



July 14, 2017

**954.001.03.002**

Dante Del Prete  
City of Sebastopol  
Public Works Department  
714 Johnson Street  
Sebastopol, California 95472

**Re: Groundwater Level Data Transmittal  
Second Quarter 2017  
City of Sebastopol  
Sebastopol, California**

Dear Mr. Del Prete:

This data transmittal has been prepared by PES Environmental, Inc. (PES) on behalf of the City of Sebastopol (City) to summarize the results of the groundwater level monitoring program performed in the second quarter of 2017 (April through June). The following sections of this transmittal summarize the activities performed and data collected for the subject monitoring period.

## **GROUNDWATER LEVEL MONITORING PROGRAM**

The activities performed for the monitoring period (April through June) included: (1) recording groundwater levels in five City production wells; (2) summarizing regional precipitation data; and (3) preparing groundwater level hydrographs.

### **Groundwater Level Measurements**

Groundwater level data collected for the second quarter included groundwater elevations from five City production wells: inactive municipal Well #5, and active municipal Wells #4, #6, #7, and #8. These wells are equipped with Solinst Inc., electronic submersible “LT Edge Levellogger” absolute (i.e., un-vented) pressure transducers and data logger systems. Additionally, a Solinst Inc., “LT Edge Barologger” is installed within Well #4 to

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provide baseline data for barometric compensation. The pressure transducers/data loggers are programmed to record pressure-head measurements at 20-minute intervals for active wells and at 60-minute intervals for inactive wells.

Pressure-head measurements stored in each data logger were transmitted to PES' office via telemetry stations installed within the respective pump houses. The pressure-head measurements were then barometrically compensated and correlated to manual groundwater level measurements that were obtained via an electronic water level sounder on July 6, 2017. The respective manual groundwater level measurements on July 6, 2017 for Wells #4, #5, #6, and #8 were 72.7, 49.5, 74.0, 109.7, and 205.6 feet below top of casing.

### **Precipitation Data**

Daily precipitation records maintained by the National Oceanic and Atmospheric Administration are summarized on Table 1. The precipitation data (reported in total inches per day) were measured at the Sonoma County Airport, Santa Rosa, California (Station ID: USW00023213). As indicated in Table 1, a total of 4.86 inches of rain were recorded during the subject monitoring period, comprising of 4.56, 0.03, and 0.27 inches in April, May, and June, respectively.

### **Groundwater Level Hydrographs**

Following conversion of the pressure-head measurements to depth-to-groundwater levels, groundwater level hydrographs were prepared for each of the five City wells (Plates 1 through 5). To facilitate groundwater level trend analysis, groundwater level data from the previous quarter (January through March) is included on Plates 1 through 5. During the subject monitoring period (April through June), observed groundwater levels generally exhibit a trend of stability and/or slight decline, which appear to correlate with the seasonal decrease in precipitation and associated decline in groundwater recharge.

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**CLOSURE**

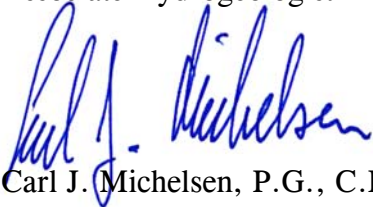
PES appreciates the opportunity to be of service to the City and in providing assistance with the subject Groundwater Level Monitoring Program. Should you have any questions regarding this information, please call PES at (415) 899-1600.

Yours very truly,

**PES ENVIRONMENTAL, INC.**



Peter D. Gorman, P.G., C.HG.  
Associate Hydrogeologist



Carl J. Michelsen, P.G., C.HG.  
Principal Geochemist

cc: Henry Mikus – City of Sebastopol

Attachments: Table 1 – Summary of Precipitation Totals  
Plate 1 – Groundwater Level Hydrograph, Municipal Well #4  
Plate 2 – Groundwater Level Hydrograph, Municipal Well #5  
Plate 3 – Groundwater Level Hydrograph, Municipal Well #6  
Plate 4 – Groundwater Level Hydrograph, Municipal Well #7  
Plate 5 – Groundwater Level Hydrograph, Municipal Well #8

