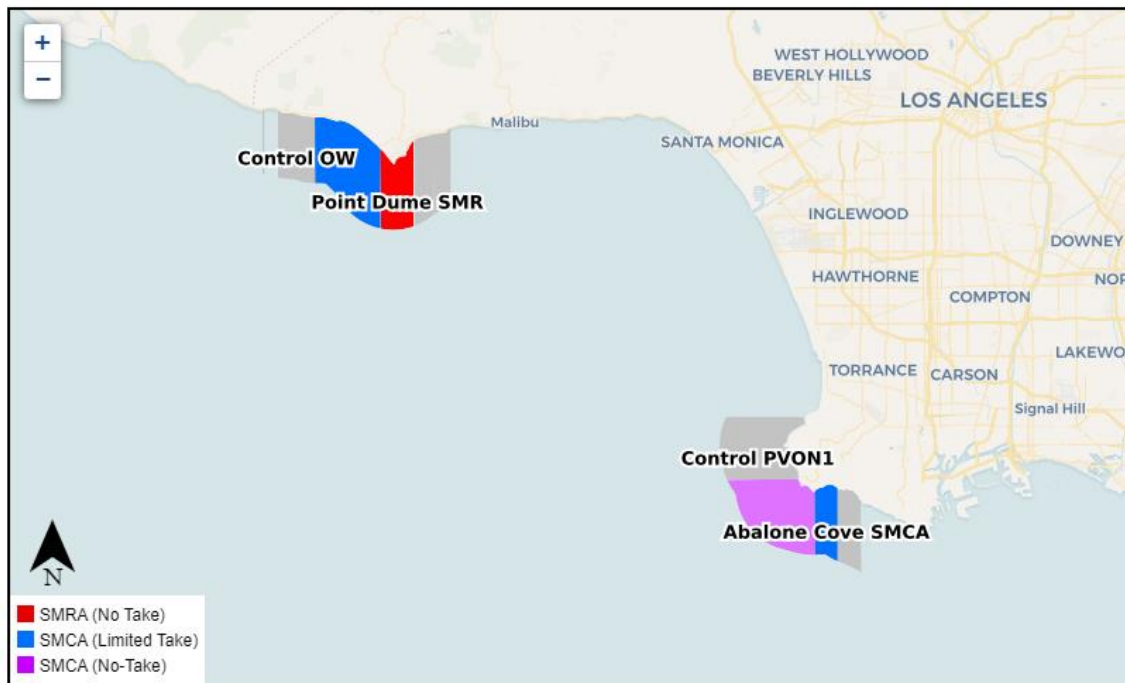




**Marine Protected Area (MPA) Watch
Regional Report
LA County Shore-Based
January 1, 2021 – June 30, 2021**



California's network of Marine Protected Areas (MPAs) was established by the Marine Life Protection Act (MLPA) of 1999 to safeguard our marine resources and ecosystems. To ensure success and to inform adaptive management, long-term monitoring of these protected areas must be conducted. Developed in 2011, MPA Watch was designed as a community science program to collect data on human use of MPAs. In Los Angeles County, the non-profit organization Heal the Bay manages MPA Watch shore-based data collection. Our volunteers monitor four MPAs: Abalone Cove State Marine Conservation Area, Point Vicente No-Take State Marine Conservation Area, Point Dume State Marine Conservation Area, and Point Dume State Marine Reserve.

