





# **APPENDIX A**

## *Survey Log*

Pass #	1		2		3		4		5		6		7		8		9		10		11		
Survey Date	12/19/2014		1/2/2015		1/13/2015		1/16/2015		1/30/2015		2/13/2015		3/3/2015		3/16/2015		3/30/2015		5/18/2015		6/1/2015		
Feature ID	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Notes
A1	Wet	None	Wet	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A2	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A3	Wet	None	Wet	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A4	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A5	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A6	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A7	Wet	None	Wet	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A8	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A9	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A10	Wet	None	Wet	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A11	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A12	Wet	FS: B. Sandiegonensis	Wet		No survey		Dry	None	Dry	None	Dry	None	Wet		Dry		Dry		Dry		Dry		
A13	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A14	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A15	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A16	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	
A17	Wet	None	Wet	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A18	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A19	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Wet	None	Dry	None	Dry	None	Dry	None	
A20	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A21	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A22	Wet	FS: B. Sandiegonensis	Wet		No survey		Wet		Dry	None	Dry	None	Wet		Dry	None	Dry	None	Dry	None	Dry	None	2M; 1F
A23	Wet	FS: B. Sandiegonensis	Wet		No survey		Wet		Dry	None	Dry	None	Wet		Dry	None	Dry	None	Dry	None	Dry	None	3M; 2F
A24	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A25	Wet	None	Wet	None	No survey	No survey	Wet	None	Wet	None	Dry	None	Wet	None	Wet	None	Dry	None	Wet	None	Dry	None	
A26	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	
A27	Wet	None	Wet	FS: B. Sandiegonensis			Dry	None	Dry	None	Dry	None	Wet		Dry	None	Dry	None	Dry	None	Dry	None	2M
AA1	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
AA2	Wet	None	Dry	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
AA3	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	
AA4	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B1	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B2	Wet	FS: B. Sandiegonensis	Wet		No survey		Wet		Dry	None	Dry	None	Wet		Dry	None	Dry	None	Dry	None	Dry	None	4M; 1F
B3	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	
B4	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B5	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B6	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B7	Wet	None	Wet	None	No survey	No survey	Wet	FS: B. Lindahli	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	1M
B8	Wet	None	Dry	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B9	Wet	None	Wet	None	No survey	No survey	Wet	None	No survey	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B10	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B11	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B12	No survey	No survey	No survey	No survey	Wet	None	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B13	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B14	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B15	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B16	No survey	No survey	No survey	No survey	Wet	None	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B17	No survey	No survey	No survey	No survey	Wet	None	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B18	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B19	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B20	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B21	No survey	No survey	No survey	No survey	Wet	None	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B22	No survey	No survey	No survey	No survey	Wet	None	No survey	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B23	No survey	No survey	No survey	No survey	Wet	None	Wet	FS: immature, did not collect	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B24	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B25	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C1	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C2	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C3	Wet	None	Dry	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C4	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C5	Wet	FS: immature, did not collect	Wet	FS: B. Lindahli	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C6	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	
C7	Wet	None	Wet	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C8	Wet	FS: B. Lindahli	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	6M; 1F
C9	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C10	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	
C11	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C12	Wet	FS: B. Lindahli	Wet	FS: B. Lindahli	No survey	No survey	Wet	None	Wet	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	7M
C13	Wet	FS: immature, did not collect	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C14	Wet	FS: B. Sandiegonensis					Dry	None	Dry	None	Dry	None	Wet		Dry	None	Dry	None	Dry	None	Dry	None	6M
C15	Wet	FS: immature, did not collect	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C16	Wet	FS: immature, did not collect	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C17	Wet	FS: immature, did not collect	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C18	Wet	FS: immature, did not collect	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	

Pass #	1		2		3		4		5		6		7		8		9		10		11		
Survey Date	12/19/2014		1/2/2015		1/13/2015		1/16/2015		1/30/2015		2/13/2015		3/3/2015		3/16/2015		3/30/2015		5/18/2015		6/1/2015		
Feature ID	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Notes
C19	Wet	FS: immature, did not collect	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C20	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C21	Wet	FS: immature, did not collect	Wet	FS: <i>B. Sandiegonensis</i>			Wet		Dry	None	Dry	None	Wet		Dry	None	Dry	None	Dry	None	Dry	None	
C22	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C23	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C24	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C25	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	



# **APPENDIX B**

## *Weather Data*

**Weather Summary October 2014 - July 2015 at weather station KCACHULA20**

2014	Temperature			Wind Speed			Precipitation Rate
Oct	High	Avg	Low	High	Avg	Gust	Sum
23	90 °F	70.1 °F	57.4 °F	6 mph	1 mph	6 mph	0 in
24	93.4 °F	73.4 °F	59.7 °F	6 mph	0 mph	6 mph	0 in
25	87.1 °F	69.8 °F	61.3 °F	6 mph	0 mph	6 mph	0 in
26	75.4 °F	65.6 °F	59.7 °F	8 mph	1 mph	8 mph	0 in
27	81 °F	64.1 °F	53.8 °F	7 mph	1 mph	7 mph	0 in
28	83.7 °F	66.1 °F	55.4 °F	8 mph	1 mph	8 mph	0 in
2014	Temperature			Speed			Precip. Rate.
Nov	High	Avg	Low	High	Avg	Gust	Sum
1	55.9 °F	44.6 °F	55.6 °F	1 mph	0 mph	1 mph	0 in
2	72.5 °F	59.2 °F	53.1 °F	7 mph	0 mph	7 mph	0.04 in
3	80.1 °F	60.8 °F	49.8 °F	7 mph	0 mph	7 mph	0 in
4	81.3 °F	61.9 °F	47.8 °F	9 mph	1 mph	9 mph	0 in
5	92.7 °F	67.1 °F	50.5 °F	7 mph	1 mph	7 mph	0 in
6	95.9 °F	71.6 °F	55.6 °F	5 mph	1 mph	6 mph	0 in
7	95.9 °F	72.4 °F	60.4 °F	4 mph	0 mph	4 mph	0 in
8	94.1 °F	70.4 °F	58.5 °F	6 mph	0 mph	6 mph	0 in
9	83.7 °F	65.4 °F	54.7 °F	4 mph	0 mph	4 mph	0 in
10	76.1 °F	63.7 °F	57.6 °F	4 mph	0 mph	4 mph	0 in
11	67.3 °F	63.2 °F	61.3 °F	6 mph	1 mph	6 mph	0 in
12	74.5 °F	63.8 °F	57.6 °F	3 mph	0 mph	3 mph	0 in
13	76.1 °F	64.1 °F	57.6 °F	4 mph	0 mph	4 mph	0 in
14	75.2 °F	62.8 °F	55.8 °F	6 mph	0 mph	6 mph	0 in
15	74.1 °F	61.6 °F	53.6 °F	8 mph	1 mph	8 mph	0 in
16	78.4 °F	62.6 °F	52.7 °F	6 mph	0 mph	6 mph	0 in
17	82.8 °F	60.8 °F	48.4 °F	6 mph	1 mph	6 mph	0 in
18	83.7 °F	60.1 °F	47.8 °F	6 mph	0 mph	6 mph	0 in
19	80.4 °F	59.1 °F	47.1 °F	6 mph	0 mph	6 mph	0 in
20	78.3 °F	59.8 °F	47.1 °F	7 mph	1 mph	7 mph	0 in
21	72.1 °F	61 °F	53.4 °F	8 mph	1 mph	8 mph	0.17 in
22	78.4 °F	60.1 °F	49.8 °F	7 mph	1 mph	7 mph	0 in
23	79 °F	60.4 °F	49.6 °F	8 mph	1 mph	8 mph	0 in
24	86.4 °F	63.1 °F	50.7 °F	7 mph	1 mph	7 mph	0 in
25	88.7 °F	64.6 °F	49.8 °F	6 mph	1 mph	6 mph	0 in
26	92.1 °F	68 °F	52.2 °F	4 mph	0 mph	4 mph	0 in
27	60.8 °F	58.9 °F	57.4 °F	0 mph	0 mph	0 mph	0 in
28	88.7 °F	65.1 °F	52.9 °F	5 mph	0 mph	5 mph	0 in
29	83.3 °F	61.1 °F	49.8 °F	9 mph	1 mph	9 mph	0 in
30	76.5 °F	61.8 °F	51.4 °F	10 mph	1 mph	11 mph	0 in
2014	Temperature			Speed			Precip. Rate.
Dec	High	Avg	Low	High	Avg	Gust	Sum
1	75.7 °F	61.6 °F	52.2 °F	3 mph	0 mph	4 mph	0 in



**Weather Summary October 2014 - July 2015 at weather station KCACHULA20**

2	67.6 °F	62 °F	57.7 °F	10 mph	1 mph	10 mph	0.5 in
3	65.7 °F	63.2 °F	60.1 °F	5 mph	0 mph	5 mph	0.83 in
4	76.3 °F	63.5 °F	55.2 °F	4 mph	1 mph	5 mph	0.62 in
5	70 °F	60.2 °F	54 °F	6 mph	0 mph	6 mph	0 in
6	77.4 °F	62.9 °F	56.1 °F	6 mph	1 mph	6 mph	0 in
7	82.6 °F	63.1 °F	52.7 °F	6 mph	0 mph	6 mph	0 in
8	77.2 °F	62.8 °F	54.9 °F	3 mph	0 mph	3 mph	0 in
9	82.8 °F	62 °F	52.7 °F	6 mph	0 mph	6 mph	0 in
10	75.6 °F	59.5 °F	50.4 °F	5 mph	0 mph	5 mph	0 in
11	74.3 °F	62.3 °F	57.2 °F	7 mph	1 mph	7 mph	0 in
12	62.1 °F	57.2 °F	53.4 °F	10 mph	1 mph	12 mph	0.05 in
13	68.9 °F	55.6 °F	48.9 °F	6 mph	1 mph	8 mph	0.05 in
14	72.7 °F	54.4 °F	45.1 °F	5 mph	1 mph	6 mph	0 in
15	70.9 °F	55.2 °F	46.9 °F	6 mph	0 mph	6 mph	0 in
16	59.4 °F	53.8 °F	50.2 °F	3 mph	0 mph	3 mph	0.12 in
17	66 °F	56.1 °F	50.2 °F	10 mph	1 mph	10 mph	0.71 in
18	66.4 °F	55.3 °F	49.3 °F	6 mph	0 mph	6 mph	0 in
19	75.2 °F	55.9 °F	47.1 °F	6 mph	0 mph	6 mph	0 in
20	71.1 °F	56.4 °F	47.5 °F	6 mph	0 mph	6 mph	0 in
21	73 °F	59.1 °F	50.7 °F	5 mph	0 mph	5 mph	0 in
22	83.5 °F	60.6 °F	48.6 °F	6 mph	0 mph	6 mph	0 in
23	88 °F	64.6 °F	50.9 °F	6 mph	1 mph	6 mph	0 in
24	80.6 °F	61.5 °F	53.1 °F	6 mph	1 mph	6 mph	0 in
25	69.1 °F	57.2 °F	47.5 °F	8 mph	1 mph	8 mph	0 in
26	73.4 °F	53.4 °F	43.7 °F	4 mph	1 mph	6 mph	0 in
27	70.5 °F	51.9 °F	43.5 °F	6 mph	1 mph	6 mph	0 in
28	70.2 °F	49.6 °F	38.1 °F	8 mph	0 mph	8 mph	0 in
29	71.2 °F	51.4 °F	40.3 °F	7 mph	0 mph	7 mph	0 in
30	58.1 °F	50.9 °F	46.9 °F	8 mph	1 mph	8 mph	0.08 in
31	56.7 °F	45.4 °F	37.6 °F	7 mph	1 mph	7 mph	0.24 in
2015	Temperature			Speed			Precip. Rate.
Feb	High	Avg	Low	High	Avg	Gust	Sum
1	65.7 °F	46.2 °F	35.2 °F	6 mph	1 mph	6 mph	0 in
2	67.8 °F	47.6 °F	36.3 °F	7 mph	1 mph	7 mph	0 in
3	69.1 °F	50 °F	39.4 °F	5 mph	0 mph	5 mph	0 in
4	76.3 °F	53.7 °F	40.3 °F	5 mph	0 mph	5 mph	0 in
5	86.2 °F	63.6 °F	47.3 °F	5 mph	1 mph	5 mph	0 in
6	90.7 °F	66.1 °F	51.6 °F	5 mph	1 mph	5 mph	0 in
7	83.8 °F	61.1 °F	49.3 °F	5 mph	0 mph	5 mph	0 in
8	75.6 °F	60.4 °F	53.2 °F	6 mph	0 mph	6 mph	0 in
9	71.4 °F	58.7 °F	52.7 °F	6 mph	0 mph	6 mph	0 in
10	77.5 °F	59.2 °F	48 °F	6 mph	1 mph	6 mph	0 in

**Weather Summary October 2014 - July 2015 at weather station KCACHULA20**

11	59.4 °F	57.6 °F	54.7 °F	4 mph	0 mph	4 mph	0.08 in
12	73.8 °F	60.4 °F	56.7 °F	7 mph	1 mph	7 mph	0.08 in
13	74.5 °F	61.1 °F	53.2 °F	6 mph	1 mph	6 mph	0 in
14	77.9 °F	58.7 °F	46.2 °F	4 mph	1 mph	6 mph	0 in
15	81 °F	60.4 °F	48.7 °F	6 mph	1 mph	6 mph	0 in
16	82.2 °F	59.6 °F	48.2 °F	6 mph	1 mph	6 mph	0 in
17	81.9 °F	60.7 °F	48.9 °F	6 mph	1 mph	6 mph	0 in
22	54.9 °F	49.4 °F	53.6 °F	8 mph	3 mph	8 mph	0.08 in
23	69.3 °F	57.8 °F	51.1 °F	9 mph	2 mph	9 mph	0.17 in
24	74.3 °F	57 °F	45.5 °F	8 mph	1 mph	10 mph	0 in
25	76.5 °F	57.9 °F	45.3 °F	6 mph	1 mph	6 mph	0 in
26	72.7 °F	56.8 °F	46.6 °F	8 mph	1 mph	8 mph	0 in
27	68.7 °F	57.9 °F	48.7 °F	11 mph	3 mph	11 mph	0 in
28	66 °F	56.9 °F	52.3 °F	12 mph	2 mph	12 mph	0.33 in
2015	Temperature			Speed			Precip. Rate.
Mar	High	Avg	Low	High	Avg	Gust	Sum
1	55.6 °F	52.6 °F	50.2 °F	4 mph	1 mph	6 mph	0.75 in
2	61.3 °F	51.8 °F	47.1 °F	10 mph	1 mph	11 mph	0.45 in
3	67.3 °F	54.7 °F	46.4 °F	6 mph	1 mph	7 mph	0 in
4	72.5 °F	56.6 °F	44.4 °F	6 mph	1 mph	6 mph	0 in
5	79.9 °F	59.3 °F	42.8 °F	5 mph	1 mph	6 mph	0 in
6	82.9 °F	61.9 °F	44.1 °F	7 mph	1 mph	8 mph	0 in
7	86.7 °F	64.7 °F	49.8 °F	6 mph	1 mph	7 mph	0 in
8	78.1 °F	67.5 °F	54.9 °F	6 mph	1 mph	7 mph	0 in
9	74.1 °F	59.8 °F	47.3 °F	6 mph	1 mph	7 mph	0 in
10	82.4 °F	63.1 °F	48.4 °F	5 mph	1 mph	6 mph	0 in
11	78.4 °F	62.4 °F	56.7 °F	6 mph	1 mph	6 mph	0 in
12	76.1 °F	75.2 °F	74.3 °F	3 mph	3 mph	3 mph	0 in
13	84.2 °F	69.9 °F	57.6 °F	9 mph	1 mph	9 mph	0 in
14	91.6 °F	75.2 °F	58.1 °F	8 mph	2 mph	8 mph	0 in
15	90.5 °F	75.4 °F	61.7 °F	9 mph	1 mph	9 mph	0 in
16	66.7 °F	63.7 °F	62.6 °F	4 mph	1 mph	4 mph	0 in
17	76.3 °F	65.4 °F	62.6 °F	4 mph	1 mph	6 mph	0 in
18	73.2 °F	63.8 °F	57.9 °F	10 mph	2 mph	10 mph	0 in
19	76.3 °F	64.7 °F	58.6 °F	8 mph	1 mph	8 mph	0 in
20	79.2 °F	64.6 °F	54.5 °F	10 mph	1 mph	10 mph	0 in
21	78.3 °F	63.9 °F	55.2 °F	6 mph	1 mph	6 mph	0 in
22	75 °F	62.2 °F	53.2 °F	10 mph	1 mph	10 mph	0 in



**Weather Summary October 2014 - July 2015 at weather station KCACHULA20**

<b>23</b>	73.9 °F	61.7 °F	51.6 °F	<b>10 mph</b>	<b>1 mph</b>	<b>10 mph</b>	<b>0 in</b>
<b>24</b>	75.9 °F	61.5 °F	49.5 °F	<b>9 mph</b>	<b>1 mph</b>	<b>9 mph</b>	<b>0 in</b>
<b>25</b>	84.2 °F	65.1 °F	51.8 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>26</b>	95.2 °F	72.3 °F	54.9 °F	<b>7 mph</b>	<b>1 mph</b>	<b>7 mph</b>	<b>0 in</b>
<b>27</b>	90 °F	70.8 °F	57.9 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>28</b>	83.7 °F	67.5 °F	54.1 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>29</b>	80.6 °F	66.5 °F	57.9 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>30</b>	79.9 °F	64.8 °F	54.5 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>31</b>	75.7 °F	63.7 °F	54.9 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>2015</b>	<b>Temperature</b>			<b>Speed</b>			<b>Precip. Rate.</b>
<b>Apr</b>	<b>High</b>	<b>Avg</b>	<b>Low</b>	<b>High</b>	<b>Avg</b>	<b>Gust</b>	<b>Sum</b>
<b>1</b>	76.1 °F	64.2 °F	58.1 °F	<b>8 mph</b>	<b>2 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>2</b>	74.7 °F	62.7 °F	54.3 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>3</b>	89.4 °F	68.1 °F	51.4 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>4</b>	82.4 °F	66.2 °F	55.6 °F	<b>8 mph</b>	<b>1 mph</b>	<b>9 mph</b>	<b>0 in</b>
<b>5</b>	72 °F	61.2 °F	53.1 °F	<b>11 mph</b>	<b>2 mph</b>	<b>11 mph</b>	<b>0 in</b>
<b>6</b>	70.2 °F	59.6 °F	52.5 °F	<b>10 mph</b>	<b>2 mph</b>	<b>10 mph</b>	<b>0 in</b>
<b>7</b>	70.3 °F	59.8 °F	52.7 °F	<b>12 mph</b>	<b>1 mph</b>	<b>12 mph</b>	<b>0 in</b>
<b>8</b>	70.9 °F	59.4 °F	51.6 °F	<b>10 mph</b>	<b>1 mph</b>	<b>10 mph</b>	<b>0.04 in</b>
<b>9</b>	72.9 °F	59.5 °F	47.8 °F	<b>10 mph</b>	<b>1 mph</b>	<b>10 mph</b>	<b>0 in</b>
<b>10</b>	71.4 °F	34.9 °F	52 °F	<b>11 mph</b>	<b>1 mph</b>	<b>11 mph</b>	<b>0 in</b>
<b>11</b>	73.8 °F	60.3 °F	49.6 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>12</b>	76.5 °F	62.1 °F	50.4 °F	<b>9 mph</b>	<b>1 mph</b>	<b>9 mph</b>	<b>0 in</b>
<b>13</b>	76.1 °F	63.8 °F	55 °F	<b>7 mph</b>	<b>1 mph</b>	<b>7 mph</b>	<b>0 in</b>
<b>14</b>	77.4 °F	65.2 °F	56.8 °F	<b>6 mph</b>	<b>0 mph</b>	<b>6 mph</b>	<b>0 in</b>
<b>15</b>	78.1 °F	63.4 °F	51.1 °F	<b>1 mph</b>	<b>0 mph</b>	<b>1 mph</b>	<b>0 in</b>
<b>16</b>	82.6 °F	67.8 °F	54.7 °F	<b>5 mph</b>	<b>0 mph</b>	<b>5 mph</b>	<b>0 in</b>
<b>17</b>	85.1 °F	66.7 °F	50.7 °F	<b>5 mph</b>	<b>0 mph</b>	<b>5 mph</b>	<b>0 in</b>
<b>18</b>	83.5 °F	66.1 °F	50.5 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>19</b>	77.4 °F	63.4 °F	51.6 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>20</b>	72.7 °F	62.7 °F	57 °F	<b>10 mph</b>	<b>2 mph</b>	<b>10 mph</b>	<b>0 in</b>
<b>21</b>	71.4 °F	62.2 °F	57.9 °F	<b>10 mph</b>	<b>2 mph</b>	<b>10 mph</b>	<b>0 in</b>
<b>22</b>	69.1 °F	60.2 °F	55.6 °F	<b>7 mph</b>	<b>1 mph</b>	<b>7 mph</b>	<b>0 in</b>
<b>23</b>	66.2 °F	59.8 °F	54.7 °F	<b>6 mph</b>	<b>0 mph</b>	<b>6 mph</b>	<b>0 in</b>
<b>24</b>	65.7 °F	58.5 °F	55.9 °F	<b>8 mph</b>	<b>2 mph</b>	<b>10 mph</b>	<b>0.04 in</b>

**Weather Summary October 2014 - July 2015 at weather station KCACHULA20**

<b>25</b>	66.6 °F	59.4 °F	55.2 °F	<b>12 mph</b>	<b>3 mph</b>	<b>12 mph</b>	<b>0 in</b>
<b>26</b>	73.8 °F	62.3 °F	53.8 °F	<b>9 mph</b>	<b>1 mph</b>	<b>9 mph</b>	<b>0 in</b>
<b>27</b>	88.7 °F	68.2 °F	51.8 °F	<b>5 mph</b>	<b>0 mph</b>	<b>5 mph</b>	<b>0 in</b>
<b>28</b>	91.6 °F	71.2 °F	55 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>29</b>	92.5 °F	72.7 °F	57.4 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0 in</b>
<b>30</b>	94.3 °F	73.3 °F	59.4 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0 in</b>
<b>2015</b>	<b>Temperature</b>			<b>Speed</b>			<b>Precip. Rate.</b>
<b>May</b>	<b>High</b>	<b>Avg</b>	<b>Low</b>	<b>High</b>	<b>Avg</b>	<b>Gust</b>	<b>Sum</b>
<b>1</b>	96.6 °F	74.2 °F	59.2 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0 in</b>
<b>2</b>	76.5 °F	65.7 °F	57.4 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0 in</b>
<b>3</b>	74.1 °F	64.4 °F	58.8 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0 in</b>
<b>4</b>	71.8 °F	63 °F	58.1 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0 in</b>
<b>5</b>	71.1 °F	60.3 °F	57.9 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0 in</b>
<b>6</b>	66 °F	60.3 °F	57.4 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0 in</b>
<b>7</b>	66 °F	58.3 °F	55.2 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0 in</b>
<b>8</b>	61.2 °F	54.5 °F	50.2 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0.25 in</b>
<b>9</b>	66.4 °F	59.1 °F	54 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0 in</b>
<b>10</b>	78.4 °F	62.5 °F	52.5 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0 in</b>
<b>11</b>	81.3 °F	64.5 °F	54.7 °F	<b>0 mph</b>	<b>0 mph</b>	<b>0 mph</b>	<b>0 in</b>
<b>12</b>	73.6 °F	62.4 °F	55.4 °F	<b>4 mph</b>	<b>0 mph</b>	<b>4 mph</b>	<b>0 in</b>
<b>13</b>	70.7 °F	60.7 °F	55.6 °F	<b>5 mph</b>	<b>1 mph</b>	<b>5 mph</b>	<b>0 in</b>
<b>14</b>	67.5 °F	58.6 °F	53.2 °F	<b>5 mph</b>	<b>0 mph</b>	<b>5 mph</b>	<b>0 in</b>
<b>15</b>	69.8 °F	57.8 °F	54.1 °F	<b>7 mph</b>	<b>1 mph</b>	<b>7 mph</b>	<b>0.67 in</b>
<b>16</b>	71.6 °F	59.8 °F	53.6 °F	<b>6 mph</b>	<b>0 mph</b>	<b>6 mph</b>	<b>0 in</b>
<b>17</b>	70.7 °F	61.2 °F	54.5 °F	<b>10 mph</b>	<b>2 mph</b>	<b>10 mph</b>	<b>0 in</b>
<b>18</b>	71.1 °F	61.6 °F	56.7 °F	<b>10 mph</b>	<b>2 mph</b>	<b>10 mph</b>	<b>0 in</b>
<b>19</b>	72.9 °F	61.8 °F	57.2 °F	<b>3 mph</b>	<b>0 mph</b>	<b>3 mph</b>	<b>0 in</b>
<b>20</b>	71.6 °F	62 °F	56.1 °F	<b>10 mph</b>	<b>2 mph</b>	<b>10 mph</b>	<b>0 in</b>
<b>21</b>	68.7 °F	58.7 °F	56.8 °F	<b>12 mph</b>	<b>2 mph</b>	<b>12 mph</b>	<b>0 in</b>
<b>22</b>	71.1 °F	61.2 °F	56.1 °F	<b>9 mph</b>	<b>1 mph</b>	<b>9 mph</b>	<b>0 in</b>
<b>23</b>	71.2 °F	56.3 °F	56.3 °F	<b>9 mph</b>	<b>2 mph</b>	<b>9 mph</b>	<b>0 in</b>
<b>24</b>	71.6 °F	44.4 °F	57.9 °F	<b>6 mph</b>	<b>1 mph</b>	<b>6 mph</b>	<b>0 in</b>
<b>25</b>	67.1 °F	58 °F	59.4 °F	<b>4 mph</b>	<b>0 mph</b>	<b>4 mph</b>	<b>0 in</b>
<b>26</b>	69.3 °F	61.9 °F	58.6 °F	<b>5 mph</b>	<b>0 mph</b>	<b>5 mph</b>	<b>0 in</b>
<b>27</b>	75.2 °F	60.8 °F	57.2 °F	<b>10 mph</b>	<b>1 mph</b>	<b>10 mph</b>	<b>0 in</b>
<b>28</b>	78.3 °F	63.1 °F	58.3 °F	<b>6 mph</b>	<b>0 mph</b>	<b>6 mph</b>	<b>0 in</b>
<b>29</b>	78.6 °F	47.9 °F	57.6 °F	<b>8 mph</b>	<b>1 mph</b>	<b>8 mph</b>	<b>0 in</b>
<b>30</b>	82.4 °F	35.9 °F	58.5 °F	<b>7 mph</b>	<b>0 mph</b>	<b>7 mph</b>	<b>0 in</b>
<b>31</b>	79.3 °F	60.9 °F	59.7 °F	<b>9 mph</b>	<b>1 mph</b>	<b>9 mph</b>	<b>0 in</b>



**Weather Summary October 2014 - July 2015 at weather station KCACHULA20**

2015	Temperature			Speed			Precip. Rate.
Jun	High	Avg	Low	High	Avg	Gust	Sum
1	78.8 °F	66.7 °F	59.4 °F	0 mph	0 mph	0 mph	0 in
2	78.4 °F	62.4 °F	55.2 °F	3 mph	0 mph	3 mph	0 in
3	75.2 °F	64.7 °F	58.8 °F	3 mph	0 mph	3 mph	0 in
4	69.8 °F	28.9 °F	58.5 °F	6 mph	0 mph	6 mph	0 in
5	73.8 °F	6.4 °F	57.9 °F	4 mph	0 mph	4 mph	0 in
6	78.6 °F	25.6 °F	59.7 °F	9 mph	0 mph	9 mph	0 in
7	81 °F	51 °F	59.4 °F	8 mph	0 mph	8 mph	0 in
8	87.1 °F	3 °F	60.1 °F	7 mph	1 mph	7 mph	0 in
9	72 °F	13.2 °F	65.7 °F	4 mph	0 mph	4 mph	0 in
10	74.8 °F	39.6 °F	63.3 °F	8 mph	2 mph	8 mph	0 in
11	77.9 °F	66.5 °F	62.6 °F	7 mph	1 mph	7 mph	0 in
12	72.7 °F	63.1 °F	61.2 °F	6 mph	1 mph	6 mph	0 in
13	72.5 °F	55.2 °F	59.4 °F	4 mph	0 mph	4 mph	0 in
14	79.7 °F	41.4 °F	62.8 °F	4 mph	0 mph	4 mph	0 in
15	82.2 °F	63.7 °F	63.1 °F	4 mph	0 mph	4 mph	0 in
16	80.8 °F	68.5 °F	61 °F	3 mph	0 mph	3 mph	0 in
17	82.9 °F	40.8 °F	60.4 °F	3 mph	0 mph	3 mph	0 in
18	85.1 °F	56.8 °F	58.6 °F	4 mph	0 mph	4 mph	0 in
19	83.1 °F	24.3 °F	58.5 °F	2 mph	0 mph	2 mph	0 in
20	84.4 °F	24.1 °F	64.9 °F	3 mph	0 mph	3 mph	0 in
21	83.3 °F	59 °F	61.3 °F	7 mph	1 mph	7 mph	0 in
22	88.7 °F	71.8 °F	60.8 °F	6 mph	1 mph	6 mph	0 in
23	89.1 °F	72.4 °F	62.2 °F	6 mph	1 mph	6 mph	0 in
24	86.7 °F	71 °F	61.9 °F	10 mph	1 mph	10 mph	0 in
25	85.3 °F	71.2 °F	63.7 °F	8 mph	1 mph	8 mph	0 in
26	86.4 °F	71.6 °F	62.6 °F	10 mph	1 mph	10 mph	0 in
27	81.1 °F	69.6 °F	62.6 °F	6 mph	1 mph	6 mph	0 in
28	85.8 °F	72.4 °F	66.7 °F	6 mph	1 mph	6 mph	0 in
29	82.8 °F	70.9 °F	65.7 °F	6 mph	1 mph	6 mph	0 in
30	86.9 °F	67.5 °F	63.1 °F	6 mph	1 mph	6 mph	0.08 in
2015	Temperature			Speed			Precip. Rate.
Jul	High	Avg	Low	High	Avg	Gust	Sum
1	85.8 °F	69.7 °F	67.1 °F	6 mph	1 mph	6 mph	0.04 in
2	147.9 °F	27.8 °F	32 °F	11 mph	1 mph	11 mph	0 in
3	-200 °F	0 °F	200 °F	10 mph	1 mph	10 mph	0 in
4	-200 °F	0 °F	200 °F	8 mph	1 mph	8 mph	0 in

# **APPENDIX C**

## *Survey Data Forms and Photographs*



**Vernal Pool Wet Season**
**Record: 51**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2014-12-19
Survey Time	08:39:00
County	San Diego
Quad	Jamul
Collector(s)	Danielle Mullen, Other
Other Collector(s)	Kyle Matthews
Permit Number	TE31221B0 DAM, other
Other Permit Number(s)	RKM
Site/Project Name	8207 PV

**Pool Data**

Pool ID	A1
Water Temperature (°C)	10
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	10
Estimated maximum	15

**Surface Area (m)**

length	3
width	3
length	5
width	4
Sampling	3 x 3
Estimated maximum	5 x 4

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Description	
Photo	

**Pool Data**

Pool ID	A2
Water Temperature (°C)	11
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	6
Estimated maximum	10

**Surface Area (m)**

length	2.6
width	1.5
length	4
width	2
Sampling	2.6 x 1.5
Estimated maximum	4 x 2

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo	
	

**Pool Data**

Pool ID	A3
Water Temperature (°C)	10
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	10.5
Estimated maximum	14

Surface Area (m)

length	11
width	2
length	13
width	3
Sampling	11 x 2
Estimated maximum	13 x 3

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Photo





## Pool Data

Pool ID	A4
Water Temperature (°C)	11
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	10
Estimated maximum	14

## Surface Area (m)

length	3.3
width	2.5
length	4
width	4
Sampling	3.3 x 2.5
Estimated maximum	4 x 4

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	A5
Water Temperature (°C)	11
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	15
Estimated maximum	18

**Surface Area (m)**

length	13
width	2.5
length	15
width	3
Sampling	13 x 2.5
Estimated maximum	15 x 3

Habitat Condition

Disturbed	1
Disturbance type	<i>tire tracks</i>
Disturbance level	<i>light</i>
Land use of habitat	<i>road rut</i>

Pool Photos

Photo



**Vernal Pool Wet Season**
**Record: 63**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2014-12-19
Survey Time	09:27:00
County	San Diego
Quad	Jamul Mountains
Collector(s)	Danielle Mullen, Other
Other Collector(s)	RKM
Permit Number	TE31221B0 DAM, other
Other Permit Number(s)	RKM
Site/Project Name	8207 PV

**Pool Data**

Pool ID	A6
Water Temperature (°C)	9.5
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	8.5
Estimated maximum	12

**Surface Area (m)**

length	5
width	2
length	6
width	2.5
Sampling	5 x 2
Estimated maximum	6 x 2.5



**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**


Pool ID	A7
Water Temperature (°C)	12
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	8
Estimated maximum	12

Surface Area (m)	
length	3
width	1
length	4
width	1.5
Sampling	3 x 1
Estimated maximum	4 x 1.5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

Pool Data	
Pool ID	A8
Water Temperature (°C)	12
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	7
Estimated maximum	10

Surface Area (m)

length	16.6
width	2.5
length	18
width	3
Sampling	16.6 x 2.5
Estimated maximum	18 x 3

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Photo



## Pool Data

Pool ID	A9
Water Temperature (°C)	12.5
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	4
Estimated maximum	6

## Surface Area (m)

length	5
width	1
length	6
width	1.5
Sampling	5 x 1
Estimated maximum	6 x 1.5

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	A10
Water Temperature (°C)	14
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	4
Estimated maximum	6

**Surface Area (m)**

length	3.3
width	0.6
length	4
width	1
Sampling	3.3 x 0.6
Estimated maximum	4 x 1



**Habitat Condition**

Disturbed	1
Disturbance type	<i>tire tracks</i>
Disturbance level	<i>light</i>
Land use of habitat	<i>road rut</i>

**Pool Photos**

Photo



**Pool Data**

Pool ID	A11
Water Temperature (°C)	15.5
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	<i>None</i>
Notostracans	0
No. of Individuals	0
Notostracans Summary	<i>None</i>

**Pool Depth (cm)**

At time of sampling	4
Estimated maximum	6


Surface Area (m)

length	4.3
width	3
length	5
width	3.2
Sampling	4.3 x 3
Estimated maximum	5 x 3.2

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Photo	
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Pool Data

Pool ID	A12
Water Temperature (°C)	12
Air Temperature (°C)	17
Anostracans	Present
No. of Individuals	100s
Anostracans Summary	Branchinecta sandiegoensis
Reproductive Status	Male, Female
Notostracans	None
No. of Individuals	0

Pool Depth (cm)	
At time of sampling	30
Estimated maximum	34

Surface Area (m)	
length	20
width	3
length	21
width	3
Sampling	20 x 3
Estimated maximum	21 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	A13
Water Temperature (°C)	15
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	8.5
Estimated maximum	11

## Surface Area (m)

length	17.3
width	3
length	19
width	3
Sampling	17.3 x 3
Estimated maximum	19 x 3

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	A14
Water Temperature (°C)	15
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	5
Estimated maximum	7

**Surface Area (m)**

length	3.6
width	1
length	4.5
width	1.3
Sampling	3.6 x 1
Estimated maximum	4.5 x 1.3



**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**


Pool ID	A15
Water Temperature (°C)	13
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	11
Estimated maximum	12

Surface Area (m)	
length	7.5
width	2.6
length	9
width	3
Sampling	7.5 x 2.6
Estimated maximum	9 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut


Pool Photos	
Photo	

Pool Data	
Pool ID	A16
Water Temperature (°C)	14
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	4
Estimated maximum	8

Surface Area (m)	
length	6
width	0.5
length	8
width	0.75
Sampling	6 x 0.5
Estimated maximum	8 x 0.75

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	A17
Water Temperature (°C)	19.5
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	5
Estimated maximum	7

## Surface Area (m)

length	6
width	0.75
length	7
width	1
Sampling	6 x 0.75
Estimated maximum	7 x 1

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	A18
Water Temperature (°C)	19.5
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	3
Estimated maximum	5

**Surface Area (m)**

length	2
width	1
length	2.5
width	1.25
Sampling	2 x 1
Estimated maximum	2.5 x 1.25



**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**

Pool ID	A19
Water Temperature (°C)	19
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	34
Estimated maximum	45


Surface Area (m)

length	25
width	6
length	27
width	8
Sampling	25 x 6
Estimated maximum	27 x 8

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Photo	
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Pool Data

Pool ID	A20
Water Temperature (°C)	20
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	4
Estimated maximum	5

Surface Area (m)

length	8.5
width	1
length	10
width	1.5
Sampling	8.5 x 1
Estimated maximum	10 x 1.5

