

Orange County MPA Watch

2014 Annual Report



WHAT IS AN MPA?

Marine Protected Areas (MPAs) are discrete geographic marine or estuarine areas designed to protect or conserve marine life and habitat. The MLPA (Marine Life Protection Act) was passed in 1999, and the statewide network of MPAs created under it was completed in 2012. The MLPA is different from traditional fishery regulations in that it seeks to protect entire marine ecosystems rather than individual species. All MPAs have measurable goals and objectives, and function as a network. Also, scientific data on the MPAs must be collected to evaluate their performance and facilitate adaptive management. This data is reviewed and adaptive management decisions are made every five years by the California Fish and Wildlife Commission.

WHY DO WE HAVE MPA'S?

MPA's preserve California's stunning marine ecosystems so that future generations can observe and enjoy. Direct benefits include:

- Increased spawning stock
- Improved habitats
- Spillover effect enhances catch close to protected areas
- Enhanced biodiversity and species protection

WHAT IS THE OC MPA WATCH PROGRAM?

The Orange County Marine Protected Area (OC MPA) Watch Program enlists volunteers, community groups, and local government to monitor human activity in and around the seven Orange County MPAs. The program is organized and run by Orange County Coastkeeper (OCCK). OCMPA Watch is part of a larger state wide program with surveys sites from Klamath to San Diego being done by a variety of groups. All of the groups use the same monitoring procedures and data collection sheet and enter data into a central database. The program has a Technical Advisory Committee made up of well-known scientists, a statewide coordinator that assists local programs and committees that develop training materials and manage IT issues. The website for the statewide program is www.mpawatch.org The goal for the statewide program is to develop information on human activities that will be used by the Department of Fish and Wildlife, other state and local agencies, and the public in managing our MPAs to insure their success.

Orange County Marine Protected Areas:

1. Bolsa Bay State Marine Conservation Area (SMCA)
2. Bolsa Chica Basin SMCA
3. Crystal Cove SMCA
4. Laguna Beach State Marine Reserve (SMR)
5. Laguna Beach SMCA
6. Dana Point SMCA
7. Upper Newport Bay SMCA

Orange County MPA Regulations:

All activities that do not harm marine life including swimming, boating, diving, surfing, tidepooling, walking and other beach recreational activities are allowed with no restrictions. The only activities restricted in MPAs are those that involve harming living marine resources. The regulations for each MPA are as follows:

1. The [Bolsa Bay SMCA](#) allows fishing from shore by hook and line only. Due to additional restrictions from the ecological reserve overlay, fishing is only allowed at one site in the very north end of the SMCA near the Bolsa Chica Interpretative Center. However, due to rapid bluff erosion this fishing area has been closed since the beginning of the year until bluff stabilization work can be completed.
2. The [Bolsa Basin SMCA](#) allows no take of any kind.
3. The [Crystal Cove SMCA](#) allows the *recreational* take of lobster, sea urchin, and finfish by hook-and-line or spearfishing, and the *commercial* take of lobster, urchins, and coastal pelagic species such as sardine, anchovy and squid by round haul net. The take of all living marine resources from tidepools is prohibited. The SMCA is bounded by the southern Newport Harbor jetty in the north to Abalone Point in the south.
4. The [Laguna Beach Marine Reserve](#) does not allow take of any marine resources in the 4.7 mile stretch from Abalone Point in the north to Goff Island in the south.
5. The [Laguna Beach SMCA](#) does not allow take of any marine resources in the 1.2 mile stretch from in Geoff Island the north to Table Rock Point in the south.
6. The [Dana Point SMCA](#) allows the *recreational* take of lobster, sea urchin, and finfish by hook-and-line or spearfishing, and the *commercial* take of lobster, urchins, and coastal pelagic species such as sardine, anchovy, and squid by round haul net. The take of all living marine resources from inside tidepools is prohibited. The SCMA is bounded by Table Rock Point in the north and the bend in the Dana Point Harbor jetty in the south.
7. The [Upper Newport Bay SMCA](#) allows fishing from shore using hook and line only. Due to the ecological reserve overlay, fishing is only allowed at four designated sites: Castaways Beach, North Star Beach, Rocky Point, and the Jamboree Bridge. This SMCA includes all of Newport Bay north of the Pacific Coast Highway bridge.

