



NATIONAL MARINE
SANCTUARIES

MONTEREY BAY

Team OCEAN Program Report 2008

“Inspiring and educating
one kayaker at a time”



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Introduction

Team OCEAN (Team Ocean Conservation Education Action Network) Programs are currently run in two of the 13 National Marine Sanctuaries: Florida Keys and Monterey Bay National Marine Sanctuaries. Many sanctuaries have volunteer programs, however these are the only two developed to intercept ocean users on the water. For both sanctuaries the focus of the program is to protect local natural resources while allowing a rich and meaningful sanctuary experience for the visitor.

In the Monterey Bay National Marine Sanctuary (MBNMS) Team OCEAN focuses its' efforts on protection of the marine mammal populations that find refuge in kelp forests, rocky outcrops, beaches and estuaries of the MBNMS. This seasonal interpretive naturalist program was designed to provide ocean users with information about the MBNMS, its' programs, natural history of inhabitants and guidelines on how to view these inhabitants respectfully without disturbing them, or changing their natural behavior.

MBNMS Team OCEAN staff and docents do not write tickets or hand out citations for violations, instead the program encourages proper viewing etiquette through interpretive enforcement. The members of Team OCEAN Kayaker Outreach Program interact in a friendly, positive, non-confrontational manner to prevent harassment situations while interpreting the sanctuary's resources and answering questions about its' ecology and wildlife.



The MBNMS Team OCEAN Kayaker Outreach Program 2008

Background

The Team OCEAN Kayaker Outreach program is designed to give one-on-one information to sanctuary users on proper wildlife viewing etiquette and general sanctuary information. Six paid staff lead a group of volunteers during each 6 hour shift, three times a week in two locations, Elkhorn Slough in Moss Landing and Cannery Row in Monterey, CA. During shifts both volunteers and staff collect information about interactions with sanctuary users, what type of disturbance if any, is seen, and how many and what type of animals were involved in any disturbances. Dedicated staff and volunteers provide a critical link between sanctuary regulations and users in a personal and caring manner without the need for tickets or law enforcement intervention. The program has been in operation since 2000 and continues to grow each year with more volunteers and more sanctuary users contacted.

Training

For 2008 training was done in conjunction with the Monterey Bay Aquarium's Volunteer Guide Class. Each class meeting had lecture for the first half of the night and in-gallery practice sessions for the second half for the MBA volunteers. New and returning Team OCEAN and Bay Net volunteers sat in for the first half of the lecture given by an aquarium staff and stayed for another lecture given by Lisa Emanuelson during the second half.

Monterey Bay Aquarium lectures included: Elkhorn Slough, cnidarians, ctenophores, bryozoans, crustaceans, molluscs, worms, echinoderms, birds, fishes, kelp forests, marine mammals. Lectures given by Lisa Emanuelson included: algae, Elkhorn Slough, interpretation, oceanography, and logistics. At the end of the training series a fun game of Jeopardy was played in order to firm up knowledge learned in lectures and give practice in interpretation.

Volunteers

In May 2008, 16 new volunteers joined the Team OCEAN Kayak Outreach Program roster for a total of 52 volunteers for the 2008 season. New volunteers received a kayak safety/training class donated by long time program partner, Monterey Bay Kayaks. The class covered topics such as proper paddling techniques, proper orientation to waves, self bail-outs, and partner assists. The safety class was an all-day on-the-water class after which the students received a certification card, certifying their participation and acceptable performance of the required skills.

Training also included a few optional weekend field trips to help hone skills. The first of one such field trip was new to the Team OCEAN training sessions, an Elkhorn Slough safari. Ron Eby, longtime volunteer and now staff for Team OCEAN arranged for volunteers to board a NOAA whaler at Moss landing Harbor. Ron piloted the boat up Elkhorn Slough giving new volunteers a bird's eye view of the Slough while still being able to ask Ron questions. The groups on the boat were quite small, only 5 at a time; boat time was donated by Elkhorn Slough National Estuarine Research Reserve. The second field trip for new Team OCEAN and Bay Net volunteers was birding at Moss Landing Harbor with Hannah Nevins of Moss Landing.

