



Orange County MPA Watch Program

Quarterly Report (Jan 1 – March 31, 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) we need to identify the types of human activities that occur in or near them to determine the effects to marine resources these activities may have. 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 to provide the maximum benefit 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 help provide context for ecological data interpretation. It is essential that more than just ecological factors are 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.

Orange County Marine Protected Areas

Currently, *seven* MPAs exist 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 there are 35 monitoring sites covered by the OC MPA Watch Program.



Methodology

The OC MPA Watch Program volunteers are trained to gather data on how areas within and outside 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 and then 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 one half hour in length. Volunteers usually take an hour or two overall (including travel to and from the site) to complete their surveys. Volunteers are trained to record only activities that are specifically within the MPA boundaries on the beaches – not on trails, roads or parking lots; and to only mark the activity that the person is actively engaging in at that moment that they are passes 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 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 include sandy beaches and rock areas up to the nearest bluff or manmade 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 and 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 for the OC MPAs vary they are summarized below.

- **Bolsa Chica Basin SMCA, Laguna Beach SMR, and Laguna Beach SMCA** do not allow *any* take of marine resources including plants, animals or inanimate objects.
- **Bolsa Bay SMCA** and **Upper Newport Bay SMCA** allow the take of finfish only by hook-and-line from shore in designated areas. The take of marine aquatic plants invertebrates and inanimate objects 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 all living marine resources from inside the 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 presence of an Ecological reserve overlay of the MPA that is a separate designation from the Marine Protected Area.

The *Bolsa Chica Ecological reserve* restricts boating, swimming, wading and diving within the ecological 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 ecological reserve boundaries. Also, 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 and limits boats to speeds less than five miles an hour. Additionally, shoreline access is limited to established trails, paths, or other designated areas.

Survey Results

January, 1 2012 was the implementation date for the new 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 previous report. Through the months of January to March, we completed 181 surveys and observed 9816 activities, consumptive and non-consumptive, onshore and offshore. We found that the frequency of non-consumptive activities greatly out-numbered consumptive activities with 95% of the 99816 activities observed being non consumptive. Of these activities beach recreation, was the most popular non consumptive activity. Of the consumptive activities, free dive spearfishing and shore fishing were the most popular recreational activities and lobster fishing was the most prevalent commercial activity.

During this period we observed 15 activities that appeared to be violations of the new MPA take regulations. Twelve of these involved collecting from tidepools (five at Shaws Cove in Laguna Beach, six at Dana Point and one at Ritz point), one involved fishing from a paddleboard at Fishermans Cove and Bluebird Beach on the same day in the Laguna Reserve, and two involved fishing from a boat in the Upper Newport Bay SMCA.

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 sites 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 tow 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 just 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 kayaking and wildlife viewing and shore fishing. We did observe two incidents of fishing from boats in the Castaways Beach Area. Since this is a new restriction in this area additional signage and educational outreach may be needed in the area.

The **Crystal Cove SMCA** allows 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 all living marine resources from inside the tidepools in these MPAs is prohibited. This SMCA consists of two distinct jurisdictions:

The **City of Newport Beach** section covers Corona Del Mar Beach, Little Corona Del Mar Beach and Morning Canyon beach survey areas. The most popular activities here are beach recreation, walking and tidepooling. This was also the most common spot in all of the Orange County MPAs for spearfishing and kayakfishing, and commercial fishing.

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 here along with commercial lobster and purse seining fishing.

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 only potential MPA violations seen in the Laguna Reserve during the quarter were five people taking organisms from the tidepools at Shaws Cove and one person observed fishing from a paddleboard at Fishermans Cove and Bluebird Beach.

The **Dana Point SMCA** allows 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 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 offshore activity is surfing, mostly at Salt Creek Beach. Observations of recreational fishing were rare and included shorefishing and spearfishing and kayak fishing. The most common commercial fishing seen was for lobster. The only potential MPA violations seen were six people collecting organisms at Dana Point and one person collecting organisms at Ritz Point at Salt Creek Beach.