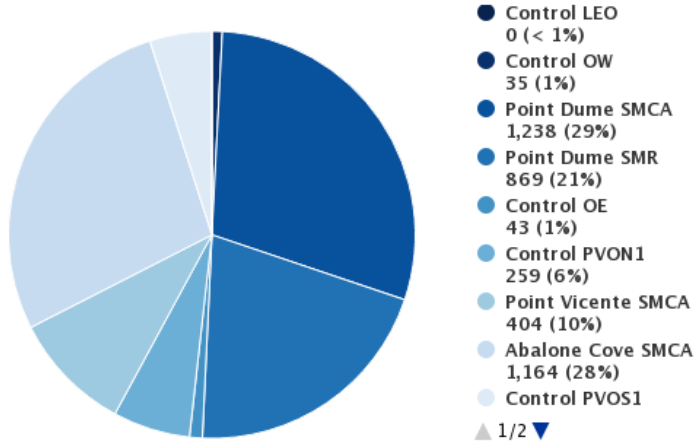
Executive Summary

- In the first half of 2021, 55 volunteers and 4 interns were trained and 29 MPA Watch volunteers conducted a total of 212 MPA Watch surveys, recording a total of 4,220 activities.
- The rate of activities in LA County MPAs decreased in the reporting period as compared to the baseline average of the previous nine years.
- Consumptive activity made up 3% of the total activity observed thus far in 2021 and remains a concern in all Los Angeles County MPAs.
- With COVID-19 restrictions lifting, Heal the Bay's MPA Watch volunteers are conducting significantly more surveys than last year, and Heal the Bay is successfully training many volunteers using a virtual training program.

Human Use of MPAs January – June 2021

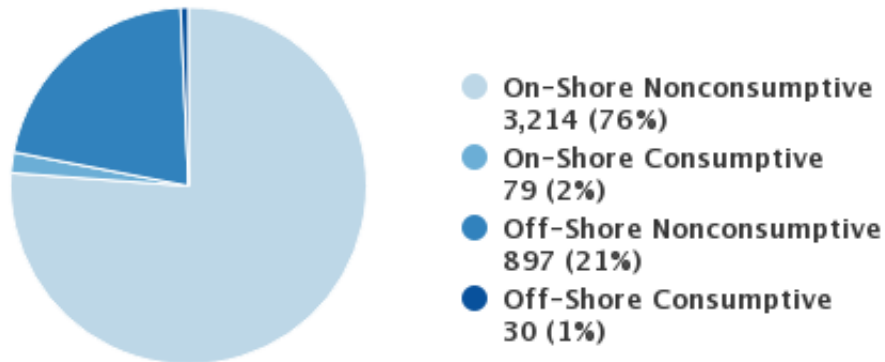
Top 10 MPAs by All Activity

January 1, 2021 – June 30, 2021
4,220 total activity events



All MPAs Combined

January 1, 2021 – June 30, 2021
4,220 activity events



Activity Classifications

On-Shore - Activities that take place on a sandy or rocky beach. Excludes bluffs, trails, sea walls, parking lots, or other man-made structures. Includes recreation, tidepooling, shore-based fishing, etc.

Off-Shore - Activities that take place offshore, typically in knee-deep water or deeper. Includes surfing, SCUBA diving, kayaking, boat fishing, etc.

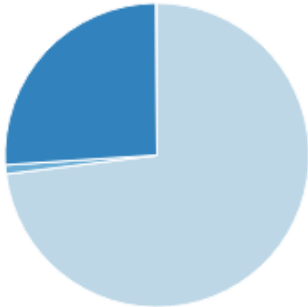
Consumptive - An activity in which a natural resource (i.e. fish, kelp, shells) is being collected.

Non-Consumptive - An activity in which a natural resource is not collected.

Activity by MPA

Point Dume SMCA

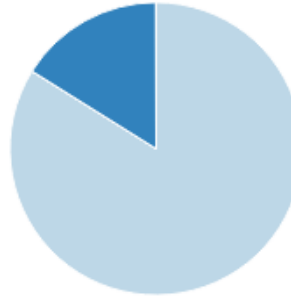
January 1, 2021 - June 30, 2021
1,238 activity events



- On-Shore Nonconsumptive
904 (73%)
- On-Shore Consumptive
12 (1%)
- Off-Shore Nonconsumptive
321 (26%)
- Off-Shore Consumptive
1 (< 1%)

Point Dume SMR

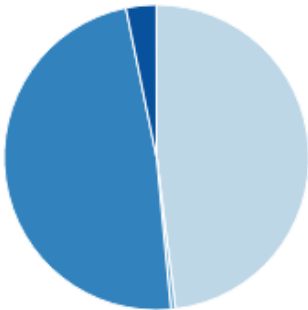
January 1, 2021 - June 30, 2021
869 activity events



- On-Shore Nonconsumptive
729 (84%)
- On-Shore Consumptive
0 (< 1%)
- Off-Shore Nonconsumptive
140 (16%)
- Off-Shore Consumptive
0 (< 1%)

Point Vicente SMCA

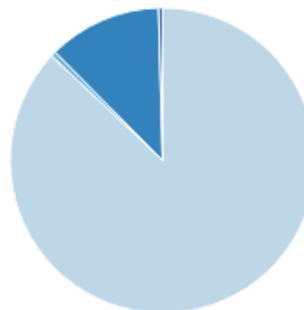
January 1, 2021 - June 30, 2021
404 activity events



