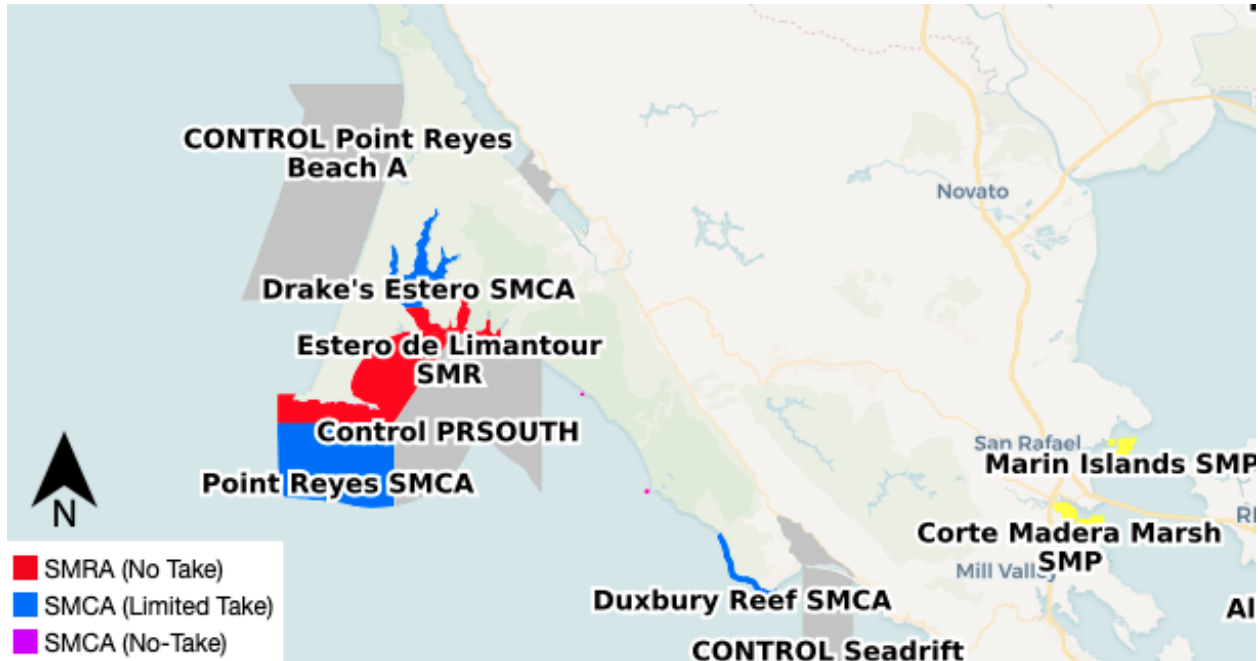




**Marine Protected Area (MPA) Watch
Regional Report
Marin County
January 1, 2020 – December 31, 2020**



MPA Watch is a statewide collaborative effort to collect critical human use data to enhance the management and conservation of marine protected areas (MPAs). MPA Watch data informs the management, enforcement, and science of California's MPAs and allows us insight on how human uses are changing as a result of MPA implementation. By involving local communities in this important work, MPA Watch programs inspire and empower stewardship, and educate California communities about ocean ecosystems.

The Marin MPA Watch program was established in 2013 as a collaboration between the Environmental Action Committee of West Marin, Point Reyes National Seashore, and the California Academy of Sciences. The Marin MPA Watch program monitors human activities adjacent to and within the Point Reyes State Marine Reserve, Point Reyes State Marine Conservation Area, Point Reyes Special Closure, Estero de Limantour State Marine Reserve, Drakes Estero State Marine Conservation Area, Duxbury Reef State Marine Conservation Area, and the Corte Madera Marsh.



1. Executive Summary

This report includes MPA Watch data from January 1 – December 31, 2020. The report comparisons are to January 1 – December 31, 2020.

The data is collected by trained on-shore observers and is organized into categories and tables that highlight on-shore and off-shore consumptive and non-consumptive uses¹ at MPAs located in Marin County.