HOW & WHY MONITOR HUMAN ACTIVITIES IN AN MPA?

To assure the effectiveness of Marine Protected Areas (MPAs) and to determine the impacts on marine resources, we need to identify the types of human activities that occur in or near MPAs. Gathering this data is time consuming, so partnerships with key community groups and engaged citizens are a cost-effective and resource-efficient way to evaluate human uses. Trained volunteers can produce accurate and reliable information that can be used to better understand how individuals use MPAs. **MPA Watch data provides the human use context needed to assist with the interpretation of biological data in the Orange County region through monitoring of human uses inside MPAs.**

Activities Observed:

- *What human activities occur in and around MPAs?*
- *What resources are needed to support the MPAs?*
- *Are regulations being followed?*
- *Have consumptive and non-consumptive uses changed since the MPAs were implemented?*

Partners:

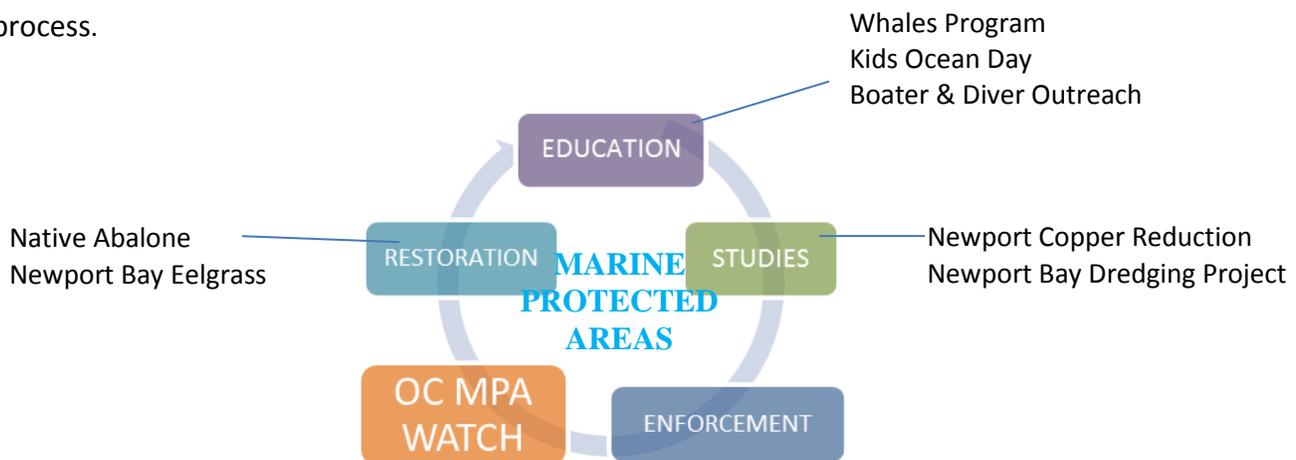
- City of Newport Beach
- City of Laguna Beach
- City of Dana Point
- Eco Adventure Center Ritz Carlton Laguna Niguel
- Members of the public

DATA:

With sound practices, data from effective volunteer monitoring programs can be used **to inform resource managers and provide information to enhance the management and performance of Marine Protected Areas.**

This data collected by MPA Watch volunteers is analyzed **to identify human use patterns** in MPAs. OCCK then uses the collected information to prepare four quarterly reports and one annual report that summarize the survey data for use by resource managers, partner groups, and the public. **This data will allow resource managers and community groups working in the MPAs to make decisions on where to invest their resources to maximize benefits to the MPAs and the community.**

In 2014 we made major changes to the MPA Watch program has been designed as a standardized survey, not necessarily a scientific study. The MPA Watch Program is one part of the umbrella of the larger Orange County and statewide MPA program. OCCK is also involved in other parts of the MPA process.



