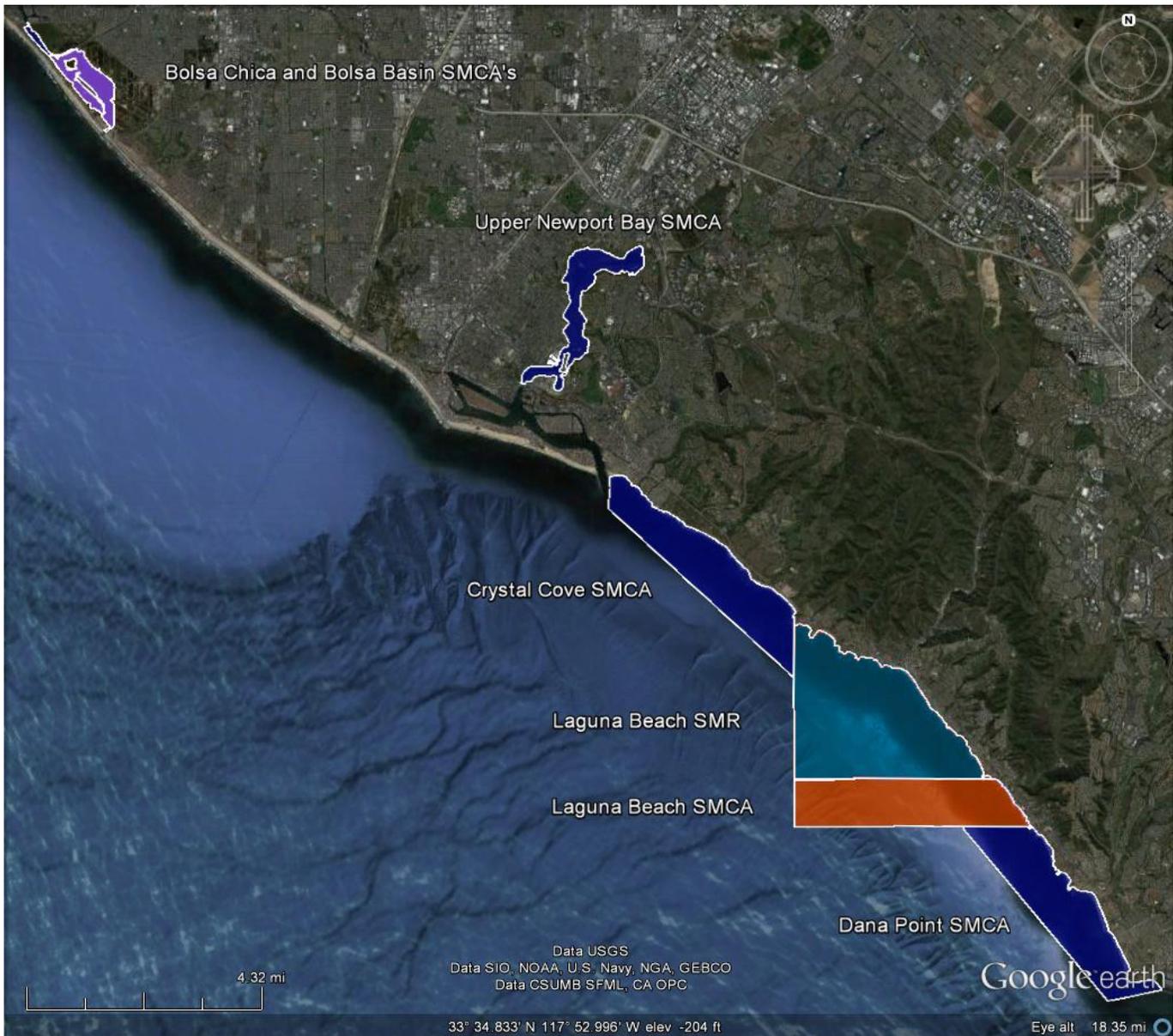




Orange County

MARINE PROTECTED AREAS



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 uses in and around the seven Orange County MPAs. The program is organized and run by Orange County Coastkeeper (OCCK) with partners listed below.

