Team OCEAN and Bay Net
2019 Season Report
Monterey Bay National Marine Sanctuary

November 1, 2019

Introduction

Bay Net and Team OCEAN programs are in-field volunteer interpretive programs focused on interacting with shoreline visitors (Bay Net) or on the water visitors (Team OCEAN) to Monterey Bay National Marine Sanctuary (MBNMS). Both Bay Net and Team OCEAN (Ocean Conservation Education Action Network) are focused on preventing wildlife disturbances through one on one interactions. While discussing prevention of wildlife disturbances, Bay Net and Team OCEAN members also discuss Monterey Bay National Marine Sanctuary (MBNMS), natural history of local marine wildlife species such as sea otters, harbor seals, sea lions and elephant seals and how to identify marine wildlife in-the-field.

Bay Net, was first started in 1996 with funding from the Center for Marine Conservation and was later adopted by MBNMS in 2006. By stationing themselves along the shoreline on the recreation trails, at viewpoints, beaches and in tidepools, Bay Net volunteers speak with an average of 20,000 people per year. Bay Net volunteers do not have set shifts or locations and can pick any location or time as long as wildlife and visitors are present. Most volunteers can be found along the recreation trail in Pacific Grove, California adjacent to Hopkins Marine Station's West Beach where an established harbor seal rookery is located. Other top Bay Net volunteer stations are at the end of Jetty Road in Moss Landing and at Cypress Point in Pebble Beach, California.

Since 2000, Team OCEAN has been a kayaker to kayaker interpretive program on the water in Elkhorn Slough, Moss Landing (Figure 1) and off Cannery Row, Monterey (Figure 2) on weekends during summer months (May-Sept). Team OCEAN members with an average of 3,100 people per year. Each six-hour Team OCEAN shift is led by a single Team OCEAN staff member and can include as many as 10 volunteers. In 2019 Team OCEAN staff were paid through funding by the National Marine Sanctuary Foundation (MBNMSF). During each shift, staff and volunteers paddle up to and interact with on-the-water visitors to the area such as other kayakers, stand up paddle boarders, hydrobikers (Figure 3), boaters, divers, kayak divers, kayak fishermen or jetskiers. Team OCEAN members approach visitors and record their interaction under any of four categories:

1. Informational: As an introduction with assistance on how to identify local wildlife and how to avoid a wildlife disturbance;
2. Prevent Disturbance: As a way to prevent an eminent disturbance from a visitor who either doesn't see the wildlife or is making a bee-line towards that wildlife;
3. Saw Disturbance: As a way to inform the visitor that they have just disturbed marine wildlife. The Team OCEAN member will also inform the visitor on how best to avoid another disturbance in the future and why avoiding local wildlife is required due to federal regulations.
4. Safety: As a way to alert visitors to potential safety concerns such as children without life preservers on or speeding through no wake zones.

Bay Net and Team OCEAN's annual combined volunteer training is conducted to provide volunteers the necessary background information to be informative, able to discuss wildlife protections, conduct themselves in an orderly and respectable manner, as well as remain safe while kayaking (Team OCEAN only). Throughout the year both Bay Net and Team Ocean staff

and volunteers record hours volunteered, number of contacts and wildlife disturbances including severity of disturbance, species disturbed and number disturbed. All current data is added to a spreadsheet of data collected by Team OCEAN and Bay Net volunteers.

Figure 1. Team OCEAN's Moss Landing and Elkhorn Slough range. The entire area that Team OCEAN members might contact visitors is outlined in white and extends from the north Moss Landing harbor, up the main channel of Elkhorn Slough to Kirby Park.

Figure 2. Team OCEAN's Monterey range. The entire area that Team OCEAN members might paddle and contact visitors is outlined in white and extends from the Monterey harbor, along the coastline (Cannery Row) to the northern boundary of the Monterey Bay Aquarium.

Figure 3. Hydrobikes in Moss Landing Harbor, CA. These pontoon bikes allow the rider to sit upright and pedal the bike to propel the craft forward.

