



July 9, 2019

954.001.03.002

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

**Re: Groundwater Level Data Transmittal
Second Quarter 2019
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 2019 (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 first 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 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

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pump houses. The pressure-head measurements were then barometrically compensated and correlated to groundwater level measurements obtained manually using an electronic water level sounder.

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 5.60 inches of rain was recorded during the monitoring period, including 1.19 and 4.41 inches of rain in April and May, respectively. No measurable precipitation was recorded in June.

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 (May through June), observed groundwater levels trends included: (1) general stability/recovery in Wells #5 and #8; and (2) general stability with slight declines in Wells #4, #6, and #7. The slight declines in the aforementioned wells appear to correlate with the seasonal decrease in precipitation and associated decrease in groundwater recharge.

CLOSURE

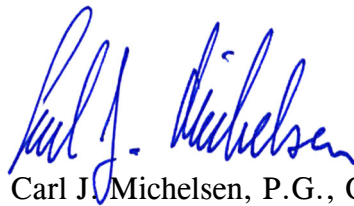
PES appreciates the opportunity to be of service to the City and in providing assistance with the subject Groundwater Level Monitoring Program. Should you have any questions regarding this information, please call PES at (415) 899-1600.

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 (paper copy)

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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-2019	May-2019	Jun-2019
1	0.01	--	--
2	0.02	--	--
3	0.02	--	--
4	0.05	--	--
5	0.65	--	--
6	0.14	--	--
7	0.06	--	--
8	0.05	--	--
9	T	T	--
10	--	--	--
11	--	--	--
12	--	--	--
13	--	--	--
14	--	--	--
15	0.19	2.10	--
16	T	0.35	--
17	--	--	--
18	--	1.02	--
19	--	0.78	--
20	--	0.04	--
21	--	0.01	--
22	--	--	--
23	--	--	--
24	--	T	--
25	--	T	--
26	--	0.11	--
27	--	--	--
28	--	--	--
29	--	--	--
30	--	--	--
31	na	--	na
Total (inches)	1.19	4.41	0.00
Total Precipitation (in inches) for April through June: 5.60			

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 measurable/reported precipitation

