no measurement
UW = under water

TABLE 1
MONITORING DATA
RAINMAKER SPRING SITE
FRYEBURG, MAINE

[illegible]

Notes:
NM = no measurement
UW = under water



August 22, 2019

Ms. Sharon Jackson
Town Manager
Town of Fryeburg
16 Lovewell Pond Road
Fryeburg, Maine 04037

RE: Q2 2019 Reporting – Rainmaker Spring Site (on behalf of Poland Spring)

INTRODUCTION

Nestle Waters North America Inc. (Poland Spring) acquired the Rainmaker Spring site in early August, 2017. This quarterly report (Q2 – April- June 2019) presents monitoring results for the site and satisfies the requirements under local Town Ordinance 17G: *Groundwater and/or Spring Water Extraction*, the Approved Land Use Authorization.

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. 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;
- Weekly flow measurements from Spring 1 and 2;
- 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.

MONITORING RESULTS

As mentioned above, Poland Spring acquired the Rainmaker Spring site in August 2017. LGS initiated monitoring of the site on August 23, 2017. Previous monitoring and reporting was conducted by the preceding owners and their consultants (CES, Inc.), whose files are available for review at the Fryeburg Town Office.

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 Q2 2019, groundwater levels rose by approximately 3.5 feet from the beginning of April to mid-May, representing the spring recharge period. From mid-May to the end of Q2 2019, groundwater levels declined by less than a foot. This water level decline represents the beginning of a typical seasonal summer trend.

SURFACE WATER

Surface water monitoring, as described in earlier reports, is conducted at two locations. SG-1, installed on October 12, 2017, 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.

As mentioned in previous reports, surface water levels in Wards Pond and at SG-1 have been subject to natural fluctuations and debris clogging the culvert under Route 113 (Wards Pond outlet). On May 23rd 2019, a beaver deterrent apparatus was installed on the upstream side of the culvert at Route 113. Following this installation and the removal of all of the debris clogging the culvert, water levels in Wards Pond fell by approximately two feet, and have remained near this lower level thru Q2 2019.

Surface water level measurements at SG-1 were first made for the 2019 season on 4/23/2019. Since then, surface water levels at SG-1 have fluctuated within an approximate one foot range. Surface water levels at this station are subject to natural fluctuations and beaver debris clogging the culvert under the railroad bed.

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.

On May 2nd 2019, LGS performed a piezometer evaluation of P-1, P-2, PZ-21S, and PZ-21D. This was accomplished by jetting and surging water into the piezometers using a small centrifugal pump to clean out sediment in the screens. How well the piezometer is connected to the aquifer was evaluated by observing the water level falling in the piezometers after the jetting procedure (similar to a falling head test). It was determined that all piezometers were well connected to the aquifer with the exception of PZ-21S, which displayed a very weak connection (but still connected).

During Q2 2019, and as shown in Figure 3, water levels in all piezometers rose by approximately 0.5 feet from the beginning of Q2 to around early-May. Levels in P-1 and P-2 remained relatively stable from early-May to the end of Q2 while the groundwater levels in PZ-21D and 21S dropped slightly after the spring recharge event, and have since then shown a general increasing trend to the end of Q2.

SPRING FLOW

During Q2 2019, no flow measurements were made at both spring catchments due to flooded conditions until the 4/26/2019 monitoring event. From the 4/26/2019 monitoring event and the end of Q2 2019, Spring-1 flow fluctuated between 10.00 and 17.22 liters per minute, and Spring-2 flow fluctuated between 2.30 – 13.33 liters per minute.

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 Q2 2019 (between the dates 3/28/2019 – 6/26/2019), KIZG recorded 14.50 inches of precipitation (Figure 2 and Figure 3).

WITHDRAWALS

Poland Spring did not withdraw any water from the Rainmaker Spring site production well during Q2 2019.

CONCLUSIONS

Groundwater levels during Q2 2019 rose by approximately 3.5 feet from the beginning of April to mid-May, representing the spring recharge period. From mid-May to the end of Q2 2019, groundwater levels declined by less than a foot. This water level decline represents the beginning of the typical seasonal summer trend.

As stated in previous reports, surface water levels at WPMP-1 have been subject to beaver debris clogging the culvert under Route 113. A beaver deterrent was installed on May 23rd, 2019, subsequently lowering water levels in Wards Pond by approximately two feet. Water levels in Wards Pond have been stable since this installation. Surface water levels at SG-1 are subject to debris clogging the culvert under the railroad bed. Since the first reading taken on 4/23/2019, water levels at SG-1 have fluctuated by approximately one foot.

During Q2 2019, and as shown in Figure 3, water levels in all piezometers rose by approximately 0.5 feet from the beginning of Q2 to around early-May. Levels in P-1 and P-2 remained relatively stable from early-May to the end of Q2 while the groundwater levels in PZ-21D and 21S dropped slightly after the spring recharge event, and have since then shown a general increasing trend to the end of Q2.

During Q2 2019 (between the dates 3/28/2019 – 6/26/2019), KIZG recorded 14.50 inches of precipitation. No spring flow measurements could be made at Spring-1 and 2 until the 4/26/2019 monitoring event due to flooded conditions. From the 4/26 monitoring event to the end of Q2, Spring-1 flow fluctuated between 10.00 – 17.22 liters per minute, and Spring-2 flow fluctuated between 2.30 – 13.33 liters per minute. No withdrawal from the production well occurred during Q2 2019.

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, Mr. Joshua Bowe)