2008 On The Water Results

Team OCEAN staff and volunteers approached 3637 people in Monterey and 4695 in Elkhorn Slough bringing the seven-year contact totals to 45,636 (2007 was erroneously reported to have a have a 7 year total of 45,597 when to actual totals were 37,304).

While Team OCEAN's primary goal is to educate sanctuary users, team members have been able to collect useful data over years. For the past six years (2003-2008) volunteers and staff have collected data using data sheets developed for the program. The data sheets allow notation of the specific user types (kayak rentals, private kayakers, boaters, pedestrians, divers, kayak divers, or jet skis) and the interaction types, see Tables 1 and 2.

Interaction types for Sanctuary users are classified as:

- Informational- users are unaware of the Sanctuary and/or the local wildlife they might encounter.
- Pre-disturbance- user is on a direct course to come close enough to wildlife to cause a disturbance, a Team OCEAN member will head off and explain the situation.
- Saw disturbance- user disturbed wildlife and may not know their actions either caused the disturbance or they may be unaware of the implications of the disturbance. A Team OCEAN member will talk with the user and help them to understand the situation.
- Safety warning- user is doing something that may endanger them while on the water. A Team OCEAN member will explain the implications of their actions in order to have them discontinue it.
- No approach- on rare occasions when a disturbance has been noted it is impossible to catch up to the sanctuary user that has caused the disturbance; or perhaps the user is known to be volatile or argumentative. In either case the Team OCEAN member does not approach but does make note of the disturbance and the non-approach.

As with all previous years, the highest numbers of interaction types were for informational purposes with 1146 (88%) in Monterey and 1423 (90%) in Elkhorn Slough (Tables 1 & 2). In 2008, 91 (7%) interactions in Monterey and 66 (4%) in Elkhorn Slough were to prevent an imminent disturbance.

The staff and volunteers also collect data on any disturbance behavior, the observed animal species, and number of individuals exhibiting a specific disturbance behavior.

Animal behaviors noted in the data sheets are:

- Head raise- where animal(s) raises only the head when alerted. This is considered a mild reaction to a disturbance.
- Flees with out diving- where animal(s) swims away, may or may not keep an eye on the reason for swimming away.
- Flees with diving- for animal(s) already in the water, dives to get away from cause of disturbance.
- Flush- for animal(s) out of water that rush into water to get away from cause of disturbance. This is considered a severe reaction to a disturbance.

In 2008, Elkhorn Slough had 67 (4%) separate disturbances observed and Cannery Row had 54 (4%) from head raises to total flushings. The most common type of disturbance is a head raise, which accounted for 61% of all disturbances off Cannery Row and 35% in Elkhorn Slough. Complete flushings, the most egregious of disturbances noted, only account for a small percentage, 4% off Cannery Row and 4% in Elkhorn Slough, see Tables 3-8 for more specific details on disturbances noted.

Summary

The Team OCEAN Kayaker Outreach Program has proven to be an effective outreach tool for the Monterey Bay National Marine Sanctuary (MBNMS). For the past 8 years Team OCEAN volunteers have contacted over 45,500 people and helped residents and visitors understand the Monterey Bay National Marine Sanctuary, what wildlife are locally abundant and how to view this wildlife safely and respectfully. By being the face of the sanctuary on the water and interacting with sanctuary users directly, Team OCEAN kayakers provide a necessary educational link between sanctuary regulations and the Sanctuary users. The 2008 season continues to highlight the effectiveness of the Team OCEAN Program through increasing numbers of people reached and increasing numbers of disturbances prevented, the Team OCEAN Program highlights the effectiveness of a one-to-one approach to wildlife disturbance and Sanctuary education.

