

Publication No. WI-2016-04

12 February 2016

## The Watershed Institute

Division of Science and Environmental  
Policy

California State University Monterey Bay  
<http://watershed.csUMB.edu>

100 Campus Center, Seaside, CA, 93955-8001  
831 582 4696 / 4431

*Central  
Coast  
Watershed  
Studies*

**CCoWS**

## Summary of Precipitation and Streamflow for Potrero and San Clemente Creeks in Water-Year 2015

Santa Lucia Preserve  
Monterey County, California

Amelia Olson  
Kaitlyn Chow  
Lauren Luna  
Leah MacCarter  
Douglas Smith (Ph.D.)

Contact:  
[dosmith@csUMB.edu](mailto:dosmith@csUMB.edu)

## Executive Summary

California State University Monterey Bay (CSUMB) began hydrologic monitoring of Santa Lucia Preserve for the Santa Lucia Conservancy in March 2007. The monitoring began as portion of permit requirements for land development implemented by Balance Hydrologics. This annual report presents precipitation and streamflow summaries for Potrero and San Clemente Creeks in the 2015 water year (October 1, 2013 to September 30, 2015). Daily records of discharge, temperature, and specific conductance are reported. Daily precipitation values are reported from the San Clemente Dam and Santa Lucia Preserve golf course.

Water Year 2015 produced 16.1 inches of rainfall at the San Clemente Dam, representing low precipitation with a 3.3 year recurrence interval. Flow in both creeks was low, yielding between 0.04 and 0.10 acre-ft/acre of watershed. Flow at the Potrero Creek gage ceased on June 17, whereas San Clemente Creek maintained baseflow throughout the year.

This report can be cited as:

Olson A, Chow K, Luna L, MacCarter L. and Smith D. 2016. Summary of Precipitation and Streamflow for Potrero and San Clemente Creeks in Water-Year 2015, Santa Lucia Preserve, Monterey County, California: Prepared for the Santa Lucia Conservancy. The Watershed Institute, California State University Monterey Bay, Publication No. WI-2016-04, 27pp.

## Acknowledgements

We are grateful for the assistance of:

- Forrest Arthur (Santa Lucia Conservancy)
- Greg James (MPWMD)
- Jason Parke, Scott Brown and Barry Hecht (Balance Hydrologics)

## Table of Contents

Executive Summary .....	ii
Acknowledgements .....	ii
Table of Contents .....	3
List of Tables and Figures .....	4
1 Introduction .....	5
2 Precipitation Data .....	5
3 Streamflow, Temperature, and Conductance Data .....	6
3.1 Potrero Creek .....	6
3.2 San Clemente Creek .....	6
4 Limitations .....	7
5 References .....	8
6 Tables .....	9
7 Figures .....	21

## List of Tables and Figures

<b>Tables</b>		<b>Page</b>
1	Daily precipitation record and monthly totals, San Clemente Dam	9
2	Daily precipitation record and monthly totals, Santa Lucia Preserve Golf Course	10
3	Mean daily flow, Potrero Creek, water year 2015	11
4	Mean Daily Water Temperature (°C), Potrero Creek	12
5	Maximum Daily Water Temperature (°C), Potrero Creek	13
6	Minimum Daily Water Temperature (°C), Potrero Creek	14
7	Mean Daily Specific Conductance (umhos/cm @ °25 C), Potrero Creek	15
8	Mean daily flow, San Clemente Creek, water year 2015	16
9	Mean Daily Water Temperature (°C), San Clemente Creek	17
10	Maximum Daily Water Temperature (°C), San Clemente Creek	18
11	Minimum Daily Water Temperature (°C), San Clemente Creek	19
12	Mean Daily Specific Conductance (umhos/cm @ 25 °C), San Clemente Creek	20

<b>Tables</b>		<b>Page</b>
1	Monthly precipitation for Water Year 2015, San Clemente Dam	21
2	Log–Pearson Type–III analysis of precipitation from San Clemente Dam	22
3	Monthly precipitation for Water Year 2015, Santa Lucia Preserve Golf Course	23
4	Mean Daily Streamflow at Potrero Creek gage for Water Year 2015	24
5	Mean Daily Conductance and Mean/Min/Max Daily Water Temp at Potrero	25
6	Mean Daily Streamflow at San Clemente Creek gage for Water Year 2015	26
7	Mean Daily Conductance and Mean/Min/Max Daily Water Temp at San Clemente	27

## 1 Introduction

This report is the Water Year 2015 (WY-15) hydrologic data summary for Santa Lucia Preserve. Balance Hydrologics installed five continuously recording streamflow gages on Santa Lucia Preserve. These gages include two on Las Garzas Creek (Moore's Lake inflow and outflow, installed in 2001), two on Potrero Creek (one installed in 2002 and one installed in 2013), and one on San Clemente Creek (installed in 2012). Detailed information on gage installation, operation, and individual gage sites can be found in Balance Hydrologics (2002).

The CSUMB Watershed Institute began operation of the Potrero Creek and San Clemente Creek streamflow on June 21, 2007. Data summaries are presented for streamflow on Potrero and San Clemente Creeks and for precipitation on Santa Lucia Preserve and San Clemente Dam.

## 2 Precipitation Data

A Rain Bird weather station operated by Santa Lucia Preserve provided precipitation data for the Santa Lucia golf. Precipitation data recorded by California American Water Company from San Clemente Dam are included for comparison.

At San Clemente Dam the total WY-15 rainfall was 16.1 inches (Table 1 and Figure 1), which represents below average precipitation at the Dam. The 94-year precipitation average at San Clemente Dam is 21.14 inches. Using Log-Pearson Type-III analysis, rainfall at San Clemente Dam should be less than 16.1 inches once in every 3.3 years on average (Figure 2).

The WY-15 recorded rainfall at the Santa Lucia Preserve Golf Course was 23.6 inches (Table 2 and Figure 3), falling below the 14 year average of 25.52 inches. The short duration of the record at the golf course may not produce average values indicative of actual long term precipitation patterns. The Preserve golf course received approximately 7.56 more inches of rain than San Clemente Dam. The available data do not show a consistent relationship between total precipitation at the San Clemente Dam and total precipitation at the golf course. During the 14 years of rain gage operation at the golf course, the golf course gage has recorded between 0.96 fewer inches and 12.10 more inches than the Dam gage, with an average difference of 6.65 inches and a standard deviation of 3.99 inches.

### **3 Streamflow, Temperature, and Conductance Data**

The streamflow gaging station on Potrero consists of a Campbell CR10X data logger and a level TROLL 500. The stream flow gaging station on San Clemente consists of a Campbell CR1000 data logger (powered by 10 or 20 watt solar panels) and two Druck pressure transducers to measure water depth. Both Campbell data loggers have a specific conductance and water temperature probe, as well as staff plates for manual readings (Balance Hydrologics 2002). The Campbell data loggers record measurements of pressure, temperature, and conductance at 15-minute intervals. The level TROLL 500 data logger records measurements of pressure and temperature at 5-minute intervals.

In WY-15, streamflow gage data were downloaded to a laptop computer during monthly visits, at which time manual discharge measurements were also taken using standard hydrologic practices. A FlowTracker (SonTek handheld ADV) current velocity meter was used to measure discharge. A portable three-inch Parshall flume was used to measure discharge during the latter part of the dry season when flows became too low to use the FlowTracker meter.

#### **3.1 Potrero Creek**

The current gage station on Potrero Creek was installed April 29, 2002 and is located upstream of the T-11 well. In WY-15, Potrero Creek had a mean daily flow of 0.26 cfs, a maximum daily flow of 1.3 cfs, and a minimum daily flow of 0.00 cfs; the 7-day low flow was 0.00 cfs (Table 3). Mean daily streamflow and manual discharge measurements are plotted in Figure 4. Temperature and conductance data are presented in Tables 4 through 7, and in Figure 5. Specific conductivity for Potrero Creek varied widely, indicating a possible malfunction in the gauge (Figure 5) Specific conductance dropped sharply near the end of July as the creek dried.

#### **3.2 San Clemente Creek**

The current gage station on San Clemente Creek was installed January 17, 2012 and is located near the Santa Lucia Preserve property boundary. In WY-15, San Clemente Creek had a mean daily flow of 0.45 cfs, a maximum daily flow of 4.1 cfs, and a minimum daily flow of less than 0.01 cfs; the 7-day low flow was less than 0.01 cfs (Table 8). Mean daily streamflow and manual discharge measurements are plotted in Figure 6. Temperature and conductance data are presented in Tables 9 through 12, and in Figure 7.

#### 4 Limitations

Streamflow gage data are based on the stage–discharge relationship unique to each stream and gage location. This stage–discharge relationship (rating curve) for each gage has been developed over time by making manual discharge measurements at various ranges of flow and noting the water level (stage) at which a particular flow occurs. Both rating curves include historic high flow measurements. The rating curve for San Clemente Creek was not adjusted this year. The rating curve for Potrero Creek was adjusted this year to reflect to changes in the channel.

The Potrero Creek rating curve is limited a rating of 32 cfs. Manual measurements were not obtained above this flow.

As more discharge measurements are made (particularly in the higher range of flows) the rating curves may change and it will be necessary to update the streamflow data to reflect these changes. For this reason, the streamflow data contained in this report should be considered provisional and caution should be exercised when using these data.

## 5 References

[Balance Hydrologics 2002]. Brown S, Porter S, Woyshner M, Hecht B. 2002. Hydrologic record for water year 2002: Las Garzas, Potrero, and San Clemente Creeks, Santa Lucia Preserve, Monterey County, California. 53 pp.