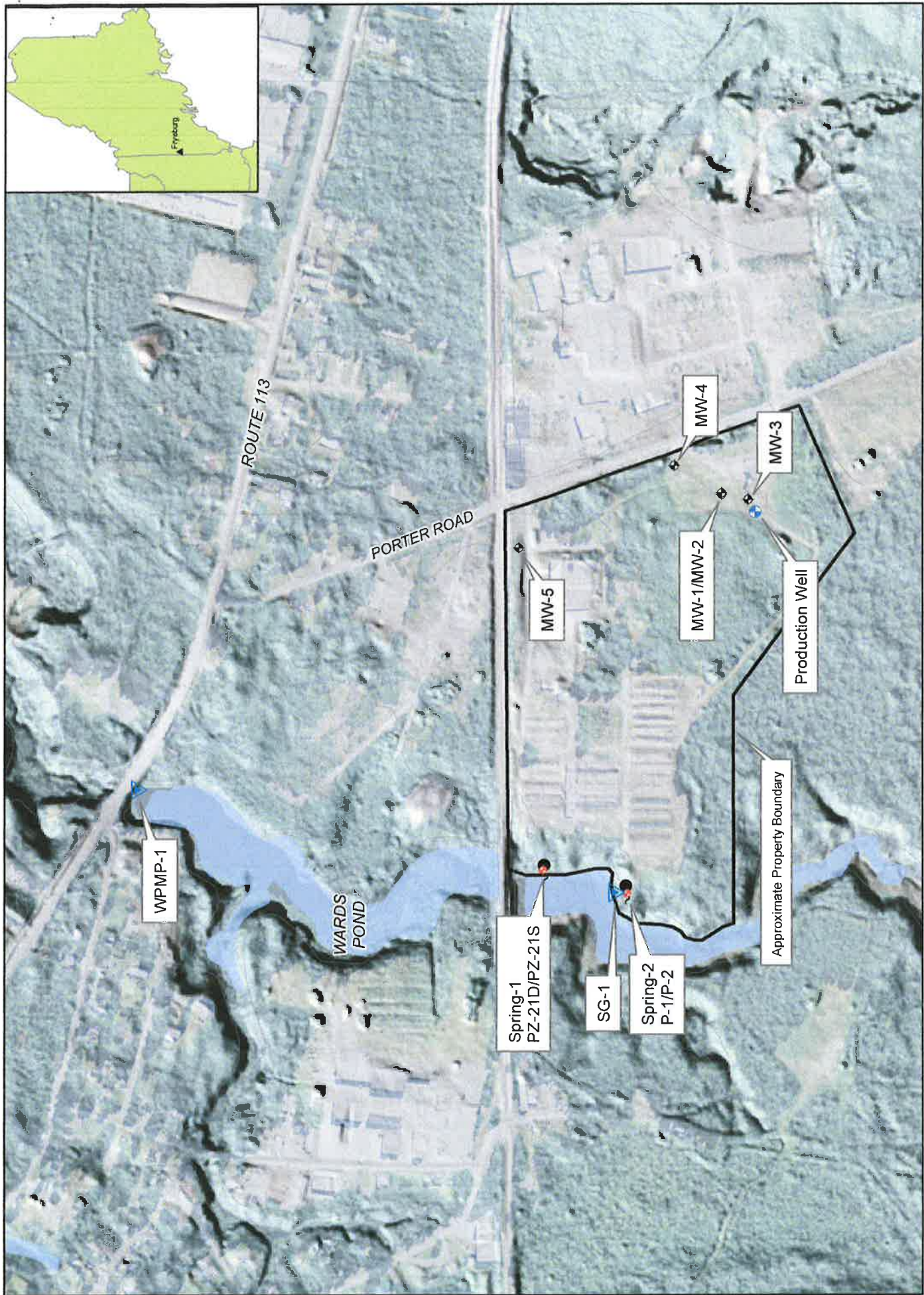


FIGURE 1
RAINMAKER SPRING SITE MAP
FRYEBURG, MAINE

FIGURE 2
GROUNDWATER ELEVATION DATA - WEEKLY PRECIPITATION

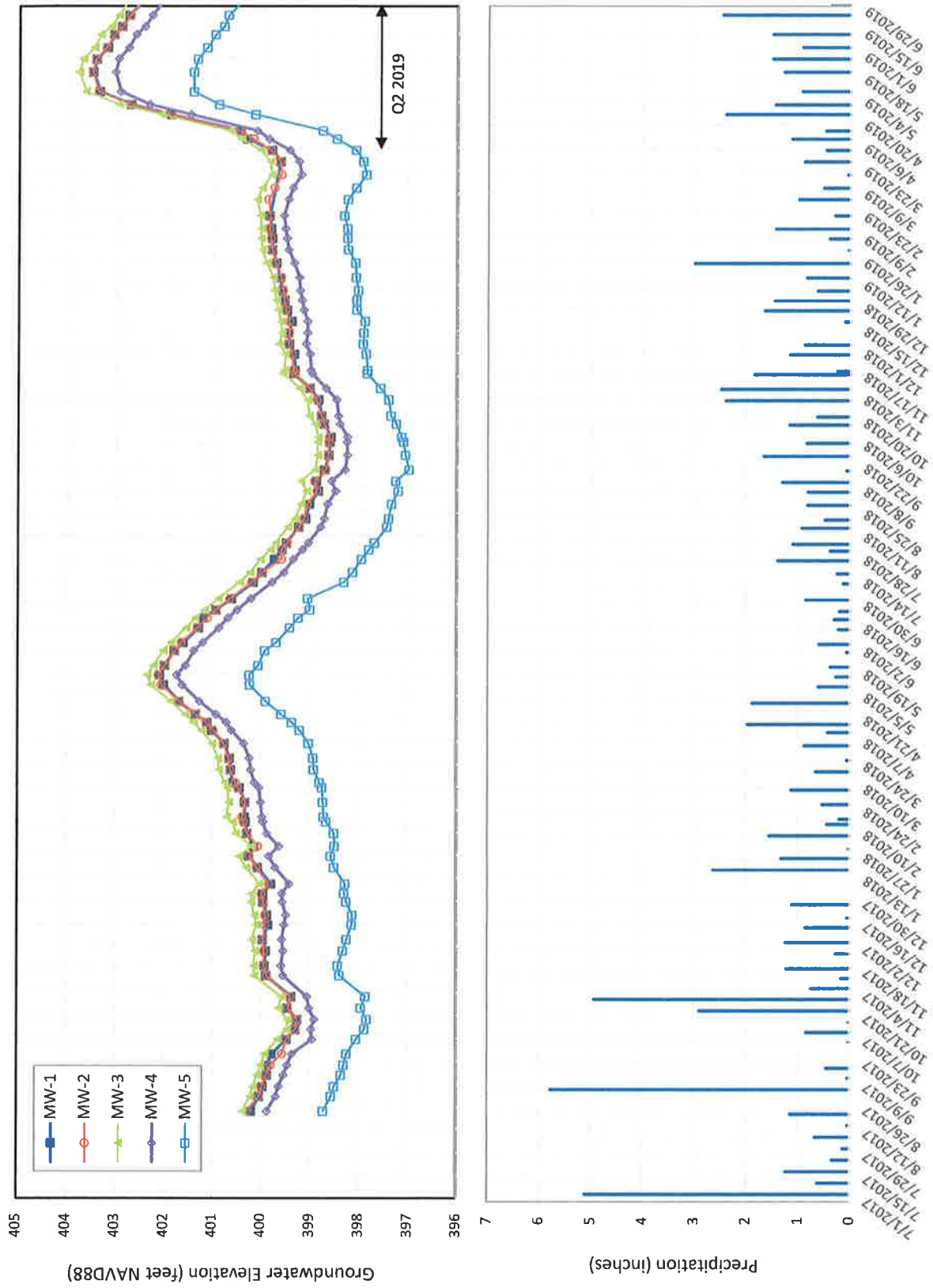


FIGURE 3
SURFACE WATER and PIEZOMETER ELEVATION DATA - WEEKLY PRECIPITATION

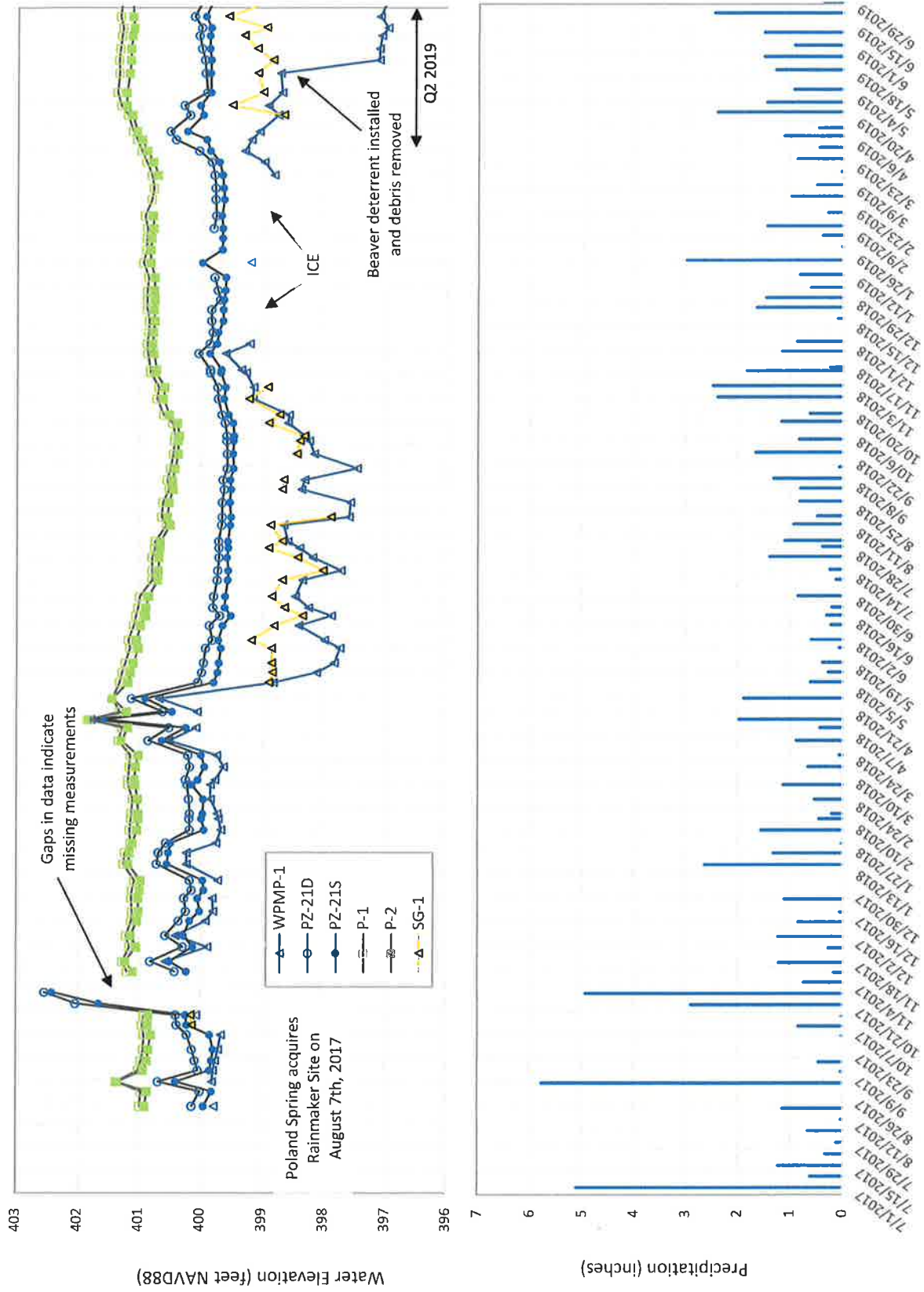


TABLE 1
MONITORING DATA
RAINMAKER SPRING SITE
FRYEBURG, MAINE

Date	GROUNDWATER ELEVATION (feet NAVD83)					PEZIDMETERS @ SPRING 1 (feet NAVD83)					PEZIDMETERS @ SPRING 2 (feet NAVD83)					SURFACE WATER					SPRING FLOW (l/min)		PRECIPITATION EASTERN SLOPES AIRPORT	
	MW-1		MW-2		MW-3		MW-4		MW-5		PZ-2Z15		P-1		P-2		WPMW-1		SG-1		Spring-1	Spring-2		
	Depth to Water below msl (ft)	Water Elevation	Depth to Water below msl (ft)	Water Elevation	Depth to Water below msl (ft)	Water Elevation	Depth to Water below msl (ft)	Water Elevation	Depth to Water below msl (ft)	Water Elevation	Depth to Water below msl (ft)	Water Elevation	Depth to Water below msl (ft)	Water Elevation	Depth to Water below msl (ft)	Water Elevation	Depth to Water below msl (ft)	Water Elevation	Depth to Water below msl (ft)	Water Elevation	Spring-1	Spring-2		
New Measuring Point (MPE Elevation)	414.75	415.59	421.26	414.75	423.11	422.53	419.30	403.99	405.40	406.03	404.35	403.67	401.23	400.08	399.49	399.49	399.78	400.91	400.91	400.91	400.91	400.91	400.91	
Old Measuring Point (MPE Elevation)	418.27	419.10	420.79	419.30	422.53	422.53	419.30	403.99	405.40	406.03	404.35	403.67	401.23	400.08	399.49	399.49	399.78	400.91	400.91	400.91	400.91	400.91	400.91	
Poland Spring acquired the Rainmaker Site on August 7th, 2017. Monitoring was Initiated on August 23rd, 2017.																								
8/16/2017	18.56	400.19	19.31	400.28	20.68	400.38	19.88	399.87	24.39	398.72	24.39	398.72	3.85	400.14	5.45	399.95	5.04	400.99	3.44	400.91	1.44	399.78	1.25	1.25
9/12/2017	18.72	400.03	19.56	400.03	21.04	400.22	20.06	399.69	24.55	398.56	24.55	398.56	3.98	400.01	5.58	399.82	5.06	400.97	3.48	400.87	NM	NM	1.66	0.60
9/17/2017	18.79	399.96	19.61	399.88	21.10	400.16	20.12	399.63	24.71	398.45	24.71	398.45	3.95	400.09	5.50	399.82	5.02	401.38	2.99	401.36	1.41	399.79	1.32	5.78
9/14/2017	18.88	399.86	19.70	399.80	21.18	400.02	20.22	399.53	24.83	398.36	24.83	398.36	3.95	400.04	5.55	399.85	5.02	402.01	3.42	400.93	1.41	399.79	1.25	0.00
