appendix B

SUPPORTING DATA

Table B-1. Summary of quarterly water quality parameters by depth strata and season during 2013-14.

Orange County Sanitation District, California.

Depth (m)	Summer 2013				Fall 2013				Winter 2014				Spring 2014				Annual			
	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev
Temperature (°C)																				
1-15	13.47	17.23	19.75	1.42	15.04	17.14	18.92	1.31	14.29	15.71	17.01	0.53	13.07	16.84	19.77	1.30	13.07	16.74	19.77	1.34
16-30	10.97	13.93	18.50	1.22	12.63	15.26	18.79	1.26	13.43	15.09	16.24	0.54	11.19	13.57	18.16	1.37	10.97	14.45	18.79	1.36
31-45	10.43	12.04	14.50	0.71	11.95	13.20	16.55	0.79	11.29	13.75	15.65	0.89	10.31	11.33	14.15	0.45	10.31	12.56	16.55	1.19
46-60	10.11	11.07	12.50	0.59	11.54	12.31	14.05	0.41	10.81	12.40	14.39	0.78	10.10	10.64	11.39	0.25	10.10	11.60	14.39	0.94
61-75	10.03	10.71	12.09	0.52	11.27	11.75	12.83	0.30	10.33	11.65	12.95	0.71	9.85	10.30	10.76	0.17	9.85	11.10	12.95	0.77
76-90	10.11	10.55	11.25	0.38	11.33	11.50	11.77	0.14	11.28	11.81	12.35	0.35	9.77	9.95	10.51	0.17	9.77	10.50	12.35	0.78
All	10.03	13.86	19.75	2.73	11.27	14.69	18.92	2.28	10.33	14.30	17.01	1.60	9.77	13.39	19.77	2.77	9.77	14.05	19.77	2.45
delta T (°C)																				
1-15	-0.57	0.18	2.03	0.23	-0.06	0.05	1.13	0.13	-0.12	0.03	0.36	0.04	-0.23	0.13	1.21	0.17	-0.57	0.10	2.03	0.17
16-30	-0.12	0.21	1.47	0.21	-0.06	0.19	1.66	0.22	-0.03	0.07	0.59	0.09	-0.20	0.26	2.02	0.24	-0.20	0.18	2.02	0.21
31-45	-0.15	0.09	0.66	0.11	-0.11	0.08	0.88	0.10	-0.07	0.11	0.65	0.10	-0.12	0.07	0.50	0.08	-0.15	0.09	0.88	0.10
46-60	-0.06	0.03	0.34	0.05	-0.08	0.04	0.29	0.04	-0.17	0.06	0.47	0.07	-0.17	0.03	0.22	0.03	-0.17	0.04	0.47	0.05
61-75	-0.01	0.02	0.18	0.02	-0.09	0.03	0.25	0.04	-0.03	0.04	0.31	0.05	-0.03	0.01	0.08	0.02	-0.09	0.03	0.31	0.03
76-90	0.02	0.03	0.03	0.01	0.00	0.02	0.07	0.03	0.01	0.03	0.07	0.02	-0.03	0.01	0.06	0.02	-0.03	0.01	0.07	0.02
All	-0.57	0.13	2.03	0.19	-0.11	0.09	1.66	0.16	-0.17	0.06	0.65	0.08	-0.23	0.13	2.02	0.18	-0.57	0.10	2.03	0.16
Density (kg/m^3)																				
1-15	23.74	24.34	25.11	0.30	24.02	24.39	24.85	0.29	24.10	24.66	24.92	0.13	23.72	24.41	25.14	0.30	23.72	24.45	25.14	0.29
16-30	24.09	25.03	25.64	0.24	24.04	24.74	25.22	0.23	24.50	24.78	25.08	0.10	24.10	25.09	25.58	0.28	24.04	24.91	25.64	0.27
31-45	24.95	25.42	25.82	0.14	24.49	25.10	25.38	0.15	24.69	25.02	25.54	0.17	24.99	25.54	25.86	0.10	24.49	25.27	25.86	0.26
46-60	25.31	25.64	25.97	0.15	24.93	25.30	25.49	0.11	24.91	25.28	25.75	0.19	25.53	25.75	25.94	0.09	24.91	25.49	25.97	0.25
61-75	25.40	25.76	26.01	0.15	25.19	25.45	25.60	0.08	25.16	25.50	25.92	0.21	25.74	25.89	26.03	0.06	25.16	25.65	26.03	0.23
76-90	25.61	25.81	25.97	0.11	25.43	25.51	25.59	0.04	25.30	25.45	25.60	0.10	25.87	26.02	26.10	0.05	25.30	25.84	26.10	0.25
All	23.74	25.05	26.01	0.58	24.02	24.85	25.60	0.44	24.10	24.94	25.92	0.33	23.72	25.15	26.10	0.60	23.72	25.00	26.10	0.51

Table B-1 continues.

Table B-1 continued.