- Point Reyes State Marine Reserve (Point Reyes SMR), Estero de Limantour State Marine Reserve (Estero de Limantour SMR), and Limantour Beach Control (Control PRSouth) are accessed through the Point Reyes National Seashore.
- Duxbury Reef State Marine Conservation Area (Duxbury SMCA) is accessed through Marin County Open Space.
- Corte Madera Marsh State Marine Park (Corte Madera Marsh SMP) is accessed through the city of Corte Madera.

Data collection in 2020 was limited due to COVID-19 access restrictions, inability to train volunteers, restrictions on volunteers to conduct surveys alone or only with individuals from the same household, and the Woodward Wildfire in Point Reyes National Seashore. Access restrictions were in place March through June 2020 (COVID-19) and again August – October 2020 (Woodward Wildfire).

a. Monitoring Site Data Summaries²:

i. Estero de Limantour State Marine Reserve (Estero de Limantour SMR):

This MPA recorded a use rate of less than 1 activities per miles surveyed. This is similar to the prior year rate. No hand collection of biota or dogs were observed. 99.9% of the observations in the MPA

¹ 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.

² Monitoring Site Data Summaries are documented for at-a-glance review of data notes for each MPA included in this report. To view comprehensive breakdowns by use and activity data, see *Section 6. Breakdown of MPA.*

were on-shore (69%) and offshore (34%) non-consumptive.

ii. **Point Reyes State Marine Reserve (Point Reyes SMR):**

This MPA recorded a use rate of 11.5 activities per miles surveyed. This was a decrease of 11% compared to the prior year rate. 94% of the observations in the MPA were mostly on-shore and offshore non-consumptive. Observations of dogs on Drakes Beach were less than the prior year.

iii. **Limantour Beach (Control PRSouth):**

This MPA recorded a use rate of 27.8 activities per miles surveyed. This is a 58% increase compared to the prior year rate. 99% of the observations in the MPA were on-shore non-consumptive. Dogs off leash continue to be an issue, volunteers recorded 65% of dogs on leash and 35% of dogs off leash.

iv. **Duxbury State Marine Conservation Area (Duxbury SMCA):**

This MPA recorded a use rate of 29.4 activities per miles surveyed. This is an increase of 79% compared to the prior year. 11% of the observations in the MPA are on-shore consumptive. 305 incidents of hand collection of biota in the intertidal were observed in the months of June, July, and August 2020. Six observations (less than 1% of all activities) included off-shore consumptive uses (boat fishing in the MPA) and were reported to Fish and Wildlife. Dogs off leash continue to be an issue, 70% of dogs off leash and 30% of dogs on leash.

Duxbury Reef SMR has the highest use count of all MPAs surveyed by Marin MPA Watch of 66% in one of the smallest survey areas. Duxbury Reef is a sensitive intertidal habitat where human impacts (trampling and collecting) may have long-term negative impacts to habitat and species.

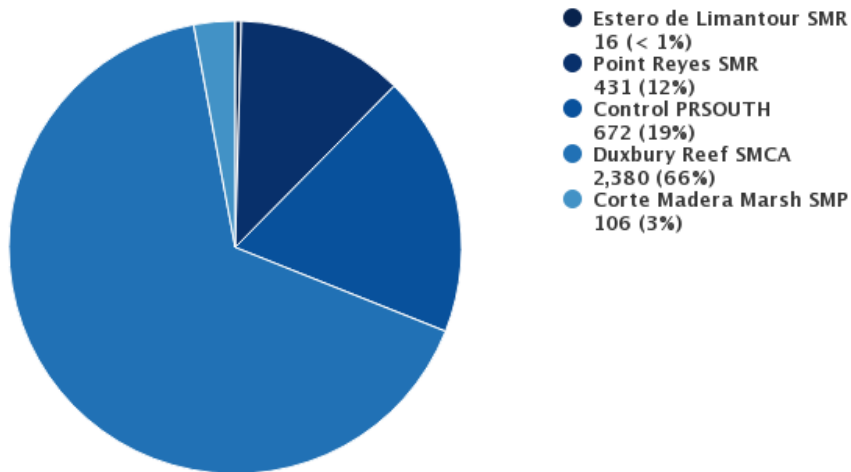
v. **Corte Madera State Marine Park (Corte Madera Marsh SMP):**

This State Marine Park recorded a use rate of 3 activities per miles surveyed. This is a 93% increase compared to the prior year. 100% of the activities were non-consumptive (97% on-shore and 3% offshore).