T = Trace precipitation event

na = Not Applicable

PLATES

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

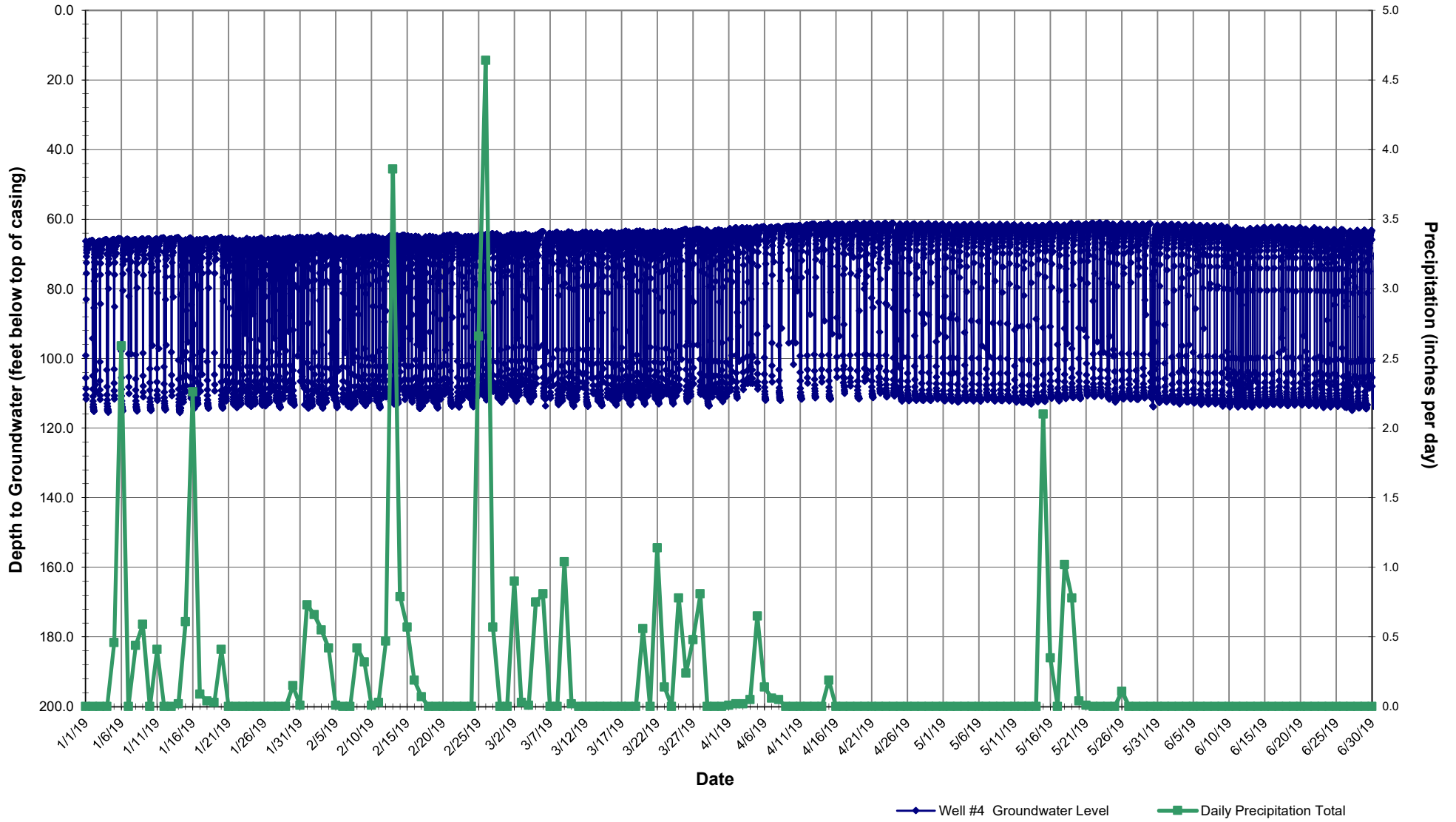


Plate 2
Groundwater Level Hydrograph - Well #5
City of Sebastopol Municipal Wellfield
Sebastopol, California

