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Summary of Precipitation and Streamflow for Potrero and San Clemente Creeks in Water-Year 2010

Santa Lucia Preserve
Monterey County, California

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Executive Summary

The purpose of this annual report is to present precipitation and streamflow summaries for the 2010 water year (October 1, 2009 to September 31, 2010). In March 2007 CSU–Monterey Bay began hydrologic monitoring of Santa Lucia Preserve for the Santa Lucia Conservancy. This project is a continuation of monitoring begun by Balance Hydrologics as part of the permit requirements for land development. Discharge, temperature, and specific conductance are reported for two creeks on the Santa Lucia Preserve, Potrero Creek and San Clemente Creek. Precipitation records are reported from two locations, the San Clemente Dam and Santa Lucia Preserve golf course.

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1 Introduction

This report is a hydrologic data summary for Santa Lucia Preserve for Water Year 2010 (WY-10). Balance Hydrologics installed four 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), one on Potrero Creek (installed in 2002), and one on San Clemente Creek (installed in 2002). Detailed information on gage installation, operation and individual gage sites is available in Balance Hydrologics (2002).

Operation of the Potrero Creek and San Clemente Creek streamflow gages was transferred to CSUMB Watershed Institute 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

Precipitation data presented from the Santa Lucia golf course is from a Rain Bird weather station operated by Santa Lucia Preserve. Precipitation data recorded by California American Water Company at nearby San Clemente Dam are included for comparison.

At San Clemente Dam the total WY-10 rainfall was 27.46 inches (Table 1 and Figure 1), which represents above average precipitation at the Dam. Based on the 89-year San Clemente Dam precipitation record, the average rainfall is 21.43 inches. Using Log-Pearson Type-III analysis, rainfall at San Clemente Dam should be less than 27.46 once every 1.24 years on average (Figure 2).

The recorded rainfall at the Santa Lucia Preserve Golf Course in WY-10 was 38.83 inches (Table 2 and Figure 3), which is above the 9 year average, 27.40 inches. The short duration of the record at the golf course may not be representative of actual long term precipitation patterns. The Preserve golf course received approximately 11 more inches of rain than the nearby 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 nine years of rain gage operation at the golf course, the golf course gage has recorded between 0.96 fewer inches and 11.63 more inches than the Dam gage, with an average difference of 6.74 inches and a standard deviation of 4.57 inches.

3 Streamflow, Temperature, and Conductance Data

The streamflow gaging stations on Potrero and San Clemente each consist of a Campbell CR10X data logger (powered by 10 or 20 watt solar panels), two Druck pressure transducers to measure water depth, Campbell specific conductance and water temperature probe, as well as staff plates for manual readings (Balance Hydrologics 2002). Data loggers record measurements of pressure, temperature, and conductance at 15-minute intervals.

In WY-10, streamflow gage data was downloaded to a laptop computer during monthly visits, at which time manual discharge measurements were also taken using standard hydrologic practices. A Swoffer (model 3000) and a FlowTracker (SonTek handheld ADV) current velocity meters were used to measure discharge. A portable Parshall flume was used to measure discharge during the latter part of the dry season when flows became too low to use the Swoffer or the FlowTracker meters.

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-10, Potrero Creek had a mean daily flow of 1.35 cfs, a maximum daily flow of 33.5 cfs, and a minimum daily flow of 0.01 cfs; the 7-day low flow was 0.02 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.

3.2 San Clemente Creek

The current gage station on San Clemente Creek was installed April 30, 2002 and is located near the Santa Lucia Preserve property boundary. In WY-10, San Clemente Creek had a mean daily flow of 4.71 cfs, a maximum daily flow of 42.4 cfs, and a minimum daily flow of 0.01 cfs; the 7-day low flow was 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. The rating curve for Potrero Creek was adjusted this year to reflect changes in the channel and is applicable to flows up to 46 cfs.

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.

The San Clemente Creek gage housing was broken in the high flows near January 19, 2010. The pressure transducers and specific conductance probes were lodged in the sand approximately 0.3 ft above where the gage station was originally housed. A shift was applied to the streamflow gage data after January 19, 2010. The specific conductance gage data were not accurate after January 19, 2010 and are not included in this report.

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 2010
 San Clemente Dam, Monterey County, California

Record obtained from: California-American Water Company, Monterey District

Values are inches

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1						0.36	0.14					
2						0.14	T					
3												
4						1.06						
5					0.66		0.95					
6					0.37		0.02					
7			0.47									
8			0.03		0.37	0.22						0.01
9					0.19	0.20						T
10			0.04		0.09	0.11		0.02				
11			0.19					0.12				
12			0.14	0.19		T	1.58					
13	1.02		1.09	0.46		0.33	0.13					
14	4.03		0.02									
15	T											
16												
17												
18		T		1.62				0.02				
19				1.75								
20	0.06			1.90			0.49					
21		0.07	T	0.51			0.75					
22			0.18	0.80	0.33		0.20					
23				0.17	0.01							
24					1.07							
25				T								
26				0.23								
27		0.15		0.16	1.16		0.01	0.07				
28			0.05				0.13	0.27				
29			0.12				0.05					
30			0.04	0.17		0.06						
31			T			0.11						
Total	5.11	0.22	2.37	7.96	4.25	2.59	4.45	0.50	0.00	0.00	0.00	0.01
Annual Total	<u>27.46</u>											

Table 2. Daily precipitation record and monthly totals, water year 2010
 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												
2						0.84	0.12					
3						1.31	0.01					
4					0.68	0.03	1.45					
5					0.19		1.05					
6			0.08		0.37	0.05						
7			0.72		0.16							
8					0.06	0.25						
9					0.41	0.03		0.04	0.01			
10			0.08		0.01	0.23		0.22				
11			0.29				1.67					
12			0.62	0.59		0.59	0.95					
13	7.02		0.34	0.56								
14	0.13		0.10									
15												
16												
17				0.61				0.06				
18		0.03		1.60				0.01				
19	0.05			2.25								
20		0.11		2.69	0.04		0.86					
21			0.44	1.03	0.28		0.58					
22			0.01	0.57	0.24							
23		0.01		0.19	0.59							
24					0.91							
25				0.02				0.01				
26			0.06	0.51	1.15							
27		0.33	0.02		0.43		0.28	0.49				
28			0.07				0.09					
29			0.01	0.17		0.01	0.01					
30			0.05	0.07		0.23						
31						0.40						
Total	7.20	0.48	2.89	10.86	5.52	3.97	7.07	0.83	0.01	0.00	0.00	0.00
Annual Total	38.83											

Note: Rainfall recorded on day of measuring.

Table 3. Mean daily flow, Potrero Creek, water year 2010
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	0.09	0.12	0.14	0.70	4.83	0.52	1.53	0.22	0.12	0.10	0.08
2	0.01	0.09	0.13	0.14	0.58	11.97	0.44	1.30	0.21	0.12	0.10	0.08
3	0.02	0.09	0.13	0.13	0.48	16.62	0.41	1.08	0.21	0.12	0.10	0.08
4	0.02	0.09	0.14	0.14	0.45	16.59	0.61	0.96	0.20	0.12	0.10	0.08
5	0.02	0.09	0.15	0.14	0.85	11.11	33.48	0.84	0.19	0.12	0.10	0.08
6	0.02	0.09	0.15	0.14	0.63	7.81	10.99	0.75	0.18	0.12	0.10	0.08
7	0.02	0.09	0.23	0.14	0.66	5.10	6.36	0.66	0.18	0.11	0.10	0.08
8	0.02	0.09	0.11	0.14	0.67	3.79	4.26	0.61	0.17	0.11	0.10	0.09
9	0.02	0.09	0.10	0.13	3.50	4.89	4.91	0.58	0.17	0.12	0.10	0.09
10	0.02	0.09	0.11	0.13	4.92	4.12	3.29	0.57	0.17	0.12	0.10	0.08
11	0.02	0.09	0.12	0.13	2.75	2.92	8.33	0.52	0.16	0.11	0.09	0.08
12	0.02	0.10	0.14	0.18	1.87	3.31	15.79	0.49	0.16	0.11	0.09	0.09
13	0.70	0.09	0.15	0.16	1.37	5.48	12.30	0.47	0.15	0.11	0.09	0.09
14	0.63	0.10	0.13	0.13	1.05	3.48	8.74	0.44	0.15	0.11	0.09	0.09
15	0.09	0.09	0.12	0.13	0.84	2.77	5.80	0.41	0.15	0.10	0.09	0.09
16	0.05	0.09	0.12	0.13	0.70	2.26	4.24	0.40	0.14	0.10	0.09	0.09
17	0.04	0.10	0.12	0.17	0.59	1.93	5.57	0.38	0.14	0.10	0.09	0.10
18	0.04	0.10	0.13	0.76	0.51	1.65	4.13	0.37	0.15	0.10	0.09	0.10
19	0.04	0.10	0.13	12.42	0.45	1.34	3.11	0.34	0.15	0.10	0.09	0.10
20	0.04	0.11	0.13	22.24	0.40	1.08	3.73	0.30	0.15	0.10	0.09	0.10
21	0.04	0.12	0.14	12.20	0.40	0.97	10.45	0.29	0.15	0.10	0.09	0.10
22	0.05	0.12	0.15	15.46	0.51	0.90	6.22	0.27	0.14	0.10	0.09	0.09
23	0.05	0.12	0.13	9.70	0.57	0.81	4.46	0.26	0.14	0.11	0.09	0.08
24	0.05	0.12	0.13	4.34	5.26	0.72	3.59	0.25	0.14	0.11	0.08	0.08
25	0.05	0.12	0.13	3.59	5.02	0.66	4.60	0.25	0.14	0.11	0.08	0.08
26	0.06	0.12	0.14	3.69	4.00	0.61	3.46	0.25	0.15	0.11	0.08	0.08
27	0.06	0.13	0.15	3.05	11.45	0.57	3.13	0.31	0.14	0.10	0.08	0.08
28	0.06	0.12	0.15	1.96	8.76	0.51	2.66	0.26	0.13	0.10	0.08	0.08
29	0.07	0.12	0.15	1.45		0.50	2.18	0.25	0.13	0.10	0.08	0.08
30	0.08	0.12	0.15	1.19		0.51	1.82	0.23	0.12	0.10	0.09	0.08
31	0.08		0.14	0.87		0.52		0.23		0.10	0.09	
Mean	0.08	0.10	0.14	3.07	2.14	3.88	5.99	0.51	0.16	0.11	0.09	0.09
Max Day	0.70	0.13	0.23	22.24	11.45	16.62	33.48	1.53	0.22	0.12	0.10	0.10
Min Day	0.01	0.09	0.10	0.13	0.40	0.50	0.41	0.23	0.12	0.10	0.08	0.08
Yield (ac-ft)	4.93	6.14	8.39	189.0	118.9	238.7	356.2	31.42	9.49	6.68	5.63	5.13