9/20/2017	18.89	399.86	19.79	399.80	21.26	400.00	20.30	399.45	24.86	398.30	24.86	398.30	3.85	400.09	5.58	399.82	5.06	400.97	3.48	400.93	1.46	399.76	1.00	0.45
9/27/2017	18.98	399.77	20.03	399.56	21.35	399.91	20.39	399.36	24.86	398.15	24.86	398.15	3.85	400.09	5.51	399.79	5.10	400.97	3.50	400.85	1.51	399.71	0.50	0.00
10/6/2017	19.28	399.47	20.11	399.48	21.60	399.66	20.80	398.95	25.02	398.05	25.02	398.05	3.77	400.32	5.55	399.85	5.11	400.92	3.54	400.81	1.55	399.67	0.51	0.01
10/16/2017	19.46	399.29	20.30	399.48	21.80	399.66	20.78	398.97	25.23	397.88	25.23	397.88	3.60	400.39	5.58	399.82	5.08	400.95	3.49	400.86	NM	NM	1.56	0.84
10/23/2017	19.58	399.15	20.44	399.45	21.84	399.45	20.84	398.81	25.48	397.63	25.48	397.63	3.59	400.40	5.61	399.82	5.14	400.92	3.50	400.83	1.15	400.16	0.61	0.00
10/29/2017	19.65	399.12	20.54	399.45	21.94	399.45	20.94	398.79	25.68	397.45	25.68	397.45	3.55	400.44	5.64	399.82	5.17	400.92	3.50	400.83	1.15	400.16	0.61	0.00
11/5/2017	19.78	399.01	20.68	399.36	22.04	399.36	21.04	398.68	25.88	397.25	25.88	397.25	3.50	400.44	5.67	399.82	5.20	400.92	3.50	400.83	1.15	400.16	0.61	

Notes:
NMI = no measurement
LW = under water

TABLE 1 CONT.

Notes:
UNF = no measurement
UNW = underweight



November 12, 2019

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

RE: Q3 2019 Reporting – Rainmaker Spring Site (on behalf of Poland Spring)

INTRODUCTION

Nestle Waters North America Inc. (Poland Spring) acquired the Rainmaker Spring site in early August, 2017. This quarterly report (Q3 – July- September 2019) presents monitoring results for the site and satisfies the requirements under local Town Ordinance 17G: *Groundwater and/or Spring Water Extraction*, the Approved Land Use Authorization.

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. 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;
- Weekly flow measurements from Spring 1 and 2;
- 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.

MONITORING RESULTS

As mentioned above, Poland Spring acquired the Rainmaker Spring site in August 2017. LGS initiated monitoring of the site on August 23, 2017. Previous monitoring and reporting was conducted by the preceding owners and their consultants (CES, Inc.), whose files are available for review at the Fryeburg Town Office.