Depth (m)	Summer 2013				Fall 2013				Winter 2014				Spring 2014				Annual			
	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev
Salinity (psu)																				
1-15	33.41	33.55	33.67	0.07	33.43	33.59	33.66	0.04	33.41	33.50	33.58	0.05	33.36	33.52	33.56	0.02	33.36	33.54	33.67	0.06
16-30	33.42	33.49	33.62	0.04	33.27	33.48	33.65	0.09	33.32	33.48	33.58	0.05	33.28	33.47	33.56	0.05	33.27	33.48	33.65	0.06
31-45	33.38	33.50	33.64	0.04	33.15	33.39	33.56	0.06	33.26	33.43	33.53	0.04	33.31	33.49	33.67	0.07	33.15	33.45	33.67	0.07
46-60	33.46	33.55	33.77	0.06	33.12	33.41	33.49	0.05	33.25	33.42	33.64	0.07	33.41	33.60	33.74	0.06	33.12	33.50	33.77	0.10
61-75	33.49	33.63	33.80	0.08	33.40	33.47	33.56	0.03	33.35	33.51	33.77	0.11	33.59	33.70	33.83	0.05	33.35	33.58	33.83	0.12
76-90	33.56	33.65	33.76	0.06	33.43	33.48	33.56	0.04	33.42	33.48	33.55	0.04	33.69	33.79	33.87	0.04	33.42	33.69	33.87	0.14
All	33.38	33.53	33.80	0.07	33.12	33.49	33.66	0.10	33.25	33.47	33.77	0.07	33.28	33.54	33.87	0.09	33.12	33.51	33.87	0.09
Dissolved Oxygen (mg/L)																				
1-15	5.87	8.59	9.89	0.67	6.29	7.91	8.75	0.19	7.40	7.87	8.36	0.13	7.20	8.40	9.15	0.33	5.87	8.20	9.89	0.50
16-30	5.33	8.40	9.79	0.82	6.95	8.07	8.88	0.37	6.81	7.74	8.54	0.26	5.14	7.48	9.42	1.09	5.14	7.93	9.79	0.80
31-45	4.71	6.65	9.02	0.91	6.00	7.32	8.74	0.47	5.09	6.97	8.08	0.60	4.36	5.37	7.45	0.42	4.36	6.58	9.02	0.97
46-60	3.87	5.48	7.05	0.66	5.56	6.59	7.89	0.40	4.60	6.12	7.40	0.65	3.78	4.75	5.42	0.31	3.78	5.73	7.89	0.87
61-75	3.66	4.74	6.42	0.61	5.12	5.98	7.18	0.32	3.92	5.50	6.60	0.76	3.36	4.24	4.98	0.37	3.36	5.11	7.18	0.86
76-90	3.85	4.53	5.14	0.38	5.31	5.83	6.22	0.28	5.30	5.72	6.07	0.24	3.37	4.00	4.38	0.23	3.37	4.57	6.22	0.83
All	3.66	7.33	9.89	1.63	5.12	7.45	8.88	0.80	3.92	7.17	8.54	0.96	3.36	6.63	9.42	1.74	3.36	7.15	9.89	1.39
Dissolved Oxygen Saturation (%)																				
1-15	76.80	109.10	122.52	6.41	82.41	100.56	107.86	3.66	89.59	97.17	103.35	2.06	87.08	106.00	112.36	2.94	76.80	103.27	122.52	6.21
16-30	59.83	100.28	121.76	11.29	80.57	98.82	108.53	5.46	80.67	94.48	105.47	4.01	58.03	88.83	112.83	14.82	58.03	95.65	121.76	10.91
31-45	52.27	76.39	108.01	11.56	69.09	86.01	106.13	6.43	57.44	82.89	97.98	8.52	48.78	60.74	86.47	5.28	48.78	76.44	108.01	12.79
46-60	42.68	61.64	81.64	8.10	63.84	75.96	93.04	5.00	51.39	70.83	88.99	8.58	41.93	52.91	60.99	3.59	41.93	65.30	93.04	11.01
61-75	40.29	52.99	73.63	7.31	57.79	68.14	83.62	3.85	43.51	62.64	76.73	9.47	37.12	46.88	55.40	4.08	37.12	57.58	83.62	10.55
76-90	42.48	50.37	58.02	4.60	60.05	66.08	70.43	3.21	59.82	65.23	69.96	3.20	37.27	43.97	48.49	2.50	37.27	50.89	70.43	10.08
All	40.29	88.09	122.52	22.80	57.79	90.55	108.53	12.78	43.51	86.50	105.47	13.78	37.12	79.26	112.83	24.44	37.12	86.10	122.52	19.70

Table B-1 continues.

Table B-1 continued.

Depth (m)	Summer 2013				Fall 2013				Winter 2014				Spring 2014				Annual			
	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev
pH (pH units)																				
1-15	8.09	8.17	8.27	0.04	7.77	8.04	8.14	0.08	7.95	8.11	8.29	0.10	8.00	8.21	8.30	0.07	7.77	8.13	8.30	0.10
16-30	7.87	8.13	8.26	0.07	7.70	8.01	8.13	0.08	7.88	8.09	8.27	0.11	7.81	8.11	8.30	0.12	7.70	8.08	8.30	0.11
31-45	7.84	8.00	8.16	0.07	7.63	7.91	8.12	0.09	7.70	8.00	8.25	0.14	7.74	7.92	8.14	0.09	7.63	7.96	8.25	0.11
46-60	7.81	7.92	8.03	0.05	7.59	7.85	8.04	0.09	7.66	7.91	8.16	0.15	7.71	7.84	7.97	0.07	7.59	7.88	8.16	0.11
61-75	7.78	7.86	7.99	0.05	7.54	7.79	7.98	0.09	7.60	7.85	8.09	0.16	7.68	7.79	7.90	0.06	7.54	7.82	8.09	0.10
76-90	7.81	7.85	7.92	0.04	7.54	7.72	7.84	0.09	7.76	7.99	8.05	0.07	7.65	7.70	7.84	0.04	7.54	7.76	8.05	0.11
All	7.78	8.06	8.27	0.13	7.54	7.96	8.14	0.12	7.60	8.03	8.29	0.16	7.65	8.03	8.30	0.18	7.54	8.02	8.30	0.15
Light Transmission (%)																				
1-15	65.01	82.67	88.41	4.32	78.33	86.05	88.41	2.01	65.07	85.72	88.25	2.70	70.21	83.48	87.56	1.94	65.01	84.46	88.41	3.26
16-30	66.73	81.19	88.55	4.19	74.63	85.54	88.33	1.82	75.10	85.37	88.17	2.27	65.57	82.83	88.29	3.49	65.57	83.69	88.55	3.61
31-45	73.76	83.70	88.22	2.52	80.54	86.57	88.64	1.15	81.10	86.18	88.71	1.27	76.75	86.83	89.24	1.72	73.76	85.78	89.24	2.17
46-60	80.27	85.88	88.77	1.82	83.26	87.37	89.07	1.16	80.98	87.25	89.14	1.32	81.20	87.64	89.35	1.55	80.27	87.01	89.35	1.64
61-75	80.33	86.42	89.19	1.76	83.30	87.72	89.24	1.20	84.41	87.65	89.51	1.31	80.48	87.77	89.40	1.83	80.33	87.37	89.51	1.65
76-90	85.28	86.51	87.57	0.79	86.43	88.25	89.06	0.80	87.69	88.46	89.44	0.60	81.12	88.25	89.36	1.13	81.12	88.09	89.44	1.13
All	65.01	83.32	89.19	3.96	74.63	86.37	89.24	1.81	65.07	86.13	89.51	2.23	65.57	84.98	89.40	3.16	65.01	85.17	89.51	3.17
Beam C (1/m)																				
1-15	0.49	0.77	1.72	0.22	0.49	0.60	0.98	0.09	0.50	0.62	3.25	0.15	0.53	0.72	1.42	0.10	0.49	0.68	3.25	0.16
16-30	0.49	0.84	1.62	0.21	0.50	0.63	1.17	0.09	0.50	0.63	1.15	0.11	0.50	0.76	1.69	0.17	0.49	0.72	1.69	0.18
31-45	0.50	0.71	1.22	0.12	0.48	0.58	0.87	0.05	0.48	0.60	0.84	0.06	0.46	0.57	1.06	0.08	0.46	0.61	1.22	0.10
46-60	0.48	0.61	0.88	0.09	0.46	0.54	0.73	0.05	0.46	0.55	0.84	0.06	0.45	0.53	0.83	0.07	0.45	0.56	0.88	0.08
61-75	0.46	0.58	0.88	0.08	0.46	0.52	0.73	0.06	0.44	0.53	0.68	0.06	0.45	0.52	0.87	0.09	0.44	0.54	0.88	0.08
76-90	0.53	0.58	0.64	0.04	0.46	0.50	0.58	0.04	0.45	0.49	0.53	0.03	0.45	0.50	0.84	0.05	0.45	0.51	0.84	0.05
All	0.46	0.73	1.72	0.20	0.46	0.59	1.17	0.08	0.44	0.60	3.25	0.11	0.45	0.65	1.69	0.15	0.44	0.64	3.25	0.16