Activities Observed:

We defined a large number of activities that our volunteers would be most likely to observe during their surveys, such as beach recreation, wildlife viewing, snorkeling, paddle boarding, and of course, fishing. Each activity falls under one of the four categories:

- *On-shore vs. Off-shore Distinction:* On-shore includes any activities that are within the MPA boundaries of the mean high tide line, which, for the purposes of this project, includes sandy beaches and rock areas up to the nearest bluff or man-made structure. Off-shore includes the area within the offshore MPA boundaries as defined in the Fish and Game code and all activities that occur in this area.
- *Consumptive vs. Non-consumptive:* Consumptive activities include recreational and commercial take of marine species both on and offshore. Non-consumptive activities include kayaking, surfing, scuba-diving, wildlife viewing, and beach-visiting.

Survey Results:

January 1st, 2012 was the implementation date for the South Coast MPAs from Point Conception to the Mexican border. **From January 1 – December 31, 2014, we completed 440 surveys and observed 25,752 activities**, consumptive and non-consumptive, onshore and offshore. Compared to 2013, the number of surveys decreased by 172 surveys and the number of activities also decreased by 20,826 observations. We found that the frequency of non-consumptive activities greatly outnumbered consumptive activities, with 97% of the **25,752** activities observed being non-consumptive. Of these activities, beach recreation was the most popular non-consumptive activity. Of the consumptive activities fishing from private vessels was the most popular recreational activity.

Survey Sites and Activities:

1. The [Upper Newport Bay SMCA](#) allows fishing from shore using hook and line only. Due to the ecological reserve overlay, fishing is only allowed at four designated sites: Castaways Beach, North Star Beach, Rocky Point, and the Jamboree Bridge. Each of these is also a survey site. The most popular activities are beach recreation and kayaking.
2. The [Crystal Cove SMCA](#) consists of two jurisdictions:
 - The **City of Newport Beach** survey sites are Corona Del Mar Beach, Little Corona Del Mar Beach, and Morning Canyon Beach.
 - The **Crystal Cove State Park** surveys are Pelican Point, Los Trancos, and Reef Point.
3. The [Laguna Beach Marine Reserve](#) does not allow take of any marine resources in the 4.7 mile stretch from Abalone Point in the north to Goff Point in the south. The Reserve contains twelve survey sites covering almost every accessible beach. Beach recreation, walking, running, and wildlife viewing (including tidepooling) are the most popular onshore activities with surfing, diving, snorkeling, and boating as the most popular offshore activities.

4. The [Laguna Beach SMCA](#) does not allow take of any marine resources in the 1.2 mile stretch from Goff Island to Table Rock Point (except for public works maintenance activities). The SMCA contains three survey sites covering almost every accessible beach. Beach recreation, walking, running, and wildlife viewing (including tidepooling) are the most popular onshore activities with surfing, diving, snorkeling, and boating as the most popular offshore activities.
5. The [Dana Point SMCA](#) allows the *recreational* take of lobster and sea urchin, and of finfish by hook-and-line or spearfishing, and the *commercial* take of lobster, urchins, and coastal pelagic species such as sardine, anchovy, and squid by round haul net. The take of all living marine resources from inside the tidepools in these MPAs is prohibited. The Survey sites are Totuava Beach, Thousand Steps Beach, Three Arch Bay, Salt Creek, Dana Strands, and Dana Point. The most popular activities here are beach recreation, walking, and tidepooling. The most common non-consumptive offshore activity is surfing, primarily at Salt Creek Beach. This area was also the most popular MPA for fishing from private boats and lobster pots.

Frequency of MPA Watch Visits per Quarter					
No. of Visits per Quarter					
MPA	Quarter 1	Quarter 2	Quarter 3	Quarter 4	TOTAL
Upper Newport	23	17	24	13	77
Crystal Cove	24	13	18	10	65
Laguna	37	69	66	54	226
Dana Point	18	21	16	17	72
TOTAL	102	120	124	94	440

*The frequency of MPA Watch Visits in the Orange County Marine Protected Areas
January 1, 2014 through December 31, 2014*