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 2019, groundwater levels declined by approximately two feet from the beginning of July to the end of September. Figure 2 presents observed groundwater levels and depicts a typical seasonal summer trend consisting of lower precipitation amounts and declining groundwater levels.

SURFACE WATER

Surface water monitoring, as described in earlier reports, is conducted at two locations. SG-1, installed on October 12, 2017, 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 2019, surface water levels at SG-1 fluctuated roughly between 398 and 399 feet NAVD88. Surface water levels at this station are subject to natural fluctuations and beaver debris clogging the culvert under the railroad bed. During two monitoring events (8/14/2019 and 9/26/2019), the surface water level fell below the gauge where a measurement could not be taken. This is represented by a gap in the data as seen on Figure 3. This situation is recorded as 'dry' on Table 1.

Surface water levels at WPMP-1 oscillated around elevation 397 feet NAVD88, and appeared stable near this elevation, likely aided by the implementation of the beaver deterrent apparatus installed on the upstream side of the culvert at Route 113.

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.

During Q3 2019, and as shown in Figure 3, water levels in all piezometers showed a slight declining trend. Water levels in the piezometers fell in the range of 0.2 to 0.3 feet, representing a typical summer trend.

SPRING FLOW

During Q3 2019, Spring-1 flow fluctuated between 9.09 and 12.90 liters per minute, and Spring-2 flow fluctuated between 5.45 – 15.00 liters per minute. This 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 2019 (between the dates 6/26/2019 – 9/26/2019), KIZG recorded 8.02 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 2019.

CONCLUSIONS

Groundwater levels during Q3 2019 fell by approximately two feet from the beginning of July to the end of September. This water level decline represents a typical seasonal summer trend of observed groundwater levels. Surface water levels at WPMP-1 remained stable around 397 feet NAVD88, and the surface water level at SG-1 fluctuated between 398 and 399 feet NAVD88. Surface water levels at SG-1 are subject to natural fluctuations and beaver debris clogging the culvert under the railroad bed.

During Q3 2019, and as shown in Figure 3, water levels in all piezometers declined in the range of 0.2 to 0.3 feet, representing a typical summer trend.

During Q3 2019 (between the dates 6/26/2019 – 9/26/2019), KIZG recorded 8.02 inches of precipitation. Spring-1 flow fluctuated between 9.09 and 12.90 liters per minute, and Spring-2 flow fluctuated between 5.45 – 15.00 liters per minute. No withdrawal from the production well occurred during Q3 2019.

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, Mr. Joshua Bowe)



