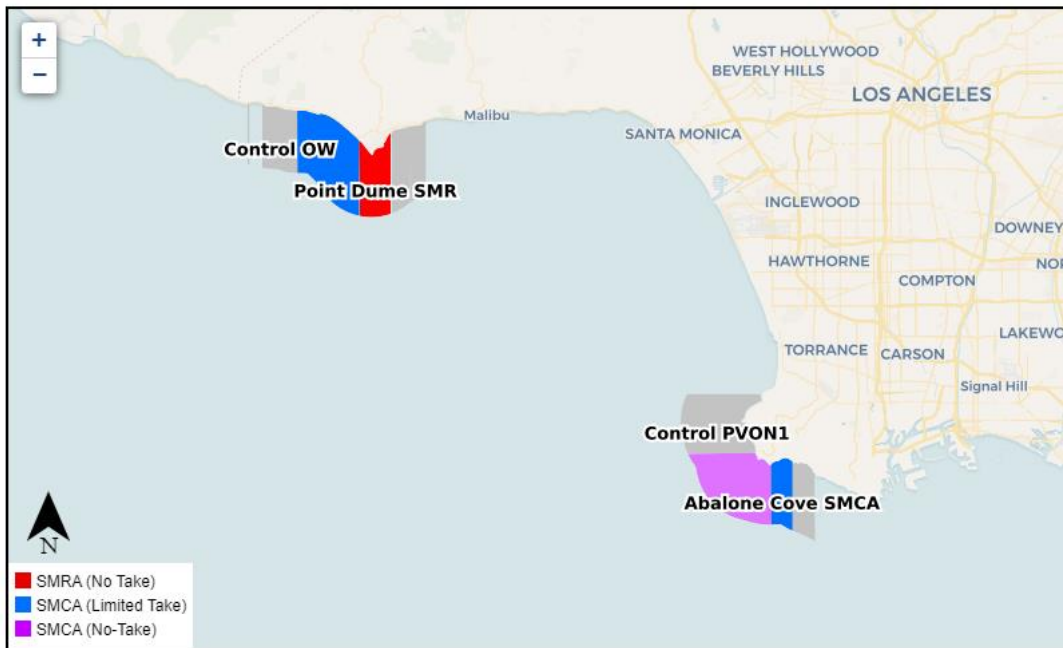




**Marine Protected Area (MPA) Watch
Regional Report
LA County Shore-Based
January 1, 2022 – December 31, 2022**



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 the 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.

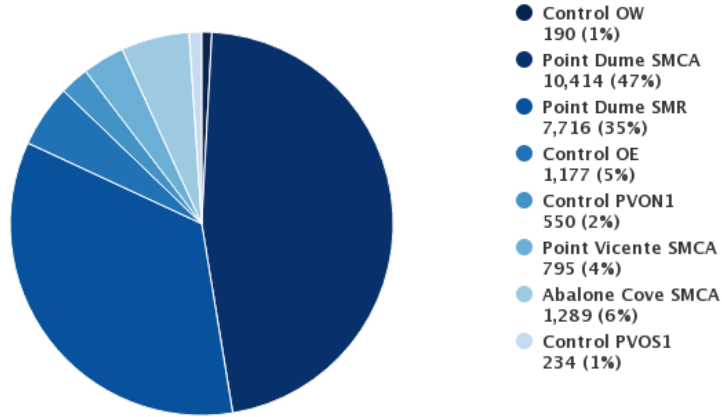
Executive Summary

- In 2022, 53 MPA Watch volunteers conducted a total of 490 surveys across 324 total survey miles and recorded a total of 22,365 activities.
- Consumptive activity continues to decrease in LA County MPAs as compared to 2021 and 2020 observed activities.
- Activity incidence rate has increased across all MPAs and activity types in 2022 as compared to the previous year.
- Potential violations decreased again in 2022 to just 0.2% of activities observed, indicating continued improvement in MPA compliance.
- Heal the Bay’s MPA Watch program has successfully transitioned to a fully hybrid training program and officially surpassed 1,000 total volunteers trained over the past 11 years, with 101 volunteers trained in 2022.