Methods

Training

In 2019 new online training platforms were incorporated to make the Bay Net and Team OCEAN training more accessible for all volunteers while standardizing training topics, quizzes and exams. Weekday evening training lectures were presented live to volunteers via GoToWebinar with recordings posted on the Bay Net and Team OCEAN Weebly site: BayNetTeamOCEAN.Weebly.com. At this site volunteers could also look over weekly learning objectives, read reference materials and take weekly quizzes. Volunteers were trained in an eight-week program focused on major topic areas that might be discussed with visitors:

- Birds
- Elkhorn Slough
- Interpretation
- Kelp Forests
- Marine mammals
- Monterey Bay National Marine Sanctuary
- Oceanography
- Data and records collecting and keeping

Team OCEAN volunteers go through an additional certification class on basic kayak safety conducted by Monterey Bay Kayaks. Topics covered in the day-long class are paddling techniques, self-rescue and assisted rescue.

During the eight-week training, weekend field trips were conducted to provide volunteers with interpretive practice on the weekly lecture topic. Weekend field trips engaged volunteers through interpretive or knowledge check games, practice interpretation sessions as well as in-the-field identification of local marine wildlife. At the end of training volunteers completed a final exam that encompassed information covered in training lectures, field trips and through question and answer periods of the online lectures.

Data Collection

Bay Net and Team OCEAN volunteers were trained on how to collect and record interaction and disturbance data using the field data sheet (Team OCEAN) and an online Google Form (Bay Net). In 2019, Bay Net volunteers collected wildlife disturbance data for the first time in order to document wildlife disturbances not observed by Team OCEAN. Team OCEAN members have been collecting disturbance data since 2000.

Both Bay Net and Team OCEAN volunteers document disturbances to sea otters, harbor seals and sea lions and the number of animals disturbed in each incident. Bird disturbances are also documented but are rare as opposed to disturbances to marine mammals. Disturbances fall in one of three categories:

- Head Raise. This is the least severe of all disturbances and entails the animal keeping an eye on the disturber. This is the least egregious disturbance recorded.
- Flee. This entails the animal starting from in the water and either diving or swimming away at the surface to avoid the disturber.

- Flush. The animal starts from land, dock or jetty and is driven into the water by a disturber that the animal wants to avoid. Flushes are often accompanied by first waking an animal up and then causing them to run into the water in panic. This is the most egregious disturbance recorded.

Any type of disturbance, head raise to flush, could be considered a violation of the Marine Mammal Protection Act (MMPA), however Bay Net and Team OCEAN volunteers do not hand out tickets or citations but are merely there to document disturbances and severity as well as to help visitors understand how and why disturbances should be avoided. Bay Net volunteers are able to call local police departments for serious violations, Team OCEAN can call local harbor patrols.

Team OCEAN Staff

For the 2019 Team OCEAN season, the same staff that have been part of the program for the past three years were hired again for the four-month season. Prior to the start of the 2019 season, Team OCEAN staff went through a rescue refresher course with Monterey Bay Kayaks to brush up on rescue techniques, practice rescues and practice with equipment such as the throw bag.

Results

Training

At the start of the 2019 Bay Net and Team OCEAN training, thirty-one potential volunteers started the training, after eight weeks twenty-nine volunteers remained and completed the final exam. Final exam scores ranged from fifty-six out of seventy-six (74%) to seventy-five out of seventy-six (99%) (Figure 4). The volunteers whose scores fell into the 70-80% bracket were given a chance to work with Bay Net and Team OCEAN coordinator, Lisa Emanuelson, and Bay Net or Team OCEAN mentors in order to improve scores.
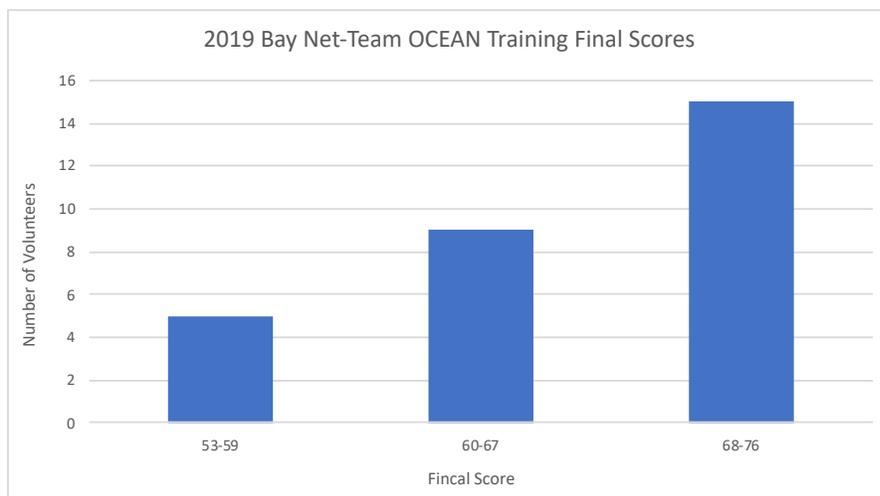
Figure 4. Spread of final exam scores for the 2019 Bay Net-Team OCEAN training.