FIGURE 1
RAINMAKER SPRING SITE MAP



FIGURE 2
GROUNDWATER ELEVATION DATA - WEEKLY PRECIPITATION

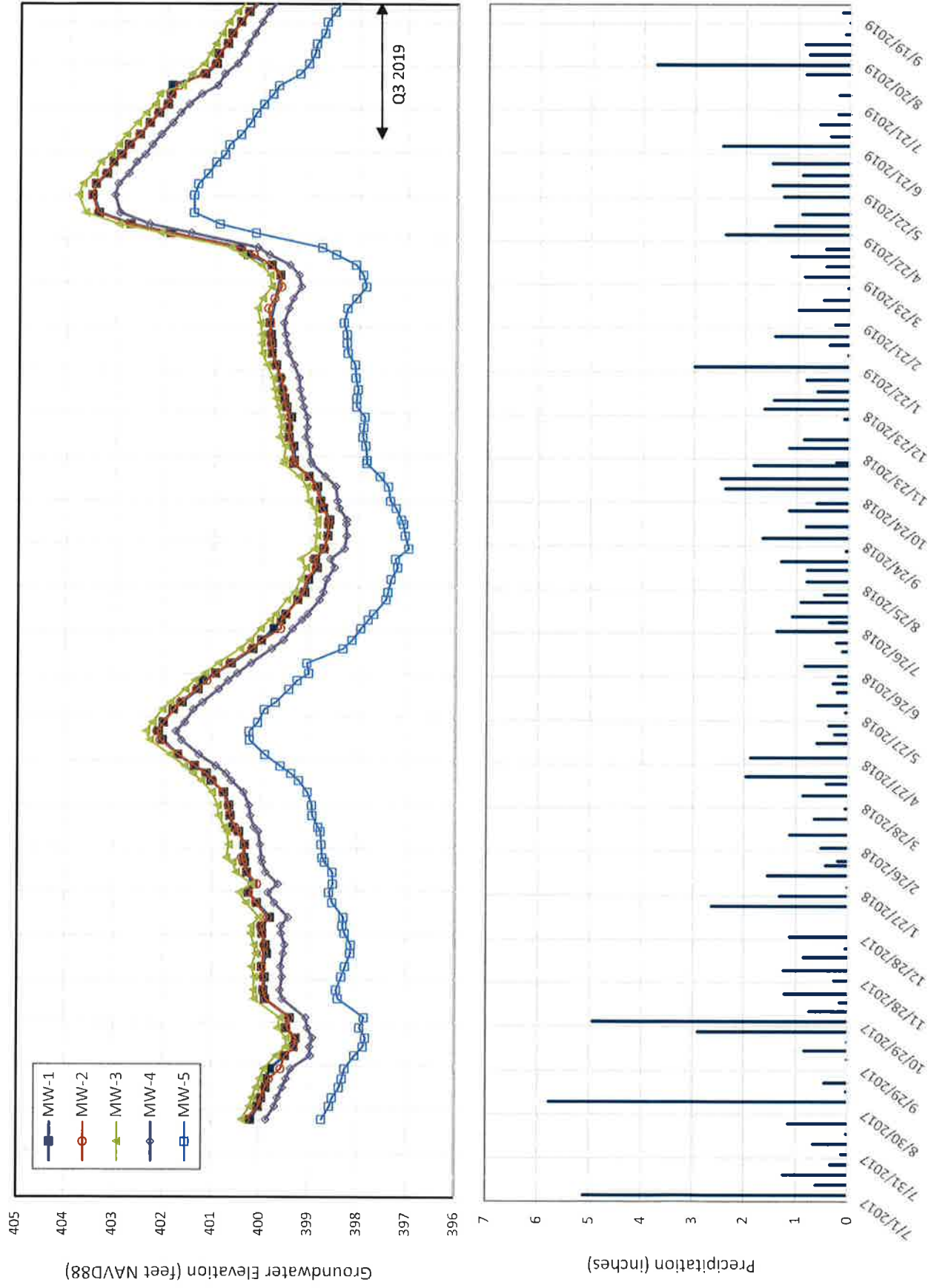


FIGURE 3
SURFACE WATER and PIEZOMETER ELEVATION DATA - WEEKLY PRECIPITATION

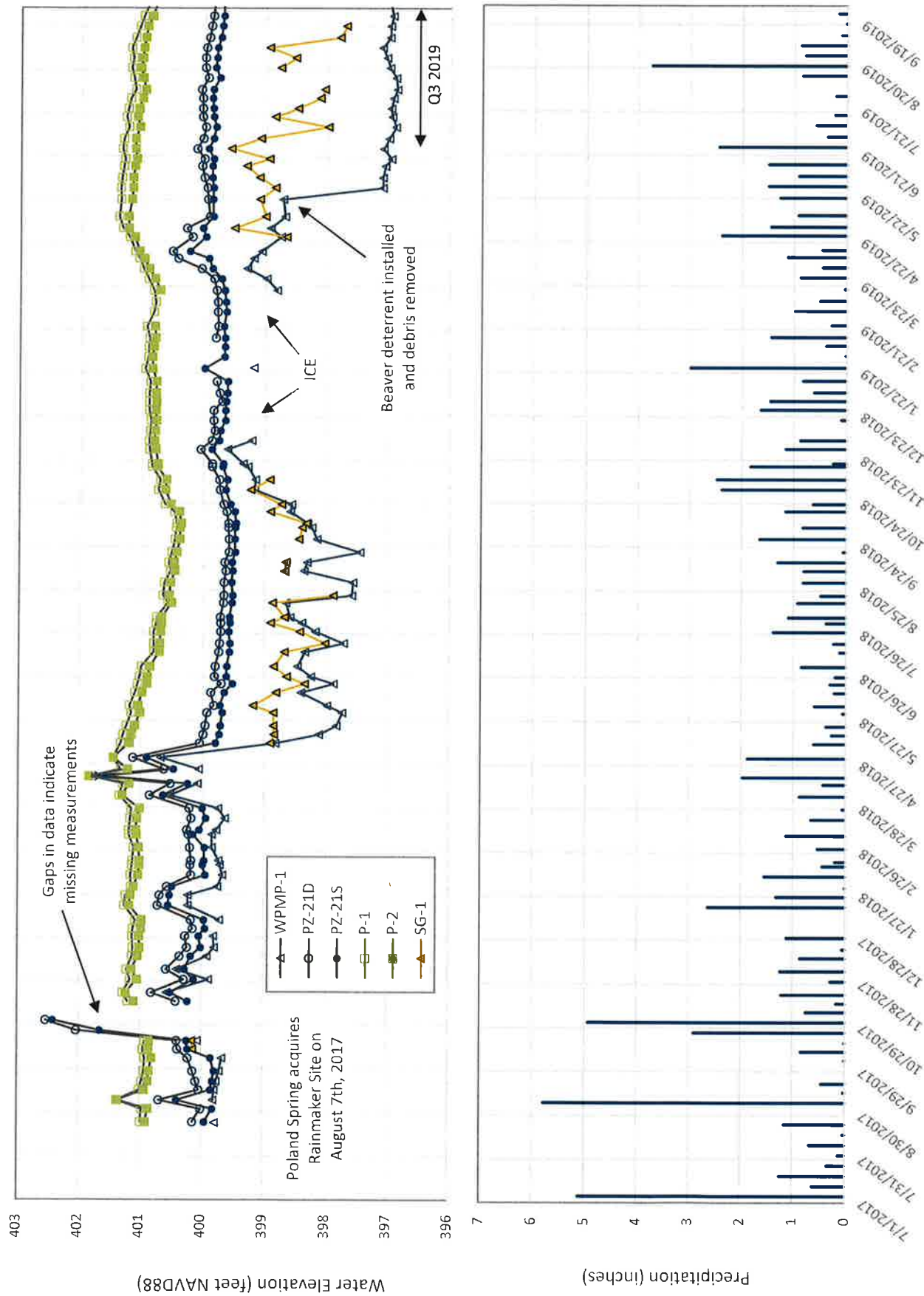


TABLE 1

Poland Spring acquired the Rainmaker Site on August 7th, 2017. Monitoring was initiated on August 23rd, 2017.

Notes:
 nilM = no measurement
 nilW = under water

TABLE 1
MONITORING DATA
LINMAKER SPRING SITE
FRYEBURG, MAINE

[illegible]

Abbreviations:

AM = no measurement
NW = under weight



February 19, 2019

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

RE: Q4 2019 Reporting – Rainmaker Spring Site (on behalf of Poland Spring)

INTRODUCTION

Nestle Waters North America Inc. (Poland Spring) acquired the Rainmaker Spring site in early August, 2017. This quarterly report (Q4 – October - December 2019) presents monitoring results for the site and satisfies the requirements under local Town Ordinance 17G: *Groundwater and/or Spring Water Extraction*, the Approved Land Use Authorization.

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. 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;
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- 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.

MONITORING RESULTS

As mentioned above, Poland Spring acquired the Rainmaker Spring site in August 2017. LGS initiated monitoring of the site on August 23, 2017. Previous monitoring and reporting was conducted by the preceding owners and their consultants (CES, Inc.), whose files are available for review at the Fryeburg Town Office.

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 Q4 2019, groundwater levels dropped to seasonal lows by the October 24th monitoring event, and then rose by approximately 0.75 feet from the October 24th to the last monitoring event in 2019 (12/24/2019). Figure 2 presents observed groundwater levels and depicts a typical

Phone: 207-415-9898

Email: ed@luetjegeological.com

seasonal fall/early winter trend consisting of greater precipitation amounts and generally rising groundwater levels from increased recharge.

SURFACE WATER

Surface water monitoring, as described in earlier reports, is conducted at two locations. SG-1, installed on October 12, 2017, 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 Q4 2019, surface water levels at SG-1 started with seasonal low water conditions whereby the surface water level in the pond was below both SG-1 and 1A. Water levels started to rise with increased precipitation, and by the 10/18/2019 monitoring event, readings could be taken again. Both gauges were under water by the 11/14/2019 monitoring event, and then ice conditions set in through the remainder of Q4 2019. In general, surface water levels at this station are subject to natural fluctuations and beaver debris clogging the culvert under the railroad bed just downstream from Spring-1.

Surface water levels at WPMP-1 oscillated around elevation 397 feet NAVD88, and then rose by approximately 0.5 feet by the 10/18/2019 monitoring event from increased precipitation. Water levels oscillated around 397.5 feet for the remainder of Q4 2019.

PIEZOMETER WATER LEVELS

Water levels are measured at two piezometers located adjacent to each spring. PZ-21D and PZ21S 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.

During Q4 2019, and as shown in Figure 3, water levels in P-1 and P-2 reached seasonal lows by early October, followed by a steady rise of approximately 0.25 feet by the end of Q4 2019. Water levels in PZ-21D and 21S also showed a rising trend ending the quarter with levels around 0.25 feet higher. However, the hydrographs for PZ-21D and 21S show, even back to the start of this record (July 2017), sharp rises, generally related to precipitation, and typically not seen in the P-1 and P-2 hydrographs. The cause of this is unknown, but may be related to the slow response and weak connection these piezometers have with the underlying shallow saturated zone.

SPRING FLOW

Q4 2019 Reporting
Rainmaker Spring Site

Luetje Geological Services, LLC
February 19, 2020

Fryeburg, Maine

During Q4 2019, Spring-1 flow was only measured during the first three monitoring events of the quarter, after which the spring catchment area was under water. Flow from Spring-1 fluctuated between 10.71 and 15.00 liters per minute.

During Q4 2019, Spring-2 flow was only measured during the first six monitoring events of the quarter. After the 11/8/2019 monitoring event, Spring-2 was underwater followed by ice conditions for the remainder of the quarter. Flow from Spring-2 thru the 11/8/2019 monitoring event fluctuated between 1.67 to 5.00 liters per minute. This 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 Q4 2019 (between the dates 9/26/2019 – 12/24/2019), KIZG recorded 13.04 inches of precipitation (Figure 2 and Figure 3).

WITHDRAWALS

Poland Spring did not withdraw any water from the Rainmaker Spring site production well during Q4 2019.

CONCLUSIONS

Groundwater levels during Q4 2019 fell to summer seasonal lows by the 10/24/2019 monitoring event. Groundwater levels then rose by approximately 0.75 feet by the end of Q4 2019. The groundwater level trend for Q4 represents the typical seasonal trends (late summer low followed by fall recharge), and is a reflection of seasonal precipitation patterns.

