



**Marine Protected Area (MPA) Watch**  
**Regional Report**  
Marin County  
January 1, 2019 - December 31, 2019



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 is a collaboration between the Environmental Action Committee of West Marin, Point Reyes National Seashore, and the California Academy of Science established in 2013. The Marin MPA Watch program monitors human activities near 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 (Duxbury MPA), and the Corte Madera Marsh.



## Executive Summary

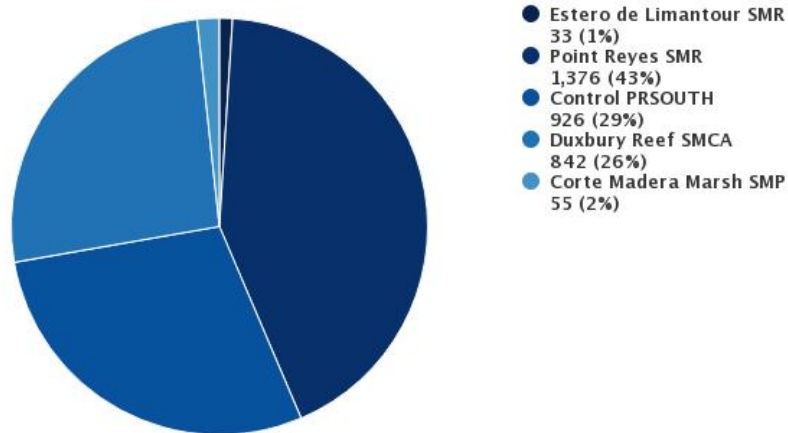
- **Estero de Limantour State Marine Reserve** continues to have a low rate of total less than 1 use count per miles surveyed. However, with that low rate in 2019, volunteers observed dogs on the restricted area of the beach and hand collection of biota.
- **Point Reyes State Marine Reserve** data recorded an increase in human activity with a 13.0 total use count per miles surveyed. This is an increase of 51% compared to the prior year rate and an increase of 12% for all survey years from 2014-2018. Volunteers continue to report concerns of interactions with elephant seals along this beach with visitors. In addition, this MPA records more boat and traffic (anchoring and observations of potential fishing) than the PR Control south of the MPA. Potential fishing in the MPA continues to be a problem during early morning hours and when there is heavy fog that reduces visibility from shore.
- **Limantour Beach (PR Control)** data recorded a rate of 17.5 total use count per miles surveyed. This is a decrease of 10% compared to the prior year rate and a decrease of 11% for all survey years from 2014-2018. Dogs off leash and in restricted areas of the beach continue to be an issue on this beach where Western Snowy Plovers overwinter and nest.
- **Duxbury Reef State Marine Conservation Area** data recorded a rate of 29.4 total use count per miles surveyed that is an increase of 90% compared to the prior year rate. Continuing issues at this MPA include high visitation in the tidepools, hand collection of biota, and 62% of observed dogs were off leash. Duxbury continues to have very high visitation in the spring at low tides by school groups that contribute to trampling in the intertidal areas.
- **Corte Madera State Marine Park** data recorded a rate of 1.6 total use count per miles surveyed. This is a decrease of 6% compared to the prior year rate. The rate of dogs off leash and in the marsh decreased compared to prior years.

## Human Use of MPAs January 1, 2019 – December 31, 2019

### Overview

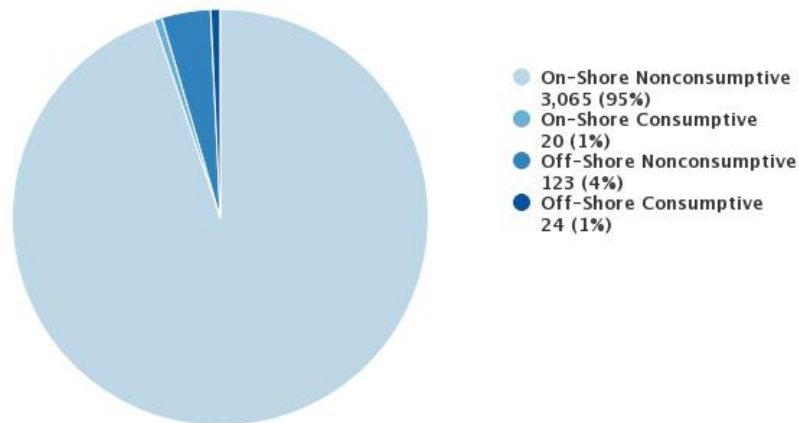
#### Top 5 MPAs by All Activity

January 1, 2019 – December 31, 2019  
3,232 total activity events



#### All MPAs Combined

January 1, 2019 – December 31, 2019  
3,232 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.