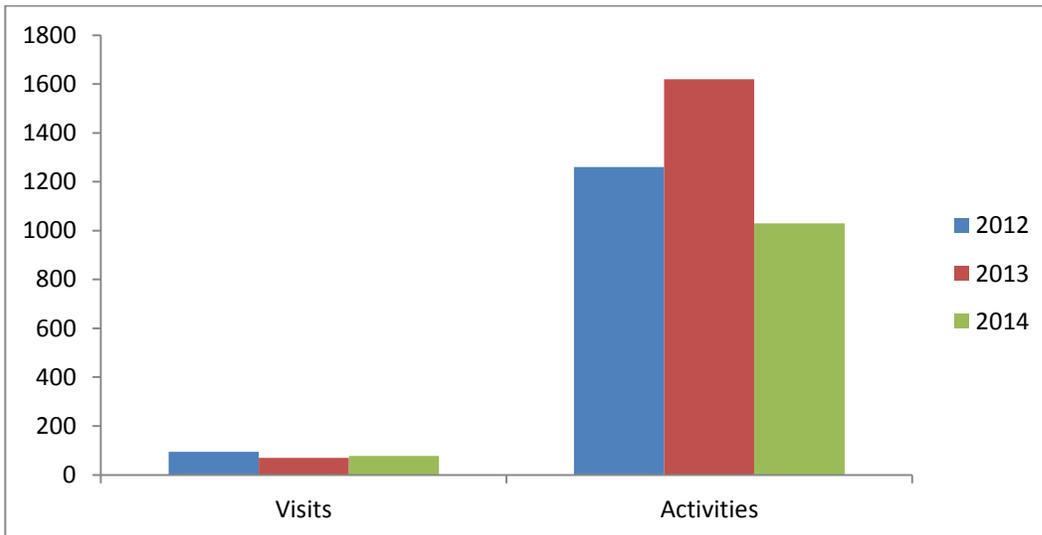
Observed Activities during MPA Watch Visits

MPA	Onshore, Non-Consumptive Activities	Onshore, Consumptive Activities	Offshore, Non-consumptive Activities	Offshore, Consumptive Activities	TOTALS
Upper Newport Bay	323	126	569	12	1,030
Crystal Cove	3,689	89	676	65	4,519
Laguna	12,362	272	2,268	7	14,909
Dana Point	3,939	109	1,122	124	5,294
TOTALS	20,313	596	4,635	208	25,752

The frequency of consumptive versus non-consumptive activities in the Orange County Marine Protected Areas January 1, 2014 through December 31, 2014