In 2009 the MBNMS' Management Plan will become finalized. Within this plan is a strategy that requires a reduction by 50% of the Team OCEAN observed wildlife disturbances. Every measure will be taken to comply with this requirement through the management plan, including recruitment of an intern to help with pre and post season analysis of kayaking behaviors along Cannery Row and in Elkhorn Slough. There is undeniable resource protection benefit of the program by preventing numerous wildlife disturbances and educating those who might potentially disturb wildlife needlessly, a further study of the areas patrolled will assist in determining how effective Team OCEAN is.

During the 2008 season a new schedule was attempted for Cannery Row in order to increase time on the water and shifting that time to heavier traffic times. Cannery Row morning split shifts started at 9 am and ended at 1pm, afternoon shifts started at 12:30 pm and ended at 4:30pm. This split shift was tried on a few weekends and then adopted for

the last month of the season. Extra staff was required for the split shifts although some staff did attempt to do both shifts in one day. The reviews of the split shifts were varied; volunteers liked it since for some volunteers they are unable to sit in a kayak for more than a few hours at a time. Some staff liked it but felt as though it was harder to get enough hours without doing both shifts. The lack of staff support led to many shifts not being covered and therefore Team OCEAN not being on the water. Split shifts will be revisited again depending upon the 2009 budget and staff support. An increase in number of kayakers contacted was not tracked during the split shift times since the kayaker population on the water at any one time is fairly variable.

The combined training for the 2008 season with MBA volunteers was an incredible opportunity, unfortunately many of the topics covered in the MBA class are not applicable to Team OCEAN of Bay Net volunteers. For the 2009 season training will return to Team OCEAN and Bay Net together for a spring time class.

The MBNMS's Team OCEAN continues to grow with new volunteers, more people contacted on the water and more wildlife observed at a respectable distance. The Team OCEAN Program serves an important function in the near shore community, as an ambassador for the Monterey Bay National Marine Sanctuary, as a water-borne information booth for visitors and locals alike, and lastly as protection for the numerous marine mammals found along the central California coastline.

For more information about the Team OCEAN Kayaker Outreach Program of the Monterey Bay National Marine Sanctuary, contact Lisa Emanuelson at (831) 647-4201 or Lisa.Emanuelson@noaa.gov

Table 1: 2000-2008 Data for Cannery Row in Monterey, CA

	2000-1	2002	2003	2004	2005	2006	2007	2008	Total
Number of days on the water	27.5	31	42	48	51	57	66	57	379.5
Total Staff & Volunteer Hours	180.4	269	545	778	1044	1056	1134	1192	6198.4
Total hours on the water (Staff+Vol)	135.3	201.75	409	584	783	792	850.5	894	4245.45
Total Volunteer Hours	0	83	240	427	588	618	472.5	576	3004.5
Number of Contacts	688	695	1301	1160	1270	1235	1416	1305	9070
Number of People Contacted		1671	3226	2901	3373	3384	4024	3637	22216
Number of Interactions by Type									
Informational	*	621	1139	1031	1145	1092	1292	1146	7466
Prevent Disturbance	4	45	96	75	75	84	119	91	589
Saw Disturbance	5	25	50	51	46	55	43	54	329
Safety Warning	*	4	11	1	4	4	10	14	48
Disturbances/Person-hour on Water	0.4	0.12	0.12	0.09	0.06	0.07	0.05	0.06	
Number of Interactions by User									
Rental Kayaks	7	589	1065	960	1027	983	1136	1012	6779
Private Kayaks	2	59	163	147	173	172	216	153	1085
Pedestrians	*	0	35	26	33	43	63	74	274
Boaters	*	6	14	12	18	17	35	23	125
Divers	*	3	14	6	16	17	12	18	86
Kayak Divers	*	9	5	1	3	2	0	3	23
Kayak Fishers	*	*	*	*	*	*	*	22	22
Jetskis	*	1	1	0	0	1	2	0	5