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Photo



## Pool Data

Pool ID	A21
Water Temperature (°C)	18
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	8
Estimated maximum	9

## Surface Area (m)

length	21
width	4.5
length	23
width	5
Sampling	21 x 4.5
Estimated maximum	23 x 5

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	A22
Water Temperature (°C)	18
Air Temperature (°C)	22
Anostracans	Present
No. of Individuals	100s
Anostracans Summary	<i>Branchinecta sandiegoensis</i>
Reproductive Status	Male, Female
Notostracans	0
No. of Individuals	0

**Pool Depth (cm)**

At time of sampling	12.5
Estimated maximum	13

**Surface Area (m)**

length	8.5
width	3
length	9
width	3
Sampling	8.5 x 3
Estimated maximum	9 x 3



Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Description	
Photo	


Pool Data

Pool ID	A23
Water Temperature (°C)	18
Air Temperature (°C)	22
Anostracans	Present
No. of Individuals	100s
Reproductive Status	Male, Female
Anostracans Summary	Branchinecta sandiegoensis
Notostracans	0
No. of Individuals	0

Pool Depth (cm)	
At time of sampling	13
Estimated maximum	15

Surface Area (m)	
length	17
width	3
length	18
width	3.5
Sampling	17 x 3
Estimated maximum	18 x 3.5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	A24
Water Temperature (°C)	19
Air Temperature (°C)	23
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	6
Estimated maximum	8

## Surface Area (m)

length	3.3
width	2.5
length	3.75
width	3
Sampling	3.3 x 2.5
Estimated maximum	3.75 x 3

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	A25
Water Temperature (°C)	20
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	14
Estimated maximum	15

**Surface Area (m)**

length	7.5
width	2.5
length	8
width	3
Sampling	7.5 x 2.5
Estimated maximum	8 x 3

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks, garbage
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**

Pool ID	A26
Water Temperature (°C)	17.5
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	6.5
Estimated maximum	8



Surface Area (m)	
length	15
width	3
length	16
width	4
Sampling	15 x 3
Estimated maximum	16 x 4

Habitat Condition	
Disturbed	0
Land use of habitat	<i>ephemeral basin</i>

Pool Photos	
Photo	

**Vernal Pool Wet Season**
**Record: 183**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2014-12-19
Survey Time	08:44:00
County	San Diego
Quad	Jamul
Collector(s)	Paul Lemons
Permit Number	TE051248 PML
Site/Project Name	8207 PV

**Pool Data**

Pool ID	B1
Water Temperature (°C)	9
Air Temperature (°C)	13
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	10
Estimated maximum	15

**Surface Area (m)**

length	1
width	15
length	1.5
width	25
Sampling	1 x 15
Estimated maximum	1.5 x 25

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

Pool Photos

Photo



Pool Data

Pool ID	B2
Water Temperature (°C)	11
Air Temperature (°C)	13
Anostracans	Present
No. of Individuals	100s; Males, Females
Anostracans Summary	<i>Branchinecta sandiegoensis</i>
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	20
Estimated maximum	24

Surface Area (m)

length	3
width	21
length	3.5
width	27
Sampling	3 x 21
Estimated maximum	3.5 x 27

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

**Pool Photos**

Photo



**Pool Data**

Pool ID	B3
Water Temperature (°C)	9
Air Temperature (°C)	14
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


**Pool Depth (cm)**

At time of sampling	4
Estimated maximum	7



Surface Area (m)	
length	2
width	0.5
length	2
width	2
Sampling	2 x 0.5
Estimated maximum	2 x 2

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

Pool Photos	
Photo	


Pool Data	
Pool ID	B4
Water Temperature (°C)	10
Air Temperature (°C)	15
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



Pool Depth (cm)	
At time of sampling	4
Estimated maximum	5

Surface Area (m)	
length	1.5
width	0.5
length	2
width	1
Sampling	1.5 x 0.5
Estimated maximum	2 x 1

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

Pool Photos	
Photo	

## Pool Data

Pool ID	B5
Water Temperature (°C)	12
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	10
Estimated maximum	12

## Surface Area (m)

length	1
width	1.5
length	1.5
width	2
Sampling	1 x 1.5
Estimated maximum	1.5 x 2

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

## Pool Photos

Photo



**Pool Data**

Pool ID	B6
Water Temperature (°C)	12
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	9
Estimated maximum	12

**Surface Area (m)**

length	1
width	7
length	1.5
width	12
Sampling	1 x 7
Estimated maximum	1.5 x 12

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

**Pool Photos**

Photo



**Pool Data**

Pool ID	B7
Water Temperature (°C)	11
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	15
Estimated maximum	18

Surface Area (m)

length	7
width	1.5
length	12
width	3
Sampling	7 x 1.5
Estimated maximum	12 x 3

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

Pool Photos

Photo	
	

Pool Data


Pool ID	B8
Water Temperature (°C)	15
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



Pool Depth (cm)	
At time of sampling	4
Estimated maximum	5

Surface Area (m)	
length	5
width	1
length	7
width	1.5
Sampling	5 x 1
Estimated maximum	7 x 1.5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

Pool Photos	
Photo	

## Pool Data

Pool ID	B9
Water Temperature (°C)	14
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	7
Estimated maximum	9

## Surface Area (m)

length	5
width	0.5
length	12
width	1
Sampling	5 x 0.5
Estimated maximum	12 x 1

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Grazed	0
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

## Pool Photos

Photo



**Pool Data**

Pool ID	B10
Water Temperature (°C)	12
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	5
Estimated maximum	7

**Surface Area (m)**

length	8
width	1
length	15
width	4
Sampling	8 x 1
Estimated maximum	15 x 4

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

**Pool Photos**

Photo	
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**Pool Data**

Pool ID	AA1
Water Temperature (°C)	17
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	7
Estimated maximum	14

Surface Area (m)	
length	1
width	4
length	2
width	10
Sampling	1 x 4
Estimated maximum	2 x 10

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

Pool Photos	
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Pool Data	
Pool ID	AA2
Water Temperature (°C)	16
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	10
Estimated maximum	15

Surface Area (m)	
length	3
width	0.5
length	6
width	1.5
Sampling	3 x 0.5
Estimated maximum	6 x 1.5



## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

## Pool Data

Pool ID	AA3
Water Temperature (°C)	15
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	8
Estimated maximum	22

## Surface Area (m)

length	6.5
width	10
length	1.5
width	4
Sampling	6.5 x 10
Estimated maximum	1.5 x 4

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

## Pool Data

Pool ID	AA4
Water Temperature (°C)	16
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	15
Estimated maximum	16

Surface Area (m)	
length	11.5
width	1
length	15
width	2
Sampling	11.5 x 1
Estimated maximum	15 x 2

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Land use of habitat	other
Other land use	Undeveloped open space with dirt roads

**Vernal Pool Wet Season**

Record: 168

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2014-12-19
Survey Time	08:30:00
County	San Diego
Quad	Jamul
Collector(s)	Thomas Liddicoat
Other Collector(s)	
Permit Number	TE139634 TSL
Site/Project Name	8207

**Pool Data**

Pool ID	C1
Water Temperature (°C)	13
Air Temperature (°C)	14
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	5
Estimated maximum	9

**Surface Area (m)**

length	5
width	2
length	9.5
width	2.5
Sampling	5 x 2
Estimated maximum	9.5 x 2.5

**Habitat Condition**

Disturbed	1
Disturbance level	moderate
Land use of habitat	road rut

Pool Photos

Photo



Pool Data

Pool ID	C2
Water Temperature (°C)	13
Air Temperature (°C)	14
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	4
Estimated maximum	7

Surface Area (m)

length	1.25
width	1
length	5
width	2
Sampling	1.25 x 1
Estimated maximum	5 x 2

**Habitat Condition**

Disturbed	1
Disturbance type	<i>tire tracks</i>
Disturbance level	<i>heavy</i>
Land use of habitat	<i>road rut</i>

**Pool Photos**

Photo



**Pool Data**

Pool ID	C3
Water Temperature (°C)	10
Air Temperature (°C)	14
Anostracans	0
No. of Individuals	0
Anostracans Summary	<i>None</i>
Notostracans	0
No. of Individuals	0
Notostracans Summary	<i>None</i>


**Pool Depth (cm)**

At time of sampling	9
Estimated maximum	12



Surface Area (m)	
length	18.5
width	3.25
length	23
width	4.25
Sampling	18.5 x 3.25
Estimated maximum	23 x 4.25

Habitat Condition	
Disturbed	1
Disturbance level	heavy
Land use of habitat	road rut


Pool Photos	
Photo	

Pool Data	
Pool ID	C4
Water Temperature (°C)	16
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	10
Estimated maximum	14

Surface Area (m)	
length	4
width	2
length	5
width	2.2
Sampling	4 x 2
Estimated maximum	5 x 2.2

Habitat Condition	
Land use of habitat	<i>ephemeral basin</i>

Pool Photos	
Photo	

## Pool Data

Pool ID	C5
Water Temperature (°C)	14
Air Temperature (°C)	21
Anostracans	Present
No. of Individuals	10s
Anostracans Summary	10s; immature did not collect
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	14
Estimated maximum	20

## Surface Area (m)

length	26
width	6
length	30
width	9
Sampling	26 x 6
Estimated maximum	30 x 9

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks, other
Other disturbance	Wood, metal fencing
Disturbance level	heavy
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	C6
Water Temperature (°C)	14
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


**Pool Depth (cm)**

At time of sampling	14
Estimated maximum	16

**Surface Area (m)**

length	5.25
width	1.25
length	6
width	2
Sampling	5.25 x 1.25
Estimated maximum	6 x 2

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Land use of habitat	road rut

Pool Photos	
Photo	

Pool Data	
Pool ID	C7
Water Temperature (°C)	14
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	16
Estimated maximum	20



**Surface Area (m)**

length	5.25
width	3
length	6
width	6
Sampling	5.25 x 3
Estimated maximum	6 x 6

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**

Pool ID	C8
Water Temperature (°C)	11
Air Temperature (°C)	21
Anostracans	Present
No. of Individuals	100s; Males, Females
Anostracans Summary	100s; <i>Branchinecta lindahli</i>
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	12
Estimated maximum	15

Surface Area (m)	
length	11.5
width	2.5
length	13
width	3
Sampling	11.5 x 2.5
Estimated maximum	13 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Land use of habitat	road rut

Pool Photos	
Photo	

### Pool Data

Pool ID	C9
Water Temperature (°C)	17
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

### Pool Depth (cm)

At time of sampling	5
Estimated maximum	7

### Surface Area (m)

length	5
width	0.5
length	6
width	0.75
Sampling	5 x 0.5
Estimated maximum	6 x 0.75

### Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Land use of habitat	road rut

### Pool Photos

Photo	
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Pool Data	
Pool ID	C10
Water Temperature (°C)	15.5
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	15
Estimated maximum	18

Surface Area (m)	
length	20
width	8
length	22
width	10
Sampling	20 x 8
Estimated maximum	22 x 10

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	ephemeral basin

Pool Photos	
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Photo



**Pool Data**

Pool ID	C11
Water Temperature (°C)	21
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	6
Estimated maximum	8

**Surface Area (m)**

length	18
width	1.25
length	21
width	2
Sampling	18 x 1.25
Estimated maximum	21 x 2



**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	heavy
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**

Pool ID	C12
Water Temperature (°C)	16
Air Temperature (°C)	21
Anostracans	Present
No. of Individuals	10s; Males
Anostracans Summary	10s; <i>Branchinecta lindahli</i>
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Ostracods

**Pool Depth (cm)**

At time of sampling	24
Estimated maximum	35

**Surface Area (m)**

length	15
width	4
length	16.5
width	11
Sampling	15 x 4
Estimated maximum	16.5 x 11

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	ephemeral basin

**Pool Photos**

Photo	
	

**Pool Data**

Pool ID	C13
Water Temperature (°C)	19
Air Temperature (°C)	21
Anostracans	Present
No. of Individuals	10s
Anostracans Summary	10s; immature did not collect
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	10
Estimated maximum	16

Surface Area (m)

length	7
width	2.25
length	9
width	3.5
Sampling	7 x 2.25
Estimated maximum	9 x 3.5

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	ephemeral basin

Pool Photos

Photo



### Pool Data

Pool ID	C14
Water Temperature (°C)	19
Air Temperature (°C)	21
Anostracans	Present
No. of Individuals	10s; Males
Anostracans Summary	10s; <i>Branchinecta sandiegoensis</i>
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Frogs

### Pool Depth (cm)

At time of sampling	15
Estimated maximum	17


### Surface Area (m)

length	4
width	1.25
length	4.5
width	4.5
Sampling	4 x 1.25
Estimated maximum	4.5 x 4.5

### Habitat Condition

Land use of habitat	ephemeral basin
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### Pool Photos

Photo	
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Pool Data	
Pool ID	C15
Water Temperature (°C)	21
Air Temperature (°C)	21
Anostracans	Present
No. of Individuals	10s
Anostracans Summary	10s; immature did not collect
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	10
Estimated maximum	13

Surface Area (m)	
length	3
width	2
length	6
width	2.25
Sampling	3 x 2
Estimated maximum	6 x 2.25

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Land use of habitat	ephemeral basin

Pool Photos	
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Photo



**Pool Data**

Pool ID	C16
Water Temperature (°C)	21
Air Temperature (°C)	21
Anostracans	Present
No. of Individuals	10s
Anostracans Summary	10s; immature did not collect
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


**Pool Depth (cm)**

At time of sampling	6
Estimated maximum	9

**Surface Area (m)**

length	1.5
width	1
length	2
width	2
Sampling	1.5 x 1
Estimated maximum	2 x 2

Habitat Condition	
Disturbed	1
Disturbance level	<i>moderate</i>
Land use of habitat	<i>ephemeral basin</i>

Pool Photos	
Photo	

Pool Data	
Pool ID	C17
Water Temperature (°C)	21.0
Air Temperature (°C)	21
Anostracans	<i>Present</i>
No. of Individuals	<i>100s</i>
Anostracans Summary	<i>100s; immature did not collect</i>
Notostracans	0
No. of Individuals	0
Notostracans Summary	<i>None</i>

Pool Depth (cm)	
At time of sampling	8
Estimated maximum	10


**Surface Area (m)**

length	3
width	2.25
length	3.5
width	4
Sampling	3 x 2.25
Estimated maximum	3.5 x 4

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	ephemeral basin

**Pool Photos**

Photo	
	

**Pool Data**

Pool ID	C18
Water Temperature (°C)	21
Air Temperature (°C)	21
Anostracans	Present
No. of Individuals	100s
Anostracans Summary	100s; immature did not collect
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	7
Estimated maximum	9

Surface Area (m)

length	11
width	2
length	15
width	2.5
Sampling	11 x 2
Estimated maximum	15 x 2.5

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Land use of habitat	ephemeral basin

Pool Photos

Photo





**Pool Data**

Pool ID	C19
Water Temperature (°C)	20
Air Temperature (°C)	16
Anostracans	Present
No. of Individuals	10s
Anostracans Summary	10s; immature did not collect
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	15
Estimated maximum	19


**Surface Area (m)**

length	3
width	2.25
length	4
width	3
Sampling	3 x 2.25
Estimated maximum	4 x 3

**Habitat Condition**

Disturbed	1
Disturbance level	moderate
Land use of habitat	ephemeral basin

**Pool Photos**

Photo	
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Pool Data	
Pool ID	C20
Water Temperature (°C)	21
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	7
Estimated maximum	10

Surface Area (m)	
length	3
width	2.5
length	4
width	3
Sampling	3 x 2.5
Estimated maximum	4 x 3

Habitat Condition	
Disturbed	1
Land use of habitat	ephemeral basin

Pool Photos	
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Photo



**Pool Data**

Pool ID	C21
Water Temperature (°C)	19
Air Temperature (°C)	21
Anostracans	Present
No. of Individuals	10s
Anostracans Summary	10s; immature did not collect
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


**Pool Depth (cm)**

At time of sampling	19
Estimated maximum	30

**Surface Area (m)**

length	12
width	3.5
length	25
width	4.25
Sampling	12 x 3.5
Estimated maximum	25 x 4.25

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks, garbage
Land use of habitat	ephemeral basin

Pool Photos	
Photo	

Pool Data	
Pool ID	C22
Water Temperature (°C)	22
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	3
Estimated maximum	6

Surface Area (m)

length	12
width	3.5
length	25
width	4.25
Sampling	12 x 3.5
Estimated maximum	25 x 4.25

Habitat Condition

Disturbed	1
Disturbance type	tire tracks, garbage
Land use of habitat	road rut

Pool Photos

Photo


Pool Data

Pool ID	C23
Water Temperature (°C)	22
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	6
Estimated maximum	8

Surface Area (m)

length	2.5
width	1
length	3
width	2
Sampling	2.5 x 1
Estimated maximum	3 x 2

Habitat Condition

Disturbed	1
Disturbance type	garbage, other
Other disturbance	Barbed wire
Disturbance level	heavy
Land use of habitat	ephemeral basin

Pool Photos

Photo





## Pool Data

Pool ID	C24
Water Temperature (°C)	23
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	4
Estimated maximum	5

## Surface Area (m)

length	4
width	43.5
length	6
width	4.5
Sampling	4 x 43.5
Estimated maximum	6 x 4.5

## Habitat Condition

Disturbed	1
Disturbance type	other
Other disturbance	Barbed wire
Land use of habitat	ephemeral basin

## Pool Photos

Photo



**Pool Data**

Pool ID	C25
Water Temperature (°C)	19
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


**Pool Depth (cm)**

At time of sampling	9
Estimated maximum	13

**Surface Area (m)**

length	1
width	0.25
length	3.5
width	2
Sampling	1 x 0.25
Estimated maximum	3.5 x 2

Habitat Condition	
Disturbed	1
Disturbance type	<i>tire tracks</i>
Disturbance level	<i>moderate</i>
Land use of habitat	<i>road rut</i>

Pool Photos	
Photo	

**Vernal Pool Wet Season**
**Record: 66**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-01-02
Survey Time	08:30:00
County	San Diego
Quad	Jamul
Collector(s)	Danielle Mullen, Other
Other Collector(s)	Kyle Matthews
Permit Number	TE31221B0 DAM, other
Other Permit Number(s)	RKM
Site/Project Name	8207 PV

**Pool Data**

Pool ID	A1
Water Temperature (°C)	17
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	10.5
Estimated maximum	15

**Surface Area (m)**

length	3
width	3
length	5
width	4
Sampling	3 x 3
Estimated maximum	5 x 4

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Description	
Photo	

**Pool Data**

Pool ID	A2
Water Temperature (°C)	18.5
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


**Pool Depth (cm)**

At time of sampling	1.5
Estimated maximum	10



Surface Area (m)	
length	2.6
width	1.5
length	4
width	2
Sampling	2.6 x 1.5
Estimated maximum	4 x 2

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

Pool Data	
Pool ID	A3
Water Temperature (°C)	18
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	7
Estimated maximum	14

Surface Area (m)

length	11
width	2
length	13
width	3
Sampling	11 x 2
Estimated maximum	13 x 3

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Photo	
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## Pool Data

Pool ID	A4
Water Temperature (°C)	16.5
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	8
Estimated maximum	14

## Surface Area (m)

length	3.3
width	2.5
length	4
width	4
Sampling	3.3 x 2.5
Estimated maximum	4 x 4

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	A5
Water Temperature (°C)	17
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	9
Estimated maximum	18

**Surface Area (m)**

length	13
width	2.5
length	15
width	3
Sampling	13 x 2.5
Estimated maximum	15 x 3

Habitat Condition

Disturbed	1
Disturbance type	<i>tire tracks</i>
Disturbance level	<i>light</i>
Land use of habitat	<i>road rut</i>

Pool Photos

Photo







Pool Data	
Pool ID	B1
Water Temperature (°C)	6
Air Temperature (°C)	11
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	8.5
Estimated maximum	10

Surface Area (m)	
length	15
width	1.5
length	16
width	2
Sampling	15 x 1.5
Estimated maximum	16 x 2

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B5
Water Temperature (°C)	10
Air Temperature (°C)	10.5
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	9.5
Estimated maximum	11

Surface Area (m)	
length	2.3
width	1.3
length	2.5
width	1.5
Sampling	2.3 x 1.3
Estimated maximum	2.5 x 1.5

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B6
Water Temperature (°C)	13
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	6.5
Estimated maximum	8

Surface Area (m)	
length	5.5
width	1
length	6
width	1
Sampling	5.5 x 1
Estimated maximum	6 x 1

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B7
Water Temperature (°C)	11.5
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	9
Estimated maximum	12

Surface Area (m)	
length	5
width	1.3
length	6
width	1.5
Sampling	5 x 1.3
Estimated maximum	6 x 1.5

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B9
Water Temperature (°C)	13.5
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	7
Estimated maximum	9

Surface Area (m)	
length	4
width	0.5
length	4.5
width	0.75
Sampling	4 x 0.5
Estimated maximum	4.5 x 0.75



Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B10
Water Temperature (°C)	11
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	4.5
Estimated maximum	5

Surface Area (m)	
length	4.3
width	1
length	5
width	1.25
Sampling	4.3 x 1
Estimated maximum	5 x 1.25

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B11
Water Temperature (°C)	16
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	14
Estimated maximum	17


Surface Area (m)

length	9
width	3
length	10
width	4
Sampling	9 x 3
Estimated maximum	10 x 4

Habitat Condition

Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Description	
Photo	

**Vernal Pool Wet Season**
**Record: 75**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-01-02
Survey Time	08:38:00
County	San Diego
Quad	Jamul Mountains
Collector(s)	Danielle Mullen, Other
Other Collector(s)	RKM
Permit Number	TE31221B0 DAM, other
Other Permit Number(s)	RKM
Site/Project Name	8207 PV
Survey Notes	

**Pool Data**

Pool ID	A6
Water Temperature (°C)	18
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth**

At time of sampling	5.5
Estimated maximum	12

**Surface Area (m)**

length	5
width	2
length	6
width	2.5
Sampling	5 x 2
Estimated maximum	6 x 2.5

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**


Pool ID	A7
Water Temperature (°C)	17
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth**

At time of sampling	5.5
Estimated maximum	12

Surface Area (m)	
length	3
width	1
length	4
width	1.5
Sampling	3 x 1
Estimated maximum	4 x 1.5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

Pool Data	
Pool ID	A8
Water Temperature (°C)	17
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



Pool Depth

At time of sampling	7
Estimated maximum	10


Surface Area (m)

length	16.6
width	2.5
length	18
width	3
Sampling	16.6 x 2.5
Estimated maximum	18 x 3

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Photo





Pool Data	
Pool ID	A10
Water Temperature (°C)	19
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth	
At time of sampling	3.5
Estimated maximum	6

Surface Area (m)	
length	3.3
width	0.6
length	4
width	1
Sampling	3.3 x 0.6
Estimated maximum	4 x 1

Habitat Condition	
Disturbed	1
Disturbance type	<i>tire tracks</i>
Disturbance level	<i>light</i>
Land use of habitat	<i>road rut</i>

Pool Photos	
Photo	

Pool Data	
Pool ID	A13
Water Temperature (°C)	19
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



Pool Depth

At time of sampling	8
Estimated maximum	11

Surface Area (m)

length	17.3
width	3
length	19
width	3
Sampling	17.3 x 3
Estimated maximum	19 x 3

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Photo	
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## Pool Data

Pool ID	A17
Water Temperature (°C)	9
Air Temperature (°C)	10
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth

At time of sampling	4.5
Estimated maximum	7

## Surface Area (m)

length	6
width	0.75
length	7
width	1
Sampling	6 x 0.75
Estimated maximum	7 x 1

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	A18
Water Temperature (°C)	6
Air Temperature (°C)	9.5
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth**

At time of sampling	6
Estimated maximum	7

**Surface Area (m)**

length	2
width	1
length	2.5
width	1.25
Sampling	2 x 1
Estimated maximum	2.5 x 1.25

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**

Pool ID	A19
Water Temperature (°C)	7
Air Temperature (°C)	9.5
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth**

At time of sampling	16
Estimated maximum	45


**Surface Area (m)**

length	25
width	6
length	27
width	8
Sampling	25 x 6
Estimated maximum	27 x 8

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo


**Pool Data**

Pool ID	A25
Water Temperature (°C)	4
Air Temperature (°C)	9
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



Pool Depth

At time of sampling	12
Estimated maximum	15

Surface Area (m)

length	7.5
width	2.5
length	8
width	3
Sampling	7.5 x 2.5
Estimated maximum	8 x 3

Habitat Condition

Disturbed	1
Disturbance type	tire tracks, garbage
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Photo


**Vernal Pool Wet Season**
**Record: 186**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-01-02
Survey Time	15:21:00
County	San Diego
Quad	Jamul
Collector(s)	Danielle Mullen, Thomas Liddicoat
Permit Number	TE31221B0 DAM, TE139634 TSL
Site/Project Name	Proctor Valley

**Pool Data**

Pool ID	A27
Water Temperature (°C)	11
Air Temperature (°C)	11
Anostracans	Present
No. of Individuals	10s
Reproductive Status	Male, Female
Anostracans Summary	Branchinecta sandiegoensis
Notostracans	0
No. of Individuals	None
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	10
Estimated maximum	30

**Surface Area (m)**

length	11
width	7
length	29
width	10
Sampling	11 x 7
Estimated maximum	29 x 10

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks, other
Other disturbance	Man made
Disturbance level	heavy
Land use of habitat	drainage ditch

**Vernal Pool Wet Season**
**Record: 171**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-01-02
Survey Time	08:40:00
County	San Diego
Quad	Jamul
Collector(s)	Thomas Liddicoat
Permit Number	TE139634 TSL
Site/Project Name	8207 PV

**Pool Data**

Pool ID	C5
Water Temperature (°C)	11
Air Temperature (°C)	11
Anostracans	Present
No. of Individuals	10s
Anostracans Summary	Branchinecta lindahli
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Ostracods

**Pool Depth (cm)**

At time of sampling	10
Estimated maximum	11

**Surface Area (m)**

length	25
width	4
Sampling	25 x 4
Estimated maximum	3.5 x 2

**Pool Data**

Pool ID	C7
Water Temperature (°C)	11
Air Temperature (°C)	11
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Ostracods

Pool Depth (cm)	
At time of sampling	7

Surface Area (m)	
length	4.5
width	3
Sampling	4.5 x 3
Estimated maximum	3.5 x 2

Pool Data	
Pool ID	C8
Water Temperature (°C)	10
Air Temperature (°C)	11
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	8

Surface Area (m)	
length	10
width	3
Sampling	10 x 3
Estimated maximum	3.5 x 2

Pool Data	
Pool ID	C9
Water Temperature (°C)	12
Air Temperature (°C)	12
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	3

Surface Area (m)	
length	4
width	0.25
Sampling	4 x 0.25
Estimated maximum	3.5 x 2

Pool Data	
Pool ID	C10
Water Temperature (°C)	11
Air Temperature (°C)	11
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	12

Surface Area (m)	
length	4
width	5
Sampling	4 x 5
Estimated maximum	3.5 x 2

Pool Data	
Pool ID	C12
Water Temperature (°C)	11
Air Temperature (°C)	11
Anostracans	Present
No. of Individuals	10s
Anostracans Summary	Branchinecta lindahli
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Ostracods



Pool Depth (cm)	
At time of sampling	12

Surface Area (m)	
length	17
width	3.5
Sampling	17 x 3.5
Estimated maximum	3.5 x 2

Pool Data	
Pool ID	C14
Water Temperature (°C)	12
Air Temperature (°C)	12
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	8

Surface Area (m)	
length	5
width	2
Sampling	5 x 2
Estimated maximum	3.5 x 2

Pool Data	
Pool ID	C21
Water Temperature (°C)	12
Air Temperature (°C)	12
Anostracans	Present
No. of Individuals	100s
Anostracans Summary	Branchinecta sandiegoensis; Males
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	12

Surface Area (m)	
length	7
width	3
Sampling	7 x 3
Estimated maximum	3.5 x 2

**Vernal Pool Wet Season**
**Record: 78**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-01-13
Survey Time	09:03:00
County	San Diego
Quad	Jamul Mts
Collector(s)	Danielle Mullen
Permit Number	TE31221B0 DAM
Site/Project Name	8207 Proctor Valley

**Pool Data**

Pool ID	B12
Water Temperature (°C)	14
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	

**Pool Depth (cm)**

At time of sampling	8
Estimated maximum	12

**Surface Area (m)**

length	1.5
width	0.5
length	2
width	0.5
Sampling	1.5 x 0.5
Estimated maximum	2 x 0.5

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Photo



Pool Data

Pool ID	B13
Water Temperature (°C)	14.5
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


Pool Depth (cm)

At time of sampling	7.5
Estimated maximum	12

Surface Area (m)

length	5
width	2.5
length	6
width	3
Sampling	5 x 2.5
Estimated maximum	6 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Grazed	0
Land use of habitat	road rut


Pool Photos	
Photo	

Pool Data	
Pool ID	B14
Water Temperature (°C)	14
Air Temperature (°C)	14
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	13.5
Estimated maximum	15

Surface Area (m)	
length	2.3
width	2
length	4
width	2.5
Sampling	2.3 x 2
Estimated maximum	4 x 2.5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	


Pool Data	
Pool ID	B15
Water Temperature (°C)	15.5
Air Temperature (°C)	14
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



Pool Depth (cm)	
At time of sampling	9
Estimated maximum	13

Surface Area (m)	
length	5
width	1
length	8
width	2
Sampling	5 x 1
Estimated maximum	8 x 2

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	B16
Water Temperature (°C)	15.5
Air Temperature (°C)	15
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	7
Estimated maximum	10

## Surface Area (m)

length	4.5
width	3
length	6.5
width	6
Sampling	4.5 x 3
Estimated maximum	6.5 x 6

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	B17
Water Temperature (°C)	15
Air Temperature (°C)	15
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	6.5
Estimated maximum	15

**Surface Area (m)**

length	3
width	2
length	19
width	4
Sampling	3 x 2
Estimated maximum	19 x 4

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**


Pool ID	B18
Water Temperature (°C)	15
Air Temperature (°C)	15
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	12.5
Estimated maximum	15

Surface Area (m)	
length	5
width	3
length	19
width	4
Sampling	5 x 3
Estimated maximum	19 x 4

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

Pool Photos	
Photo	


Pool Data	
Pool ID	B19
Water Temperature (°C)	16.5
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



Pool Depth (cm)	
At time of sampling	11
Estimated maximum	15

Surface Area (m)	
length	2.3
width	1
length	4
width	1.5
Sampling	2.3 x 1
Estimated maximum	4 x 1.5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	



Pool Data

Pool ID	B20
Water Temperature (°C)	16
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	7
Estimated maximum	10

Surface Area (m)

length	2.5
width	1
length	4
width	2
Sampling	2.5 x 1
Estimated maximum	4 x 2

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

Pool Photos

Photo



**Pool Data**

Pool ID	B21
Water Temperature (°C)	18.5
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	6
Estimated maximum	10

**Surface Area (m)**

length	3
width	0.5
length	6
width	1
Sampling	3 x 0.5
Estimated maximum	6 x 1

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**


Pool ID	B22
Water Temperature (°C)	18.5
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	8
Estimated maximum	10

Surface Area (m)	
length	3
width	0.5
length	6
width	1
Sampling	3 x 0.5
Estimated maximum	6 x 1

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut


Pool Photos	
Photo	

Pool Data	
Pool ID	B23
Water Temperature (°C)	18.5
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	12.5
Estimated maximum	20

Surface Area (m)	
length	5
width	1
length	7
width	1.5
Sampling	5 x 1
Estimated maximum	7 x 1.5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	B24
Water Temperature (°C)	18
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	9.5
Estimated maximum	13

## Surface Area (m)

length	4
width	1
length	9
width	2
Sampling	4 x 1
Estimated maximum	9 x 2

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

## Pool Photos



Photo



**Pool Data**

Pool ID	B25
Water Temperature (°C)	20.5
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


**Pool Depth (cm)**

At time of sampling	9
Estimated maximum	14

**Surface Area (m)**

length	6
width	1
length	8
width	2
Sampling	6 x 1
Estimated maximum	8 x 2

Habitat Condition	
Disturbed	1
Disturbance type	<i>tire tracks</i>
Disturbance level	<i>moderate</i>
Land use of habitat	<i>road rut</i>

Pool Photos	
Photo	

**Vernal Pool Wet Season**
**Record: 93**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-01-16
Survey Time	08:30:00
County	San Diego
Quad	Jamul
Collector(s)	Danielle Mullen, Other
Other Collector(s)	Kyle Matthews
Permit Number	TE31221B0 DAM, other
Other Permit Number(s)	RKM
Site/Project Name	8207 PV

**Pool Data**

Pool ID	A2
Water Temperature (°C)	22
Air Temperature (°C)	22
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	3
Estimated maximum	10

**Surface Area (m)**

length	2.6
width	1.5
length	4
width	2
Sampling	2.6 x 1.5
Estimated maximum	4 x 2

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**

Pool ID	A4
Water Temperature (°C)	22
Air Temperature (°C)	22
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	7
Estimated maximum	14

**Surface Area (m)**

length	3.3
width	2.5
length	4
width	4
Sampling	3.3 x 2.5
Estimated maximum	4 x 4

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo	
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**Pool Data**

Pool ID	A5
Water Temperature (°C)	22
Air Temperature (°C)	22
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



**Pool Depth (cm)**

At time of sampling	10
Estimated maximum	18

**Surface Area (m)**

length	13
width	2.5
length	15
width	3
Sampling	13 x 2.5
Estimated maximum	15 x 3

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo





Pool Data	
Pool ID	AA2
Water Temperature (°C)	9
Air Temperature (°C)	13.5
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	4
Estimated maximum	5

Surface Area (m)	
length	2
width	0.5
length	2.5
width	0.5
Sampling	2 x 0.5
Estimated maximum	2.5 x 0.5

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B1
Water Temperature (°C)	10
Air Temperature (°C)	13
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	4
Estimated maximum	10

Surface Area (m)	
length	15
width	1.5
length	16
width	2
Sampling	15 x 1.5
Estimated maximum	16 x 2

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B5
Water Temperature (°C)	10
Air Temperature (°C)	14
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	7
Estimated maximum	11

Surface Area (m)	
length	2.3
width	1.3
length	2.5
width	1.5
Sampling	2.3 x 1.3
Estimated maximum	2.5 x 1.5

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B6
Water Temperature (°C)	14
Air Temperature (°C)	24
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	7
Estimated maximum	8

Surface Area (m)	
length	5.5
width	1
length	6
width	1
Sampling	5.5 x 1
Estimated maximum	6 x 1

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B7
Water Temperature (°C)	12
Air Temperature (°C)	16
Anostracans	Present
No. of Individuals	10s
Reproductive Status	Male
Anostracans Summary	Branchinecta lindahli
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	8
Estimated maximum	12

Surface Area (m)	
length	5
width	1.3
length	6
width	1.5
Sampling	5 x 1.3
Estimated maximum	6 x 1.5

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B8
Water Temperature (°C)	18
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	6
Estimated maximum	6

Surface Area (m)	
length	2.3
width	0.5
length	3
width	0.75
Sampling	2.3 x 0.5
Estimated maximum	3 x 0.75

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B9
Water Temperature (°C)	15
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	11
Estimated maximum	13

Surface Area (m)	
length	4
width	0.5
length	4.5
width	0.75
Sampling	4 x 0.5
Estimated maximum	4.5 x 0.75

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B10
Water Temperature (°C)	15
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	3
Estimated maximum	5

Surface Area (m)	
length	4.3
width	1
length	5
width	1.25
Sampling	4.3 x 1
Estimated maximum	5 x 1.25

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut


Pool Data	
Pool ID	B11
Water Temperature (°C)	20
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	15
Estimated maximum	17

Surface Area (m)	
length	9
width	3
length	10
width	4
Sampling	9 x 3
Estimated maximum	10 x 4



Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Description	
Photo	

**Vernal Pool Wet Season**
**Record: 87**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-01-16
Survey Time	08:16:00
County	San Diego
Quad	Jamul Mountains
Collector(s)	Danielle Mullen, Other
Other Collector(s)	RKM
Permit Number	TE31221B0 DAM, other
Other Permit Number(s)	RKM
Site/Project Name	8207 PV
Survey Notes	Dry pools were all marked in my field notebook as well.