Human Use of MPAs January - December 2022

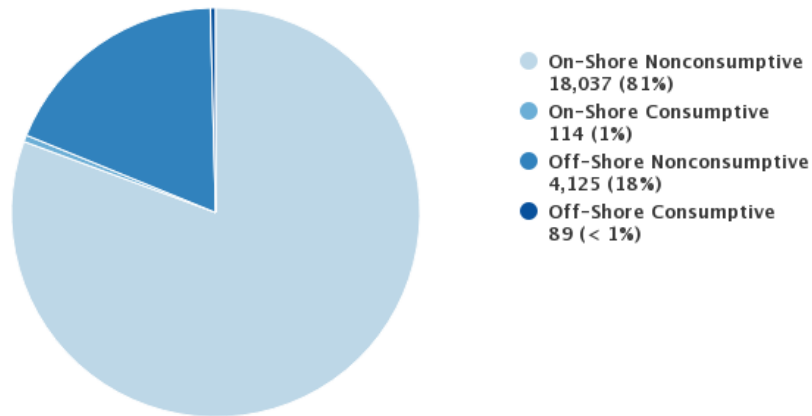
Top 8 MPAs by All Activity

January 1, 2022 – December 31, 2022
22,365 total activity events



All MPAs Combined

January 1, 2022 – December 31, 2022
22,365 activity events



Figures 1a and 1b: Pie charts of human activity by MPA or Control site.

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.

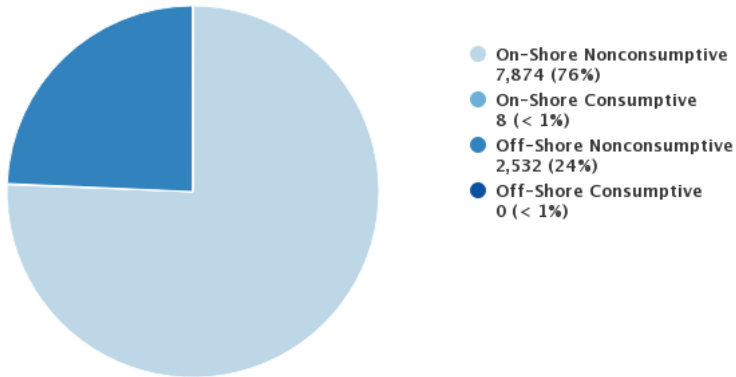
Consumptive - An activity in which a natural resource (i.e. fish, kelp, shells) is being collected.