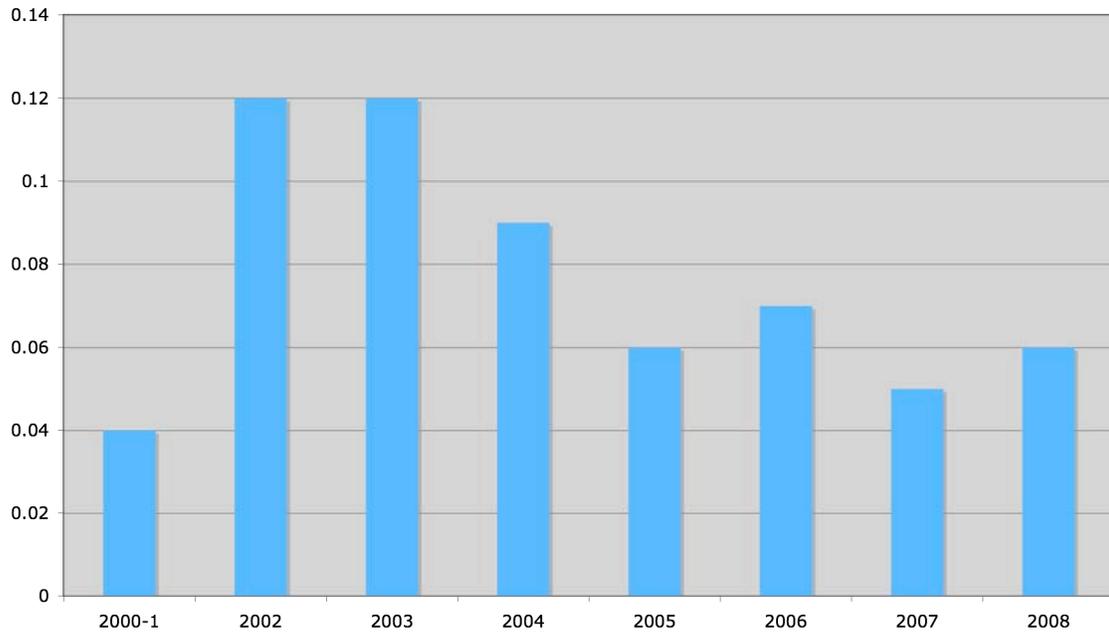
*data not collected

Table 2: 2000-2008 Data for Elkhorn Slough in Moss Landing, CA

	2000-1	2002	2003	2004	2005	2006	2007	2008	Totals
Number of days on the water	24.5	30	51	49	53	55	66	57	385.5
Total hours Staff & Volunteers	147.5	280	605	581	978	1158	1164	1134	6047.5
Total Staff and Volunteer Hours on the Water	110.7	210	454	436	733.5	868.5	873	850.5	4536.2
Total volunteer hours	0	80	221	267	468	666	648	714	3064
Number of approaches	559	714	1241	910	1002	1121	1268	1597	8412
Number of people approached	833	1858	3360	2272	2584	3185	4307	4699	23098
Interaction reason types									
Informational	*	648	1130	860	911	1030	1140	1423	7142
Prevent disturbance	*	27	57	28	84	48	79	66	389
Saw disturbance	3	35	39	21	30	40	42	71	281
Safety Warning	*	2	11	0	7	3	7	21	51
Disturbances/Person-hour on water	0.03	0.17	0.09	0.05	0.04	0.05	0.05	0.08	
Types of ocean users by interactions									
Rental Kayaks	1	519	959	631	667	777	888	1115	5557
Private Kayaks	2	166	318	270	218	231	389	350	1944
Pedestrians	*	2	12	6	31	57	56	58	222
Boaters	*	11	21	37	37	56	54	56	272
Canoe	*	0	14	0	0	3	0	0	17
Divers	*	1	0	0	0	0	1	0	2
Kayak Divers	*	0	0	0	0	0	17	0	17
Jetskis	*	0	1	0	0	0	5	0	6
Kayak Fishermen	*	*	*	*	*	*	*	2	2