**Pool Data**

Pool ID	A6
Water Temperature (°C)	22
Air Temperature (°C)	22
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	6
Estimated maximum	12

**Surface Area (m)**

length	5
width	2
length	6
width	2.5
Sampling	5 x 2
Estimated maximum	6 x 2.5

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**


Pool ID	A8
Water Temperature (°C)	22
Air Temperature (°C)	22
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	4
Estimated maximum	10

Surface Area (m)	
length	16.6
width	2.5
length	18
width	3
Sampling	16.6 x 2.5
Estimated maximum	18 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut


Pool Photos	
Photo	

Pool Data	
Pool ID	A13
Water Temperature (°C)	20
Air Temperature (°C)	24
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	9
Estimated maximum	11

Surface Area (m)	
length	17.3
width	3
length	19
width	3
Sampling	17.3 x 3
Estimated maximum	19 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	A18
Water Temperature (°C)	7
Air Temperature (°C)	13.5
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	5
Estimated maximum	7

## Surface Area (m)

length	2
width	1
length	2.5
width	1.25
Sampling	2 x 1
Estimated maximum	2.5 x 1.25

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos



Photo



**Pool Data**

Pool ID	A19
Water Temperature (°C)	9
Air Temperature (°C)	13.5
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	14
Estimated maximum	45

**Surface Area (m)**

length	25
width	6
length	27
width	8
Sampling	25 x 6
Estimated maximum	27 x 8

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**


Pool ID	A25
Water Temperature (°C)	11.5
Air Temperature (°C)	13
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	12
Estimated maximum	15

Surface Area (m)	
length	7.5
width	2.5
length	8
width	3
Sampling	7.5 x 2.5
Estimated maximum	8 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks, garbage
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

**Vernal Pool Wet Season**

Record: 90

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-01-16
Survey Time	09:27:00
County	San Diego
Quad	Jamul
Collector(s)	Danielle Mullen, Other
Other Collector(s)	RKM
Permit Number	TE31221B0 DAM
Site/Project Name	8207 Proctor Valley

**Pool Data**

Pool ID	B13
Water Temperature (°C)	11.5
Air Temperature (°C)	15
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	9
Estimated maximum	12

**Surface Area (m)**

length	5
width	2.5
length	6
width	3
Sampling	5 x 2.5
Estimated maximum	6 x 3

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Grazed	0
Land use of habitat	road rut

Pool Photos

Photo



Pool Data

Pool ID	B14
Water Temperature (°C)	11.5
Air Temperature (°C)	15
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	6
Estimated maximum	15

Surface Area (m)

length	2.3
width	2
length	4
width	2.5
Sampling	2.3 x 2
Estimated maximum	4 x 2.5



**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**

Pool ID	B15
Water Temperature (°C)	12
Air Temperature (°C)	15
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


**Pool Depth (cm)**

At time of sampling	7.5
Estimated maximum	13



Surface Area (m)	
length	5
width	1
length	8
width	2
Sampling	5 x 1
Estimated maximum	8 x 2

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut


Pool Photos	
Photo	

Pool Data	
Pool ID	B18
Water Temperature (°C)	13
Air Temperature (°C)	15
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	6.5
Estimated maximum	15

Surface Area (m)	
length	5
width	3
length	19
width	4
Sampling	5 x 3
Estimated maximum	19 x 4

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	B19
Water Temperature (°C)	14
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	6
Estimated maximum	15

## Surface Area (m)

length	2.3
width	1
length	4
width	1.5
Sampling	2.3 x 1
Estimated maximum	4 x 1.5

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	B20
Water Temperature (°C)	9
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	5
Estimated maximum	10

**Surface Area (m)**

length	2.5
width	1
length	4
width	2
Sampling	2.5 x 1
Estimated maximum	4 x 2

**Habitat Condition**

Disturbed	1
Disturbance type	<i>tire tracks</i>
Disturbance level	<i>moderate</i>
Land use of habitat	<i>road rut</i>

**Pool Photos**

Photo



**Pool Data**

Pool ID	<i>B22</i>
Water Temperature (°C)	<i>15</i>
Air Temperature (°C)	<i>24</i>
Anostracans	<i>0</i>
No. of Individuals	<i>0</i>
Anostracans Summary	<i>None</i>
Notostracans	<i>0</i>
No. of Individuals	<i>0</i>
Notostracans Summary	<i>None</i>


**Pool Depth (cm)**

At time of sampling	<i>5</i>
Estimated maximum	<i>10</i>



Surface Area (m)	
length	3
width	0.5
length	6
width	1
Sampling	3 x 0.5
Estimated maximum	6 x 1

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	


Pool Data	
Pool ID	B23
Water Temperature (°C)	12
Air Temperature (°C)	21
Anostracans	Present
No. of Individuals	10s
Reproductive Status	immature
Anostracans Summary	10s; immature did not collect
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



Pool Depth (cm)	
At time of sampling	11
Estimated maximum	20

Surface Area (m)	
length	5
width	1
length	7
width	1.5
Sampling	5 x 1
Estimated maximum	7 x 1.5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	B24
Water Temperature (°C)	14
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	5
Estimated maximum	13

## Surface Area (m)

length	4
width	1
length	9
width	2
Sampling	4 x 1
Estimated maximum	9 x 2

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	B25
Water Temperature (°C)	21
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


**Pool Depth (cm)**

At time of sampling	5
Estimated maximum	14

**Surface Area (m)**

length	6
width	1
length	8
width	2
Sampling	6 x 1
Estimated maximum	8 x 2

Habitat Condition	
Disturbed	1
Disturbance type	<i>tire tracks</i>
Disturbance level	<i>moderate</i>
Land use of habitat	<i>road rut</i>

Pool Photos	
Photo	

**Vernal Pool Wet Season**
**Record: 174**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-01-16
Survey Time	07:30:00
County	San Diego
Quad	Jamul
Collector(s)	Thomas Liddicoat
Permit Number	TE139634 TSL
Site/Project Name	8207 PV

**Pool Data**

Pool ID	C3
Water Temperature (°C)	6
Air Temperature (°C)	6
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	7
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**Surface Area (m)**

length	16
width	3.5
Sampling	16 x 3.5
Estimated maximum	3.5 x 2

**Pool Data**

Pool ID	C5
Water Temperature (°C)	6
Air Temperature (°C)	6
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Ostracods, Other
Other Species	Frog eggs sacs

Pool Depth (cm)	
At time of sampling	8

Surface Area (m)	
length	5
width	2
Sampling	5 x 2
Estimated maximum	3.5 x 2

Pool Data	
Pool ID	C10
Water Temperature (°C)	7
Air Temperature (°C)	7
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	10

Surface Area (m)	
length	4
width	3
Sampling	4 x 3
Estimated maximum	3.5 x 2

Pool Data	
Pool ID	C8
Water Temperature (°C)	8
Air Temperature (°C)	8
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Ostracods
Insects	Corixidae



## Pool Depth (cm)

At time of sampling	9
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## Surface Area (m)

length	8.5
width	3.5
Sampling	8.5 x 3.5
Estimated maximum	3.5 x 2

## Pool Data

Pool ID	C9
Water Temperature (°C)	8
Air Temperature (°C)	8
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Ostracods
Insects	Corixidae

## Pool Depth (cm)

At time of sampling	3
---------------------	---

## Surface Area (m)

length	2.5
width	0.25
Sampling	2.5 x 0.25
Estimated maximum	3.5 x 2

## Pool Data

Pool ID	C12
Water Temperature (°C)	11
Air Temperature (°C)	11
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Ostracods, Other
Other Species	Frog egg sacs
Insects	Corixidae

Pool Depth (cm)	
At time of sampling	20

Surface Area (m)	
length	14
width	4
Sampling	14 x 4
Estimated maximum	3.5 x 2

Pool Data	
Pool ID	C21
Water Temperature (°C)	15
Air Temperature (°C)	15
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Ostracods
Insects	Corixidae

Pool Depth (cm)	
At time of sampling	3

Surface Area (m)	
length	1.5
width	1
Sampling	1.5 x 1
Estimated maximum	3.5 x 2

**Vernal Pool Wet Season**

Record: 118

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-01-30
Survey Time	07:47:00
County	San Diego
Quad	Jamul Mountains
Collector(s)	Danielle Mullen, Other
Other Collector(s)	RKM
Permit Number	TE31221B0 DAM, other
Other Permit Number(s)	RKM
Site/Project Name	8207 PV
Survey Notes	

**Pool Data**

Pool ID	A25
Water Temperature (°C)	12
Air Temperature (°C)	14
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	7
Estimated maximum	15

**Surface Area (m)**

length	7.5
width	2.5
length	8
width	3
Sampling	7.5 x 2.5
Estimated maximum	8 x 3

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks, garbage
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Photo



Pool Data	
Pool ID	C12
Water Temperature (°C)	17
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	7
Estimated maximum	13

Surface Area (m)	
length	7
width	2.5
length	10
width	3
Sampling	7 x 2.5
Estimated maximum	10 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut







**Vernal Pool Wet Season**
**Record: 102**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-03-03
Survey Time	07:53:00
County	San Diego
Quad	Jamul
Collector(s)	Danielle Mullen, Other
Other Collector(s)	Kyle Matthews
Permit Number	TE31221B0 DAM, other
Other Permit Number(s)	RKM
Site/Project Name	8207 PV

**Pool Data**

Pool ID	A1
Water Temperature (°C)	20
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	13
Estimated maximum	15

**Surface Area (m)**

length	3
width	3
length	5
width	4
Sampling	3 x 3
Estimated maximum	5 x 4

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Description	
Photo	

**Pool Data**


Pool ID	A2
Water Temperature (°C)	20
Air Temperature (°C)	22
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	7
Estimated maximum	10

Surface Area (m)	
length	2.6
width	1.5
length	4
width	2
Sampling	2.6 x 1.5
Estimated maximum	4 x 2

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut


Pool Photos	
Photo	

Pool Data	
Pool ID	A3
Water Temperature (°C)	16
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	4
Estimated maximum	14

Surface Area (m)	
length	11
width	2
length	13
width	3
Sampling	11 x 2
Estimated maximum	13 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	A4
Water Temperature (°C)	20
Air Temperature (°C)	22
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	9
Estimated maximum	14

## Surface Area (m)

length	3.3
width	2.5
length	4
width	4
Sampling	3.3 x 2.5
Estimated maximum	4 x 4

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos



Photo



**Pool Data**

Pool ID	A5
Water Temperature (°C)	20
Air Temperature (°C)	22
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	18
Estimated maximum	18

**Surface Area (m)**

length	13
width	2.5
length	15
width	3
Sampling	13 x 2.5
Estimated maximum	15 x 3

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**

Pool ID	AA1
Water Temperature (°C)	15
Air Temperature (°C)	15
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Other

**Pool Depth (cm)**

At time of sampling	5
Estimated maximum	7

Surface Area (m)	
length	3.25
width	0.5
length	5
width	1
Sampling	3.25 x 0.5
Estimated maximum	5 x 1

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	AA4
Water Temperature (°C)	11
Air Temperature (°C)	15
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	13
Estimated maximum	15

Surface Area (m)	
length	11.5
width	1
length	15
width	2
Sampling	11.5 x 1
Estimated maximum	15 x 2

Habitat Condition	
Disturbed	1
Disturbance level	moderate
Land use of habitat	road rut

Pool Data	
Pool ID	AA2
Water Temperature (°C)	12
Air Temperature (°C)	14
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	
Other Species	

Pool Depth (cm)	
At time of sampling	12
Estimated maximum	14

Surface Area (m)	
length	2
width	0.5
length	2.5
width	0.5
Sampling	2 x 0.5
Estimated maximum	2.5 x 0.5

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B1
Water Temperature (°C)	15
Air Temperature (°C)	15
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Other

Pool Depth (cm)	
At time of sampling	9
Estimated maximum	10

Surface Area (m)	
length	15
width	1.5
length	16
width	2
Sampling	15 x 1.5
Estimated maximum	16 x 2

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B4
Water Temperature (°C)	20
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	3
Estimated maximum	5

Surface Area (m)	
length	1.5
width	0.5
length	2
width	1
Sampling	1.5 x 1.5
Estimated maximum	2 x 1

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B5
Water Temperature (°C)	17
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	
Other Species	

Pool Depth (cm)	
At time of sampling	14
Estimated maximum	15

Surface Area (m)	
length	2.3
width	1.3
length	2.5
width	1.5
Sampling	2.3 x 1.3
Estimated maximum	2.5 x 1.5

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B6
Water Temperature (°C)	18
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



## Pool Depth (cm)

At time of sampling	10
Estimated maximum	11

## Surface Area (m)

length	5.5
width	1
length	6
width	1
Sampling	5.5 x 1
Estimated maximum	6 x 1

## Habitat Condition

Disturbed	1
Disturbance level	light
Land use of habitat	road rut

## Pool Data

Pool ID	B7
Water Temperature (°C)	19
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Reproductive Status	Male
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	18
Estimated maximum	20

## Surface Area (m)

length	5
width	1.3
length	6
width	1.5
Sampling	5 x 1.3
Estimated maximum	6 x 1.5

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B8
Water Temperature (°C)	20
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	7
Estimated maximum	7

Surface Area (m)	
length	2.3
width	0.5
length	3
width	0.75
Sampling	2.3 x 0.5
Estimated maximum	3 x 0.75

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Grazed	0
Land use of habitat	road rut

Pool Data	
Pool ID	B9
Water Temperature (°C)	20
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	15
Estimated maximum	15

Surface Area (m)	
length	4
width	0.5
length	4.5
width	0.75
Sampling	4 x 0.5
Estimated maximum	4.5 x 0.75

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B10
Water Temperature (°C)	19
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	8
Estimated maximum	9

Surface Area (m)	
length	4.3
width	1
length	5
width	1.25
Sampling	4.3 x 1
Estimated maximum	5 x 1.25

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Data	
Pool ID	B11
Water Temperature (°C)	20
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	14
Estimated maximum	17

Surface Area (m)	
length	9
width	3
length	10
width	4
Sampling	9 x 3
Estimated maximum	10 x 4

Habitat Condition	
Disturbed	1
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Description	

Photo



**Vernal Pool Wet Season**
**Record: 124**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-03-03
Survey Time	08:00:00
County	San Diego
Quad	Jamul Mountains
Collector(s)	Danielle Mullen, Other
Other Collector(s)	RKM
Permit Number	TE31221B0 DAM, other
Other Permit Number(s)	RKM
Site/Project Name	8207 PV
Survey Notes	

**Pool Data**

Pool ID	A6
Water Temperature (°C)	20
Air Temperature (°C)	22
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	7.5
Estimated maximum	12

**Surface Area (m)**

length	5
width	2
length	6
width	2.5
Sampling	5 x 2
Estimated maximum	6 x 2.5



**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**

Pool ID	A7
Water Temperature (°C)	20
Air Temperature (°C)	22
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	8
Estimated maximum	12

**Surface Area (m)**

length	3
width	1
length	4
width	1.5
Sampling	3 x 1
Estimated maximum	4 x 1.5

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo	
	


**Pool Data**

Pool ID	A8
Water Temperature (°C)	20
Air Temperature (°C)	22
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	6
Estimated maximum	10

Surface Area (m)	
length	16.6
width	2.5
length	18
width	3
Sampling	16.6 x 2.5
Estimated maximum	18 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	A9
Water Temperature (°C)	20
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	5.5
Estimated maximum	7

## Surface Area (m)

length	5
width	1
length	6
width	1.5
Sampling	5 x 1
Estimated maximum	6 x 1.5

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	A10
Water Temperature (°C)	20
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	5.5
Estimated maximum	6

**Surface Area (m)**

length	3.3
width	0.6
length	4
width	1
Sampling	3.3 x 0.6
Estimated maximum	4 x 1



**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**

Pool ID	A11
Water Temperature (°C)	20
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


**Pool Depth (cm)**

At time of sampling	7.5
Estimated maximum	7.5



Surface Area (m)	
length	4.3
width	3
length	5
width	3.2
Sampling	4.3 x 3
Estimated maximum	5 x 3.2

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut


Pool Photos	
Photo	

Pool Data	
Pool ID	A13
Water Temperature (°C)	20
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	11.5
Estimated maximum	13

Surface Area (m)	
length	17.3
width	3
length	19
width	3
Sampling	17.3 x 3
Estimated maximum	19 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	A14
Water Temperature (°C)	20
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	7
Estimated maximum	7

## Surface Area (m)

length	0
width	0
length	4.5
width	1.3
Sampling	0 x 0
Estimated maximum	4.5 x 1.3

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	A15
Water Temperature (°C)	20
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	8
Estimated maximum	12

**Surface Area (m)**

length	0
width	0
length	9
width	3
Sampling	0 x 0
Estimated maximum	9 x 3

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**

Pool ID	A17
Water Temperature (°C)	15
Air Temperature (°C)	12
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	
Other Species	



Pool Depth (cm)

At time of sampling	3
Estimated maximum	7

Surface Area (m)

length	6
width	0.75
length	7
width	1
Sampling	6 x 0.75
Estimated maximum	7 x 1

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

Pool Photos

Photo





## Pool Data

Pool ID	A18
Water Temperature (°C)	11
Air Temperature (°C)	11
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Other

## Pool Depth (cm)

At time of sampling	7
Estimated maximum	7

## Surface Area (m)

length	2
width	1
length	2.5
width	1.25
Sampling	2 x 1
Estimated maximum	2.5 x 1.25

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	A19
Water Temperature (°C)	13
Air Temperature (°C)	14
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	
Other Species	

**Pool Depth (cm)**

At time of sampling	32
Estimated maximum	45

**Surface Area (m)**

length	25
width	6
length	27
width	8
Sampling	25 x 6
Estimated maximum	27 x 8

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**


Pool ID	A20
Water Temperature (°C)	12
Air Temperature (°C)	12
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Other

**Pool Depth (cm)**

At time of sampling	4
Estimated maximum	5

Surface Area (m)	
length	8.5
width	1
length	10
width	1.5
Sampling	8.5 x 1
Estimated maximum	10 x 1.5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut


Pool Photos	
Photo	

Pool Data	
Pool ID	A21
Water Temperature (°C)	13
Air Temperature (°C)	13
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	
Other Species	

Pool Depth (cm)	
At time of sampling	3
Estimated maximum	9

Surface Area (m)	
length	0
width	0
length	23
width	5
Sampling	0 x 0
Estimated maximum	23 x 5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	A24
Water Temperature (°C)	10.5
Air Temperature (°C)	11
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Other

## Pool Depth (cm)

At time of sampling	8.5
Estimated maximum	10

## Surface Area (m)

length	3.3
width	2.5
length	3.75
width	3
Sampling	3.3 x 2.5
Estimated maximum	3.75 x 3

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

## Pool Photos



Photo



**Pool Data**

Pool ID	A25
Water Temperature (°C)	9.5
Air Temperature (°C)	10
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	14
Estimated maximum	15

**Surface Area (m)**

length	7.5
width	2.5
length	8
width	3
Sampling	7.5 x 2.5
Estimated maximum	8 x 3

Habitat Condition	
Disturbed	1
Disturbance type	<i>tire tracks, garbage</i>
Disturbance level	<i>light</i>
Land use of habitat	<i>road rut</i>

Pool Photos	
Photo	

**Vernal Pool Wet Season**
**Record: 103**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-03-03
Survey Time	08:37:00
County	San Diego
Quad	Jamul Mts
Collector(s)	Danielle Mullen, Other
Other Collector(s)	RKM
Permit Number	TE31221B0 DAM
Site/Project Name	8207 Proctor Valley

**Pool Data**

Pool ID	B12
Water Temperature (°C)	16
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	8
Estimated maximum	12

**Surface Area (m)**

length	1.5
width	0.5
length	2
width	0.5
Sampling	1.5 x 0.5
Estimated maximum	2 x 0.5

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

### Pool Photos

Photo



### Pool Data

Pool ID	B13
Water Temperature (°C)	16
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Amphibian egg masses

### Pool Depth (cm)


At time of sampling	12
Estimated maximum	14

### Surface Area (m)

length	5
width	2.5
length	6
width	3
Sampling	5 x 2.5
Estimated maximum	6 x 3



Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Grazed	0
Land use of habitat	road rut


Pool Photos	
Photo	

Pool Data	
Pool ID	B14
Water Temperature (°C)	16
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	15
Estimated maximum	15

Surface Area (m)	
length	2.3
width	2
length	4
width	2.5
Sampling	2.3 x 2
Estimated maximum	4 x 2.5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	


Pool Data	
Pool ID	B15
Water Temperature (°C)	17
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



Pool Depth (cm)	
At time of sampling	11
Estimated maximum	13

Surface Area (m)	
length	5
width	1
length	8
width	2
Sampling	5 x 1
Estimated maximum	8 x 2

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

## Pool Data

Pool ID	B16
Water Temperature (°C)	18
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	4.5
Estimated maximum	10

## Surface Area (m)

length	4.5
width	3
length	6.5
width	6
Sampling	4.5 x 3
Estimated maximum	6.5 x 6

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	B17
Water Temperature (°C)	13
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	10
Estimated maximum	15

**Surface Area (m)**

length	3
width	2
length	19
width	4
Sampling	3 x 2
Estimated maximum	19 x 4

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**


Pool ID	B18
Water Temperature (°C)	17
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	14.5
Estimated maximum	15

Surface Area (m)	
length	5
width	3
length	19
width	4
Sampling	5 x 3
Estimated maximum	19 x 4

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

Pool Photos	
Photo	


Pool Data	
Pool ID	B19
Water Temperature (°C)	16
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



Pool Depth (cm)	
At time of sampling	7
Estimated maximum	15

Surface Area (m)	
length	2.3
width	1
length	4
width	1.5
Sampling	2.3 x 1
Estimated maximum	4 x 1.5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	



## Pool Data

Pool ID	B20
Water Temperature (°C)	16
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

## Pool Depth (cm)

At time of sampling	8
Estimated maximum	10

## Surface Area (m)

length	2.5
width	1
length	4
width	2
Sampling	2.5 x 1
Estimated maximum	4 x 2

## Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

## Pool Photos

Photo



**Pool Data**

Pool ID	B21
Water Temperature (°C)	16
Air Temperature (°C)	18
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	8
Estimated maximum	10

**Surface Area (m)**

length	3
width	0.5
length	6
width	1
Sampling	3 x 0.5
Estimated maximum	6 x 1

**Habitat Condition**

Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

**Pool Photos**

Photo



**Pool Data**


Pool ID	B22
Water Temperature (°C)	16
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	6
Estimated maximum	10

Surface Area (m)	
length	3
width	0.5
length	6
width	1
Sampling	3 x 0.5
Estimated maximum	6 x 1

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut


Pool Photos	
Photo	

Pool Data	
Pool ID	B23
Water Temperature (°C)	17
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Reproductive Status	Female
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	Other

Pool Depth (cm)	
At time of sampling	14
Estimated maximum	20

Surface Area (m)	
length	5
width	1
length	7
width	1.5
Sampling	5 x 1
Estimated maximum	7 x 1.5

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	

Pool Data

Pool ID	B24
Water Temperature (°C)	20
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	9
Estimated maximum	13

Surface Area (m)

length	4
width	1
length	9
width	2
Sampling	4 x 1
Estimated maximum	9 x 2

Habitat Condition

Disturbed	1
Disturbance type	tire tracks
Disturbance level	moderate
Land use of habitat	road rut

Pool Photos



Photo



**Pool Data**

Pool ID	B25
Water Temperature (°C)	19
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


**Pool Depth (cm)**

At time of sampling	10
Estimated maximum	14

**Surface Area (m)**

length	6
width	1
length	8
width	2
Sampling	6 x 1
Estimated maximum	8 x 2

Habitat Condition	
Disturbed	1
Disturbance type	<i>tire tracks</i>
Disturbance level	<i>moderate</i>
Land use of habitat	<i>road rut</i>

Pool Photos	
Photo	

**Vernal Pool Wet Season**
**Record: 180**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-03-03
Survey Time	09:12:00
County	San Diego
Quad	Jamul
Collector(s)	Thomas Liddicoat
Permit Number	TE139634 TSL
Site/Project Name	8207 PV

**Pool Data**

Pool ID	C1
Water Temperature (°C)	18
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	2.5
---------------------	-----

**Surface Area (m)**

length	6
width	3
Sampling	6 x 3
Estimated maximum	5 x 5

**Pool Photos**

Photo



**Pool Data**

Pool ID	C2
Water Temperature (°C)	18
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	3
---------------------	---

**Surface Area (m)**

length	2.5
width	2
Sampling	2.5 x 2
Estimated maximum	5 x 5

### Pool Photos

Photo



### Pool Data

Pool ID	C3
Water Temperature (°C)	14
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

### Pool Depth (cm)

At time of sampling	22
---------------------	----

### Surface Area (m)

length	31.25
width	4.5
Sampling	31.25 x 4.5
Estimated maximum	5 x 5



Pool Data

Pool ID	C4
Water Temperature (°C)	15.5
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	4
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Surface Area (m)

length	3
width	2
Sampling	3 x 2
Estimated maximum	5 x 5

Pool Photos

Photo




**Pool Data**

Pool ID	C5
Water Temperature (°C)	15.5
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


**Pool Depth (cm)**

At time of sampling	6
---------------------	---

**Surface Area (m)**

length	6.25
width	2.25
Sampling	6.25 x 2.25
Estimated maximum	5 x 5

**Pool Photos**

Photo


Pool Data

Pool ID	C7
Water Temperature (°C)	15
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


Pool Depth (cm)

At time of sampling	6
---------------------	---

Surface Area (m)

length	4
width	3
Sampling	4 x 3
Estimated maximum	5 x 5


Pool Photos

Photo


Pool Data	
Pool ID	C8
Water Temperature (°C)	14
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	20

Surface Area (m)	
length	14
width	5
Sampling	14 x 5
Estimated maximum	5 x 5

Pool Photos	
Photo	

### Pool Data

Pool ID	C9
Water Temperature (°C)	16
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


### Pool Depth (cm)

At time of sampling	8
---------------------	---

### Surface Area (m)

length	6.5
width	3
Sampling	6.5 x 3
Estimated maximum	5 x 5

### Pool Photos

Photo


### Pool Data

Pool ID	C12
Water Temperature (°C)	15
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


### Pool Depth (cm)

At time of sampling	15
---------------------	----

### Surface Area (m)

length	13
width	4
Sampling	13 x 4
Estimated maximum	5 x 5

### Pool Photos

Photo


### Pool Data

Pool ID	C13
Water Temperature (°C)	18
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


### Pool Depth (cm)

At time of sampling	10
---------------------	----

### Surface Area (m)

length	9
width	2.5
Sampling	9 x 2.5
Estimated maximum	5 x 5

### Pool Photos

Photo




Pool Data

Pool ID	C14
Water Temperature (°C)	15.5
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


Pool Depth (cm)

At time of sampling	18
---------------------	----

Surface Area (m)

length	6
width	2
Sampling	6 x 2
Estimated maximum	5 x 5

Pool Photos

Photo	
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### Pool Data

Pool ID	C15
Water Temperature (°C)	15.5
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


### Pool Depth (cm)

At time of sampling	9
---------------------	---

### Surface Area (m)

length	7.5
width	3
Sampling	7.5 x 3
Estimated maximum	5 x 5


### Pool Photos

Photo


Pool Data	
Pool ID	C16
Water Temperature (°C)	15.5
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	9


Surface Area (m)	
length	3.5
width	2.5
Sampling	3.5 x 2.5
Estimated maximum	5 x 5

Pool Photos	
Photo	

Pool Data	
Pool ID	C17
Water Temperature (°C)	15.5
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	9

Surface Area (m)	
length	3
width	7.5
Sampling	3 x 7.5
Estimated maximum	5 x 5

Pool Photos	
Photo	

Pool Data

Pool ID	C18
Water Temperature (°C)	15.5
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	9
---------------------	---

Surface Area (m)

length	7.5
width	3.5
Sampling	7.5 x 3.5
Estimated maximum	5 x 5

Pool Photos

Photo


Pool Data

Pool ID	C22
Water Temperature (°C)	22
Air Temperature (°C)	22
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	6
---------------------	---

Surface Area (m)

length	5
width	5
Sampling	5 x 5
Estimated maximum	5 x 5

Pool Photos

Photo




Pool Data

Pool ID	C23
Water Temperature (°C)	20
Air Temperature (°C)	20
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	6
---------------------	---

Surface Area (m)

length	6
width	4
Sampling	6 x 4
Estimated maximum	5 x 5

Pool Photos

Photo	
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Pool Data

Pool ID	C24
Water Temperature (°C)	21
Air Temperature (°C)	21
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	3
---------------------	---

Surface Area (m)

length	5
width	5
Sampling	5 x 5
Estimated maximum	5 x 5

Pool Photos

Photo	
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### Pool Data

Pool ID	C19
Water Temperature (°C)	17.5
Air Temperature (°C)	17.5
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

### Pool Depth (cm)

At time of sampling	13
---------------------	----

### Surface Area (m)

length	4
width	3
Sampling	4 x 3
Estimated maximum	5 x 5


### Pool Photos

Photo


Pool Data	
Pool ID	C20
Water Temperature (°C)	19
Air Temperature (°C)	19
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	7

Surface Area (m)	
length	5
width	3.5
Sampling	5 x 3.5
Estimated maximum	5 x 5

Pool Photos	
Photo	



### Pool Data

Pool ID	C21
Water Temperature (°C)	19
Air Temperature (°C)	19
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

### Pool Depth (cm)

At time of sampling	8
---------------------	---

### Surface Area (m)

length	14
width	3.5
Sampling	14 x 3.5
Estimated maximum	5 x 5

### Pool Photos

Photo


### Pool Data

Pool ID	C10
Water Temperature (°C)	19
Air Temperature (°C)	19
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None


### Pool Depth (cm)

At time of sampling	12
---------------------	----

### Surface Area (m)

length	4.5
width	6
Sampling	4.5 x 6
Estimated maximum	5 x 5

### Pool Photos

Photo




Pool Data

Pool ID	C11
Water Temperature (°C)	23
Air Temperature (°C)	23
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)

At time of sampling	11
---------------------	----

Surface Area (m)

length	29
width	4
Sampling	29 x 4
Estimated maximum	5 x 5

Pool Photos

Photo	
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**Vernal Pool Wet Season**


Record: 136	
This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-03-16
Survey Time	12:38:00
County	San Diego
Quad	Jamul Mountains
Collector(s)	Danielle Mullen, Other
Other Collector(s)	RKM
Permit Number	TE31221B0 DAM, other
Other Permit Number(s)	RKM
Site/Project Name	8207 PV
Survey Notes	

Pool Data	
Pool ID	A19
Water Temperature (°C)	26
Air Temperature (°C)	31
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None
Species Observations	
Other Species	

Pool Depth (cm)	
At time of sampling	4
Estimated maximum	45

Surface Area (m)	
length	25
width	6
length	27
width	8
Sampling	25 x 6
Estimated maximum	27 x 8

Habitat Condition	
Disturbed	1
Disturbance type	<i>tire tracks</i>
Disturbance level	<i>light</i>
Land use of habitat	<i>road rut</i>


Pool Photos	
Photo	

Pool Data	
Pool ID	A25
Water Temperature (°C)	25
Air Temperature (°C)	31
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	3
Estimated maximum	15

Surface Area (m)	
length	7.5
width	2.5
length	8
width	3
Sampling	7.5 x 2.5
Estimated maximum	8 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks, garbage
Disturbance level	light
Land use of habitat	road rut

Pool Photos	
Photo	



**Vernal Pool Wet Season**
**Record: 153**

This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2015-05-18
Survey Time	08:52:00
County	San Diego
Quad	Jamul
Collector	Thomas Liddicoat
Collector(s)	Other
Permit Number	TE139634 TSL
Site/Project Name	8207 PV
Survey Notes	Some other C pools but all under 3 cm

**Pool Data**

Pool ID	C10
Water Temperature (°C)	25
Air Temperature (°C)	25
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

**Pool Depth (cm)**

At time of sampling	6.5
---------------------	-----

**Surface Area (m)**

length	3.5
width	3
Sampling	3.5 x 3
Estimated maximum	4 x 3

**Pool Data**

Pool ID	A25
Water Temperature (°C)	25
Air Temperature (°C)	25
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	8
Estimated maximum	15

Surface Area (m)	
length	1
width	5
Sampling	1 x 5
Estimated maximum	8 x 3

Habitat Condition	
Notes	On road

# **APPENDIX G**

*List of Plant Species Observed*



## APPENDIX G

### List of Plant Species Observed

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#### VASCULAR SPECIES

##### EUDICOTS

##### ***ADOXACEAE—MUSKROOT FAMILY***

*Sambucus nigra* ssp. *caerulea*—blue elderberry

##### ***AMARANTHACEAE—AMARANTH FAMILY***

*Amaranthus blitoides*—mat amaranth

##### ***ANACARDIACEAE—SUMAC OR CASHEW FAMILY***

- \* *Schinus molle*—Peruvian peppertree
- \* *Schinus terebinthifolius*—Brazilian peppertree
- Malosma laurina*—laurel sumac
- Rhus aromatica*—skunkbush sumac
- Rhus integrifolia*—lemonade sumac
- Rhus ovata*—sugarbush
- Toxicodendron diversilobum*—Pacific poison oak

##### ***APIACEAE—CARROT FAMILY***

- \* *Anthriscus caucalis*—bur chervil
- \* *Apium graveolens*—wild celery
- \* *Foeniculum vulgare*—sweet fennel
- Apiastrum angustifolium*—mock parsley
- Daucus pusillus*—American wild carrot
- Eryngium aristulatum* var. *parishii*—Parish's eryngo
- Lomatium dasycarpum* ssp. *dasycarpum*—woollyfruit desertparsley
- Lomatium lucidum*—shiny biscuitroot
- Sanicula arguta*—sharptooth blacksnakeroot
- Sanicula bipinnatifida*—purple sanicle

##### ***APOCYNACEAE—DOGBANE FAMILY***

*Asclepias fascicularis*—Mexican whorled milkweed

##### ***ASTERACEAE—SUNFLOWER FAMILY***

- \* *Carduus pycnocephalus* ssp. *pycnocephalus*—Italian plumeless thistle
- \* *Centaurea melitensis*—Maltese star-thistle
- \* *Cotula australis*—Australian waterbuttons
- \* *Cotula coronopifolia*—common brassbuttons
- \* *Cynara cardunculus* ssp. *cardunculus*—globe artichoke

## APPENDIX G (Continued)

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- \* *Cynara cardunculus*—cardoon
- \* *Dittrichia graveolens*—stinkwort
- \* *Erigeron bonariensis*—asthmaweed
- \* *Glebionis coronaria*—crowndaisy
- \* *Hedypnois rhagadioloides*—crete weed
- \* *Helminthotheca echiioides*—bristly oxtongue
- \* *Hypochaeris glabra*—smooth cat’s ear
- \* *Lactuca serriola*—prickly lettuce
- \* *Logfia gallica*—narrowleaf cottonrose
- \* *Senecio vulgaris*—old-man-in-the-Spring
- \* *Silybum marianum*—blessed milkthistle
- \* *Sonchus asper* ssp. *asper*—spiny sowthistle
- \* *Sonchus oleraceus*—common sowthistle
- \* *Taraxacum officinale*—common dandelion
- Acourtia microcephala*—sacapellote
- Ambrosia acanthicarpa*—flatspine bur ragweed
- Ambrosia psilostachya*—Cuman ragweed
- Artemisia californica*—coastal sagebrush
- Artemisia douglasiana*—Douglas’ sagewort
- Artemisia palmeri*—San Diego sagewort
- Baccharis pilularis* ssp. *consanguinea*—coyotebrush
- Baccharis salicifolia* ssp. *salicifolia*—mulefat
- Baccharis sarothroides*—desertbroom
- Bahiopsis laciniata*—San Diego viguiera
- Brickellia californica*—California brickellbush
- Chaenactis glabriuscula*—yellow pincushion
- Corethrogyne filaginifolia*—common sandaster
- Deinandra conjugens*—Otay tarweed
- Deinandra fasciculata*—clustered tarweed
- Erigeron canadensis*—Canadian horseweed
- Encelia californica*—California brittle bush
- Erigeron foliosus* var. *foliosus*—leafy fleabane
- Eriophyllum confertiflorum* var. *confertiflorum*—golden-yarrow
- Gutierrezia californica*—San Joaquin snakeweed
- Gutierrezia sarothrae*—broom snakeweed
- Hazardia squarrosa* var. *grindelioides*—sawtooth bristleweed
- Helianthus annuus*—common sunflower
- Helianthus gracilentus*—slender sunflower
- Heterotheca grandiflora*—telegraphweed



## APPENDIX G (Continued)

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*Holocarpha virgata* ssp. *elongata*—graceful tarplant  
*Isocoma menziesii* var. *menziesii*—Menzies' goldenbush  
*Isocoma menziesii* var. *vernonioides*—Menzies' goldenbush  
*Iva hayesiana*—San Diego povertyweed  
*Lasthenia gracilis*—needle goldfields  
*Logfia filaginoides*—California cottonrose  
*Osmadenia tenella*—false rosinweed  
*Pentachaeta aurea* ssp. *aurea*—golden chaetopappa  
*Pluchea sericea*—arrowweed  
*Porophyllum gracile*—slender poreleaf  
*Pseudognaphalium beneolens*—Wright's cudweed  
*Pseudognaphalium biolettii*—two-color rabbit-tobacco  
*Pseudognaphalium californicum*—ladies' tobacco  
*Psilocarphus brevissimus* var. *brevissimus*—short woollyheads  
*Psilocarphus tenellus*—slender woollyheads  
*Rafinesquia californica*—California plumeseed  
*Stephanomeria exigua*—small wirelettuce  
*Stephanomeria virgata*—rod wirelettuce  
*Stylocline gnaphaloides*—mountain neststraw  
*Uropappus lindleyi*—Lindley's silverpuffs  
*Viguiera laciniata*—San Diego County viguiera  
*Xanthium strumarium*—rough cocklebur