## 6 Tables

Table 1. Daily precipitation record and monthly totals, water year 2015

San Clemente Dam, Monterey County, California

Record obtained from: Monterey Peninsula Water Management District

Values are inches

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1		0.46	0.05			0.17				0.01		
2		0.02	1.44			0.05						
3		0.01	2.00			0.03						
4			0.03						0.02			
5			0.35				0.02					
6			0.01		1.09						0.02	
7					0.85		1.27	0.10				
8					1.40							
9					0.26							
10												
11				4.12		0.18						
12				0.73								
13		0.27		0.04								
14							0.03	0.09				
15				1.70				0.01				
16				0.80								
17				0.04								
18				0.05						0.81		
19		0.07		0.10				0.02				
20		0.01		0.28								
21				0.02								
22		0.18			0.02							
23		0.01			0.01	0.15	0.01	0.03				
24				0.09			0.07					
25	0.05						1.15	0.01				
26	0.01											
27					0.16							
28					0.85							
29												
30		0.20										
31	1.35											
<b>Total</b>	1.41	1.23	3.88	7.97	4.64	0.58	2.55	0.26	0.02	0.82	0.02	0.00
<b>Annual Total</b>	<u>23.38</u>											

Table 2. Daily precipitation record and monthly totals, water year 2015  
 Santa Lucia Preserve Golf Course, Monterey County, California

Record obtained from: Santa Lucia Preserve

Values are inches

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1						1.61	0.76					
2					0.84	0.07	0.20					
3			0.03		0.01							
4						0.07	0.11					
5					0.01		0.01					
6			0.11		0.63	0.06						
7			0.52		0.10							
8					0.23							
9					0.16			0.01				
10					0.01							
11				0.03	0.01							
12				0.01								
13												
14												
15												
16					0.01							
17												
18												
19		0.01	0.06		0.01							
20		0.35						0.39				
21		0.05						0.01				
22							0.05	0.01				
23												
24												
25						0.03	0.58					0.15
26					1.83	0.82	0.03					
27						0.04						0.07
28	0.45				3.02							
29	0.13					0.32						
30						0.18						
31				0.19		0.71						
<b>Total</b>	0.58	0.41	0.72	0.23	6.87	3.91	1.74	0.42	0.00	0.00	0.00	0.22
<b>Annual Total</b>	<u>15.10</u>											

Table 3. Mean daily flow, Potrero Creek, water year 2015  
Santa Lucia Preserve, Monterey County, California

Values are cfs (unless otherwise noted)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	0.15		0.10	0.10	0.12	0.06	0.04	0.03	0.00	0.00	0.00
2	0.00	0.02		0.10	0.10	0.11	0.06	0.04	0.03	0.00	0.00	0.00
3	0.00	0.00	0.21	0.09	0.10	0.11	0.06	0.03	0.04	0.00	0.00	0.00
4	0.00	0.00	0.18	0.09	0.10	0.10	0.06	0.04	0.04	0.00	0.00	0.00
5	0.00	0.00	0.18	0.09	0.10	0.10	0.07	0.04	0.03	0.00	0.00	0.00
6	0.00	0.00	0.19	0.09	0.11	0.10	0.07	0.04	0.03	0.00	0.00	0.00
7	0.00	0.02	0.18	0.09	0.17	0.10	0.11	0.04	0.02	0.00	0.00	0.00
8	0.00	0.03	0.18	0.09	0.18	0.10	0.08	0.04	0.02	0.00	0.00	0.00
9	0.00	0.04	0.18	0.08	1.11	0.10	0.07	0.04	0.02	0.00	0.00	0.00
10	0.00	0.05	0.18	0.08	0.25	0.10	0.06	0.04	0.02	0.00	0.00	0.00
11	0.00	0.07	6.22	0.08	0.22	0.10	0.06	0.04	0.01	0.00	0.00	0.00
12	0.00	0.07	14.14	0.08	0.19	0.10	0.06	0.03	0.01	0.00	0.00	0.00
13	0.00	0.09	1.09	0.08	0.18	0.10	0.06	0.03	0.01	0.00	0.00	0.00
14	0.00	0.10	0.19	0.08	0.17	0.10	0.06	0.04	0.01	0.00	0.00	0.00
15	0.00	0.10	11.22	0.08	0.16	0.09	0.05	0.03	0.01	0.00	0.00	0.00
16	0.00	0.11	7.29	0.08	0.15	0.09	0.05	0.04	0.01	0.00	0.00	0.00
17	0.00	0.11	5.80	0.08	0.14	0.09	0.05	0.04	0.00	0.00	0.00	0.00
18	0.00	0.12	2.18	0.08	0.14	0.08	0.05	0.04	0.00	0.00	0.00	0.00
19	0.00	0.12	0.64	0.08	0.13	0.08	0.05	0.05	0.00	0.00	0.00	0.00
20	0.00	0.12	0.25	0.08	0.13	0.08	0.06	0.05	0.00	0.00	0.00	0.00
21	0.00	0.13	0.22	0.08	0.12	0.08	0.05	0.04	0.00	0.00	0.00	0.00
22	0.01	0.14	0.19	0.08	0.12	0.08	0.06	0.04	0.00	0.00	0.00	0.00
23	0.00	0.14	0.18	0.08	0.11	0.08	0.06	0.05	0.00	0.00	0.00	0.00
24	0.00		0.17	0.08	0.11	0.08	0.05	0.05	0.00	0.00	0.00	0.00
25	0.00		0.16	0.08	0.11	0.08	0.09	0.05	0.00	0.00	0.00	0.00
26	0.00		0.15	0.08	0.11	0.07	0.06	0.05	0.00	0.00	0.00	0.00
27	0.00		0.14	0.08	0.11	0.07	0.05	0.04	0.00	0.00	0.00	0.00
28	0.00		0.13	0.08	0.14	0.07	0.05	0.04	0.00	0.00	0.00	0.00
29	0.01		0.12	0.08		0.07	0.04	0.04	0.00	0.00	0.00	0.00
30	0.01		0.12	0.09		0.07	0.04	0.04	0.00	0.00	0.00	0.00
31	0.00		0.11	0.10		0.07		0.04		0.00	0.00	
<b>Mean</b>	0.00	0.07	1.80	0.08	0.17	0.09	0.06	0.04	0.01	0.00	0.00	0.00
<b>Max Day</b>	0.01	0.15	14.14	0.10	1.11	0.12	0.11	0.05	0.04	0.00	0.00	0.00
<b>Min Day</b>	0.00	0.00	0.11	0.08	0.10	0.07	0.04	0.03	0.00	0.00	0.00	0.00
<b>Yield (ac-ft)</b>	0.30	3.40	103.43	5.2	9.6	5.5	3.6	2.48	0.68	0.00	0.00	0.00

Water Year 2011 Annual Summary			yr	day	cfs
Mean Daily Flow	0.19	cfs	1992	7/10	0.02
Max. Daily Flow	14.1	cfs	1993	7/21	0.04
Min. Daily Flow	0.00	cfs	1994	8/14	0.02
7-Day Low Flow	0.00	cfs	1995	9/19	0.02
Total Yield	134	ac-ft	2002	8/8	0.01
Normalized Yield	0.04	ac-ft/ac	2003	8/23	0.01
			2004	8/27	0.00
			2005	9/30	0.05
			2006	9/17	0.06
			2007	9/6	<.01
			2008	9/2	0.02
			2009	9/3	0.13
			2010	8/24	0.08
			2011	9/7	0.17
			2012	8/23	0.04
			2014	7/24	0.00
			2015	6/17	0.00

Approximate date and value of first minimum daily mean flow near the end of each water year.

Table 4. Mean Daily Water Tempertures  
Portero Creek, water year 2015

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	13.60	12.54		6.41	8.62	9.89	10.40	11.63	12.71	15.02	16.15	15.52
2	13.16	12.19		6.39	8.91	9.58	10.27	11.90	12.69	14.07	16.02	15.71
3	13.59	11.35	12.15	6.51	9.22	9.21	9.86	11.78	12.67	14.33	15.91	15.30
4	13.81	11.13	12.24	6.93	9.34	9.40	9.71	11.69	12.63	14.54	15.11	14.99
5	13.85	11.29	12.20	7.36	10.18	9.51	9.71	11.68	12.80	14.85	15.22	14.63
6	13.11	11.33	12.22	7.72	10.71	9.56	9.45	11.59	12.91	15.03	15.44	13.91
7	12.72	11.44	12.05	7.79	12.12	9.58	10.35	11.49	13.19	15.11	15.81	13.77
8	12.99	11.56	11.63	8.24	11.91	9.87	10.33	11.39	13.08	14.84	15.61	14.11
9	12.65	11.67	11.73	9.04	12.60	10.89	10.01	11.50	13.08	15.00	15.75	14.55
10	13.75	11.72	11.80	9.39	11.09	10.48	9.80	11.79	13.79	15.05	16.09	15.07
11	14.38	12.27	12.49	9.41	10.12	11.31	9.64	11.68	13.81	14.83	16.10	15.12
12	13.77	12.45	12.41	9.04	10.27	10.96	10.40	11.64	13.55	14.96	15.00	15.60
13	12.75	12.56	11.16	8.51	10.04	11.18	10.59	11.41	13.59	15.17	15.93	15.71
14	14.80	12.60	10.54	8.06	10.24	11.74	10.59	11.16	13.69	15.23	15.72	16.08
15	13.90	12.17	11.32	7.98	10.25	11.94	9.92	11.41	13.41	15.09	15.74	15.88
16	13.05	11.53	11.48	8.61	10.29	11.43	9.98	11.77	13.34	15.18	15.89	14.31
17	12.10	11.29	11.47	8.99	11.06	12.05	10.19	11.96	13.22	15.20	15.40	14.70
18	12.87	10.97	11.66	9.61	11.51	11.25	10.18	12.00	12.93	15.16	15.87	14.17
19	12.92	11.38	11.40	9.88	11.57	11.10	10.86	12.07	12.55	15.40	15.99	14.19
20	13.78	12.06	12.49	9.60	11.25	10.83	11.19	12.14	12.63	16.02	16.36	14.63
21	12.22	11.72	12.69	8.69	10.57	10.44	11.42	12.26	12.94	15.95	16.26	15.20
22	11.67	11.72	12.60	8.51	10.91	11.33	11.46	12.48	12.69	15.80	16.25	15.58
23	12.33	11.45	11.42	8.52	9.66	11.54	11.31	12.43	12.80	15.61	16.33	14.73
24	12.35		10.98	8.54	8.99	11.10	11.48	12.25	12.83	14.82	15.94	14.48
25	13.63		10.13	8.28	9.15	11.35	11.66	12.34	13.07	14.44	15.83	14.78
26	12.55		8.69	8.46	10.10	11.37	11.45	12.36	13.13	15.16	15.42	14.47
27	11.25		7.96	9.61	11.10	11.39	11.33	12.44	13.63	14.83	15.29	14.45
28	11.11		8.09	9.39	10.70	11.51	11.68	12.57	14.11	14.35	15.62	14.73
29	11.56		8.08	9.15		11.17	11.78	12.52	14.29	14.60	16.12	15.31
30	12.13		8.57	9.37		10.77	11.27	12.43	13.94	15.41	15.49	15.08
31	13.11		7.03	9.23		10.98		12.41		15.80	15.42	
<b>Mean Day</b>	12.95	11.75	10.99	8.49	10.45	10.80	10.61	11.94	13.19	15.06	15.78	14.89
<b>Max Day</b>	14.80	12.60	12.69	9.88	12.60	12.05	11.78	12.57	14.29	16.02	16.36	16.08
<b>Min Day</b>	11.11	10.97	7.03	6.39	8.62	9.21	9.45	11.16	12.55	14.07	15.00	13.77