- On-Shore Nonconsumptive
194 (48%)
- On-Shore Consumptive
2 (< 1%)
- Off-Shore Nonconsumptive
195 (48%)
- Off-Shore Consumptive
13 (3%)

Abalone Cove SMCA

January 1, 2021 - June 30, 2021
1,164 activity events

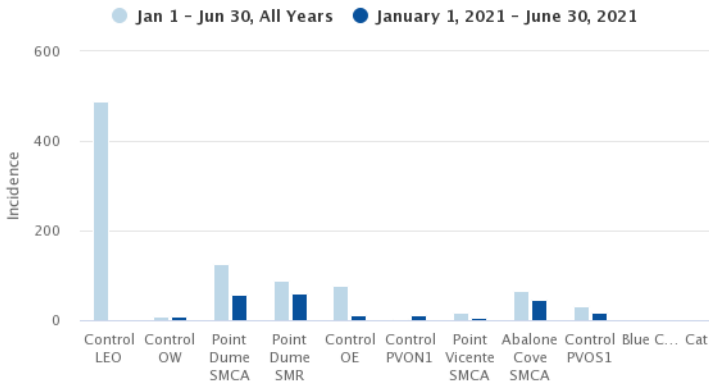


- On-Shore Nonconsumptive
1,013 (87%)
- On-Shore Consumptive
6 (1%)
- Off-Shore Nonconsumptive
140 (12%)
- Off-Shore Consumptive
5 (< 1%)

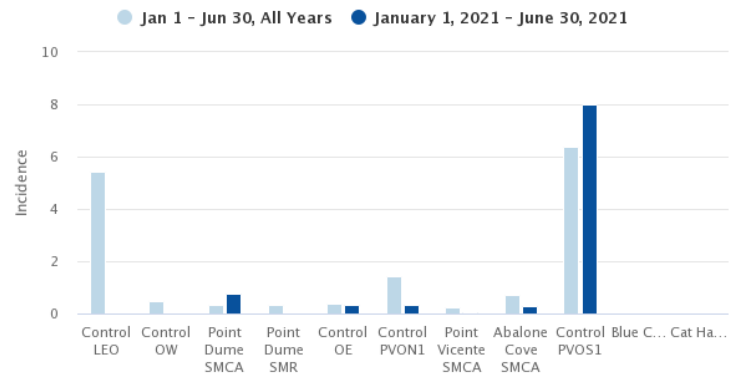
The above pie charts on pages 1 & 2 show raw number of activities observed by the MPA Watch Program in Los Angeles County and do not correct for number of surveys performed.