### **BORAGINACEAE—BORAGE FAMILY**

*Amsinckia intermedia*—common fiddleneck  
*Amsinckia menziesii*—Menzies' fiddleneck  
*Cryptantha intermedia* var. *intermedia*—Clearwater cryptantha  
*Cryptantha muricata* var. *jonesii*—pointed cryptantha  
*Emmenanthe penduliflora* var. *penduliflora*—whisperingbells  
*Eriodictyon crassifolium* var. *crassifolium*—thickleaf yerba santa  
*Eriodictyon trichocalyx*—hairy yerba santa  
*Eucrypta chrysanthemifolia* var. *chrysanthemifolia*—spotted hideseed  
*Harpagonella palmeri*—Palmer's grapplinghook  
*Heliotropium curassavicum* var. *oculatum*—seaside heliotrope  
*Pectocarya linearis* ssp. *ferocula*—sagebrush combseed  
*Phacelia cicutaria* var. *hispida*—caterpillar phacelia  
*Phacelia grandiflora*—largeflower phacelia  
*Phacelia minor*—wild Canterbury bells  
*Phacelia parryi*—Parry's phacelia

## APPENDIX G (Continued)

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*Pholistoma auritum*—blue fiestaflower  
*Pholistoma membranaceum*—white fiestaflower  
*Plagiobothrys collinus*—Cooper’s popcornflower  
*Plagiobothrys* sp.—popcornflower

### **BRASSICACEAE—MUSTARD FAMILY**

- \* *Brassica nigra*—black mustard
- Caulanthus lasiophyllus*—California mustard
- \* *Hirschfeldia incana*—shortpod mustard
- Lepidium virginicum* var. *robinsonii*—Robinson’s pepper-grass
- \* *Raphanus sativus*—cultivated radish
- \* *Sisymbrium altissimum*—tall tumbledustard
- \* *Sisymbrium irio*—London rocket
- \* *Sisymbrium orientale*—Indian hedgemustard
- Lepidium nitidum*—shining pepperweed
- Thysanocarpus curvipes* ssp. *curvipes*—sand fringedpod

### **CACTACEAE—CACTUS FAMILY**

*Cylindropuntia prolifera*—coastal cholla  
*Ferocactus viridescens*—San Diego barrelcactus  
*Opuntia littoralis*—coastal pricklypear

### **CAPRIFOLIACEAE—HONEYSUCKLE FAMILY**

*Lonicera subspicata* var. *denudata*—Santa Barbara honeysuckle

### **CARYOPHYLLACEAE—PINK FAMILY**

- \* *Cerastium glomeratum*—sticky chickweed
- \* *Polycarpon tetraphyllum* var. *tetraphyllum*—fourleaf manyseed
- \* *Silene gallica*—common catchfly
- \* *Spergula arvensis*—corn spurry
- \* *Spergularia bocconi*—Boccone’s sandspurry
- \* *Stellaria media*—common chickweed
- Spergularia marina*—salt sandspurry

### **CHENOPODIACEAE—GOOSEFOOT FAMILY**

- \* *Atriplex semibaccata*—Australian saltbush
- \* *Chenopodium album*—lambsquarters
- \* *Chenopodium murale*—nettleleaf goosefoot
- \* *Salsola australis*—Russian thistle
- Chenopodium californicum*—California goosefoot

## APPENDIX G (Continued)

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### **CISTACEAE—ROCK-ROSE FAMILY**

*Crocanthemum scoparium*—no common name

### **CLEOMACEAE—CLEOME FAMILY**

*Peritoma arborea* var. *arborea*—bladderpod spiderflower

### **CONVOLVULACEAE—MORNING-GLORY FAMILY**

- \* *Convolvulus arvensis*—field bindweed
- Calystegia macrostegia* ssp. *tenuifolia*—island false bindweed
- Calystegia macrostegia*—island false bindweed
- Cuscuta californica* var. *californica*—chaparral dodder
- Dichondra occidentalis*—western dichondra

### **CRASSULACEAE—STONECROP FAMILY**

*Crassula connata*—sand pygmyweed  
*Dudleya edulis*—fingertips  
*Dudleya pulverulenta*—chalk dudleya  
*Dudleya variegata*—variegated dudleya

### **CUCURBITACEAE—GOURD FAMILY**

*Marah macrocarpa*—Cucamonga manroot

### **DIPSACACEAE—TEASEL FAMILY**

- \* *Dipsacus sativus*—Indian teasel

### **ELATINACEAE—WATERWORT FAMILY**

*Elatine brachysperma*—shortseed waterwort

### **ERICACEAE—HEATH FAMILY**

*Arctostaphylos otayensis*—Otay manzanita  
*Xylococcus bicolor*—mission manzanita

### **EUPHORBIACEAE—SPURGE FAMILY**

- \* *Euphorbia maculata*—spotted sandmat
- \* *Euphorbia peplus*—petty spurge
- \* *Euphorbia serpens*—matted sandmat
- Croton setiger*—dove weed
- Euphorbia albomarginata*—whitemargin sandmat
- Euphorbia polycarpa*—smallseed sandmat

## APPENDIX G (Continued)

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### **FABACEAE—LEGUME FAMILY**

- \* *Acacia cyclops*—coastal wattle
- \* *Medicago polymorpha*—burclover
- \* *Melilotus albus*—yellow sweetclover
- \* *Melilotus indicus*—annual yellow sweetclover
- \* *Vicia villosa* ssp. *villosa*—winter vetch
- Acmispon americanus* var. *americanus*—American bird's-foot trefoil
- Acmispon glaber*—deer weed
- Acmispon glaber* var. *glaber*—common deerweed
- Acmispon strigosus*—strigose bird's-foot trefoil
- Lathyrus vestitus* var. *alefeldii*—Alefeld's pea
- Lupinus bicolor*—miniature lupine
- Lupinus concinnus*—bajada lupine
- Lupinus hirsutissimus*—stinging annual lupine
- Lupinus truncatus*—collared annual lupine
- Trifolium willdenovii*—tomcat clover
- Vicia ludoviciana* ssp. *ludoviciana*—Louisiana vetch

### **FAGACEAE—OAK FAMILY**

- Quercus ×acutidens*—hybrid oak
- Quercus agrifolia* var. *agrifolia*—California live oak
- Quercus berberidifolia*—scrub oak
- Quercus wislizeni* var. *frutescens*—interior live oak

### **FRANKENIACEAE—FRANKENIA FAMILY**

- Frankenia salina*—alkali heath

### **GENTIANACEAE—GENTIAN FAMILY**

- Zeltnera venusta*—charming centaury

### **GERANIACEAE—GERANIUM FAMILY**

- \* *Erodium botrys*—longbeak stork's bill
- \* *Erodium cicutarium*—redstem stork's bill
- \* *Erodium moschatum*—musky stork's bill
- \* *Geranium molle*—dovefoot geranium

### **GROSSULARIACEAE—GOOSEBERRY FAMILY**

- Ribes indecorum*—whiteflower currant
- Ribes malvaceum* var. *viridifolium*—chaparral currant

## APPENDIX G (Continued)

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### **LAMIACEAE—MINT FAMILY**

- \* *Marrubium vulgare*—horehound
- Clinopodium chandleri*—San Miguel calamint
- Lepechinia ganderi*—San Diego pitchersage
- Salvia apiana*—white sage
- Salvia clevelandii*—fragrant sage
- Salvia columbariae*—chia
- Salvia mellifera*—black sage
- Salvia munzii*—Munz's sage

### **LYTHRACEAE—LOOSESTRIFE FAMILY**

- \* *Lythrum hyssopifolia*—hyssop loosestrife

### **MALVACEAE—MALLOW FAMILY**

- \* *Malva parviflora*—cheeseweed mallow
- Malacothamnus fasciculatus* var. *fasciculatus*—Mendocino bushmallow
- Sidalcea malviflora*—dwarf checkerbloom
- Sidalcea sparsifolia*—dwarf checkerbloom

### **MONTIACEAE—MONTIA FAMILY**

- Calandrinia menziesii*—red maids
- Claytonia parviflora* ssp. *parviflora*—streambank springbeauty
- Claytonia perfoliata*—miner's lettuce

### **MYRSINACEAE—MYRSINE FAMILY**

- \* *Lysimachia arvensis*—scarlet pimpernel

### **MYRTACEAE—MYRTLE FAMILY**

- \* *Eucalyptus camaldulensis*—river redgum
- \* *Eucalyptus globulus*—Tasmanian bluegum
- \* *Eucalyptus sideroxylon*—red ironbark

### **NYCTAGINACEAE—FOUR O'CLOCK FAMILY**

- Mirabilis laevis* var. *crassifolia*—California four o'clock

### **OLEACEAE—OLIVE FAMILY**

- \* *Olea europaea*—olive

### **ONAGRACEAE—EVENING PRIMROSE FAMILY**

- Camissoniopsis bistorta*—southern suncup
- Camissoniopsis hirtella*—Santa Cruz Island suncup

## APPENDIX G (Continued)

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*Clarkia delicata*—Campo clarkia  
*Clarkia epilobioides*—canyon clarkia  
*Clarkia purpurea* ssp. *quadrivulnera*—winecup clarkia  
*Epilobium canum* ssp. *canum*—hummingbird trumpet  
*Eulobus californicus*—California suncup

### **OROBANCHACEAE—BROOM-RAPE FAMILY**

*Castilleja affinis* ssp. *affinis*—coast Indian paintbrush  
*Castilleja exserta* ssp. *exserta*—exserted Indian paintbrush

### **OXALIDACEAE—OXALIS FAMILY**

\* *Oxalis corniculata*—creeping woodsorrel  
*Oxalis californica*—California woodsorrel

### **PAEONIACEAE—PEONY FAMILY**

*Paeonia californica*—California peony

### **PAPAVERACEAE—POPPY FAMILY**

*Eschscholzia caespitosa*—tufted poppy  
*Eschscholzia californica*—California poppy  
*Romneya trichocalyx*—bristly Matilija poppy

### **PHRYMACEAE—LOPSEED FAMILY**

*Mimulus aurantiacus* var. *puniceus*—orange bush monkeyflower  
*Mimulus aurantiacus*—orange bush monkeyflower  
*Mimulus brevipes*—widethroat yellow monkeyflower  
*Mimulus guttatus*—common monkey flower

### **PLANTAGINACEAE—PLANTAIN FAMILY**

*Antirrhinum coulterianum*—Coulter's snapdragon  
*Antirrhinum nuttallianum*—violet snapdragon  
*Antirrhinum nuttallianum* ssp. *nuttallianum*—violet snapdragon  
*Collinsia heterophylla* var. *heterophylla*—purple Chinese houses  
*Keckiella antirrhinoides* var. *antirrhinoides*—snapdragon penstemon  
*Keckiella ternata*—scarlet keckiella  
*Nuttallanthus texanus*—Texas toadflax  
*Penstemon spectabilis* var. *spectabilis*—showy penstemon  
*Plantago erecta*—dwarf plantain  
*Plantago ovata*—desert Indianwheat



## APPENDIX G (Continued)

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### **POLEMONIACEAE—PHLOX FAMILY**

- Linanthus dianthiflorus*—fringed linanthus
- Navarretia hamata*—hooked pincushionplant
- Navarretia hamata* ssp. *leptantha*—hooked pincushionplant

### **POLYGONACEAE—BUCKWHEAT FAMILY**

- \* *Polygonum aviculare*—prostrate knotweed
- \* *Rumex crispus*—curly dock
- Chorizanthe fimbriata* var. *fimbriata*—fringed spineflower
- Eriogonum fasciculatum*—Eastern Mojave buckwheat
- Eriogonum fasciculatum* var. *fasciculatum*—Eastern Mojave buckwheat
- Pterostegia drymarioides*—woodland pterostegia

### **PORTULACACEAE—PURSLANE FAMILY**

- \* *Portulaca oleracea*—little hogweed
- Calandrinia menziesii*—fringed redmaids

### **RANUNCULACEAE—BUTTERCUP FAMILY**

- Clematis lasiantha*—pipestem clematis
- Clematis pauciflora*—ropevine clematis
- Delphinium cardinale*—scarlet larkspur
- Delphinium parryi* ssp. *parryi*—San Bernardino larkspur
- Thalictrum fendleri*—Fendler's meadow-rue

### **RHAMNACEAE—BUCKTHORN FAMILY**

- Ceanothus tomentosus*—woollyleaf ceanothus
- Rhamnus crocea*—redberry buckthorn

### **ROSACEAE—ROSE FAMILY**

- Adenostoma fasciculatum*—chamise
- Adenostoma fasciculatum* var. *obtusifolium*—chamise
- Cercocarpus minutiflorus*—smooth mountain mahogany
- Drymocallis glandulosa*—sticky cinquefoil
- Heteromeles arbutifolia*—toyon
- Rubus ursinus*—California blackberry

### **RUBIACEAE—MADDER FAMILY**

- Galium andrewsii*—phloxleaf bedstraw
- Galium angustifolium*—narrowleaf bedstraw
- Galium angustifolium* ssp. *angustifolium*—narrowleaf bedstraw

## APPENDIX G (Continued)

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*Galium aparine*—stickywilly

*Galium nuttallii* ssp. *nuttallii*—climbing bedstraw

*Galium porrigens* var. *porrigens*—graceful bedstraw

### ***SALICACEAE—WILLOW FAMILY***

*Populus fremontii* ssp. *fremontii*—Fremont cottonwood

*Salix gooddingii*—Goodding's willow

*Salix laevigata*—red willow

*Salix lasiolepis*—arroyo willow

### ***SAURURACEAE—LIZARD'S-TAIL FAMILY***

*Anemopsis californica*—yerba mansa

### ***SCROPHULARIACEAE—FIGWORT FAMILY***

*Scrophularia californica*—California figwort

### ***SIMAROUBACEAE—QUASSIA OR SIMAROUBA FAMILY***

\* *Ailanthus altissima*—tree of heaven

### ***SIMMONDSIACEAE—JOJOBA FAMILY***

*Simmondsia chinensis*—jojoba

### ***SOLANACEAE—NIGHTSHADE FAMILY***

\* *Nicotiana glauca*—tree tobacco

\* *Solanum elaeagnifolium*—silverleaf nightshade

*Datura wrightii*—sacred thorn-apple

*Solanum douglasii*—greenspot nightshade

*Solanum parishii*—Parish's nightshade

*Solanum xanti*—chaparral nightshade

### ***TAMARICACEAE—TAMARISK FAMILY***

\* *Tamarix ramosissima*—saltcedar

### ***URTICACEAE—NETTLE FAMILY***

\* *Urtica urens*—dwarf nettle

*Hesperocnide tenella*—western stingingnettle

### ***VERBENACEAE—VERVAIN FAMILY***

*Phyla nodiflora*—turkey tangle fogfruit

### ***VIOLACEAE—VIOLET FAMILY***

## APPENDIX G (Continued)

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*Viola pedunculata*—Johnny-jump-up

### FERNS AND FERN ALLIES

#### ***PTERIDACEAE—BRAKE FAMILY***

*Adiantum jordanii*—California maidenhair

*Pellaea mucronata* var. *mucronata*—birdfoot cliffbrake

*Pentagramma triangularis* ssp. *viscosa*—silverback fern

*Pentagramma triangularis*—goldback fern

#### ***SELAGINELLACEAE—SPIKE-MOSS FAMILY***

*Selaginella bigelovii*—bushy spikemoss

*Selaginella cinerascens*—mesa spikemoss

### GYMNOSPERMS AND GNETOPHYTES

#### ***PINACEAE—PINE FAMILY***

*Pinus* sp.—pine

### MONOCOTS

#### ***AGAVACEAE—AGAVE FAMILY***

*Chlorogalum parviflorum*—smallflower soap plant

*Chlorogalum pomeridianum* var. *pomeridianum*—wavyleaf soap plant

*Hesperoyucca whipplei*—chaparral yucca

*Yucca schidigera*—Mojave yucca

#### ***ALLIACEAE—ONION FAMILY***

*Allium praecox*—early onion

#### ***ARECACEAE—PALM FAMILY***

\* *Phoenix canariensis*—Canary Island date palm

\* *Washingtonia robusta*—Washington fan palm

#### ***CYPERACEAE—SEDGE FAMILY***

*Schoenoplectus americanus*—American bulrush

*Schoenoplectus californicus*—California bulrush

*Eleocharis macrostachya*—pale spike rush

#### ***IRIDACEAE—IRIS FAMILY***

*Sisyrinchium bellum*—western blue-eyed grass

## APPENDIX G (Continued)

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### ***JUNCACEAE—RUSH FAMILY***

*Juncus acutus* ssp. *leopoldii*—Leopold's rush

*Juncus balticus* ssp. *ater*—mountain rush

*Juncus bufonius* var. *bufonius*—toad rush

*Juncus dubius*—questionable rush

*Juncus mexicanus*—Mexican rush

### ***LILIACEAE—LILY FAMILY***

*Bloomeria clevelandii*—San Diego goldenstar

*Brodiaea orcuttii*—Orcutt's brodiaea

*Calochortus dunnii*—Dunn's mariposa lily

*Calochortus splendens*—splendid mariposa lily

*Calochortus weedii* var. *weedii*—Weed's mariposa lily

### ***MELANTHIACEAE—FALSE HELLEBORE FAMILY***

*Toxicoscordion fremontii*—Fremont's deathcamas

### ***POACEAE—GRASS FAMILY***

- \* *Avena barbata*—slender oat
- \* *Avena fatua*—wild oat
- \* *Brachypodium distachyon*—purple false brome
- \* *Bromus diandrus*—ripgut brome
- \* *Bromus hordeaceus*—soft brome
- \* *Bromus madritensis* ssp. *madritensis*—compact brome
- \* *Bromus madritensis* ssp. *rubens*—red brome
- \* *Cortaderia selloana*—Uruguayan pampas grass
- \* *Cynodon dactylon*—Bermudagrass
- \* *Cynosurus echinatus*—bristly dogstail grass
- \* *Festuca myuros*—rat-tail fescue
- \* *Festuca perennis*—Italian ryegrass
- \* *Gastridium phleoides*—nit grass
- \* *Hordeum marinum* ssp. *gussoneanum*—Mediterranean barley
- \* *Hordeum murinum* ssp. *glaucum*—smooth barley
- \* *Hordeum murinum*—mouse barley
- \* *Lamarckia aurea*—goldentop grass
- \* *Melinis repens*—rose Natal grass
- \* *Paspalum dilatatum*—dallisgrass
- \* *Pennisetum setaceum*—crimson fountaingrass
- \* *Phalaris minor*—littleseed canarygrass
- \* *Poa annua*—annual bluegrass

## APPENDIX G (Continued)

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- \* *Polypogon monspeliensis*—annual rabbitsfoot grass
- \* *Schismus barbatus*—common Mediterranean grass
- \* *Stipa miliacea* var. *miliacea*—smilgrass
- Aristida adscensionis*—sixweeks threeawn
- Bromus carinatus*—California brome
- Distichlis spicata*—saltgrass
- Festuca microstachys*—six-weeks fescue
- Melica imperfecta*—smallflower melicgrass
- Muhlenbergia microsperma*—littleseed muhly
- Stipa diegoensis*—San Diego County needle grass
- Stipa lepida*—foothill needlegrass
- Stipa pulchra*—purple needlegrass
- Stipa speciosa*—desert needlegrass

### ***THEMIDACEAE—BRODIAEA FAMILY***

- Bloomeria crocea* var. *crocea*—common goldenstar
- Brodiaea terrestris* ssp. *kernensis*—Kern brodiaea
- Dichelostemma capitatum* ssp. *capitatum*—bluedicks

### ***MUILLA MARITIMA—SEA MUILLATYPHACEAE—CATTAIL FAMILY***

- Typha domingensis*—southern cattail
- Typha latifolia*—broadleaf cattail

\* signifies introduced (non-native) species

## APPENDIX G (Continued)

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# **APPENDIX H**

*List of Wildlife Species Observed*



## APPENDIX H

### List of Wildlife Species Observed

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#### AMPHIBIAN

##### TOADS

##### ***PELOBATIDAE—SPADEFEET***

*Spea hammondi*—Western spadefoot

#### BIRD

##### BLACKBIRDS, ORIOLES, AND ALLIES

##### ***ICTERIDAE—BLACKBIRDS***

*Agelaius phoeniceus*—red-winged blackbird

*Icterus bullockii*—Bullock's oriole

*Sturnella neglecta*—western meadowlark

\* *Molothrus ater*—brown-headed cowbird

*Icterus cucullatus*—hooded oriole

##### BUSHTITS

##### ***AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS***

*Psaltiriparus minimus*—bushtit

##### CARDINALS, GROSBEAKS, AND ALLIES

##### ***CARDINALIDAE—CARDINALS AND ALLIES***

*Passerina amoena*—lazuli bunting

*Passerina caerulea*—blue grosbeak

##### EMBERIZINES

##### ***EMBERIZIDAE—EMBERIZIDS***

*Ammodramus savannarum*—grasshopper sparrow

*Chondestes grammacus*—lark sparrow

*Melospiza melodia*—song sparrow

*Melospiza crissalis*—California towhee

*Passerculus sandwichensis*—Savannah sparrow

*Pipilo maculatus*—spotted towhee

*Spizella atrogularis*—black-chinned sparrow

*Aimophila ruficeps canescens*—Southern California rufous-crowned sparrow

*Zonotrichia leucophrys*—white-crowned sparrow

## APPENDIX H (Continued)

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### FALCONS

#### ***FALCONIDAE—CARACARAS AND FALCONS***

*Falco sparverius*—American kestrel

### FINCHES

#### ***FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES***

*Haemorhous mexicanus*—house finch

*Spinus psaltria*—lesser goldfinch

### FLYCATCHERS

#### ***TYRANNIDAE—TYRANT FLYCATCHERS***

*Myiarchus cinerascens*—ash-throated flycatcher

*Sayornis nigricans*—black phoebe

*Sayornis saya*—Say's phoebe

*Tyrannus verticalis*—western kingbird

*Tyrannus vociferans*—Cassin's kingbird

### GOATSUCKERS

#### ***CAPRIMULGIDAE—GOATSUCKERS***

*Chordeiles acutipennis*—lesser nighthawk

### HAWKS

#### ***ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES***

*Accipiter cooperii*—Cooper's hawk

*Aquila chrysaetos*—golden eagle

*Buteo jamaicensis*—red-tailed hawk

*Buteo lineatus*—red-shouldered hawk

*Circus cyaneus*—northern harrier

*Elanus leucurus*—white-tailed kite

### HUMMINGBIRDS

#### ***TROCHILIDAE—HUMMINGBIRDS***

*Calypte anna*—Anna's hummingbird

*Calypte costae*—Costa's hummingbird

## APPENDIX H (Continued)

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### JAYS, MAGPIES, AND CROWS

#### ***CORVIDAE—CROWS AND JAYS***

*Aphelocoma californica*—western scrub-jay

*Corvus brachyrhynchos*—American crow

*Corvus corax*—common raven

### KINGLETS

#### ***REGULIDAE—KINGLETS***

*Regulus calendula*—ruby-crowned kinglet

### LARKS

#### ***ALAUDIDAE—LARKS***

*Eremophila alpestris*—horned lark

### MOCKINGBIRDS AND THRASHERS

#### ***MIMIDAE—MOCKINGBIRDS AND THRASHERS***

*Toxostoma redivivum*—California thrasher

*Mimus polyglottos*—northern mockingbird

### NEW WORLD QUAIL

#### ***ODONTOPHORIDAE—NEW WORLD QUAIL***

*Callipepla californica*—California quail

### NEW WORLD VULTURES

#### ***CATHARTIDAE—CARDINALS AND ALLIES***

*Cathartes aura*—turkey vulture

### OLD WORLD SPARROWS

#### ***PASSERIDAE—OLD WORLD SPARROWS***

\* *Passer domesticus*—house sparrow

## APPENDIX H (Continued)

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### OLD WORLD WARBLERS AND GNATCATCHERS

#### ***SYLVIIDAE—SYLVIID WARBLERS***

*Poliophtila caerulea*—blue-gray gnatcatcher

*Poliophtila californica californica*—coastal California gnatcatcher

### OWLS

#### ***TYTONIDAE—BARN OWLS***

*Tyto alba*—barn owl

#### ***STRIGIDAE—TYPICAL OWLS***

*Asio otus*—long-eared owl

*Bubo virginianus*—great horned owl

*Athene cunicularia*—burrowing owl (sign)

### PIGEONS AND DOVES

#### ***COLUMBIDAE—PIGEONS AND DOVES***

*Columbina passerina*—common ground-dove

*Zenaida macroura*—mourning dove

\* *Streptopelia decaocto*—Eurasian collared-dove

### ROADRUNNERS AND CUCKOOS

#### ***CUCULIDAE—CUCKOOS, ROADRUNNERS, AND ANIS***

*Geococcyx californianus*—greater roadrunner

### SHRIKES

#### ***LANIIDAE—SHRIKES***

*Lanius ludovicianus*—loggerhead shrike

### SILKY FLYCATCHERS

#### ***PTILOGONATIDAE—SILKY-FLYCATCHERS***

*Phainopepla nitens*—phainopepla

### STARLINGS AND ALLIES

#### ***STURNIDAE—STARLINGS***

\* *Sturnus vulgaris*—European starling



## APPENDIX H (Continued)

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### SWALLOWS

#### ***HIRUNDINIDAE—SWALLOWS***

*Petrochelidon pyrrhonota*—cliff swallow

*Stelgidopteryx serripennis*—northern rough-winged swallow

*Tachycineta bicolor*—tree swallow

*Tachycineta thalassina*—violet-green swallow

### SWIFTS

#### ***APODIDAE—SWIFTS***

*Aeronautes saxatalis*—white-throated swift

### THRUSHES

#### ***TURDIDAE—THRUSHES***

*Sialia mexicana*—western bluebird

### TITMICE

#### ***PARIDAE—CHICKADEES AND TITMICE***

*Baeolophus inornatus*—oak titmouse

### WOOD WARBLERS AND ALLIES

#### ***PARULIDAE—WOOD-WARBLERS***

*Geothlypis trichas*—common yellowthroat

*Cardellina pusilla*—Wilson's warbler

*Setophaga coronata*—yellow-rumped warbler

*Setophaga petechia*—yellow warbler

### WOODPECKERS

#### ***PICIDAE—WOODPECKERS AND ALLIES***

*Picoides nuttallii*—Nuttall's woodpecker

*Colaptes auratus*—northern flicker

## APPENDIX H (Continued)

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### WRENS

#### **TROGLODYTIDAE—WRENS**

*Catherpes mexicanus*—canyon wren  
*Salpinctes obsoletus*—rock wren  
*Thryomanes bewickii*—Bewick's wren  
*Troglodytes aedon*—house wren

### WRENTITS

#### **TIMALIIDAE—BABBLERS**

*Chamaea fasciata*—wren tit

### INVERTEBRATE

### BUTTERFLIES

#### **LYCAENIDAE—BLUES, HAIRSTREAKS, AND COPPERS**

*Brephidium exile*—western pygmy-blue  
*Callophrys augustinus*—brown elfin  
*Callophrys dumetorum affinis*—immaculate bramble hairstreak  
*Celistrina ladon [argiolus] echo*—echo blue  
*Euphilotes battoides bernardino*—Bernardino square-spotted blue  
*Everes amyntula*—western tailed-blue  
*Glaucopsyche lygdamus australis*—southern blue  
*Hemiargus ceraunus gyas*—Edward's blue  
*Icaricia acmon acmon*—Acmon blue  
*Leptotes marina*—marine blue  
*Strymon melinus*—gray hairstreak

#### **NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES**

*Adelpha bredowii*—California sister  
*Agraulis vanillae*—Gulf fritillary  
*Chlosyne californica*—California patch  
*Chlosyne gabbii*—Gabb's checkerspot  
*Coenonympha tullia californica*—common California ringlet  
*Danaus gilippus*—queen  
*Danaus plexippus*—monarch  
*Junonia coenia*—common buckeye  
*Nymphalis antiopa*—mourning cloak  
*Nymphalis californica*—California tortoiseshell

## APPENDIX H (Continued)

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*Speyeria callippe comstocki*—Comstock's fritillary

*Vanessa annabella*—west coast lady

*Vanessa atalanta*—red admiral

*Vanessa cardui*—painted lady

*Vanessa virginiensis*—American lady

### **RIODINIDAE—METALMARKS**

*Apodemia mormo virgulti*—Behr's metalmark

*Calephelis wrighti*—Wright's metalmark

### **HESPERIIDAE—SKIPPERS**

*Erynnis afranius*—Afranius duskywing

*Erynnis funeralis*—funereal duskywing

*Erynnis pacuvius*—Pacuvius duskywing

*Erynnis tristis*—mournful duskywing

*Heliopetes ericetorum*—northern white-skipper

*Hylephila phyleus*—fiery skipper

*Lerodea eufala*—Eufala skipper

*Pyrgus albescens*—white checkered-skipper

*Systasea zampa*—Arizona powdered skipper

### **PAPILIONIDAE—SWALLOWTAILS**

*Papilio cresphontes*—giant swallowtail

*Papilio eurymedon*—pale swallowtail

*Papilio rutulus*—western tiger swallowtail

*Papilio zelicaon*—anise swallowtail

### **PIERIDAE—WHITES AND SULFURS**

*Anthocharis cethura*—desert orangetip

*Anthocharis sara sara*—Pacific sara orangetip

*Colias eurytheme*—orange Sulphur

*Colias harfordii*—Harford's Sulphur

*Euchloe hyantis lotta*—desert pearly marble

*Eurema nicippe*—sleepy orange

*Nathalis iole*—dainty Sulphur

*Phoebis sennae*—cloudless sulphur

*Pieris rapae*—cabbage white

*Pontia protodice*—checkered white

*Pontia sisymbrii*—spring white

## APPENDIX H (Continued)

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### FAIRY SHRIMP

#### ***BRANCHINECTIDAE—FAIRY SHRIMP***

*Branchinecta sandiegonensis*—San Diego fairy shrimp

*Branchinecta lindahli*—versatile fairy shrimp

### TARANTULA HAWKS

#### ***POMPILIDAE—SPIDER WASPS***

*Pepsis* sp.—tarantula hawk

### MAMMAL

#### CANIDS

#### ***CANIDAE—WOLVES AND FOXES***

*Canis latrans*—coyote

*Urocyon cinereoargenteus*—gray fox

#### CATS

#### ***FELIDAE—CATS***

*Lynx rufus*—bobcat

*Puma concolor*—cougar

### DOMESTIC

#### ***CANIDAE—WOLVES AND FOXES***

\* *Canis lupus familiaris*—domestic dog

### HARES AND RABBITS

#### ***LEPORIDAE—HARES AND RABBITS***

*Lepus californicus bennettii*—San Diego black-tailed jackrabbit

*Sylvilagus audubonii*—desert cottontail

*Sylvilagus bachmani*—brush rabbit

### KANGAROO RATS

#### ***HETEROMYIDAE—POCKET MICE AND KANGAROO RATS***

*Dipodomys* sp.—kangaroo rat

## APPENDIX H (Continued)

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### MUSTELIDS

#### ***MUSTELIDAE—WEASELS, SKUNKS, AND OTTERS***

*Mustela frenata*—long-tailed weasel

*Taxidea taxus*—American badger (burrow only)

### POCKET GOPHERS

#### ***GEOMYIDAE—POCKET GOPHERS***

*Thomomys bottae*—Botta's pocket gopher

### RATS AND MICE

#### ***MURIDAE—RATS AND MICE***

*Neotoma* sp.—woodrat species

### SQUIRRELS

#### ***SCIURIDAE—SQUIRRELS***

*Spermophilus (Otospermophilus) beecheyi*—California ground squirrel

### UNGULATES

#### ***CERVIDAE—DEERS***

*Odocoileus hemionus*—mule deer

### REPTILE

### LIZARDS

#### ***PHRYNOSOMATIDAE—IGUANID LIZARDS***

*Phrynosoma blainvillii*—Blainville's horned lizard

*Sceloporus occidentalis*—western fence lizard

*Uta stansburiana*—common side-blotched lizard

#### ***ANGUIDAE—ALLIGATOR LIZARDS***

*Elgaria multicarinata*—southern alligator lizard

#### ***TEIIDAE—WHIPTAIL LIZARDS***

*Aspidoscelis tigris stejnegeri*—San Diegan tiger whiptail

## APPENDIX H (Continued)

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### SNAKES

#### ***COLUBRIDAE—COLUBRID SNAKES***

*Coluber lateralis*—striped racer

*Thamnophis sirtalis*—common gartersnake

*Pituophis catenifer*—gophersnake

#### ***BOIDAE—BOAS***

*Lichanura trivirgata*—rosy boa

#### ***VIPERIDAE—VIPERS***

*Crotalus oreganus*—western rattlesnake

*Crotalus ruber*—red diamond rattlesnake

#### **Notes:**

\* signifies introduced (non-native) species

Wildlife species observed during focused Quino checkerspot butterfly surveys were added to the compendium.



# **APPENDIX I-1**

*Special-Status Plant Species Detected or  
Potentially Occurring in the Land Exchange Area*



**APPENDIX I-1**  
**Special-Status Plant Species Detected or Potentially Occurring in**  
**the Land Exchange Area**

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/ County <sup>1</sup>	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Observed</i>								
<i>Arctostaphylos otayensis</i>	Otay manzanita	None/None	1B.2	Covered/List A	Chaparral, cismontane woodland; metavolcanic/shrub/January–March/900–5,600 feet amsl	Observed	Observed within the PA 16/19 preserve	Detected during the 2014 and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017).
<i>Artemisia palmeri</i>	San Diego sagewort	None/None	4.2	None/List D	Chaparral, coastal scrub, riparian forest, scrub, and woodland; sandy, mesic/deciduous shrub/May–September/50–3,000 feet amsl	Observed	Observed within the PA 16/19 development and preserve	Detected during the 2014, 2015, and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017).
<i>Bloomeria clevelandii</i>	San Diego goldenstar	None/None	1B.1	Covered/List A	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/clay/perennial bulbiferous herb/April–May/164–1,526 feet amsl	Observed	Observed within the Village 14 development, Village 14 preserve, and PA 16/19 development	Detected during the 2014, 2016, and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017).
<i>Calochortus dunnii</i>	Dunn’s mariposa-lily	None/SR	1B.2	Covered, Narrow Endemic/List A	Closed-cone conifer forest, chaparral; gabbroic or metavolcanic/bulbiferous herb/April–June/1,245–6,000 feet amsl	Observed	Observed within the Village 14 development, Village 14 preserve, and PA 16/19 preserve	Detected during the 2014 and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017).
<i>Clarkia delicata</i>	Delicate clarkia	None/None	1B.2	None/List A	Chaparral, cismontane woodland/often gabbroic/annual herb/April–June/770–3,300 feet amsl	Observed	Observed within the PA 16/19 preserve	Detected during the 2014 and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017).
<i>Clinopodium [=Satureja] chandleri</i>	San Miguel savory	None/None	1B.2	Covered/List A	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland/rocky, gabbroic or metavolcanic/perennial shrub/March–July/394–3,527 feet amsl	Observed	Observed within the PA 16/19 preserve	Detected during the 2014 and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017).
<i>Deinandra conjugens</i>	Otay tarplant	FT/SE	1B.1	Covered, Narrow Endemic/List A	Coastal scrub, valley and foothill grassland/clay/annual herb/May–June/82–984 feet amsl	Observed	Observed within and adjacent to the off-site Proctor Valley Road South	Detected during the 2015 and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017).
<i>Dichondra occidentalis</i>	Western dichondra	None/None	4.2	None/List D	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/rhizomatous herb/March–May/160–1,650 feet amsl	Observed	Observed within Village 14 development	This species was detected in the 2016 rare plant surveys. This has been recorded in the vicinity (CNPS 2017; SDNHM 2017). There is suitable habitat within the Preserve areas and there is a high potential for this species to occur in those areas.
<i>Dudleya variegata</i>	Variegated dudleya	None/None	1B.2	Covered, Narrow Endemic/List A	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/perennial herb/April–June/<1,900 feet amsl	Observed	Observed within Village 14 development	This species was observed during the 2016 and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area.
<i>Ferocactus viridescens</i>	San Diego barrel cactus	None/None	2B.1	Covered/List B	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/perennial stem succulent/May–June/<1,500 feet amsl	Observed	Observed within Village 14 development, Village 14 preserve, and within and adjacent to the off-site Proctor Valley Road South	Detected during the 2014, 2015, 2016 and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017).

<sup>1</sup> For purposes of this table, the Land Exchange Area also includes off-site improvement areas.