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

Activity by MPA

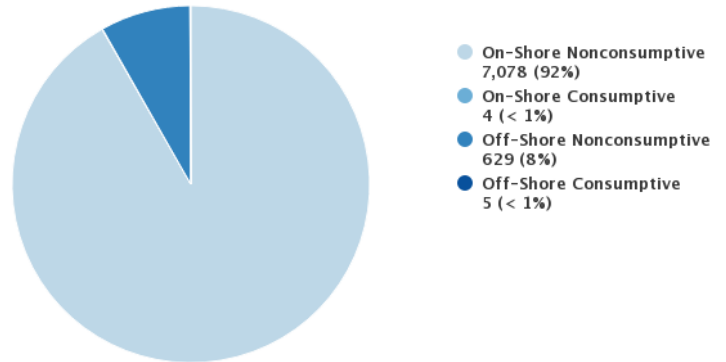
Point Dume SMCA

January 1, 2022 – December 31, 2022
10,414 activity events



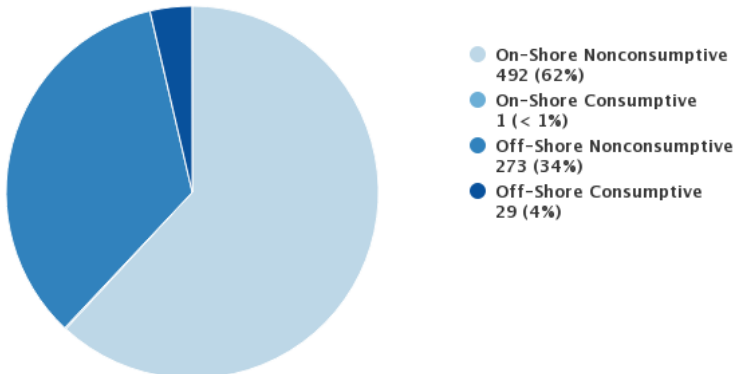
Point Dume SMR

January 1, 2022 – December 31, 2022
7,716 activity events



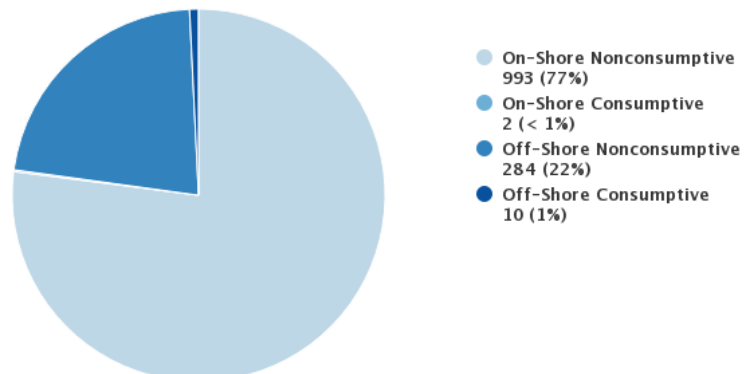
Point Vicente SMCA

January 1, 2022 – December 31, 2022
795 activity events



Abalone Cove SMCA

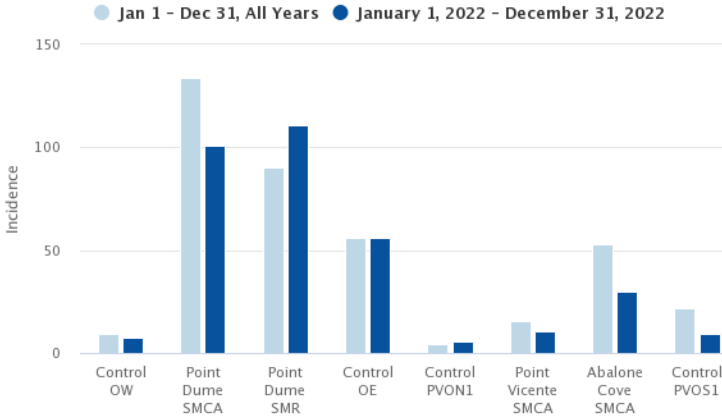
January 1, 2022 – December 31, 2022
1,289 activity events



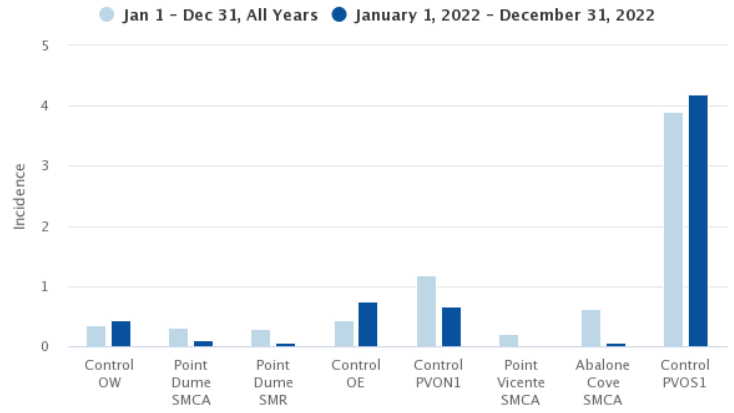
Figures 2a, 2b, 2c, and 2d in order of right to left and top to bottom above: Pie charts of activity type by MPA or Control site. These and Figures 1a and 1b show raw number of activities observed by the MPA Watch Program in Los Angeles County and do not correct for the number of surveys performed.