Water Year 2010 Annual Summary				yr	day	cfs
Mean Daily Flow	1.35	cfs		1992	7/10	0.02
Max. Daily Flow	33.5	cfs		1993	7/21	0.04
Min. Daily Flow	0.01	cfs		1994	8/14	0.02
7-Day Low Flow	0.02	cfs		1995	9/19	0.02
Total Yield	981	ac-ft		2002	8/8	0.01
Normalized Yield	0.29	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

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

Table 4. Mean Daily Water Temperature (°C)
Potrero Creek, water year 2010

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1	11.45	10.83	7.42	8.95	9.23	10.62	10.18	11.12	12.62	12.71	13.35	13.80
2	11.10	11.07	7.70	8.61	9.52	11.04	10.30	11.61	12.47	12.74	13.39	13.89
3	10.93	11.19	7.90	8.00	9.17	10.22	10.30	11.59	13.15	12.72	13.38	13.56
4	11.16	11.14	7.59	7.32	9.25	9.73	9.74	12.21	13.67	12.46	13.29	13.51
5	11.08	11.01	7.80	7.07	10.18	9.50	10.20	11.26	14.17	12.94	13.21	13.32
6	10.46	11.10	7.50	7.32	10.37	10.09	9.53	10.78	14.35	13.27	13.30	12.74
7	10.03	11.20	7.40	7.78	10.21	10.31	10.07	10.73	14.00	13.50	13.38	12.67
8	10.54	10.66	6.04	8.32	10.41	10.59	10.85	10.85	13.42	13.47	13.35	13.39
9	10.74	10.01	5.04	8.51	10.14	9.88	10.47	11.62	12.81	13.34	13.59	13.56
10	10.64	9.81	5.84	8.17	8.91	9.93	10.54	11.64	12.96	13.30	13.46	12.80
11	10.90	9.95	7.38	8.41	9.00	9.29	10.58	11.43	12.72	13.61	13.60	12.57
12	11.14	10.12	8.84	9.25	9.63	9.37	10.65	10.89	12.63	13.92	13.71	12.74
13	12.02	10.01	9.63	10.59	9.82	9.77	10.49	11.51	12.84	14.10	13.61	12.89
14	14.50	9.80	9.54	10.09	9.77	9.28	10.44	11.63	12.87	13.52	13.59	12.78
15	14.44	9.44	8.30	8.83	9.53	9.57	10.34	11.71	12.53	13.78	13.63	12.75
16	14.23	8.91	8.23	8.65	9.84	10.18	10.57	11.58	12.54	13.94	13.63	12.84
17	14.08	8.65	8.54	8.88	10.14	10.62	10.82	11.60	12.22	14.18	13.56	13.47
18	13.90	8.91	8.30	9.24	10.26	10.87	11.22	12.28	12.28	14.13	13.45	13.94
19	13.42	8.55	8.37	10.26	10.87	10.85	11.96	11.86	12.28	13.60	13.64	13.49
20	13.00	8.22	8.42	10.19	10.53	10.53	11.89	12.37	12.41	13.44	13.46	13.90
21	12.79	8.48	8.99	9.77	10.69	10.25	10.54	11.57	12.54	13.38	13.60	13.52
22	12.85	8.15	9.39	9.44	10.85	11.09	11.10	11.31	12.48	13.34	13.35	13.26
23	12.66	8.23	7.66	8.90	10.08	10.79	11.11	11.30	12.46	13.45	13.32	12.58
24	12.54	8.11	6.25	8.68	11.20	10.35	11.82	11.71	12.38	13.74	13.79	12.62
25	12.31	8.07	5.79	9.50	10.98	10.72	11.49	11.29	12.73	13.76	14.05	13.02
26	12.12	8.10	5.76	10.16	10.80	10.59	11.69	11.96	12.66	13.66	14.02	13.09
27	12.17	8.38	6.87	10.38	11.13	10.35	12.05	11.86	12.58	13.66	13.68	13.17
28	11.77	8.70	7.58	9.69	10.79	10.45	11.51	11.58	12.89	13.51	13.69	13.64
29	10.89	8.18	7.83	9.61		10.58	11.15	11.55	13.19	13.52	13.70	13.79
30	10.58	7.65	8.25	9.89		11.47	11.28	11.88	12.57	13.66	13.52	13.08
31	10.63		8.91	9.42		10.96		12.06		13.54	13.95	
Mean Day	11.97	9.42	7.71	9.03	10.12	10.32	10.83	11.56	12.85	13.48	13.56	13.21
Max Day	14.50	11.20	9.63	10.59	11.20	11.47	12.05	12.37	14.35	14.18	14.05	13.94
Min Day	10.03	7.65	5.04	7.07	8.91	9.28	9.53	10.73	12.22	12.46	13.21	12.57

Table 5. Maximum Daily Water Temperature (°C)
Potrero Creek, water year 2010

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1	12.22	11.06	7.62	9.13	9.54	11.47	10.78	11.82	12.97	13.02	13.62	14.26
2	11.50	11.27	7.89	9.01	9.82	11.53	10.88	12.46	13.33	12.98	13.71	14.20
3	11.21	11.30	7.96	8.49	9.78	11.14	10.89	12.52	13.93	13.19	13.64	14.01
4	11.26	11.30	7.96	7.55	9.73	10.75	10.44	13.03	14.39	13.01	13.53	13.81
5	11.24	11.21	8.02	7.35	10.59	10.59	11.09	12.09	14.90	13.46	13.43	13.66
6	11.06	11.25	8.01	7.57	10.60	11.11	10.95	11.77	14.93	13.61	13.53	13.30
7	10.46	11.31	7.48	8.03	10.56	10.82	11.49	11.64	14.65	13.80	13.57	13.13
8	10.79	11.16	7.27	8.57	10.60	10.78	11.33	11.68	13.74	13.67	13.67	13.65
9	10.93	10.54	5.47	8.73	10.53	10.39	11.17	12.00	13.30	13.55	13.74	13.69
10	10.90	10.00	6.76	8.54	9.89	10.22	11.03	11.98	13.29	13.61	13.64	13.39
11	11.07	10.12	8.08	8.79	9.52	10.02	10.79	11.97	13.24	13.97	13.85	13.00
12	11.41	10.20	9.33	9.93	10.52	10.20	11.34	11.46	13.54	14.27	13.90	12.93
13	13.49	10.17	9.89	10.96	10.47	10.21	11.58	12.02	13.42	14.40	13.78	13.09
14	14.64	10.01	9.96	10.99	10.18	9.98	11.27	11.96	13.24	14.11	13.74	13.00
15	14.63	9.87	9.12	9.44	10.05	10.45	11.19	12.20	12.86	14.31	13.87	13.06
16	14.45	9.30	8.51	9.06	10.55	11.02	11.23	11.82	13.17	14.26	13.88	13.29
17	14.29	8.92	8.81	8.97	10.56	11.42	11.57	12.11	12.76	14.56	13.79	13.80
18	14.10	9.07	8.66	9.95	10.73	11.59	11.99	12.72	12.53	14.45	13.78	14.19
19	13.84	9.06	8.58	10.80	11.19	11.55	12.31	12.57	12.46	14.11	13.90	13.95
20	13.30	8.46	8.70	10.72	11.01	11.43	12.28	12.90	12.76	13.64	13.77	14.11
21	13.00	8.56	9.51	9.98	10.97	10.93	11.49	12.15	12.93	13.55	13.80	13.87
22	13.00	8.49	9.73	9.87	11.05	11.66	12.24	11.81	12.83	13.61	13.80	13.64
23	12.99	8.34	8.83	9.60	10.82	11.45	12.49	11.86	12.66	13.78	13.94	13.21
24	12.76	8.35	6.83	9.32	12.16	11.14	12.88	12.38	12.80	14.02	14.32	13.13
25	12.57	8.20	6.07	10.09	11.87	11.15	13.31	11.86	12.92	13.93	14.31	13.56
26	12.39	8.23	6.14	10.63	11.50	11.09	12.98	12.71	12.80	13.86	14.26	13.48
27	12.31	8.68	7.47	10.63	11.57	11.05	12.78	12.49	13.14	13.88	14.11	13.68
28	12.08	8.79	7.72	10.49	11.71	11.15	12.17	12.16	13.41	13.81	13.89	14.15
29	11.61	8.65	8.00	9.87		11.37	11.69	12.57	13.50	13.83	13.86	14.14
30	10.76	8.03	8.85	10.00		11.71	11.96	12.75	13.20	13.89	13.80	13.63
31	10.84		9.04	9.95		11.48		12.71		13.74	14.30	
Mean Day	12.29	9.66	8.14	9.45	10.65	11.00	11.65	12.20	13.32	13.80	13.83	13.60
Max Day	14.64	11.31	9.96	10.99	12.16	11.71	13.31	13.03	14.93	14.56	14.32	14.26
Min Day	10.46	8.03	5.47	7.35	9.52	9.98	10.44	11.46	12.46	12.98	13.43	12.93