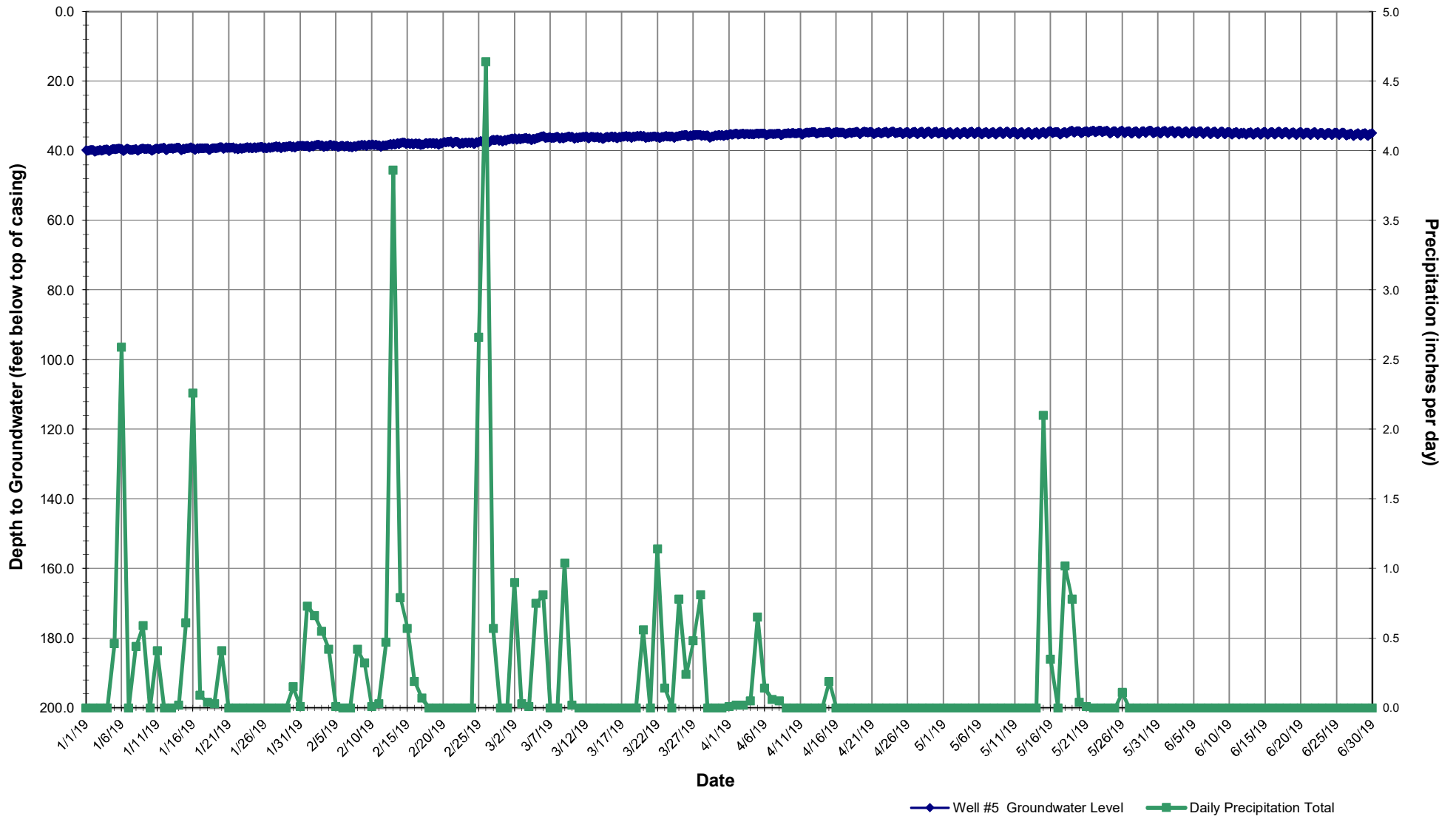


Plate 3
Groundwater Level Hydrograph - Well #6
City of Sebastopol Municipal Wellfield
Sebastopol, California

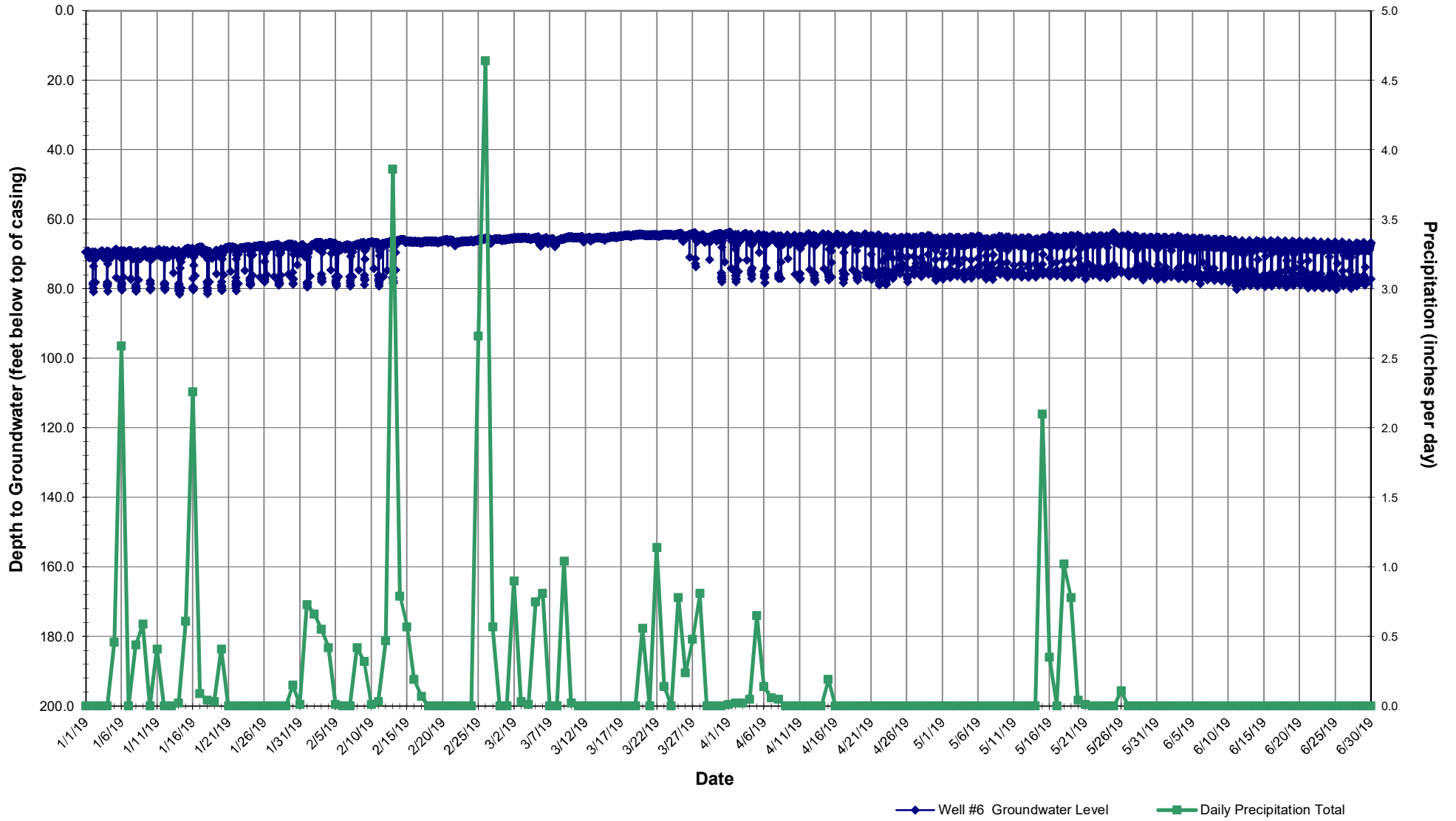


Plate 4
Groundwater Level Hydrograph - Well #7
City of Sebastopol Municipal Wellfield
Sebastopol, California