2. Overview of Human Use of MPAs January 1 – December 31st, 2020³

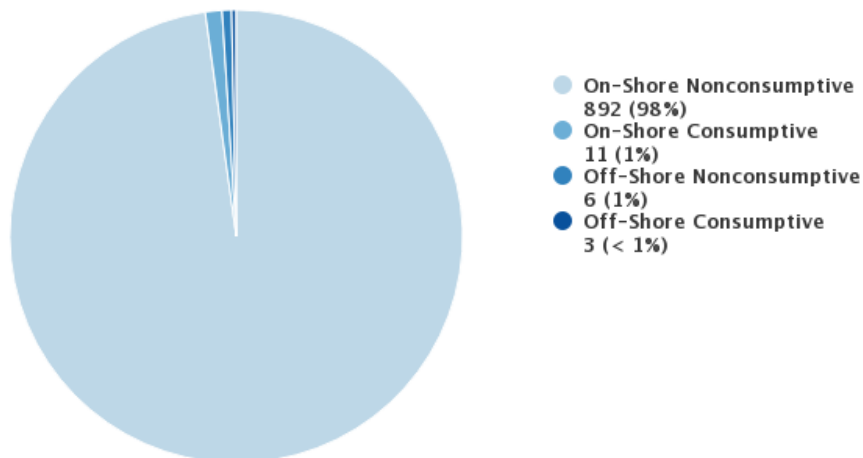
Top 5 MPAs by All Activity

January 1, 2020 – December 31, 2020
3,605 total activity events



All MPAs Combined

January 1, 2020 – June 30, 2020
912 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, S diving, kayaking, boat fishing, etc.

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

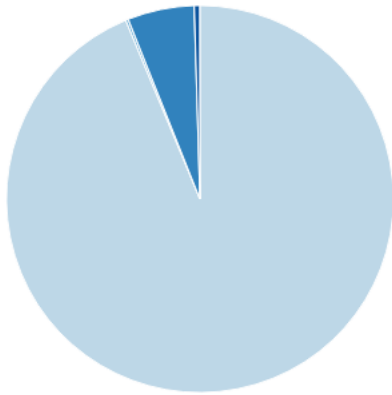
Non-Consumptive - An activity in which a natural resource is not collected.

³ Duxbury Reef SMR has the highest use count per activity mile surveyed (66%) in one of the smallest survey areas. Duxbury Reef is a sensitive intertidal habitat where human impacts (trampling and collecting) may have long-term negative impacts to habitat and species.

3. Activity by MPA⁴

Point Reyes SMR

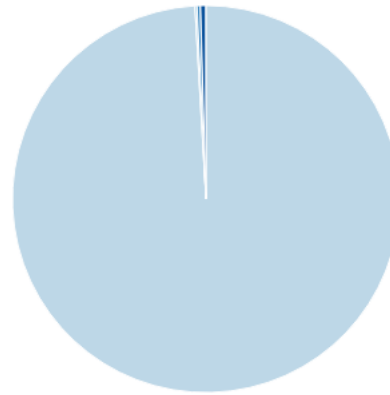
January 1, 2020 - December 31, 2020
431 activity events



- On-Shore Nonconsumptive
404 (94%)
- On-Shore Consumptive
1 (< 1%)
- Off-Shore Nonconsumptive
24 (6%)
- Off-Shore Consumptive
2 (< 1%)

Control PRSOUTH

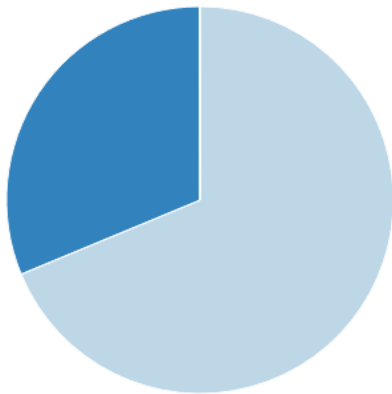
January 1, 2020 - December 31, 2020
672 activity events



