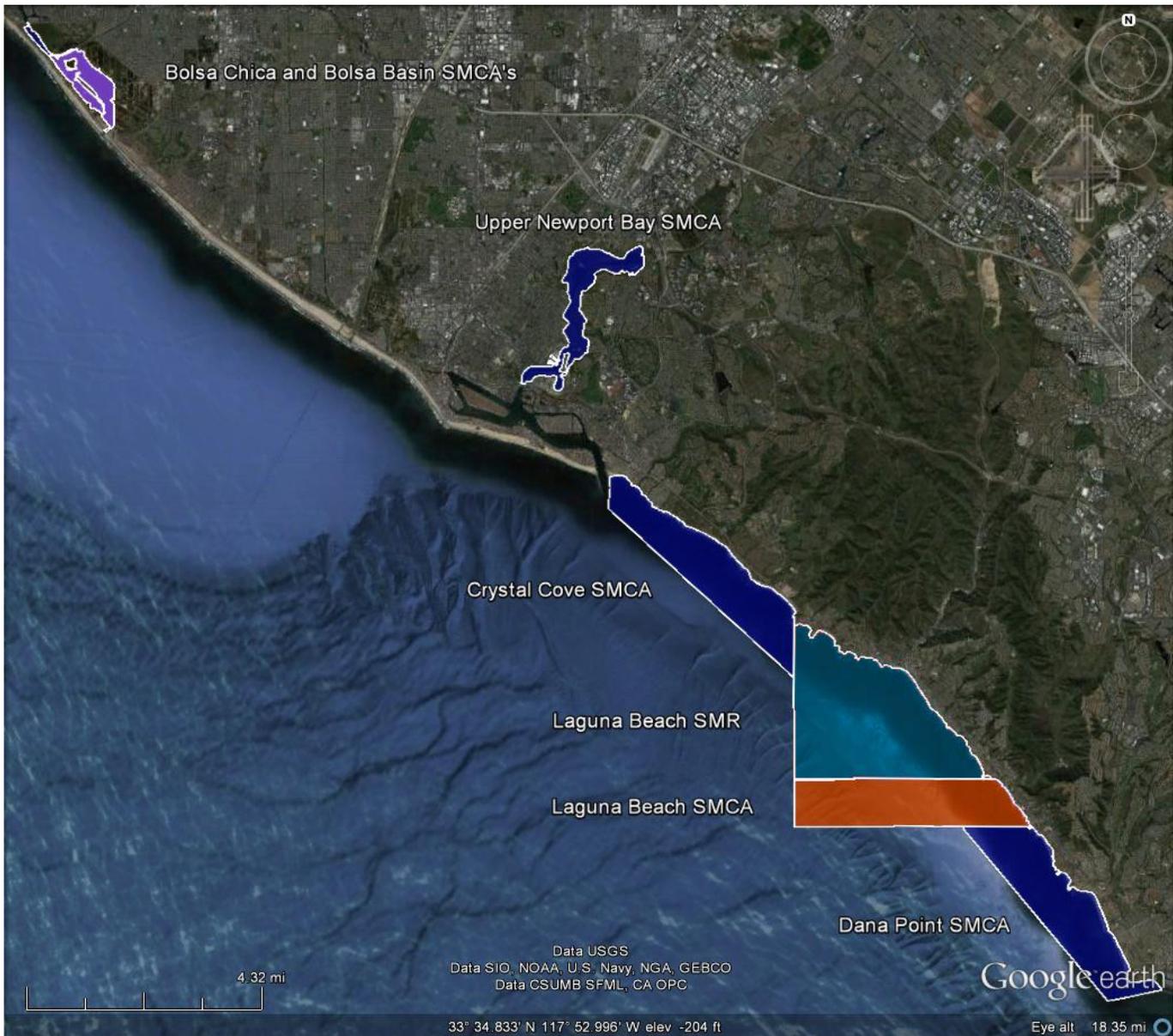




Orange County

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

ORANGE COUNTY MARINE PROTECTED AREAS

- ◆ Bolsa Bay State Marine Conservation Area (SMCA)
- ◆ Bolsa Chica 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.**

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			



The Department of Fish and Game 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.

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 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.

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.

- ◆ **Bolsa Chica Basin SMCA, Laguna Beach SMR, and Laguna Beach SMCA** do not allow *any* take of living marine resources including plants, animals.
- ◆ **Bolsa Bay SMCA** and **Upper Newport Bay SMCA** allow 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.

State Marine Protected Areas in Orange County do not prohibit any non-consumptive activities, however in the **Bolsa Bay SMCA**, **Bolsa Chica Basin SMCA** and **Upper Newport Bay SMCA** 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 *Bolsa Chica Ecological Reserve* restricts boating, swimming, wading, and diving within the reserve which includes the MPA. Additionally, the Bolsa Chica Ecological Reserve does not allow pets of any kind or bicycles to be ridden within the reserve boundaries. Furthermore, no person is allowed to diverge from the established trails, paths, or other designated areas within the conservation area, except law enforcement officers, fire suppression agencies, and those associated with oil and gas extraction operations.

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. This resulted in a major change in both the size and take regulations in the Orange County MPAs since our last report. **Between the months of April and June of 2013, we completed 200 surveys and observed 13,228 activities**, consumptive and non-consumptive, onshore and offshore. We found that the frequency of non-consumptive activities greatly outnumbered consumptive activities, with 99% of the 11,173 activities observed being non-consumptive. Of these activities, beach recreation was the most popular non-consumptive activity. Of the consumptive activities, onshore rod and reel fishing was the most popular recreational activities.

