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May 12, 2020

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

RE: Evergreen Spring - March 2020 Aquifer Monitoring Report

INTRODUCTION

Luetje Geological Services (LGS) of Freeport, Maine, an independent hydrogeologic consulting firm, has been contracted by Nestle Waters North America Inc. (Poland Spring) to collect and compile hydraulic data from the Wards Brook Aquifer in Fryeburg, Maine. These data are collected as part of regular routine monitoring by Poland Spring and while the monitoring program is not part of a regulatory compliance program, the data are voluntarily provided to the Town of Fryeburg on a monthly basis. The data in the monthly reports, in turn, are used to compile an annual report of the hydraulic data for the Wards Brook Aquifer.

Data are presented for eleven monitoring wells, four surface water stations, from rain gauges at the Borehole-1 load-out facility and the Fryeburg Eastern Slopes Airport (ICAO Station KIZG, Northeast Regional Climate Center), and withdrawal data from Borehole-1 (PBH-1, aka BH-1 or Well #1; dedicated spring water borehole). Locations of all data collection stations are shown in Figure 1 located at the end of this report.

GROUNDWATER

Groundwater levels are measured in eleven monitoring wells at locations shown in Figure 1. These wells provide groundwater level data across and adjacent to the Wards Brook watershed (Figure 1). Table 1 provides a summary of groundwater elevations at these locations as measured on March 18th, 2020.

TABLE 1: GROUNDWATER ELEVATION DATA

Monitoring Well	Reference Elevation (feet NAVD) ¹	Groundwater Elevation (feet NAVD) ²
MW-101 ³	408.32	399.90
MW-103	421.42	411.89
MW-105	404.98	380.67
MW-107	432.05	426.58
MW-108	419.88	411.33
MW-109	420.08	398.86
MW-110	461.84	417.74
MW-113	441.11	420.46
MW-114	405.25	386.43
TW-2 ⁴	404.19	405.32
TW-9	409.17	410.38

- Notes:
1. NAVD is the North American Vertical Datum (1988). The Reference Elevation is the measuring point (usually the top of casing for monitoring wells) elevation in feet NAVD. New reference elevations were provided by Bliss Associates in November 2015.
 2. The Groundwater Elevation is the elevation of the water table (feet NAVD) at the monitoring well.
 3. MW refers to 'monitoring well'
 4. TW refers to 'test well'

SURFACE WATER

Surface water elevation is measured at four locations in and around the Wards Brook Aquifer watershed as seen in Figure 1. Spring water was flowing to the ground surface this month near PBH-1 as observed at the main spring pool weir and several nearby springs. The surface water elevation measuring locations are as follows:

- Saco River Monitoring Point (SRMP-1): surface water elevation is measured at the Route 113 bridge over the Saco River;
- Wards Pond Monitoring Point (WPMP-1): surface water elevation is measured at the Route 113 crossing over Wards Brook;
- Lovewell Pond Staff Gage (LPSG-1): surface water elevation is measured at the inlet from Wards Pond Brook; and,
- Wards Pond Staff Gage (WPSG-2A): surface water elevation is measured near the center of the watershed in a bog located to the south of Wards Pond.

Table 2 presents the surface water elevation data measured on March 18th, 2020.

TABLE 2: SURFACE WATER ELEVATION DATA

Surface Water Station	Reference Elevation (feet NAVD) ¹	Surface Water Elevation (feet NAVD) ²
LPSG-1	364.81 ¹	363.16
WPMP-1	401.22	397.32
SRMP-1	418.85	397.15
WPSG-2A	402.37 ¹	401.57

Notes: 1. NAVD is the North American Vertical Datum (1988). The Reference Elevation is the measuring point (usually the top of the staff gage for surface water stations) elevation in feet NAVD. New reference elevations were surveyed by LGS in April 2020, and are reflected in this report.
2. The Surface Water Elevation is the elevation of the water surface (feet NAVD) at the monitoring station.

PRECIPITATION

Precipitation is recorded on-site adjacent to PBH-1 using an Onset Data Logging Rain Gauge (RG) as shown on Figure 1. The on-site rain gauge has a self-tipping bucket that is activated with every 0.01 inches of precipitation. The gauge is also wrapped with heat tape that melts snowfall and allows measurement of precipitation through the winter months.

Precipitation data are also recorded at the Fryeburg Eastern Slopes Airport (ICAO Station KIZG, Northeast Regional Climate Center). The Fryeburg Eastern Slopes Airport is approximately two miles to the south of the on-site rain gauge. Table 3 presents monthly precipitation data for March 2020.

TABLE 3: FRYEBURG AREA PRECIPITATION DATA

Station ID	Monthly Precipitation Total (Inches)
On-Site Rain Gauge (RG)	2.81
Fryeburg Eastern Slopes Airport (ICAO Station KIZG) ¹	2.80

Notes: 1. Data provided by ICAO Station KIZG is preliminary prior to compilation of the Annual Report.

WITHDRAWALS

Poland Spring has historically presented withdrawal volumes from PBH-1 as total gallons recorded as offloaded at the plant facilities. Due to recent reporting discrepancies in withdrawal volumes between Maine Water and Poland Spring, Poland Spring has now adopted reporting withdrawal volumes from PBH-1 as measured by the flow meters located at the loadout station. New flow meters and process piping were installed in November 2019 in an effort to eliminate engineering design issues. Spring water withdrawals from PBH-1 totaled 14,136,570 gallons for the month of March 2020.