Table 5. Maximum Daily Water Temperature  
Portero Creek, water year 2015

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	15.26	12.86		6.83	9.34	10.70	10.94	12.14	13.32	14.21	16.58	16.03
2	15.09	12.38		6.97	9.63	10.09	10.84	12.26	13.05	14.64	16.33	16.18
3	15.50	12.05	12.45	7.19	9.90	10.11	10.60	12.23	13.32	14.86	16.34	16.05
4	15.75	11.56	12.46	7.67	10.07	10.34	10.35	11.80	12.79	15.04	15.93	15.48
5	15.51	11.64	12.39	8.03	10.68	10.57	10.26	11.95	13.31	15.41	16.00	15.26
6	14.85	11.74	12.38	8.34	11.80	10.68	10.09	11.73	13.39	15.52	15.86	15.05
7	14.23	11.77	12.29	8.43	12.49	10.71	10.87	11.69	13.66	15.64	16.32	15.03
8	14.60	11.92	12.04	8.97	12.85	10.79	10.81	11.87	13.55	15.19	16.08	15.34
9	14.19	11.93	12.03	9.72	12.96	11.71	10.67	11.74	13.38	15.47	16.18	15.76
10	14.59	12.07	12.04	9.85	12.19	11.18	10.47	12.18	14.46	15.50	16.44	16.00
11	15.34	12.46	13.07	9.82	10.95	11.96	10.42	11.83	14.20	15.33	16.39	16.11
12	15.44	12.60	12.62	9.52	11.09	11.93	11.19	11.97	14.00	15.54	15.93	15.84
13	14.53	12.90	11.88	9.04	10.97	12.03	11.00	11.81	14.14	15.73	16.49	16.03
14	15.71	12.83	10.97	8.63	11.12	12.66	10.98	11.53	14.03	15.39	16.42	16.52
15	15.03	12.61	12.28	8.57	11.16	12.48	10.63	11.83	13.76	15.40	16.85	16.40
16	14.20	12.09	11.94	9.14	10.89	12.17	10.87	11.98	13.82	15.82	16.62	15.20
17	13.92	11.77	11.87	9.62	11.40	12.61	10.90	12.27	13.74	15.85	16.13	15.35
18	14.44	11.29	12.09	10.20	12.10	11.86	10.78	12.28	13.53	15.96	16.35	15.22
19	14.30	12.01	12.07	10.37	11.79	11.94	11.29	12.24	13.25	15.85	16.41	15.41
20	14.71	12.18	12.95	9.97	11.89	11.52	11.47	12.44	13.35	17.13	16.64	15.88
21	13.49	12.13	13.07	9.39	11.24	11.34	11.84	12.67	13.58	16.29	16.49	16.18
22	13.30	12.07	13.05	9.26	11.50	11.85	11.66	12.85	13.38	16.22	16.60	15.92
23	13.78	12.01	11.99	9.17	10.61	12.11	11.45	12.59	13.30	16.11	16.66	15.56
24	13.80		11.58	9.19	9.79	11.70	11.85	12.47	13.35	15.42	16.47	15.74
25	14.51		11.26	8.99	10.25	12.03	11.90	12.60	13.61	15.04	16.44	15.62
26	13.34		9.57	9.25	10.94	12.19	11.85	12.56	13.85	15.74	16.31	15.51
27	12.54		8.54	10.20	11.69	11.96	12.01	12.76	14.34	15.43	16.32	15.20
28	12.59		8.62	10.00	11.22	12.19	11.97	12.97	14.63	15.05	16.59	15.24
29	13.23		8.96	9.74		11.84	12.15	12.83	14.81	15.29	16.86	15.68
30	13.23		9.09	10.07		11.40	12.05	12.87	14.42	15.95	16.14	15.65
31	14.28		7.74	9.82		11.57		12.68		16.28	15.97	
<b>Mean Day</b>	14.36	12.12	11.49	9.10	11.16	11.56	11.14	12.25	13.71	15.56	16.36	15.68
<b>Max Day</b>	15.75	12.9	13.07	10.37	12.96	12.66	12.15	12.97	14.81	17.13	16.86	16.52
<b>Min Day</b>	12.54	11.29	7.74	6.83	9.34	10.09	10.09	11.53	12.79	14.21	15.86	15.03

Table 6. Minimum Daily Water Temperature (°C)  
Portero Creek, water year 2015

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	11.81	12.39		5.89	7.70	9.01	9.56	10.98	12.16	13.40	15.79	14.97
2	10.91	11.91		5.84	8.11	8.83	9.45	11.61	12.18	13.64	15.75	15.11
3	11.58	10.73	11.74	5.89	8.49	8.09	8.92	11.43	12.16	13.92	15.58	14.56
4	11.70	10.63	12.04	6.24	8.45	8.25	8.81	11.60	12.51	14.06	14.06	14.40
5	12.05	10.93	12.06	6.69	9.69	8.32	8.99	11.43	12.38	14.42	14.09	13.91
6	11.20	10.96	12.05	7.04	9.87	8.28	8.59	11.43	12.52	14.60	14.91	12.70
7	10.78	11.05	11.84	7.07	11.81	8.23	9.86	11.32	12.79	14.66	15.40	12.47
8	11.30	11.21	11.32	7.61	11.29	8.71	9.81	10.88	12.56	14.48	15.14	12.90
9	10.80	11.35	11.50	8.50	12.25	10.16	9.22	11.31	12.71	14.63	15.31	13.37
10	12.79	11.29	11.56	8.88	10.03	9.44	8.95	11.51	13.27	14.71	15.74	14.07
11	13.60	12.08	12.04	8.95	8.89	10.93	8.70	11.52	13.46	14.26	15.74	13.97
12	12.06	12.35	11.91	8.49	9.24	9.85	9.50	11.38	13.11	14.40	13.78	15.31
13	10.45	12.29	10.62	7.78	8.87	10.15	10.19	10.90	13.11	14.60	15.51	15.30
14	14.11	12.33	10.04	7.27	9.15	10.79	10.05	10.71	13.38	15.07	15.09	15.78
15	12.61	11.79	10.62	7.19	9.15	11.29	9.00	10.86	13.13	14.86	14.62	15.03
16	11.69	11.09	10.80	7.91	9.27	10.56	8.97	11.59	12.97	14.73	14.98	13.18
17	10.08	10.83	10.97	8.32	10.82	11.67	9.30	11.70	12.79	14.71	14.47	13.79
18	11.16	10.59	11.30	8.98	11.09	10.34	9.39	11.76	12.13	14.63	15.48	13.01
19	11.28	11.00	10.80	9.34	11.32	10.13	10.46	11.94	11.60	15.03	15.63	12.95
20	12.96	11.93	12.08	9.14	10.39	10.00	10.99	11.92	11.73	15.40	16.14	13.42
21	10.45	11.36	12.31	7.84	9.54	9.36	11.12	11.93	12.40	15.63	16.06	14.18
22	9.88	11.43	12.03	7.71	10.50	10.83	11.28	12.17	11.99	15.49	15.94	15.26
23	10.88	10.85	10.69	7.74	8.65	11.14	11.21	12.32	12.22	15.23	16.07	13.58
24	10.71		10.20	7.81	7.88	10.22	11.20	12.01	12.38	14.07	15.48	13.26
25	12.65		9.54	7.39	8.08	10.52	11.37	12.16	12.50	13.57	15.33	13.80
26	11.53		8.04	7.63	9.19	10.48	11.00	12.19	12.39	14.84	14.34	13.36
27	9.44		7.26	9.15	10.67	10.64	10.58	12.20	13.10	14.06	14.19	13.48
28	9.35		7.51	8.56	10.21	10.70	11.43	12.24	13.70	13.43	14.66	14.18
29	9.84		7.35	8.37		10.32	11.50	12.23	13.88	13.78	15.42	15.05
30	10.90		7.78	8.71		9.89	10.36	11.92	13.37	14.96	14.57	14.45
31	12.30		6.49	8.51		10.46		12.15		15.37	14.78	
<b>Mean Day</b>	11.38	11.41	10.50	7.82	9.66	9.92	9.99	11.65	12.69	14.54	15.16	14.03
<b>Max Day</b>	14.11	12.39	12.31	9.34	12.25	11.67	11.50	12.32	13.88	15.63	16.14	15.78
<b>Min Day</b>	9.35	10.59	6.49	5.84	7.70	8.09	8.59	10.71	11.60	13.40	13.78	12.47

Table 7. Mean Daily Specific Conductance (um hos/cm @ 25 °C)  
Portero Creek, water year 2015

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	11.81	1614.89		907.68	1005.58	865.83	946.68	994.50	1058.81	1129.13	777.29	152.79
2	10.91	1549.96		865.27	1030.58	870.73	952.07	998.28	1058.83	1128.63	543.19	144.32
3	11.58	1449.77	1492.88	878.99	1059.44	872.13	958.38	1003.35	1058.85	1131.71	303.22	135.41
4	11.70	1390.14	1523.02	837.50	1055.09	874.60	964.43	1005.88	1058.88	1125.51	264.86	126.10
5	12.05	1405.89	1536.14	829.51	1041.21	851.69	971.00	1007.99	1058.90	1085.57	312.51	116.27
6	11.20	1462.18	1535.90	845.21	1040.73	805.73	974.92	1007.63	1058.92	1020.33	351.82	104.46
7	10.78	1506.33	1503.91	858.43	1022.27	796.36	916.23	1007.23	1058.94	971.18	388.51	91.70
8	11.30	1527.67	1463.32	865.09	1015.80	793.06	862.24	1007.56	1058.96	951.35	393.41	78.36
9	10.80	1541.78	1425.56	877.58	731.15	789.39	956.33	1007.68	1058.98	934.71	398.79	68.07
10	12.79	1511.55	1391.69	886.25	433.76	788.66	973.27	1009.54	1059.00	934.24	402.51	57.14
11	13.60	1488.40	1185.52	892.66	457.81	813.70	975.23	1009.16	1059.02	944.72	403.56	46.86
12	12.06	1507.11	286.00	903.48	484.38	839.49	975.53	1010.49	1059.03	949.30	395.43	40.23
13	10.45	1535.21	435.61	911.00	510.28	845.41	974.57	1012.11	1059.05	943.57	380.90	35.60
14	14.11	1522.67	546.22	918.14	533.30	852.20	973.99	1017.18	1059.07	944.38	366.21	32.78
15	12.61	1510.57	410.50	926.41	545.31	855.93	973.01	1023.57	1059.09	952.60	347.33	30.45
16	11.69	1502.93	281.02	934.08	561.33	858.55	975.51	1027.14	1059.11	953.17	322.81	28.12
17	10.08	1528.21	277.72	938.61	593.38	865.47	979.10	1029.95	1059.13	944.79	306.58	26.61
18	11.16	1552.96	337.46	949.44	630.48	865.79	983.85	1032.40	1059.14	949.35	294.25	24.89
19	11.28	1564.38	412.51	1025.77	712.74	870.34	990.51	1035.41	1059.15	960.78	279.67	23.61
20	12.96	1583.26	458.20	1047.38	807.21	871.42	1001.10	1041.51	1059.16	961.35	267.24	22.41
21	10.45	1600.00	496.06	1026.80	861.31	874.68	1007.89	1046.95	1059.17	974.86	254.16	21.61
22	9.88	1604.44	532.86	1006.04	885.25	881.75	1009.19	1049.84	1059.18	957.01	243.09	20.69
23	10.88	1535.91	564.77	1019.74	885.41	890.14	1008.02	1053.48	1059.19	961.19	233.81	19.65
24	10.71		589.68	1032.44	883.72	899.33	1008.78	1055.60	1059.20	964.92	224.94	17.87
25	12.65		607.66	1029.64	884.77	904.53	978.08	1052.80	1059.21	966.56	216.41	16.45
26	11.53		622.78	1040.96	880.92	906.44	996.27	1048.28	1059.22	962.95	207.24	15.49
27	9.44		634.89	1078.61	874.02	908.83	1002.17	1046.60	1059.22	954.27	195.60	14.65
28	9.35		654.20	1080.19	865.82	919.00	997.61	1047.57	1059.23	960.85	182.46	13.90
29	9.84		748.89	1050.63		930.51	996.67	1049.73	1059.23	970.08	173.44	12.93
30	10.90		926.43	1009.45		936.13	995.27	1053.28	1059.22	964.91	164.41	12.21
31	12.30		964.55	1008.02		942.65		1056.00		970.41	157.65	
<b>Mean Day</b>	11.38	1521.57	822.27	951.00	796.18	865.82	975.93	1027.38	1059.07	984.66	314.62	51.72
<b>Max Day</b>	14.11	1614.89	1536.14	1080.19	1059.44	942.65	1009.19	1056.00	1059.23	1131.71	777.29	152.79
<b>Min Day</b>	9.35	1390.14	277.72	829.51	433.76	788.66	862.24	994.50	1058.81	934.24	157.65	12.21