During this period we observed 29 activities that appeared to violate MPA take regulations:

- ◆ Five of these involved observations at the Upper Newport Bay Ecological Reserve
 - The following offshore activities involved possible take of marine resources
 - 2 kayaking or canoeing with rod/reel
 - 2 private vessel with rod/reel
- ◆ Twenty-six of these involved observations at the Laguna Beach Reserve
 - Fifteen of these involved collecting from tidepools at Shaws and Crescent coves
 - Ten involved possible take of marine resources
 - 2 rod/reel fishing onshore
 - 3 scuba divers with spear guns or nets
 - 5 private vessels with rod/reel

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

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. No fishing was observed in this area during our surveys of the site. Walking, running and wildlife viewing were the most common activities observed.

The **Bolsa Basin SMCA** allows no take of any kind. There are three survey sites: the walkbridge, the tidal inlet, and the interpretive center. The most common activities here are walking, running, and wildlife viewing. Fishing is popular outside the SMCA at the tidal inlet jetties across Bolsa Chica State Beach.

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, swimming, and kayaking. We observed four incidences of fishing from boats (two at Los Trancos, two at Pelican). Since this appears to be an ongoing issue in this area, additional signage and educational outreach may be needed. We also observed one instance of the possible taking of “living marine resources” (One at Pelican).

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 tidepooling. These are also the most common spots in all of the Orange County MPAs for spearfishing and kayak fishing. 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 tidepooling. Recreational shore and spear fishing is common, along with commercial lobster and purse seining fishing. 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, running, photography, and rock climbing are the most popular onshore activities with boogie boarding, stand up paddleboarding, and surfing as the most popular offshore activities. The potential MPA violations seen in the Laguna Reserve during the quarter involved nine instances of the taking of “living marine resources” from tidepools. This included three times at Shaw’s Cove and six times at Crescent Beach. We also observed five instances of people fishing from private boats, two at Shaw’s Cove, two at Fisherman’s Cove, and one at Montage. We also observed two people shore fishing with rod and reel both at Fisherman’s Cove.

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, 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. The potential MPA violations seen were one trolling fishing boat at Dana Point.

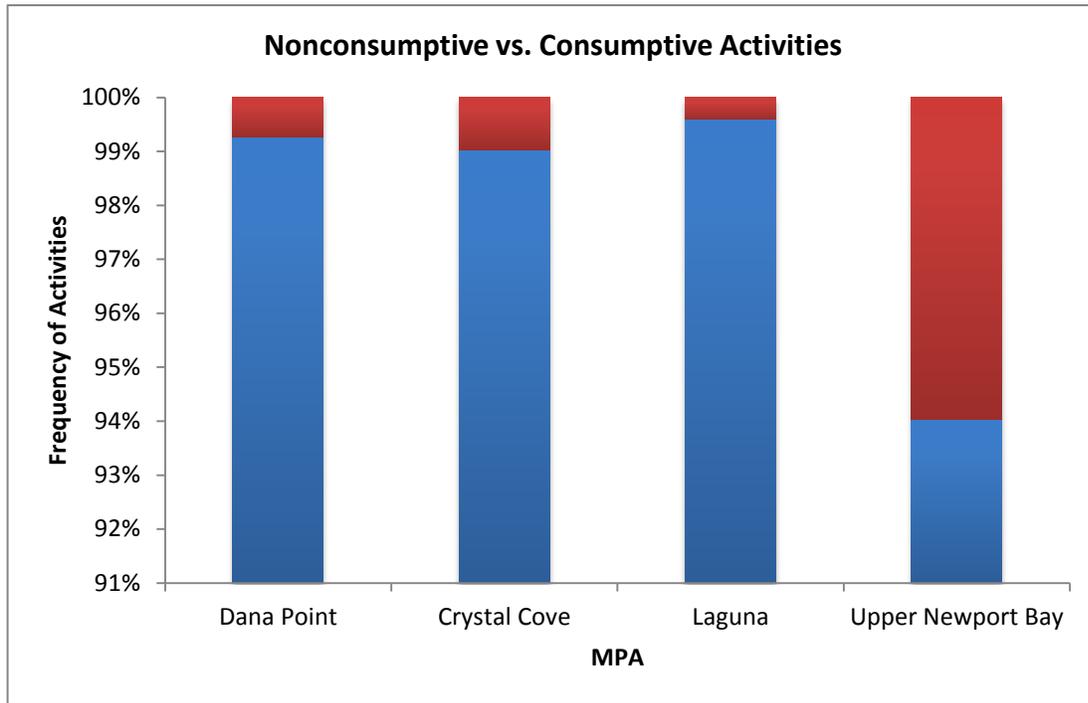
Observed Activities during MPA Watch Visits

MPA	Onshore, Non- Consumptive Activities	Onshore, Consumptive Activities	Offshore, Non- consumptive Activities	Offshore, Consumptive Activities	TOTALS
Upper Newport Bay	308	20	86	4	418
Crystal Cove	2170	55	550	42	2817
Laguna	5473	15	957	10	6455
Dana Point	1660	0	780	18	2458
Bolsa Chica	1078	0	0	0	1078
TOTALS	8848	49	2238	38	13228

Frequency of MPA Watch Visits per Month

No. of Visits per Months

MPA	April	May	June	TOTAL
Upper Newport Bay (four sites)	0	7	7	14
Crystal Cove (6 sites)	16	10	15	41
Laguna (15 sites)	28	34	27	89
Dana Point (7 sites)	6	6	7	19
Bolsa Chica (3 sites)	17	13	7	37
TOTALS	41	51	48	200



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.