**TABLE**

**Table 1  
Summary of Precipitation Totals  
Sonoma County Airport  
Santa Rosa, California**

Day	Daily Precipitation Totals (inches)		
	Apr-2017	May-2017	Jun-2017
1	--	--	--
2	--	--	--
3	--	--	--
4	--	--	--
5	--	T	--
6	2.36	T	--
7	0.41	--	T
8	0.20	--	0.26
9	--	--	0.01
10	0.01	--	--
11	0.18	--	T
12	0.57	--	--
13	0.07	--	--
14	--	--	--
15	--	--	--
16	0.34	T	--
17	0.16	--	--
18	0.07	--	--
19	0.17	--	--
20	--	--	T
21	--	--	--
22	T	--	--
23	--	--	--
24	T	T	--
25	--	0.03	--
26	0.02	--	--
27	--	--	--
28	--	--	--
29	--	--	--
30	--	--	--
31	na	--	na
Total (inches)	4.56	0.03	0.27
<b>Total Precipitation (in inches) for April through June: 4.86</b>			

**Notes:**

Source of Data: National Oceanic and Atmospheric Administration (NOAA)  
 Preliminary Record of Climatological Observations for Sonoma County  
 Airport - Cooperative Station Network (Station ID: USW00023213)  
 -- = No measureable/reported precipitation  
 T = Trace precipitation event  
 na = Not Applicable

**PLATES**

Plate 1  
Groundwater Level Hydrograph - Well #4  
City of Sebastopol Municipal Wellfield  
Sebastopol, California