Table B-1 continues.

Table B-1 continued.

Depth (m)	Summer 2013				Fall 2013				Winter 2014				Spring 2014				Annual			
	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev
Photosynthetically Active Radiation (PAR, %)																				
1-15	2.00	25.31	100.00	19.04	2.00	21.96	100.00	18.43	1.30	24.77	100.00	23.25	3.00	29.29	100.00	20.55	1.30	25.33	100.00	20.54
16-30	0.40	4.41	14.90	2.78	0.40	4.94	16.40	3.34	0.20	4.98	21.00	3.68	0.00	4.94	17.60	3.44	0.00	4.81	21.00	3.33
31-45	0.10	0.92	4.10	0.61	0.10	1.29	6.60	1.04	0.10	1.04	6.20	0.82	0.00	0.73	2.70	0.46	0.00	0.99	6.60	0.79
46-60	0.10	0.41	1.50	0.26	0.10	0.52	3.30	0.56	0.10	0.29	1.20	0.17	0.00	0.20	0.60	0.12	0.00	0.36	3.30	0.35
61-75	0.00	0.32	1.20	0.23	0.10	0.34	2.50	0.49	0.10	0.14	0.40	0.07	0.00	0.07	0.20	0.06	0.00	0.22	2.50	0.29
76-90	0.00	0.26	0.50	0.17	0.10	0.21	0.60	0.20	0.10	0.13	0.30	0.07	0.00	0.01	0.10	0.03	0.00	0.08	0.60	0.14
All	0.00	9.23	100.00	15.22	0.10	8.51	100.00	13.96	0.10	9.29	100.00	16.87	0.00	10.46	100.00	17.14	0.00	9.38	100.00	15.86
Colored Dissolved Organic Matter (CDOM, µg/L)																				
1-15	0.00	0.81	3.39	0.44	0.52	1.10	2.66	0.51	0.29	1.08	2.73	0.55	0.38	1.01	2.16	0.31	0.00	1.00	3.39	0.48
16-30	0.13	1.53	3.93	0.57	0.56	1.55	3.52	0.46	0.39	1.35	3.22	0.52	0.63	1.72	4.14	0.49	0.13	1.54	4.14	0.53
31-45	1.18	2.10	5.88	0.82	1.19	1.92	4.74	0.52	0.85	1.80	4.99	0.67	1.27	2.15	4.62	0.82	0.85	2.00	5.88	0.74
46-60	1.18	1.96	4.89	0.49	1.24	1.85	5.33	0.50	1.15	1.97	6.45	0.89	1.25	1.68	4.37	0.49	1.15	1.87	6.45	0.63
61-75	1.33	1.85	2.28	0.18	1.50	1.74	2.14	0.12	1.34	1.71	2.76	0.34	1.28	1.60	2.17	0.16	1.28	1.73	2.76	0.23
76-90	1.66	1.86	2.07	0.14	1.62	1.74	1.97	0.10	1.38	1.53	1.97	0.14	1.45	1.60	1.92	0.11	1.38	1.64	2.07	0.15
All	0.00	1.51	5.88	0.74	0.52	1.54	5.33	0.57	0.29	1.47	6.45	0.69	0.38	1.56	4.62	0.64	0.00	1.52	6.45	0.67
Chlorophyll-*a* (µg/L)																				
1-15	0.53	4.13	36.88	4.11	0.55	3.02	9.66	2.12	0.53	3.25	19.98	3.74	0.55	2.66	17.39	2.12	0.53	3.27	36.88	3.21
16-30	0.97	10.64	39.76	6.90	1.16	5.09	14.75	1.93	0.89	5.20	18.51	2.70	2.20	8.42	36.77	4.75	0.89	7.39	39.76	5.11
31-45	0.78	5.66	29.35	3.27	1.38	3.62	8.24	1.21	1.04	3.79	9.61	1.54	0.93	3.00	11.11	1.45	0.78	4.05	29.35	2.30
46-60	0.40	2.05	6.69	1.04	0.76	1.92	5.30	0.68	0.51	1.60	4.01	0.57	0.60	1.40	4.52	0.54	0.40	1.75	6.69	0.78
61-75	0.30	1.12	3.69	0.63	0.48	1.01	3.13	0.36	0.21	0.88	1.91	0.40	0.30	0.74	2.38	0.24	0.21	0.94	3.69	0.46
76-90	0.38	0.83	1.19	0.24	0.46	0.75	0.96	0.15	0.33	0.76	1.17	0.30	0.22	0.41	1.12	0.15	0.22	0.55	1.19	0.26
All	0.30	5.50	39.76	5.58	0.46	3.29	14.75	2.11	0.21	3.37	19.98	2.97	0.22	3.82	36.77	3.97	0.21	4.01	39.76	4.01

Table B-1 continues.

Table B-1 continued.