Table 8. Mean daily flow, San Clemente Creek, water year 2015  
Santa Lucia Preserve, Monterey County, California

Values are cfs (unless otherwise noted)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.01	0.05	0.05	1.32	0.39	1.10	0.51	0.28	0.21	0.09	0.05	0.05
2	0.01	0.03	0.13	1.28	0.37	0.98	0.50	0.28	0.21	0.09	0.05	0.05
3	0.00	0.03	0.25	1.24	0.35	0.94	0.49	0.29	0.21	0.09	0.05	0.05
4	0.00	0.03	0.16	1.22	0.35	0.89	0.47	0.31	0.20	0.09	0.05	0.06
5	0.00	0.02	0.17	1.17	0.31	0.85	0.46	0.31	0.19	0.10	0.05	0.05
6	0.00	0.02	0.14	1.10	0.38	0.81	0.47	0.30	0.19	0.10	0.04	0.04
7	0.00	0.02	0.10	1.06	2.07	0.77	0.90	0.31	0.17	0.09	0.05	0.04
8	0.00	0.02	0.09	1.04	2.46	0.73	0.71	0.31	0.16	0.10	0.05	0.03
9	0.00	0.01	0.07	0.99	3.94	0.71	0.59	0.31	0.17	0.09	0.04	0.03
10	0.00	0.01	0.05	0.95	2.75	0.69	0.55	0.28	0.16	0.09	0.04	0.02
11	0.01	0.01	0.61	0.95	2.18	0.73	0.51	0.30	0.15	0.09	0.04	0.02
12	0.00	0.02	4.13	0.98	1.81	0.74	0.46	0.29	0.14	0.09	0.04	0.02
13	0.00	0.02	2.03	1.03	1.59	0.68	0.47	0.29	0.14	0.08	0.04	0.02
14	0.00	0.02	1.41	1.02	1.42	0.62	0.49	0.29	0.15	0.08	0.04	0.02
15	0.01	0.03	3.37	1.04	1.31	0.61	0.47	0.28	0.16	0.08	0.03	0.04
16	0.01	0.03	3.63	1.01	1.23	0.62	0.43	0.27	0.16	0.08	0.03	0.05
17	0.01	0.03	3.94	0.94	1.20	0.60	0.39	0.27	0.14	0.07	0.03	0.04
18	0.01	0.03	2.84	0.91	1.16	0.62	0.35	0.28	0.14	0.08	0.03	0.04
19	0.01	0.02	2.40	0.90	1.13	0.60	0.34	0.28	0.14	0.11	0.03	0.03
20	0.01	0.02	2.20	0.89	1.03	0.59	0.33	0.26	0.13	0.08	0.03	0.03
21	0.01	0.04	2.02	0.91	0.99	0.58	0.33	0.26	0.14	0.07	0.04	0.02
22	0.01	0.05	1.88	0.97	0.91	0.54	0.33	0.26	0.14	0.08	0.04	0.03
23	0.01	0.06	1.80	0.97	1.04	0.61	0.34	0.27	0.14	0.08	0.04	0.04
24	0.01	0.05	1.66	0.94	0.96	0.59	0.36	0.25	0.13	0.09	0.04	0.03
25	0.01	0.05	1.69	0.89	0.90	0.54	0.71	0.24	0.11	0.08	0.03	0.02
26	0.02	0.04	1.59	0.88	0.82	0.52	0.58	0.24	0.10	0.08	0.03	0.02
27	0.01	0.04	1.49	0.83	0.77	0.50	0.46	0.23	0.10	0.07	0.03	0.02
28	0.01	0.04	1.38	0.80	1.10	0.49	0.40	0.23	0.10	0.06	0.03	0.02
29	0.01	0.03	1.31	0.85		0.48	0.36	0.23	0.10	0.06	0.04	0.03
30	0.01	0.04	1.27	0.84		0.49	0.31	0.21	0.09	0.06	0.05	0.03
31	0.02		0.06	0.58		0.50		0.22		0.06	0.05	
<b>Mean</b>	0.01	0.03	1.42	0.98	1.25	0.67	0.47	0.27	0.15	0.08	0.04	0.03
<b>Max Day</b>	0.02	0.06	4.13	1.32	3.94	1.10	0.90	0.31	0.21	0.11	0.05	0.06
<b>Min Day</b>	0.00	0.01	0.05	0.58	0.31	0.48	0.31	0.21	0.09	0.06	0.03	0.02
<b>Yield (ac-ft)</b>	0.5	1.8	87.2	60.5	69.2	41.1	27.9	16.7	8.9	5.11	2.44	1.98

Water Year 2015 Annual Summary			yr	day	cfs
Mean Daily Flow	0.45	cfs	1991	9/17	0.03
Max. Daily Flow	4.1	cfs	1992	8/27	0.06
Min. Daily Flow	0.00	cfs	1993	8/27	0.10
7-Day Low Flow	0.00	cfs	1994	7/16	0.04
Total Yield	323	ac-ft	1995	9/29	0.14
Normalized Yield	0.10	ac-ft/ac	2002	8/25	0.01
			2003	9/14	0.03
			2004	8/27	0.02
			2005	9/30	0.11
			2006	9/23	0.17
			2007	8/4	0.03
			2008	8/26	0.07
			2009	9/4	0.03
			2010	9/5	0.01
			2011	9/23	0.17
			2012	9/30	0.04
			2014	8/2	<0.01
			2015	9/27	0.02

Approximate date and value of first minimum daily mean flow near the end of each water year.



Table 9. Mean Daily Water Temperature  
San Clemente Creek, water year 2015

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	13.64	11.97	10.48	4.70	7.42	8.58	8.92	12.00	12.47	16.35	16.46	14.96
2	13.51	11.63	10.80	4.84	7.83	8.11	8.68	11.71	12.57	16.31	16.05	15.10
3	13.74	10.50	11.94	4.98	8.22	7.67	8.40	11.27	12.15	16.26	15.98	14.48
4	13.88	10.32	11.55	5.70	8.41	7.89	8.00	10.99	12.36	16.15	15.00	13.46
5	14.18	10.73	11.60	6.43	9.28	8.09	8.03	10.68	12.38	15.99	15.02	13.29
6	14.22	11.18	11.75	7.17	10.43	8.10	7.79	10.55	12.96	16.04	15.41	13.41
7	14.16	11.13	11.21	7.30	12.02	8.18	9.28	9.75	13.62	15.83	15.58	13.60
8	14.25	11.28	10.58	7.85	11.94	8.69	9.09	10.35	14.65	15.18	15.42	14.22
9	14.06	11.39	10.92	8.49	11.89	8.94	8.70	10.83	14.49	15.38	15.22	14.91
10	13.78	11.13	10.97	8.56	10.26	9.48	8.67	10.91	15.23	15.47	15.44	15.58
11	13.56	11.83	12.09	8.54	9.47	10.52	8.69	10.24	15.26	15.41	15.17	15.80
12	13.68	11.88	11.00	7.96	9.85	9.82	9.52	10.32	15.40	15.36	14.91	15.71
13	13.46	12.19	9.52	7.64	9.70	10.30	9.75	9.91	15.41	15.29	15.07	15.95
14	14.03	11.87	8.90	7.12	9.82	11.10	9.42	9.88	14.37	15.39	15.27	15.76
15	13.98	11.23	10.19	6.88	9.89	11.35	8.57	10.40	13.52	15.28	15.70	15.28
16	13.33	10.70	10.02	7.62	9.99	10.76	9.08	10.95	13.32	15.20	16.36	13.92
17	12.88	10.43	10.19	8.34	10.27	11.23	9.56	10.98	13.52	15.51	16.37	14.18
18	13.09	10.48	10.50	9.06	10.39	9.83	9.77	10.92	13.53	15.44	15.83	13.92
19	13.12	11.29	10.29	9.18	9.91	9.96	9.94	10.91	13.47	15.90	15.98	14.13
20	13.59	11.54	11.31	8.55	9.93	9.90	10.40	10.97	13.79	16.75	16.06	14.63
21	12.79	10.77	11.73	7.39	9.48	9.38	10.59	10.97	13.71	16.71	15.77	15.27
22	12.16	11.04	11.18	7.29	9.86	10.41	10.64	11.31	12.84	15.81	15.67	15.21
23	12.34	10.20	10.30	7.33	8.31	10.40	10.53	11.19	13.39	15.27	15.85	13.92
24	12.35	9.11	9.92	7.43	7.54	9.79	10.34	11.24	13.63	14.83	15.56	14.42
25	13.08	8.96	8.88	7.35	7.59	10.36	10.61	11.72	14.29	14.89	15.48	14.84
26	12.38	9.29	7.13	7.86	8.54	10.61	10.46	11.89	15.09	15.12	15.57	14.74
27	11.49	9.39	6.26	9.33	9.77	10.87	10.86	12.00	14.96	15.04	15.83	14.80
28	11.36	8.25	6.63	8.54	9.27	10.64	11.30	11.83	15.08	15.49	16.30	14.78
29	11.67	9.17	6.65	8.26		10.47	11.12	11.80	15.17	15.92	16.49	14.98
30	12.19	10.14	7.08	8.15		10.05	11.03	12.27	16.06	16.37	15.42	14.76
31	12.58		5.12	7.86		9.95		12.01		16.77	15.11	
<b>Mean Day</b>	13.18	10.70	9.89	7.54	9.54	9.72	9.59	11.06	13.96	15.70	15.66	14.67
<b>Max Day</b>	14.25	12.19	12.09	9.33	12.02	11.35	11.30	12.27	16.06	16.77	16.49	15.95
<b>Min Day</b>	11.36	8.25	5.12	4.70	7.42	7.67	7.79	9.75	12.15	14.83	14.91	13.29