Frequency of MPA Watch Visits per Month				
MPA	January 2012	February 2012	March 2012	TOTAL
Bolsa Chica (three sites)	6	6	6	18
Upper Newport Bay (four sites)	8	8	17	33
Crystal Cove (6 sites)	12	20	12	44
Laguna (15 sites)	21	15	21	57
Dana Point (7 sites)	9	12	9	30
TOTAL	56	60	65	182

Observed Activities during MPA Watch Visits

MPA	Onshore, Non-Consumptive Activities	Onshore, Consumptive Activities	Offshore, Non-consumptive Activities	Offshore, Consumptive Activities
Bolsa Chica	289	72	11	0
Newport	90	13	153	4
Crystal Cove	4221	118	594	335
Laguna	2017	28	322	21
Dana Point	1095	48	296	89

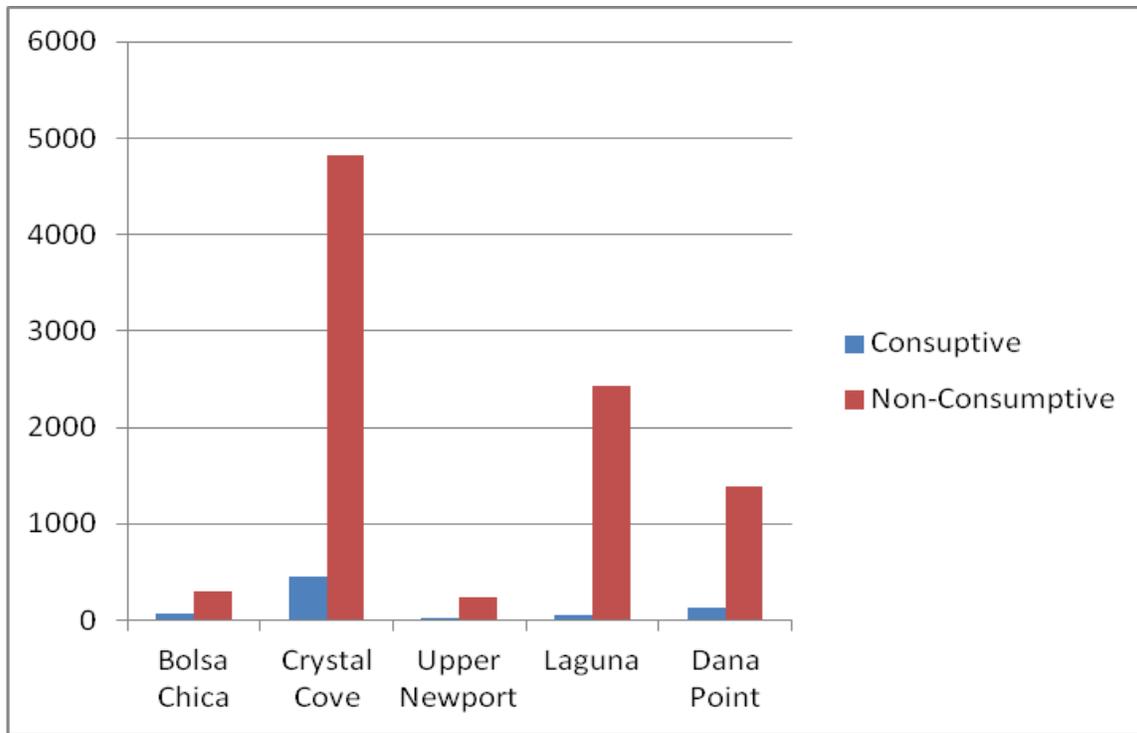


Chart 1: The Frequency of consumptive versus non-consumptive activities in the Orange County Marine Protected Areas Jan. 2012 through Mar. 2012