Depth (m)	Summer 2013				Fall 2013				Winter 2014				Spring 2014				Annual			
	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev
Ammonia (mg/L)																				
1-15	<0.02	<0.02	0.04	0.00	<0.02	<0.02	0.02	0.00	<0.02	<0.02	0.04	0.00	<0.02	<0.02	<0.02	0.00	<0.02	<0.02	0.04	0.00
16-30	<0.02	0.02	0.08	0.01	<0.02	0.02	0.07	0.01	<0.02	0.02	0.10	0.01	<0.02	0.02	0.15	0.02	<0.02	0.02	0.15	0.02
31-45	<0.02	0.03	0.20	0.04	<0.02	0.03	0.13	0.03	<0.02	0.03	0.18	0.03	<0.02	0.05	0.15	0.04	<0.02	0.03	0.20	0.04
46-60	<0.02	0.02	0.12	0.02	<0.02	0.03	0.20	0.04	<0.02	0.04	0.24	0.05	<0.02	0.02	0.14	0.02	<0.02	0.03	0.24	0.04
61-75	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
All	0.02	0.02	0.20	0.02	0.02	0.02	0.20	0.02	0.02	0.02	0.24	0.03	0.02	0.02	0.15	0.02	0.02	0.02	0.24	0.02
Total Coliform (MPN/100 mL)																				
1-15	<10	<10	41	1.3	<10	<10	10	1.0	<10	<10	31	1.3	<10	<10	10	1.1	<10	<10	41	1.2
16-30	<10	10	41	1.7	<10	<10	275	2.1	<10	<10	86	1.6	<10	<10	134	1.9	<10	<10	275	1.8
31-45	<10	18	109	2.6	<10	29	520	5.9	<10	19	197	3.4	<10	26	573	5.3	<10	22	573	4.1
46-60	<10	13	189	2.7	<10	25	496	4.7	<10	100	1,553	8.7	<10	22	528	4.7	<10	29	1,553	5.8
61-75	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
All	<10	10	189	2.0	<10	12	520	3.0	<10	15	1,553	4.2	<10	11	573	2.8	<10	12	1,553	3.0
Fecal Coliform (MPN/100 mL)																				
1-15	<10	<10	<10	1.0	<10	<10	<10	1.0	<10	<10	11	1.1	<10	<10	<10	1.0	<10	<10	11	1.0
16-30	<10	<10	11	1.1	<10	<10	107	1.6	<10	<10	11	1.1	<10	<10	34	1.4	<10	<10	107	1.4
31-45	<10	<10	22	1.4	<10	11	81	2.3	<10	10	45	2.0	<10	16	160	3.4	<10	12	160	2.3
46-60	<10	<10	22	1.3	<10	14	107	2.4	<10	33	282	4.2	<10	14	141	2.8	<10	15	282	3.0
61-75	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
All	<10	<10	22	1.2	<10	<10	107	1.8	<10	10	282	2.4	<10	<10	160	2.0	<10	9	282	1.9
***Enterococcus* (MPN/100 mL)**																				
1-15	<10	<10	10	1.1	<10	<10	20	1.3	<10	<10	10	1.2	<10	<10	20	1.3	<10	<10	20	1.2
16-30	<10	<10	10	1.1	<10	<10	20	1.2	<10	<10	41	1.4	<10	<10	30	1.3	<10	<10	41	1.3
31-45	<10	<10	20	1.4	<10	<10	10	1.2	<10	11	31	1.7	<10	10	30	1.6	<10	<10	31	1.5
46-60	<10	<10	10	1.1	<10	<10	20	1.4	<10	15	86	2.2	<10	<10	30	1.5	<10	10	86	1.7
61-75	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
All	<10	<10	20	1.1	<10	<10	20	1.3	<10	<10	86	1.6	<10	<10	30	1.4	<10	9	86	1.4

ns = No sample.

Table B-2. Summary statistics of core nearshore stations for total coliforms, fecal coliforms, and enterococci bacteria (CFU/100 mL) by station and seasons during 2013-14.

Orange County Sanitation District, California.

Station	Summer 2013				Fall 2013				Winter 2014				Spring 2014				Annual			
	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev
Total Coliforms																				
39N	<17	14	17	1.16	<17	19	270	2.25	<17	25	270	2.87	<17	14	33	1.31	<17	17	270	2
33N	<17	32	170	2.36	<17	18	220	2.1	<17	23	150	2.15	<17	15	50	1.46	<17	21	220	2.11
27N	<17	18	>170	2.21	<17	16	120	1.88	<17	30	250	2.5	<17	15	33	1.31	<17	19	250	2.06
21N	<17	16	50	1.55	<17	18	120	1.91	<17	31	130	2.43	<17	23	100	1.96	<17	21	130	2.02
15N	<17	25	100	2.22	<17	20	67	1.69	<17	20	50	1.67	<17	23	83	2.1	<17	22	100	1.9
12N	<17	23	>300	2.7	<17	23	100	2.11	<17	21	200	2.43	<17	25	120	2.22	<17	23	>300	2.31
9N	<17	34	34000	5.99	<17	21	150	2.02	<17	20	180	2.06	<17	28	180	2.45	<17	25	34000	3.08
6N	<17	21	130	1.88	<17	42	330	3.07	<17	34	480	3.41	<17	38	620	2.97	<17	33	620	2.89
3N	<17	27	680	2.64	<17	32	440	2.97	<17	126	2000	4.5	<17	64	7000	6.16	<17	51	7000	4.45
0	<17	26	1500	3.33	<17	24	180	2.38	<17	63	2000	3.91	<17	32	600	2.94	<17	33	2000	3.26
3S	<17	16	83	1.67	<17	22	67	1.89	<17	68	1100	3.83	<17	44	>20000	8.15	<17	32	>20000	4.04
6S	<17	16	100	1.76	<17	19	120	1.85	<17	34	200	2.71	<17	29	>20000	8.14	<17	23	>20000	3.44
9S	<17	16	50	1.55	<17	16	33	1.3	<17	24	67	1.93	<17	19	280	2.36	<17	18	280	1.83
15S	<17	19	250	2.38	<17	23	180	2.58	<17	20	440	2.73	<17	14	17	1.15	<17	19	440	2.26
21S	<17	13	17	1.11	<17	23	150	2.53	<17	22	180	2.41	<17	20	67	1.77	<17	19	180	2.05
27S	<17	13	17	1.08	<17	14	33	1.3	<17	14	33	1.31	<17	14	50	1.46	<17	14	50	1.3
29S	<17	15	33	1.31	<17	17	50	1.53	<17	40	2300	5.21	<17	36	370	3.09	<17	24	2300	3
39S	<17	22	700	3.01	<17	22	1200	3.61	<17	14	17	1.15	<17	13	17	1.12	<17	17	1200	2.38
All	<17	14	17	1.16	<17	19	270	2.25	<17	25	270	2.87	<17	14	33	1.31	<17	17	270	2

Table B-2 continues.

Table B-2 Continued.