Surface water levels at SG-1 also fell to summer seasonal lows by mid-October, followed by rising levels until frozen conditions were observed during the 11/19/2019 monitoring round. In general, surface water levels at this station are subject to natural fluctuations and beaver debris clogging the culvert under the railroad bed just downstream from Spring-1. Surface water levels at WPMP-1 oscillated around elevation 397 feet NAVD88, and then rose by approximately 0.5 feet by the 10/18/2019 monitoring event from increased precipitation. Water levels oscillated around 397.5 feet for the remainder of Q4 2019.

During Q4 2019, and as shown in Figure 3, water levels in all piezometers reached seasonal summer lows by early October, followed by a rise of approximately 0.25 feet by the end of the quarter, representing fall recharge.

During Q4 2019 (between the dates 9/26/2019 – 12/24/2019), KIZG recorded 13.04 inches of precipitation. Only a limited number of flow measurements were able to be taken from Spring-1 and 2 during Q4 2019 prior to flood and ice conditions; however, Spring-1 flow fluctuated between 10.71 and 15.00 liters per minute, and Spring-2 flow fluctuated between 1.67 – 5.00 liters per

minute during these short periods. No withdrawal from the production well occurred during Q4 2019.

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, Mr. Joshua Bowe)
Town of Fryeburg, CEO (Mr. John Wiesemann)

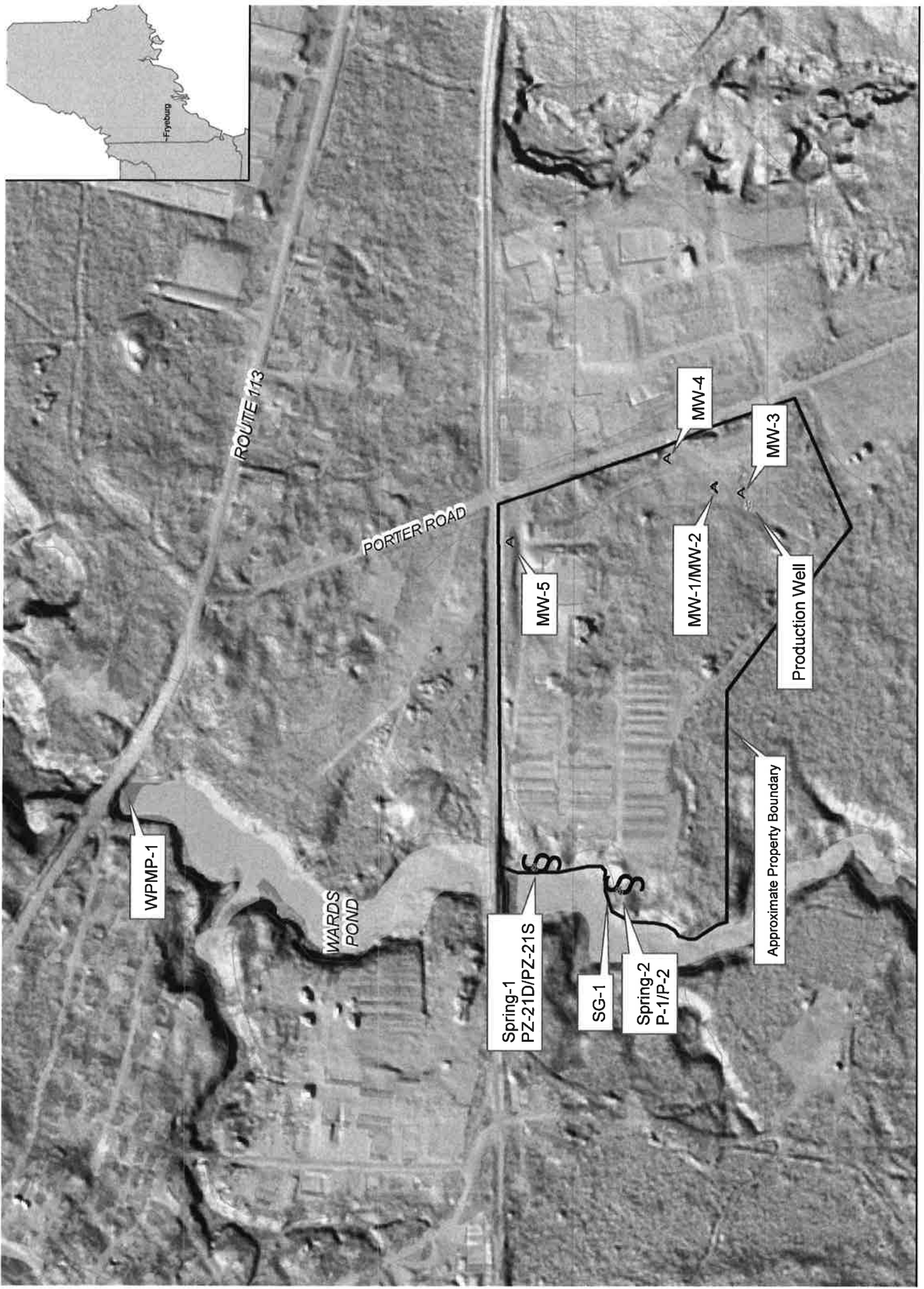
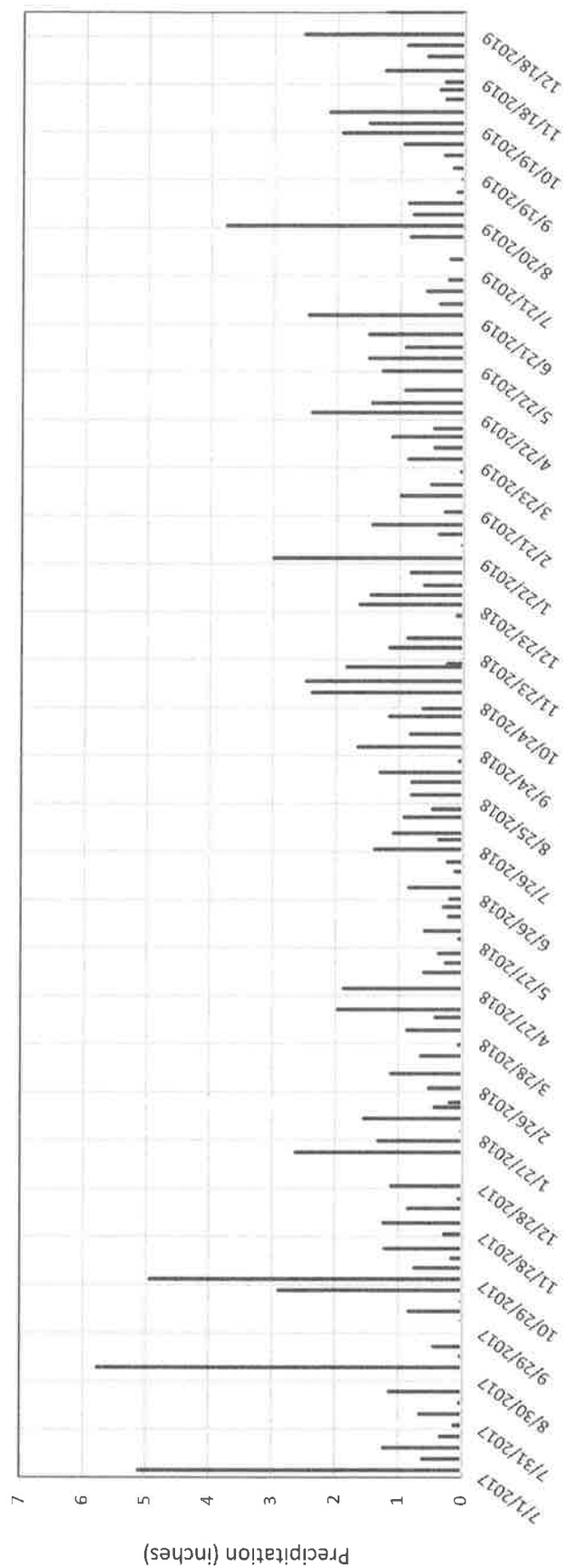
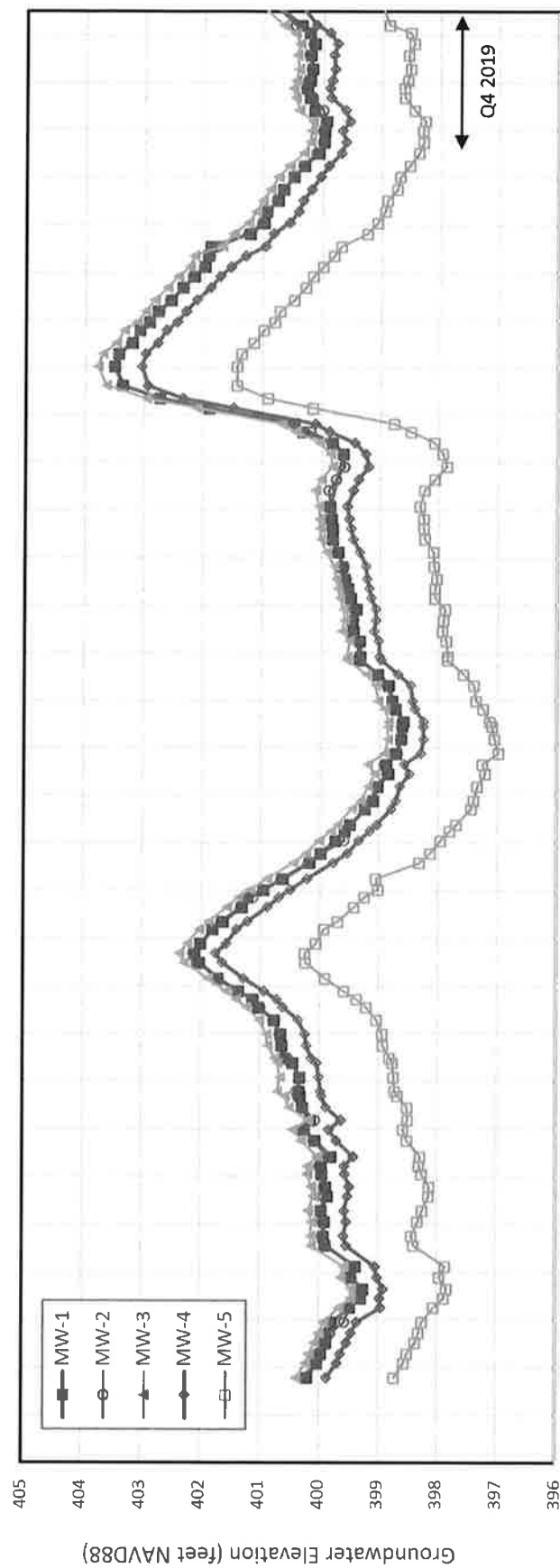