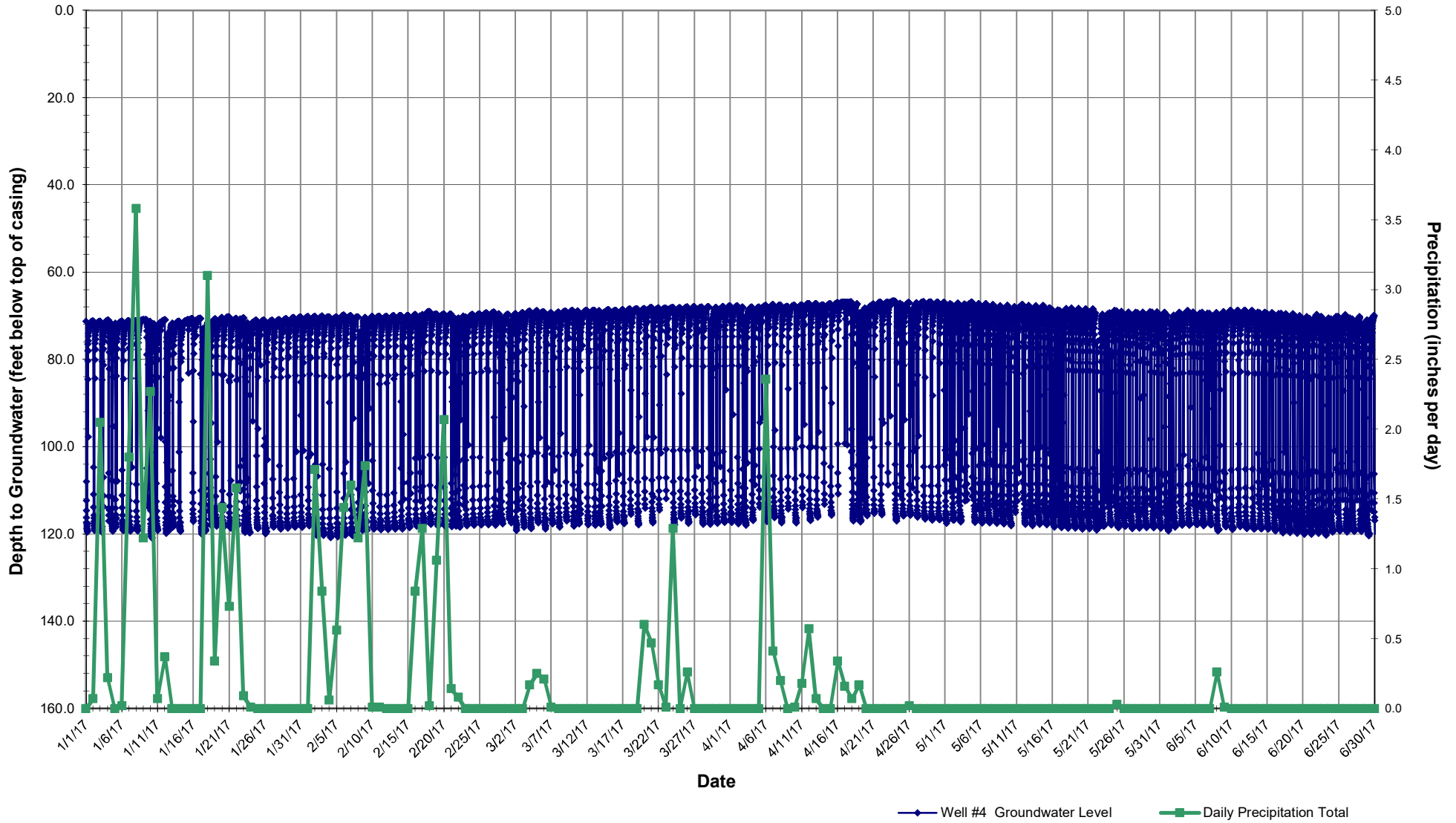


Plate 2  
Groundwater Level Hydrograph - Well #5  
City of Sebastopol Municipal Wellfield  
Sebastopol, California

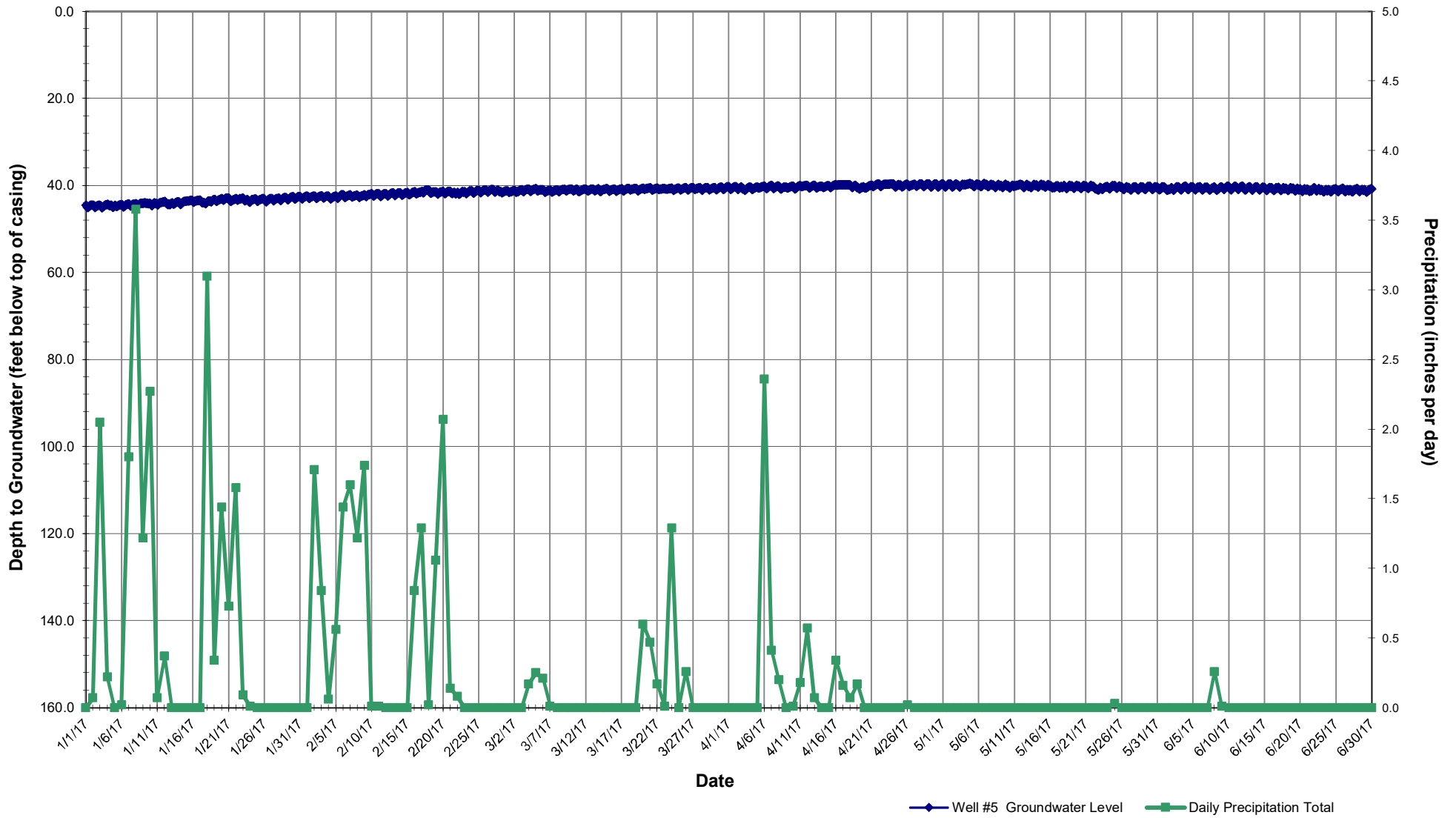




Plate 3  
Groundwater Level Hydrograph - Well #6  
City of Sebastopol Municipal Wellfield  
Sebastopol, California