APPENDIX I-1 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/ County <sup>1</sup>	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	None/None	4.2	None/List D	Chaparral, coastal scrub, valley and foothill grassland; clay/annual herb/March–May/ 60–3,100 feet amsl	Observed	Observed within Village 14 development	This species was observed during the 2016 and 2017 focused surveys in the development area. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the Preserve portions of the Project Area, and has a high potential to occur in these areas.
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	Graceful tarplant	None/None	4.2	None/List D	Chaparral, coastal scrub, cismontane woodland, chaparral, valley and foothill grassland/annual herb/May–November/ 200–3,600 feet amsl	Observed	Observed within Village 14 development	It was detected during the 2016 and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the Preserve portions of the Project Area and therefore this species has a potential to occur in these areas as well.
<i>Iva hayesiana</i>	San Diego marsh-elder	None/None	2B.2	None/List B	Marshes and swamps, playas/perennial herb/April–November/30–1,650 feet amsl	Observed	Observed within Village 14 development, Village 14 preserve, PA 16/19 preserve, PA 16/19 development, and within and adjacent to the off-site roads	Detected during the 2014, 2015, 2016, and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017).
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	Southwestern spiny rush	None/None	4.2	None/List D	Coastal dunes (mesic), meadows and alkaline seeps, coastal saltwater marshes and swamps/ rhizomatous herb/May–June/ <3,000 feet amsl	Observed	Observed within PA 16/19 development and preserve, and within the off-site Proctor Valley Road South	Detected during the 2014, 2015, and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017), including the Jamul Mountains quadrangle.
<i>Lepechinia ganderi</i>	Gander's pitcher sage	None/None	1B.3	Covered, Narrow Endemic/List A	Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland/gabbroic or metavolcanic/ perennial shrub/June–July/1,001–3,297 feet amsl	Observed	Observed within the PA 16/19 preserve	Detected during the 2014, 2015, and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017).
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	None/None	4.3	None/List A	Chaparral, coastal scrub/annual herb/January–July/< 2,900 feet amsl	Observed	Observed within Village 14 development and preserve	This species was observed during the 2016 and 2017 focused surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017; SDNHM 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the preserve portions of the Project Area and therefore this species has the potential to occur in these areas as well...
<i>Pentachaeta aurea</i> ssp. <i>aurea</i>	Golden-rayed pentachaeta	None/None	4.2	None/List D	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, valley and foothill grassland/annual herb/March–July/260– 6,070 feet amsl	Observed	Observed within Village 14 development and preserve	Species was detected during the 2014 focused plant surveys in PA 16/19 and in the Village 14 development during the 2016 and 2017 focused surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017).
<i>Salvia munzii</i>	Munz's sage	None/None	2B.2	None/List B	Chaparral, coastal scrub/perennial evergreen shrub/February–April/394–3,494 feet amsl	Observed	Observed within Village 14 development and preserve, and PA 16/19 development and preserve, and within and adjacent to off-site Proctor Valley Road Central	Detected during the 2014, 2015, 2016, and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017).
<i>Selaginella cinerascens</i>	Ashy spike-moss	None/None	4.1	None/List D	Chaparral, coastal scrub/perennial rhizomatous herb/N/A/66–2,100 feet amsl	Observed	Observed within Village 14 development and preserve	Detected during the 2014, 2015, and 2016 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017).

APPENDIX I-1 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/ County <sup>1</sup>	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Stipa</i> [= <i>Achnatherum</i> ] <i>diegoensis</i>	San Diego County needle grass	None/None	4.2	None/List D	Chaparral, coastal scrub/rocky, often mesic/ perennial herb/February–June/33–2,625 feet amsl	Observed	Observed within PA 16 development footprint and Otay Ranch RMP Preserve and off-site PA 16/19 roads.	Detected during the 2017 focused plant surveys.
<i>Viguiera laciniata</i>	San Diego County viguiera	None/None	4.2	None/List D	Chaparral, coastal scrub/shrub/February– June/200–2,460 feet amsl	Observed	Observed within Village 14 development and preserve	Detected during the 2014, 2015, 2016, and 2017 focused plant surveys. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017).
Moderate Potential								
<i>Microseris douglasii</i> ssp. <i>platycarpha</i>	Small-flowered microseris	None/None	4.2	None/List D	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/ annual herb/March–May/50–3,500 feet amsl	No	Moderate potential to occur.	This has been recorded in the vicinity <sup>2</sup> (CNPS 2017; SDNHM 2017). There is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Myosurus minimus</i> ssp. <i>apus</i>	Little mouseltail	None/None	3.1	Covered/List C	Vernal pools, valley and foothill grassland; alkaline/annual herb/March–June/60–2,100 feet amsl	No	Moderate potential to occur.	This species is recorded within the project site <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Senecio aphanactis</i>	Chaparral ragwort	None/None	2B.2	None/List B	Chaparral, cismontane woodland, coastal scrub/sometimes alkaline/annual herb/ January–April/50–2,625 feet amsl	No	Moderate potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area. Although not detected during the 2014, 2015, or 2016 focused plant surveys, this early-blooming annual species may not have been detected during surveys.

<sup>1</sup> **Status Legend:**  
FE: federally listed as endangered  
FT: federally listed as threatened  
FC: federal candidate for listing  
SE: state listed as endangered  
ST: state listed as threatened  
SR: state rare  
CRPR 1A: plants presumed extinct in California  
CRPR List 1B: plants rare, threatened, or endangered in California and elsewhere  
CRPR List 2: plants rare, threatened, or endangered in California but more common elsewhere  
CRPR List 3: plants about which more information is needed – a review list  
CRPR List 4: plants of limited distribution – a watch list  
    .1: seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)  
    .2: fairly endangered in California (20% to 80% of occurrences threatened)  
    .3: not very endangered in California (less than 20% of occurrences threatened or no current threats known)  
**County:**  
List A: plants rare, threatened or endangered in California and elsewhere  
List B: plants rare, threatened or endangered in California but more common elsewhere  
List C: plants which may be rare, but need more information to determine their true rarity status  
Plants of limited distribution and are uncommon, but not presently rare or endangered

<sup>2</sup> Vicinity refers to records within the La Mesa, El Cajon, Alpine, National City, Jamul Mountains, Dulzura, Imperial Beach, Otay Mesa, and Otay Mountain quadrangles (CNPS 2017; CDFW 2017) and San Diego Plant Atlas Grids S14 and T14 (SDNHM 2017).

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## **APPENDIX I-2**

*Special-Status Plant Species with Low Potential or  
Not Expected to Occur in the Land Exchange Area*



**APPENDIX I-2**  
**Special-Status Plant Species with Low Potential or**  
**Not Expected to Occur in the Land Exchange Area**

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Abronia maritima</i>	Red sand-verbena	None/None	4.2	None/List D	Coastal dunes/perennial herb/February–November/10–330 feet amsl	No	Not expected to occur.	No coastal dune habitat within the Project Area and the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Abronia villosa</i> var. <i>aurita</i>	Chaparral sand-verbena	None/None	1B.1	None/List A	Chaparral, coastal scrub, desert dunes; sandy/annual herb/January–September/260–5,300 feet amsl	No	Low potential to occur.	There is moderately suitable habitat within the Project Area, however this species was not detected during the 2014, 2015, or 2016 focused plant surveys nor has it been recorded in the vicinity <sup>2</sup> .
<i>Acanthomintha ilicifolia</i>	San Diego thorn-mint	FT/SE	1B.1	Narrow Endemic/List A	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay/annual herb/ April–June/30–3,150 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area and this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017). While this species is an annual herb, it is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Acmispon</i> [= <i>Lotus</i> ] <i>haydonii</i>	pygmy lotus	None/None	1B.3	None/List A	Pinyon and juniper woodland, Sonoran desert scrub/rocky/perennial herb/January–June/1,706–3,937 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Acmispon prostratus</i> [= <i>Lotus nuttallianus</i> ]	Nuttall's acmispon	None/None	1B.1	Covered/List A	Coastal dunes, coastal scrub; sandy/annual herb/March–June/<35 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), however, the site is outside of the elevation range for this species. In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Adolphia californica</i>	California adolphia	None/None	2B.1	None/List B	Chaparral, coastal scrub, valley and foothill grassland; clay/deciduous shrub/December–May/150–2,430 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area, however, this conspicuous deciduous shrub was not detected during the 2014, 2015, or 2016 focused plant surveys and would likely have been observed if present.
<i>Agave shawii</i> var. <i>shawii</i>	Shaw's agave	None/None	2B.1	Covered, Narrow Endemic/List B	Coastal bluff scrub, coastal scrub/ perennial leaf succulent/September–May/33–394 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. However, the site is located outside of the elevation range for this species and it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Ambrosia chenopodiifolia</i>	San Diego bur-sage	None/None	2B.1	None/List B	Coastal scrub/perennial shrub/April–June/180–509 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. However, the site is located outside of the elevation range for this species and it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Ambrosia monogyra</i>	Singlewhorl burrobrush	None/None	2B.2	None/None	Chaparral, Sonoran desert scrub/sandy/perennial shrub/August–November/33–1,640 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Ambrosia pumila</i>	San Diego ambrosia	FE/None	1B.1	Covered, Narrow Endemic/List A	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; often disturbed, sometimes alkaline/rhizomatous herb/May –October/60–1,360 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area. While this species is an herb, it is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.

<sup>1</sup> For purposes of this table, the Project Area also includes off-site improvement areas.

## APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Androsace elongata</i> ssp. <i>acuta</i>	California androsace	None/None	4.2	None/List D	Chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, valley and foothill grassland/annual herb/March–June/492–3,937 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area, however this species has not been observed in the vicinity <sup>2</sup> , nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Aphanisma blitoides</i>	Aphanisma	None/None	1B.2	Covered/List A	Coastal bluff scrub, coastal dunes, coastal scrub/sandy/annual herb/March–June/3–1,001 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	Del Mar manzanita	FE/None	1B.1	Covered/List A	Maritime chaparral; sandy/evergreen shrub/December–June/< 1,200 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017). Although there is chaparral within the Project Area, it is not considered maritime chaparral and the project site is outside the current range of this species. It was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Arctostaphylos rainbowensis</i>	Rainbow manzanita	None/None	1B.1	None/List A	Chaparral/evergreen shrub/December–March/740–1,770 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area, however this species has not been observed in the vicinity <sup>2</sup> , nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Asplenium vespertinum</i>	Western spleenwort	None/None	4.2	None/List D	Chaparral, cismontane woodland, coastal scrub/rocky/perennial rhizomatous herb/February–June/591–3,281 feet amsl	No	Low potential to occur.	This has been recorded in the vicinity (SDNHM 2017). There is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Astragalus crotalariae</i>	Salton milk-vetch	None/None	4.3	None/List D	Sonoran desert scrub/sandy or gravelly/perennial herb/January–April/200–820 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Astragalus deanei</i>	Dean's milk-vetch	None/None	1B.1	Covered/List A	Chaparral, coastal scrub, riparian forest/perennial herb/February–May/246–2,200 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Astragalus douglasii</i> var. <i>perstrictus</i>	Jacumba milk-vetch	None/None	1B.2	None/List A	Chaparral, cismontane woodland, valley and foothill grassland; rocky/perennial herb/April–June/2,950–4,500 feet amsl	No	Not expected to occur.	The site is outside of the elevation range for this species and this species has not been recorded within the vicinity <sup>2</sup> . In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Astragalus insularis</i> var. <i>harwoodii</i>	Harwood's milk-vetch	None/None	2B.2	None/List B	Desert dunes, Mojavean desert scrub/sandy or gravelly/annual herb/January–May/0–2,300 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Astragalus lentiginosus</i> var. <i>borreganus</i>	Borrego milk-vetch	None/None	4.3	None/List D	Mojavean desert scrub, Sonoran desert scrub/sandy/annual herb/February–May/100–885 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Astragalus magdalenae</i> var. <i>peirsonii</i>	Peirson's milk-vetch	FT/SE	1B.2	None/List A	Desert dunes/perennial herb/December – April/197–738 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Astragalus oocarpus</i>	San Diego milk-vetch	None/None	1B.2	None/List A	Chaparral(openings), cismontane woodland/perennial herb/May–August/1,001–5,000 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. However, this perennial herb was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is not expected to occur on site.

APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Astragalus pachypus</i> var. <i>jaegeri</i>	Jaeger's bush milk-vetch	None/None	1B.1	None/List A	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/sandy or rocky/perennial shrub/December–June/1,198–3,002 feet amsl	No	Low potential to occur.	Although there is suitable habitat within the Project Area, this species has not been observed in the vicinity <sup>2</sup> , nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Astragalus tener</i> var. <i>titi</i>	coastal dunes milk-vetch	FE/SE	1B.1	Covered/List A	Coastal bluff scrub(sandy), coastal dunes, coastal prairie(mesic)/often vernal mesic areas/annual herb/March–May/3–164 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area and the site is outside of the elevation range for this species. Not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Atriplex coulteri</i>	Coulter's saltbush	None/None	1B.2	None/List A	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay/perennial herb/March–October/10–1,500 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017). This perennial herb was not detected during the 2014, 2015, or 2016 focused plant surveys; however, there is suitable habitat within the Project Area. Therefore, it is considered to have low potential to occur on site.
<i>Atriplex pacifica</i>	South Coast saltscale	None/None	1B.2	None/List A	Coastal bluff scrub, coastal dunes, coastal scrub, playas/annual herb/March–October/ < 500 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area and this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. While this species is an annual herb, it is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Atriplex parishii</i>	Parish's brittlescale	None/None	1B.1	None/List A	Chenopod scrub, playas, vernal pools/ alkaline/annual herb/June–October/82–6,234 feet amsl	No	Low potential to occur.	Soils on the project site are not strongly alkaline. This species has not been observed in the vicinity <sup>2</sup> , nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Atriplex serenana</i> var. <i>davidsonii</i>	Davidson's saltscale	None/None	1B.2	None/List A	Coastal bluff scrub, coastal scrub/ alkaline/annual herb/April–October/33–656 feet amsl	No	Low potential to occur.	Soils on the project site are not strongly alkaline. This species has not been observed in the vicinity <sup>2</sup> , nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Ayenia compacta</i>	California ayenia	None/None	2B.3	None/List B	Mojavean desert scrub, Sonoran desert scrub/rocky/perennial herb/March–April/490–3,600 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Azolla microphylla</i> [= <i>mexicana</i> ]	Mexican mosquito fern	None/None	4.2	None/List D	Marshes and swamps(ponds, slow water)/ annual/perennial herb/August/98–328 feet amsl	No	Not expected to occur.	There is no suitable habitat within the Project Area nor is the project site located within the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> , nor was it detected during the 2014 or 2015 focused surveys.
<i>Baccharis vanessae</i>	Encinitas baccharis	FT/SE	1B.1	Covered, Narrow Endemic/List A	Chaparral (maritime), cismontane woodland/sandstone/deciduous shrub/ August–November/200–2,400 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017). This shrub was not detected during the 2014, 2015, or 2016 focused plant surveys; however, there is suitable habitat within the Project Area. Therefore, it is considered to have low potential to occur on site.
<i>Berberis higginsiae</i>	Higgins' barberry	None/None	3.2	None/None	Chaparral, Sonoran desert scrub/rocky, sometimes granitic/shrub/March–April/ 2,625–3,500 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Berberis nevinii</i>	Nevin's barberry	FE/SE	1B.1	Covered, Narrow Endemic/List A	Chaparral, cismontane woodland, coastal scrub, riparian scrub/sandy or gravelly/ perennial evergreen shrub/March–June/899–2,707 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species was not detected during the 2014, 2015, or 2016 focused plant surveys nor has it been recorded in the vicinity <sup>2</sup> .

APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Bergerocactus emoryi</i>	golden-spined cereus	None/None	2B.2	None/List B	Closed-cone coniferous forest, chaparral, coastal scrub/sandy/perennial stem succulent/May–June/10–1,296 feet amsl	No	Not expected to occur.	Observed adjacent to the off-site Proctor Valley Road South during the 2015 focused plant surveys, but was not observed on site during focused surveys.
<i>Boechera hirshbergiae</i>	Hirshberg’s rockcress	None/None	1B.2	None/List A	Pebble plain/perennial herb/March–May/4,593–4,642 feet amsl	No	Not expected to occur.	There is no suitable habitat within the project site and the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Brodiaea filifolia</i>	Thread-leaved brodiaea	FT/SE	1B.1	Covered/List A	Chaparral (openings) cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools; often clay/bulbiferous herb/March–June/400–2,800 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however this species was not detected during the 2014, 2015, or 2016 focused plant surveys. In addition, this species has not been recorded within the vicinity <sup>2</sup> .
<i>Brodiaea orcuttii</i>	Orcutt’s brodiaea	None/None	1B.1	Covered/List A	Closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools; mesic, clay, sometimes serpentine/ bulbiferous herb/May–July/100–5,550 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Bursera microphylla</i>	Little-leaf elephant tree	None/None	2B.3	None/List B	Sonoran desert scrub/rocky/deciduous tree/June–July/660–2,300 feet amsl	No	Not expected to occur.	No suitable Sonoran desert scrub within the Project Area, nor has this species been recorded within the vicinity <sup>2</sup> . In addition, this tree was not observed during the 2014, 2015, or 2016 focused plant surveys.
<i>Calandrinia breweri</i>	Brewer’s calandrinia	None/None	4.2	None/List D	Chaparral, coastal scrub/sandy or loamy, disturbed sites and burns/annual herb/March–June/33–4,003 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area. However, this species was not detected during the 2014, 2015, or 2016 focused plant surveys nor has it been recorded within the vicinity <sup>2</sup> .
<i>California</i> [=Erodium] <i>macrophylla</i>	round-leaved filaree	None/None	1B.2	None/List B	Cismontane woodland, valley and foothill grassland/clay/annual herb/March–May/ 49–3,937 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area and this species has been recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017). While this species is an annual herb, it is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Calliandra eriophylla</i>	pink fairy-duster	None/None	2B.3	None/List B	Sonoran desert scrub(sandy or rocky)/perennial deciduous shrub/ January–March/394–4,921 feet amsl	No	Not expected to occur.	No suitable Sonoran desert scrub within the Project Area, nor has this species been recorded within the vicinity <sup>2</sup> . In addition, this shrub was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Calochortus catalinae</i>	Catalina mariposa lily	None/None	4.2	None/List D	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/ perennial bulbiferous herb/(February) March–June/49–2,297 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area. However, this species was not detected during the 2014, 2015, or 2016 focused plant surveys nor has it been recorded within the vicinity <sup>2</sup> .
<i>Camissoniopsis</i> [ <i>Camissonia</i> ] <i>lewisii</i>	Lewis evening primrose	None/None	3	None/List C	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy or clay/annual herb/March–May (June)/<1,000 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area and this species is recorded within the vicinity <sup>2</sup> (CNPS 2017). However, it was not detected during the 2014, 2015, or 2016 focused plant surveys, and the project site has limited sandy soils preferred by this species. Therefore, it is considered to have low potential to occur on site.



## APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Carex obispoensis</i>	San Luis Obispo sedge	None/None	1B.2	None/None	Closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland/often serpentinite seeps, sometimes gabbro; often on clay soils/perennial rhizomatous herb/April-June/33–2,690 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area, however this species was not detected during the 2014, 2015, or 2016 focused plant surveys nor has it been recorded in the vicinity <sup>2</sup> .
<i>Carlowrightia arizonica</i>	Arizona carlowrightia	None/None	2B.2	None/List B	Sonoran desert scrub(sandy, granitic alluvium)/perennial deciduous shrub/March–May/935–1,411 feet amsl	No	Not expected to occur.	No suitable Sonoran desert scrub within the Project Area, nor has this species been recorded within the vicinity <sup>2</sup> . In addition, this shrub was not observed during the 2014, 2015, or 2016 focused plant surveys.
<i>Caulanthus simulans</i>	Payson's jewel-flower	None/None	4.2	None/List D	Chaparral, coastal scrub; sandy and granitic/annual herb/(Feb) March–May (June)/300–7,200 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area, however this species was not detected during the 2014, 2015, or 2016 focused plant surveys nor has it been recorded in the vicinity <sup>2</sup> .
<i>Ceanothus cyaneus</i>	Lakeside ceanothus	None/None	1B.2	Covered, Narrow Endemic/List A	Closed-cone conifer forest, chaparral/shrub/April–June/770–2,500 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area and this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017); however this shrub was not detected during the 2014, 2015, or 2016 focused plant surveys even though it is a conspicuous shrub.
<i>Ceanothus otayensis</i>	Otay Mountain ceanothus	None/None	1B.2	None/None	Chaparral (metavolcanic or gabbroic)/shrub/January–April/600–1,100 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area and this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017). This conspicuous shrub was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Ceanothus verrucosus</i>	Wart-stemmed ceanothus	None/None	2B.2	Covered/List B	Chaparral/shrub/December–April/3–1,247 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area and this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017). This conspicuous shrub was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Centromadia parryi</i> ssp. <i>australis</i>	Southern tarplant	None/None	1B.1	None/List A	Marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools/annual herb/May–November/<400 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area, however this species is not recorded within the vicinity <sup>2</sup> , nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Centromadia pungens</i> ssp. <i>laevis</i>	Smooth tarplant	None/None	1B.1	None/List A	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline/annual herb/April–September/<1,580 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area and this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017). While this is annual herb, it is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Chaenactis carphoclinia</i> var. <i>peirsonii</i>	Peirson's pincushion	None/None	1B.3	None/List A	Sonoran desert scrub(sandy)/annual herb/March–April/10–1,640 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	None/None	1B.1	None/List A	Coastal bluff scrub, coastal dunes/annual herb/January–August/10–330 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017); however, the site does not contain suitable habitat nor is it within the elevation range for this species. In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Chaenactis parishii</i>	Parish's chaenactis	None/None	1B.3	None/List A	Chaparral(rocky)/perennial herb/May–July/4,265–8,202 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the species' known elevation range. In addition, this species has not been recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.

## APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Chamaebatia australis</i>	southern mountain misery	None/None	4.2	None/List D	Chaparral; gabbroic or metavolcanic/ evergreen shrub/November–May/1,000– 2,300 feet amsl	No	Low potential to occur.	Although this species has been recorded within the vicinity <sup>2</sup> (CNPS 2017) and there is suitable habitat within the Project Area, this species was not detected during the 2014, 2015, or 2016 focused plant surveys despite being a conspicuous evergreen shrub.
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i> [= <i>Cordylanthus maritimus</i> ssp. <i>maritimus</i> ]	salt marsh bird's-beak	FE/SE	1B.2	Covered/List A	Coastal dunes, marshes and swamps (coastal salt)/annual herb hemiparasitic/ May–October/0–98 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is limited suitable habitat within the marsh habitat in the Project Area. However the site is located outside of the elevation range for this species and it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Chorizanthe leptotheca</i>	Peninsular spineflower	None/None	4.2	None/List D	Chaparral, coastal scrub, lower montane coniferous forest/alluvial fan, granitic/ annual herb/May–August/984–6,234 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however this species was not detected during the 2014, 2015, or 2016 focused plant surveys and it has not been recorded within the vicinity <sup>2</sup> .
<i>Chorizanthe orcuttiana</i>	Orcutt's spineflower	FE/SE	1B.1	None/List A	Maritime chaparral, closed-cone conifer forest, coastal scrub/annual herb/March– May/<400 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is located outside of the elevation range for this species and it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	Long-spined spineflower	None/None	1B.2	None/List A	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland; often clay/annual herb/April–July/100–5,000 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area and this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017). While this is annual herb, it is relatively easy to detect because it occurs in vegetation gaps and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Cistanthe</i> [= <i>Calandrinia</i> ] <i>maritima</i>	seaside cistanthe	None/None	4.2	None/List D	Coastal bluff scrub, coastal scrub, valley and foothill grassland/sandy/annual herb/(February), March–June (August)/ 16–984 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area however this species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Colubrina californica</i>	Las Animas colubrina	None/None	2B.3	None/List B	Mojavean desert scrub, Sonoran desert scrub/perennial deciduous shrub/April– June/33–3,281 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	Summer holly	None/None	1B.2	None/List A	Chaparral, cismontane woodland/evergreen shrub/April– June/100–1,800 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area and this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. This conspicuous shrub was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Convolvulus simulans</i>	small-flowered morning- glory	None/None	4.2	None/List D	Chaparral (openings), coastal scrub, valley and foothill grassland; clay, serpentinite seeps/annual herb/March–July/100–2,300 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area however this species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Corethrogyne filaginifolia</i> var. <i>incana</i> [= <i>Lessingia filaginifolia</i> ]	San Diego sand aster	None/None	1B.1	None/None	Chaparral, coastal bluff scrub, coastal scrub/perennial herb/June–September/10– 380 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), and there is suitable habitat within the Project Area; however, the site is outside of the elevation range for this species. In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	Del Mar Mesa sand aster	None/None	1B.1	Covered/List A	Coastal bluff scrub, maritime chaparral (openings), coastal scrub; sandy/perennial herb/May–September/10–380 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, the site is outside of the elevation range for this species. In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys. This species was not recorded within the vicinity <sup>2</sup> .

APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Cryptantha costata</i>	ribbed cryptantha	None/None	4.3	None/List D	Desert dunes, Mojavean desert scrub, Sonoran desert scrub/sandy/annual herb/February–May/200–1,640 feet amsl	No	Not expected to occur.	There is no suitable habitat within the Project Area and the species has not been recorded within the vicinity <sup>2</sup> . In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Cryptantha ganderi</i>	Gander's cryptantha	None/None	1B.1	None/List A	Desert dunes, Sonoran desert scrub/sandy/annual herb/February– May/525–1,300 feet amsl	No	Not expected to occur.	There is no suitable habitat within the Project Area and the species has not been recorded within the vicinity <sup>2</sup> . In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Cryptantha holoptera</i>	winged cryptantha	None/None	4.3	None/List D	Mojavean desert scrub, Sonoran desert scrub/annual herb/March–April/328–5,545 feet amsl	No	Not expected to occur.	There is no suitable habitat within the Project Area and the species has not been recorded within the vicinity <sup>2</sup> . In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Cylindropuntia californica</i> var. <i>californica</i> [= <i>Opuntia</i> <i>parryi</i> var. <i>serpentina</i> ]	snake cholla	None/None	1B.1	Covered, Narrow Endemic/List A	Chaparral, coastal scrub/perennial stem succulent/April–May/98–492 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, the site is located outside of the known elevation range for this species. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. Not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Cylindropuntia</i> <i>echinocarpa</i> [= <i>Opuntia</i> <i>wigginsii</i> ]	Wiggins cholla	None/None	3.3	None/List C	Sonoran desert scrub, sandy/stem succulent/March/100–2,900 feet amsl	No	Not expected to occur.	There is no suitable Sonoran desert scrub within the Project Area. In addition, the species has not been recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Cylindropuntia</i> [= <i>Opuntia</i> ] <i>wolfii</i>	Wolf's cholla	None/None	4.3	None/List D	Sonoran desert scrub/stem succulent/ March–May/330–4,000 feet amsl	No	Not expected to occur.	There is no suitable Sonoran desert scrub within the Project Area. In addition, the species has not been recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Deinandra floribunda</i>	Tecate tarplant	None/None	1B.2	None/List A	Chaparral, coastal scrub/annual herb/ August–October/230–4,000 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Deinandra</i> [= <i>Hemizonia</i> ] <i>mohavensis</i>	Mojave tarplant	None/SE	1B.3	None/List A	Chaparral, coastal scrub, riparian scrub/ mesic/annual herb/July–October/2,000– 5,250 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is located outside of the known elevation range for this species. This species has not been recorded within the vicinity <sup>2</sup> , nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Deinandra paniculata</i>	Paniculate tarplant	None/None	4.2	None/ List D	Coastal scrub, valley and foothill grassland, vernal pools; usually vernal mesic/annual herb/April–November/80– 3,100 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017) and there is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys, which included plant surveys for tarplant species. Therefore, it is considered to have low potential to occur on site.
<i>Delphinium hesperium</i> ssp. <i>cuyamacae</i>	Cuyamaca larkspur	None/SR	1B.2	None/List A	Lower montane conifer forest, meadows and seeps, mesic areas/perennial herb/ June–July/4,000–5,350 feet amsl	No	Not expected to occur.	There is limited suitable habitat within riparian habitat in the Project Area. However, this species has not been recorded within the vicinity <sup>2</sup> , and the site is located outside of the elevation range for this species. It was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Delphinium parishii</i> ssp. <i>subglobosum</i>	Colorado Desert larkspur	None/None	4.3	None/List D	Chaparral, cismontane woodland, pinyon and juniper woodland, Sonoran desert scrub/perennial herb/March–June/2,000– 5,905 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area. However, this species has not been recorded within the vicinity <sup>2</sup> , and the site is located outside of the elevation range for this species. It was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Dendromecon harfordii</i> var. <i>harfordii</i>	north island bush-poppy	None/None	3.2	None/None	Closed-cone coniferous forest, chaparral/ rocky/perennial evergreen shrub/March– November/49–1,378 feet amsl	No	Not expected to occur.	Although this species is recorded within the vicinity <sup>2</sup> (CNPS 2017), the project site is outside the known range, which is primarily coastal areas. It was not detected during the 2014, 2015, or 2016 focused plant surveys.

APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Dicranostegia orcuttiana</i> [= <i>Cordylanthus orcuttianus</i> ]	Orcutt's bird's-beak	None/None	2B.1	Covered/List B	Coastal scrub/annual herb hemiparasitic/(March), April–July (September)/33–1,148 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. While this is annual herb, it is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Dieteria asteroides</i> var. <i>lagunensis</i>	Mount Laguna aster	None/SR	2B.1	None/None	Cismontane woodland, lower montane coniferous forest/perennial herb/July– August/2,625–7,800 feet amsl	No	Not expected to occur.	The site is outside of the species' known elevation range and there is no suitable vegetation present. In addition, this species has not been recorded from within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Ditaxis serrata</i> var. <i>californica</i>	California ditaxis	None/None	3.2	None/List C	Sonoran desert scrub/perennial herb/ March–December/98–3,281 feet amsl	No	Not expected to occur.	There is no suitable Sonoran desert scrub within the Project Area. In addition, the species has not been recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Downingia concolor</i> var. <i>brevior</i>	Cuyamaca Lake downingia	None/SE	1B.1	None/List A	Meadows and seeps (vernally mesic), vernal pools/annual herb/May–July/4,600– 4,920 feet amsl	No	Not expected to occur.	The site is outside of the species' known elevation range. In addition, this species has not been recorded from within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Dudleya attenuata</i> ssp. <i>attenuata</i>	Orcutt's dudleya	None/None	2B.1	None/List B	Coastal bluff scrub, chaparral, coastal scrub/rocky or gravelly/perennial herb/ May–July/10–164 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however, the site is outside of the species' known elevation range. This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017). Not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Dudleya blochmaniae</i> var. <i>blochmaniae</i>	Blochman's dudleya	None/None	1B.1	None/ List A	Chaparral, coastal bluff scrub, coastal scrub, valley and foothill grassland, rocky; often clay or serpentinite/perennial herb/ April–June/15–1,500 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) but local occurrences are along the coast in San Diego County (SDNHM 2017). Additionally, this perennial herb was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Dudleya brevifolia</i>	short-leaved dudleya	None/SE	1B.1	Covered, Narrow Endemic/List A	Chaparral (maritime, openings), coastal scrub/Torrey sandstone/perennial herb/ April–May/98–820 feet amsl	No	Not expected to occur.	Although suitable scrub habitat occurs at the site, Torrey sandstone substrates are not present. The site is outside of the species' known elevation range. This species has not been recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Dudleya multicaulis</i>	many-stemmed dudleya	None/None	1B.2	None/List A	Chaparral, coastal scrub, valley and foothill grassland; often clay/perennial herb/April–July/50–2,600 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species has not been recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Dudleya viscida</i>	sticky dudleya	None/None	1B.2	Covered/List A	Coastal bluff scrub, chaparral, coastal scrub; rocky/perennial herb/May–June/30– 1,800 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however this species has not been recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Ericameria cuneata</i> var. <i>macrocephala</i>	Laguna Mountains goldenbush	None/None	1B.3	None/List A	Chaparral/granitic/shrub/September– December/3,920–6,070 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area. However the site is located outside of the elevation range for this species and it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Ericameria palmeri</i> var. <i>palmeri</i>	Palmer's goldenbush	None/None	1B.1	Covered, Narrow Endemic/List B	Chaparral, coastal scrub; mesic/evergreen shrub/(July) September–November/100– 2,000 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) including the Jamul Mountains quadrangle; and there is suitable habitat within the Project Area. This conspicuous shrub was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Eriogonum evanidum</i> [= <i>E. foliosum</i> ]	vanishing wild buckwheat	None/None	1B.1	None/None	Chaparral, cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland/sandy/annual herb/July– October/3,610–7,300 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), however, the site is outside of the elevation range for this species. In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.

APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	FE/SE	1B.1	Covered/List A	Coastal scrub, valley and foothill grassland, vernal pools, mesic/annual– perennial herb/ April–June/60–2,000 feet amsl	No	Low potential to occur.	Approximately 85 individuals were mapped at vernal pools north of the project site during the 2015 focused plant surveys. However, this species was not observed on site during focused surveys in 2014, 2015, or 2016.
<i>Eryngium pendletonense</i>	Pendleton button-celery	None/None	1B.1	None/List A	Coastal bluff scrub, valley and foothill grassland, vernal pools/clay, vernal mesic/perennial herb/April–June (July)/49– 361 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Eucnide rupestris</i>	annual rock-nettle	None/None	2B.2	None/List B	Sonoran desert scrub/annual herb/ December–April/1,640–1,970 feet amsl	No	Not expected to occur.	No suitable Sonoran desert scrub within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Euphorbia abramsiana</i>	Abrams' spurge	None/None	2B.2	None/None	Mojavean desert scrub, Sonoran desert scrub, sandy/annual herb/(Aug), September–November/<656 feet amsl	No	Not expected to occur.	Although this species has been recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), there is no suitable habitat within the Project Area. In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Euphorbia arizonica</i>	Arizona spurge	None/None	2B.3	None/List B	Sonoran desert scrub(sandy)/perennial herb/March–April/164–984 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014 2014 or 2015 focused plant surveys.
<i>Euphorbia misera</i>	Cliff spurge	None/None	2B.2	None/List B	Coastal bluff scrub, coastal scrub, Mojavean desert scrub; rocky/shrub/ December–August/30–1,650 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. This conspicuous shrub was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Euphorbia platysperma</i>	flat-seeded spurge	None/None	1B.2	None/List A	Desert dunes, Sonoran desert scrub (sandy)/annual herb/February– September/213–328 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area and the site is outside of the species' known elevation range. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014 2014 or 2015 focused plant surveys.
<i>Euphorbia revoluta</i>	revolute spurge	None/None	4.3	None/List D	Mojavean desert scrub (rocky)/annual herb/August–September/3,593–10,171 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area and the site is outside of the species' known elevation range. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Frankenia palmeri</i>	Palmer's frankenia	None/None	2B.1	None/List B	Coastal dunes, marshes and swamps (coastal salt), playas/perennial herb/May– July/0–33 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), however, the site is outside of the elevation range for this species. In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Fraxinus paryi</i>	Chaparral ash	None/None	2B.2	None/None	Chaparral/perennial shrub/March– May/699–2,034 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. This conspicuous shrub was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Fremontodendron mexicanum</i>	Mexican flannelbush	FE/SR	1B.1	Covered/List A	Closed-cone coniferous forest, chaparral, cismontane woodland/gabbroic, metavolcanic, or serpentinite/perennial evergreen shrub/March–June/33–2,349 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017; SDNHM 2017) including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area. This conspicuous shrub was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.

## APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Fritillaria biflora</i> var. <i>ineziana</i>	Hillsborough chocolate lily	None/None	1B.1	None/None	Cismontane woodland, valley and foothill grassland/serpentine/perennial bulbiferous herb/March–April/492 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Funastrum</i> [= <i>Cynanchum</i> ] <i>utahense</i>	Utah vine milkweed	None/None	4.2	None/List D	Mojavean desert scrub, Sonoran desert scrub/sandy or gravelly/perennial herb/ (March) April–June (September) (October)/328–4,708 feet amsl	No	Not expected to occur.	No suitable desert scrub within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Galium angustifolium</i> ssp. <i>borregoense</i>	Borrego bedstraw	None/SR	1B.3	None/List A	Sonoran desert scrub/rocky/perennial herb/March/1,150–4,100 feet amsl	No	Not expected to occur.	No suitable Sonoran desert scrub within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	San Jacinto Mountains bedstraw	None/None	1B.3	None/List A	Lower montane coniferous forest/perennial herb/June–August/4,430–6,900 feet amsl	No	Not expected to occur.	The site is outside of the species' known elevation range and there is no suitable habitat within the Project Area. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Galium johnstonii</i>	Johnston's bedstraw	None/None	4.3	None/List D	Chaparral, lower montane coniferous forest, pinyon and juniper woodland, riparian woodland/perennial herb/June– July/4,003–7,546 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Galium proliferum</i>	desert bedstraw	None/None	2B.2	None/None	Joshua tree “woodland,” Mojavean desert scrub, pinyon and juniper woodland/rocky, carbonate/March–June/1,190–1,630 feet amsl	No	Not expect to occur.	Although this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), there is no suitable habitat within the Project Area nor was this species detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Geraea viscida</i>	sticky geraea	None/None	2B.3	None/List B	Chaparral (often disturbed)/perennial herb/May–June/1,476–15,580 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Githopsis diffusa</i> ssp. <i>filicaulis</i>	Mission Canyon bluecup	None/None	3.1	None/List C	Chaparral (mesic, disturbed areas)/annual herb/April–June/1,476–2,297 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017) and there is suitable habitat within the Project Area. This species was not detected during the 2014, 2015, or 2016 focused plant surveys. Its distribution in San Diego is limited and may be extirpated in nearby quadrangles (CNPS 2017). Therefore, it is considered to have low potential to occur on site.
<i>Grindelia hallii</i>	San Diego gumplant	None/None	1B.2	None/List A	Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grassland/perennial herb/May– October/ 607–5,725 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Hazardia orcuttii</i>	Orcutt's hazardia	None/ST	1B.1	None/List A	Maritime chaparral, coastal scrub; often clay/evergreen shrub/August–October/ 250–280 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Herissantia crispa</i>	curly herissantia	None/None	2B.3	None/List B	Sonoran desert scrub/annual-perennial herb/August–September/2,300–2,400 feet amsl	No	Not expected to occur.	The site is outside of the species' known elevation range and there is no suitable habitat present. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.

APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Hesperocyparis forbesii</i>	Tecate cypress	None/None	1B.1	Covered/List A	Closed-cone conifer forest, chaparral/ evergreen tree/NA/840–4,920 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including within the Jamul Mountains quadrangle, and there is suitable habitat within the Project Area, however this conspicuous tree was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Hesperocyparis stephensonii</i>	Cuyamaca cypress	None/None	1B.1	None/List A	Closed-cone coniferous forest, chaparral, cismontane woodland, riparian forest/ gabbroic/perennial evergreen tree/ NA/3,396–5,594 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Heterotheca sessiliflora</i> ssp. <i>fastigiata</i> var. <i>sanjacintensis</i>	sessileflower false goldenaster	None/None	None	None/List D	Oak woodland, pine forest, desert washes/perennial herb/March– November/328–7,216 feet amsl	No	Not expected to occur.	There is no suitable habitat within the Project Area nor was this species detected during the 2014, 2015, or 2016 focused plant surveys. This species was not recorded within the vicinity <sup>2</sup> .
<i>Heuchera brevistaminea</i>	Laguna Mountains alumroot	None/None	1B.3	None/List A	Broadleafed upland forest, chaparral, cismontane woodland, riparian forest/ rocky/rhizomatous herb/April–July/4,500– 6,560 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Heuchera rubescens</i> var. <i>versicolor</i>	San Diego County alumroot	None/None	3.3	None/List B	Chaparral, lower montane coniferous forest/rocky/perennial rhizomatous herb/ May–June/4,921–13,123 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Hordeum intercedens</i>	vernal barley	None/None	3.2	None/List C	Coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), vernal pools/annual herb/ March–June/16–3,281 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Horkelia cuneata</i> var. <i>puberula</i>	Mesa horkelia	None/None	1B.1	None/List A	Chaparral, cismontane woodland, coastal scrub; sandy or gravelly/perennial herb/February–July (September)/230– 2,650 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Horkelia truncata</i>	Ramona horkelia	None/None	1B.3	None/List A	Chaparral, cismontane woodland/clay, gabbroic/perennial herb/May–June/1,300– 4,300 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. However, this perennial herb is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is not expected to occur on site.
<i>Hosackia</i> [=Lotus] <i>crassifolius</i> var. <i>otayensis</i>	Otay Mountain lotus	None/None	1B.1	None/List A	Chaparral (metavolcanic, often in disturbed areas)/perennial herb/May– August/1,247–3,297 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. This perennial herb is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Horsfordia newberryi</i>	Newberry's velvet- mallow	None/None	4.3	None/List D	Sonoran desert scrub(rocky)/perennial shrub/February–December/10–2,625 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Hulsea californica</i>	San Diego sunflower	None/None	1B.3	None/List A	Chaparral, lower montane coniferous forest, upper montane coniferous forest/openings and burned areas, perennial herb/April–June/3,000–9,560 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.



APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Hulsea mexicana</i>	Mexican hulsea	None/None	2B.3	None/List B	Chaparral (volcanic, often on burns or disturbed areas)/annual-perennial herb/ April–June/3,940– 3,940 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Hulsea vestita</i> ssp. <i>callicarpa</i>	beautiful hulsea	None/None	4.2	None/None	Chaparral, lower montane coniferous forest/rocky or gravelly, granitic/perennial herb/May–October/3,000–10,000 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Hymenothrix wrightii</i>	Wright’s hymenothrix	None/None	4.3	None/List D	Cismontane woodland, lower montane coniferous forest, valley and foothill grassland/perennial herb/June–October/4,593–5,085 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Ipomopsis tenuifolia</i>	slender-leaved ipomopsis	None/None	2B.3	None/List B	Chaparral, pinyon and juniper woodland, Sonoran desert scrub/gravelly or rocky/perennial herb/March–May/330–3,940 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	None/None	1B.2	None/List A	Chaparral, coastal scrub (sandy, often disturbed areas)/shrub/April–November/30–450 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including within the Jamul Mountains quadrangle, however, the site is higher than the known elevation range for this variety, which is primarily observed in more coastal regions. In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Juglans californica</i>	Southern California black walnut	None/None	4.2	None/List D	Chaparral, cismontane woodland, coastal scrub/alluvial/perennial deciduous tree/ March–August/164–2,953 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however, it has not been recorded within the vicinity <sup>2</sup> nor was this large conspicuous tree detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Juncus cooperi</i>	Cooper’s rush	None/None	4.3	None/List D	Meadows and seeps (mesic, alkaline or saline)/perennial herb/April–May (August)/ 853–5,807 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter’s goldfields	None/None	1B.1	None/List A	Saltwater marsh and swamps, playas, vernal pools/annual herb/February–June/<4,000 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area. While this is annual herb, it is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is not expected to occur on site.
<i>Lathyrus splendens</i>	Pride-of-California	None/None	4.3	None/List D	Chaparral/perennial herb/March–June/660–5,000 feet amsl	No	Low potential to occur.	This has been recorded in the vicinity <sup>2</sup> (CNPS 2017; SDNHM 2017). There is suitable habitat within the Project Area. This perennial herb is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Lepechinia cardiophylla</i>	heart-leaved pitcher sage	None/None	1B.2	Covered, Narrow Endemic/List A	Closed-cone coniferous forest, chaparral, cismontane woodland/perennial shrub/ April–July/1,706–4,495 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Lepidium flavum</i> var. <i>felipense</i>	Blair Valley pepper-grass	None/None	1B.2	None/List A	Pinyon and juniper woodland, Sonoran desert scrub/sandy/annual herb/March–May/1,500–2,800 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.

## APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Leptosiphon</i> [=Linanthus] <i>floribundus</i> ssp. <i>hallii</i>	Santa Rosa Mountains leptosiphon	None/None	1B.3	None/List A	Pinyon and juniper woodland, Sonoran desert scrub/perennial herb/May–July/ 3,281–6,562 feet amsl	No	Not expected to occur.	The site is outside of the species' known elevation range and there is no suitable vegetation present. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Leptosyne maritima</i>	sea dahlia	None/None	2B.2	None/List B	Coastal bluff scrub, coastal scrub/ perennial herb/March–May/15–500 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), however, the site is outside of the elevation range for this species. In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Lessingia glandulifera</i> var. <i>tomentosa</i>	Warner Springs lessingia	None/None	1B.1	None/List A	Chaparral/sandy/annual herb/August– October/2,850–4,000 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Lewisia brachycalyx</i>	short-sepaled lewisia	None/None	2B.2	None/List B	Lower montane coniferous forest, meadows and seeps/mesic/perennial herb/February–June/4,500–7,545 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	ocellated Humboldt lily	None/None	4.2	None/List D	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland/openings/bulbiferous herb/March–July/90–5,900 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Lilium parryi</i>	lemon lily	None/None	1B.2	None/List A	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest/mesic/ bulbiferous herb/July–August/4,000–9,000 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Limnanthes alba</i> ssp. <i>parishii</i>	Parish's meadowfoam	None/SE	1B.2	None/None	Lower montane coniferous forest, meadows and seeps, vernal pools/vernally mesic/annual herb/April–June/1,969– 6,562 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Linanthus bellus</i>	desert beauty	None/None	2B.1	None/List B	Chaparral/sandy/annual herb/April–May/ 3,280–4,600 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Linanthus orcuttii</i>	Orcutt's linanthus	None/None	1B.3	None/List A	Chaparral, lower montane coniferous forest, pinyon and juniper woodland/ openings/annual herb/May–June/3,002– 7,037 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Lupinus excubitus</i> var. <i>medius</i>	Mountain Springs bush lupine	None/None	1B.3	None/List A	Pinyon and juniper woodland, Sonoran desert scrub/shrub/March–May/1,400– 4,500 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Lycium californicum</i>	California box-thorn	None/None	4.2	None/List D	Coastal bluff scrub, coastal scrub/ perennial shrub/(December), March– August/16–492 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Lycium parishii</i>	Parish's desert-thorn	None/None	2B.3	None/List B	Coastal scrub, Sonoran desert scrub/ shrub/March–April/1,000–3,280 feet amsl	No	Low potential to occur.	There is limited suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.

## APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Lyrocarpa coulteri</i>	Palmer's lyrepod	None/None	4.3	None/List D	Sonoran desert scrub(gravelly or rocky)/ perennial herb/December–April/394–2,608 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Malacothamnus aboriginum</i>	Indian Valley bush- mallow	None/None	1B.2	None/List A	Chaparral, cismontane woodland/rocky, often in burned areas/deciduous shrub/ April–October/490–5,600 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Malperia tenuis</i>	brown turbans	None/None	2B.3	None/List B	Sonoran desert scrub(sandy, gravelly)/ annual herb/(February) March–April/50– 1,100 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Matelea parvifolia</i>	spearleaf	None/None	2B.3	None/List B	Mojavean desert scrub, Sonoran desert scrub/rocky/perennial herb/March–May/ 1,444–3,593 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Mentzelia hirsutissima</i>	hairy stickleaf	None/None	2B.3	None/List B	Sonoran desert scrub/rocky/annual herb/ March–May/0–2,300 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Mimulus aurantiacus</i> var. <i>aridus</i>	low bush monkeyflower	None/None	4.3	None/None	Chaparral(rocky), Sonoran desert scrub/ perennial evergreen shrub/April–July/ 2,461–3,937 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Mimulus clelandii</i>	Cleveland's bush monkeyflower	None/None	4.2	None/List D	Chaparral, cismontane woodland, lower montane coniferous forest/gabbroic, often in disturbed areas, openings, rocky/perennial rhizomatous herb/April–July/1,675–6,560 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Mimulus diffusus</i> [=palmeri]	Palomar monkeyflower	None/None	4.3	None/List D	Chaparral, lower montane coniferous forest; sandy or gravelly/annual herb/ April–June/4,000–6,000 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Mimulus latidens</i>	vernal pool monkeyflower	None/None	None	None/List A	Vernally wet depressions/annual herb/ April–June/elevation unknown	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Mirabilis tenuiloba</i>	slender-lobed four o'clock	None/None	4.3	None/List D	Sonoran desert scrub/perennial herb/ (February) March–May/984–3,593 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	Felt-leaved monardella	None/None	1B.2	Covered/List A	Chaparral, cismontane woodland/ rhizomatous herb/June–August/1,000– 3,600 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	None/None	1B.3	None/List A	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland/perennial rhizomatous herb/ June–October/2,395–7,201 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Monardella nana</i> ssp. <i>leptosiphon</i>	San Felipe monardella	None/None	1B.2	None/List A	Chaparral, lower montane coniferous forest/rhizomatous herb/June–July/ 3,940–6,090 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.

## APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Monardella stoneana</i>	Jennifer's monardella	None/None	1B.2	None/List A	Closed-cone coniferous forest, chaparral, coastal scrub, riparian scrub/usually rocky intermittent streambeds/perennial herb/June–September/33–2,592 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. This perennial herb is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Monardella viminea</i>	willowy monardella	FE/SE	1B.1	Covered, Narrow Endemic/List A	Chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland/alluvial ephemeral washes/perennial herb/June–August/164–738 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. This perennial herb is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Mucronea californica</i>	California spineflower	None/None	4.2	None/List D	Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland/sandy/annual herb/March–July (August),/0–4,593 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Nama stenocarpum</i>	Mud nama	None/None	2B.2	None/List B	Marshes and swamps, lake margins, riverbanks/annual–perennial herb/January–July/15–1,650 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Nasturtium [=Rorippa] gambelii</i>	Gambel's water cress	FE/ST	1B.1	None/List A	Marshes and swamps(freshwater or brackish)/perennial rhizomatous herb/April–October/16–1,083 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Navarretia fossalis</i>	Spreading navarretia	FT/None	1B.1	Covered/List A	Chenopod scrub, shallow freshwater marshes and swamps, playas, vernal pools/ annual herb/April–June/100–4,300 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Navarretia peninsularis</i>	Baja navarretia	None/None	1B.2	None/List A	Chaparral (openings), lower montane coniferous forest/mesic/annual herb/June–August/4,920–7,545 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	None/None	1B.1	None/List A	Coastal scrub, meadows and seeps, valley and foothill grassland(alkaline), vernal pools/mesic/annual herb/April–July/49–3,970 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) but there are no documented occurrences within the Jamul quadrangle (CDFW 2017; SDNHM 2017). Additionally, it was not detected during the 2014, 2015, or 2016 focused plant surveys, or assessments of the vernal pools. Therefore, it is considered to have low potential to occur on site.
<i>Nemacaulis denudata</i> var. <i>denudata</i>	coast woolly-heads	None/None	1B.2	None/List A	Coastal dunes/annual herb/April–September/< 330 feet amsl	No	Not expected to occur.	Although this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), The site is outside of the species' known elevation range and there is no suitable vegetation present. In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Nemacaulis denudata</i> var. <i>gracilis</i>	slender cottonheads	None/None	2B.2	None/List B	Coastal dunes, desert dunes, Sonoran desert scrub/annual herb/(March) April–May/164–1,312	No	Not expected to occur.	Although this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), there is no suitable habitat within the Project Area. Not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Nolina cismontana</i>	chaparral nolina	None/None	1B.2	None/List A	Chaparral, coastal scrub; sandstone or gabbro/evergreen shrub/May–July/460–4,200 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys despite being a conspicuous evergreen shrub.

## APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Nolina interrata</i>	Dehesa nolina	None/SE	1B.1	Covered, Narrow Endemic/List A	Chaparral (gabbroic, metavolcanic, or serpentine)/perennial herb/June– July/607–2,805 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. This perennial herb is relatively easy to detect and was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Ophioglossum californicum</i>	California adder's- tongue	None/None	4.2	None/List D	Chaparral, valley and foothill grassland, vernal pools(margins)/mesic/perennial rhizomatous herb/(December) January– June/197–1,722 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Orcuttia californica</i>	California Orcutt grass	FE/SE	1B.1	Covered/List A	Vernal pools/annual herb/April– August/50–2,200 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys, and the closest known occurrences are located approximately 5-7 miles southwest of the Project Area (CDFW 2017; USFWS 2015). Therefore, it is considered to have low potential to occur on site.
<i>Ornithostaphylos oppositifolia</i>	Baja California birdbush	None/SE	2B.1	None/List B	Chaparral/perennial evergreen shrub/ January–April/180–2,625 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. This conspicuous shrub was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Orobanche parishii</i> ssp. <i>brachyloba</i>	short-lobed broom-rape	None/None	4.2	None/List D	Coastal bluff scrub, coastal dunes, coastal scrub; sandy/perennial herb parasitic/April–October/<1,000 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys. This species has limited distribution in San Diego County and is currently found along the coast (CNPS 2017). Therefore, it is considered to have low potential to occur on site.
<i>Packera ganderi</i>	Gander's ragwort	None/SR	1B.2	Covered/List A	Chaparral (burned areas and gabbroic outcrops)/perennial herb/April–May/1,312– 3,940 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area, however the Project Area is located below the lower elevation range of this species, and it was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Pectocarya peninsularis</i>	peninsular pectocarya	None/None	None	None/List D	Sonoran desert scrub/annual herb/ February–April/0–984 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Penstemon clevelandii</i> var. <i>connatus</i>	San Jacinto beardtongue	None/None	4.3	None/List D	Chaparral, pinyon and juniper woodland, Sonoran desert scrub/rocky/perennial herb/March–May/1,312–4,921 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Penstemon thurberi</i>	Thurber's beardtongue	None/None	4.2	None/List D	Chaparral, Joshua tree "woodland," pinyon and juniper woodland, Sonoran desert scrub/perennial herb/May–July/1,640– 4,003 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.

## APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	Gairdner's yampah	None/None	4.2	None/List D	Broadleafed upland forest, chaparral, coastal prairie, valley and foothill grassland, vernal pools/vernally mesic/ perennial herb/June–October/0–2,001 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Phacelia stellaris</i>	Brand's star phacelia	None/None	1B.1	None/List A	Coastal dunes, coastal scrub/annual herb/March–June/3–1,312 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys. This species has limited distribution in San Diego County and is currently found along the coast in San Diego (CNPS 2017). Therefore, it is considered to have low potential to occur on site.
<i>Pilostyles thurberi</i>	Thurber's pilostyles	None/None	4.3	None/List D	Sonoran desert scrub/perennial herb parasitic/January/0–1,200 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Pinus torreyana</i> ssp. <i>torreyana</i>	Torrey pine	None/None	1B.2	Covered/List A	Closed-cone conifer forest, chaparral; sandstone/evergreen tree/NA/250–550 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was this conspicuous tree detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Piperia cooperi</i>	chaparral rein orchid	None/None	4.2	None/List D	Chaparral, cismontane woodland, valley and foothill grassland/perennial herb/ March–June/50–5,200 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Piperia leptopetala</i>	narrow-petaled rein orchid	None/None	4.3	None/List D	Cismontane woodland, lower montane coniferous forest, upper montane coniferous forest/perennial herb/May– July/1,250–7,300 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Poa atropurpurea</i>	San Bernardino bluegrass	FE/None	1B.2	None/List A	Meadows and seeps/mesic/rhizomatous herb/May–July/4,460–8,055 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Pogogyne abramsii</i>	San Diego mesa mint	FE/SE	1B.1	Covered/List A	Vernal pools/annual herb/March–July/ 295–656 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys or during seasonal fairy shrimp surveys.
<i>Pogogyne nudiuscula</i>	Otay Mesa mint	FE/SE	1B.1	Covered/List A	Vernal pools/annual herb/May–July/295– 820 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area, however it was not detected during the 2014, 2015, or 2016 focused plant surveys or during seasonal fairy shrimp surveys.
<i>Polygala cornuta</i> var. <i>fishiae</i>	Fish's milkwort	None/None	4.3	None/List D	Chaparral, cismontane woodland, riparian woodland/perennial deciduous shrub/ May–August/328–3,281 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys or during seasonal fairy shrimp surveys.
<i>Proboscidea althaeifolia</i>	desert unicorn-plant	None/None	4.3	None/List D	Sonoran desert scrub(sandy)/perennial herb/May–Aug/279–3,281 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.

APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Quercus cedrosensis</i>	Cedros Island oak	None/None	2B.2	None/List B	Closed-cone coniferous forest, chaparral, coastal scrub/perennial evergreen tree/April–May/837–3,150 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area, however this tree was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Quercus dumosa</i>	Nuttall’s scrub oak	None/None	1B.1	None/List A	Chaparral, coastal scrub, closed-cone coniferous forest; sandy, clay loam/ evergreen shrub/February–April/50–1,300 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area, however due to a lack of acorns during surveys, some of the scrub oaks could not be identified to species during the 2014, 2015, or 2016 focused plant surveys.
<i>Quercus engelmannii</i>	Engelmann oak	None/None	4.2	None/List D	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland/ deciduous tree/March–June/400–4,250 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was this large tree detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Rhus aromatica</i> var. <i>simplicifolia</i>	single-leaved basketbrush	None/None	2B.3	None/List B	Chaparral, pinyon–juniper woodland/ perennial deciduous shrub/April–July/ 4,003–4,495 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Ribes canthariforme</i>	Moreno currant	None/None	1B.3	None/List A	Chaparral/deciduous shrub/February– April/ 1,110–3,940 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area. This conspicuous shrub was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Ribes viburnifolium</i>	Santa Catalina Island currant	None/None	1B.2	None/List A	Chaparral, cismontane woodland/ evergreen shrub/February–April/100– 1,000 feet amsl	No	Not expected to occur.	Although this it is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), the project site is outside the narrow coastal range of this species. It was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Romneya coulteri</i>	Coulter’s matilija poppy	None/None	4.2	None/List D	Chaparral, coastal scrub/often in burns/ perennial rhizomatous herb/March– July/66–3,937 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however this species has not been recorded within the vicinity <sup>2</sup> nor was it observed during the 2014, 2015, or 2016 focused plant surveys.
<i>Rosa minutifolia</i>	small-leaved rose	None/SE	2B.1	Covered/List B	Chaparral, coastal scrub/perennial deciduous shrub/January–June/492–525 feet amsl	No	Low potential to occur.	Although this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), its local range does not extend beyond the coastal areas of southern San Diego County. It was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Rubus glaucifolius</i> var. <i>ganderi</i>	Cuyamaca raspberry	None/None	3.1	None/List A	Lower montane coniferous forest/ gabbroic/evergreen shrub/May–June/ 3,940–5,500 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Rupertia rigida</i>	Parish’s rupertia	None/None	4.3	None/List D	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland/perennial herb/June– August/2,300–8,200 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Saltugilia</i> [= <i>Gilia</i> ] <i>caruifolia</i>	caraway-leaved woodland-gilia	None/None	4.3	None/List D	Chaparral, lower montane coniferous forest/sandy, openings/annual herb/May– August/2,756–7,546 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.



## APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Salvia eremostachya</i>	desert sage	None/None	4.3	None/List D	Sonoran desert scrub(rocky or gravelly)/ perennial evergreen shrub/March–May/ 2,297–4,593 feet amsl	No	Not expected to occur.	The site is outside of the species' known elevation range and there is no suitable vegetation present. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	southern mountains skullcap	None/None	1B.2	None/List A	Chaparral, cismontane woodland, lower montane coniferous forest/mesic/ rhizomatous herb/June–August/1,970– 6,560 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Selaginella asprella</i>	bluish spike-moss	None/None	4.3	None/List D	Cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland, subalpine coniferous forest, upper montane coniferous forest/granitic, rocky/perennial rhizomatous herb/July/ 5,249–8,858 feet amsl	No	Not expected to occur.	The site is outside of the species' known elevation range and there is no suitable vegetation present. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Selaginella eremophila</i>	desert spike-moss	None/None	2B.2	None/List B	Sonoran desert scrub/gravelly or rocky/ rhizomatous herb/June/656–2,950 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Senna covesii</i>	Coves' cassia	None/None	2B.2	None/List B	Sonoran desert scrub(sandy)/perennial herb/March–June/935–3,510 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Sibaropsis hammittii</i>	Hammitt's clay-cress	None/None	1B.2	None/List A	Chaparral(openings), valley and foothill grassland/clay/annual herb/March–April/ 2,362–3,494 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), however, the site is outside of the elevation range for this species. In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Spermolepis echinata</i>	bristly scaleseed	None/None	None	None/List B	Sonoran desert scrub(sandy or rocky)/ annual herb/March–April/197–4,921 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Stemodia durantifolia</i>	purple stemodia	None/None	2B.1	None/List B	Sonoran desert scrub; often mesic, sandy/ perennial herb/January–December/600– 1,000 feet amsl	No	Not expected to occur.	Although this species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including within the Jamul Mountains quadrangle, there is no suitable habitat within the Project Area nor was this species detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Streptanthus bernardinus</i>	Laguna Mountains jewel- flower	None/None	4.3	None/List D	Chaparral, lower montane coniferous forest/perennial herb/May–Aug/2,200– 8,200 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), including within the Jamul Mountains quadrangle, however, the site is outside of the elevation range for this species. In addition, this species was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Streptanthus campestris</i>	southern jewel-flower	None/None	1B.3	None/List A	Chaparral, lower montane coniferous forest, pinyon and juniper woodland/rocky/ perennial herb/May–July/2,950–7,550 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Suaeda esteroa</i>	estuary seablite	None/None	1B.2	None/List A	Coastal salt marshes and swamps/ perennial herb/May–October (January)/ <20 feet amsl	No	Not expected to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017), however, the site is outside of the elevation range for this species. In addition, there is not suitable habitat within the Project Area and this species was not detected during the 2014, 2015, or 2016 focused plant surveys.

APPENDIX I-2 (Continued)

Scientific Name	Common Name	Federal/ State Status <sup>1</sup>	CRPR <sup>1</sup>	MSCP South County/County <sup>1</sup>	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range	Verified Within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur Within the Project Area	Status Within the Project Area or Potential to Occur
<i>Suaeda taxifolia</i>	woolly seablite	None/None	4.2	None/List D	Coastal bluff scrub, coastal dunes, marshes and swamps(margins of coastal salt)/perennial evergreen shrub/January– December/0–164 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Tetracoccus dioicus</i>	Parry's tetracoccus	None/None	1B.2	Covered/List A	Chaparral, coastal scrub/deciduous shrub/April–May/550–3,300 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) including the Jamul Mountains quadrangle. There is suitable habitat within the Project Area. This conspicuous shrub was not detected during the 2014, 2015, or 2016 focused plant surveys. Therefore, it is considered to have low potential to occur on site.
<i>Texosporium sancti- jacobi</i>	woven-spored lichen	None/None	3	None/None	Chaparral(openings)/on soil, small mammal pellets, dead twigs, and on <i>Selaginella</i> spp./no blooming period/290– 660 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017; CDFW 2017) and there is suitable habitat within the Project Area (including suitable host items), however it was not detected during the 2014, 2015, or 2016 focused plant surveys. This species has limited known distribution in San Diego County and has not been recorded in Jamul Mountains quadrangle. Therefore, it is considered to have low potential to occur on site.
<i>Thermopsis californica</i> var. <i>semota</i>	velvety false lupine	None/None	1B.2	None/List A	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland/rhizomatous herb/March–June/3,280–6,135 feet amsl	No	Not expected to occur.	There is suitable habitat within the Project Area; however the site is outside of the elevation range for this species. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Viguiera purisimae</i>	La Purisima viguiera	None/None	2B.3	None/List A	Coastal bluff scrub, chaparral/shrub/April– September/1,198–1,394 feet amsl	No	Low potential to occur.	There is suitable habitat within the Project Area; however, this species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Viola purpurea</i> ssp. <i>aurea</i>	golden violet	None/None	2B.2	None/List B	Great Basin scrub, pinyon and juniper woodland/sandy/perennial herb/April– June/3,281–8,202 feet amsl	No	Not expected to occur.	The site is outside of the species' known elevation range and there is no suitable vegetation present. This species has not been recorded in the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Xanthisma junceum</i>	rush-like bristleweed	None/None	4.3	None/ List D	Chaparral, coastal scrub/perennial herb/ June–January/787–3,281 feet amsl	No	Low potential to occur.	This species is recorded within the vicinity <sup>2</sup> (CNPS 2017) however, this species is not recorded in the Jamul quadrangle and records are limited to the mountains east and north of the Project Area (SDNHM 2017). Additionally, it was not detected during the 2014, 2015, or 2016 focused plant surveys.
<i>Xylorhiza orcuttii</i>	Orcutt's woody aster	None/None	1B.2	None/List A	Sonoran desert scrub/perennial herb/ March–April/66–1,200 feet amsl	No	Not expected to occur.	No suitable habitat within the Project Area. This species is not recorded within the vicinity <sup>2</sup> nor was it detected during the 2014, 2015, or 2016 focused plant surveys.

<sup>1</sup> **Status Legend:**  
FE: federally listed as endangered  
FT: federally listed as threatened  
FC: federal candidate for listing  
SE: state listed as endangered  
ST: state listed as threatened  
SR: state rare  
CRPR 1A: plants presumed extinct in California  
CRPR List 1B: plants rare, threatened, or endangered in California and elsewhere  
CRPR List 2: plants rare, threatened, or endangered in California but more common elsewhere  
CRPR List 3: plants about which more information is needed – a review list  
CRPR List 4: plants of limited distribution – a watch list  
.1: seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)

- .2: fairly endangered in California (20% to 80% of occurrences threatened)
- .3: not very endangered in California (less than 20% of occurrences threatened or no current threats known)

County:  
List A: Plants rare, threatened, or endangered in California and elsewhere  
List B: Plants rare, threatened, or endangered in California but more common elsewhere  
List C: Plants that may be rare, but need more information to determine their true rarity status  
Plants of limited distribution and are uncommon, but not presently rare or endangered

<sup>2</sup> Vicinity refers to records within the La Mesa, El Cajon, Alpine, National City, Jamul Mountains, Dulzura, Imperial Beach, Otay Mesa, and Otay Mountain quadrangles (CNPS 2017; CDFW 2017) and San Diego Plant Atlas Grids S14 and T14 (SDNHM 2017).

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# **APPENDIX J-1**

*Special-Status Wildlife Species Detected or  
Potentially Occurring in the Land Exchange Area*



**APPENDIX J-1**  
**Special-Status Wildlife Species Detected or**  
**Potentially Occurring in the Land Exchange Area**

Scientific Name	Common Name	Status (Federal/ State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Primary Habitat Associations	Verified within the Project Area <sup>1</sup> (Direct/ Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Amphibians</i>								
<i>Spea hammondi</i>	western spadefoot	None/SSC	None	Group 2	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	Yes	Observed	Spadefoot tadpoles were observed in a vernal pool and road rut during fairy shrimp surveys in 2015. The vernal pool is located in the Village 14 Preserve (B2). The road rut (identified as B13) is within the Village 14 Development approximately 700 feet south of the vernal pool. This species has also been documented in Proctor Valley (AECOM and Hogan 2012).
<i>Birds</i>								
<i>Accipiter cooperii</i> (nesting)	Cooper’s hawk	None/WL	Covered	Group 1	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Yes	Observed	Observed within various areas throughout the Project Area. This species has potential to nest in the eucalyptus woodland or riparian woodland within the Project Area; however, no nesting has been observed within the Project Area.
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow	None/WL	Covered	Group 1	Nests and forages open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Yes	Observed	Observed within the Project Area on several occasions in coastal sage scrub habitats.
<i>Ammodramus savannarum</i> (nesting)	grasshopper sparrow	None/SSC	None	Group 1	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Yes	Observed	Observed within various portions of the Project Area.
<i>Aquila chrysaetos</i> (nesting and wintering)	golden eagle	BCC/FP, WL	Covered	Group 1	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Yes	Observed	A pair of golden eagles was observed foraging within the Project Area in 2014 by USFWS staff; two additional observations of a foraging golden eagle were recorded in 2014 by Dudek and additional unpaired eagles have been identified in the Valley by USFWS personnel during 2015. There is no suitable nesting habitat within the Project Area for this species. The closest known historical nesting area, which has since collapsed, is on Mount Miguel, is over 4,000 feet to the north (WRI 2010 and USFWS 2014).
<i>Artemisiospiza belli belli</i>	Bell’s sage sparrow	BCC/WL	None	Group 1	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	No	Moderate potential to occur	There is suitable habitat throughout the project site and this species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Athene cunicularia</i> (burrow sites and some wintering sites)	burrowing owl	BCC/SSC	Covered	Group 1	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Yes	Observed (sign only)	There is suitable habitat within the within the Village 14, but this species was not detected during focused burrowing owl surveys conducted in 2014. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016). During recent plant surveys in July 2015, a potential burrowing owl sign (white wash, feathers, and pellets) was observed at one burrow in the central portion of the Project Area. However, no actual owls were observed or have been observed.
<i>Buteo lineatus</i>	red-shouldered hawk	None/None	None	Group 1	Nests in dense riparian areas, especially with adjacent edges, swamps, marshes, and wet meadows for hunting	Yes	Observed	Observed within various portions of the Project Area. This species has potential to nest in the eucalyptus woodland or riparian woodland within the Project Area; however, no nesting has been observed within the Project Area.
<i>Buteo regalis</i> (wintering)	ferruginous hawk	BCC/WL	Covered	Group 1	Winters and forages in open, dry country, grasslands, open fields, agriculture	No	High potential to occur	There is high potential for ferruginous hawk to forage within the Project Area during the winter season.

<sup>1</sup> For purposes of this table, the Project Area also includes off-site improvement areas.



APPENDIX J-1 (Continued)

Scientific Name	Common Name	Status (Federal/ State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Primary Habitat Associations	Verified within the Project Area <sup>1</sup> (Direct/ Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Cathartes aura</i>	turkey vulture	None/None	None	Group 1	Rangeland, agriculture, grassland; uses cliffs and large trees for roosting, nesting, and resting throughout most of California during breeding season	Yes	Observed	This species has been observed foraging overhead throughout all portions of the Project Area. There are no cliffs or large trees for nesting or roosting within the Project Area.
<i>Circus cyaneus</i> (nesting)	northern harrier	None/SSC	Covered	Group 1	Nests in open wetlands including marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes, but also in drier habitats such as grassland and grain fields; forages in variety of habitats, including grassland, scrubs, rangelands, emergent wetlands, and other open habitats	Yes	Observed (foraging); moderate potential to nest	Northern harrier has been observed within the within the PA 16/19 preserve. There is suitable foraging habitat throughout the Project Area, and some nesting habitat in the grasslands and marsh habitat within the Project Area.
<i>Eremophila alpestris actia</i>	California horned lark	None/WL	None	Group 2	Nests and forages in grasslands disturbed lands, agriculture, and beaches; nests in alpine fell fields of the high Sierra	Yes	Observed	California horned lark has been observed within the Village 14 preserve and PA 16/19 preserve; there is potential for it to occur in suitable habitat throughout the Project Area.
<i>Ixobrychus exilis</i> (nesting)	least bittern	BCC/SSC	None	Group 2	Nests in freshwater and brackish marshes with dense, tall growths of aquatic and semi-aquatic vegetation	No	Moderate potential to occur	There is some freshwater marsh within the southern drainage near Proctor Valley Road that could support this species. This species has been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Lanius ludovicianus</i> (nesting)	loggerhead shrike	BCC/SSC	None	Group 1	Nests and forages in open habitats with scattered shrubs, trees, or other perches	Yes	Observed	This species was observed within the Village 14 preserve; there is potential for it to occur in suitable habitat throughout the Project Area.
<i>Polioptila californica californica</i>	coastal California gnatcatcher	FT/SSC	Covered	Group 1	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level (amsl) in elevation	Yes	Observed	During the 2014 focused protocol surveys nine pairs, four fledglings/juveniles, and three lone males were observed: one male observed in Village 14 Development, three pair observed in Village 14 preserve, one male and one pair observed in PA 16/19 preserve, one male and one pair observed in City of Chula Vista lands, and two juveniles, four pair, and two fledglings were observed in City of San Diego lands (Dudek 2015a, Dudek 2015b).
<i>Setophaga petechia</i> (nesting)	yellow warbler	BCC/SSC	None	Group 2	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine and mixed conifer habitats	Yes	Observed	This species was observed in 2017 foraging overhead within the PA 16. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016). There are very small patches of riparian scrub within the Project Area that has low potential to support this species.
<i>Sialia mexicana</i>	western bluebird	None/None	Covered	Group 2	Nests in old-growth red fir, mixed conifer, lodgepole pine habitats near wet meadows used for foraging	Yes	Observed	A pair of western bluebirds was observed within along Proctor Valley Road North and can occur in suitable habitat throughout the Project Area. This species has moderate potential to nest in eucalyptus trees within the Project Area.
<i>Tyto alba</i>	Common barn-owl	None/None	None	Group 2	Open habitats including grassland, chaparral, riparian, and other wetlands	Yes	Observed	This species was observed within the Project Area.
Invertebrates								
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	FE/None	Covered	Group 1	Vernal pools, non-vegetated ephemeral pools	Yes	Observed	San Diego fairy shrimp have been confirmed in 7 vernal pool features within the Village 14 preserve and PA 16/19 preserve (A12, A22, A23, A27, B2, C14, C21) (Dudek 2015c).
<i>Danaus plexippus</i>	monarch	None/None	None	Group 2	Wind-protected tree groves with nectar sources and nearby water sources	Yes	Observed	Monarch butterflies were observed during the 2015 Quino checkerspot butterfly surveys (Helix 2015). Not suitable colonial roosting areas present however.