FIGURE 1



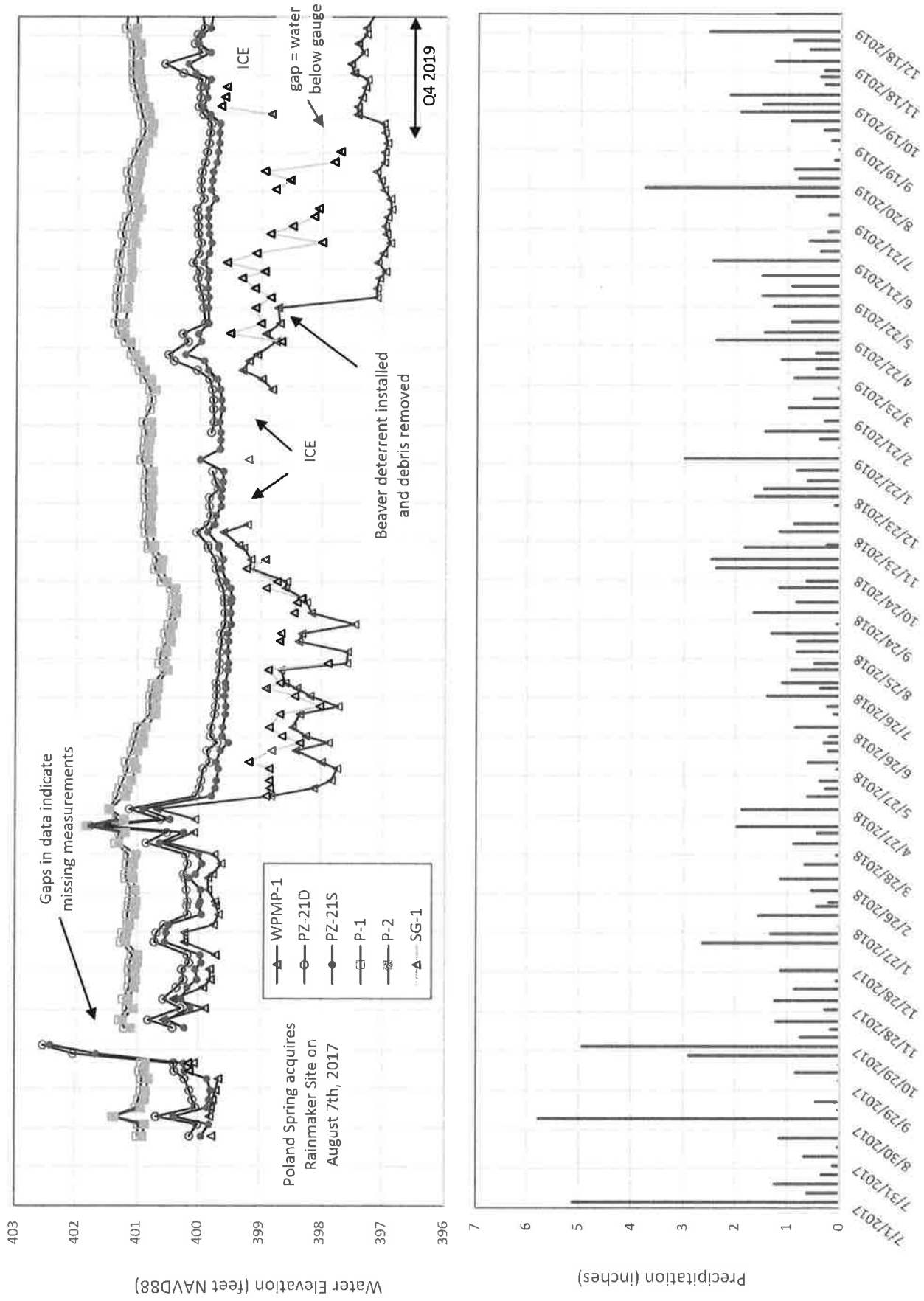
FIGURE 2
GROUNDWATER ELEVATION DATA - WEEKLY PRECIPITATION



Rainmaker Spring Site
Fryeburg, Maine

Luetje Geological Services, LLC

FIGURE 3
SURFACE WATER and PIEZOMETER ELEVATION DATA - WEEKLY PRECIPITATION



MONITORING DATA
RAINMAKER SPRING SITE
FRYEBURG, MAINE

GROUNDWATER ELEVATION (feet NAVD83)										PIEZOMETERS @ SPRING 1 (feet NAVD83)				PIEZOMETERS @ SPRING 2 (feet NAVD83)				SURFACE WATER				SPRING FLOW (l/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	KZG
New Measuring Point (MPI Elevations) (feet NAVD83)																										
																						SG-1 (2019)	400.08			
Old Measuring Point (MPI Elevations)																										
																	</									