- On-Shore Nonconsumptive
666 (99%)
- On-Shore Consumptive
1 (< 1%)
- Off-Shore Nonconsumptive
2 (< 1%)
- Off-Shore Consumptive
3 (< 1%)

Estero de Limantour SMR

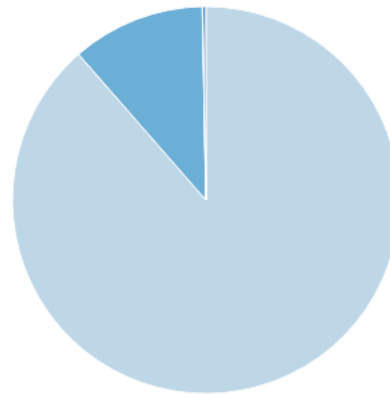
January 1, 2020 - December 31, 2020
16 activity events



- On-Shore Nonconsumptive
11 (69%)
- On-Shore Consumptive
0 (< 1%)
- Off-Shore Nonconsumptive
5 (31%)
- Off-Shore Consumptive
0 (< 1%)

Duxbury Reef SMCA

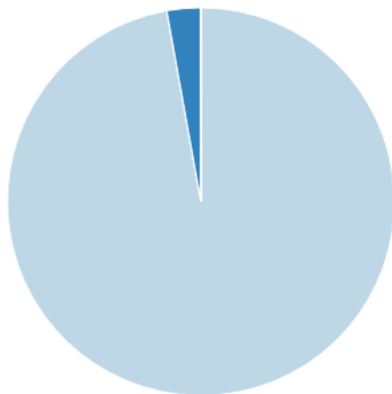
January 1, 2020 - December 31, 2020
2,380 activity events



- On-Shore Nonconsumptive
2,108 (89%)
- On-Shore Consumptive
265 (11%)
- Off-Shore Nonconsumptive
1 (< 1%)
- Off-Shore Consumptive
6 (< 1%)