From June to December 2019 new Bay Net volunteers tallied over 72 volunteer hours and over 1250 contacts. From May to December 2019, new Team OCEAN volunteers tallied over 310 hours.

Data Collection

Bay Net and Team OCEAN volunteers documented the number visitors contacted as well as the number and severity of observed disturbances to marine mammals: harbor seals, sea otters, sea lions and elephant seals.

Bay Net volunteers spoke with 29,394 people over 1,641 hours during FY 2018-2019. Disturbances observed by Bay Net volunteers were mostly from Hopkins Marine Station's West Beach or adjacent pupping beaches due to the number of shifts conducted there: 68% of all Bay Net hours were at the Hopkins fence (Figures 5 and 6) or pupping beaches next to Hopkins (Figure 7). Bay Net disturbance data highlight the number and severity of disturbances from all locations as well as the causes of disturbances to harbor seals (Table 1), sea otters (Table 2), sea lions (Table 3) and elephant seals (Table 4). Because Hopkins is the most common station for Bay Net volunteers and is home to an established harbor seal rookery, harbor seals are the most often observed species for Bay Net volunteers on shift and subsequently are the most commonly disturbed species recorded.

Figure 5. Harbor seal fans line up along the Hopkins Marine Station West Beach fence to see the resident harbor seals at rest and at play. Photo: H. Brown

Figure 6. Bay Net volunteer interprets harbor seal behavior for visitors to Hopkins. Photo: L. Emanuelson MBNMS/CMSF

Figure 7. Hopkins Marine Station's West Beach harbor seal rookery and the 4th and 5th Street seasonal harbor seal pupping beaches.

Table 1. 2019 Human caused harbor seal disturbances observed by Bay Net volunteers.

	Head Raise		Flee		Flush	
	Number of incidents	Number of animals	Number of incidents	Number of animals	Number of incidents	Number of animals
Kayak or Stand Up Paddleboard	2	106	1	6	7	236
Cars and Motorcycles	0	0	0	0	6	207
Pedestrians and Beachgoers	4	39	0	0	3	136
Drones	2	11	0	0	1	27
Totals	**8**	**156**	**1**	**6**	**17**	**606**

Table 2. 2019 Human caused sea otter disturbances observed by Bay Net volunteers.

	Head Raise		Flee		Flush	
	Number of incidents	Number of animals	Number of incidents	Number of animals	Number of incidents	Number of animals
Kayak or Stand Up Paddleboard	4	14	10	148	0	0
Cars and Motorcycles	0	0	0	0	0	0
Pedestrians and Beachgoers	0	0	0	0	0	0
Drones	0	0	0	0	0	0
Totals	**4**	**14**	**10**	**148**	**0**	**0**

Table 3. 2019 Human caused sea lion disturbances observed by Bay Net volunteers.

	Head Raise		Flee		Flush	
	Number of incidents	Number of animals	Number of incidents	Number of animals	Number of incidents	Number of animals
Kayak or Stand Up Paddleboard	0	0	0	0	0	0
Cars and Motorcycles	0	0	0	0	0	0
Pedestrians and Beachgoers	0	0	0	0	1	1
Drones	0	0	0	0	0	0
Totals	**0**	**0**	**0**	**0**	**1**	**1**

Table 4. 2019 Human caused elephant seal disturbances observed by Bay Net volunteers.