Table 6. Minimum Daily Water Temperature °C
Potrero Creek, water year 2010

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1	11.00	10.69	7.25	8.74	8.83	9.84	9.62	10.09	12.39	12.47	13.04	13.28
2	10.80	10.92	7.54	8.25	9.25	10.63	9.82	10.66	11.65	12.54	13.04	13.50
3	10.73	11.03	7.82	7.53	8.72	9.47	9.86	10.46	12.45	12.29	13.04	13.16
4	11.06	11.03	7.36	7.11	8.96	8.64	9.16	11.55	12.96	11.82	13.15	13.18
5	10.89	10.85	7.60	6.78	9.74	8.38	9.59	10.47	13.47	12.59	12.99	13.02
6	10.09	10.94	7.20	7.12	10.18	9.24	8.23	9.64	13.69	13.03	13.06	12.28
7	9.70	11.10	7.29	7.59	9.94	9.81	8.89	9.63	13.59	13.25	13.19	12.32
8	10.25	10.39	5.25	8.05	10.29	10.42	10.34	9.80	13.12	13.28	12.95	13.12
9	10.63	9.71	4.65	8.28	9.85	9.49	9.72	11.27	12.44	13.11	13.44	13.41
10	10.48	9.61	4.97	7.83	8.19	9.65	10.11	11.30	12.69	13.00	13.24	12.28
11	10.82	9.84	6.79	8.07	8.38	8.54	10.35	10.82	12.15	13.32	13.37	12.16
12	11.04	10.05	8.11	8.82	9.06	8.70	10.15	10.09	11.75	13.67	13.54	12.54
13	11.42	9.90	9.35	9.95	9.18	9.23	9.57	11.17	12.11	13.87	13.40	12.72
14	13.62	9.66	9.12	9.30	9.19	8.50	9.72	11.36	12.59	12.88	13.40	12.55
15	14.29	9.18	7.74	8.31	8.89	8.76	9.54	11.33	12.40	13.26	13.38	12.45
16	14.03	8.67	8.02	8.22	9.27	9.40	9.86	11.38	12.04	13.51	13.31	12.38
17	13.89	8.45	8.25	8.73	9.55	9.84	10.14	11.16	11.62	13.85	13.33	13.30
18	13.77	8.72	7.94	8.96	9.86	10.05	10.58	11.97	12.14	13.76	13.12	13.80
19	13.14	8.26	8.13	9.97	10.69	9.98	11.72	10.95	12.13	13.32	13.38	13.05
20	12.79	7.99	8.13	9.80	10.18	9.71	11.52	11.84	12.13	13.27	13.18	13.69
21	12.64	8.39	8.53	9.65	10.46	9.47	10.30	10.82	12.18	13.20	13.47	13.31
22	12.77	7.93	8.85	9.05	10.61	10.72	10.35	10.69	12.13	13.11	12.99	12.93
23	12.43	8.11	6.83	8.29	9.78	10.00	9.83	10.67	12.27	13.19	12.71	12.03
24	12.35	7.92	5.85	8.19	10.09	9.58	11.04	11.16	11.98	13.49	13.29	12.14
25	12.09	7.92	5.50	9.25	10.16	10.21	9.74	10.56	12.57	13.55	13.69	12.57
26	11.91	7.94	5.63	9.92	10.19	9.92	10.19	11.34	12.54	13.47	13.73	12.65
27	12.06	8.22	6.14	10.10	10.65	9.54	11.34	11.43	12.06	13.46	13.34	12.68
28	11.60	8.61	7.48	9.10	10.15	9.66	10.84	10.91	12.42	13.25	13.50	13.23
29	10.54	7.93	7.69	9.26		9.79	10.62	10.52	12.93	13.25	13.55	13.52
30	10.41	7.41	7.77	9.72		11.33	10.47	10.94	12.05	13.41	13.30	12.71
31	10.45		8.80	8.96		10.62		11.29		13.35	13.69	
Mean Day	11.73	9.25	7.34	8.67	9.65	9.65	10.11	10.88	12.42	13.19	13.28	12.87
Max Day	14.29	11.10	9.35	10.10	10.69	11.33	11.72	11.97	13.69	13.87	13.73	13.80
Min Day	9.70	7.41	4.65	6.78	8.19	8.38	8.23	9.63	11.62	11.82	12.71	12.03

Table 7. Mean Daily Specific Conductance (umhos/cm @ 25 °C)
Potrero Creek, water year 2010

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1	1150.5	902.8	988.5	1012.5	356.1	334.8	494.5	377.2	605.0	757.2	836.1	893.0
2	1157.0	908.6	989.1	1013.9	367.7	319.4	502.7	388.1	609.2	757.9	840.2	894.3
3	1162.3	914.2	989.1	1015.6	379.9	258.8	509.9	397.5	614.0	757.4	842.9	896.9
4	1168.8	919.4	989.3	1018.1	391.4	216.2	516.7	407.2	617.6	756.6	841.8	900.7
5	1174.3	924.7	990.3	1019.9	404.1	212.1	350.7	416.5	622.2	758.4	841.7	903.4
6	1180.1	929.8	990.1	1020.6	415.8	245.2	221.6	425.9	627.3	760.1	843.3	907.3
7	1187.6	934.7	991.3	1021.3	425.0	268.0	224.8	435.0	635.7	762.0	843.7	912.5
8	1195.6	938.5	990.6	1021.7	432.9	282.2	239.2	445.0	652.1	763.4	843.1	915.9
9	1200.4	942.6	977.1	1023.0	441.1	294.8	255.9	451.0	667.3	764.9	845.0	915.5
10	1203.9	947.2	967.2	1023.9	446.7	304.5	273.9	458.2	678.9	767.3	847.5	913.3
11	1206.9	951.1	966.9	1023.8	439.4	312.9	289.8	471.2	684.2	770.0	850.1	912.1
12	1206.9	954.3	975.4	1023.3	429.1	320.6	240.8	485.6	688.4	772.1	853.6	911.9
13	1205.2	957.2	983.1	1021.7	427.1	329.6	246.0	500.4	692.2	774.0	855.6	912.0
14	1127.4	960.2	977.1	1013.2	431.6	337.6	235.7	516.2	697.6	774.6	858.0	913.1
15	997.6	962.8	973.6	1006.6	438.2	345.3	246.0	526.7	704.0	778.7	860.7	914.9
16	924.1	965.6	974.8	1003.8	445.5	352.9	256.2	540.6	710.3	783.1	861.7	916.4
17	886.8	968.5	980.6	1003.8	452.4	360.5	266.0	555.7	713.6	788.5	862.1	918.2
18	867.8	971.4	988.8	1005.6	459.7	368.8	278.2	565.7	717.6	792.9	863.4	918.6
19	858.1	972.8	996.2	987.9	467.5	377.1	292.5	573.5	721.1	796.6	865.2	917.7
20	853.2	975.3	1002.3	473.0	474.9	385.7	308.1	578.4	724.5	799.9	866.1	919.2
21	852.4	977.3	1006.7	265.4	481.7	395.1	312.2	583.6	729.5	801.8	868.2	918.8
22	854.4	978.5	1010.0	236.1	488.5	405.2	299.1	583.3	735.5	806.2	870.4	919.8
23	857.1	980.4	1012.2	230.6	493.6	415.0	297.0	583.6	741.9	809.2	874.9	921.6
24	861.1	981.7	1012.4	242.4	500.6	424.7	296.1	584.8	748.4	810.2	878.8	925.8
25	865.6	983.0	1012.2	257.6	500.5	434.6	296.1	586.7	751.6	811.1	878.7	929.8
26	870.5	984.1	1012.8	278.5	482.2	444.0	302.7	590.0	751.9	813.8	879.4	932.9
27	875.9	985.3	1012.1	298.2	440.2	452.9	319.6	592.1	752.1	816.4	882.8	936.6
28	880.8	985.8	1012.4	310.7	371.4	461.3	335.3	595.5	753.5	821.2	890.4	940.3
29	885.3	986.2	1012.8	322.4		469.2	348.8	597.9	754.9	826.1	893.6	944.3
30	891.4	987.3	1013.2	333.8		477.2	362.5	600.4	754.7	828.9	893.9	952.7
31	897.2		1012.1	345.0		485.5		602.9		832.1	894.1	
Mean Day	1016.3	957.7	993.9	737.9	438.7	357.8	314.0	516.7	695.2	787.5	862.2	917.7
Max Day	1206.9	987.3	1013.2	1023.9	500.6	485.5	516.7	602.9	754.9	832.1	894.1	952.7
Min Day	852.4	902.8	966.9	230.6	356.1	212.1	221.6	377.2	605.0	756.6	836.1	893.0