Activity Incidence by Site

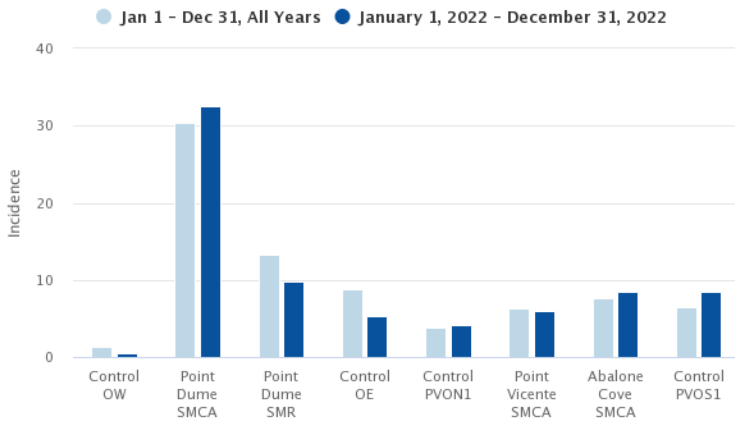
On-Shore, Non-Consumptive



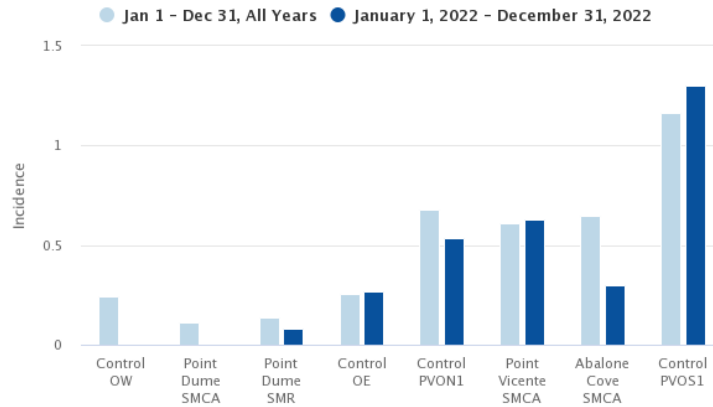
On-Shore, Consumptive



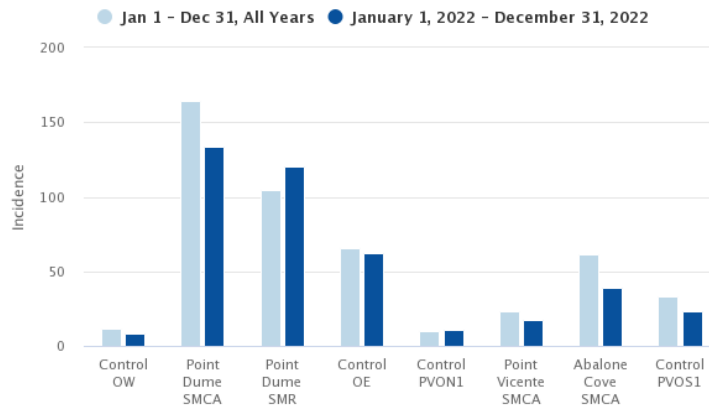
Off-Shore, Non-Consumptive



Off-Shore, Consumptive



All Activity



Figures 3a, 3b, 3c, 3d, and 3e in order of right to left and top to bottom: activity rate bar charts for 2022 compared to all years since 2011. Incidence is calculated as the number of activities recorded divided by total survey miles.