Activity Incidence by MPA

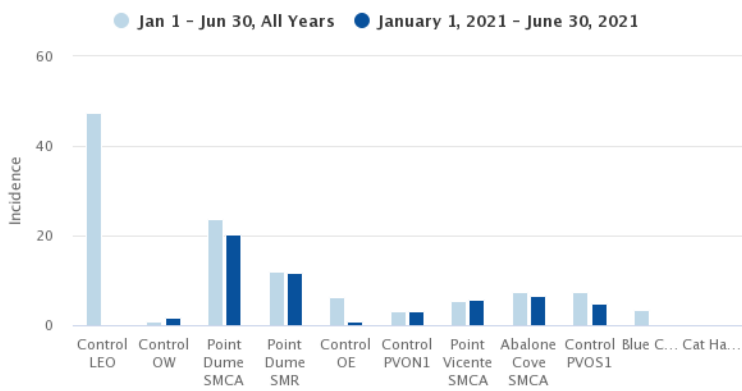
On-Shore, Non-Consumptive



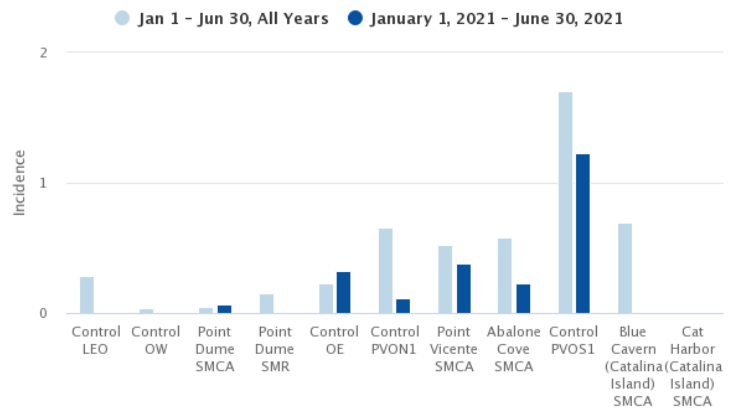
On-Shore, Consumptive



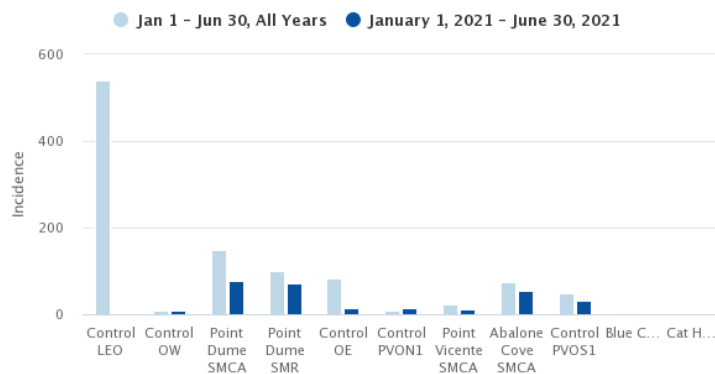
Off-Shore, Non-Consumptive



Off-Shore, Consumptive



All Activity



The above charts show incidence values for each MPA monitored by the MPA Watch Program in Los Angeles County. **Incidence is calculated as # of activities recorded divided by total survey-miles.**

Activity Incidence by MPA

MPA	On-Shore					
	▲	Non-Consumptive		Consumptive		
		Jan 1 Jun 30 All Years	◆	Jan 1, 2021 through Jun 30, 2021	◆	Jan 1 Jun 30 All Years
Control LEO		487.7		nan	5.4	nan
Control OW		7.6		7.2	0.5	0.0
Point Dume SMCA		125.6		57.2	0.3	0.8
Point Dume SMR		87.9		60.8	0.3	0.0
Control OE		76.5		12.3	0.4	0.3
Control PVON1		3.8		10.7	1.4	0.3
Point Vicente SMCA		18.2		5.7	0.2	0.1
Abalone Cove SMCA		65.0		46.9	0.7	0.3
Control PVOS1		32.6		17.8	6.4	8.0
Blue Cavern (Catalina Island) SMCA		0.0		nan	0.0	nan
Cat Harbor (Catalina Island) SMCA		inf		nan	inf	nan
All MPAs Combined		70.3		28.0	0.5	0.7

MPA	Off-Shore					
	▲	Non-Consumptive		Consumptive		
		Jan 1 Jun 30 All Years	◆	Jan 1, 2021 through Jun 30, 2021	◆	Jan 1 Jun 30 All Years
Control LEO		47.4		nan	0.3	nan
Control OW		0.9		1.8	0.0	0.0
Point Dume SMCA		23.7		20.3	0.1	0.1
Point Dume SMR		12.0		11.7	0.1	0.0
Control OE		6.4		1.0	0.2	0.3
Control PVON1		3.0		3.3	0.7	0.1
Point Vicente SMCA		5.3		5.8	0.5	0.4
Abalone Cove SMCA		7.6		6.5	0.6	0.2
Control PVOS1		7.3		4.9	1.7	1.2
Blue Cavern (Catalina Island) SMCA		3.4		nan	0.7	nan
Cat Harbor (Catalina Island) SMCA		inf		nan	inf	nan
All MPAs Combined		11.3		7.8	0.3	0.3

MPA	Total	
	Combined	
	▲ Jan 1 Jun 30 All Years	◆ Jan 1, 2021 through Jun 30, 2021 ◆
Control LEO	540.9	nan
Control OW	9.0	9.0
Point Dume SMCA	149.7	78.4
Point Dume SMR	100.4	72.4
Control OE	83.5	13.9
Control PVON1	8.9	14.4
Point Vicente SMCA	24.2	11.9
Abalone Cove SMCA	73.9	53.9
Control PVOS1	48.0	32.0
Blue Cavern (Catalina Island) SMCA	4.1	nan
Cat Harbor (Catalina Island) SMCA	inf	nan
All MPAs Combined	82.4	36.8

The above table shows incidence values for each MPA monitored by the MPA Watch program in Los Angeles County.