Table 10. Maximum Daily Water Temperature (°C)  
San Clemente Creek, water year 2015

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	14.57	12.19	10.95	5.29	8.28	9.38	9.62	13.42	13.92	17.52	18.31	16.33
2	14.58	11.95	11.46	5.37	8.54	8.78	9.61	13.04	14.08	17.80	17.94	16.27
3	14.74	11.09	12.27	5.73	9.00	8.65	9.65	12.57	13.38	18.07	17.89	15.72
4	14.92	11.08	11.97	6.55	9.09	8.89	9.05	12.10	13.49	17.95	15.93	14.43
5	15.17	11.55	12.04	7.38	9.78	9.16	9.03	12.11	13.87	17.68	16.14	14.41
6	15.19	11.97	12.02	7.87	11.78	9.18	8.71	11.89	14.33	17.68	16.12	14.70
7	15.08	11.79	11.70	8.01	12.41	9.45	9.94	10.33	15.08	17.54	17.31	14.90
8	15.15	12.06	11.13	8.61	13.09	9.76	9.86	11.44	16.42	16.43	17.35	15.51
9	14.88	12.00	11.52	9.03	12.40	10.00	9.83	12.14	15.08	16.84	17.19	16.19
10	14.55	11.63	11.66	8.95	11.26	10.54	9.81	12.38	16.18	16.86	17.36	16.76
11	14.36	12.18	12.75	8.94	10.47	11.13	9.91	11.52	16.72	17.13	17.05	16.85
12	14.55	12.09	11.33	8.44	10.64	10.77	10.85	11.57	16.99	17.00	16.79	16.17
13	14.41	12.72	10.25	8.06	10.60	11.48	10.77	10.96	16.96	16.89	17.06	16.83
14	14.59	12.30	9.34	7.59	10.62	12.06	10.34	10.54	15.99	17.30	17.27	16.25
15	14.53	11.56	11.21	7.62	10.76	12.14	9.82	11.63	15.24	17.03	18.05	16.08
16	13.97	11.22	10.81	8.24	10.68	11.61	10.40	12.14	14.98	17.03	18.48	14.68
17	13.65	11.00	10.51	9.10	10.68	11.88	10.92	11.58	15.32	17.39	18.52	15.07
18	13.73	11.08	10.99	9.62	10.86	10.85	11.08	11.58	15.46	17.19	18.05	14.95
19	13.75	11.89	11.02	9.63	10.46	11.16	11.12	11.38	15.29	16.63	18.15	15.21
20	14.06	11.77	11.68	9.02	10.53	11.00	11.55	11.61	15.42	18.06	18.04	15.74
21	13.42	11.17	12.17	7.98	10.22	10.65	11.56	11.49	15.42	18.51	17.78	16.32
22	12.82	11.62	12.04	8.14	10.21	11.27	11.41	12.09	14.65	17.60	17.59	16.17
23	13.01	11.30	10.71	7.97	9.15	11.14	11.43	11.50	15.17	17.17	17.60	14.99
24	13.02	9.73	10.44	8.16	8.39	10.73	11.32	12.65	15.39	16.80	17.62	15.50
25	13.57	9.76	10.04	8.17	8.90	11.27	11.44	12.99	16.00	16.90	17.36	15.85
26	12.81	10.12	8.04	8.82	9.42	11.85	11.43	13.12	16.82	17.07	17.37	15.71
27	12.11	10.19	6.96	9.87	10.23	11.83	12.34	13.35	16.49	17.12	17.73	15.56
28	12.10	8.93	7.13	9.30	9.70	11.72	12.69	13.38	16.62	17.55	18.12	15.26
29	12.56	10.14	7.66	8.92		11.63	12.43	13.27	16.88	17.96	18.24	15.42
30	12.82	10.64	7.76	8.70		11.25	12.69	13.93	17.58	18.26	16.88	15.20
31	12.92		5.91	8.37		10.88		13.26		18.57	16.59	
<b>Mean Day</b>	13.92	11.29	10.50	8.18	10.29	10.71	10.69	12.16	15.51	17.40	17.48	15.63
<b>Max Day</b>	15.19	12.72	12.75	9.87	13.09	12.14	12.69	13.93	17.58	18.57	18.52	16.85
<b>Min Day</b>	12.10	8.93	5.91	5.29	8.28	8.65	8.71	10.33	13.38	16.43	15.93	14.41

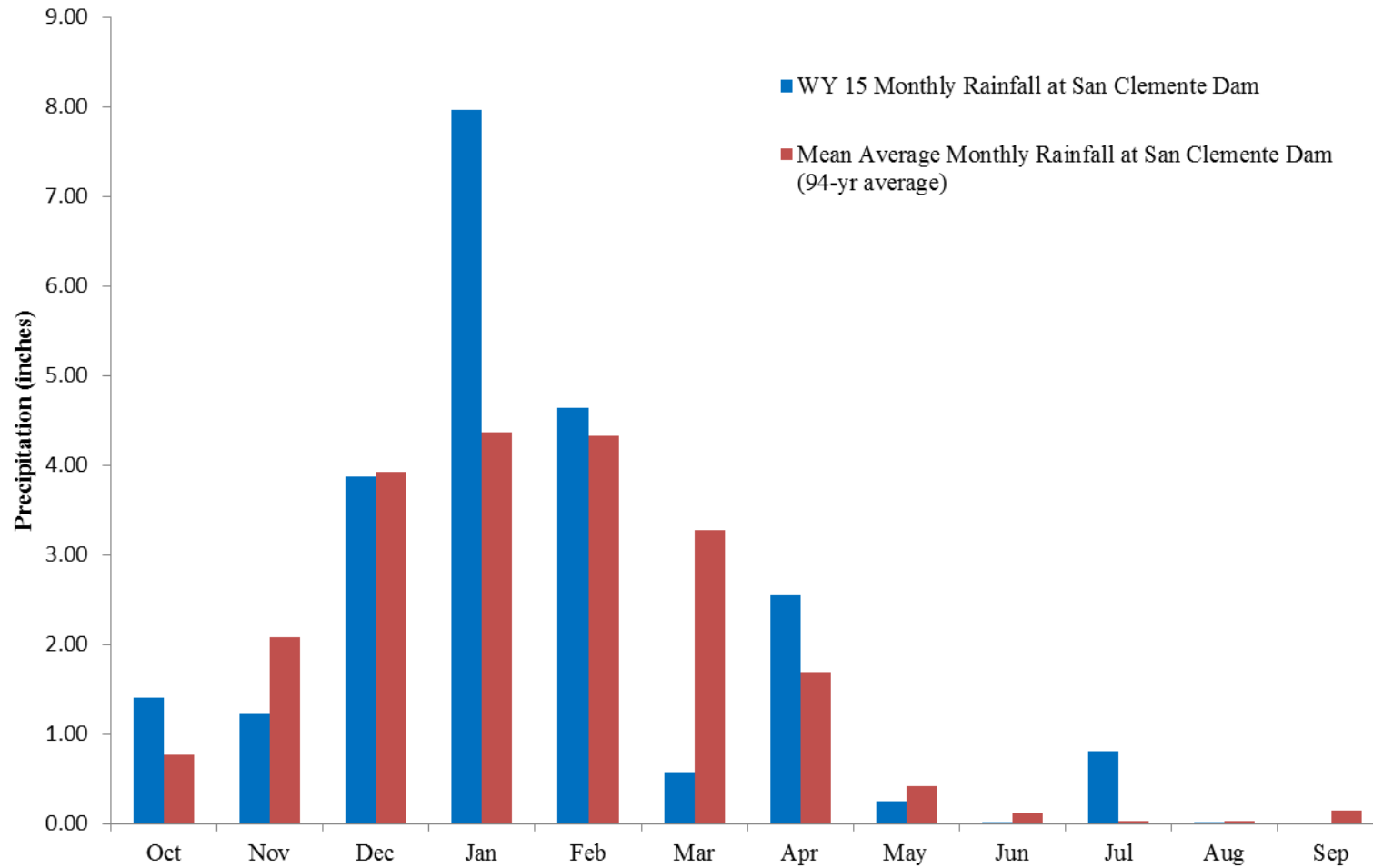
Table 11. Minimum Daily Water Temperature  
San Clemente Creek, water year 2015

