



# Orange County MPA Watch Program

Quarterly Report (June 1 – September 30, 2012)

## 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. Groups or individuals are assigned to specific monitoring locations to record observed activities in hopes of addressing questions similar to the ones below:

- *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?*

The program is organized and run by Orange County Coastkeeper (OCCK) with the help of the cities of Newport Beach, Laguna Beach, and Dana Point, Crystal Cove State Park, the Laguna Bluebelt Coalition, Jean-Michel Cousteau's Ambassadors of the Environment Ritz-Carlton Laguna Niguel, Bolsa Chica Conservancy, and members of the public.

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.

### **What do we do with the 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 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.

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### **Orange County Marine Protected Areas**

There are seven MPAs within Orange County:

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

Within those MPAs are 35 monitoring sites covered by the OC MPA Watch Program.



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## **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.

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:
<i>Non-Consumptive</i>		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)			
<i>Consumptive</i>			
Rod/Reel fishing			
Trap Fishing			
Cast Net Fishing			

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

*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 and 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.

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## **Survey Results**

January 1<sup>st</sup>, 2012 was the implementation date for the South Coast MPA's 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 July and September, we completed 200 surveys and observed 17,777 activities, consumptive and non-consumptive, onshore and offshore. We found that the frequency of non-consumptive activities greatly outnumbered consumptive activities, with 97% of the 17,777 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 were the most popular recreational activities.

During this period we observed 32 activities that appeared to violate the new MPA take regulations:

- Seventeen of these involved collecting "living marine resources":
  - 8 of these were observed in Laguna Beach (three times at Shaws Cove, two times each at Bluebird Beach and Montage, and 1 time at Fisherman's Beach)
  - 3 instances were observed at Dana Point
  - 2 instances at Big Corona in Crystal Cove
  - 4 observations were made at Upper Newport (twice at Castaways, and once each at Rocky Point and North Star.).
- Twelve of these activities involved fishing from boats in protected areas:
  - We observed 10 potential violations in the Upper Newport Bay SMCA:
    - 6 at Castaways
    - 4 at Northstar
  - We also observed 2 instances of people fishing from boats in the Laguna Reserve (one private fishing boat at Shaw's, and one purse-seine boat at Bluebird).
- One activity involved free diving with a speargun at Shaw's Beach in Laguna.
- Two instances involved rod and reel fishing from the shore in Laguna Beach.

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. There is one survey site at the interpretative center. 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 two survey sites, one at the walkbridge and one at the tidal inlet. 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 and kayaking. We observed ten incidences of fishing from boats (six at Castaways, and four at Northstar). Since this appears to be an ongoing issue in this area, additional signage and educational outreach may be needed. We also observed four instances of the taking of “living marine resources” (two times at Castaways, and one time each at Rocky Point and North Star.).

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 in these MPAs 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 did observe two instances of the taking of “living marine resources” at Little Corona Del Mar Beach
- 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, and wildlife viewing (including tidepooling) are the most popular onshore activities, with surfing, diving, and boating as the most popular offshore activities. The potential MPA violations seen in the Laguna Reserve during the quarter involved eight instances of the taking of “living marine resources” from tidepools. This includes three times at Shaw’s Cove, two times each at Bluebird Beach and Montage, and one time at Fisherman’s Beach. We also observed two instances of people fishing from private boats, one at Shaw’s, and one at Bluebird. We also observed two people shore fishing at Shaw’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 three people collecting “living marine resources” from tidepools at Salt Creek.

<b>Frequency of MPA Watch Visits per Month</b>				
<b>MPA</b>	<b>July 2012</b>	<b>August 2012</b>	<b>September 2012</b>	<b>TOTAL</b>
<b>Bolsa Chica (three sites)</b>	14	12	9	<b>35</b>
<b>Upper Newport Bay (four sites)</b>	7	11	9	<b>27</b>
<b>Crystal Cove (6 sites)</b>	9	11	15	<b>35</b>
<b>Laguna (15 sites)</b>	24	38	17	<b>79</b>
<b>Dana Point (7 sites)</b>	8	4	13	<b>25</b>
<b>TOTAL</b>	<b>64</b>	<b>76</b>	<b>63</b>	<b>200</b>

## Observed Activities during MPA Watch Visits

MPA	Onshore, Non-Consumptive Activities	Onshore, Consumptive Activities	Offshore, Non-consumptive Activities	Offshore, Consumptive Activities
Bolsa Chica	503	0	0	0
Upper Newport Bay	241	34	349	16
Crystal Cove	3584	12	1423	50
Laguna	6286	23	1595	5
Dana Point	2458	16	1002	186

*Chart 1: The frequency of consumptive versus non-consumptive activities in the Orange County Marine Protected Areas June 1, 2012 through September 30, 2012*