Table 8. Mean daily flow, San Clemente Creek, water year 2010
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		0.30	0.33	0.78	4.58	15.69	5.29	10.72	3.15	1.08	0.25	0.03
2		0.29	0.33	0.77	4.18	21.00	4.91	10.09	3.01	1.09	0.23	0.03
3		0.29	0.33	0.75	3.74	31.55	5.08	9.36	2.96	1.07	0.21	0.03
4		0.30	0.33	0.72	3.68	35.32	6.11	8.92	2.86	1.01	0.19	0.02
5	0.30	0.31	0.36	0.70	10.16	25.79	26.36	8.35	2.79	1.01	0.18	0.01
6	0.30	0.31	0.34	0.70	6.67	22.28	10.96	8.27	2.69	0.99	0.18	0.01
7	0.30	0.31	0.50	0.70	7.05	18.61	9.30	7.90	2.51	0.97	0.18	0.01
8	0.31	0.29	0.36	0.70	6.11	17.22	8.44	7.60	2.37	0.93	0.18	0.02
9	0.34	0.28	0.35	0.68	8.40	16.18	7.96	7.58	2.40	0.90	0.18	0.01
10	0.34	0.29	0.41	0.67	7.15	15.59	7.52	7.51	2.41	0.83	0.18	0.01
11	0.35	0.31	0.50	0.68	6.38	13.18	17.90	7.11	2.29	0.80	0.18	0.01
12	0.36	0.31	0.87	0.92	5.97	14.40	36.55	6.62	2.18	0.79	0.17	0.01
13	7.03	0.32	2.15	1.99	5.58	14.89	26.54	6.32	2.09	0.79	0.16	0.01
14	3.95	0.32	1.57	1.31	5.09	12.27	21.99	5.86	1.99	0.74	0.15	0.01
15	0.52	0.32	1.18	1.10	4.71	11.39	19.71	5.54	1.91	0.70	0.14	
16	0.33	0.33	1.03	1.01	4.45	10.66	17.68	5.27	1.82	0.65	0.13	
17	0.29	0.34	0.94	1.30	4.18	9.97	16.24	5.11	1.74	0.59	0.13	
18	0.26	0.34	0.88	8.14	3.90	9.34	14.91	5.08	1.73	0.53	0.12	
19	0.25	0.32	0.85	12.64	3.77	8.60	13.58	4.75	1.74	0.45	0.11	
20	0.26	0.32	0.82	42.42	3.44	8.04	16.52	4.50	1.71	0.45	0.10	
21	0.26	0.35	0.84	37.41	3.46	7.71	27.08	4.26	1.65	0.50	0.10	
22	0.26	0.35	1.24	33.01	4.30	7.46	21.43	4.10	1.58	0.48	0.09	
23	0.26	0.35	0.92	19.55	3.96	7.09	17.72	3.97	1.53	0.44	0.08	
24	0.26	0.35	0.84	12.44	16.79	6.62	15.78	3.86	1.45	0.40	0.08	
25	0.25	0.35	0.81	9.91	8.33	6.28	14.54	3.80	1.47	0.38	0.08	
26	0.25	0.35	0.81	10.80	14.69	5.98	13.45	3.77	1.45	0.39	0.07	
27	0.26	0.40	0.82	8.86	31.30	5.63	13.48	4.43	1.42	0.41	0.05	
28	0.26	0.35	0.83	7.21	19.51	5.34	12.87	3.95	1.36	0.40	0.04	
29	0.26	0.31	0.84	6.26		5.18	12.31	3.55	1.25	0.38	0.04	
30	0.29	0.31	0.84	6.09		5.56	11.50	3.37	1.12	0.32	0.04	
31	0.30		0.80	5.10		5.37		3.19		0.28	0.04	
Mean	0.68	0.32	0.77	7.59	7.55	12.91	15.12	5.96	2.02	0.67	0.13	0.02
Max Day	7.03	0.40	2.15	42.42	31.30	35.32	36.55	10.72	3.15	1.09	0.25	0.03
Min Day	0.25	0.28	0.33	0.67	3.44	5.18	4.91	3.19	1.12	0.28	0.04	0.01
Yield (ac-ft)	36.47	19.23	47.61	466.7	419.5	793.8	899.9	366.4	120.3	41.12	8.08	0.44

Water Year 2010 Annual Summary			yr	day	cfs
Mean Daily Flow	4.71	cfs	1991	9/17	0.03
Max. Daily Flow	42.4	cfs	1992	8/27	0.06
Min. Daily Flow	0.01	cfs	1993	8/27	0.10
7-Day Low Flow	0.01	cfs	1994	7/16	0.04
Total Yield	3220	ac-ft	1995	9/29	0.14
Normalized Yield	0.32	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

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

Table 9. Mean Daily Water Temperature °C
San Clemente Creek, water year 2010

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1		10.6	6.2	8.1	8.7	10.3	8.8	10.2	13.1	13.4	13.5	13.8
2		10.9	6.1	7.7	9.1	10.5	9.4	11.2	12.9	13.3	13.6	14.4
3		10.9	5.7	6.8	8.4	9.7	9.2	11.7	14.0	13.6	13.8	14.6
4		10.5	5.6	6.7	8.8	9.1	8.6	11.8	14.3	13.9	13.7	14.2
5	11.0	10.5	6.1	6.7	9.8	9.4	9.6	10.7	14.9	14.4	13.5	13.8
6	10.4	10.6	5.1	7.2	9.8	9.8	8.9	10.2	15.1	14.4	13.4	13.7
7	10.3	10.4	5.9	7.9	9.5	9.8	9.8	10.5	14.3	14.5	13.4	13.5
8	10.3	9.0	4.8	8.3	9.7	9.9	10.2	10.5	13.6	14.3	13.7	13.9
9	10.8	8.3	4.2	8.1	9.2	9.1	9.8	10.9	13.1	14.2	14.0	13.7
10	10.7	8.7	5.7	7.8	8.2	9.2	10.1	10.5	12.7	14.3	13.7	13.1
11	10.6	9.3	7.5	8.6	8.4	8.7	9.8	10.5	12.3	14.7	13.8	13.1
12	11.3	9.0	8.7	9.6	9.2	9.2	10.0	10.5	13.0	15.0	13.9	13.1
13	13.2	8.8	9.0	10.2	9.1	9.5	9.8	11.5	13.8	15.1	13.8	12.5
14	14.4	8.5	8.5	8.4	8.9	8.8	9.7	11.5	14.0	14.9	13.8	11.9
15	13.9	7.8	7.4	8.1	9.0	9.5	9.9	11.7	13.3	15.8	13.6	
16	13.8	7.3	7.8	8.1	9.6	10.3	10.6	11.7	12.6	16.2	13.4	
17	13.7	7.3	7.8	8.5	9.8	10.7	10.8	11.4	12.7	16.3	13.7	
18	13.6	8.0	7.6	9.3	9.8	10.9	11.4	12.0	12.2	16.2	13.4	
19	12.3	6.5	8.1	9.1	10.4	10.5	11.7	11.7	12.2	15.3	13.3	
20	11.8	6.8	8.2	8.9	9.7	10.1	11.0	12.2	12.6	14.5	13.2	
21	11.3	7.4	8.8	9.0	9.9	9.8	9.6	11.1	12.7	14.3	13.5	
22	11.5	6.8	8.1	8.8	9.8	10.1	10.3	10.8	13.2	14.1	13.2	
23	11.7	7.3	6.2	8.5	8.9	10.2	10.8	10.7	13.7	14.3	13.6	
24	11.9	6.9	5.4	8.4	10.8	10.0	11.2	10.9	13.6	14.7	14.6	
25	11.7	7.1	5.4	9.4	10.2	10.3	11.3	10.5	13.7	14.7	15.5	
26	11.5	7.2	6.1	10.2	10.4	10.2	11.6	11.4	13.8	14.3	15.2	
27	11.3	7.8	7.5	9.9	10.5	9.9	11.6	11.0	14.7	14.3	14.3	
28	10.1	7.8	7.4	8.9	10.3	10.3	10.7	10.9	15.6	14.0	13.5	
29	8.8	6.3	7.4	8.8		10.3	10.2	11.2	15.2	13.8	13.2	
30	9.5	6.0	8.2	9.5		11.1	10.4	12.1	14.3	13.9	13.0	
31	10.0		8.1	8.6		9.9		12.5		13.8	13.5	
Mean Day	11.5	8.3	6.9	8.5	9.5	9.9	10.2	11.2	13.6	14.5	13.7	13.5
Max Day	14.4	10.9	9.0	10.2	10.8	11.1	11.7	12.5	15.6	16.3	15.5	14.6
Min Day	8.8	6.0	4.2	6.7	8.2	8.7	8.6	10.2	12.2	13.3	13.0	11.9