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	12.73	11.74	10.08	4.08	6.45	7.80	7.75	10.55	11.18	15.34	15.41	13.81
2	12.26	10.93	10.19	4.28	7.04	7.28	7.42	10.41	11.27	15.43	14.99	14.31
3	12.63	9.76	11.43	4.30	7.46	6.56	6.92	10.26	11.28	15.01	15.14	13.77
4	12.75	9.45	11.10	4.96	7.64	6.77	6.51	10.45	11.62	14.91	13.94	12.47
5	13.08	9.88	11.25	5.58	8.81	6.91	6.88	9.87	10.77	14.93	13.65	12.04
6	13.20	10.43	11.41	6.44	9.37	6.86	6.40	9.83	11.50	14.99	14.67	12.14
7	13.15	10.42	10.66	6.50	11.65	6.72	8.59	9.01	12.06	14.80	14.68	12.13
8	13.34	10.48	9.90	7.21	10.96	7.45	8.33	9.25	12.93	14.18	14.38	12.84
9	13.10	10.70	10.35	8.01	11.26	7.67	7.28	9.97	13.71	14.55	13.77	13.62
10	12.87	10.41	10.38	8.12	9.40	8.20	7.21	9.59	14.42	14.70	14.39	14.49
11	12.54	11.44	11.31	8.06	8.34	9.99	7.06	9.18	14.00	14.46	13.96	14.69
12	12.88	11.65	10.25	7.45	8.96	8.69	7.87	9.77	13.98	14.45	13.37	15.05
13	12.30	11.64	8.97	7.13	8.68	8.94	8.80	8.68	14.18	14.03	13.76	15.34
14	13.58	11.48	8.47	6.49	8.89	10.00	8.41	9.11	12.87	14.49	14.19	15.27
15	13.50	10.71	8.96	6.05	8.98	10.52	7.00	9.35	11.86	14.07	14.11	14.02
16	12.65	9.98	9.32	6.94	9.10	9.69	7.41	10.25	11.37	13.57	14.92	12.91
17	11.98	9.69	9.65	7.62	9.67	10.21	7.93	10.47	11.50	14.05	15.02	13.31
18	12.33	9.79	10.16	8.45	9.90	8.57	8.12	10.54	11.79	14.05	14.37	12.78
19	12.37	10.66	9.66	8.68	9.05	8.64	8.50	10.59	11.61	15.22	14.97	12.86
20	13.18	11.09	10.98	8.03	9.03	8.70	9.45	10.52	11.94	15.68	15.33	13.39
21	12.15	10.27	11.33	6.64	8.43	7.79	9.85	10.47	12.27	15.94	14.90	14.18
22	11.32	10.41	10.72	6.45	9.17	9.59	10.06	10.62	10.74	14.81	14.77	14.29
23	11.64	9.39	9.76	6.52	7.43	9.85	9.96	10.88	11.93	14.27	14.98	12.60
24	11.54	8.40	9.28	6.64	6.49	8.49	9.86	9.94	12.28	13.32	14.33	13.36
25	12.48	8.10	8.12	6.45	6.39	9.20	9.82	10.76	12.54	13.31	14.04	14.07
26	11.88	8.50	6.50	6.87	7.52	9.15	9.43	10.96	13.74	13.89	14.14	13.72
27	10.62	8.74	5.57	8.71	9.21	9.69	9.14	10.93	13.65	13.48	14.64	13.93
28	10.51	7.38	6.18	7.79	8.73	9.27	9.98	10.28	13.89	13.82	15.07	14.22
29	10.73	8.20	6.01	7.47		9.01	9.94	10.06	13.62	14.37	15.64	14.60
30	11.48	9.33	5.91	7.46		8.56	8.93	10.69	14.62	15.12	14.44	14.17
31	12.16		4.64	7.22		9.16		10.64		15.92	13.97	
<b>Mean Day</b>	12.35	10.03	9.31	6.86	8.71	8.58	8.36	10.13	12.50	14.55	14.51	13.68
<b>Max Day</b>	13.58	11.74	11.43	8.71	11.65	10.52	10.06	10.96	14.62	15.94	15.64	15.34
<b>Min Day</b>	10.51	7.38	4.64	4.08	6.39	6.56	6.40	8.68	10.74	13.31	13.37	12.04

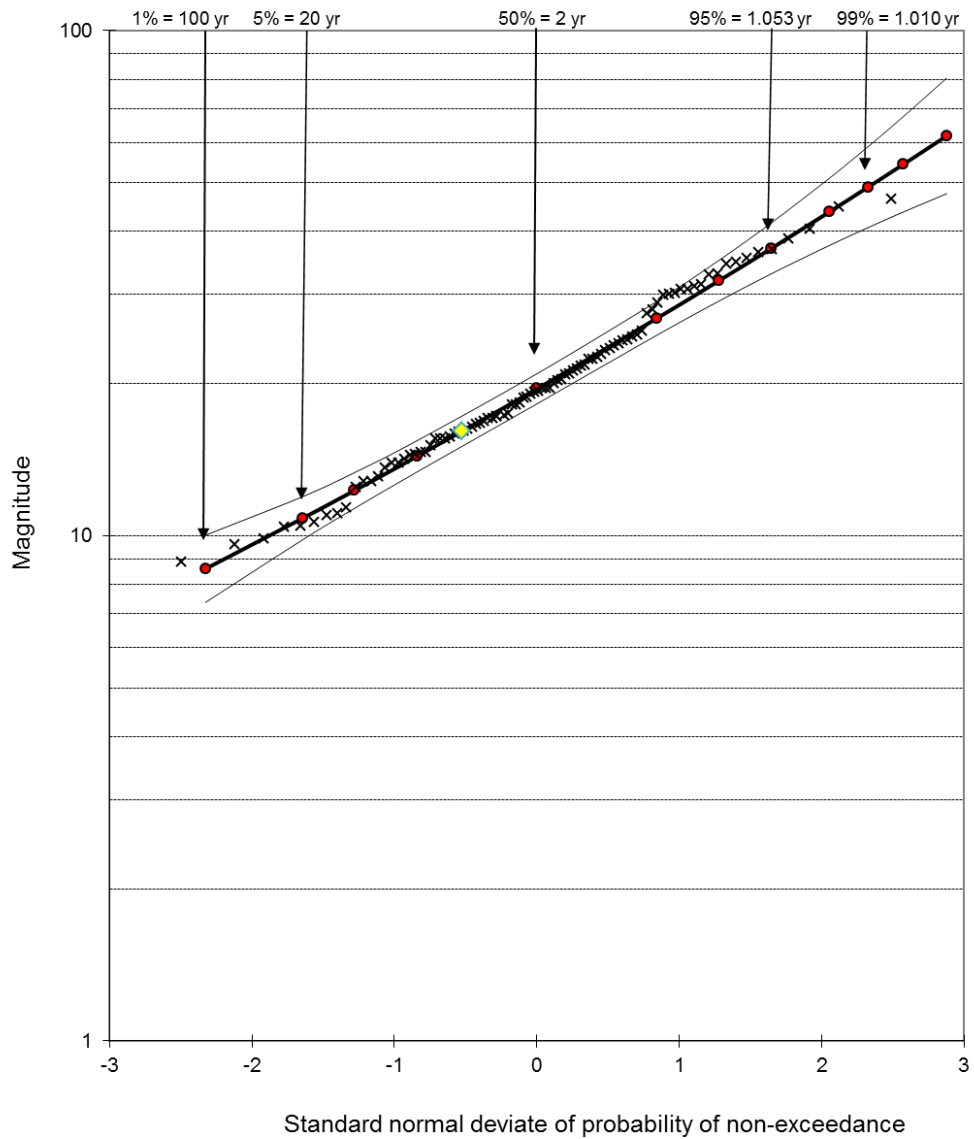
Table 12. Mean Daily Specific Conductance (um hos/cm @ 25 °C)  
San Clemente Creek, water year 2015

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	273.54	256.70	254.66	188.41	215.54	93.92	114.99	132.43	149.73	284.52	291.76	283.68
2	273.45	262.03	239.53	190.43	218.40	94.21	114.31	131.90	150.36	284.25	289.13	284.70
3	275.76	255.18	248.36	192.15	220.80	93.65	113.65	131.29	148.58	284.49	288.45	280.33
4	277.20	254.14	268.15	197.44	221.97	94.83	112.49	130.77	149.54	284.08	281.28	273.08
5	281.20	257.19	269.61	202.10	227.51	95.75	112.66	129.70	150.04	283.17	281.72	271.83
6	287.00	260.27	276.92	206.88	225.49	95.97	112.04	129.02	152.79	284.00	284.17	273.04
7	289.76	259.75	279.17	208.65	185.19	96.53	116.98	125.71	156.34	282.57	285.66	275.46
8	291.74	260.74	275.86	212.44	147.50	99.94	116.05	127.11	160.59	278.00	284.73	279.57
9	282.57	261.63	278.74	217.06	79.54	103.48	114.48	129.13	160.33	279.93	283.56	284.59
10	278.34	259.72	278.91	218.39	85.78	106.94	114.25	130.22	163.86	280.42	285.31	289.75
11	273.86	264.84	236.25	218.97	89.78	111.20	114.20	127.75	164.90	280.55	283.48	291.51
12	275.26	264.92	144.43	216.54	93.24	110.05	116.97	128.14	166.49	280.54	281.44	291.18
13	274.26	265.53	187.29	214.42	95.40	112.38	118.04	131.79	166.56	280.34	282.73	291.90
14	277.66	264.68	210.74	211.49	97.99	115.80	117.08	135.59	162.44	281.15	284.39	290.21
15	277.17	260.53	154.82	210.64	100.00	117.40	114.25	138.93	161.95	280.41	287.78	286.02
16	272.15	256.67	149.01	214.86	102.14	116.05	115.94	140.98	159.98	280.14	292.93	276.63
17	268.14	254.97	138.82	219.13	104.71	118.03	117.78	141.40	159.41	282.53	293.07	278.78
18	270.30	255.23	167.79	223.61	106.86	113.94	118.38	141.27	159.83	281.99	288.69	277.00
19	270.42	260.77	180.41	224.36	105.94	114.77	118.81	141.08	160.16	282.35	289.78	278.81
20	273.33	261.97	189.97	219.89	103.92	114.93	119.99	141.38	161.84	291.00	290.29	283.00
21	267.40	257.25	197.00	213.19	96.47	113.67	120.74	141.69	162.53	292.78	288.44	288.09
22	263.16	259.38	200.96	213.43	98.06	117.39	121.05	143.08	160.17	286.63	287.84	287.55
23	264.46	253.73	201.06	214.11	94.76	117.59	120.89	143.42	161.94	283.05	289.22	277.84
24	264.31	246.24	202.33	214.11	93.31	115.88	120.31	143.58	163.11	280.06	287.50	281.39
25	269.64	245.27	199.27	213.67	93.50	117.96	121.26	145.22	218.41	280.75	287.30	285.29
26	264.49	247.53	193.10	217.04	96.18	119.02	123.06	146.07	273.01	282.01	288.40	284.50
27	258.18	248.31	190.93	226.70	99.77	120.22	127.82	146.61	272.27	281.98	290.78	284.82
28	257.11	240.78	194.56	222.43	94.45	119.72	125.94	146.30	273.64	285.53	294.10	284.23
29	259.58	246.78	196.14	220.06		119.47	126.24	146.58	274.92	288.52	294.91	285.10
30	263.39	250.44	199.71	219.06		118.27	127.42	148.52	282.14	291.24	287.22	283.49
31	259.95		190.27	217.24		118.26		147.46		294.21	284.85	
<b>Mean Da</b>	272.09	256.44	212.73	212.87	128.36	110.23	118.27	137.55	180.26	283.65	287.45	282.78
<b>Max Day</b>	291.74	265.53	279.17	226.70	227.51	120.22	127.82	148.52	282.14	294.21	294.91	291.90
<b>Min Day</b>	257.11	240.78	138.82	188.41	79.54	93.65	112.04	125.71	148.58	278.00	281.28	271.83