In addition, it has been noted that the originally reported withdrawal volumes for the months of January and February 2020 were inaccurate. This was due to reporting time-stamp inconsistencies and miscommunication between Maine Water and Poland Spring (now resolved). The table below summarizes these inaccuracies. Over these two months, there was a net over-reporting by 463,260 gallons.

	Originally Reported Withdrawal (gal)	Revised Withdrawal (gal)
January 2020	14,690,435	15,077,190
February 2020	10,402,820	9,552,805

Based on the groundwater and surface water data collected in Fryeburg, Luetje Geological Services has not observed any adverse impact to waters of the State, water-related natural resources and existing uses as a result of the sale of water by the Fryeburg Water Company to Poland Spring.

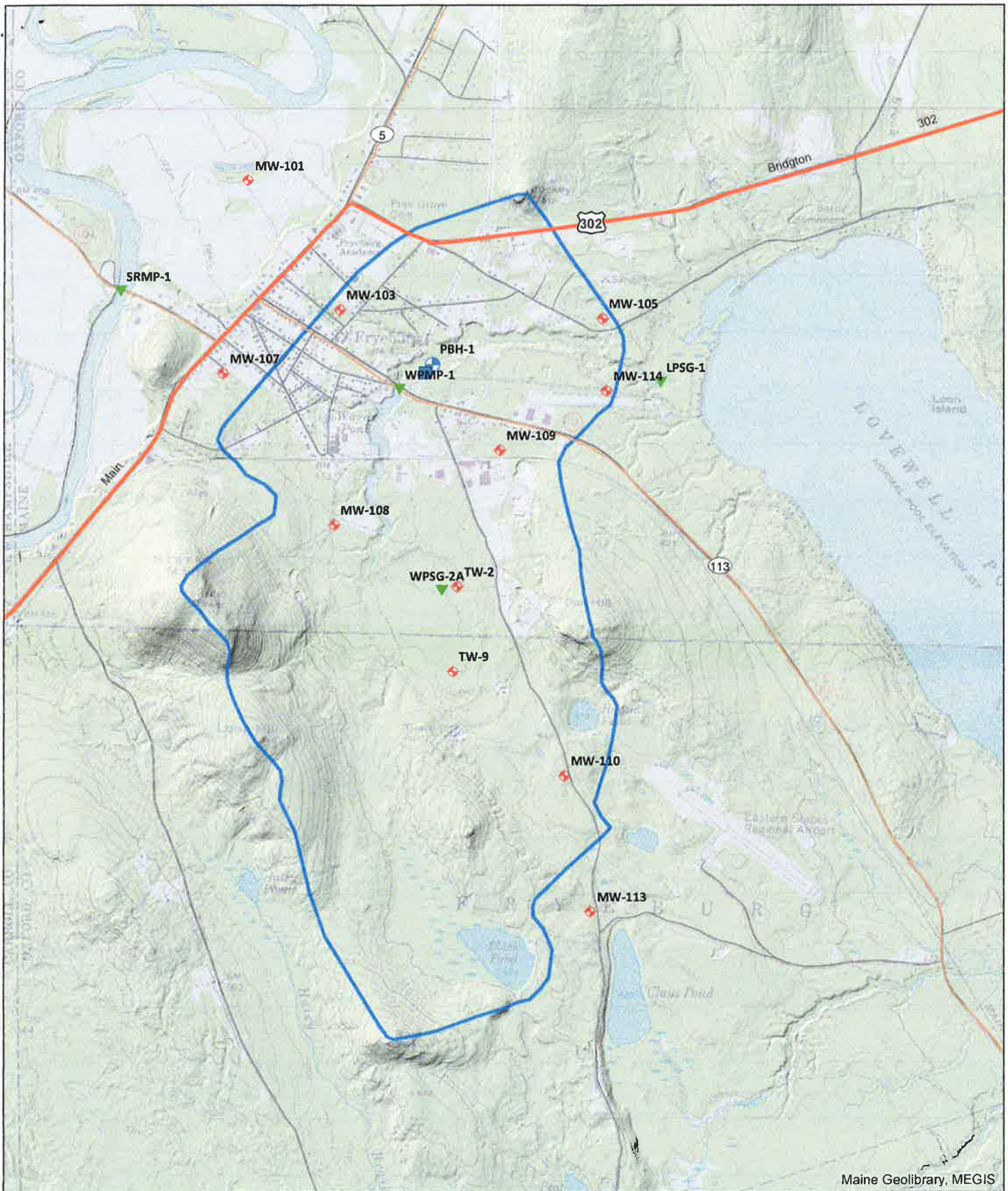
If you have any questions regarding the data included in this report, please do not hesitate to contact me at (207) 415-9898.

Sincerely,
Luetje Geological Services, LLC



Ed Luetje C.G.

cc: Fryeburg Water Company (Mr. George Weston)
Fryeburg Water District (Mr. Scot Montgomery)
Maine Water Company (Mr. Rick Knowlton, Mr. Aric Odone)
Emery & Garrett Groundwater, Inc. (Mr. Dan Tinkham)
Poland Spring (Mr. Mark Dubois, Mr. Joshua Bowe)



Maine Geolibrary, MEGIS






-  BOREHOLE
-  MONITORING WELL
-  RAIN GAUGE
-  SURFACE WATER STATION
-  WARDS BROOK WATERSHED (APPROXIMATE)

FIGURE 1
MONITORING LOCATIONS
EVERGREEN SPRING
FRYEBURG, MAINE

0 500 1,000 2,000 3,000
Feet

NOTES:
1. ALL GENERAL DATA LAYERS ACQUIRED FROM THE
MAINE OFFICE OF GIS AND/OR ESRI ONLINE.



DATE:
2/20/2018


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