Station	Summer 2013				Fall 2013				Winter 2014				Spring 2014				Annual			
	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev
Fecal Coliforms																				
39N	<17	17	33	1.49	<17	16	170	1.99	<17	18	67	1.73	<17	15	17	1.16	<17	16	170	1.62
33N	<17	20	83	1.86	<17	16	130	1.85	<17	15	33	1.45	<17	14	33	1.31	<17	16	130	1.64
27N	<17	17	100	1.91	<17	15	83	1.65	<17	18	200	2.24	<17	14	17	1.16	<17	16	200	1.76
21N	<17	13	17	1.08	<17	19	67	1.91	<17	27	100	2.08	<17	19	120	2.18	<17	19	120	1.93
15N	<17	18	83	1.87	<17	16	67	1.72	<17	17	50	1.53	<17	17	50	1.61	<17	17	83	1.67
12N	<17	21	320	2.61	<17	15	50	1.44	<17	18	33	1.37	<17	27	120	2.35	<17	20	320	2.01
9N	<17	28	23000	5.43	<17	18	120	1.71	<17	19	150	2.21	<17	26	400	2.72	<17	22	23000	2.98
6N	<17	17	250	2.05	<17	32	200	2.69	<17	29	440	3.01	<17	28	440	2.99	<17	26	440	2.72
3N	<17	24	420	2.45	<17	28	270	2.42	<17	110	1900	4.05	<17	58	5400	6.52	<17	45	5400	4.21
0	<17	27	1100	3.62	<17	22	170	2.14	<17	47	1500	3.57	<17	28	400	2.65	<17	29	1500	3.03
3S	<17	15	67	1.58	<17	21	83	1.84	<17	32	200	2.54	<17	43	>20000	8.03	<17	26	>20000	3.45
6S	<17	14	33	1.31	<17	16	100	1.75	<17	20	130	2	<17	25	11000	6.48	<17	18	11000	2.82
9S	<17	13	17	1.11	<17	14	17	1.16	<17	19	83	1.73	<17	14	50	1.46	<17	15	83	1.44
15S	<17	17	170	2.1	<17	21	200	2.55	<17	22	500	2.8	<17	18	130	2.13	<17	19	500	2.35
21S	<17	13	17	1.08	<17	21	83	1.94	<17	19	220	2.29	<17	15	33	1.31	<17	17	220	1.76
27S	<17	14	50	1.46	<17	15	100	1.77	<17	16	50	1.55	<17	18	200	2.27	<17	16	200	1.76
29S	<17	15	33	1.31	<17	16	50	1.55	<17	25	540	2.93	<17	30	200	2.86	<17	21	540	2.28
39S	<17	18	780	3.12	<17	14	33	1.31	<17	14	17	1.13	<17	13	<17	1	<17	14	780	1.79
All	<17	18	23000	1.09	<17	19	270	0.4	<17	27	1900	0.79	<17	23	>20000	2.06	<17	21	>23000	0.76

Table B-2 continues.

Table B-2 Continued.

Station	Summer 2013				Fall 2013				Winter 2014				Spring 2014				Annual			
	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev	Min	Mean	Max	Std Dev
Enterococci																				
39N	<2	7	34	3.16	<2	2	6	1.51	<2	3	14	2.28	<2	3	30	2.86	<2	3	34	2.72
33N	<2	16	84	3.06	<2	4	72	2.68	<2	4	34	2.74	<2	4	12	2.24	<2	6	84	3.05
27N	<2	8	>400	4.68	<2	4	38	3.17	2	13	160	4.41	2	5	28	2.3	<2	7	>400	3.69
21N	<2	8	34	3.11	<2	7	52	3.99	4	18	176	3.28	<2	8	56	3.32	<2	9	176	3.52
15N	<2	4	32	2.39	<2	4	50	2.8	4	10	124	2.94	<2	4	40	2.68	<2	5	124	2.86
12N	<2	6	106	3.58	<2	5	40	3.24	<2	8	94	3.58	<2	6	62	3.64	<2	6	106	3.43
9N	<2	9	>400	4.15	<2	6	30	2.67	<2	9	82	2.98	<2	6	68	3.31	<2	7	>400	3.26
6N	<1	4	62	3.38	<2	8	94	3.81	<2	12	334	4.02	<2	10	>400	5.18	<1	8	>400	4.2
3N	<2	7	282	3.63	<2	9	174	3.54	2	42	>400	3.74	<2	19	>400	5.32	<2	14	>400	4.66
0	<2	6	168	4.34	<2	5	48	3.01	<2	20	>400	3.56	<2	6	68	3.56	<2	7	>400	4.02
3S	<2	3	42	3.27	<2	4	32	2.85	4	21	104	2.74	2	9	110	3.38	<2	7	110	3.78
6S	<2	2	44	2.66	<2	4	24	2.37	<2	9	84	3.64	<2	4	32	2.7	<2	4	84	3.13
9S	<2	2	48	3.23	<2	3	12	2.05	<2	10	256	3.78	<2	3	10	2.02	<2	4	256	3.1
15S	<2	3	10	2.21	<2	4	46	3.06	<2	4	118	3.52	<2	2	8	1.54	<2	3	118	2.64
21S	<2	3	16	2.45	<2	3	46	3.21	<2	5	108	4.4	<2	4	16	2.62	<2	4	108	3.12
27S	<2	2	4	1.43	<2	3	24	2.79	<2	3	32	2.41	<2	3	16	2.29	<2	3	32	2.25
29S	<2	3	12	2.21	<2	4	30	2.78	<2	5	54	3.94	<2	7	76	4.55	<2	5	76	3.41
39S	<2	3	>400	4.92	<2	2	24	2.25	<2	2	6	1.46	<2	2	6	1.66	<2	2	>400	2.54
All	<1	5	>400	0.92	<2	5	174	0.61	<2	11	>400	0.77	<2	6	>400	1.09	<1	6	>400	0.62

Table B-3. Total coliform bacteria (MPN/100 mL) collected in offshore waters and used for comparison with California Ocean Plan Water-Contact (REC-1) compliance criteria, July 2013 through June 2014.

Orange County Sanitation District, California.