Activity Incidence by Site

MPA	On-Shore				
	Non-Consumptive			Consumptive	
	▲ Jan 1 Dec 31 All Years	◆ Jan 1, 2022 through Dec 31, 2022	◆	Jan 1 Dec 31 All Years	◆ Jan 1, 2022 through Dec 31, 2022
Control OW		9.4	7.3	0.4	0.4
Point Dume SMCA		133.9	100.9	0.3	0.1
Point Dume SMR		90.5	110.6	0.3	0.1
Control OE		56.3	56.0	0.4	0.7
Control PVON1		4.2	5.6	1.2	0.7
Point Vicente SMCA		15.8	10.7	0.2	0.0
Abalone Cove SMCA		52.7	29.7	0.6	0.1
Control PVOS1		21.6	9.4	3.9	4.2
All MPAs Combined		68.4	55.7	0.5	0.4

Table 1: Onshore activity incidence rate by MPA or Control site. Incidence is calculated as the number of activities recorded divided by total survey miles.

MPA	Off-Shore				
	Non-Consumptive			Consumptive	
	▲ Jan 1 Dec 31 All Years	◆ Jan 1, 2022 through Dec 31, 2022	◆	Jan 1 Dec 31 All Years	◆ Jan 1, 2022 through Dec 31, 2022
Control OW		1.4	0.5	0.2	0.0
Point Dume SMCA		30.4	32.5	0.1	0.0
Point Dume SMR		13.2	9.8	0.1	0.1
Control OE		8.8	5.3	0.3	0.3
Control PVON1		3.8	4.2	0.7	0.5
Point Vicente SMCA		6.2	5.9	0.6	0.6
Abalone Cove SMCA		7.6	8.5	0.7	0.3
Control PVOS1		6.4	8.5	1.2	1.3
All MPAs Combined		13.4	12.7	0.3	0.3

Table 2: Offshore activity incidence rate by MPA or Control site. Incidence is calculated as the number of activities recorded divided by total survey miles.

MPA	Total	
	Combined	
	▲ Jan 1 Dec 31 All Years	◆ Jan 1, 2022 through Dec 31, 2022 ◆
Control OW	11.4	8.3
Point Dume SMCA	164.7	133.5
Point Dume SMR	104.2	120.6
Control OE	65.8	62.3
Control PVON1	9.8	10.9
Point Vicente SMCA	22.8	17.2
Abalone Cove SMCA	61.6	38.6
Control PVOS1	33.1	23.4
All MPAs Combined	82.6	69.1

Table 3: Total activity incidence rate by MPA or Control site. Incidence is calculated as the number of activities recorded divided by total survey miles.

Program Status and COVID-19

Heal the Bay's MPA Watch program has fully recovered from impacts of the COVID-19 pandemic; however, the program has undergone subsequent permanent changes as a result of the pandemic. Our program fully reopened on July 1 2020 after a 3-month closure and has since operated very successfully using hybrid training, virtual programming, and digital recruitment and management. As of summer 2021, Heal the Bay has been utilizing a hybrid training program consisting of training videos and online quizzes, and a virtual classroom training session combined with an in-person field training. This change, while originally designed to maintain training during the pandemic, has become a permanent change to our training protocol as it requires fewer resources and allows our program to be more accessible to volunteers while maintaining the scientific rigor required to train MPA Watch volunteers. We trained over 50 volunteers in 2021 and over 100 volunteers in 2022 using this method, many of whom are already conducting surveys on their own as dedicated and reliable volunteers.

Volunteer participation continues to remain high following the increases we experienced in 2021, indicating successful program recovery from the pandemic. We saw steady rates of surveys completed, volunteers trained, volunteer retention, and active volunteers in 2022. In 2022, our numbers have even surpassed pre-pandemic numbers, with 101 volunteers being trained throughout the year. In 2022, those volunteers conducted more surveys than were completed in the last three years. Heal the Bay is still taking precautions for COVID-19 by strongly encouraging all volunteers to obtain and maintain up-to-date COVID-19 vaccinations, when available. All volunteers may provide proof they have begun or completed the vaccination process via the MPA Watch Volunteer Safety Agreement.