Corte Madera Marsh SMP

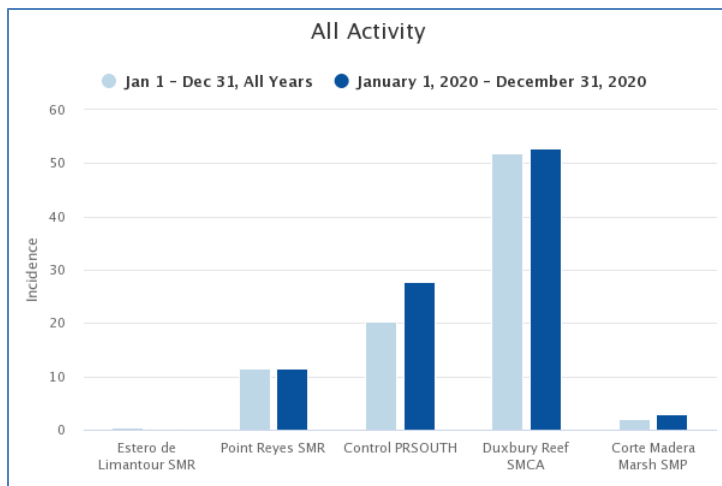
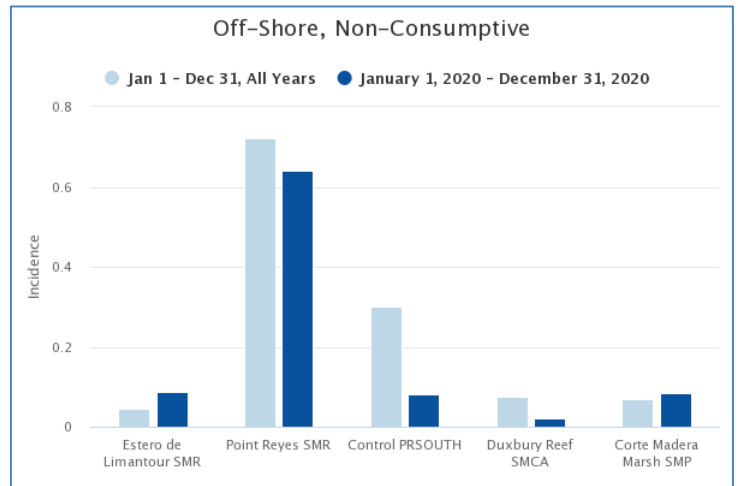
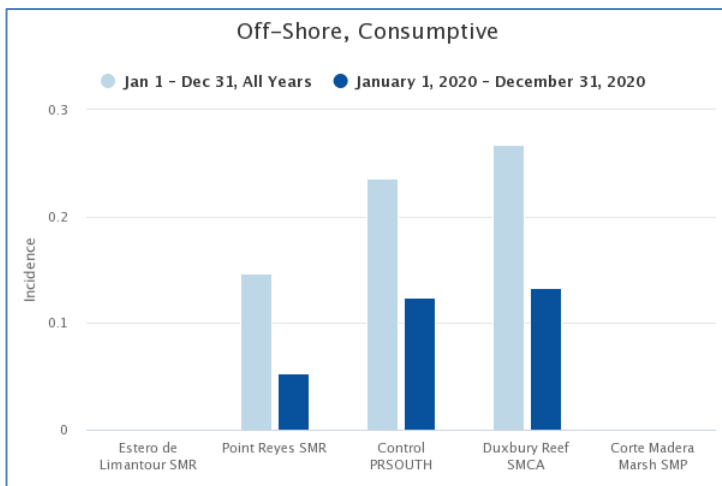
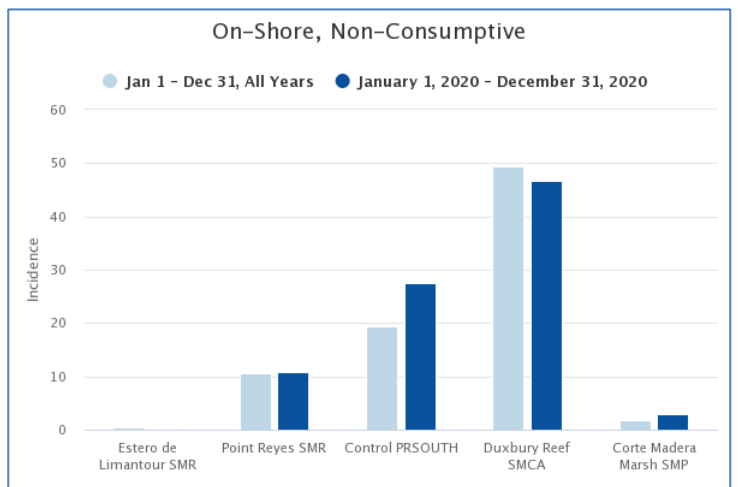
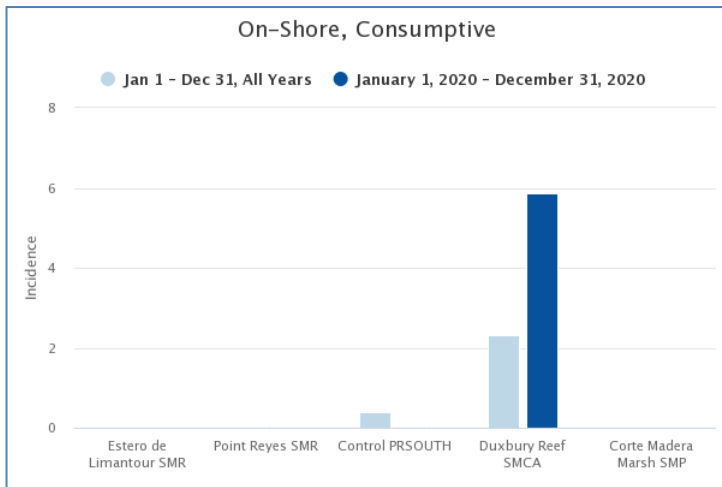
January 1, 2020 - December 31, 2020
106 activity events



- On-Shore Nonconsumptive
103 (97%)
- On-Shore Consumptive
0 (< 1%)
- Off-Shore Nonconsumptive
3 (3%)
- Off-Shore Consumptive
0 (< 1%)

⁴ Observation count of activities (onshore / offshore) and type (consumptive / non-consumptive) in each survey area.