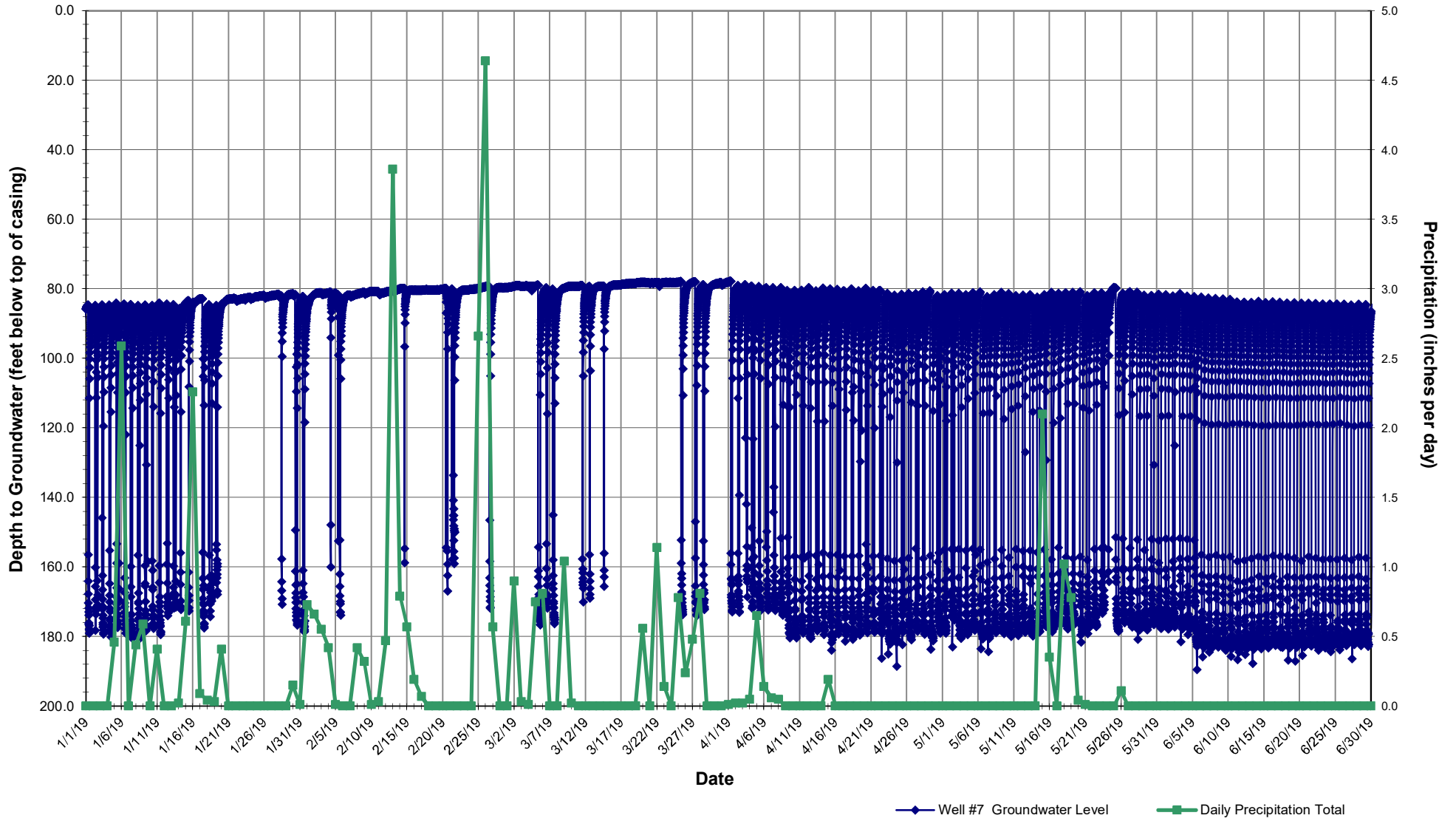


Plate 5
Groundwater Level Hydrograph - Well #8
City of Sebastopol Municipal Wellfield
Sebastopol, California