Incidence is calculated as number of activities recorded divided by total survey-miles.

Notes on Calculating Incidence

The baseline rate for the reporting period was calculated by summing the total use count for each category during the same period from each previous year and dividing this value by the transect miles surveyed at each site. The miles surveyed were calculated by first identifying the length of each transect for all the MPAs in question and multiplying the length of the transect by the number of surveys that had been taken along that transect during the same time period. For MPAs with multiple transects, the total distance traveled for each transect within the MPA were summed together to get the total miles surveyed within that MPA. In the tables, “inf” references a rate too small to calculate and “nan” references a rate of 0.

COVID-19

COVID-19 continued to impact Heal the Bay's MPA Watch program in the first half of 2021, however the program has recovered significantly from the severe impacts we felt last year and has overcome many pandemic-related challenges. Our program fully reopened on July 1 2020 after a 3-month closure last year and has since operated quite successfully using virtual programming. As documented in our last report, Heal the Bay implemented a virtual training program so that we could continue recruiting and training volunteers for the MPA Watch program. Heal the Bay used this virtual training program three times in the first half of 2021 to train 55 volunteers total, and we are on track to vastly exceed our total number of trained volunteers in 2017, 2018, 2019 and 2020. This virtual training program has proven very successful and our remotely trained volunteers have conducted hundreds of surveys.

Volunteer participation has significantly increased during the first half of 2021 and we are pleased to see an increase in both surveys completed and volunteers trained this year. While many of surveys are still being conducted by a handful of top volunteers, we are hoping to return to pre-pandemic survey levels this year. Heal the Bay is still taking precautions for COVID-19, including additional safety training and a Volunteer Safety Agreement that all volunteers must sign. We will continue to monitor COVID-19 very carefully and hopefully will be able to return to in-person programming or a hybrid of in-person and virtual trainings before the end of the year.

As reported last year, COVID-19 and subsequent increased visitation and harvesting of organisms also had an enormous impact on LA County's rocky intertidal zone, both inside and outside MPAs. While the MPA Watch data will undoubtedly miss a great deal of this take, both volunteers and MPA managers anecdotally noticed an enormous uptick in take from the tidepools of Abalone Cove SMCA and surrounding areas last year. This may be attributed to increased unemployment and lack of food security due to COVID-19, but we are still unsure of the cause. Thankfully, this take has lessened in the past few months since the reversal of LA County COVID-19 restrictions, however Heal the Bay is still monitoring the situation closely and will be conducting tidepool visitation surveys this summer to better understand the demographics of visitors to our tidepools in an effort to increase compliance.

Breakdown by MPA

Point Dume State Marine Reserve

Point Dume became a State Marine Reserve (SMR) in 2012 as part of the third phase of the California Marine Life Protection Act (MLPA). Point Dume SMR is located at Point Dume in Malibu, California and encompasses a total of 7.53 square miles. Classified as an SMR, all take is strictly prohibited in this MPA. With panoramic views and miles of visibility down the Malibu coast, Point Dume is known today as an ideal location for hiking, rock climbing, and beach recreation.

Centuries before the settlement of Spanish missionaries in the area, the Indigenous Chumash tribe inhabited Point Dume. Living closely in relation to their natural environment, the Chumash treated Point Dume as a sacred place and a sun shrine. Point Dume's significance relates directly to its position, as it juts out into the Pacific Ocean. Chumash people used the top of Point Dume as a lookout to observe seasonal migrations of marine mammals, schools of fish, and movements of people along the coastline.¹

In the first half of 2021, total activity incidence decreased in the Point Dume SMR, both onshore and offshore and for both consumptive and non-consumptive activities, as compared to the all-year activity incidence per survey mile. Incidence of consumptive activities in this MPA were both at 0 per survey mile, down significantly from incidences as high as 0.4 per survey mile in 2020. On shore non-consumptive activity fell by 31% while offshore non-consumptive activities fell by only 2% from the all-year average. The most common activities in this MPA thus far this year have been surfing, offshore recreation, and both sandy and rocky beach recreation. No violations were reported in this MPA for the first half of 2021.