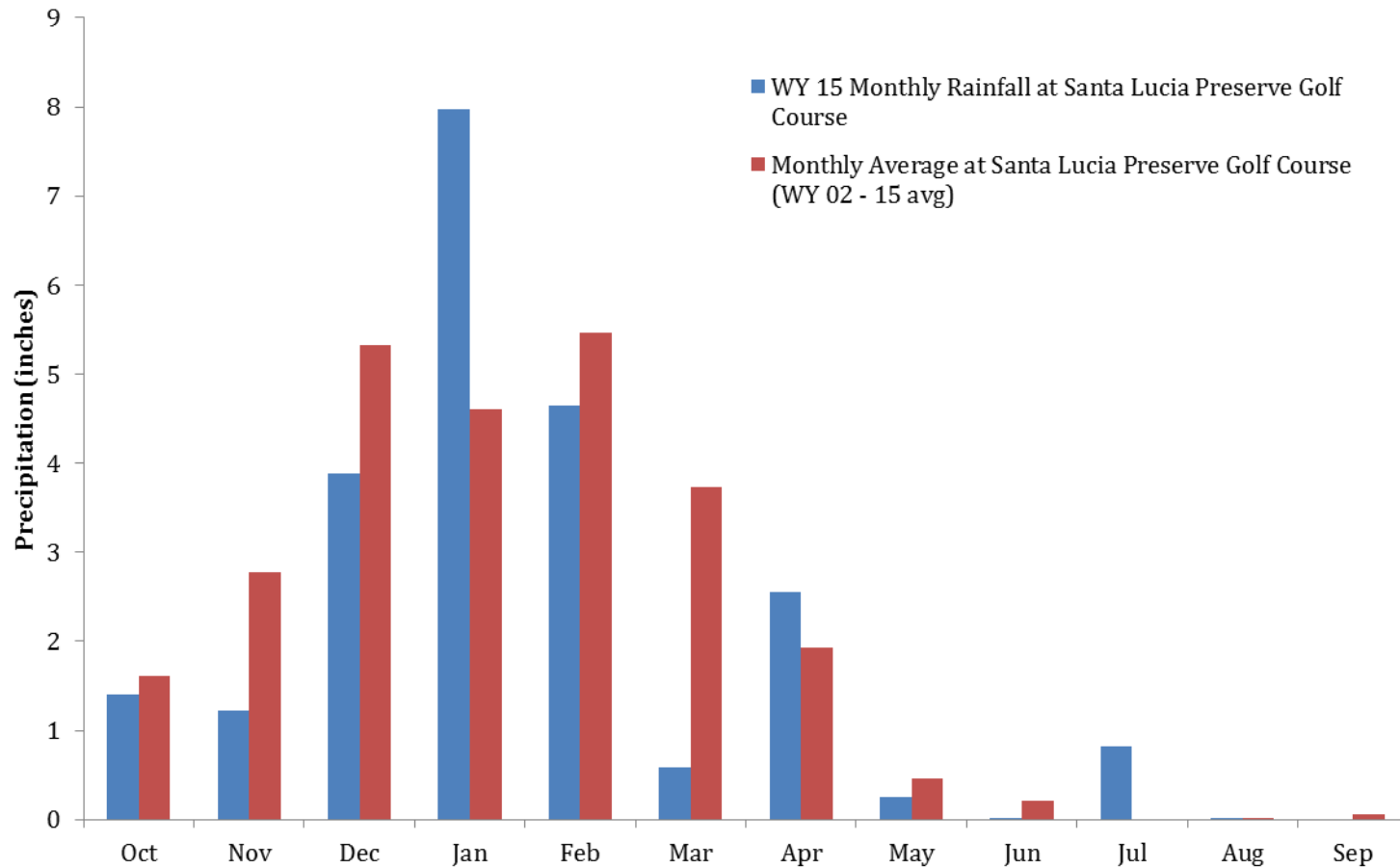
## 7 Figures



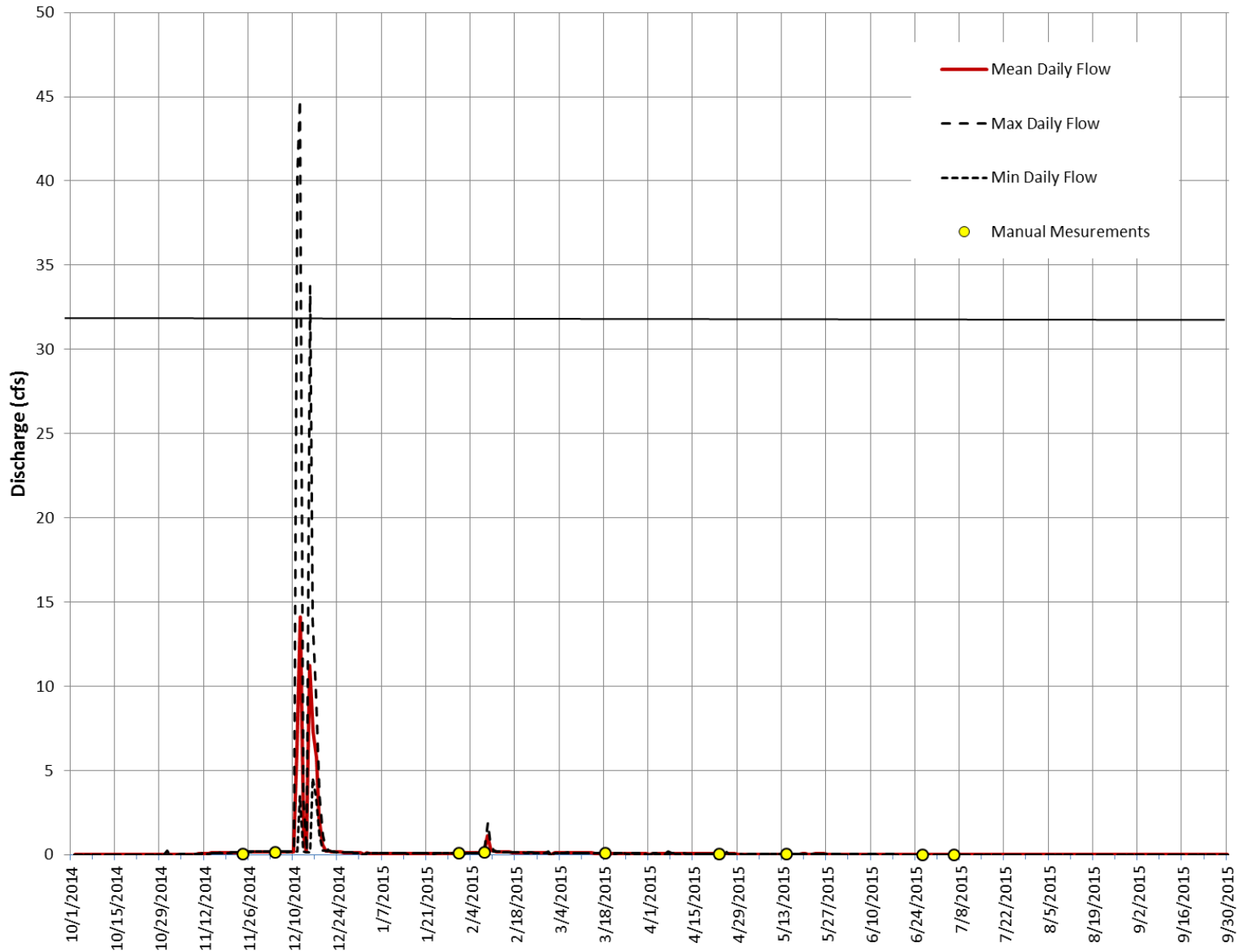
**Figure 1. Monthly precipitation at San Clemente Dam for Water Year 2015.** WY 2015 precipitation was below average. Total precipitation in WY 2015 at the dam was 16.1 inches compared to the average total precipitation at the dam, 21.14 inches. Mean monthly data is based on Water Years 1922 – 2015. Precipitation data are from the Monterey Peninsula Water Management District (2015).



**Figure 2. Log-Pearson Type-III statistical analysis of historic precipitation data from San Clemente Dam.** Thin curved lines represent upper and lower 95% confidence bounds for precipitation and non-exceedance probability. The yellow diamond symbol marks the 16.1 inch precipitation of the 2015 water year.