4/16/2019	16.85	401.90	17.70	401.89	19.15	402.11	18.26	401.49	22.86	400.15	3.79	400.20	5.42	399.98	4.81	401.22	3.21	401.34	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	10.00	5.00	1.45
5/10/2019	15.39	403.36	16.20	403.99	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	10.00	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	-0.38	399.01	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	21.86	401.25	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	398.55	12.00	4.11	0.00
6/26/2019	15.99	402.76	16.85	402.76	18.28	402.98	17.46	402.29	22.40	400.71	3.88	400.13	5.46	399.84	4.69	401.34	3.22	401.13	4.12	397.10	-0.51	399.57	10.00	13.33	2.46
7/3/2019	16.21	402.54	17.03	402.56	18.44	402.82	17.64	402.11	22.64	400.47	3.96	400.03	5.54	399.86	4.71	401.32	3.22	401.13	4.21	397.01	-0.99	399.09	12.90	13.33	0.38
7/11/2019	16.41	402.34	17.26	402.33	18.65	402.61	17.87	401.88	22.83	400.28	4.00	399.99	5.58	399.82	4.79	401.24	3.29	401.06	4.32	396.90	-1.49	398.00	10.92	9.52	0.59
7/18/2019	16.60	402.15	17.41	402.18	18.83	402.43	18.03	401.72	22.86	400.15	3.95	400.04	5.58	399.82	4.75	401.28	3.25	401.01	4.26	396.96	-0.63	398.86	12.00	15.00	0.24
7/24/2019	16.78	401.97	17.60	401.99	19.02	402.24	18.21	401.54	23.12	399.99	3.95	400.04	5.53	399.87	4.78	401.25	3.27	401.08	4.24	396.98	-1.00	398.49	11.75	9.52	0.00
7/31/2019	16.84	401.91	17.69	401.90	19.10	402.16	18.46	401.29	23.31	399.80	3.95	400.06	5.52	399.88	4.82	401.21	3.33	401.02	4.28	396.94	-1.36	398.13	12.00	10.00	0.22
8/6/2019	16.87	401.88	17.84	401.75	19.57	401.69	18.79	400.96	23.43	399.68	3.93	400.06	5.53	399.87	4.90	401.13	3.38	400.97	4.34	396.88	-1.43	398.06	12.00	10.00	0.00
8/14/2019	17.54	401.21	18.34	401.25	19.76	401.50	18.93	400.82	23.97	399.24	4.04	399.95	5.64	399.76	4.87	401.15	3.34	401.01	4.32	396.90	dry	398.77	10.90	5.45	0.85
8/21/2019	17.77	400.98	18.56	401.01	20.01	401.25	19.19	400.56	24.05	399.06	3.99	400.00	5.57	399.83	4.89	401.20	3.30	401.05	4.22	397.00	-0.72	398.77	10.00	5.45	3.76
8/28/2019	17.81	400.94	18.66	400.93	20.14	401.12	19.34	400.41	24.17	398.94	3.99	400.00	5.59	399.81	4.86	401.17	3.33	401.02	4.17	397.05	-0.96	398.13	9.23	6.00	0.80
9/4/2019	18.00	400.75	18.82	400.77	20.25	401.01	19.42	400.33	24.21	398.90	4.01	399.98	5.60	399.80	4.83	401.20	3.35	401.00	4.10	397.12	-0.54	398.95	9.23	7.06	0.88
9/11/2019	18.09	400.66	18.94	400.65	20.38	400.88	19.56	400.19	24.38	398.73	4.06	399.93	5.66	399.74	4.90	401.13	3.38	400.97	4.22	397.00	-1.68	397.81	10.00	6.67	0.11
9/19/2019	18.27	400.48	19.11	400.48	20.51	400.75	19.71	400.04	24.43	398.68	4.09	399.90	5.68	399.72	4.97	401.06	3.41	400.94	4.23	396.99	-1.78	397.71	9.23	5.45	0.02
9/26/2019	18.44	400.31	19.26	400.33	20.69	400.57	19.85	399.90	24.59	398.52	4.12	399.87	5.70	399.70	5.09	401.00	3.49	400.86	4.27	396.95	dry		9.09	5.71	0.17
10/4/2019	18.68	400.07	19.48	400.11	20.93	400.33	20.06	399.69	24.75	398.36	4.14	399.85	5.70	399.70	5.11	400.92	3.55	400.80	4.23	396.99	dry	dry	10.71	3.75	0.31
10/11/2019	18.77	399.98	19.59	400.00	21.04	400.22	20.14	399.61	24.83	398.26	4.16	399.83	5.71	399.69	5.11	400.92	3.57	400.78	4.21	397.01	dry	dry	10.71	3.75	0.95
10/18/2019	18.78	399.97	19.59	400.00	21.06	400.20	20.08	399.67	24.82	398.29	4.03	399.96	5.55	399.85	5.06	400.97	3.51	400.84	3.78	397.44	-0.65	398.84	15.00	5.00	1.92
10/24/2019	18.81	399.94	19.63	399.96	21.08	400.18	20.20	399.55	24.85	398.26	3.95	400.04	5.43	399.97	5.04	400.99	3.49	400.86	3.78	397.44	-0.41	399.67	10.00	1.71	1.50
10/31/2019	18.61	400.14	19.59	400.00	20.85	400.41	20.15	399.62	24.67	398.44	3.96	400.01	5.50	399.90	4.99	401.04	3.41	400.94	3.85	397.37	-0.47	399.61	10.00	1.67	2.13
11/8/2019	18.53	400.22	19.41	400.18	20.79	400.47	19.86	399.87	24.50	398.61	3.97	400.02	5.48	399.92	4.94	401.09	3.39	400.96	3.91	397.31	-0.50	399.58	10.00	1.82	0.29
11/14/2019	18.48	400.27	19.30	400.29	20.75	400.51	19.86	399.89	24.49	398.62	4.00	399.99	5.56	399.94	4.92	401.11	3.36	400.99	3.95	397.27	ice	ice	10.00	0.38	
11/19/2019	18.53	400.22	19.33	400.26	20.80	400.46	19.90	399.85	24.55	398.56	3.69	400.30	5.31	400.09	4.91	401.12	3.34	401.01	3.72	397.50	ice	ice	10.00	0.30	
11/26/2019	18.57	400.18	19.39	400.20	20.84	400.42	19.95	399.80	24.60	398.51	3.40	400.59	5.19	400.21	4.91	401.12	3.34	401.01	3.67	397.55	ice	ice	10.00	1.25	
12/5/2019	18.54	400.21	19.35	400.24	20.81	400.45	19.95	399.82	24.56	398.55	4.00	399.99	5.55	399.85	4.92	401.11	3.37	400.98	3.88	397.34	ice	ice	10.00	0.58	
12/12/2019	18.61	400.14	19.42	400.17	20.86	400.40	19.99	399.76	24.66	398.45	3.88	400.11	5.35	400.05	4.91	401.12	3.35	401.00	3.78	397.44	ice	ice	10.00	0.90	
12/19/2019	18.52	400.23	19.36	400.23	20.78	400.48	19.86	399.89	24.60	398.51	3.93	400.05	5.40	400.00	4.88	401.15	3.27	401.08	3.93	397.29	ice	ice	10.00	2.59	
12/24/2019	18.36	400.37	19.12	400.47	20.59	400.67	19.63	400.12	24.23	398.88	4.04	399.95	5.55	399.85	4.80	401.23	3.30	401.05	3.92	397.30	ice	ice	10.00	0.00	

Notes:
MEL = no freeze present
LW = under water