



ORANGE COUNTY
COASTKEEPER®

Orange County MARINE PROTECTED AREAS

2nd Annual Quarterly Report 2017



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

PARTNERS:

To assure the effectiveness of Marine Protected Areas (MPAs) and 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 activity. Trained volunteers can



produce accurate and reliable information that can be used to better understand how individuals use the 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 Laguna Niguel

ORANGE COUNTY MARINE PROTECTED AREAS

- ◆ Bolsa 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. From separate efforts of other organizations, monitoring of habitat, species, and economic impacts are being done. 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 of 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.

Each survey segment is selected within an MPA at strategic locations. Survey sites vary in size and duration of the survey spent at each. 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.

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?*

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 30 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.



The MPA Watch program has been designed as a scientific study. After some adaptation in 2012 and early 2013 to meet the needs of local resource managers and ensure statewide consistency of the program the data from the second half of 2013, and all of 2014 and 2015 was collected using the same methodology and data sheets.

MPA Watch has a webpage at www.mpawatch.org where the public can view maps of surveys and see data collected throughout the state. MPA watch volunteers can also use the site to enter their survey data online, eliminating the need for paper data sheets.

HOW DO WE DEFINE THE OBSERVED ACTIVITIES?

We chose and defined 30 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 and 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 and 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 of less than five miles an hour. Additionally, shoreline access is confined to establish trails, paths, or other designated areas. The *Bolsa Chica Ecological Reserve* does not allow any water access and 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 April 1st and June 30th of 2017, we completed 140 surveys and observed 7934 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 activities observed being non-consumptive. Of these activities, beach recreation was the most popular non-consumptive activity, followed by offshore recreation. Of the consumptive activities, hand collect biota and hook fishing was the most popular, the bulk of hand collecting biota was observed in Crystal Cove SMCA.

During this period we observed **eleven (11)** activities that appeared to violate MPA take regulations.

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

Observed survey results can be seen in fig. 1, 2, and 3.

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, and Castaways is a priority monitoring site. The most popular activities observed were beach recreation, followed by board sports, and other boating such as kayaks. The most popular consumptive activity was shore (hook) fishing. We did observe 3 potential MPA violations within this time period consisting of: offshore fishing activities.



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 tide pools 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. Little Corona Del Mar is a priority monitoring site. The most popular activities here are beach recreation, followed by off shore recreation, and tide pooling. We did observe 8 potential MPA violations within this time period: Collection from tidepools.

- ◆ 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 and offshore recreation. We did not observe any potential MPA violations within this time period.

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. Within the Laguna Beach SMR, we have chosen Crescent Bay, Shaw’s Cove, Moss Point, Aliso State Beach, and Table Rock Beach as priority sites for monitoring. Beach recreation, is the most popular onshore activity, surfing, board sports and scuba diving as the most popular offshore activities. We did not observe any potential MPA violations within this time period.

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, tide pooling and different boating. We did not observe any potential MPA violations within this time period.

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	56	13	135	3	207
Crystal Cove	3630	29	468	8	4135
Laguna	2958	13	328	8	3307
Dana Point	238	3	34	5	280
Totals	6882	58	965	24	7934

fig. 1 Survey results of MPA watch

Frequency of MPA Watch Visits per Month				
MPA	April	May	June	Total
Upper Newport Bay (4 Sites)	5	12	8	25
Crystal Cove (6 Sites)	9	27	6	42
Laguna (14 Sites)	21	32	7	60
Dana Point (6 Sites)	4	6	3	13

fig. 2 Frequency report of surveys

The chart below compares the relative frequency of non-consumptive with consumptive activities in each of the Orange County Marine Protected Areas for the 2nd Quarter of 2017. The grey represents non-consumptive activities, while the orange represents consumptive activities. Please note that, with the exception of Upper Newport and Dana Point, the frequency of consumptive activities is almost negligible when compared to the total activities in the other MPAs.

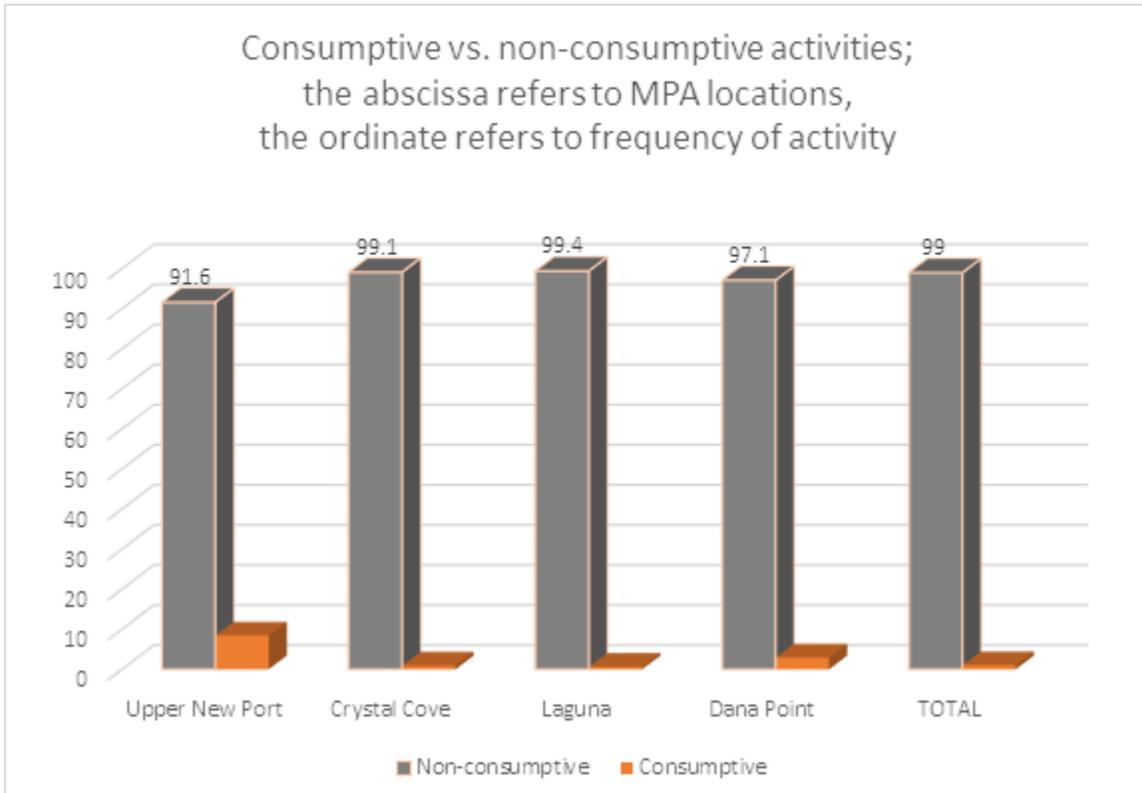


fig. 3 Data

table of comparative activities