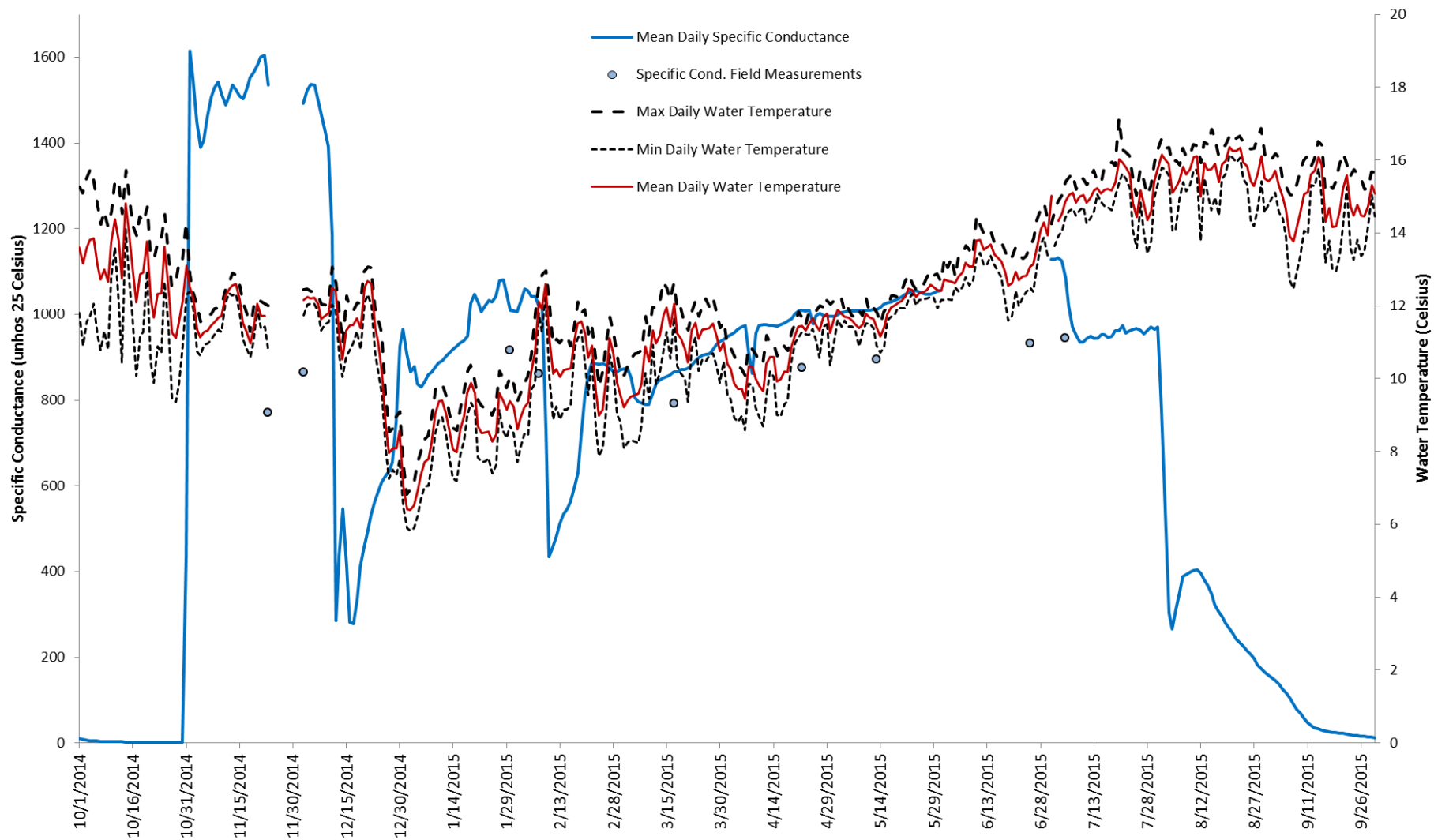


**Figure 3. Monthly Precipitation at Santa Lucia Preserve Golf course for Water Year 2015.** WY 2015 precipitation was below average at the golf course. Precipitation was 15.10 inches in Water Year 2015 compared to the 13 year annual average of 26.21 inches. Mean monthly average is based only on Water Years 2002 - 2015 and is probably not an accurate characterization of actual long-term patterns (precipitation data from Santa Lucia Preserve, 2015).



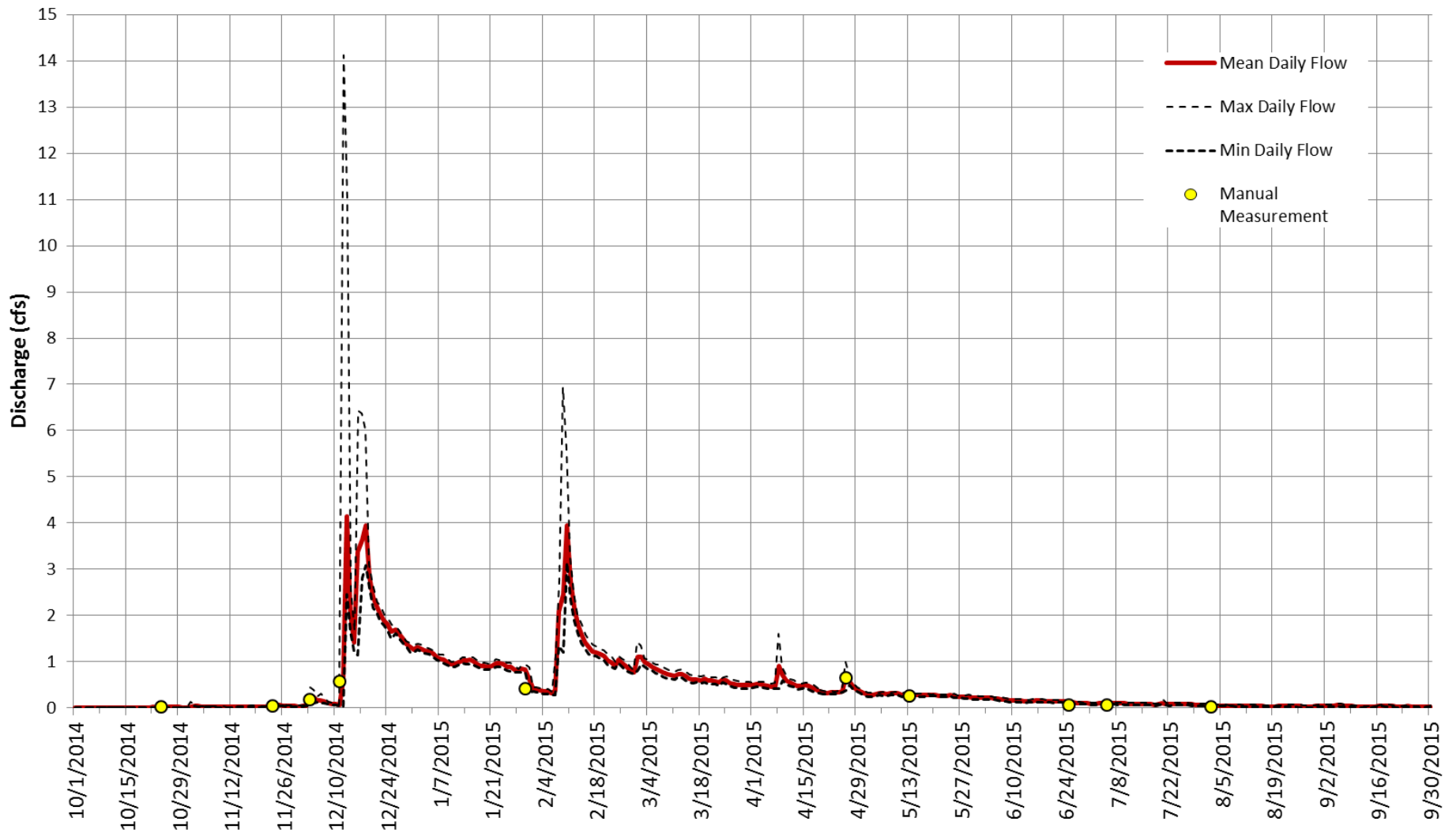
**Figure 4. Mean Daily Streamflow at Potrero Creek gage for Water Year 2015.** Red line is mean daily streamflow. Minimum and maximum daily flows are also shown. Yellow points represent manual discharge measurements. Black horizontal line at 32 cfs represents the limit to the streamflow rating at Potrero.



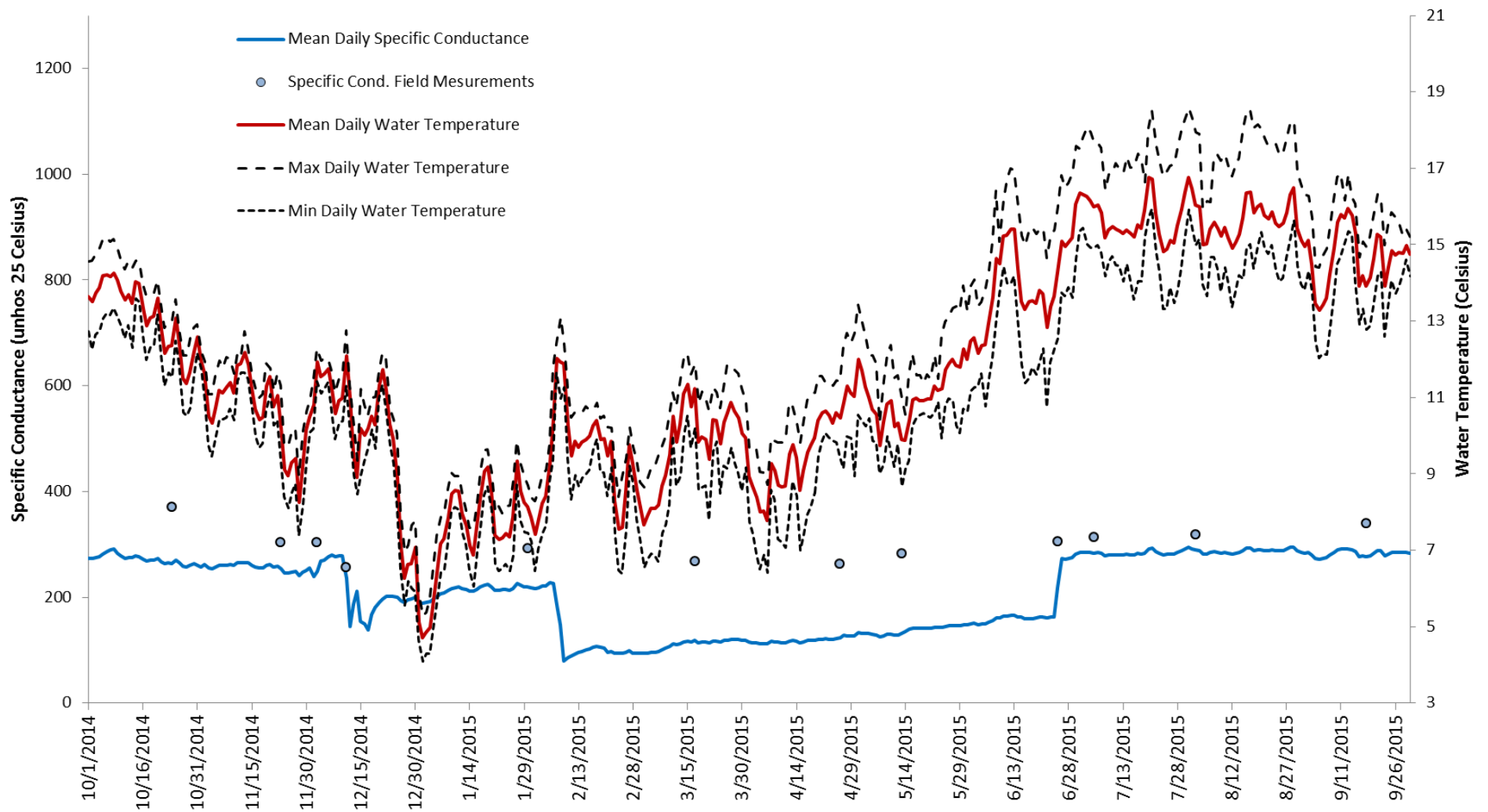


**Figure 5. Daily Specific Conductance Water Temperature data at Potrero Creek gage for Water Year 2015.**

Blue line is mean daily specific conductance; red line is mean daily water temperature; dotted lines represent minimum and maximum daily water temperature values.



**Figure 6. Mean Daily Streamflow at San Clemente Creek gage for Water Year 2015.** Red line is mean daily streamflow. Minimum and maximum daily flows are also shown. Yellow points represent manual discharge measurements.



**Figure 7. Daily Specific Conductance and Water Temperature data at San Clemente Creek gage for Water Year 2015.** Blue line is mean daily specific conductance; red line is mean daily water temperature; dotted lines represent minimum and maximum daily water temperature values.