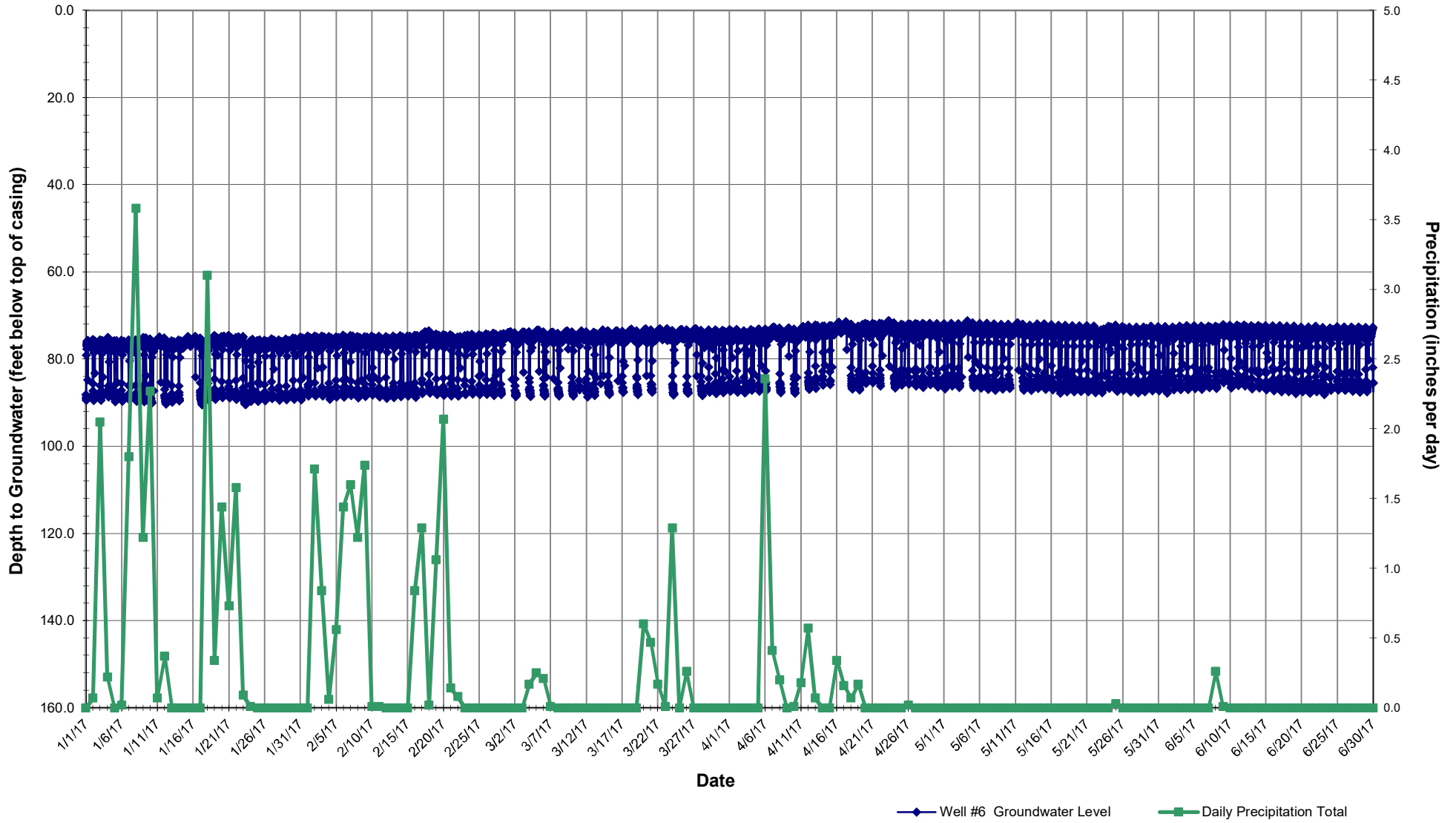


Plate 4  
Groundwater Level Hydrograph - Well #7  
City of Sebastopol Municipal Wellfield  
Sebastopol, California