As reported in 2020 and in the first half of 2021, COVID-19 and subsequent increased visitation and harvesting of organisms had an enormous impact on LA County's rocky intertidal zone, both inside and outside MPAs. While the MPA Watch data undoubtedly missed 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 in 2020. Thankfully, anecdotal reporting indicates this take lessened during the summer of 2021 and has remained at less concerning levels since then, however, Heal the Bay will continue monitoring the area closely through our MPA Watch program.

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 2022, onshore non-consumptive activity incidence increased beyond the all-year average for the first time in years (Table 1). Activity incidence across all types increased by 67% from 2021 to 2022 and was 14% above the all-year average (Table 3). Onshore consumptive activity remains at 0.1 incidences per survey mile (Table 1), the same as 2021 and 67% lower than the all-year average. Offshore consumptive activity increased from 0 in 2021 to 0.1 incidences per survey mile in 2022 (Table 2), the same as the all-year average. Consumptive activities, while making up only 0.1% of all activity in this MPA, included sandy beach hand collection of biota, sandy beach hook and line fishing, and commercial trap fishing from a boat. The most common activities in this MPA in 2022 were sandy beach recreation (87%), offshore recreation (5%), surfing (3%), and rocky beach recreation (2%). In 2021, surveying in this MPA was difficult due to multiple transect closures caused by barriers to access, including road and beach closures and beach erosion from extreme high tides. While only 33 surveys were conducted and approved in Point Dume SMR in 2021 and only 25 in 2020, 69 were conducted and approved in 2022. This is most likely due in part to increased access, a testament to how important coastal access is for MPA monitoring success and the need for sea level rise mitigation in the Malibu area. We are expecting continued access and surveying problems in the coming year at this MPA and across LA County due to major beach erosion from the recent rain events of January 2023, more of which are predicted for the 2023 winter season.

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 an 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 for 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)

In keeping with the previous year and the all-year trend, Point Dume SMCA had the most recorded activity of all survey sites in LA County in 2022 with 47% of recorded activities (Figure 1a). Also similar to 2021 and the all-year average, this MPA had the highest activity incidence (133.5 activities observed per mile surveyed, a 54% increase from 2021) in 2022 of all four MPAs and control sites, indicating it is the most heavily trafficked site (Table 3). This is the highest activity incidence we have documented since before the COVID-19 pandemic. Non-consumptive activity incidences all increased dramatically in 2022 as compared to 2021 and 2020 while consumptive activity incidence decreased onshore from 0.5 to 0.1 observations per survey mile and offshore from 0.1 to 0 observations per survey mile (Tables 1 and 2), a good sign for this MPA. Consumptive activity accounted for only 0.07% of all recorded activities (Figure 2a). These consumptive activities included five hook and line fishers, both rocky and sandy beach, and hand collection of biota. The most common activities in this MPA in 2022 across the 93 surveys collected for the year were sandy beach recreation (73%), surfing (13%), offshore recreation (11%), and animals on leash (1%). As with Point Dume SMR, the number of surveys conducted in this MPA increased dramatically in 2022 by a whopping 173% compared to 2021.

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.

As with the last couple of years, volunteers surveyed Point Vicente SMCA the most out of all the MPAs in 2022 with a total of 132 surveys, making up 27% of the total number of surveys conducted. Consistent with trends from recent years and the all-year totals, Point Vicente SMCA had more offshore activity than any other LA MPA in 2022, making up 34% of the total observed activity, down from 54% in 2021 (Figure 2c). Consumptive activity accounted for a total of 4% of the activities observed, remaining the highest percentage of consumptive activity of all LA County MPAs from the last 3 years and the all-year total (Figure 2c). Total activity incidence remained below the all-year average during this timeframe, however, it increased from 6.0 in 2021 to 17.2 observations per survey mile in 2022 (Table 3). Across all activity types, incidence rates were higher in this MPA than they have been for the past 3 years. Offshore consumptive activity rate remains consistent with the all-year average at 0.6 activities per survey mile, the highest of all the MPAs and an increase from 0.4 in 2021 (Table 2), while onshore consumptive activity was zero in 2022 (Table 1). The most common activities recorded were rocky beach recreation (35%), power boating (15%), sandy beach recreation (9%), wildlife viewing (7%) and sailing (7%). The consumptive activity recorded in this MPA was mostly boat-based including unknown fishing (3% of all activity), recreational line fishing from a boat, and commercial net fishing from a boat (both <1%). While 30 observations of consumptive activity were recorded, 24 of them were recorded as unknown fishing and therefore not designated as violations in the