4. Activity Incidence⁵ by MPA: All Years⁶ and Current Year



⁵ The charts display incidence values for each MPA monitored by MPA Watch in Marin County. Incidence is calculated as the number of activities recorded divided by the total survey-miles.

⁶ Activity Incidence “All Years” data includes 2016 through 2020 survey data.

5. Activity Incidence⁷ Tables⁸ by MPA

MPA	On-Shore				
	Non-Consumptive			Consumptive	
	Jan 1 Dec 31 All Years	Jan 1, 2020 through Dec 31, 2020	Jan 1 Dec 31 All Years	Jan 1, 2020 through Dec 31, 2020	
Estero de Limantour SMR		0.4	0.2	0.0	0.0
Point Reyes SMR		10.7	10.8	0.0	0.0
Control PRSOUTH		19.5	27.5	0.4	0.0
Duxbury Reef SMCA		49.3	46.7	2.3	5.9
Corte Madera Marsh SMP		1.8	2.9	0.0	0.0
All MPAs Combined		11.0	16.5	0.3	1.3
MPA	Off-Shore				
	Non-Consumptive			Consumptive	
	Jan 1 Dec 31 All Years	Jan 1, 2020 through Dec 31, 2020	Jan 1 Dec 31 All Years	Jan 1, 2020 through Dec 31, 2020	
Estero de Limantour SMR		0.0	0.1	0.0	0.0
Point Reyes SMR		0.7	0.6	0.1	0.1
Control PRSOUTH		0.3	0.1	0.2	0.1
Duxbury Reef SMCA		0.1	0.0	0.3	0.1
Corte Madera Marsh SMP		0.1	0.1	0.0	0.0
All MPAs Combined		0.2	0.2	0.1	0.1
MPA	Total Combined				
	Jan 1 Dec 31 All Years	Jan 1, 2020 through Dec 31, 2020			
	Jan 1 Dec 31 All Years	Jan 1, 2020 through Dec 31, 2020			
Estero de Limantour SMR		0.4	0.3		
Point Reyes SMR		11.6	11.5		
Control PRSOUTH		20.4	27.8		
Duxbury Reef SMCA		52.0	52.8		
Corte Madera Marsh SMP		1.9	3.0		
All MPAs Combined		11.7	18.1		

⁷ 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 MPA's 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 MPA's 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.

⁸ The tables display incidence values for each MPA monitored by MPA Watch in Marin County. Incidence is calculated as the number of activities recorded divided by the total survey-miles.

6. Breakdown by MPA

This report includes MPA Watch data from January 1 – December 31, 2020. The report comparisons are to January 1 – December 31, 2020. The data is collected by trained on-shore observers and is organized into categories and tables that highlight on-shore and off-shore consumptive and non-consumptive uses at MPAs located in Marin County.

- Point Reyes State Marine Reserve (Point Reyes SMR), Estero de Limantour State Marine Reserve (Estero de Limantour SMR), and Limantour Beach Control (Control PRSouth) are accessed through the Point Reyes National Seashore.
- Duxbury Reef State Marine Conservation Area (Duxbury SMCA) is accessed through Marin County Open Space.
- Corte Madera Marsh State Marine Park (Corte Madera Marsh SMP) is accessed through the city of Corte Madera.

Data collection in 2020 was limited due to COVID-19 access restrictions, inability to train volunteers, restrictions on volunteers to conduct surveys alone or only with individuals from the same household, and the Woodward Wildfire in Point Reyes National Seashore. The below table summarizes the access closures and limitations by MPA and dates of impact.

MPA Name	COVID-19 Disruptions March 22 – June 3, 2020	Woodward Wildfire August 18 – October 9, 2020
Point Reyes SMR	Closed to all public access.	Closed to all public access.
Estero de Limantour SMR	April 29 – June 3: Open to individuals who can walk to the access location (access points not accessible to walk in, no surveys during this time).	
Control PRSouth		
Duxbury Reef SMCA	March 22 – April 28: Closed to all public access.	August 18 – August 31: Closed to all public access due to wildfire evacuation warning.
Corte Madera Marsh SMP	April 29 – June 3: Open to individuals who can walk to the access location. Surveys collected during this time.	September: Open but surveys limited due to heavy smoke from Woodward Fire and all Northern CA fires.
		Open but surveys limited due to heavy smoke from all Northern CA fires.