	Head Raise		Flee		Flush	
	Number of incidents	Number of animals	Number of incidents	Number of animals	Number of incidents	Number of animals
Kayak or Stand Up Paddleboard	0	0	0	0	1	3
Cars and Motorcycles	0	0	0	0	0	0
Pedestrians and Beachgoers	0	0	0	0	1	1
Drones	0	0	0	0	0	0
Totals	**0**	**0**	**0**	**0**	**2**	**4**

In 2019, Team OCEAN staff and volunteers spoke with 5,829 visitors over 936 hours. Team OCEAN recorded disturbance data, collected since 2000, is separated by location (Cannery Row vs Elkhorn Slough), as well as by species (sea otter, harbor seal and sea lion) and is available in Appendix 1. Team OCEAN recorded data on interaction and visitor types collected by Team OCEAN staff and volunteers since 2000, is separated by location (Cannery Row vs Elkhorn Slough) and is available in Appendix 2.

Team OCEAN Staff
The 2019 budget for Team OCEAN staff of $7,000 was provided by the National Marine Sanctuary Foundation. The total for five Team OCEAN staff came in under budget at $6,842.50.

Summary

The FY 2018-2018 Bay Net and Team OCEAN programs were a success with a combined total of 35,223 visitor contacts between both Bay Net and Team OCEAN. In FY 2018-2019 changes to the training of new Bay Net and Team OCEAN volunteers as well as changes to the data collection of Bay Net volunteers had unexpected benefits, and with funding from the National Marine Sanctuary Foundation, Team OCEAN could operate for its 20th season.

In FY 2018-2019, training for new and returning Bay Net and Team OCEAN volunteers was conducted via weekly webinars through GoToWebinar that allowed volunteers to watch and interact with lecturers all from the comfort of their own homes. All recorded lectures and other learning content were available to all volunteers through an online portal at BayNetTeamOCEAN.Weebly.com. By providing online training lectures, volunteers from farther away could finally participate. In the past, volunteer training was conducted in Pacific Grove starting at 6 pm. Due to traffic and work time constraints, the timing of the training made it impossible for volunteers outside of a small geographic range to participate in the Bay Net-Team OCEAN training. Additionally, because many volunteers are not as adept at taking notes as they once were, the recorded lecture videos made it possible for volunteers to watch lecture videos as many times as necessary to understand and assimilate content. As more Bay Net-Team OCEAN training is conducted online, improvements to training materials will be completed including smaller micro-learning lectures of ten minutes or less for volunteers to brush up on specific species or topics, refinement of learning objectives for volunteers and training on how to correctly collect disturbance information.

In FY 2018-2019, Bay Net volunteers started to formally collect disturbance data to integrate anecdotal observations with quantifiable data. Bay Net disturbance data collection is just at the very beginning stage and requires refinement of the online Google Form in order to be more useful. However, documentation of disturbance data, especially for the eight months that Team OCEAN is not on the water, is useful for resource managers to make informed decisions regarding marine wildlife protections.

In FY 2018-2019, Team OCEAN's 20th season on the water, Team OCEAN staff were funded by the National Marine Sanctuary Foundation. Team OCEAN staff provide necessary on-the-water oversight and direction for Team OCEAN volunteers. In 2019 funding from the National Marine Sanctuary Foundation allowed for four months of operation on Saturdays and Sundays.

Bay Net and Team OCEAN interpretive programs attempt to bridge the gap between Monterey Bay visitors and Monterey Bay National Marine Sanctuary by providing on-the-water or on-the-trail interpretation of local wildlife. Many visitors to Monterey Bay and Monterey Bay National Marine Sanctuary do not know what a sea otter looks like from the water, why harbor seals rest on beaches during the daytime or why throwing rocks at resting elephant seals is against the law. Thankfully Bay Net and Team OCEAN members endeavor to answer questions, stop harmful human behavior and protect marine wildlife in Monterey Bay National Marine Sanctuary.