Station	Date					Meets 30-day Geometric Mean of <1,000/100 mL	Meets single sample standard of <10,000/100 mL	Meets single sample standard of <1,000/100 mL*
	7/23/2013	**7/25/2013**	**7/29/2013**	**8/6/2013**	**8/8/2013**			
2103	15	14	<10	10	13	YES	YES	YES
2104	34	<10	17	<10	10	YES	YES	YES
2183	12	19	<10	<10	27	YES	YES	YES
2203	<10	10	<10	<10	16	YES	YES	YES
2223	<10	<10	<10	<10	<10	YES	YES	YES
2303	<10	<10	<10	<10	<10	YES	YES	YES
2351	<10	<10	<10	<10	<10	YES	YES	YES
2403	<10	<10	<10	<10	<10	YES	YES	YES
	10/23/2013	**10/30/2013**	**10/31/2013**	**11/5/2013**	**11/7/2013**			
2103	<10	27	11	<10	<10	YES	YES	YES
2104	<10	33	<10	<10	<10	YES	YES	YES
2183	27	<10	<10	<10	<10	YES	YES	YES
2203	<10	<10	<10	<10	<10	YES	YES	YES
2223	<10	<10	<10	<10	<10	YES	YES	YES
2303	<10	<10	<10	<10	<10	YES	YES	YES
2351	<10	<10	<10	<10	<10	YES	YES	YES
2403	<10	<10	12	<10	<10	YES	YES	YES
	1/22/2014	**2/4/2014**	**2/6/2014**	**2/10/2014**	**2/13/2014**			
2103	<10	16	<10	<10	10	YES	YES	YES
2104	<10	78	26	49	13	YES	YES	YES
2183	<10	<10	<10	<10	<10	YES	YES	YES
2203	<10	<10	<10	<10	<10	YES	YES	YES
2223	<10	<10	<10	<10	<10	YES	YES	YES
2303	<10	<10	<10	<10	<10	YES	YES	YES
2351	10	<10	12	<10	<10	YES	YES	YES
2403	<10	<10	<10	<10	<10	YES	YES	YES
	4/23/2014	**5/7/2014**	**5/8/2014**	**5/13/2014**	**5/21/2014**			
2103	<10	10	<10	13	<10	YES	YES	YES
2104	30	<10	<10	16	<10	YES	YES	YES
2183	<10	<10	<10	<10	<10	YES	YES	YES
2203	<10	<10	<10	<10	<10	YES	YES	YES
2223	<10	<10	<10	<10	<10	YES	YES	YES
2303	<10	<10	<10	<10	<10	YES	YES	YES
2351	<10	<10	<10	<10	<10	YES	YES	YES
2403	<10	<10	<10	<10	<10	YES	YES	YES

***** Standard is based on when the single sample maximum fecal coliform/total coliform ratio >0.1.

Table B-4. Fecal coliform bacteria (MPN/100 mL) collected in offshore waters and used for comparison with California Ocean Plan Water-Contact (REC-1) compliance criteria, July 2013 through June 2014.

Orange County Sanitation District, California.

Station	Date					Meets 30-day Geometric Mean of <200/100 mL	Meets single sample standard of <400/100 mL
	7/23/2013	**7/25/2013**	**7/29/2013**	**8/6/2013**	**8/8/2013**		
2103	<10	<10	<10	<10	11	YES	YES
2104	15	<10	<10	<10	<10	YES	YES
2183	<10	<10	<10	<10	15	YES	YES
2203	<10	<10	<10	<10	<10	YES	YES
2223	<10	<10	<10	<10	<10	YES	YES
2303	<10	<10	<10	<10	<10	YES	YES
2351	<10	<10	<10	<10	<10	YES	YES
2403	<10	<10	<10	<10	<10	YES	YES
	10/23/2013	**10/30/2013**	**10/31/2013**	**11/5/2013**	**11/7/2013**		
2103	<10	13	<10	<10	<10	YES	YES
2104	<10	14	<10	<10	<10	YES	YES
2183	11	<10	<10	<10	<10	YES	YES
2203	<10	<10	<10	<10	<10	YES	YES
2223	<10	<10	<10	<10	<10	YES	YES
2303	<10	<10	<10	<10	<10	YES	YES
2351	<10	<10	<10	<10	<10	YES	YES
2403	<10	<10	<10	<10	<10	YES	YES
	1/22/2014	**2/4/2014**	**2/6/2014**	**2/10/2014**	**2/13/2014**		
2103	<10	<10	<10	<10	<10	YES	YES
2104	<10	31	<10	18	<10	YES	YES
2183	<10	<10	<10	<10	<10	YES	YES
2203	<10	<10	<10	<10	<10	YES	YES
2223	<10	<10	<10	<10	<10	YES	YES
2303	<10	<10	<10	<10	<10	YES	YES
2351	<10	<10	12	<10	<10	YES	YES
2403	<10	<10	<10	<10	<10	YES	YES
	4/23/2014	**5/7/2014**	**5/8/2014**	**5/13/2014**	**5/21/2014**		
2103	<10	<10	<10	<10	<10	YES	YES
2104	16	<10	<10	10	<10	YES	YES
2183	<10	<10	<10	<10	<10	YES	YES
2203	<10	<10	<10	<10	<10	YES	YES
2223	<10	<10	<10	<10	<10	YES	YES
2303	<10	<10	<10	<10	<10	YES	YES
2351	<10	<10	<10	<10	<10	YES	YES
2403	<10	<10	<10	<10	<10	YES	YES

Table B-5. Enterococci bacteria (MPN/100 mL) collected in offshore waters and used for comparison with California Ocean Plan Water-Contact (REC-1) compliance criteria and EPA Primary Recreation Criteria in Federal Waters, July 2013 through June 2014.

Orange County Sanitation District, California.