- a. Estero de Limantour State Marine Reserve (Estero de Limantour SMR):**
This MPA is observed from two survey transects within Point Reyes National Seashore and accessed from either 1) Limantour Beach and walking north west, or 2) Drakes Beach and walking east. This MPA does not allow any on-shore or offshore consumptive uses.

This MPA recorded a use rate of less than 1 activity per miles surveyed (0.3 total use count per mile).

99.9% of the observations in the MPA were on-shore (69%) and offshore (34%) non-consumptive. Non-consumptive observations in this MPA included non-consumptive on-shore beach recreation and kayaking.

Dogs are restricted from this MPA due to the presence of marine mammals and its role as a critical habitat for Western Snowy Plovers. Volunteers conducted 18 surveys and recorded zero (0) dog observations.

b. Point Reyes State Marine Reserve (Point Reyes SMR)

This MPA is observed from two survey transects within the Point Reyes National Seashore and accessed from either 1) Limantour Beach and walking north west, or 2) at Drakes Beach. In addition to access restrictions due to COVID-19 and the Woodward Wildfire, access at Drakes Beach was restricted in January 2020 due to elephant seal presence. This MPA does not allow any on-shore or offshore consumptive uses.

This MPA recorded a use rate of 11.5 activities per miles surveyed. This was a decrease of 11% compared to the prior year rate.

94% of the observations in the MPA were mostly on-shore and offshore non-consumptive. activities including surfing, wildlife viewing, and beach recreation.

Dogs are restricted from MPA beach access at Drakes Beach and at the north-west portion of Limantour Beach due to the presence of marine mammals and critical habitat for the Western Snowy Plover. In 2020, volunteers conducted 31 surveys and recorded zero (0) dog observations in the MPA⁹.

⁹ One volunteer directed beach-goers in the parking lot to other dog friendly beaches before they accessed the MPA. Another volunteer recorded 2 incidents by National Park Service staff directing visitors with dogs to leave the MPA.

Volunteers accessing this MPA from Drakes Beach find large quantities of plastic marine debris that is a mix of small plastic particles, nurdles, fishing gear, single-use foodware and plastic packaging, ropes, tires, shotgun shells, and hazardous medical waste (i.e. needles).

c. Limantour Beach (Control PRSOUTH)

This MPA is observed within the Point Reyes National Seashore and accessed at Limantour Beach. This area borders an MPA, therefore consumptive uses, like fishing from shore or offshore is allowable within the appropriate season and licenses.

This MPA recorded a use rate of 27.8 activities per miles surveyed. This is a 58% increase compared to the prior year rate.

99% of the observations in the MPA were on-shore non-consumptive, such as beach recreation, dogs, horses, and some consumptive offshore boat-activity.

The remaining 1% of activities included onshore and offshore consumptive activities (1 trap fishing, 2 unknown boat fishing, and hook and line fishing from shore).

Leashed dogs are allowed to access the southern portion of Limantour Beach. Dogs are restricted from the north-west portion of the beach due to the presence of marine mammals and critical habitat for the Western Snowy Plover. Volunteers conducted 11 surveys and recorded 26 dog observations (16 or 65% on leash and 9 or 35% off-leash) in the MPA. This is a decrease from 2019 that recorded 12 dog observations (7 or 58% on leash and 5 or 42% off leash).

d. Duxbury Reef State Marine Conservation Area (Duxbury SMCA)

This MPA is observed from within Marin County Open Space and Point Reyes National Seashore and accessed at Agate Beach. This MPA allows hook and line fishing from shore.

This MPA recorded a use rate of 29.4 activities per miles surveyed. This is an increase of 79% compared to the prior year.

11% of the observations in the MPA were on-shore consumptive. 305 incidents of hand collection of biota in the intertidal were observed in the months of June, July, and August 2020.

89% of the observations in the MPA include on-shore non-consumptive activities including beach recreation and tidepooling.

Volunteers noted that they interacted with individuals who were collecting and observed that most collecting was not for consumption and most replaced species after removing. Offshore consumptive activities were observed (6 observations) within the MPA and reported to California Fish and Wildlife as potential violations.