MPA Watch database. Of the 6 violations, all were reported via CalTIP to DFW, an increase from zero reports called in from this MPA in 2021 and a huge win for volunteer contributions to enforcement and compliance activities and MPA management as a whole.

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 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 2022, consumptive activity continued to decrease in Abalone Cove SMCA, down from both in 2021 and 2020. Consumptive activity made up only 1% of observations in 2022 (Figure 2d), down from 2% in 2021 and 4% in 2020. Onshore consumptive activity dropped to 0.1 observations per survey mile (Table 1) with no tidepool collection activities being observed and offshore consumptive activity dropped from 0.4 in 2021 to 0.3 incidences per survey mile in 2022 (this is below the all-year average of 0.7) (Table 2). Total activity in this MPA is below the all-year average across all activity types (down to 38.6 from 61.6 observations per survey mile), and decreased from 2021 by 17% (Table 3). Consumptive activity included hook and line fishing and net fishing from a boat (a violation in this MPA) and spearfishing from both boat and shore (permitted in this MPA). Tidepooling activity is more common here than any other MPA with 123 observations made (10% of all activity observations). The other most common activities observed in Abalone Cove in 2022 were rocky and sandy beach recreation (36% and 30% respectively), kayaking (7%), and power boating (5%).

Potential Violations

While some consumptive activities are permitted in LA County MPAs, this metric is a good place to start when looking at compliance in MPAs, particularly state marine reserves and no-take state marine conservation areas. The rate of consumptive activities across all LA MPAs surveyed by MPA Watch remained relatively low in LA County mainland MPAs. Consumptive activities accounted for only 1% of total activities in these MPAs in 2022, down from 2% in both 2021 and 2020. As in years past, the highest rates of consumptive activity occurred at control site PVOS1, also known as Sacred Cove, located just south of the Abalone Cove SMCA. This site is often provided as an alternative for fishing and tidepool collecting to Abalone Cove by local rangers and docents. In 2022, 55 counts of consumptive activity were recorded at this transect, making up 24% of all observations at this site. Onshore consumptive activity rate was 4.2 incidences per survey mile, significantly higher than any other site and higher than the all-year average for this site. Offshore consumptive activity rate was 1.3 incidences per survey

mile, higher than the all-year average and the highest across all sites. That this unprotected control site makes up a great deal of consumptive activity violations may be indicative of effective MPA regulations and relatively good compliance in the region.

Of the observed consumptive activities across all LA County MPAs, only 23 observations were deemed violations, or about 0.2% of total observations. Violations were observed in every MPA monitored by MPA Watch in LA County with 2 in Abalone Cove, 9 in Point Dume SMCA, 9 in Point Dume SMR, and 6 in Point Vicente SMCA. These observations were made across 17 surveys, accounting for 3% of total surveys conducted, down from violations observed in 6% of total surveys in 2021 and 8.5% of surveys in 2020. This decrease in observed violations continues a multi-year trend and may indicate better compliance in MPA regulations in LA County MPAs in 2022 than in years past.