Station	Date					Meets COP 30-day Geometric Mean of <35/100 mL	Meets COP single sample standard of <104/100 mL	Meets EPA single sample standard of <501/100 mL*
	7/23/2013	**7/25/2013**	**7/29/2013**	**8/6/2013**	**8/8/2013**			
2103	<10	<10	<10	<10	<10	YES	YES	YES
2104	<10	<10	<10	<10	<10	YES	YES	YES
2183	<10	<10	<10	<10	<10	YES	YES	YES
2203	<10	<10	<10	<10	<10	YES	YES	YES
2223	<10	<10	<10	<10	<10	YES	YES	YES
2303	<10	<10	<10	<10	<10	YES	YES	YES
2351	<10	<10	<10	<10	<10	YES	YES	YES
2403	<10	<10	<10	<10	<10	YES	YES	YES
	10/23/2013	**10/30/2013**	**10/31/2013**	**11/5/2013**	**11/7/2013**			
2103	<10	10	11	<10	12	YES	YES	YES
2104	<10	15	<10	<10	<10	YES	YES	YES
2183	<10	<10	<10	<10	15	YES	YES	YES
2203	11	<10	<10	<10	<10	YES	YES	YES
2223	<10	<10	10	<10	10	YES	YES	YES
2303	<10	19	10	<10	<10	YES	YES	YES
2351	<10	<10	<10	<10	<10	YES	YES	YES
2403	<10	<10	<10	<10	<10	YES	YES	YES
	1/22/2014	**2/4/2014**	**2/6/2014**	**2/10/2014**	**2/13/2014**			
2103	12	<10	10	<10	<10	YES	YES	YES
2104	<10	20	<10	12	<10	YES	YES	YES
2183	<10	<10	<10	<10	12	YES	YES	YES
2203	<10	<10	<10	10	<10	YES	YES	YES
2223	<10	<10	<10	<10	<10	YES	YES	YES
2303	<10	<10	10	<10	<10	YES	YES	YES
2351	<10	<10	<10	<10	<10	YES	YES	YES
2403	<10	<10	<10	<10	<10	YES	YES	YES
	4/23/2014	**5/7/2014**	**5/8/2014**	**5/13/2014**	**5/21/2014**			
2103	<10	10	<10	10	<10	YES	YES	YES
2104	<10	10	<10	<10	<10	YES	YES	YES
2183	<10	<10	<10	<10	<10	YES	YES	YES
2203	<10	<10	<10	<10	<10	YES	YES	YES
2223	<10	<10	<10	<10	<10	YES	YES	YES
2303	<10	<10	<10	12	<10	YES	YES	YES
2351	<10	<10	<10	<10	<10	YES	YES	YES
2403	<10	<10	<10	<10	<10	YES	YES	YES

* Standard is based on area of infrequent use.

Table B-6. Summary of floatable material by station group observed during the 28-station grid water quality surveys, July 2013 through June 2014. Individual stations may have multiple types of debris.

Orange County Sanitation District, California.

Surface Observation	Station Group							Totals
	Upcoast Offshore	Upcoast Nearshore	Nearfield Offshore	Within ZID	Nearfield Nearshore	Downcoast Offshore	Downcoast Nearshore	
	2225, 2226, 2305, 2306, 2353, 2354, 2405, 2406	2223, 2224, 2303, 2304, 2351, 2352, 2403, 2404	2206	2205	2203, 2204	2105, 2106, 2185, 2186	2103, 2104, 2183, 2184	
Trash/Debris (black tar, ash from brush fires) [1]	0	0	0	0	0	0	1	1
Biological Material (kelp)	6	1	1	1	0	0	0	9
Totals	6	1	1	1	0	0	1	10

[1] Concluded to be not of sewage origin.

Table B-7. Summary of floatable material by station group observed during the REC-1 water quality surveys, July 2013 through June 2014. Individual stations may have multiple types of debris.

Orange County Sanitation District, California.

Surface Observation	Station Group				Totals
	Upcoast Nearshore	Within ZID	Nearfield Nearshore	Downcoast Nearshore	
	2223, 2303, 2352, 2403	2205	2203	2103, 2104, 2183	
Trash/Debris (black tar, ash from brush fires) [1]	0	0	0	0	0
Biological Material (kelp)	0	0	0	0	0
Totals	0	0	0	0	0

[1] Concluded to be not of sewage origin.

Table B-8. Total abundance of epibenthic macroinvertebrates by species and station collected by trawl in summer (July 2013) and winter (January 2014).

Orange County Sanitation District, California.

Station	T23	T22	T1	T12	T17	T11	Total
Nominal Depth	58	60	55	57	60	60	
# of Hauls	2	2	2	2	2	2	
Species							
Lytechinus pictus	930	116	186	54	26	1,071	2,383
Ophiura luetkenii	54	51	5	152	18	67	347
Thesea sp B	33	25	53	7	18	41	177
Hamatoscalpellum californicum	25	19	18	4	17	16	99
Acanthodoris brunnea	2	5	8	3	13	13	44
Sicyonia ingentis	1		4	3	3	11	22
Ophiothrix spiculata	4	14				4	22
Astropecten californicus	5	6	9				20
Luidia foliolata		1	7	6	5	3	22
Acanthoptilum sp	5	1	2	1	5		14
Pleurobranchaea californica	8			2		4	14
Luidia sp	2	2		2	4		10
Octopus rubescens		2	4	3			9
Luidia asthenosoma		1	2	2		3	8
Sicyonia penicillata			2	4			6
Pyromaia tuberculata			1			1	2
Parastichopus californicus			2				2
Platymera gaudichaudii		1			1		2
Strongylocentrotus fragilis	1	1					2
Orthopagurus minimus		1				1	2
Megasurcula carpenteriana				1			1
Cancellaria crawfordiana				1			1
Simnia sp	1						1
Flabellina iodinea						1	1
Tritonia festiva				1			1
Metacarcinus anthonyi		1					1
Ptilosarcus gurneyi	1						1
Total Abundance	1,072	247	303	246	110	1,236	3,214
Total No. of Species	14	16	14	16	10	13	27

Table B-9. Total biomass (kg) of epibenthic macroinvertebrates by species and station collected by trawl in summer (July 2013) and winter (January 2014).

Orange County Sanitation District, California.

Station	T23	T22	T1	T12	T17	T11	Total
Nominal Depth	58	60	55	57	60	60	
# of Hauls	2	2	2	2	2	2	
Species							
Lytechinus pictus	2.596	0.068	0.281	0.160	0.080	2.565	5.750
Luidia foliolata		0.001	0.301	1.310	0.910	0.346	2.868
Parastichopus californicus			1.410				1.410
Pleurobranchaea californica	0.860			0.012		0.147	1.019
Octopus rubescens		0.130	0.415	0.230			0.775
Ophiura luetkenii	0.036	0.040	0.002	0.343	0.009	0.079	0.509
Platymera gaudichaudii		0.230			0.250		0.480
Metacarcinus anthonyi		0.350					0.350
Thesea sp B	0.034	0.008	0.092	0.004	0.018	0.051	0.207
Sicyonia penicillata			0.055	0.133			0.188
Astropecten californicus	0.003	0.015	0.116				0.134
Sicyonia ingentis	0.002		0.006	0.006	0.006	0.031	0.051
Ophiothrix spiculata	0.005	0.018				0.002	0.025
Luidia asthenosoma		0.004	0.005	0.013		0.004	0.026
Acanthoptilum sp	0.003	0.001	0.008	0.001	0.008		0.021
Hamatoscalpellum californicum	0.005	0.003	0.002	0.001	0.004	0.006	0.021
Acanthodoris brunnea	0.002	0.004	0.004	0.002	0.005	0.003	0.020
Megasurcula carpenteriana				0.007			0.007
Luidia sp	0.001	0.002		0.001	0.002		0.006
Strongylocentrotus fragilis	0.001	0.002					0.003
Pyromaia tuberculata			0.001			0.001	0.002
Orthopagurus minimus		0.001				0.001	0.002
Cancellaria crawfordiana				0.001			0.001
Simnia sp	0.001						0.001
Tritonia festiva				0.001			0.001
Ptilosarcus gurneyi	0.001						0.001
Flabellina iodinea						0.001	0.001
Total Biomass	3.550	0.877	2.698	2.225	1.292	3.236	13.879

Table B-10. Demersal fish abundance by station, family, and species collected by trawl in summer (July 2013) and winter (January 2014) OCSD monitoring surveys.