Appendix 1. Team OCEAN Disturbance Data by Location

Table A1.1 Team OCEAN Cannery Row, Monterey Sea Otter Disturbances 2000-2019

Sea Otters	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Total # of head raises	12	32	28	13	26	12	17	12	20	12	6	5	5	13	8	13	8	4	246
Total # of animals showing head raises	57	70	42	38	73	34	45	20	101	59	17	13	6	42	23	65	42	25	772
Total # of flees	11	7	10	7	9	11	16	9	8	1	1	1	10	9	5	2	8	6	131
Total # of animals fleeing	40	15	13	19	39	31	57	26	23	1	2	1	28	42	17	9	43	31	437
Total # of flushes	1	3	2	1	1	1	1	1	6	5	7	6	4	10	2	4	3	1	59
Total # of animals flushed	10	15	2	5	4	2	6	2	20	13	23	23	13	23	3	20	24	8	216
Total # of disturbances of all types	24	42	40	21	36	24	34	22	34	18	14	12	19	32	15	19	19	11	436
Total # of animals disturbed	107	100	57	62	116	67	108	48	144	73	42	37	47	107	43	94	109	64	1425

Table A1.2 Team OCEAN Cannery Row, Monterey Sea Lion Disturbances 2000-2019

Sea Lions	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Total # of head raises	0	1	2	7	7	10	6	6	2	0	3	4	1	4	0	3	2	10	68
Total # of animals showing head raises	0	3	6	46	54	82	63	42	5	0	36	30	12	28	0	19	8	75	509
Total # of flees	1	1	3	3	8	2	3	4	1	0	1	0	3	0	0	1	0	1	32
Total # of animals fleeing	5	2	11	18	69	15	17	18	10	0	10	0	12	0	0	5	0	5	197
Total # of flushes	7	3	4	3	1	0	1	1	4	3	1	2	4	3	0	3	0	2	42
Total # of animals flushed	175	29	19	21	4	0	4	20	57	32	10	21	20	38	0	12	0	6	468
Total # of disturbances of all types	8	5	9	13	16	12	10	11	7	3	5	6	8	7	0	7	2	13	142
Total # of animals disturbed	180	34	36	85	127	97	84	80	72	32	56	51	44	66	0	36	8	86	1174

Table A1.3 Team OCEAN Cannery Row, Monterey Harbor Seal Disturbances 2000-2019

Harbor Seals	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Total # of head raises	1	15	16	5	11	6	10	3	9	3	2	3	0	0	0	2	0	3	89
Total # of animals showing head raises	1	24	36	18	27	20	42	8	23	9	2	12	0	0	0	7	0	5	234
Total # of flees	0	0	0	1	0	3	0	1	1	1	0	0	0	0	0	1	0	0	8
Total # of animals fleeing	0	0	0	2	0	3	0	1	3	5	0	0	0	0	0	2	0	0	16
Total # of flushes	0	1	0	2	2	1	0	0	1	1	1	0	1	0	0	0	0	0	10
Total # of animals flushed	0	1	0	3	7	2	0	0	1	1	1	0	50	0	0	0	0	0	66
Total # of disturbances of all types	1	16	16	8	13	10	10	4	11	5	3	3	1	0	0	3	0	3	107
Total # of animals disturbed	1	25	36	23	34	25	42	9	27	15	3	12	50	0	0	9	0	5	316

Table A1.4 Team OCEAN Elkhorn Slough, Moss Landing Sea Otter Disturbances 2000-2019

Sea Otters	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Total # of head raises	1	0	1	7	3	8	12	5	6	2	7	4	7	18	13	7	17	27	145
Total # of animals showing head raises	2	0	1	20	11	31	47	34	31	3	8	12	79	131	85	42	62	212	811
Total # of flees	7	6	3	14	12	16	25	12	16	12	32	17	29	27	32	34	35	29	358
Total # of animals fleeing	11	6	3	36	34	132	130	68	150	124	361	156	438	171	167	144	326	112	2569
Total # of flushes	0	0	0	3	0	0	2	2	22	2	10	3	9	7	5	9	12	2	88
Total # of animals flushed	0	0	0	12	0	0	24	16	192	2	79	59	69	55	37	40	79	22	686
Total # of disturbances of all types	8	6	4	24	15	24	39	19	44	16	49	24	45	52	50	50	64	58	591
Total # of animals disturbed	13	6	4	68	45	163	201	118	373	129	448	227	586	357	289	226	467	346	4066