Table 10. Maximum Daily Water Temperature °C
San Clemente Creek, water year 2010

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1		11.4	7.0	8.6	9.7	11.2	9.7	11.9	14.0	14.2	14.4	14.8
2		11.6	6.6	8.3	9.7	11.0	10.7	12.8	14.5	14.3	14.6	15.3
3		11.6	6.2	7.9	9.2	10.6	10.4	13.5	15.2	15.1	14.8	15.3
4		11.2	6.3	7.3	9.8	10.3	9.6	13.2	15.5	15.1	14.5	14.9
5	11.5	11.2	6.6	7.6	10.3	10.4	10.6	11.9	16.2	15.5	14.3	14.4
6	11.2	11.1	5.7	8.1	10.1	10.9	10.6	11.9	16.3	15.4	14.2	14.5
7	11.2	11.0	6.1	8.5	9.8	10.8	11.9	12.0	15.3	15.4	14.2	14.1
8	11.2	9.7	5.5	9.0	10.1	10.2	11.5	12.1	14.7	15.3	14.4	14.2
9	11.4	9.2	4.7	8.8	9.6	9.8	11.8	11.3	14.0	15.3	14.7	14.1
10	11.4	9.6	6.6	8.6	9.3	10.0	10.9	10.9	13.1	15.4	14.4	13.8
11	11.1	9.9	8.3	9.3	9.5	10.3	10.1	11.7	13.6	15.7	14.5	13.9
12	11.8	9.5	9.1	10.3	10.3	10.4	10.8	12.3	14.5	15.8	14.7	13.6
13	15.2	9.1	9.2	10.6	10.2	10.1	11.0	13.1	15.3	16.0	14.5	13.2
14	14.9	9.1	9.0	9.6	10.0	10.1	10.7	13.1	15.1	16.1	14.5	12.6
15	14.3	8.7	8.1	8.8	10.2	11.3	12.0	13.4	14.2	16.9	14.4	
16	14.5	8.0	8.5	8.6	10.8	11.9	12.1	12.8	14.0	17.0	14.4	
17	14.2	7.8	8.3	8.9	10.8	12.3	12.7	11.9	14.1	17.1	14.5	
18	13.9	8.2	8.3	9.7	10.8	12.3	13.2	12.7	13.1	17.1	14.3	
19	13.2	7.3	8.7	9.8	10.7	12.1	12.9	13.1	13.0	16.3	14.2	
20	12.4	7.7	8.6	9.5	10.2	11.7	11.9	13.2	13.7	15.2	14.1	
21	12.0	7.7	9.3	9.4	10.4	11.3	10.0	12.0	14.2	15.0	14.2	
22	12.2	7.9	9.1	9.3	10.2	11.6	11.3	11.5	14.5	15.1	14.1	
23	12.5	7.9	7.4	9.4	9.7	11.8	12.6	11.7	14.8	15.3	14.7	
24	12.6	7.6	6.2	9.4	11.8	11.5	12.7	11.7	14.6	15.6	15.8	
25	12.3	7.9	6.1	10.1	11.3	11.0	13.2	11.4	14.6	15.4	16.4	
26	12.2	7.9	7.3	10.5	11.2	11.4	13.2	12.6	14.9	14.9	15.9	
27	12.1	8.4	7.9	10.2	11.0	11.6	12.6	11.8	16.3	14.9	15.0	
28	10.7	8.4	7.9	9.9	11.4	11.9	11.5	12.0	16.6	14.7	13.9	
29	9.5	7.0	8.0	9.6		12.0	10.9	13.1	16.2	14.7	13.8	
30	10.3	6.7	8.6	9.7		11.6	11.5	13.9	15.2	14.9	13.5	
31	10.8		8.5	9.4		10.5		13.8		14.7	14.2	
Mean Day	12.2	9.0	7.5	9.2	10.3	11.1	11.5	12.4	14.7	15.5	14.5	14.2
Max Day	15.2	11.6	9.3	10.6	11.8	12.3	13.2	13.9	16.6	17.1	16.4	15.3
Min Day	9.5	6.7	4.7	7.3	9.2	9.8	9.6	10.9	13.0	14.2	13.5	12.6

Table 11. Minimum Daily Water Temperature °C
San Clemente Creek, water year 2010

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1		9.8	5.5	7.7	7.7	9.3	7.8	8.7	12.4	12.4	12.2	12.7
2		10.0	5.5	7.0	8.5	10.0	8.3	9.8	11.3	12.1	12.3	13.4
3		10.1	5.0	5.9	7.4	8.4	8.2	10.0	12.6	12.1	12.6	13.6
4		9.9	4.9	6.0	8.0	8.2	7.5	10.4	13.0	12.4	12.7	13.2
5	10.2	9.8	5.7	5.9	9.3	8.3	9.0	9.7	13.6	13.1	12.6	12.8
6	9.4	9.8	4.2	6.5	9.5	9.0	7.4	8.8	13.9	13.3	12.3	12.7
7	9.3	9.8	5.6	7.2	9.3	8.7	7.9	8.9	13.3	13.5	12.4	12.7
8	9.5	8.4	4.2	7.7	9.5	9.2	8.8	9.0	12.5	13.4	12.9	13.8
9	10.2	7.3	3.6	7.4	8.8	8.4	7.9	10.5	12.3	13.2	13.2	13.3
10	10.0	7.7	4.7	6.9	7.2	8.7	9.4	10.1	12.2	13.1	12.8	12.1
11	9.9	8.7	6.6	8.0	7.2	7.4	9.6	9.5	10.9	13.7	13.1	12.2
12	10.8	8.6	8.3	9.0	8.3	8.1	9.4	8.7	11.4	14.2	13.1	12.5
13	11.8	8.6	8.8	9.6	7.9	8.8	8.8	10.1	12.2	14.3	12.9	11.8
14	14.1	7.7	7.8	7.7	7.7	7.8	8.9	9.9	12.7	13.5	12.9	11.0
15	13.4	7.1	6.8	7.2	7.8	8.1	8.1	10.1	12.3	14.7	12.6	
16	13.1	6.4	7.0	7.2	8.6	8.9	9.0	10.4	11.2	15.3	12.1	
17	13.0	6.6	7.2	8.2	8.6	9.3	9.1	10.8	11.2	15.3	12.7	
18	13.3	7.4	6.9	8.9	8.7	9.5	9.8	11.4	11.6	15.0	12.3	
19	11.5	5.7	7.5	8.6	9.9	8.9	10.6	10.2	11.6	14.2	12.1	
20	11.1	5.8	7.6	8.7	9.2	8.4	10.1	11.2	11.5	13.7	12.1	
21	10.5	6.9	8.3	8.7	9.4	8.3	9.5	10.3	11.2	13.4	12.8	
22	10.7	5.9	7.4	8.4	9.4	8.7	9.6	10.1	11.8	12.9	12.2	
23	10.9	6.7	5.6	7.9	8.3	8.6	9.2	9.6	12.5	13.2	12.3	
24	11.3	6.1	4.7	7.5	9.7	8.4	9.8	10.2	12.5	13.7	13.3	
25	11.1	6.4	4.8	8.9	9.0	9.3	9.6	9.4	13.0	13.9	14.7	
26	10.8	6.5	5.3	9.9	9.6	9.2	10.1	10.4	12.6	13.6	14.4	
27	10.7	7.2	7.1	9.5	10.0	8.3	10.8	10.5	13.2	13.7	13.5	
28	9.5	7.0	6.7	7.8	9.3	8.7	10.0	9.8	14.5	13.2	13.0	
29	7.9	5.7	6.7	8.0		8.5	9.7	9.4	14.1	12.6	12.5	
30	8.7	5.3	7.7	9.2		10.5	9.5	10.3	13.2	12.8	12.2	
31	9.2		7.7	7.5		9.2		10.9		12.7	12.6	
Mean Day	10.8	7.6	6.3	7.9	8.7	8.7	9.1	10.0	12.4	13.5	12.7	12.7
Max Day	14.1	10.1	8.8	9.9	10.0	10.5	10.8	11.4	14.5	15.3	14.7	13.8
Min Day	7.9	5.3	3.6	5.9	7.2	7.4	7.4	8.7	10.9	12.1	12.1	11.0

Table 12. Mean Daily Specific Conductance (umhos/cm @ 25 °C)
San Clemente Creek, water year 2010

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1		354.5	352.6	276.9								
2		354.7	352.1	284.8								
3		354.9	351.8	289.4								
4		355.1	351.1	291.2								
5	404.9	355.1	350.0	292.7								
6	404.0	354.9	350.6	294.2								
7	402.8	355.1	347.9	295.4								
8	401.4	355.4	346.8	296.1								
9	400.0	355.5	346.7	297.7								
10	398.9	355.2	344.3	299.6								
11	397.9	355.0	340.7	301.6								
12	396.9	355.0	333.9	303.9								
13	346.2	354.9	261.3	270.6								
14	200.7	354.9	242.0	242.9								
15	251.0	355.2	246.5	248.5								
16	271.6	355.5	251.3	253.9								
17	286.5	355.5	254.7	256.3								
18	298.8	355.2	258.0	221.7								
19	308.6	356.2	262.8									
20	317.1	355.6	270.7									
21	324.1	354.9	280.5									
22	330.2	355.1	272.5									
23	335.6	354.7	262.8									
24	340.3	355.0	261.9									
25	344.0	354.9	262.9									
26	347.0	354.4	264.3									
27	349.4	353.2	265.8									
28	351.2	352.5	268.4									
29	352.6	353.2	265.4									
30	353.6	353.2	264.9									
31	354.2		267.7									
Mean Day	389.8	378.9	360.7	278.7								
Max Day	397.4	383.4	372.2	303.9								
Min Day	381.7	372.6	350.4	221.7								