Orange County Sanitation District, California.

Station	T23	T22	T1	T12	T17	T11	Total Abundance By Species	Total Abundance By Family
Nominal Depth	58	60	55	57	60	60		
# of Hauls	2	2	2	2	2	2		
Family/Species								
Synodontidae (lizardfish)								1,800
Synodus lucioceps	308	87	297	409	295	404	1,800	
Paralichthyidae (sand flounders)								1,620
Citharichthys sordidus	392	173	264	196	241	167	1,433	
Citharichthys xanthostigma			4	6	4	3	17	
Hippoglossina stomata	14	41	16	16	9	35	131	
Xystreurys liolepis	2		4	10	1	22	39	
Hexagrammidae (greenlings)								671
Ophiodon elongatus		3	2	5		2	12	
Zaniolepis frenata	1	6		1	1		9	
Zaniolepis latipinnis	22	16	97	168	301	46	650	
Pleuronectidae (righteye flounders)								421
Microstomus pacificus	6	2			11		19	
Parophrys vetulus	90	19	27	12	23	71	242	
Pleuronichthys decurrens	1	6	4	4	2	17	34	
Pleuronichthys verticalis	21	16	41	6	5	37	126	
Cottidae (sculpins)								398
Chitonotus pugetensis	21	19	10	10	4	27	91	
Icelinus quadriseriatus	20	23	9	64	53	138	307	
Cynoglossidae (tonguefishes)								188
Symphurus atricaudus	33	56	70	6	10	13	188	
Batrachoididae (toadfishes)								69
Porichthys notatus	12	2	1	42	12		69	
Agonidae (Poachers)								53
Agonopsis sterletus	1						1	
Odontopyxis trispinosa	18	7	20	4	2	1	52	
Embiotocidae (surfperches)								34
Zalembius rosaceus	28	3		3			34	
Rajidae (skates)								14
Raja inornata	6	1	1	1	4	1	14	
Ophidiidae (cusk-eels)								12
Chilara taylori			4		4	4	12	
Scorpaenidae (scorpionfishes)								10
Scorpaena guttata						1	1	
Sebastes dallii			3	1	1		5	
Sebastes saxicola				1			1	
Sebastes semicinctus	1				1		2	
Sebastes sp				1			1	
Zoarcidae (eelpouts)								9
Lycodes pacificus					9		9	
Labrisomidae (labrisomid blennies)								1
Neoclinus blanchardi				1			1	
Stromateidae (butterfishes)								1
Peprilus simillimus				1			1	
Total Abundance	997	480	874	968	993	989	5,301	5301
Total No. of Species	19	17	18	23	21	17	29	

Table B-11. Total biomass (kg) of demersal fish by station and species collected by trawl in summer (July 2013) and winter (January 2014) OCSD monitoring surveys.

Orange County Sanitation District, California.

Station	T23	T22	T1	T12	T17	T11	Total	%
Nominal Depth	58	60	55	57	60	60		
# of Hauls	2	2	2	2	2	2		
Species								
Citharichthys sordidus	16.238	9.063	13.483	5.888	9.384	8.313	62.369	42.5
Synodus lucioceps	3.437	0.970	3.859	4.029	3.249	4.511	20.055	13.7
Parophrys vetulus	7.165	2.286	3.619	1.037	1.764	2.938	18.809	12.8
Pleuronichthys verticalis	1.306	1.597	3.165	0.458	0.400	2.149	9.075	6.2
Hippoglossina stomata	0.437	3.106	0.347	0.572	0.208	1.800	6.470	4.4
Zaniolepis latipinnis	0.331	0.269	1.640	1.413	1.627	0.425	5.705	3.9
Symphurus atricaudus	0.854	1.566	2.271	0.174	0.267	0.314	5.446	3.7
Raja inornata	0.674	0.590	0.100	0.040	2.180	0.017	3.601	2.5
Xystreurys liolepis	0.102		0.251	0.604	0.107	1.627	2.691	1.8
Citharichthys xanthostigma			0.685	0.740	0.475	0.207	2.107	1.4
Porichthys notatus	0.480	0.120	0.037	0.964	0.279		1.880	1.3
Icelinus quadriseriatus	0.122	0.124	0.057	0.339	0.286	0.736	1.664	1.1
Pleuronichthys decurrens	0.063	0.320	0.217	0.214	0.092	0.672	1.578	1.1
Ophiodon elongatus		0.430	0.180	0.864		0.057	1.531	1.0
Chitonotus pugetensis	0.303	0.260	0.140	0.141	0.061	0.304	1.209	0.8
Microstomus pacificus	0.335	0.175			0.388		0.898	0.6
Zalembius rosaceus	0.260	0.059		0.055			0.374	0.3
Zaniolepis frenata	0.035	0.194		0.037	0.035		0.301	0.2
Chilara taylori			0.111		0.087	0.054	0.252	0.2
Lycodes pacificus					0.233		0.233	0.2
Sebastes dallii			0.077	0.080	0.003		0.160	0.1
Scorpaena guttata						0.140	0.140	<0.1
Odontopyxis trispinosa	0.046	0.015	0.046	0.011	0.005	0.001	0.124	<0.1
Sebastes semicinctus	0.053				0.001		0.054	<0.1
Neoclinus blanchardi				0.049			0.049	<0.1
Sebastes saxicola				0.024			0.024	<0.1
Agonopsis sterletus	0.011						0.011	<0.1
Peprilus simillimus				0.001			0.001	<0.1
Sebastes sp				0.001			0.001	<0.1
Total Biomass	32.252	21.144	30.285	17.735	21.131	24.265	146.812	100.0