Of these 23 violation observations made in 2022, MPA Watch volunteers reported 7 total violations. Some volunteers noted in the comments of these surveys that they chose not to report due to a lack of clarity on either the allowance of the activity itself or whether the activity was truly taking place inside the MPA or not. For example, one volunteer noted that they observed a boat that seemed to be fishing the line but they could not confidently confirm whether it was in violation. Another, who observed a trawler, could not tell what the boat was doing or if it was actively fishing or not, resulting in a hesitancy to call CalTIP. This is a trend we continue to see and has indicated that, while they are trained in CalTIP reporting procedure, many potential violations still go unreported by MPA Watch volunteers in LA County. In response to this trend, Heal the Bay began including additional CalTIP reporting tools in our MPA Watch training program this past year, including practice phone calls and sample call scripts. We are strongly encouraging our volunteers to report violations to CalTIP so the state maintains accurate documentation of violations. This new training addition seems to be working, as the percentage of violations reported has increased to 30% in 2022 from only 4% in 2021. We will continue utilizing these new training tools to increase volunteer confidence and subsequent CalTIP reporting.

Next Steps

Looking ahead to 2023, Heal the Bay's MPA Watch team will continue utilizing our new model of hybrid trainings with virtual classroom sessions and training videos combined with in-person mandatory field trainings to train our new volunteers. This new model has shown to be incredibly successful and has produced dedicated and well-versed volunteers. We are making this a permanent change to increase accessibility to our program. In 2021, we completed an analysis of volunteer retention rates to gain a better understanding of why some volunteers stick with us while others do not and to identify the drop-off points. We used that information to develop new volunteer engagement techniques in the latter half of 2022. These include contacting volunteers who have not conducted their first survey within a month of completing their training to offer guidance and offering guided survey walks with an intern. These techniques appears to be helpful in retaining more volunteers after they complete their training and getting more volunteers out and comfortable in the field on their own. We will continue using these techniques and plan to launch a new online volunteer engagement tool to increase

community building and comradery in the otherwise solitary MPA Watch program. We have also begun a new volunteer email protocol for our QA/QC procedure that has drastically increased volunteer email response rate and subsequent survey approval that we are excited to continue testing in 2023.

We will also continue to prioritize updating training materials and hosting virtual refresher courses for our current volunteers to keep them informed of survey protocols. In 2020, we released a brand new training manual to our volunteers with improved survey instructions and guidance, difficulty and accessibility ratings, additional scientific information, and updated photos. In 2023, we plan to release another version of this manual with more updated instructions and a new Traditional Ecological Knowledge section to honor Indigenous management of coastal and marine ecosystems. We also plan to continue expanding our successful private training program to include local educational institutions and continue hosting MPA docent trainings as a supplement to our MPA Watch program.

Finally, we will continue collaborating with PhD students in the Barber and/or Eagle Labs at UCLA to begin a second 2-year environmental DNA (eDNA) study in 2023 in and around the MPAs of Malibu in addition to analyzing the data from the first 2-year study from our 2019-2021 partnership. The grant proposal that was submitted earlier in 2022 was accepted and funding has been secured for the second phase of this project. We have also begun working with a new graduate student who will carry on the eDNA sampling and analysis for 2023 and 2024. We are very excited to see these data and to show how eDNA can contribute to advanced long-term monitoring of our local MPAs.

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 you are interested in joining the Heal the Bay MPA Watch volunteer team, please attend one of our volunteer orientations for more information. Volunteer orientations are held bimonthly, and are a prerequisite to attending one of our quarterly 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. Connect with MPA Watch on social media @MPAWatchOrg.

To learn more about Heal the Bay's MPA Watch Program and to register for an orientation or training, please visit healthebay.org/mpa. 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)
Crystal Barajas, MPA Watch and Angler Outreach Coordinator at Heal the Bay (Reviewer)
Katherine Pease, Science and Policy Director at Heal the Bay (Reviewer)



MPA Watch Volunteer Trainings: Top Left - Point Dume, July 2022; Top Right - Point Dume, June 2022; Bottom Left - Point Dume, November 2022; Bottom Right, February 2022.