Table A1.5 Team OCEAN Elkhorn Slough, Moss Landing Sea Lion Disturbances 2000-2019

Sea Lions	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Total # of head raises	0	3	0	0	0	0	3	1	0	0	0	0	2	0	0	0	0	0	9
Total # of animals showing head raises	0	13	0	0	0	0	4	12	0	0	0	0	24	0	0	0	0	0	53
Total # of flees	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
Total # of animals fleeing w/o diving	0	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	28
Total # of flushes	0	2	0	0	0	0	1	2	4	1	1	0	1	0	0	0	0	0	12
Total # of animals flushed	0	12	0	0	0	0	30	140	166	45	15	0	20	0	0	0	0	0	428
Total # of disturbances of all types	0	5	0	0	0	0	7	3	4	1	1	0	3	0	0	0	0	0	24
Total # of animals disturbed	0	25	0	0	0	0	62	152	166	45	15	0	44	0	0	0	0	0	509

Table A1.6 Team OCEAN Elkhorn Slough, Moss Landing Harbor Seal Disturbances 2000-2019

Harbor Seals	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Total # of head raises	11	29	16	15	19	8	9	7	15	4	9	8	8	4	1	36	5	17	221
Total # of animals showing head raises	112	157	158	221	132	55	53	144	93	52	95	34	91	38	5	59	27	102	1628
Total # of flees	2	0	3	2	3	2	8	3	0	2	4	3	0	1	0	3	2	2	40
Total # of animals fleeing	2	0	5	45	10	22	64	51	0	2	55	16	0	2	0	4	16	10	304
Total # of flushes	4	8	8	5	10	7	6	8	3	4	2	5	7	4	0	2	3	0	86
Total # of animals flushed	66	59	234	217	147	65	63	88	16	96	13	38	194	111	0	25	20	0	1452
Total # of disturbances of all types	17	37	27	22	32	17	23	18	18	10	15	16	15	9	1	41	10	19	347
Total # of animals disturbed	180	216	397	483	289	142	180	283	109	150	163	88	285	151	5	88	63	112	3384

Appendix 2. Team OCEAN Visitor Interaction Data by Location

A2.1 Team OCEAN Interaction Data for Cannery Row, Monterey, California 2000-2019

	2000-1	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Number of Days on the Water	28	31	42	48	51	57	66	57	46	45	28	28	30	45	28	27	25	44	67	793
Total Staff & Volunteer Hours	180	269	545	778	1044	1056	1134	1192	672	834	558	528	767	636	556	510	468	696	402	12825
Total Staff and Volunteer Hours on the water	135	202	409	584	783	792	851	894	504	626	419	396	576	477	417	383	351	522	302	9623
Total Volunteer Hours	0	83	240	427	588	618	473	576	384	558	390	360	587	366	388	261	318	384	239	7240
Number of Contacts	688	695	1301	1160	1270	1235	1416	1305	1089	947	648	623	837	1041	1074	805	661	1008	619	18422
Number of People Contacted	*	1671	3226	2901	3373	3384	4024	3637	3077	2490	2044	1795	2192	2781	2941	2321	1744	2852	1585	48038
Number of Interactions by Type																				
Informational	*	621	1139	1031	1145	1092	1292	1146	979	826	565	572	763	929	940	747	603	956	564	15910
Prevent Disturbance	4	45	96	75	75	84	119	91	66	65	39	31	54	83	91	35	30	29	22	1134
Saw Disturbance	5	25	50	51	46	55	43	54	35	53	25	20	19	29	37	16	25	20	27	635
Safety Warning	*	4	11	1	4	4	10	14	9	3	4	0	1	0	6	7	3	3	6	90
Disturbances/Person-hour on Water	0.4	0.12	0.12	0.09	0.06	0.07	0.05	0.06	0.07	0.08	0.06	0.05	0.03	0.06	0.09	0.09	0.07	0.04	0.09	
Number of Interactions by User																				
Rental Kayaks	7	589	1065	960	1027	983	1136	1012	817	733	466	522	668	824	820	631	481	757	436	13934
Private Kayaks	2	59	163	147	173	172	216	153	145	111	87	61	102	151	139	79	113	127	98	2298
Pedestrians	*	0	35	26	33	43	63	74	65	55	45	13	32	27	15	37	22	23	9	617
Boaters	*	6	14	12	18	17	35	23	27	27	15	12	20	11	18	6	8	17	16	302
Divers	*	3	14	6	16	17	12	18	8	8	2	4	2	9	1	4	5	8	4	141
Kayak Divers	*	9	5	1	3	2	0	3	3	0	4	0	0	0	0	0	0	0	0	30
Kayak Fishers	*	*	*	*	*	*	*	22	24	13	14	11	13	19	38	27	7	32	26	246
Stand Up Paddle Boarders	*	*	*	*	*	*	*	*	*	17	15	24	14	20	43	21	25	44	30	253
Jetskis	*	1	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	5