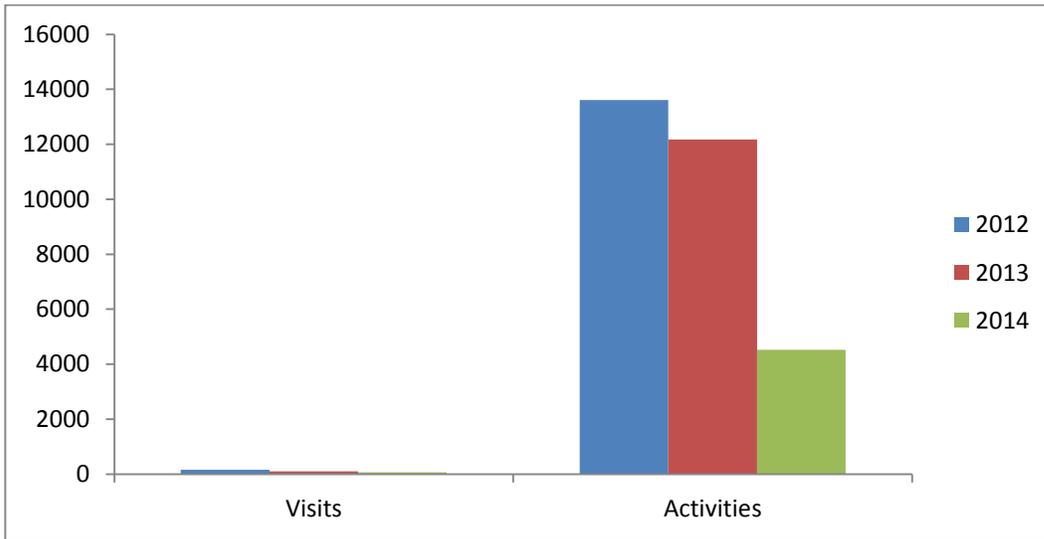
By the Numbers: 2012 vs 2013 vs 2014

- Upper Newport Bay



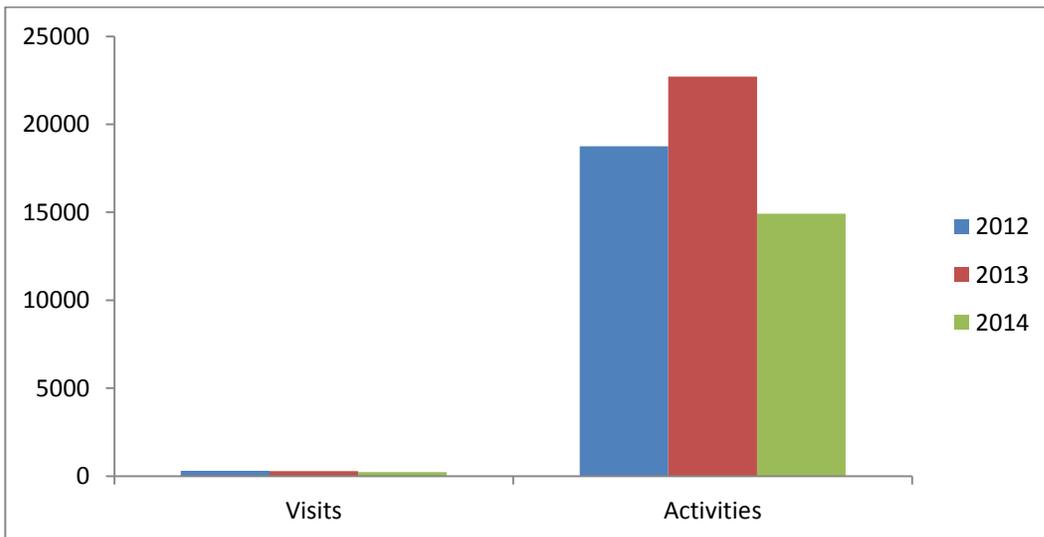
The number of MPA Watch visits and the number of activities observed at Upper Newport Bay for 2012, 2013, and 2014. While the number of visits maintained relatively the same from 2013, the number of activities recorded decreased by 590.

- Crystal Cove



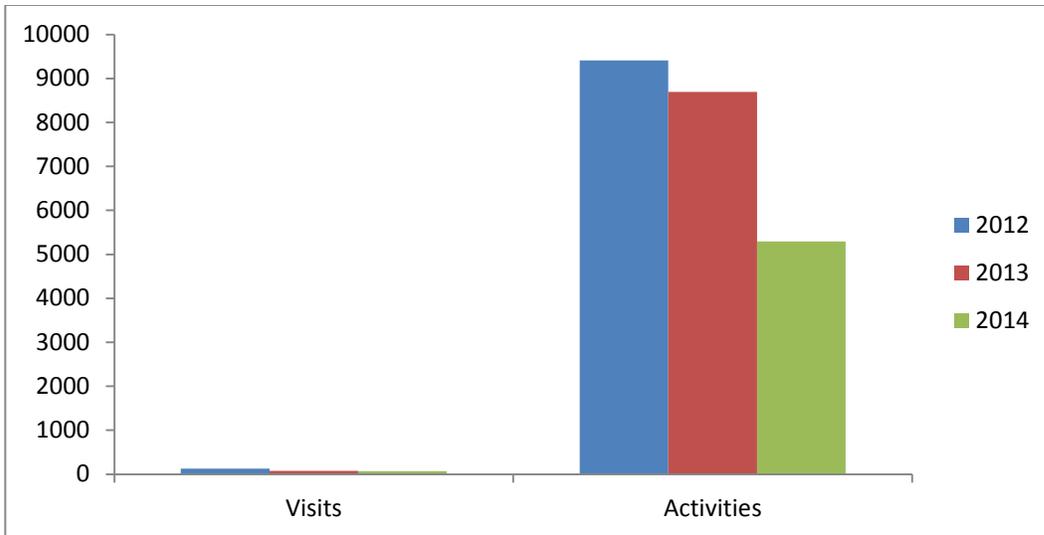
The number of MPA Watch visits and the number of activities observed at Crystal Cove for 2012, 2013, and 2014. The number of visits in 2014 decreased by 29 compared to 2013, and the number of activities also decreased by 7,650.