ACTIVITIES OBSERVED:

- ◆ *What human uses 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:

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.

- ◆ City of Newport Beach
- ◆ City of Laguna Beach
- ◆ Crystal Cove State Park
- ◆ Laguna Bluebelt Coalition
- ◆ Members of the public
- ◆ City of Dana Point
- ◆ Eco Adventure Center Ritz-Carlton

ORANGE COUNTY MARINE PROTECTED AREAS

- ◆ Bolas Chica SMCA
- ◆ Bolsa Basin SMCA
- ◆ Crystal Cove SMCA
- ◆ Dana Point SMCA
- ◆ Laguna Beach SMCA
- ◆ Laguna Beach State Marine Reserve (SMR)
- ◆ Upper Newport Bay SMCA

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 quarterly reports 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 and maximize benefits to the MPAs and the community.**

The Department of Fish and Wildlife intends to review the success of MPAs on a regular basis. Monitoring of habitat, species and economic impacts is being done by other organizations. Concurrent human use surveys are needed to provide context for ecological data interpretation. More than just ecological factors need to be monitored to better understand MPA effectiveness. **MPA Watch data provides the human use context needed to assist with the interpretation of biological data in the South Coast region through monitoring of human uses inside MPAs.**

MPA Watch should be viewed as the first part of a three-step process of monitoring, education, and enforcement to assure that the MPAs are given the chance to succeed.

Image 1: Example of datasheet.

Each survey segment is selected within an MPA at strategic locations. Survey segments vary in size, but all surveys are half an hour in length. Volunteers usually take between one and two hours (including traveling to and from the site) to complete their surveys. Volunteers are trained to record only activities specifically within the MPA boundaries on the beaches – not on trails, roads or parking lots-- and to only mark the activity being engaged at the moment that they are passed on a route or viewed from a distance.

Orange County MPA Watch Data Sheet			
City Name:		Date:	
Observer 1:		# Surveys Completed:	
Observer 2:		Estimated Temperature:	
Weather: Sunny Rainy Windy Cloudy Partly Cloudy		Tide Level: Low Medium High	
Activities: Onshore	Survey Name:	Survey Name:	Survey Name:
Non-Consumptive	Start/End Time:	Start/End Time:	Start/End Time:
Beach Rec. (sunbathing, picnic, art, resting, games, skim boarding, etc.)			
Walking			
Running			
Docents			
Law Enforcement/Maintenance			
Tidepooling (NOT collecting)			
Rock Climbing			
Photography			
Wildlife Viewing			
Driving on beach			
Domesticated Animals ON Leash			
Domesticated Animals OFF Leash			
Research (NOT collecting)			
Consumptive			
Rod/Reel fishing			
Trap Fishing			
Cast Net Fishing			



METHODOLOGY:

The OC MPA Watch Program volunteers are trained to gather data on how areas within the seven OC MPAs are being used. On- and near-shore data is gathered by volunteers walking along the beach or viewing from a vantage point. Volunteers are provided with monitoring datasheets to record observed ocean-use activities, their location, weather, time, tides, etc. During the class and field training, volunteers are trained to identify 50 different consumptive and non-consumptive activities, both onshore and offshore. Each observed activity is recorded quantitatively on the data sheet. After the data sheets are returned to Orange County Coastkeeper, they undergo a Quality Control review for completeness before the data is entered into a project database. The data is then analyzed on a quarterly basis, and a data summary report is created and distributed. *Our goal is to have each MPA survey site monitored at least twice monthly.*



The MPA Watch program has been designed as a standardized survey, not necessarily a scientific study. Since we are still in the beginning stages of MPA implementation, the program will adapt over time to meet the needs of the resource managers and local community. 2012 and 2013 data were collected using the same sites methodology and data sheets. 2014 will feature a revision to the program to strengthen the science behind the program, provide easier data input and public access and reduce redundant surveys.