A2.2 Team OCEAN Interaction Data for Elkhorn Slough, Moss Landing, California 2000-2019

	2000-1	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Totals
Number of Days on the Water	25	30	51	49	53	55	66	57	50	48	30	31	30	47	31	29	28	52	31	793
Total Staff & Volunteers Hours	148	280	605	581	978	1158	1164	1134	762	846	528	684	641	696	700	564	504	810	534	13317
Total Staff and Volunteer Hours on the Water	111	210	454	436	734	869	873	851	572	635	396	513	482	522	525	423	378	608	401	9993
Total Volunteer Hours	0	80	221	267	468	666	648	714	444	552	348	498	461	414	514	390	336	390	348	7759
Number of Contacts	559	714	1241	910	1002	1121	1268	1597	1325	1397	964	1207	1217	1329	1144	1215	1192	1945	1478	22825
Number of People Contacted	833	1858	3360	2272	2584	3185	4307	4699	3980	3657	2914	3520	3356	3938	3403	3345	3431	6151	4244	65037
Interaction reason types																				
Informational	*	648	1130	860	911	1030	1140	1423	1227	1242	881	1092	1102	1159	1012	1087	1039	1770	1308	20061
Prevent disturbance	*	27	57	28	84	48	79	66	54	81	51	57	66	90	62	74	76	85	76	1161
Saw disturbance	3	35	39	21	30	40	42	71	41	67	29	54	47	68	59	48	64	73	79	910
Safety Warning	*	2	11	0	7	3	7	21	3	7	3	4	2	12	11	6	13	17	15	144
Disturbances/Person-hour on water	0.03	0.17	0.09	0.05	0.04	0.05	0.05	0.08	0.07	0.11	0.07	0.11	0.1	0.13	0.11	0.17	0.17	0.12	0.2	
Types of ocean users by interactions																				
Rental Kayaks	1	519	959	631	667	777	888	1115	923	1005	663	927	880	962	827	843	817	1384	1018	15,806
Private Kayaks	2	166	318	270	218	231	389	350	315	290	236	198	241	272	211	260	235	480	302	4,984
Pedestrians	*	2	12	6	31	57	56	58	49	53	28	32	38	25	61	24	27	90	8	657
Boaters	*	11	21	37	37	56	54	56	35	34	25	32	20	35	21	39	32	12	28	585
Canoe	*	0	14	0	0	3	0	0	0	0	0	0	0	0	0	0	0	49	0	66
Divers	*	1	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	4
Kayak Divers	*	0	0	0	0	0	17	0	1	0	0	0	0	0	0	0	0	0	1	19
Kayak Fishermen	*	*	*	*	*	*	*	2	2	5	0	5	4	3	3	8	14	10	9	65
Stand Up Paddle Boarders	*	*	*	*	*	*	*	*	*	8	12	13	34	32	21	41	44	76	61	342
Hydro bikes	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	86	51	137
Jetskis	*	0	1	0	0	0	5	0	2	0	0	0	0	0	0	0	0	0	0	8