The remaining less than 1% of activities included permitted observations of hook and line fishing (permitted uses).

Leashed dogs are allowed on Agate Beach and Duxbury Reef. Volunteers conducted 98 surveys and recorded 109 dog observations (33 or 30% on leash and 76 or 70% off-leash. This is an increase from 2019 when 63 surveys were conducted and recorded 23 dog observations (10 or 43% on leash and 13 or 57% off leash¹⁰).

Duxbury Reef SMR has the highest use count of all MPAs surveyed by Marin MPA Watch of 66% in one of the smallest survey areas. Duxbury Reef is a sensitive intertidal habitat where human impacts (trampling and collecting) may have long-term negative impacts to habitat and species.

e. Corte Madera Marsh State Marine Park (Corte Madera Marsh SMP)

This MPA is observed within the city limits of Corte Madera and access by the network of public trails. This area is a State Marine Park and consumptive uses, like hook and line fishing is allowable within the appropriate season and licenses.

This MPA recorded a use rate of 3 activities per miles surveyed. This is an increase of 93% compared to the prior year.

100% of the activities were non-consumptive. 97% on-shore activities included recreation and wildlife watching. 3% of offshore activities included windsurfing.

Leashed dogs are allowed on the walking paths, but not in the wetland or marsh. Volunteers conducted 16 surveys and recorded 29 dog observations (18 or 62% on leash and 11 or 38% off-leash. This is an increase from 2019

¹⁰ The high number of animals off leash continues to be a problem and is trending in the wrong direction.

when 63 surveys were conducted and recorded 12 dog observations (7 or 58% on leash and 5 or 42% off leash.

7. Potential Violations

The rate of consumptive activities observed in all MPAs (except Duxbury Reef SMCA) remains relatively low, accounting for less than 1% of all observations recorded. Anecdotal evidence suggests rates may be higher than reflected in the data, but this was not observed during the surveys.

Recurring issues with the illegal take and disturbance of tidepool organisms in Duxbury Reef SMCA is an ongoing problem during low tides and was exacerbated in the summer months due to outdoor recreational increases as a consequence of stay-at-home orders due to the pandemic. Marin MPA Watch worked in the summer months to alert Marin County Parks, Point Reyes National Seashore, California Department of Fish and Wildlife, and the California Fish and Game Commission about poaching activities and for patrol increases.

8. Next Steps

Marin MPA Watch continues to collect data in MPAs that are accessed from Marin County with a goal of two surveys per month, per MPA. Our surveys have been limited in 2020 due to the pandemic and the Woodward Wildfire.

Marin MPA Watch is working with California Academy of Science Rocky Shore Naturalists, community members in the village of Bolinas, and Marin County Parks and Open Space to implement a community docent program to address the high rate of usage at Duxbury Reef and the lack of resources to provide visitor education. A report of the Marin MPA Watch findings was drafted in the summer of 2019 and presented to Marin County Parks in January 2020. A formal partnership is in the process of being created to implement the docent program with training in the spring of 2021 and implementation of the program in summer 2021. This program will improve community partnerships and ensure compliance with MPA regulations.

MPA Watch intends to collaborate with the California Department of Fish and Wildlife to distribute MPA Watch reports to regional managers in order to improve the management and enforcement of MPAs. MPA Watch is also looking to expand its network of partner organizations to enhance the scale and scope of MPA monitoring across California.

MPA Watch will be making our human use data available on our website to make it accessible to partners, resource agencies, municipalities, and other interested parties. One of the hopes of MPA Watch is that volunteers and community members help spread knowledge and awareness of MPAs to the communities that surround them, inspiring marine stewardship in our populations.

9. Additional Information

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.

For additional information regarding MPAs and regulations specific to the various classifications of MPAs please visit wildlife.ca.gov/MPAs. If you see an activity that violates MPA regulations, please call CalTip to report the violation at (888)-334-2258.

The Marin MPA Watch program is a partnership of the Environmental Action Committee of West Marin (EAC), California Academy of Science and Point Reyes National Seashore. The program is managed by EAC. For more information to become involved with the program, please visit eacmarin.org/mpa-watch.