7 Figures

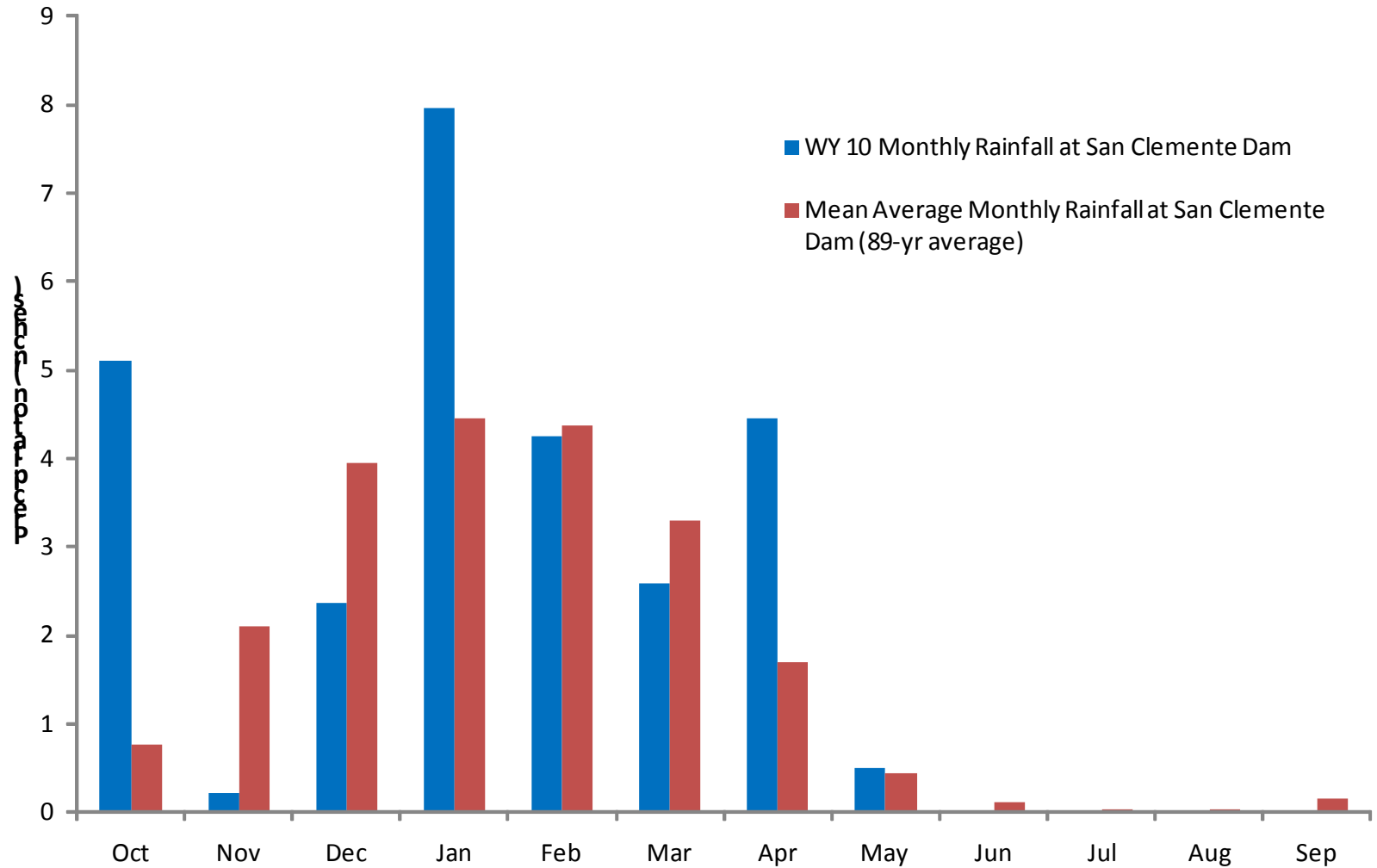


Figure 1. Monthly precipitation at San Clemente Dam for Water Year 2010. WY 2010 precipitation was above average. Total precipitation in WY 2010 at the dam was 27.46 inches compared to the average total precipitation at the dam, 21.43 inches. Mean monthly data is based on Water Years 1922 – 2009. Precipitation in October, January and April was well above average and contributed a large portion of the precipitation for WY 2010. Precipitation data are from the Monterey Peninsula Water Management District (2010).

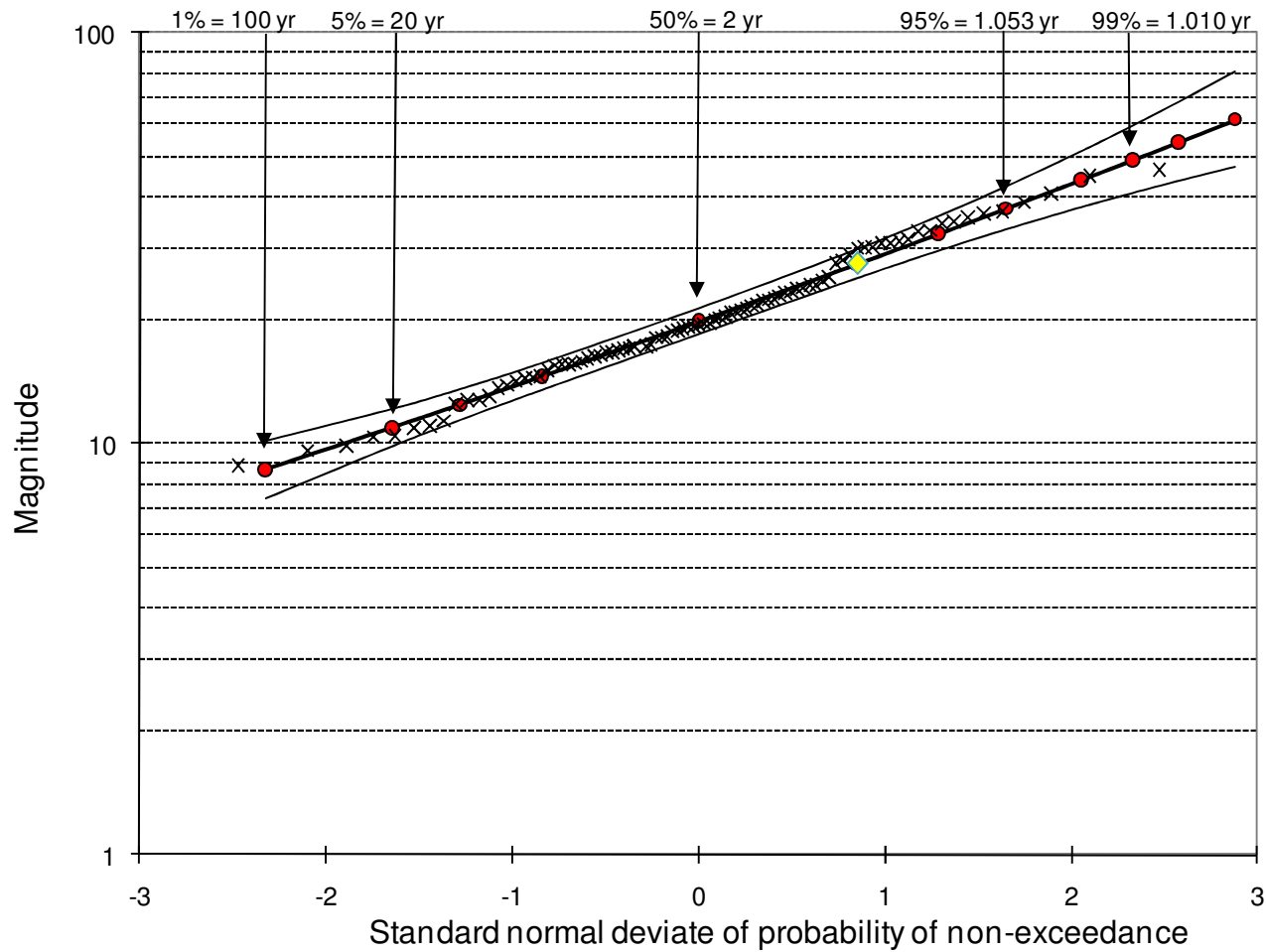


Figure 2. Log-Pearson Type-III statistical analysis of historic precipitation data from San Clemente Dam. Thin curved lines represent upper and lower 95% confidence bounds for precipitation and non-exceedance probability. The yellow diamond symbol marks the 27.46 inch precipitation of the 2010 water year. Rainfall at San Clemente Dam should be less than 27.47 inches once every 1.24 years on average.