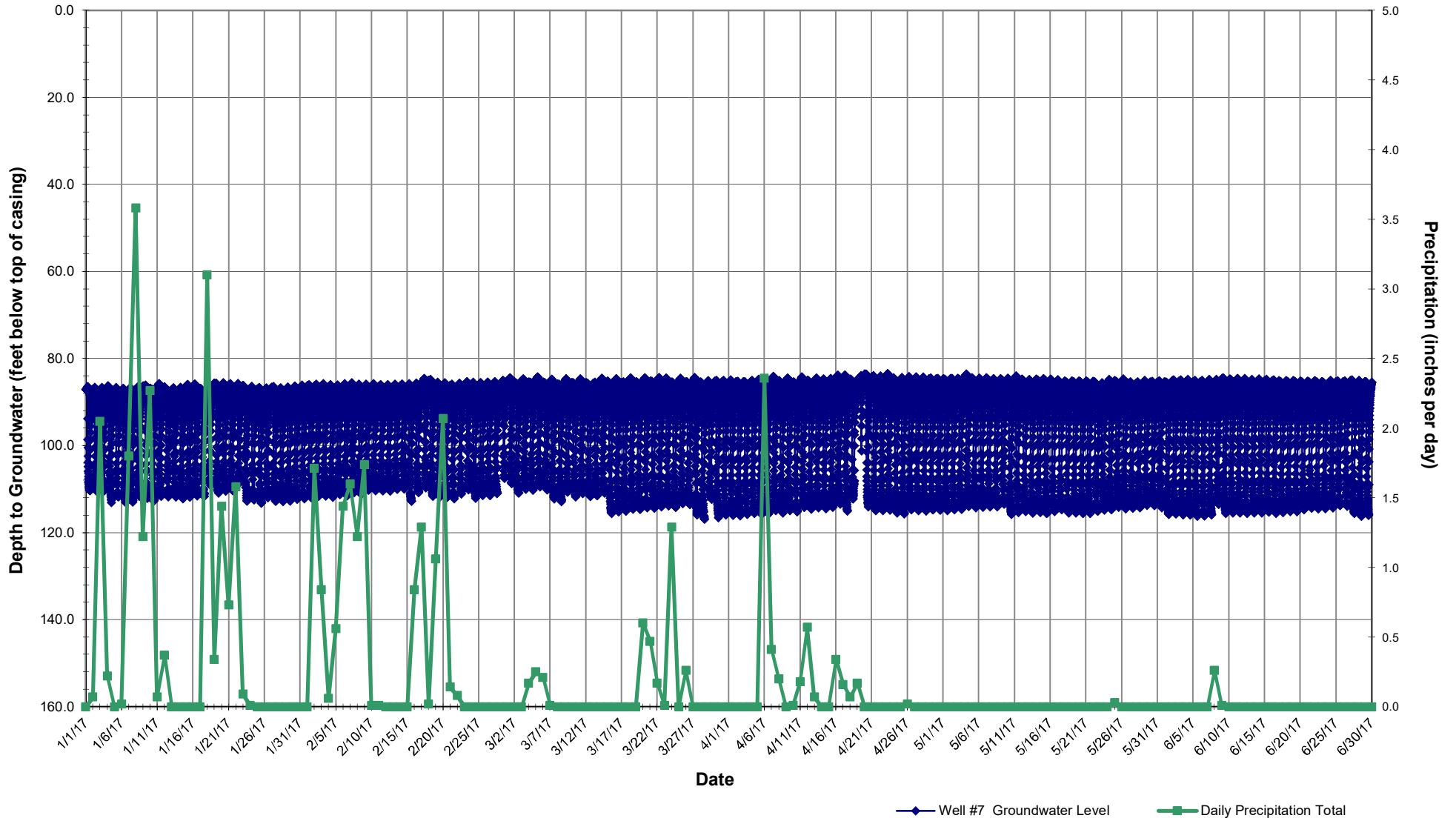


Plate 5  
Groundwater Level Hydrograph - Well #8  
City of Sebastopol Municipal Wellfield  
Sebastopol, California