Point Dume State Marine Conservation Area

Located adjacent to the Point Dume State Marine Reserve, Point Dume SMCA encompasses 15.92 square miles and runs along Zuma and El Matador beaches in Malibu, CA to the northwest of Point Dume. Adopted in 2012 along with Point Dume SMR during phase three of the MLPA adoption process, this MPA was chosen as the location for a SMCA due to diverse habitats, high species diversity, and monitoring & research opportunities. Similar to the Point Dume SMR, this site plays a significant role in Chumash maritime culture and is well suited for tribal co-management, maritime cultural preservation, and education and outreach.

As a conservation area, Point Dume SMCA does allow some consumptive activity. The recreational take by spearfishing of white seabass and pelagic finfish is permitted, along with the commercial take of swordfish by harpoon and coastal pelagic species by round haul net, brail gear, and light boat. There is an incidental take limit of no more than 5% by commercial fishing activity, and take pursuant to beach nourishment and sediment management practices is also permissible.

¹ Robinson, T., Draft Initial Study and Mitigated Negative Declaration - Point Dume Natural Preserve (2003). Retrieved from [https://www.parks.ca.gov/pages/980/files/Point Dume MND_ Draft2.pdf](https://www.parks.ca.gov/pages/980/files/Point_Dume_MND_Draft2.pdf)

Point Dume SMCA had the most recorded activity of all survey sites in LA County with 29% of recorded activities. This MPA also had the highest activity incidence of all four MPAs and control sites, indicating it is the most heavily used MPA in LA County. Onshore non-consumptive activity is by far the most common, making up 73% of the recorded activity observations. Onshore non-consumptive activity experienced a significant decrease of 54% in activity incidence per survey mile from the all-year average. Onshore consumptive activity, however, increased from 0.3 to 0.8 incidences per survey mile. A total of 12 observations of consumptive land activity were recorded thus far in 2021, all of which came from one survey in Zuma Beach. This activity was hand-collection of biota and was noted by the volunteer as a group of visitors hand collecting kelp and seashells from the shoreline. One incidence of boat fishing was also recorded in this MPA. The most common activities in this MPA are sandy beach recreation, offshore recreation and surfing.

Point Vicente No-Take State Marine Conservation Area

Point Vicente State Marine Conservation Area (SMCA) is a no-take MPA established in 2012. This MPA protects key habitats and covers fifteen square miles. Home to the Point Vicente Lighthouse and 3.7 miles of scenic shoreline, Point Vicente attracts many tourists. Beach access in this MPA is limited which makes beach recreation and other activities less common, however, tourists can still enjoy the views and occasional wildlife viewing from the bluff trails. As a no-take SMCA, no recreational or commercial take is permitted within its boundaries. Specially permitted incidental take for infrastructure maintenance is legally permissible.

Point Vicente SMCA had much more offshore activity than any other LA MPA thus far in 2021, making up 51% of the total observed activity. Consumptive activity accounted for a total of 4% of the activities observed, more than any other MPA. Non-consumptive onshore activity was considerably lower than the all-year incidence rate, at only 57.2 activities per mile surveyed compared to 125.6 activities per mile surveyed. All other activity types remained relatively unchanged in this MPA. Six violations were observed (though none reported) inside this MPA, mostly active boat fishing with nets and line. This was a very popular site for MPA Watch volunteers, with nearly half of all surveys being conducted in this MPA (92 total). The most common activities in this MPA were rocky beach recreation, wildlife watching, power boating, and sailing.

Abalone Cove State Marine Conservation Area

Located adjacent to Point Vicente SMCA, Abalone Cove SMCA spans just 1.2 miles of shoreline and encompasses only 4.7 square miles. The smallest of the MPAs in LA County, this protected area is located on the south of the Palos Verdes Peninsula. It was adopted in 2012 and along with Point Vicente SMCA, includes the only south-facing headland in the entire region. The shoreline of this MPA is known for its rocky intertidal habitat. As an SMCA, Abalone Cove SMCA does allow some take of marine organisms. Within the MPA boundaries, the recreational take by spearfishing of white seabass and pelagic finfish; and market squid by hand-held dip net is permitted. The commercial take of swordfish by harpoon; and coastal pelagic species and Pacific bonito by round haul net, brail gear, and light boat are also permitted. Additionally, like Point Vicente SMCA, Abalone Cove SMCA partially contains a

superfund site, and therefore take pursuant to the mitigation actions of the superfund site is permitted.