- Laguna



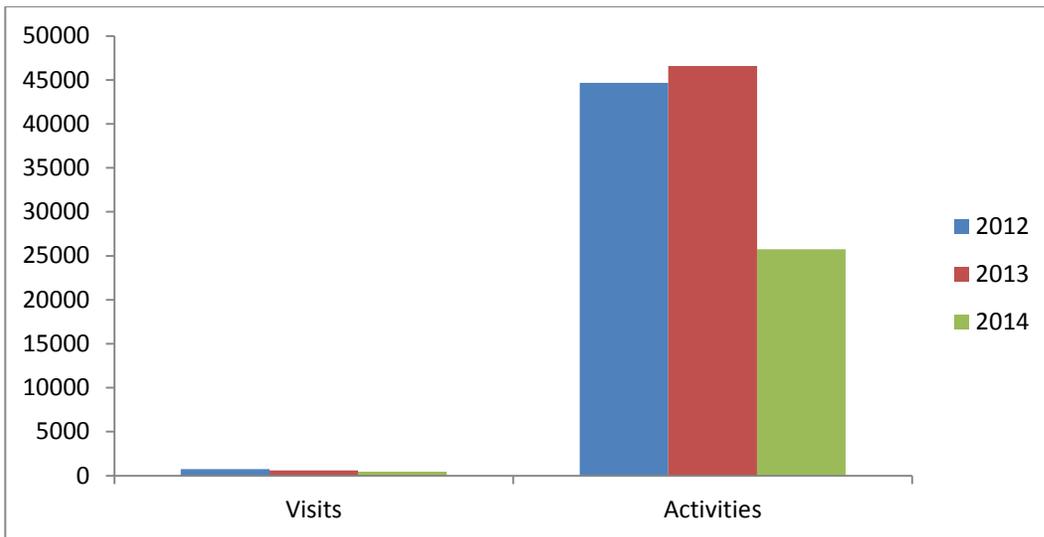
The number of MPA Watch visits and the number of activities observed at Laguna Beach for 2012, 2013, and 2014. The number of remained relatively the same compared to 2013, but the number of activities observed decreased by 7,807.

- Dana Point



The number of MPA Watch visits and the number of activities observed at Dana Point for 2012, 2013, and 2014. Visits remained relatively the same compared to 2013 but the number of observed activities decreased by 3,398.

- Totals



The number of MPA Watch visits and the number of activities observed Upper Newport, Crystal Cove, Laguna, and Dana Point for 2012, 2013, and 2014. The number of visits decreased by 172, but the number of activities recorded increased by 20,826 in 2013.

Overall Comparison of 2012, 2013, and 2014

	2012	2013	2014
Total Number of Sites Monitored	35	35	7
Total Number of Surveys Conducted	754	612	440
Total Number of Observed Activities	43,938	46,570	25,752
Total Number of Onshore, Consumptive Activities	691	611	596
Total Number of Onshore, Non-Consumptive Activities	33,852	34,968	20,313
Total Number of Offshore, Consumptive Activities	681	1620	208
Total Number of Offshore, Non-Consumptive Activities	8,714	9,371	4,635
Total Number of Violations	69	139	7

By comparing the past three years statistically, we can see that each year, the percentage breakdown of uses is almost identical regardless of the number of surveys and sites monitored. In 2012, 77% of the activities observed were onshore, non-consumptive activities. Similarly, in 2013 and 2014 75% and 79% of the observed activities were onshore, non-consumptive activities. The percentages of activities observed as being onshore, consumptive activities for 2012, 2013, and 2014 were 1.6%, 1.3%, and 2.3%. This trend is continually followed when looking at offshore activities and violations. 1.5% of the total observed activities in 2012 were categorized as offshore, consumptive. In 2013 and 2014, the percentages were 3.5% and 1.0%. The percentage of total activities that were observed as offshore, non-consumptive was 20% in 2012, 20% in 2013, and 18% in 2014.

The biggest difference we have seen is the in the variability of the number of potential MPA regulation violations observed. Through the three years these were calculated to be .15% in 2012,

.29% in 2013, and .03% in 2014. While this may seem like a large variation the percentages are so small that they are not statistically different. The biggest change in potential violations was the decrease from 2013 to 2014. This could have been due to increased public awareness about the MPAs, better enforcement, and/or increased warning signs around the selected beaches.

Orange County Survey Sites