HOW DO WE DEFINE THE OBSERVED ACTIVITIES?

We chose and defined 50 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 non-consumptive activity
- ◆ On-shore consumptive activity
- ◆ Off-shore non-consumptive activity
- ◆ Off-shore consumptive activity.

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.

ALLOWED ACTIVITIES

The 'take' regulations vary for each OC MPAs and are summarized below.

- ◆ **Laguna Beach SMR and Laguna Beach SMCA** do not allow *any* take of living marine resources including plants, animals.
- ◆ **Upper Newport Bay SMCA** allows the take of finfish only by hook-and-line from the shore in designated areas. The take of marine aquatic plants invertebrates is prohibited.

- ◆ **Crystal Cove SMCA** and **Dana Point SMCA** allow the *recreational* take of finfish by hook-and-line or by spearfishing along with lobster and sea urchin, and the *commercial* take of lobster, urchins, and coastal pelagic species, such as sardine, anchovy, and squid, by round haul net. The take of any living marine resources from inside tidepools in these MPAs is prohibited.
- ◆ **Bolsa Bay SMCA** allows the recreational take of finfish by hook and line only from designated areas.
- ◆ **Bolsa Basin SMCA prohibits** any take of living marine resources including plants, animals.

State Marine Protected Areas in Orange County do not prohibit any non-consumptive activities, however in the **Bolsa Chica** and **Upper Newport Bay SMCA**s some *non-consumptive* activities are not allowed on- and offshore due to the overlay of an ecological reserve that is a separate designation from the Marine Protected Area.

The *Upper Newport Bay Ecological Reserve*, which covers the northern portion of the Upper Newport Bay SMCA, only allows swimming between North Star Beach and mid-channel. Boats are limited to speeds less than five miles an hour. Additionally, shoreline access is confined to established trails, paths, or other designated areas.

SURVEY RESULTS

January 1st, 2012 was the implementation date for the South Coast MPAs from Point Conception to the Mexican border. **Between the months of October and December of 2013, we completed 119 surveys and observed 6,020 activities**, consumptive and non-consumptive, onshore and offshore. This is the least active time of the year based on our observations. We found that the frequency of non-consumptive activities greatly outnumbered consumptive activities, with 72% of the activities observed being non-consumptive. Of these activities, beach recreation was the most popular non-consumptive activity. Of the consumptive activities, lobster fishing was the most popular recreational activity.

During this period we observed 16 activities that appeared to violate MPA take regulations:

- ◆ All possible violations occurred within the Laguna Beach SMR and were associated with lobster fishing

Below is a detailed discussion of the results from the different MPAs and the major jurisdictions within running from north to south.

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, SCUBA diving, and stand-up paddleboarding. The most popular consumptive activity was shore fishing.



The **Crystal Cove 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 tidepools is prohibited. This SMCA consists of two distinct jurisdictions:

- ◆ The City of Newport Beach survey areas cover Corona Del Mar Beach, Little Corona Del Mar Beach, and Morning Canyon Beach. The most popular activities here are beach recreation, walking, and surfing. We observed no instances of the taking of “living marine resources”.
- ◆ The **Crystal Cove State Park** section covers the Pelican Point, Los Trancos, and Reef Point survey areas. The most common activities here are beach recreation, walking, and surfing. The most common consumptive activity was fishing by rod/reel. We observed no taking of “living marine resources” this quarter at Crystal Cove State Park

The **Laguna Beach Marine Reserve** does not allow take of any marine resources in the 5.5 mile stretch from Abalone Point in the north to Table Rock point in the south. The Reserve contains fifteen survey sites covering almost every accessible beach. Beach recreation, walking, and tidepooling are the most popular onshore activities with swimming, surfing/boogie boarding, and stand-up paddleboarding as the most popular offshore activities. The potential MPA violations seen in the Laguna Reserve during the quarter involved the observation of lobster pot buoys. This included 1 at Moss Cove, 1 at Heisler Park, 2 at Shaw’s Cove and 1 at Aliso. 13 lobster pots were recorded at Table Rock in one survey, but the offshore boundary there is difficult to determine from shore and it is likely these pots were on the boundary line.