In 2021 Abalone Cove SMCA has seen a decrease in the percentage of consumptive activity, only accounting for 2% thus far this year as compared to 4% last year. Abalone Cove also had the highest percentage of onshore activity as compared to the total, at 88%. This MPA had the second highest tally of activity counts at 28% of the total. All activity types decreased thus far this year according to activity incidence as compared to the previous all-year average. Total activity incidence decreased by 27%, from 73.9 observations per survey mile to 53.9 observations per survey mile. A total of 11 consumptive activities were recorded in this MPA thus far, 9 of which were violations observed and included boat-based and shore-based hook and line fishing. None of these violations were reported. Surprisingly, no incidences of hand collection were observed, as this site was targeted for tidepool poaching last year. The most common activities observed in this MPA were beach recreation, recreational tidepooling, kayaking, and power boating. SCUBA diving was also a common activity reported.

Potential Violations

The rate of consumptive activities across all LA MPAs surveyed by MPA Watch remains relatively low in most MPAs, however MPA Watch volunteers still report consumptive activity in all 4 of LA MPAs. Consumptive activities accounted for 3% of total activity in LA MPAs thus far in 2021. While 28 violations were observed by MPA Watch volunteers (accounting for 26% of the total consumptive activities observed), no violations were reported between January and June of 2021. These violations make up only .06% of the total number of activities recorded. Last year during this same time frame, 17 violations were observed of the total 1,887 observations made, .09% of the total. This indicates a possible downward trend in potential violations, however the activity incidence rate indicates this may not be the case, as onshore consumptive activities have increased slightly in one MPA (Point Dume SMCA).

Last year, anecdotal evidence and data collected from the Ranchos Palos Verdes seemed to indicate a massive increase in both legal and illegal take, from fishing and collection from the rocky intertidal zone. MPA Watch surveys did not fully capture this trend, as much of this take was occurring at times when volunteers were not in the field collecting data (i.e. very early mornings). This same anecdotal evidence from local MPA managers indicates that that level of take has decreased since COVID-19 restrictions have been lifted, however violations are still observed by MPA Watch volunteers at every single MPA in Los Angeles County.

Even though violations and consumptive activity have decreased, Heal the Bay still strongly recommends continued enforcement efforts and multilingual outreach activity in all LA County MPAs in response to startling increases in take effort in Los Angeles observed over the past year and a half and we recommend a strong effort in documentation of violations in these areas by CDFW outreach and enforcement staff.

Next Steps

In the first half of 2021 Heal the Bay's MPA Watch team has prioritized the implementation of our entirely virtual training program developed in 2020 that has allowed for the safe recruitment and training of new MPA Watch volunteers during the COVID-19 pandemic. This training program consists of training videos, presentations, and virtual classroom sessions to fully prepare a new cohort of volunteers to accurately conduct MPA Watch surveys. This training technique has been successfully implemented to train dozens of new volunteers who are now in the field safely collecting survey data. For the second half of 2021, we are looking forward to moving towards a hybrid training program as restrictions are lifted that will combine the current virtual classroom training with an in-person socially distant field training. We hope to pilot this new hybrid system in August with the goal of returning to fully in-person trainings by 2022.

In addition to training new volunteers, we have and will continue to prioritize virtual refresher courses and monthly newsletters for our current volunteers to keep them informed of survey protocol. Our team has also prioritized the update of our training and outreach materials. This year, we released an updated training manual to accompany the new data sheet and training program. This training manual has new difficulty and accessibility ratings for each transect, MPA science information, updated GPS coordinates and photos of the transect start and stop points and landmarks, and updated field notes to improve volunteer experience. We will be circulating surveys to our volunteers and interns for feedback on this new manual later this year. In early 2022, we plan to release a second version of this new manual that will incorporate this feedback and include additional information on tribal and Indigenous lands, and traditional ecological knowledge drafted in partnership with local Indigenous representatives.