## APPENDIX J-1 (Continued)

Scientific Name	Common Name	Status (Federal/ State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Primary Habitat Associations	Verified within the Project Area <sup>1</sup> (Direct/ Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Euphydryas editha quino</i>	Quino checkerspot	FE/None	None	Group 1	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clat; host plants include <i>Plantago erecta</i> (dwarf plantain), <i>Antirrhinum coulterianum</i> (white snapdragon), and <i>Plantago patagonica</i> (woolly plantain) (Silverado Occurrence Complex)	No	High potential to occur	Quino checkerspot butterfly has been recorded within the Project Area (CDFW 2016, USFWS 2015). Within the project boundary, two records are described as being observed prior to 1990 (CDFW 2016); one from 2001 and one from 2006 (USFWS 2015). There are additional records north and south of the project area. The Proctor Valley Vernal Pool Restoration Plan includes records of Quino checkerspot butterfly in and around the project boundary (AECOM and CLC 2012). There is suitable habitat in the coastal sage scrub, openings in chaparral, and in some of the non-native grassland. Focused surveys for Quino checkerspot butterfly were conducted in 2015; the results were negative but stopped in April due diminishing host plants.
<i>Lycaena hermes</i>	Hermes copper	FC/None	None	Group 1	Mixed woodlands, chaparral and coastal scrub	No	Moderate potential to occur	There are approximately 17 acres mapped as suitable Hermes copper habitat. Results of the focused surveys were negative, but this species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Panoquina errans</i>	wandering skipper	None/None	Covered	Group 1	Salt marsh	No	Moderate potential to occur	There is some salt grass ( <i>Distichlis spicata</i> ) within the cismontane alkali marsh that occurs along drainages within the Project Area. This species has not been observed, however, has been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Pseudocopaodes eunus eunus</i>	alkali skipper	None/None	None	Group 1	Grassy spots on alkali flats; playa/salt flats	No	Moderate potential to occur	There is some salt grass ( <i>Distichlis spicata</i> ) within the cismontane alkali marsh that occurs along drainages within the Project Area. This species has not been observed. Additionally, this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Mammals</i>								
<i>Antrozous pallidus</i>	pallid bat	None/SSC	None	Group 2	Grasslands, shrublands, woodlands, forests; most common in open dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	No	High potential to occur	There is suitable foraging habitat within the Project Area and some roosting habitat in large boulders and trees within the Project Area. This species has been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	None/SSC	None	Group 2	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed conifer habitats; disturbance specialist; 0 to 3,000 feet amsl	No	Moderate potential to occur	There is suitable habitat for this species within the Project Area. This species has not been recorded in the Jamul Mountains quadrangle, but is documented in surrounding quadrangles <sup>2</sup> (CDFW 2016).
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None/SSC	None	Group 2	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland	No	Moderate potential to occur	There is suitable habitat for this species within the Project Area. This species has not been recorded in the Jamul Mountains quadrangle, but is documented in surrounding quadrangles <sup>2</sup> (CDFW 2016).
<i>Eumops perotis californicus</i>	western mastiff bat	None/SSC	None	Group 2	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees and tunnels	No	High potential to occur	There is suitable foraging habitat within the Project Area and some roosting habitat in large boulders and trees within the Project Area. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Lasiurus blossevillii</i>	western red bat	None/SSC	None	Group 2	Forest, woodland, riparian, mesquite bosque and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	No	High potential to occur	There is suitable foraging habitat within the Project Area and some roosting habitat in large boulders and trees within the Project Area. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/SSC	None	Group 2	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	Yes	Observed	San Diego black-tailed jackrabbit have been observed regularly throughout the Project Area.
<i>Macrotus californicus</i>	California leaf-nosed bat	None/SSC	None	Group 2	Riparian woodlands, desert wash, desert scrub; roosts in mines and caves, occasionally buildings	No	Moderate potential to occur	There is suitable foraging habitat within the Project Area. There is no roosting habitat within the Project Area. This species has been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016). Mostly a desert species.
<i>Myotis yumanensis</i>	Yuma myotis	None/None	None	Group 2	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, rock crevices, caves, mines, and trees	No	High potential to occur	There is suitable foraging habitat within the Project Area and some roosting habitat in rock crevices and trees within the Project Area. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).

APPENDIX J-1 (Continued)

Scientific Name	Common Name	Status (Federal/ State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Primary Habitat Associations	Verified within the Project Area <sup>1</sup> (Direct/ Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None/SSC	None	Group 2	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	No	High potential to occur	Woodrat middens have been observed within the Project Area and this species likely occurs. This species has been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	None/SSC	None	Group 2	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, palm oases; roosts in high cliffs or rock outcrops with dropoffs, caverns, buildings	No	Moderate potential to occur	There is suitable foraging habitat within the Project Area and some roosting habitat in large boulders within the Project Area. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016). A mostly desert species.
<i>Nyctinomops macrotis</i>	big free-tailed bat	None/SSC	None	Group 2	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	No	High potential to occur	There is suitable foraging habitat within the Project Area and some roosting habitat in large boulders and trees within the Project Area. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Odocoileus hemionus</i>	mule deer	None/None	Covered	Group 2	Coastal sage scrub, chaparral, riparian, woodlands, forest; often browses in open area adjacent to cover throughout California, except deserts and intensely farmed area	Yes	Observed	Mule deer have been observed occasionally within portions of the Project Area.
<i>Puma concolor</i>	cougar	None/None	Covered	Group 2	Scrubs, chaparral, riparian, woodland, forest; rests in rocky area, and on cliffs and ledges that provide cover; most abundant in riparian area and brushy stages of most habitats throughout California, except deserts	Yes	Observed	This species has been observed within the Project Area during California gnatcatcher surveys.
<i>Taxidea taxus</i>	American badger	None/SSC	Covered	Group 2	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, pastures, especially with friable soils	Yes	Observed (sign only)	An American badger burrow was observed in the PA 16/19 preserve. The burrow showed distinct claw marks indicative of a badger burrow. There is suitable habitat for this species in the grassland and other open areas within the Project Area. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
Reptiles								
<i>Anniella pulchra</i>	California legless lizard	None/SSC	None	Group 2	Stabilized dunes, beaches, dry washes, chaparral, scrubs, pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils	No	Moderate potential to occur	There is some potential for this species to occur in the Proctor Valley drainage where there are sandy soils. This species has been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Aspidoscelis hyperythra</i>	orangethroat whiptail	None/WL	Covered	Group 2	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	No	High potential to occur	There is suitable habitat for this species in the coastal sage scrub and chaparral. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Aspidoscelis tigris stejnegeri</i>	San Diegan tiger whiptail	None/SSC	None	Group 2	Open areas in semiarid grasslands, scrublands, and woodlands	Yes	Observed	This species was observed within the Village 14 Development, but can occur within suitable habitat throughout the Project Area.
<i>Coleonyx variegatus abbotti</i>	San Diego banded gecko	None/SSC	None	Group 1	Rocky areas within coastal scrub and chaparral	No	High potential to occur	There is suitable habitat for this species within the Project Area and the project site is located within its range (Nafis 2015).
<i>Crotalus ruber</i>	red diamondback rattlesnake	None/SSC	None	Group 2	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Yes	Observed	This species was observed within the Project Area.
<i>Diadophis punctatus similis</i>	San Diego ringneck snake	None/None	None	Group 2	Moist habitats including wet meadows, rocky hillsides, gardens, farmland grassland, chaparral, mixed conifer forest, and woodland habitats	No	Moderate potential to occur	There is suitable habitat for this species within the Project Area. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Lichanura trivirgata</i>	rosy boa	None/None	None	Group 2	Desert and chaparral habitats with rocky soils in coastal canyons and hillsides, desert canyons, washes and mountains	Yes	Observed	This species was observed in the southwestern portion of the Project Area. Since this species has a potential to throughout the Project Area, specific locations were not mapped.
<i>Phrynosoma blainvillii</i>	Blainville’s horned lizard	None/SSC	Covered	Group 2	Open areas of sandy soil in valleys, foothills and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper and annual grassland	Yes	Observed	This species was observed within the PA 16/19 preserve, but can occur within suitable habitat throughout the Project Area.

APPENDIX J-1 (Continued)

Scientific Name	Common Name	Status (Federal/ State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Primary Habitat Associations	Verified within the Project Area <sup>1</sup> (Direct/ Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Plestiodon skiltonianus interparietalis</i>	Coronado skink	None/WL	None	Group 2	Woodlands, grasslands, pine forests, chaparral; rocky areas near water	No	High potential to occur	This species has high potential to occur within some of the rocky chaparral and coastal sage scrub with drainages where there is seasonal water. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Salvadora hexalepis virgultea</i>	coast patch-nosed snake	None/SSC	None	Group 2	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	No	Moderate potential to occur	There is suitable habitat for this species within the Project Area. This species has not been recorded in the Jamul Mountains quadrangle, but is documented in surrounding quadrangles <sup>2</sup> (CDFW 2016).

<sup>1</sup> **Status Designations:**  
**Federal**  
FC: candidate for federal listing as threatened or endangered  
(FD): federally delisted; monitored for 5 years  
FE ; federally listed endangered  
FT: federally listed as threatened  
**State Designations:**  
SSC: California special concern species  
FP: California Department of Fish and Wildlife fully protected species  
WL: California Department of Fish and Wildlife watch list species  
SE: state listed as endangered  
ST: state listed as threatened  
**San Diego South County MSCP**  
Covered: species covered under the MSCP  
None: no coverage under the MSCP  
**County of San Diego Designations:**  
Group 1: County of San Diego Sensitive Animal List  
Group 2; County of San Diego Sensitive Animal List

<sup>2</sup> Records within the Jamul Mountains and surrounding eight quadrangles: La Mesa, El Cajon, Alpine, National City, Dulzura, Imperial Beach, Otay Mesa, and Otay Mountain quadrangles (CDFW 2016).

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## **APPENDIX J-2**

*Special-Status Wildlife Species Not Expected or  
Rarely Occurring in the Land Exchange Area*





APPENDIX J-2  
Special-Status Wildlife Species Not Expected  
to Occur or Low Potential to Occur

Scientific Name	Common Name	Status (Federal/ State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Habitat	Verified within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
Amphibians								
<i>Anaxyrus californicus</i>	arroyo toad	FE/SSC	Covered	Group 1	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding(typically 3rd order); adjacent stream terraces and uplands for foraging and wintering	No	Low potential to occur	Potential suitable habitat is limited to the downstream (southernmost) end of the site within the large unnamed wash that parallels Proctor Valley Road. There are no known locations in this creek; however, this species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Batrachoseps major aridus</i>	desert slender salamander	FE/SE	None	Group 1	Barren, palm oasis, desert wash and desert scrub; barren, palm oasis, desert wash and desert scrub; limited geographic distribution: known only from Hidden Palm Canyon and Guadalupe Canyon on east slope of Santa Rosa Mountains, Riverside County; occurs under limestone sheets, rocks, and talus; at the base of damp, shaded locations (e.g., spring oasis, moist cliffs) without direct sunlight (1)	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, the Project Area does not contain suitable habitat for this specie and this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Ensatina klauberi</i>	large-blotched salamander	None/WL	None	Group 1	Moist and shaded evergreen and deciduous woodlands	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Rana draytonii</i>	California red-legged frog	FT/SSC	Covered	Group 1	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	No	Not expected to occur.	There are no permanent sources of water within the Project Area to support this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Rana muscosa</i>	mountain yellow-legged frog	FE/SE, WL	None	Group 1	Lakes, ponds, meadow streams, isolated pools and open riverbanks; rocky canyons in narrow canyons and in chaparral	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Taricha torosa</i> (Monterey Co. south only)	California newt	None/SSC (Monterey Co south)	None	Group 2	Wet forests, oak forests, chaparral, and rolling grassland	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
Birds								
<i>Accipiter striatus</i> (nesting)	sharp-shinned hawk	None/WL	None	Group 1	Nests in coniferous forests, ponderosa pine, black oak, riparian deciduous, mixed conifer, Jeffrey pine; winters in lowland woodlands and other habitats	No	Not expected to occur	The Project Area does not contain suitable nesting habitat for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Aechmophorus occidentalis</i>	western grebe	None/None	None	Group 1	Along coast in marine subtidal and estuary waters; uncommon to fairly common on large lakes near coast and inland at low elevations; breed on large, marshy lakes, normally deeper than required by eared grebe; nest on Modoc Plateau and south locally to Inyo County; also Sacramento National Wildlife Refuge, Salton Sea, Colorado River, and Sweetwater Reservoir	No	Not expected to occur	The Project Area does not contain suitable habitat for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Agelaius tricolor</i> (nesting colony)	tricolored blackbird	BCC/SSC	Covered	Group 1	Nests near fresh water, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	No	Low potential to occur	The freshwater marsh within the Project Area is narrow and in small patches and is likely too small to support tricolored blackbirds. No tricolored blackbirds have been observed within the Project Area; however, this species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).

<sup>1</sup> For purposes of this table, the Project Area also includes off-site improvement areas.

## APPENDIX J-2 (Continued)

Scientific Name	Common Name	Status (Federal/State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Habitat	Verified within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Antigone canadensis canadensis</i> (wintering)	lesser sandhill crane	None/SSC	None	Group 2	Winter foraging in cropland, grazed and mowed grassland, pasture, alfalfa fields, and shallow wetlands; roosting sites are flooded and support several inches of water	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species nor has this species been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Antigone canadensis tabida</i> (nesting & wintering)	greater sandhill crane	None/ST, FP	None	Group 2	Winter foraging in cropland, grazed and mowed grassland, pasture, alfalfa fields and shallow wetlands; roosting sites are flooded and support several inches of water	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species nor has this species been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Anas strepera</i>	gadwall	None/None	None	Group 2	Interior valleys, wetlands, ponds, and streams; feeds and rests in freshwater lacustrine and emergent habitats, and to a lesser extent, estuarine and saline emergent habitats, and nests in nearby herbaceous and cropland habitats; common in Central Valley and less common in Coast Range foothills of central and Southern California; locally common in Imperial Valley and along Colorado River, October to March; breeds on northeastern plateau and east of Sierra Nevada	No	Not expected to occur	The Project Area does not contain suitable nesting or foraging habitat for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Ardea herodias</i> (nesting colony)	great blue heron	None/None	None	Group 2	Nests in large trees or snags; forages in wetlands, water bodies, water courses, and opportunistically in uplands, including pasture and croplands	No	Not expected to occur	Large trees within the Project Area are limited to a patch of eucalyptus trees. Wetlands within the Project Area are limited narrow patches of freshwater marsh, cismontane alkali marsh and mulefat scrub, none of which would be considered suitable habitat for this species. In addition, there are no water bodies or water courses with permanent water. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Asio flammeus</i> (nesting)	short-eared owl	None/SSC	None	Group 2	Grassland, prairies, dunes, meadows, irrigated lands, saline and freshwater emergent wetlands	No	Not expected to nest within the Project Area; low potential to winter	While there is suitable habitat within the grassland and marsh habitat within the Project Area, short-eared owl has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016); and Unitt (2004) does not show winter and spring records in or near the Project Area.
<i>Asio otus</i> (nesting)	long-eared owl	None/SSC	None	Group 1	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats	Yes	Observed (winter); low potential to nest within the Project Area	Long-eared owl was observed in November 2014 within the Village 14 preserve and there is suitable winter/foraging habitat within the Project Area. While this species is not in the records in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016), there are some records in surrounding areas to the north (Unitt 2004). Due to the lack of dense riparian woodland or oak woodland within the Project Area, this species has low potential to nest.
<i>Aythya americana</i> (nesting)	redhead	None/SSC	None	Group 2	Nests in relatively deep (>3 feet) permanent or semi-permanent wetlands of at least one acre, with about 75% open water and emergent tules, bulrushes ( <i>Scirpus</i> spp.), and cattails ( <i>Typha</i> spp.) up to about 3 feet in height; winters in coastal estuaries and large, deep ponds, lakes, and reservoirs of the interior	No	Not expected to occur	The freshwater marsh within the Project Area is narrow and in small patches and is likely too small to redheads. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Branta canadensis</i>	Canada goose	None/None	Covered	Group 2	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	No	Low potential to occur	There is suitable foraging habitat (i.e., grassland) for this species within the Project Area. However, this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016) and it has never been detected within the Project Area over numerous wildlife surveys.

## APPENDIX J-2 (Continued)

Scientific Name	Common Name	Status (Federal/State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Habitat	Verified within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Bucephala islandica</i> (nesting)	Barrow's goldeneye	None/SSC	None	Group 2	Winters in lagoons, bays, estuaries in coastal areas, and riverine waters, lakes, and reservoirs in the interior	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species nor has this species been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Buteo swainsoni</i> (nesting)	Swainson's hawk	BCC/ST	Covered	Group 1	Nests in open woodland and savanna, riparian and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	No	Not expected to occur (nesting)	Swainson's hawk does not nest in the region and it has not been observed within the Project Area; however, it has been recorded in the Jamul Mountains quadrangle (CDFW 2016). There is suitable foraging habitat within the Project Area.
<i>Butorides striatus</i>	green heron	None/None	None	Group 2	Nests and roosts in valley foothill and desert riparian habitats; feeds in fresh emergent wetland, lacustrine, slow-moving riverine habitats; resident in foothills and lowlands throughout California; common August to March in southern coastal ranges, in summer along the Colorado River, and found all year at the Salton Sea	No	Not expected to occur	The Project Area does not contain suitable nesting or foraging habitat for this species. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Campylorhynchus brunneicapillus sandiegensis</i> (San Diego & Orange Counties only)	coastal cactus wren	BCC/SSC	Covered	Group 1	Southern cactus scrub patches	No	Not expected to occur	There are no cactus scrub patches within the Project Area to support nesting cactus wren, and none have been observed over numerous wildlife surveys, including California gnatcatcher surveys. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Cerorhinca monocerata</i> (nesting colony)	rhinoceros auklet	None/WL	None	Group 2	Marine pelagic and subtidal habitats	No	Not expected to occur	There is no suitable habitat within the Project Area for this species. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Charadrius alexandrinus nivosus</i> (nesting)	western snowy plover	FT, BCC/SSC	Covered	Group 1	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	No	Not expected to occur	The site is outside of the species' known geographic range and there is no suitable nesting habitat present. This species has been recorded in the CNDDB 9-quadrangle search <sup>2</sup> in coastal areas (CDFW 2016).
<i>Charadrius montanus</i> (wintering)	mountain plover	BCC/SSC	Covered	Group 2	Winters in shortgrass prairies, plowed fields, open sagebrush and sandy deserts	No	Not expected to occur	This species has not been recorded in the Jamul Mountains or eight surrounding quadrangles (CDFW 2016, nor has it been observed over numerous wildlife surveys.
<i>Chen caerulescens</i> (winter)	snow goose	None/None	None	Group 2	Fresh emergent wetlands, adjacent lacustrine waters, and nearby wet croplands, pastures, meadows, and grasslands; occasionally found in saline (brackish) emergent wetlands and adjacent estuarine waters; found primarily in Central Valley; less common southward in the interior but abundant in Imperial Valley and locally common along Colorado River; found regularly only in Southern California along Coast Ranges and immediate coast from mid-November to February (2)	No	Not expected to occur	The Project Area does not contain suitable habitat for this species. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Chlidonias niger</i> (nesting colony)	black tern	None/SSC	None	Group 2	Freshwater marsh with emergent vegetation; in the Central Valley primarily nest and forage in rice fields and other flooded agricultural fields with weeds and other residual aquatic vegetation	No	Not expected to occur	The site is outside of the species' known geographic range. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Coccyzus americanus occidentalis</i> (nesting)	western yellow-billed cuckoo	FT, BCC/SE	None	Group 1	Nests dense, wide riparian woodlands and forest with well-developed understories	No	Not expected to occur	The riparian scrub within the Project Area is very small (less than 0.5 acre) and not suitable for this species, however, this species has been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Cypseloides niger</i> (nesting)	black swift	BCC/SSC	None	Group 2	Nests in moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons; forages over a wide range of habitats	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species nor has this species been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).

## APPENDIX J-2 (Continued)

Scientific Name	Common Name	Status (Federal/State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Habitat	Verified within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Dendrocygna bicolor</i> (nesting)	fulvous whistling-duck	None/SSC	None	Group 2	Nests in freshwater wetlands, especially shallow impoundments managed for rice production and temporally flooded grasslands; also nests in pastures, haylands and small grain fields adjacent to ricefields	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species nor has this species been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Egretta rufescens</i>	reddish egret	None/None	Covered	Group 2	Freshwater marsh with emergent vegetation; in the Central Valley primarily nest and forage in rice fields and other flooded agricultural fields with weeds and other residual aquatic vegetation	No	Not expected to occur	This species is typically found along coastal wetlands. Additionally, this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Elanus leucurus</i> (nesting)	white-tailed kite	None/FP	None	Group 1	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Yes	Observed; low potential to nest within the Project Area	White-tailed kite was observed in November 2014 within the Village 14 preserve. There is suitable foraging habitat within the Project Area and due to the Project Area's proximity to Sweetwater Reservoir and Otay Lakes where there is more suitable riparian woodland for nesting, this species likely forages on the Project Area occasionally. Due to the lack of dense riparian or oak woodland within the Project Area, as well as lack of observations during the nesting season, this species is unlikely to nest within the Project Area.
<i>Empidonax traillii extimus</i> (nesting)	southwestern willow flycatcher	FE/SE	Covered	Group 1	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	No	Not expected to occur	The riparian scrub within the Project Area is very small (less than 0.5 acre) and not suitable for this species. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016), but has not been detected during any wildlife surveys.
<i>Falco columbarius</i> (wintering)	merlin	None/WL	None	Group 2	Forages in semi-open areas, including coastline, grassland, agriculture, savanna, woodland, lakes, and wetlands	No	Low potential to occur	There is suitable foraging habitat (i.e. grassland) for this species within the project area. However, this species has not been recorded in the Project Area or CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Falco mexicanus</i> (nesting)	prairie falcon	BCC/WL	None	Group 1	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	No	Low potential to occur (nesting)	Prairie falcon has not been observed within the Project Area; however, it is recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016). There is no nesting habitat within the Project Area; however, this species could forage within the Project Area.
<i>Falco peregrinus anatum</i> (nesting)	American peregrine falcon	FDL, BCC/SDL, FP	Covered	Group 1	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	No	Not expected to occur (nesting)	There is suitable foraging habitat within the Project Area; however, peregrine falcon has not been observed within the Project Area or recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Fratercula cirrhata</i> (nesting colony)	tufted puffin	None/SSC	None	Group 2	Nest on offshore rocks and islands free of mammalian predators, either in earthen burrows or crevices on steep rocky slopes	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species nor has this species been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Gavia immer</i> (nesting)	common loon	None/SSC	None	Group 2	Extirpated as a breeder from California; winters in coastal waters such as bays, channels, coves, and inlets; also winters inland at large, deep lakes and reservoirs	No	Not expected to occur	There is no suitable habitat within the Project Area for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Haliaeetus leucocephalus</i> (nesting & wintering)	bald eagle	FDL, BCC/SE, FP	Covered	Group 1	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	No	Not expected to occur	There is suitable foraging habitat within the Project Area; however, bald eagle has not been observed within the Project Area or recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016)
<i>Icteria virens</i> (nesting)	yellow-breasted chat	None/SSC	None	Group 1	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles and dense brush	No	Low potential to occur	This species has not been observed within the Project Area, but has been recorded in the Jamul Mountains quadrangle (CDFW 2016). There are very small patches of riparian scrub within the Project Area that has low potential to support this species.

APPENDIX J-2 (Continued)

Scientific Name	Common Name	Status (Federal/ State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Habitat	Verified within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Junco hyemalis caniceps</i> (nesting)	gray-headed junco	None/WL	None	Group 2	Nests and forages in pine and juniper–pine forests	No	Not expected to occur	The site is outside of the species’ known geographic range. In addition, Project Area does not contain suitable habitat for this species nor has this species been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Larus californicus</i> (nesting colony)	California gull	None/WL	None	Group 2	Nests in alkali and freshwater lacustrine habitats; abundant in coastal and interior lowlands during non-nesting period	No	Not expected to occur	There is no suitable habitat within the Project Area for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Laterallus jamaicensis coturniculus</i>	California black rail	BCC/ST, FP	None	Group 2	Tidal marshes, shallow freshwater margins, wet meadows and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra foothill populations	No	Not expected to occur	The freshwater marsh habitat within the Project Area is not large enough nor is there enough perennial water within the Project Area to support the wetland habitat required by this species, however this species has been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Melanerpes lewis</i> (nesting)	Lewis’ woodpecker	BCC/None	None	Group 1	Winters in open oak woodland and savanna; nests in open ponderosa pine forest, and logged or burned pine forest	No	Not expected to occur	There is no suitable habitat within the Project Area for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Mycteria americana</i>	wood stork	None/SSC	None	Group 2	Nests in freshwater and marine-estuarine forested habitats; forages in natural and artificial wetlands; roosts in trees, usually over water	No	Not expected to occur	There is no suitable nesting or roosting habitat within the Project Area for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Numenius americanus</i> (nesting)	long-billed curlew	BCC/WL	Covered	Group 2	Nests in grazed, mixed grass, and short-grass prairies. Localized nesting along the California coast; winters and forages in coastal estuaries, mudflats, open grassland and cropland	No	Low potential to occur	This species has not been observed within the Project Area, nor has it been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016). There is some grassland within the Project Area but this species is unlikely to occur.
<i>Oceanodroma furcata</i> (nesting colony)	fork-tailed storm-petrel	None/SSC	None	None	Offshore islands with restricted access and free of mammalian predators; nesting habitat varies across islands from natural crevices in talus slopes to earthen burrows dug by themselves or other species	No	Not expected to occur	The Project Area does not contain suitable habitat for this species and this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Oceanodroma homochroa</i> (nesting colony)	ashy storm-petrel	BCC/SSC	None	Group 2	Nests on rocky offshore islands on talus slopes, rock walls, sea caves, cliffs, and under piles of driftwood; they do not excavate their own nesting burrows	No	Not expected to occur	The Project Area does not contain suitable habitat for this species and this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Oceanodroma melania</i> (nesting colony)	black storm-petrel	None/SSC	None	Group 2	Nests on small rocky islands or talus slopes of larger islands free of mammalian predators; only occurs on land to breed	No	Not expected to occur	The Project Area does not contain suitable habitat for this species and this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Oreoryx pictus</i>	mountain quail	None/None	None	Group 2	Dense montane chaparral and brushy areas within coniferous forest, pinyon-juniper–yucca associations; uses shrubs, brush stands and trees on steep slopes for cover	No	Not expected to occur	There is no suitable habitat within the Project Area for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Pandion haliaetus</i> (nesting)	osprey	None/WL	None	Group 1	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	No	Not expected to occur	There is no suitable habitat within the Project Area for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Passerculus sandwichensis beldingi</i>	Belding’s savannah sparrow	None/SE	Covered	Group 1	Nests and forages in coastal saltmarsh dominated by pickleweed	No	Not expected to occur	There is no suitable salt marsh habitat for this subspecies of savannah sparrow which usually occurs along the coast, however this species has been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Passerculus sandwichensis rostratus</i> (wintering)	large-billed savannah sparrow	None/SSC	Covered	Group 2	Nests and forages in open, low saltmarsh vegetation including low halophytic scrub	No	Not expected to occur	There is no suitable salt marsh habitat for this subspecies of savannah sparrow that occurs along the coast. Additionally, this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).

## APPENDIX J-2 (Continued)

Scientific Name	Common Name	Status (Federal/State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Habitat	Verified within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Pelecanus erythrorhynchos</i> (nesting colony)	American white pelican	None/SSC	None	Group 2	Nests colonially on isolated islands in freshwater lakes with sandy, earthen, or rocky substrates; minimal disturbance from humans or mammalian predators required, as is close access to productive foraging areas; forages on inland marshes, lakes or rivers; winters on shallow coastal bays, inlets and estuaries	No	Not expected to occur	There is no suitable nesting or foraging habitat for this species within the Project Area. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Pelecanus occidentalis californicus</i> (nesting colonies & communal roosts)	California brown pelican	FDL/SDL, FP	Covered	Group 2	Forage in warm coastal marine and estuarine environments; in California, nests on dry, rocky offshore islands	No	Not expected to occur	There is no suitable nesting or foraging habitat for this species within the Project Area. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Phalacrocorax auritus</i> (nesting colony)	double-crested cormorant	None/WL	None	Group 2	Nests in riparian trees near ponds, lakes, artificial impoundments, slow-moving rivers, lagoons, estuaries and open coastlines; winter habitat includes lakes, rivers, and coastal areas	No	Not expected to occur	There is no suitable nesting or foraging habitat for this species within the Project Area; however, this species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Piranga rubra</i> (nesting)	summer tanager	None/SSC	None	Group 2	Nests and forages in mature desert riparian habitats dominated by cottonwoods and willows	No	Not expected to occur	There is no suitable nesting or habitat within the Project Area for this species. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Plegadis chihi</i> (nesting colony)	white-faced ibis	None/WL	Covered	Group 1	Nests in shallow marshes with areas of emergent vegetation; winter foraging in shallow lacustrine waters, flooded agricultural fields, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields and estuaries	No	Not expected to occur (nesting)	This species has not been observed within the Project Area, nor has it been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016). There is some grassland within the Project Area but this species is unlikely to occur.
<i>Progne subis</i> (nesting)	purple martin	None/SSC	None	Group 1	Nest and forages in woodland habitats including riparian, coniferous, and valley foothill and montane woodlands; in the Sacramento region often nests in weep holes under elevated freeways	No	Not expected to occur	There is no suitable nesting or foraging habitat within the Project Area for this species. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Pyrocephalus rubinus</i> (nesting)	vermillion flycatcher	None/SSC	None	Group 1	Nests in riparian woodlands, riparian scrub, and freshwater marshes; typical desert riparian with cottonwood, willow, mesquite adjacent to irrigated fields, ditches or pastures	No	Not expected to occur (nesting)	While this species is not in the records in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016), there are scattered records in surrounding areas to the north and south of the Project Area (Unitt 2004). It is a rare nesting species in San Diego County and with the limited riparian scrub within the Project Area, this species is not expected to occur.
<i>Rallus obsoletus levipes</i>	Ridgway's rail	FE/SE, FP	Covered	Group 1	Coastal wetlands, brackish areas, coastal saline emergent wetlands	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species nor has this species been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Riparia riparia</i> (nesting)	bank swallow	None/ST	None	Group 1	Nests in riparian, lacustrine and coastal areas with vertical banks, bluffs and cliffs with sandy soils; open country and water during migration	No	Not expected to occur	There is no suitable nesting habitat within the Project Area for this species. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Rynchops niger</i> (nesting colony)	black skimmer	BCC/SSC	None	Group 1	Nests on barrier beaches, shell banks, spoil islands and saltmarsh; forages over open water; roosts on sandy beaches and gravel bars	No	Not expected to occur	There is no suitable nesting or foraging habitat within the Project Area for this species. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Sternula antillarum browni</i> (nesting colony)	California least tern	FE/SE, FP	Covered	Group 1	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flat	No	Not expected to occur	There is not suitable nesting or foraging habitat for this species within the Project Area, however, this species has been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Strix occidentalis occidentalis</i>	California spotted owl	BCC/SSC	None	Group 1	Nests and forages in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats	No	Not expected to occur	There is no suitable nesting or foraging habitat within the Project Area for this species. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).

APPENDIX J-2 (Continued)

Scientific Name	Common Name	Status (Federal/ State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Habitat	Verified within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Synthliboramphus hypoleucus</i> (nesting colony)	Xantus' murrelet, Guadalupe murrelet	None/None	None	Group 2	Offshore waters; rare visitor to southern offshore waters in late summer and fall	No	Not expected to occur	The Project Area does not contain suitable habitat for this species nor has this species been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Thalasseus elegans</i> (nesting colony)	elegant tern	None/WL	Covered	Group 1	Inshore coastal waters, bays, estuaries and harbors; forages over open water	No	Not expected to occur	There is no suitable habitat within the Project Area for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Toxostoma bendirei</i>	Bendire's thrasher	BCC/SSC	None	Group 2	Nests and forages in desert succulent shrub and Joshua tree habitat in Mojave Desert; nests in yucca, cholla and other thorny scrubs or small trees	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, the Project Area does not contain suitable habitat for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Toxostoma crissale</i>	crissal thrasher	None/SSC	None	Group 1	Nests and forages in desert riparian and desert wash; dense thickets of sagebrush and other shrubs such as mesquite, iron catclaw acacia, and arrowweed willow within juniper and pinyon-juniper woodlands	No	Not expected to occur	The Project Area does not contain suitable habitat for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Toxostoma lecontei</i>	Le Conte's thrasher	BCC/SSC	None	Group 2	Nests and forages in desert wash, desert scrub, alkali desert scrub, desert succulent, and Joshua tree; nests in spiny shrubs or cactus	No	Not expected to occur	The Project Area does not contain suitable habitat for this species. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Vireo bellii pusillus</i> (nesting)	least Bell's vireo	FE/SE	Covered	Group 1	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	No	Low potential to occur	The riparian scrub within the Project Area is very small (less than 0.5 acre) and not suitable for this species. Least Bell's vireo was heard calling off site in Proctor Valley drainage once during surveys in July 2014. The lack of additional observations throughout the surveys indicates this species is not nesting within the Project Area. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Vireo vicinior</i> (nesting)	gray vireo	BCC/SSC	None	Group 1	Nests and forages in pinyon–juniper woodland, oak, and chamise and redshank chaparral	No	Low potential to occur	There is suitable chaparral habitat within the Project Area for this species. However, this species has not been recorded within the Project Area or in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
Invertebrates								
<i>Apodemia virgulti peninsularis</i>	Peninsular metalmark	None/None	None	Group 1	Meadows; larval host plant <i>Eriogonum wrightii</i> ssp. <i>membranaceum</i>	No	Not expected to occur	The Project Area does not contain suitable habitat for this species nor has the host plant been recorded within the Project Area. In addition, this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Ariolimax columbianus stramineus</i>	Palomar banana slug	None/None	None	Group 2	Moist forests; dark, damp habitats, such as under logs or other decomposing material	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species and this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Brennania belkini</i>	Belkin's dune tabanid fly	None/None	None	Group 2	Inhabits coastal sand dunes of Southern California	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species and this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Callophrys thornei</i>	Thorne's hairstreak	None/None	Covered	Group 1	Interior cypress woodland dominated by host plant <i>Hesperocyparis forbesii</i> (Tecate cypress)	No	Not expected to occur	The Project Area does not contain suitable habitat for this species nor has the host plant been recorded within the Project Area. However, this species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Cicindela gabbii</i>	western tidal-flat tiger beetle	None/None	None	Group 2	Inhabits estuaries and mudflats along the coast of Southern California	No	Not expected to occur	The Project Area does not contain suitable habitat for this species. This species has been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> along the coast (CDFW 2016).



## APPENDIX J-2 (Continued)

Scientific Name	Common Name	Status (Federal/State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Habitat	Verified within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Cicindela hirticollis gravida</i>	sandy beach tiger beetle	None/None	None	Group 2	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico	No	Not expected to occur	The Project Area does not contain suitable habitat for this species. This species has been recorded in the CNDDB 9-quadrangle search <sup>2</sup> along the coast (CDFW 2016).
<i>Cicindela latesignata latesignata</i> (=obliviosa)	western beach tiger beetle	None/None	None	Group 2	Inhabited the Southern California coastline, from La Jolla north to the Orange County line; occupied saline mudflats and moist sandy spots in estuaries of small streams in the lower zone; has not been observed in 20 years; the oblivious tiger beetle ( <i>C. l. obliviosa</i> ) is no longer the accepted name for this species (ITIS 2016)	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species, however this species has been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Cicindela senilis frosti</i>	senile tiger beetle	None/None	None	Group 2	Inhabits marine shoreline, from Central California coast south to salt marshes of San Diego; also found at Lake Elsinore	No	Not expected to occur	The Project Area does not contain suitable habitat for this species. This species has been recorded in the CNDDB 9-quadrangle search <sup>2</sup> along the coast (CDFW 2016).
<i>Cicindela trifasciata sigmoidea</i>	mudflat tiger beetle	None/None	None	Group 2	Has been identified along the fringe of a mudflat and low marsh habitat in San Diego County	No	Not expected to occur	The Project Area does not contain suitable habitat for this species. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Coelus globosus</i>	globose dune beetle	None/None	None	Group 1	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has been recorded in the CNDDB 9-quadrangle search <sup>2</sup> along the coast (CDFW 2016).
<i>Euphyes vestris harbisoni</i>	Harbison dun skipper	None/None	None	Group 1	Oak riparian drainages and adjacent seeps supporting host plant <i>Carex spissa</i>	No	Not expected to occur	There is no suitable habitat for this species within the Project Area and the host plant has not been observed within the Project Area. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Helminthoglypta traskii coelata</i>	Peninsular Range shoulderband snail	None/None	None	Group 2	Wet habitats	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species and this species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Linderiella occidentalis</i>	California linderiella	None/None	None	Group 1	Cool soft-water vernal pools in grasslands below 1,000 feet above mean sea level (amsl)	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species and this species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Megathymus yuccae harbisoni</i>	yucca giant skipper	None/None	None	Group 2	Coastal dunes, open yucca flats, desert canyons, open woodland, grassland, and old fields; host plant is <i>Yucca schidigera</i> ; record from eastern San Diego County near Scissors Crossing, Anza-Borrego Desert State Park	No	Not expected to occur	There is suitable grassland habitat present for this species however the host plant has not been observed. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Papilio multicaudata</i>	two-tailed swallowtail	None/None	None	Group 1	Semi-arid canyon land, mid-level mountains, canyon bottoms; groves, parks, roadsides	No	Low potential to occur	There is marginal habitat present for this species. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Phobetus robinsoni</i>	Robinson's rain beetle	None/None	None	Group 2	Unknown	No	Not expected to occur	This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Plebejus saepiolus hilda</i>	Hilda greenish blue	None/None	None	Group 1	Grassy meadow, near small pond; oviposit on <i>Trifolium wormskioldii</i> ; in San Bernardino Mountains	No	Not expected to occur	There is no suitable habitat for this species within the Project Area and the host plant has not been observed within the Project Area. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Pyrgus ruralis lagunae</i>	Laguna Mountains skipper	FE/None	None	Group 1	Restricted to montane meadows of Laguna Mts. and Mt. Palomar	No	Not expected to occur	The site is outside of the species' known geographic range. In addition, Project Area does not contain suitable habitat for this species and this species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).