* data not collected

**2000-2008 Cannery Row Monterey:
Disturbance per person-hour on the water**



**2000-2008 Elkhorn Slough:
Disturbance/person-hour on the water**

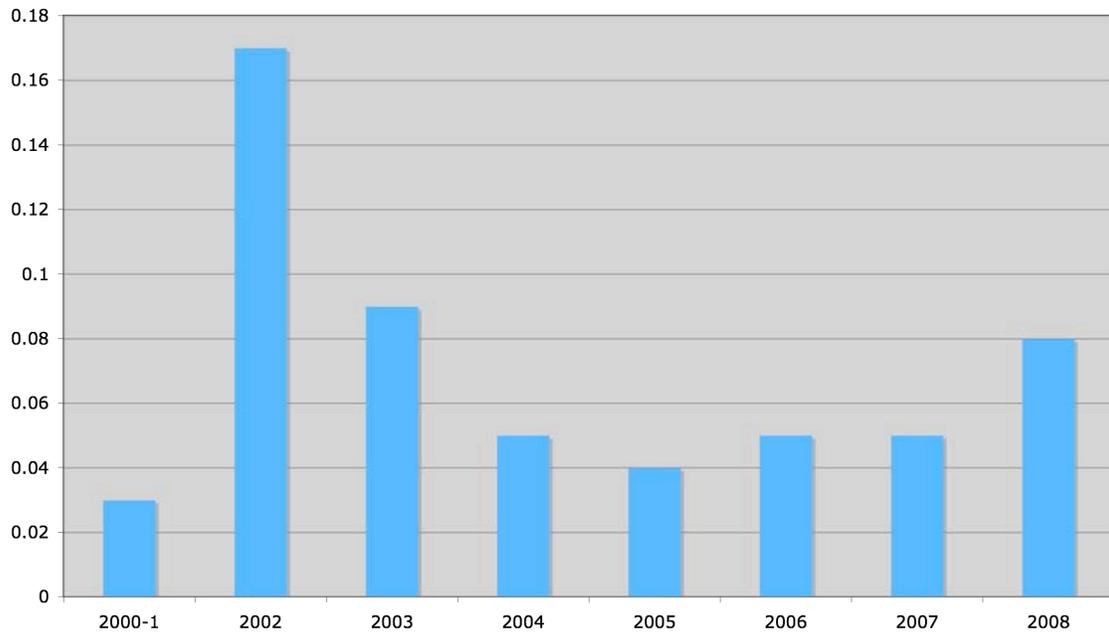


Table 3: Disturbances of Sea Otters (*Enhydra lutris*) for Cannery Row in Monterey, CA

Sea Otters	2002	2003	2004	2005	2006	2007	2008
Total # of head raises	12	32	28	13	26	12	17
Total # of animals showing head raises	57	70	42	38	73	34	45
Total # of flees w/o diving	4	2	4	4	4	7	10
Total # of animals fleeing w/o diving	11	5	4	14	20	26	35
Total # of flees with diving	7	5	6	3	5	4	6
Total # of animals fleeing with diving	29	10	9	5	19	5	22
Total # of flushes	1	3	2	1	1	1	1
Total # of animals flushed	10	15	2	5	4	2	6
Total # of disturbances of all types	24	42	40	21	36	24	34
Total # of animals disturbed	107	100	57	62	116	67	108

Table 4: Disturbances of Sea Lions (*Zalophus californianus*) for Cannery Row in Monterey, CA