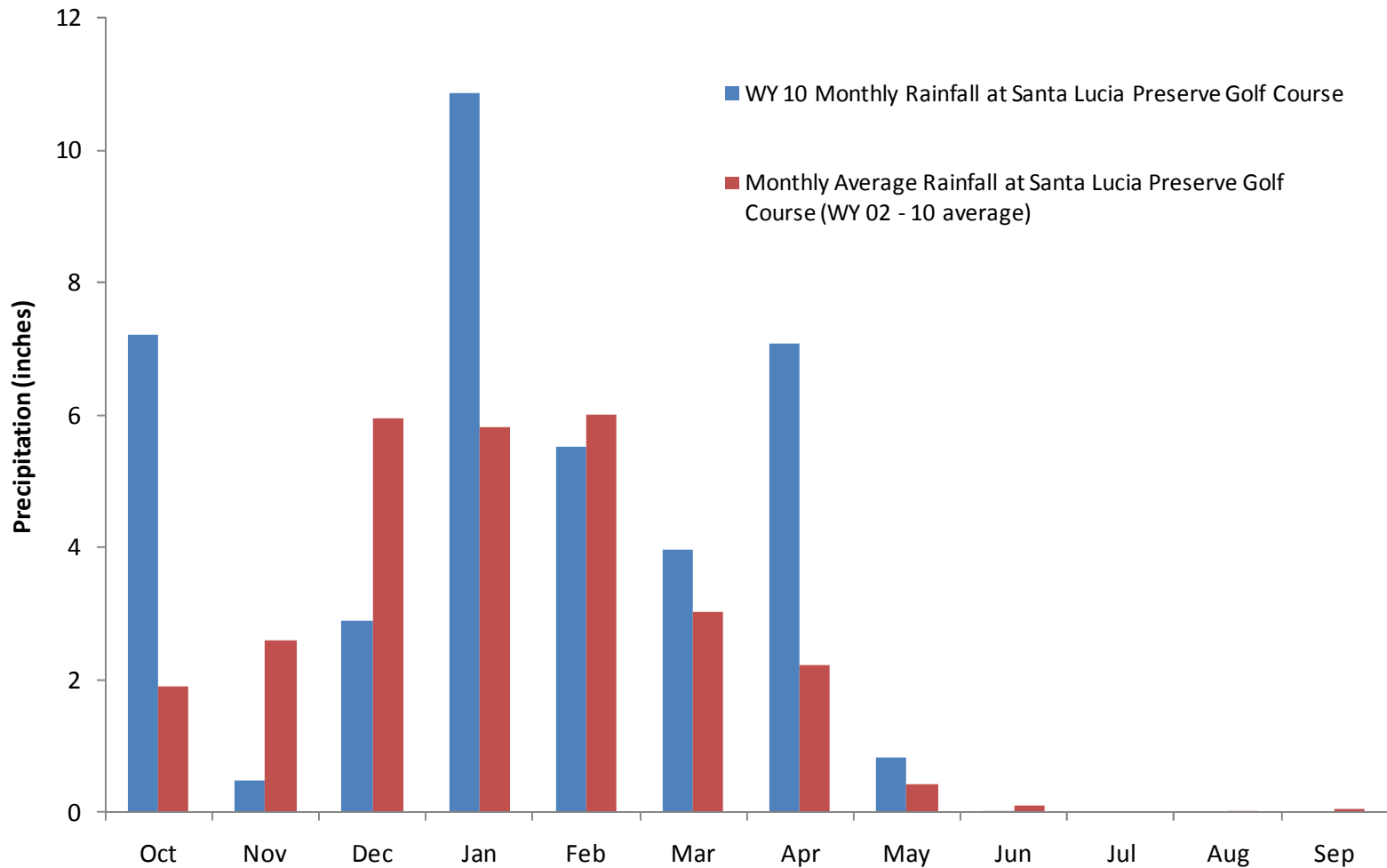


Figure 3. Monthly Precipitation at Santa Lucia Preserve Golf course for Water Year 2010. WY 2010 precipitation was above average at the golf course. Precipitation was 38.83 inches in Water Year 2010 compared to the 9 year annual average of 27.4 inches. Mean monthly average is based only on Water Years 2001 - 2010 and is probably not an accurate characterization of actual long-term patterns (precipitation data from Santa Lucia Preserve, 2010).

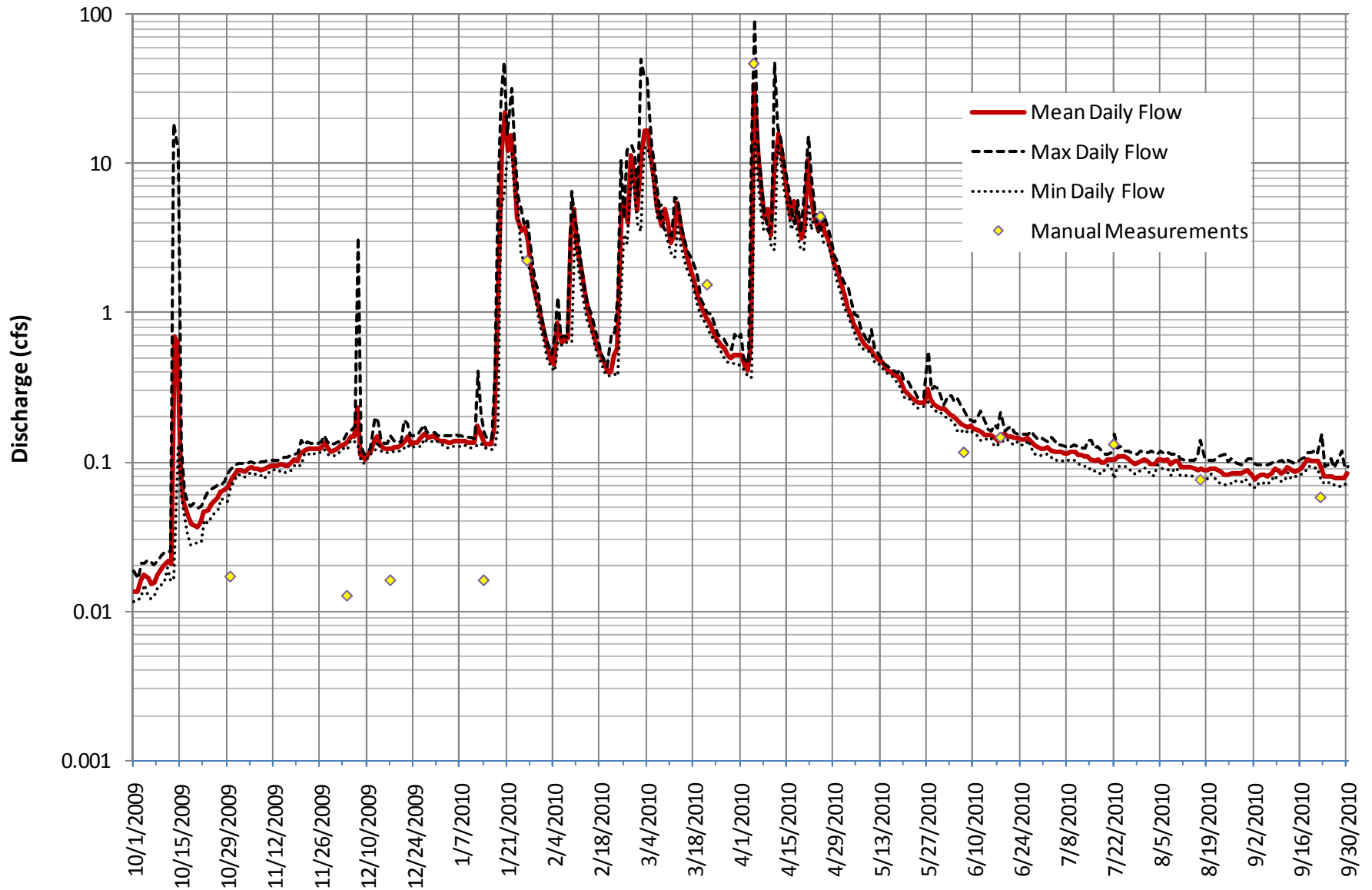


Figure 4. Mean Daily Streamflow at Potrero Creek gage for Water Year 2010. Red line is mean daily streamflow. Minimum and maximum daily flows are also shown. Yellow points represent manual discharge measurements.