## APPENDIX J-2 (Continued)

Scientific Name	Common Name	Status (Federal/State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Habitat	Verified within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE/None	Covered	Group 1	Vernal pools, non-vegetated ephemeral pools	No	Low potential to occur	This species has not been recorded during any of the fairy shrimp/vernal pool surveys conducted within the Project Area. Pools within the Project Area appear to be too shallow for Riverside fairy shrimp. Additionally, this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Trigonoscuta blaisdelli</i>	Blaisdell trigonoscuta weevil	None/None	None	Group 2	<i>Trigonoscuta</i> sp.: coastal, desert, or inland sand dunes; wide variety of plant types used; the larvae feed on the roots and the adults on the leaves	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Tryonia imitator</i>	mimic tryonia (=California brackishwater snail)	None/None	None	Group 2	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. However, this species has been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Mammals</i>								
<i>Bassariscus astutus</i>	ringtail	None/FP	None	Group 2	Mixed forests and shrublands near rocky area or riparian habitats; forages near water and is seldom found more than 1 km (0.62 mi) from a water source	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Chaetodipus fallax pallidus</i>	pallid San Diego pocket mouse	None/SSC	None	Group 2	Desert wash, desert scrub, desert succulent scrub and pinyon-juniper woodland	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Choeronycteris mexicana</i>	Mexican long-tongued bat	None/SSC	None	Group 2	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland; roosts in caves, mines, and buildings	No	Not expected to occur	The Project Area is outside of the known range of this species and there is no suitable habitat within the Project Area. However, this species has been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None/PST, SSC	None	Group 2	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, also man-made structures and tunnels	No	Low to moderate potential to forage	There is suitable foraging within the Project Area for this species in the riparian habitat. There are no caves, undercrossings, or manmade structures within the Project Area for roosting. This species has been recorded in the Jamul Mountains quadrangle (CDFW 2016). No typical roost sites are on the Project Area.
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FE/ST	None	Group 1	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover or in disturbed areas	No	Low potential to occur	While suitable habitat is present within the Project Area, this species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Lasiurus xanthinus</i>	western yellow bat	None/SSC	None	None	Valley foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet amsl; roost in riparian and palms	No	Not expected to occur	There is no suitable habitat for this species within the Project Area, however, this species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Myotis melanorhinus</i>	dark-nosed small-footed myotis	None/None	None	Group 2	Arid woodlands and shrublands, but near water; roosts in caves, crevices, mines, abandoned buildings	No	Low potential to occur	There is potential suitable foraging habitat for this species within the Project Area in proximity to open water (Upper Otay Lake and Lower Otay Lake) and ephemeral water sources during wet periods. There is no suitable roosting habitat within the Project Area. This species has been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Myotis evotis</i>	long-eared myotis	None/None	None	Group 2	Nearly all brush, woodland, and forest habitats from sea level to 9,000 feet amsl, but prefers coniferous habitats; forages along habitat edges, in open habitats, and over water; roosts in buildings, crevices, under bark, and snags; caves are used as night roosts	No	Not expected to occur	There is no suitable habitat for this species within the Project Area; however, this species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).

APPENDIX J-2 (Continued)

Scientific Name	Common Name	Status (Federal/ State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Habitat	Verified within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Myotis thysanodes</i>	fringed myotis	None/None	None	Group 2	Primarily drier woodlands, including oak, pinyon-juniper, ponderosa pine, and also desert scrub, mesic coniferous forest, grassland, and sage-grass steppe from sea level to 9,350 feet amsl; roosts in crevices in buildings, mines, rocks, cliff faces, and bridges, and large, decadent trees and snags	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Myotis volans</i>	long-legged myotis	None/None	None	Group 2	Primarily coniferous forests, but also seasonally in riparian and desert habitats; roosts in crevices in cliffs, caves, mines, buildings, exfoliating tree bark, and snags	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	None/SSC	None	Group 2	Grassland and sparse coastal scrub	No	Low potential to occur	Although there is suitable habitat present, this species has not been observed in the Project Area. The species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016). The nearest occurrences are located approximately 30 miles to the east/northeast.
<i>Ovis canadensis nelsoni</i>	Nelson's bighorn sheep	None/FP	None	Group 1	Steep slopes and cliffs, rough and rocky topography, sparse vegetation; also canyons, washes and alluvial fans	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	None/SSC	None	Group 2	Lower elevation grassland, alluvial sage scrub, and coastal scrub	No	Low potential to occur	Although there is suitable habitat present, this species has not been observed in the Project Area. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016). The nearest occurrence, recorded in 1909, is located approximately 40 miles northeast.
<i>Perognathus longimembris internationalis</i>	Jacumba pocket mouse	None/SSC	None	Group 2	Desert scrub and sparse sage scrub in areas with fine sandy soils	No	Low potential to occur	Although there is marginal habitat present, this species has not been observed in the Project Area. The species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016). The nearest occurrence is located approximately 30 miles northeast in San Felipe Valley.
<i>Perognathus longimembris pacificus</i>	Pacific pocket mouse	FE/SSC	None	Group 1	Fine-grain sandy substrates in open coastal strand, coastal dunes and river alluvium	No	Not expected to occur	There is suitable habitat for this species within the Project Area; however, the species has not been observed in the Project Area. This species has not been recorded in the Jamul Mountains quadrangle, but is documented in surrounding quadrangles <sup>2</sup> (CDFW 2016).
Reptiles								
<i>Actinemys marmorata</i>	western pond turtle	None/SSC	Covered	Group 1	Slow-moving permanent or intermittent streams, ponds, small lakes, reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	No	Not expected to occur	There is no suitable habitat for this species within the Project Area; however, this species has been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Chelonia mydas</i>	green turtle	FT/None	None	None	Shallow waters of lagoons, bays, estuaries, mangroves, eelgrass and seaweed beds	No	Not expected to occur	There is no suitable habitat for this species within the Project Area; however, this species has been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Coleonyx switaki</i>	Switak's banded gecko	None/ST	None	Group 2	Rocklands, especially massive rocks and rock formations at the heads of canyons	No	Not expected to occur	This species is restricted to eastern San Diego County. This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Lampropeltis zonata (pulchra)</i>	California mountain kingsnake (San Diego population)	None/WL	None	Group 2	Habitat generalist found in habitats ranging from conifer forest, oak–pine woodlands, riparian woodland, chaparral, manzanita and coastal scrub	No	Low potential to occur	Suitable vegetation and rock outcrops present. Closest species detection in Cleveland National Forest, approximately 19 miles northeast of site (in 1989; CDFW 2016). This species has not been recorded in the CNDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).

APPENDIX J-2 (Continued)

Scientific Name	Common Name	Status (Federal/ State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Habitat	Verified within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Phrynosoma mcallii</i>	flat-tailed horned lizard	None/PSE, SSC	None	Group 1	Desert washes and flats with sparse low-diversity vegetation cover and sandy soils	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDb 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Sauromalus ater</i>	common chuckwalla	None/None	None	Group 2	Rock-dwelling, sheltering in rock crevices or under rocks; inhabits rocky flats and hillsides in the Mojave and Colorado Deserts; found in creosote bush habitats; sea level to 1,800 meters (5,905 feet) amsl	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDb 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Sceloporus graciosus vandenburgianus</i>	southern sagebrush lizard	None/ None	None	Group 2	Montane chaparral, hardwood and conifer forest, juniper, coastal scrub	No	Not expected to occur	While there is no suitable habitat within the Project Area in the coastal scrub habitat, this species is known to occur further east in higher elevations (Nafis 2017). This species has not been recorded in the CNDDb 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Thamnophis hammondi</i>	two-striped gartersnake	None/SSC	None	Group 1	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	No	Not expected to occur	There is no suitable habitat for this species within the Project Area; however, this species has been recorded in the Jamul Mountains quadrangle (CDFW 2016).
<i>Thamnophis sirtalis</i> ssp. (Coastal plain from Ventura Co. to San Diego Co., from sea level to about 850 m.)	south coast gartersnake	None/SSC	None	Group 2	Marsh and upland habitats near permanent water and riparian vegetation	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDb 9-quadrangle search <sup>2</sup> (CDFW 2016).
Fish								
<i>Cyprinodon macularius</i>	desert pupfish	FE/SE	None	Group 2	Desert springs, small streams, and marshes below 1,515 meters (5,000 feet) amsl; tolerates high salinities, high water temperatures, and low dissolved-oxygen concentrations	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDb 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Eucyclogobius newberryi</i>	tidewater goby	FE/SSC	None	Group 1	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego Co. to the mouth of the Smith River	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDb 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Gasterosteus aculeatus williamsoni</i>	unarmored threespine stickleback	FE/SE, FP	None	Group 2	Slow-moving and backwater areas	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDb 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Gila orcuttii</i>	arroyo chub	None/SSC	None	Group 1	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDb 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Oncorhynchus mykiss irideus</i>	southern steelhead – southern California DPS	None/SSC	None	Group 1	Clean, clear, cool well-oxygenated streams; needs relatively deep pools in migration and gravelly substrate to spawn	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDb 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Oncorhynchus mykiss irideus</i>	steelhead – central California coast DPS	None/SSC	None	Group 1	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDb 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Oncorhynchus mykiss irideus</i>	steelhead – Central Valley DPS	None/SSC	None	Group 1	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDb 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Oncorhynchus mykiss irideus</i>	steelhead – northern California DPS	None/SSC	None	Group 1	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDb 9-quadrangle search <sup>2</sup> (CDFW 2016).

APPENDIX J-2 (Continued)

Scientific Name	Common Name	Status (Federal/State) <sup>1</sup>	San Diego South County MSCP <sup>1</sup>	San Diego County <sup>1</sup>	Habitat	Verified within the Project Area <sup>1</sup> (Direct/Indirect Evidence)	Potential to Occur within the Project Area	Status Within the Project Area or Potential to Occur
<i>Oncorhynchus mykiss irideus</i>	steelhead – south/central California coast DPS	None/SSC	None	Group 1	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).
<i>Oncorhynchus mykiss irideus</i>	summer-run steelhead trout	None/SSC	None	Group 1	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead	No	Not expected to occur	There is no suitable habitat for this species within the Project Area. This species has not been recorded in the CNDDDB 9-quadrangle search <sup>2</sup> (CDFW 2016).

<sup>1</sup> **Status Designations:**  
**Federal**  
FC: candidate for federal listing as threatened or endangered  
(FD): federally delisted; monitored for 5 years  
FE: federally listed endangered  
FT: federally listed as threatened  
**State:**  
SSC: California special concern species  
FP: California Department of Fish and Wildlife fully protected species  
WL: California Department of Fish and Wildlife watch list species  
SE: state listed as endangered  
ST: state listed as threatened  
CDF: California Department of Forestry sensitive species  
PST: proposed state threatened  
PSE: proposed state endangered  
**San Diego South County MSCP:**  
Covered: species covered under the MSCP  
None: no coverage under the MSCP  
**County of San Diego Designations:**  
Group 1 County of San Diego Sensitive Animal List  
Group 2 County of San Diego Sensitive Animal List

<sup>2</sup> Records within the Jamul Mountains and surrounding eight quadrangles: La Mesa, El Cajon, Alpine, National City, Dulzura, Imperial Beach, Otay Mesa, and Otay Mountain quadrangles (CDFW 2016).

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# **APPENDIX K**

## ***Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report***





**Land Exchange Alternative  
Otay Ranch RMP and MSCP Preserve Status Report  
San Diego County, California**

*Lead Agency:*

**County of San Diego  
Planning and Development Services**

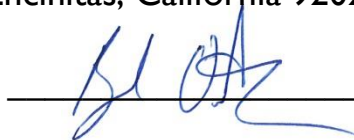
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**FEBURARY 2018**



# Land Exchange Alternative Otay Ranch RMP/MSCP Preserve Status Report

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## ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
BCC	Bird of Conservation Concern
BRCA	Biological Resource Core Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNPS	California Native Plant Society
County	San Diego County
CRPR	California Rare Plant Rank
FP	Fully Protected
GDP	General Development Plan
LDA	Limited Development Area
MSCP	Multiple Species Conservation Program
RMP	Resource Management Plan
SRP	Subregional Plan
SSC	species of special concern
USFWS	U.S. Fish and Wildlife Service
WL	Watch List



# Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report

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# Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report

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## 1 INTRODUCTION

### 1.1 Purpose of the Report

The purpose of this Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report is to describe the existing conditions of biological resources within the designated Preserve Areas in Otay Ranch Village 14 and Planning Areas 16/19 (Land Exchange Alternative). These biological resources include vegetation communities, jurisdictional resources, special-status plants, special-status wildlife, and wildlife movement. This Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report is adopted in accordance with the Otay Ranch RMP guidelines stating “status reports shall be submitted with each SPA to ensure long-term documentation of population status” (Policies 2.6 through 2.8; City of Chula Vista and County of San Diego 1993b).

### 1.2 Village 14 and Planning Areas 16/19 Otay Ranch RMP and MSCP Preserve Location

The Land Exchange Alternative encompasses 2,387.7 acres, including approximately 1,002.6 acres within Otay Ranch Village 14, 1,344.8 acres within Planning Areas 16/19, and 40.2 acres of off-site improvements is located in Otay Ranch, southwest of Jamul and northeast of Bonita (Land Exchange Area) (Figure 1-1). The Otay Reservoir is located to the south and open space borders to the northwest and southeast. Specifically, the Otay Ranch Village 14 and Planning Areas 16/19 is located primarily southeast of Proctor Valley Road, within the Jamul Mountains U.S. Geological Survey 7.5-minute quadrangle; Township 17 South; Ranges 1 East and 1 West; Sections 8, 9, 16, 17, 18, 19, 20, 25, and 30 (Figure 1-2). The approximate center of Otay Ranch Village 14 and Planning Areas 16/19 is located at a latitude and longitude of 32°40'57" north and 116°54'24" west.

Otay Ranch Village 14 and Planning Areas 16/19 are part of the overall Otay Ranch, an approximately 23,000-acre master-planned community in southern San Diego County designed as a series of villages and planning areas. Village 14 and Planning Areas 16/19 are located in unincorporated southwestern San Diego County (County) (Figure 1-1, Regional Map, and Figure 1-2, Vicinity Map). In 1993, the County of San Diego, in cooperation with the City of Chula Vista, adopted the *Otay Ranch City of Chula Vista General Development Plan/County of San Diego Otay Subregional Plan*, Volume II (Otay Ranch GDP/SRP) (City of Chula Vista and County of San Diego 1993a). The Otay Ranch GDP/SRP plans land use in Otay Ranch and designates parcels for residential development or Otay Ranch RMP Preserve, including parcels that are part of the Village 14 and Planning Areas 16/19. The Otay Ranch RMP Phase I is a comprehensive planning document that addresses the preservation, enhancement, and

## Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report

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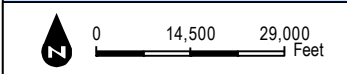
management of sensitive natural and cultural resources on the 22,899-acre Otay Ranch property and was designed specifically for Otay Ranch. The RMP and the 11,375-acre Otay Ranch RMP Preserve serve as the basis for mitigation of biological impacts identified in the Otay Ranch GDP/SRP Final Program EIR (Otay Ranch PEIR (City of Chula Vista and County of San Diego 1993c); Implementing Agreement Section 10.5.2). The RMP includes conveyance procedures for dedicating parcels of land to the Otay Ranch RMP Preserve and establishes an obligation for each new development to convey its fair share of the Preserve. Otay Ranch is also located within the boundaries of the MSCP Plan (1998), which is a comprehensive multi-jurisdictional habitat conservation planning program for the southwestern portion of San Diego County.

Implementation of the Land Exchange Alternative would result in conveyance of 654.8 acres to the Otay Ranch RMP Preserve. The development of Land Exchange Alternative is discussed in the *Biological Resources Technical Report for the Otay Ranch Village 14 and Planning Areas 16/19 Land Exchange Alternative*. This report focuses on the Otay Ranch RMP and MSCP Preserve within the boundaries of Village 14 and Planning Areas 16/19.

### 1.3 Description of the Land Exchange Alternative

The Land Exchange Alternative reflects the applicant's ownership within Village 14 and Planning Areas 16/19 as well as CDFW's ownership in Village 14 and Planning Areas 16/19, which remains approved for development per the County's general plan and the Otay Ranch GDP/SRP. In addition, there is an area of Village 14 commonly known as the "Inverted L," which is excluded from the Land Exchange Alternative because it is not owned by the applicant; it was acquired by the USFWS and Otay Water District for conservation purposes; and it is located in the City of Chula Vista.

The Land Exchange Alternative limits development to Village 14 and converts the majority of development approved by the Otay Ranch GDP/SRP in Planning Areas 16/19 to preserve land that would be managed either by the Otay Ranch Preserve Owner/Manager or State. The Land Exchange Alternative includes of a land exchange agreement with the State of California and a simultaneous boundary adjustment to the MSCP and Otay Ranch RMP Preserve systems.



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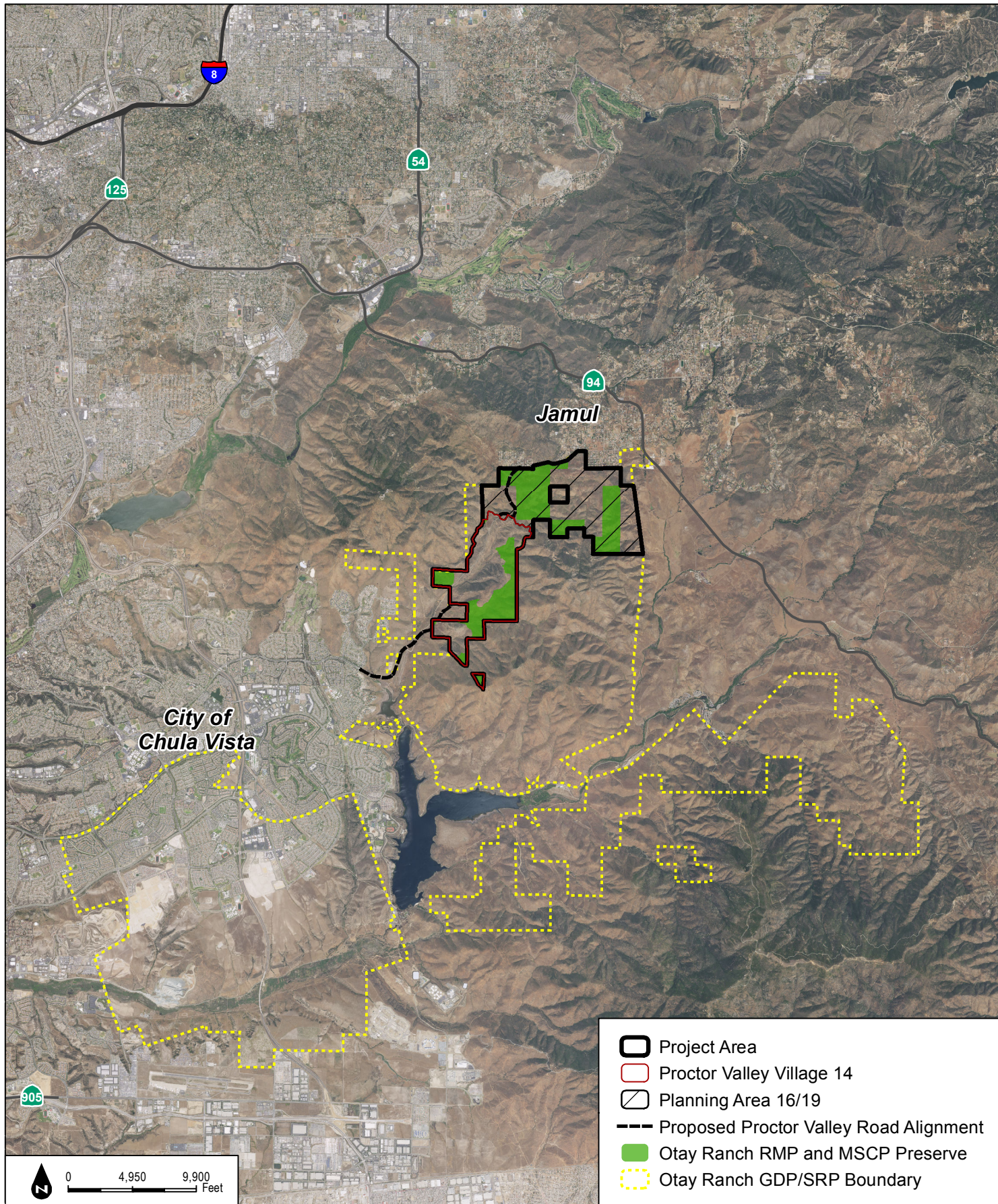
Otay Ranch Village 14 and Planning Area 16/19 - Land Exchange Alternative Preserve Status Report

## **Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report**

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- Project Area
- Proctor Valley Village 14
- Planning Area 16/19
- Proposed Proctor Valley Road Alignment
- Otay Ranch RMP and MSCP Preserve
- Otay Ranch GDP/SRP Boundary

FIGURE 1-2  
Vicinity Map

SOURCE: NAIP 2016; Hunsaker 201; County of San Diego 1997

Otay Ranch Village 14 and Planning Area 16/19 - Land Exchange Alternative Preserve Status Report



## **Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report**

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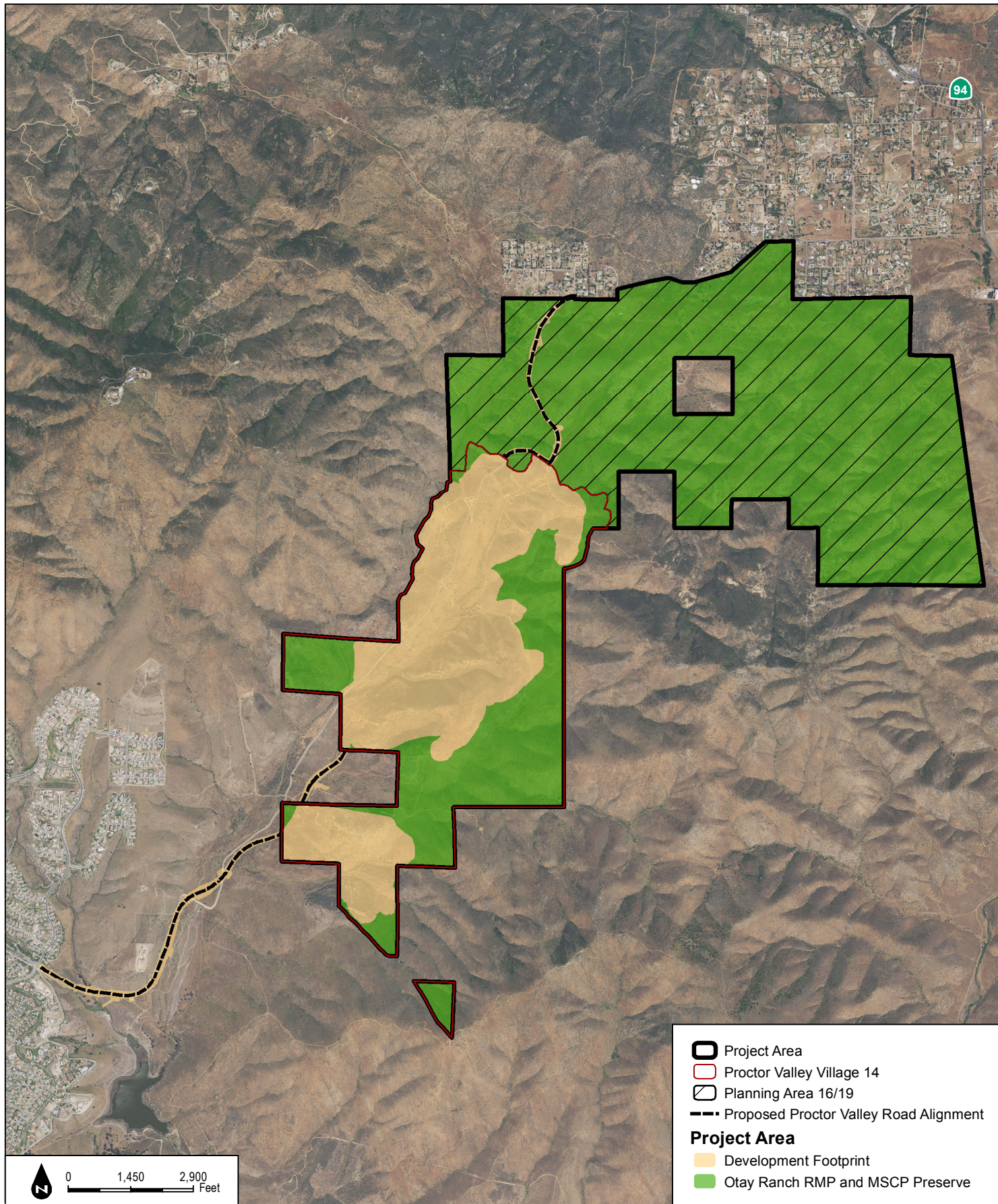


FIGURE 1-3  
Project Area

SOURCE: NAIP 2016; Hunsaker 2017

Otay Ranch Village 14 and Planning Area 16/19 - Land Exchange Alternative Preserve Status Report



## **Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report**

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## Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report

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Specifically, the Land Exchange Alternative proposes to:

- Exchange 278 acres owned by the state in Village 14 for 278 acres owned by the applicant in Planning Area 16.
- Change MSCP/Otay Ranch RMP Preserve boundaries via a boundary adjustment where approximately 169.8 acres of designated development in Planning Areas 16/19 are converted to Otay Ranch RMP Preserve and 142.3 acres of designated development in Village 14 are converted to Otay Ranch RMP Preserve. In addition 43.6 acres of designated Otay Ranch RMP Preserve in Village 14 are converted to development. The boundary adjustment would result in a net increase in preserve of 268.5 acres.

The Land Exchange Alternative contemplates a Specific Plan, General Plan Amendments, EIR, Rezone, Tentative Map, the Otay Ranch RMP Amendment, and MSCP County of San Diego Subarea Plan (MSCP County Subarea Plan) South County Segment Boundary Adjustment. The mitigation for the Land Exchange Alternative is governed by the terms of the Otay Ranch Resource Management Plan (RMP) and includes conveyance of Preserve land at a ratio of 1.188 for a total of 654.8 acres. The Land Exchange Alternative shall convey 403.9 acres within Village 14 and 276.3 acres within Planning Areas 16/19 for a total of 680.2 acres of conveyance. The total Otay Ranch RMP and MSCP Preserve (i.e., Preserve) associated with the Land Exchange Alternative is 1,732.4 acres, which includes 3.0 acres associated with development of a water tank within Village 14 and 16.2 acres of development associated with Proctor Valley Road North.

## **Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report**

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# Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report

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## 2 ENVIRONMENTAL SETTING

### 2.1 Existing Conditions

The entire Land Exchange Alternative is undeveloped. The on-site elevation ranges between 590 and 1,200 feet above mean sea level (amsl). The site is diverse in topography and contains a flat valley along Proctor Valley Road and rolling hills within the remainder of the site. The Land Exchange Alternative is bordered by San Miguel Mountain and the Jamul Mountains immediately to the northwest and southeast with the foothills of these mountains encroaching into the Land Exchange Alternative. The two eastern portions of Planning Area 16 are located within portions of the Jamul Mountains and contain the highest elevations. Preserve occurs throughout Village 14, and Planning Areas 16/19 (Figure 1-3).

Nineteen soil types in nine soil series occur within the Preserve: Cieneba coarse sandy loam, 15% to 30% slopes, eroded; Cieneba very rocky coarse sandy loam, 30% to 75% slopes; Escondido very fine sandy loam, 9% to 15% slopes, eroded; Fallbrook sandy loam, 9% to 15% slopes, eroded; Friant rocky fine sandy loam, 30% to 70% slopes; Friant rocky fine sandy loam, 9% to 30% slopes; Olivenhain cobbly loam, 2% to 9% slopes; Olivenhain cobbly loam, 9% to 30% slopes; Placentia sandy loam, 2% to 9% slopes; Placentia sandy loam, 5% to 9% slopes, eroded; Placentia sandy loam, thick surface, 2% to 9% slopes; Ramona sandy loam, 9% to 15% slopes, eroded; Riverwash; San Miguel-Exchequer rocky silt loams, 9% to 70% slopes; Visalia gravelly sandy loam, 2% to 5% slopes; Visalia sandy loam, 2% to 5% slopes; Visalia sandy loam, 5% to 9% slopes; Vista rocky coarse sandy loam, 5% to 15% slopes; and Wyman loam, 2% to 5% slopes (USDA 2014). Of those soil types, the Olivenhain and San Miguel are known to support special-status plant species.

### 2.2 Habitat Types/Vegetation Communities

The Preserve within the Land Exchange Alternative is dominated by chaparral and sage scrub, with some representation of grassland. Various wetland plant communities also occur in the Preserve. The vegetation communities and land cover types within the Preserve are described below. Acreages are presented in Table 1. Spatial distributions of vegetation communities are presented in Figure 2-1, Biological Resources – Legend, and Figures 2-1A through 2-1V, Biological Resources.

In September 2010, the California Department of Fish and Wildlife (CDFW) published the *List of California Vegetation Alliances and Associations* (CDFG 2010), which uses the scientific name of the dominant species in that alliance as the alliance name and includes a global and state rarity rank based on the NatureServe Standard Heritage Program methodology (NatureServe

## Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report

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2014). The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers have the following meaning (NatureServe 2014):

- 1 = critically imperiled
- 2 = imperiled
- 3 = vulnerable to extirpation or extinction
- 4 = apparently secure
- 5 = demonstrably widespread, abundant, and secure

For example, G1 would indicate that a vegetation community is critically imperiled across its entire range (i.e., globally). A rank of S3 would indicate the vegetation community is vulnerable and at moderate risk within a particular state or province, although it may be more secure elsewhere (NatureServe 2014). Because NatureServe ranks vegetation communities at the global level, they have few rankings at the state level available. However, the List of California Vegetation Alliances and Associations (CDFG 2010) includes state-level rarity rankings (i.e., the subnational (S) rank) for vegetation communities. The List of California Vegetation Alliances and Associations (CDFG 2010) is considered the authority for ranking the conservation status of vegetation communities in California.

**Table 1**  
**Vegetation Communities and Land Cover Types within**  
**Otay Ranch RMP Preserve/MSCP Preserve**

Habitat Types/Vegetation Communities	Code <sup>a</sup>	Village 14	Planning Areas 16/19	Total <sup>b</sup>
<i>Sensitive Upland Communities</i>				
Granitic chamise chaparral	37210	91.3	66.5	157.8
Granitic southern mixed chaparral	37121	—	107.7	107.7
Diegan coastal sage scrub	32500	264.5	942.7	1,207.2
Diegan coastal sage scrub (disturbed)	32500	38.5	20.9	59.4
Non-native grassland	42200	3.2	168.0	171.2
Coast live oak woodland	71160	—	1.1	1.1
<i>Subtotal of Sensitive Upland Communities</i>		394.5	1,306.9	1,901.4
<i>Jurisdictional Aquatic Resources</i>				
Alkali seep	45320	—	0.5	0.5
Cismontane alkali marsh (including disturbed)	52310	1.1	6.8	7.9
Mulefat scrub	63310	0.2	0.4	0.6
Southern coast live oak riparian forest	61310	0.7	—	0.7

# Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report

**Table 1**  
**Vegetation Communities and Land Cover Types within**  
**Otay Ranch RMP Preserve/MSCP Preserve**

Habitat Types/Vegetation Communities	Code <sup>a</sup>	Village 14	Planning Areas 16/19	Total <sup>b</sup>
Southern willow scrub	63320	—	0.3	0.3
Open water	64100	—	2.0	2.0
Unvegetated channel <sup>c</sup>	64200	See Section 2.3	See Section 2.3	—
<i>Subtotal of Jurisdictional Aquatic Resources</i>		2.0	10.0	12.0
<i>Non-Sensitive Communities and Land Covers</i>				
Eucalyptus woodland	79100	—	2.7	2.7
Urban/developed	12000	0.1	0.7	0.8
Disturbed habitat	11300	4.3	8.3	12.6
<i>Subtotal of Non-Sensitive Communities and Land Covers</i>		4.4	11.7	16.1
<b>Total<sup>c</sup></b>		<b>403.9</b>	<b>1,328.5</b>	<b>1,732.4</b>

<sup>a</sup> Oberbauer et al. 2008.

<sup>b</sup> May not total due to rounding.

<sup>c</sup> Unvegetated stream channel is also an overlay within various vegetation communities and is therefore not fully represented in this table. See Section 2.3.

Note that there are 3.0 acres of impacts to Otay Ranch RMP Preserve within Village 14 associated with the water tank and 16.2 acres of impacts associated with development of Proctor Valley Road North.

## Granitic Chamise Chaparral (37210)

Granitic chamise chaparral contains shrubs, overwhelmingly dominated by chamise, from 3 to 10 feet tall, with little cover provided by other species. Stump sprouting allows this vegetation to adapt to repeated fires. Chamise chaparral typically occurs on dry slopes and ridges (Holland 1986). The chamise chaparral alliance is ranked by CDFW as a G5S5 alliance (CDFG 2010). This ranking indicates that globally and within California the alliance is widespread, abundant, and is considered secure (CDFG 2010; NatureServe 2014).

Granitic chamise chaparral (including disturbed forms) occurs within Preserve areas in Village 14 and Planning Areas 16/19 (Figures 2-1 and 2-1A through 2-1V) and is typically characterized by a relatively monotypic stand of chamise with some diversity of other shrubs and herbaceous cover. Areas where native species were co-dominant with non-native grasses were mapped as disturbed granitic chamise chaparral.

## Granitic Southern Mixed Chaparral (37121)

Granitic southern mixed chaparral (37121) is characterized by broad-leaved sclerophyll shrubs ranging from 5 to 10 feet in height (Oberbauer et al. 2008). Granitic southern mixed chaparral is



## Land Exchange Alternative Otay Ranch RMP and MSCP Preserve Status Report

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characterized by chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos* spp.), white fairy-lantern (*Calochortus albus*), ceanothus (*Ceanothus* spp.), and other species with patches of bare soil. This habitat often occurs on dry, rocky, often steep slopes with little soil and moderate temperatures. Areas mapped as southern mixed chaparral are dominated by chamise. The *Adenostoma fasciculatum* (chamise) alliance has a rank of G5S5 by CDFW (CDFG 2010; NatureServe 2014), meaning it is globally secure and secure in the state.

Areas mapped as southern mixed chaparral are dominated by chamise, laurel sumac (*Malosma laurina*), woolyleaf ceanothus (*Ceanothus tomentosus*), scrub oak (*Quercus berberidifolia*), and toyon (*Heteromeles arbutifolia*). Granitic southern mixed chaparral occurs within the Planning Areas 16/19 Preserve (Figures 2-1 and 2-1A through 2-1V).

### **Diegan Coastal Sage Scrub (32500)**

Diegan coastal sage scrub is the most widespread coastal sage scrub in coastal Southern California from Los Angeles into Baja California (Oberbauer et al. 2008). The community mostly consists of drought-deciduous species such as California sagebrush (i.e., coastal sagebrush), Eastern Mojave buckwheat, white sage (*Salvia apiana*), laurel sumac, and black sage (*Salvia mellifera*). Diegan coastal sage scrub is typical on low moisture-available sites, such as steep, xeric slopes or clay-rich soils that release stored water slowly. This community integrates with types of chaparral at higher elevations. The *Artemisia californica* (California sagebrush scrub) alliance has a rank of G5S5 in CDFW (CDFG 2010; NatureServe 2014) meaning it is globally secure and secure in the state. Diegan coastal sage scrub is also the primary habitat preferred by the coastal California gnatcatcher (*Poliophtila californica californica*), which is federally threatened, a state species of special concern (SSC), and an MSCP Covered Species.