Sea Lions	2002	2003	2004	2005	2006	2007	2008
Total # of head raises	0	2	2	7	7	10	6
Total # of animals showing head raises	0	3	6	46	54	82	63
Total # of flees w/o diving	0	0	1	1	1	0	1
Total # of animals fleeing w/o diving	0	0	1	5	6	0	6
Total # of flees with diving	1	1	2	2	7	2	2
Total # of animals fleeing with diving	5	2	10	13	63	15	11
Total # of flushes	7	3	4	3	1	0	1
Total # of animals showing flushes	175	29	19	21	4	0	4
Total # of disturbances of all types	8	6	9	13	16	12	10
Total # of animals disturbed	180	34	36	85	127	97	84

Table 5: Disturbances of Harbor Seals (*Phoca vitulina*) for Cannery Row in Monterey, CA

Harbor Seals	2002	2003	2004	2005	2006	2007	2008
Total # of head raises	1	15	16	5	11	6	10
Total # of animals showing head raises	1	24	36	18	27	20	42
Total # of flees w/o diving	0	0	0	1	0	0	0
Total # of animals fleeing w/o diving	0	0	0	2	0	0	0
Total # of flees with diving	0	0	0	0	0	3	0
Total # of animals fleeing with diving	0	0	0	0	0	3	0
Total # of flushes	0	1	0	2	2	1	0
Total # of animals flushed	0	1	0	3	7	2	0
Total # of disturbances of all types	1	16	16	8	13	10	10
Total # of animals disturbed	1	25	36	23	34	25	42

Table 6: Disturbances of Sea Otters (*Enhydra lutris*) for Elkhorn Slough in Moss Landing, CA

Sea Otters	2002	2003	2004	2005	2006	2007	2008
Total # of head raises	1	0	1	7	3	8	12
Total # of animals showing head raises	2	0	1	20	11	31	47
Total # of flees w/o diving	0	3	0	7	4	4	9
Total # of animals fleeing w/o diving	0	3	0	20	19	49	73
Total # of flees with diving	7	3	3	7	8	12	16
Total # of animals fleeing with diving	11	3	3	16	15	73	57
Total # of flushes	0	0	0	3	0	0	2
Total # of animals flushed	0	0	0	12	0	0	24
Total # of disturbances of all types	8	6	4	24	15	24	39
Total # of animals disturbed	13	6	4	68	45	153	201

Table 7: Disturbances of California Sea Lions (*Zalophus californianus*) for Elkhorn Slough in Moss Landing, CA

Sea Lions	2002	2003	2004	2005	2006	2007	2008
Total # of head raises	0	3	0	0	0	0	3
Total # of animals showing head raises	0	13	0	0	0	0	4
Total # of flees w/o diving	0	0	0	0	0	0	1
Total # of animals fleeing w/o diving	0	0	0	0	0	0	6
Total # of flees with diving	0	0	0	0	0	0	2
Total # of animals fleeing with diving	0	0	0	0	0	0	22
Total # of flushes	0	2	0	0	0	0	1
Total # of animals flushed	0	12	0	0	0	0	30
Total # of disturbances of all types	0	2	0	0	0	0	7
Total # of animals disturbed	0	15	0	0	0	0	62

Table 8: Disturbances of Harbor Seals (*Phoca vitulina*) for Elkhorn Slough in Moss Landing, CA

Harbor Seals	2002	2003	2004	2005	2006	2007	2008
Total # of head raises	11	29	16	15	19	8	9
Total # of animals showing head raises	112	157	158	221	132	55	53
Total # of flees w/o diving	1	0	2	1	1	0	3
Total # of animals fleeing w/o diving	1	0	4	5	2	0	34
Total # of flees with diving	1	0	1	1	2	2	5
Total # of animals flees with diving	1	0	1	40	8	22	30
Total # of flushes	4	8	8	5	10	7	6
Total # of animals flushed	66	59	234	217	147	65	63
Total # of disturbances of all types	17	37	27	22	32	17	23
Total # of animals disturbed	180	216	397	483	289	142	180