



July 23, 2020

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

RE: Evergreen Spring - June 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). In addition, and in accordance with Poland Spring's renewed Bulk Water Transport Permit, Poland Spring will now measure flow and stage at two locations along Wards Brook (SG-2 and SG-3). 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 June 19<sup>th</sup>, 2020.

## **SURFACE WATER**

Surface water elevation is now measured at six 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;
- 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; and,
- SG-2 and SG-3: These staff gauges are in Wards Brook at the upstream and downstream gauging locations.

Surface water elevation data appears in Table 1.

## **WARDS BROOK STREAM FLOW**

As of the June 2020 monitoring round, monthly stream flow and stage measurements will be conducted at two locations along Wards Brook; the upstream location (SG-2) is ~200' downstream from Route 113, and the downstream location (SG-3) is at the former grist mill site, upstream of Lovewell Pond and downstream of Evergreen Spring (Figure-1). Wards Brook stream flow and stage as measured on June 19<sup>th</sup>, 2020 is presented in Table 1.

## **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 1 presents monthly precipitation data for June 2020.

## **WITHDRAWALS**

Spring water withdrawals from PBH-1 totaled 10,709,460 gallons for the month of June 2020.

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



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Ed Luetje C.G.

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

**TABLE 1**  
**EVERGREEN SPRING**  
**FRYEBURG, MAINE**  
**COLLECTION DATE: 6/19/2020**

Groundwater Elevations (ft NAVD <sup>1</sup> )		
	Reference Elevation <sup>2</sup>	Groundwater Elevation <sup>3</sup>
MW-101 <sup>4</sup>	408.32	397.18
MW-103	421.42	412.10
MW-105	404.98	380.47
MW-107	432.05	425.77
MW-108	419.88	411.18
MW-109	420.08	400.14
MW-110	461.84	420.36
MW-113	441.11	422.35
MW-114	405.25	385.14
TW-2 <sup>5</sup>	404.19	405.44
TW-9	409.17	411.75

Surface Water Elevations (ft NAVD)		
	Reference Elevation	Surface Water Elevation <sup>6</sup>
LPSG-1 <sup>7</sup>	364.81	361.92
WPMP-1	401.22	397.02
SRMP-1	418.85	394.67
WPSG-2A <sup>7</sup>	402.37	401.05

Wards Brook Stream Flow		
	Stage (ft NAVD)	Flow (cfs) <sup>9</sup>
SG-2 (Upstream)	386.64	0.91
SG-3 (Downstream)	367.57	3.71

Monthly Withdrawal	
	Total (gallons)
PBH-1	10,709,460

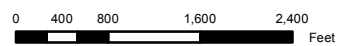
Monthly Precipitation	
	Total Inches
Fryeburg Eastern Slopes Airport (ICAO Station KIZG) <sup>8</sup>	3.36
On-Site gauge (RG)	3.32

- 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, or the top of the staff gauge for surface water stations) elevation in feet NAVD.
2. New Reference Elevations were provided by Bliss Associates in November 2015.
3. The Groundwater Elevation is the elevation of the water table (feet NAVD) at the monitoring well.
4. 'MW' refers to 'monitoring well'.
5. 'TW' refers to 'test well'.
6. The Surface Water Elevation is the elevation of the water surface (feet NAVD) at the monitoring station.
7. New reference elevations were surveyed by LGS in April 2020, and are reflected in this report.
8. Data provided by ICAO Station KIZG is preliminary prior to compilation of the Annual Report.
9. 'cfs' refers to 'cubic feet per second'.





FIGURE 1  
MONITORING LOCATIONS  
EVERGREEN SPRING  
FRYEBURG, MAINE









NOTES:  
1. ALL GENERAL DATA LAYERS ACQUIRED FROM THE  
MAINE OFFICE OF GIS AND/OR ESRI ONLINE.  
2. 2003 2FT ORTHOIMAGERY BASE MAP

N  
DATE:  
7/23/2020



LUETJE GEOLOGICAL SERVICES, LLC  
153 FLYING POINT ROAD  
FREEPORT, ME 04032  
207-415-9898  
ed@luetjegeological.com

-  BOREHOLE
-  MONITORING WELL
-  RAIN GAUGE
-  SURFACE WATER STATION
-  STREAM FLOW AND STAGE
-  WARDS BROOK WATERSHED (APPROXIMATE)