So far this year, and into the rest of 2021, we are also prioritizing additional outreach with our local community members through MPA presentations, docent trainings, and private partnerships. We have provided educational presentations to the docents at the Point Vicente Interpretive Center and plan to do the same with the Green Team and Security Team at the Terranea Resort, located on the coast of the Point Vicente SMCA. We have also conducted private trainings with the National Charity League and the Catalina Naturalist program. The latter has resulted in a continued partnership with the Catalina Collaborative on MPA Watch transects and we are now piloting two transects on Catalina Island that we intend to permanently add to the MPA Watch program. We hope this partnership will lead to a permanent chapter of MPA Watch on Catalina Island in the future.

We also continue to collaborate with PhD students in the Barber Lab at UCLA to complete a 2-year environmental DNA (eDNA) study in the MPAs of Malibu. In lieu of in-person eDNA events, staff collected samples with research partners. Sampling concluded this past spring and we look forward to working with the research team on data analysis in the coming months. Heal the Bay's MPA Watch team is dedicated to furthering our program during these uncertain times while ensuring the safety of our staff and volunteers.

Additional Information

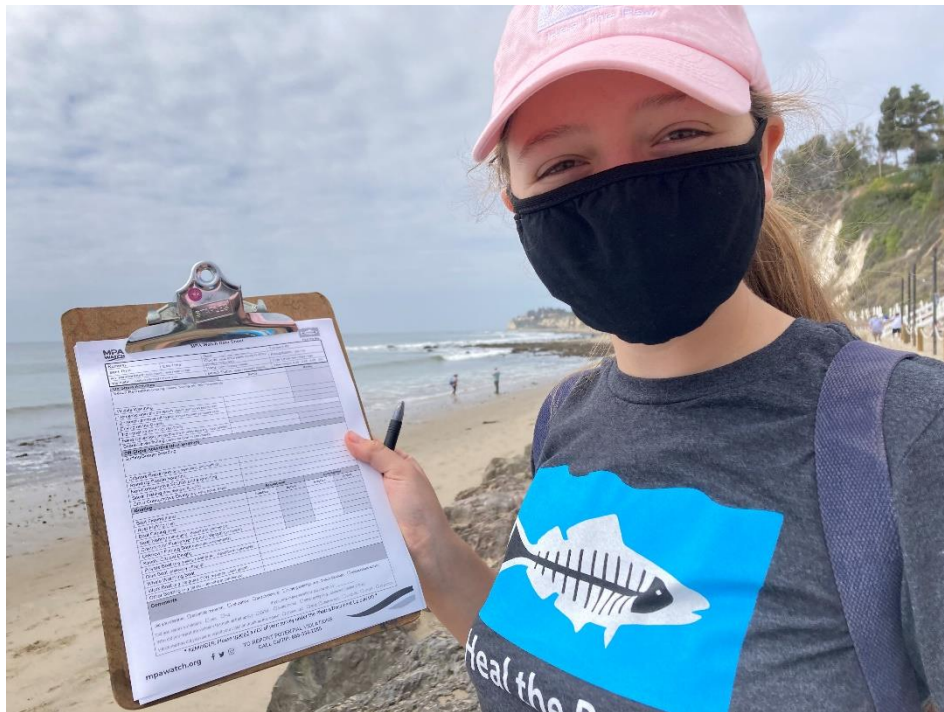
LA County MPA Watch is part of a larger statewide MPA Watch effort. For more information about this program, please visit www.mpawatch.org. If a member of the public interested in joining the Heal the Bay MPA Watch volunteer team, they can attend one of our volunteer orientations for more information. Volunteer orientations are held once quarterly, and are a necessary prerequisite to attend one of our four yearly MPA Watch trainings.

For additional information on MPA Watch, including survey sites, participating organizations, protocols and datasheets, media kit, and how to get involved, please visit mpawatch.org or www.healtheybay.org/mpa. Connect with the program on social media @MPAWatchOrg and @HealTheBay.

To learn more about Heal the Bay's MPA Watch Program and to register for an orientation or training, please visit www.healtheybay.org/take-part. For information on California's network of marine protected areas, please visit californiampas.org. For details on the rules, regulations and management of California's MPAs, please visit wildlife.ca.gov/MPAs.

Contributing Authors/Editors:

Emily Parker, Coastal and Marine Scientist at Heal the Bay (Lead Author)
Forest Curtis, MPA Watch and Outreach Associate at Heal the Bay (Co-Author)
Katherine Pease, Science and Policy Director at Heal the Bay (Reviewer)



Heal the Bay MPA Watch Volunteer Sophia von der Ohe conducting a survey, 2021