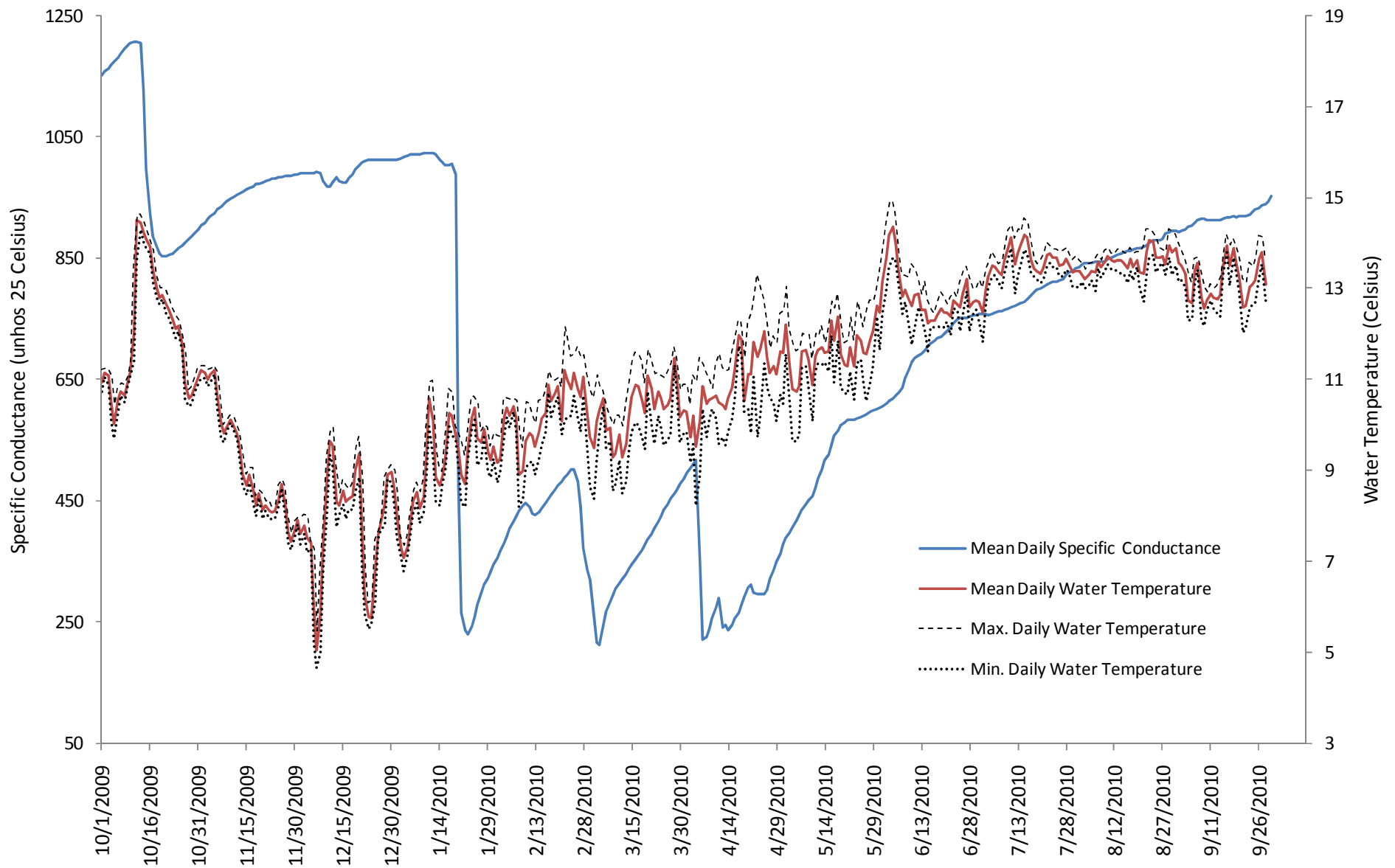


Figure 5. Daily Specific Conductance Water Temperature data at Potrero Creek gage for Water Year 2010.

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

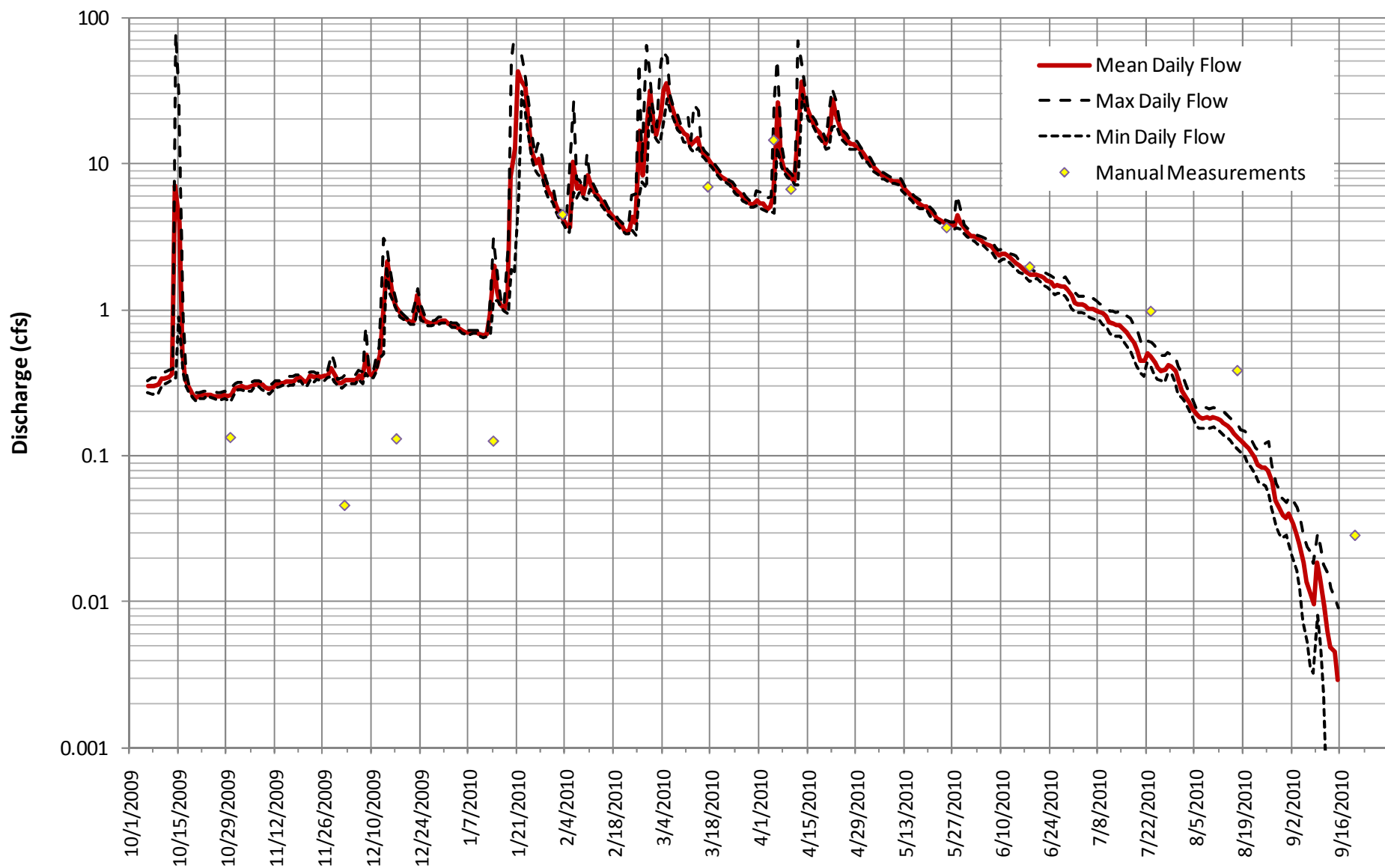


Figure 6. Mean Daily Streamflow at San Clemente Creek gage for Water Year 2010. Red line is mean daily streamflow. Minimum and maximum daily flows are also shown. Yellow points represent manual discharge measurements.

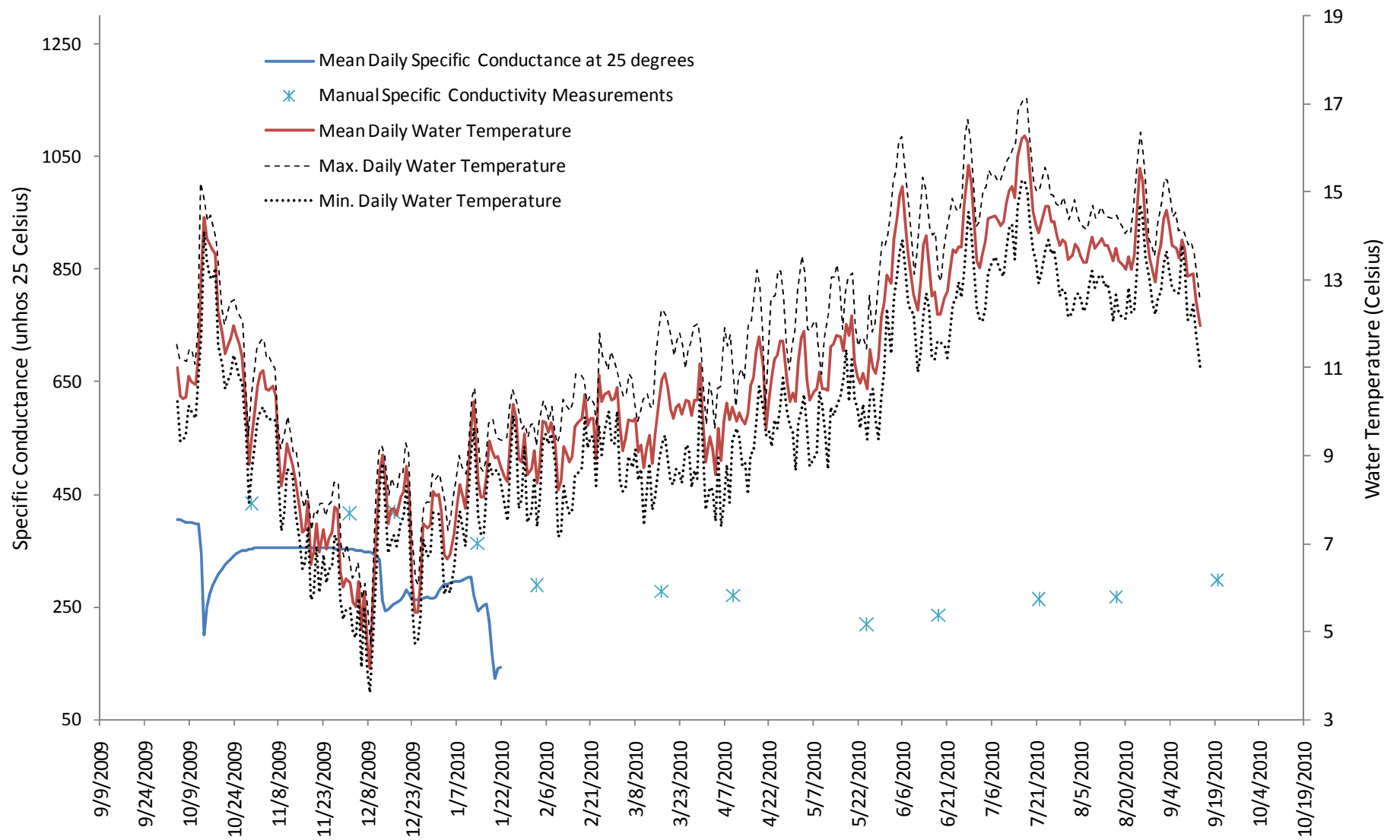


Figure 7. Daily Specific Conductance and Water Temperature data at San Clemente Creek gage for Water Year 2010. Blue line is mean daily specific conductance; red line is mean daily water temperature; dotted lines represent minimum and maximum daily water temperature values.