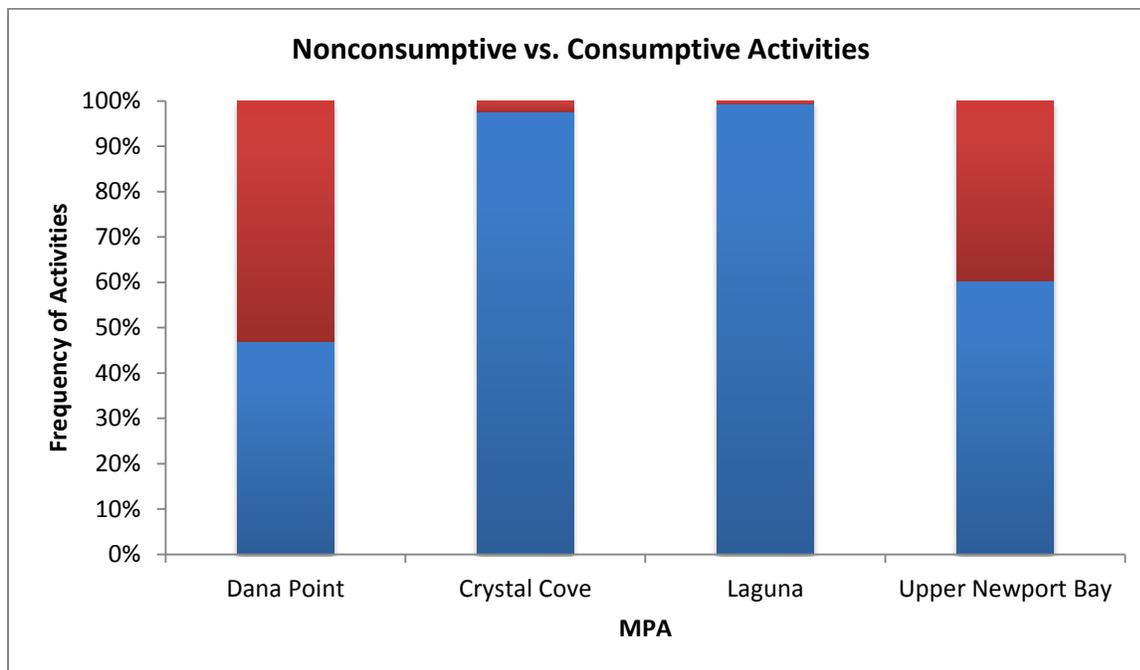
The **Dana Point SMCA** allows the *recreational* take of lobster and sea urchin, and of finfish by hook-and-line or spearfishing, and the *commercial* take of lobster, urchins, and coastal pelagic species such as sardine, anchovy, and squid by round haul net. The take of all “living marine resources” from inside the tidepools in these MPAs is prohibited. The Totuava Beach, Thousand Steps Beach, Three Arch Bay, Salt Creek, Dana Strands, and Dana Point survey sites cover this area. The most popular activities here are beach recreation and walking. The most common non-consumptive offshore activity is surfing/boogie boarding. We did not observe any potential MPA violations

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	291	287	160	9	1854
Crystal Cove	363	5	65	6	439
Laguna	2507	7	442	18	2982
Dana Point	625	5	246	978	747
TOTALS	15114	122	4762	50	6020

Frequency of MPA Watch Visits per Month

No. of Visits per Months

MPA	October	November	December	TOTAL
Upper Newport Bay (4 sites)	14	6	0	20
Crystal Cove (6 sites)	6	3	0	9
Laguna (14 sites)	27	34	11	72
Dana Point (6 sites)	11	4	0	15
TOTALS	58	47	11	126



This chart shows the frequency of non-consumptive versus consumptive activities in the Orange County Marine Protected Areas. The blue represents non-consumptive activities while the red represents consumptive activities.