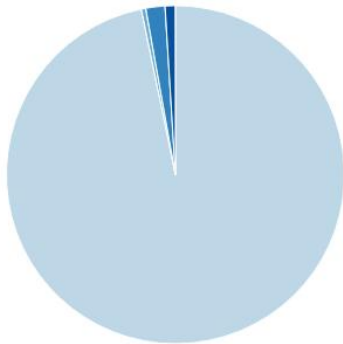
**Consumptive** - An activity in which a natural resource (i.e. fish, kelp, shells) is being collected.

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

## Activity by MPA

### Control PRSOUTH

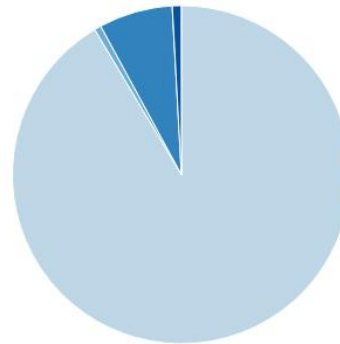
January 1, 2019 – December 31, 2019  
926 activity events



- On-Shore Nonconsumptive  
896 (97%)
- On-Shore Consumptive  
4 (< 1%)
- Off-Shore Nonconsumptive  
17 (2%)
- Off-Shore Consumptive  
9 (1%)

### Point Reyes SMR

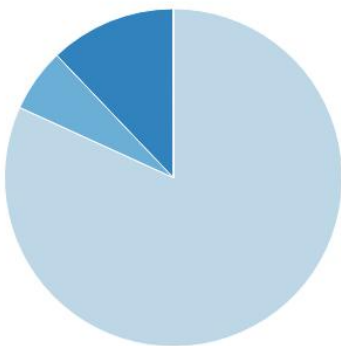
January 1, 2019 – December 31, 2019  
1,376 activity events



- On-Shore Nonconsumptive  
1,258 (91%)
- On-Shore Consumptive  
9 (1%)
- Off-Shore Nonconsumptive  
97 (7%)
- Off-Shore Consumptive  
12 (1%)

### Estero de Limantour SMR

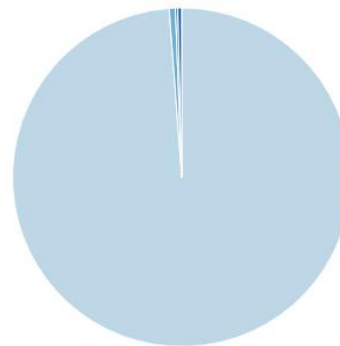
January 1, 2019 – December 31, 2019  
33 activity events



- On-Shore Nonconsumptive  
27 (82%)
- On-Shore Consumptive  
2 (6%)
- Off-Shore Nonconsumptive  
4 (12%)
- Off-Shore Consumptive  
0 (< 1%)

### Duxbury Reef SMCA

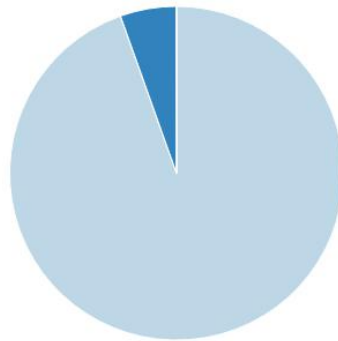
January 1, 2019 – December 31, 2019  
842 activity events



- On-Shore Nonconsumptive  
832 (99%)
- On-Shore Consumptive  
5 (1%)
- Off-Shore Nonconsumptive  
2 (< 1%)
- Off-Shore Consumptive  
3 (< 1%)

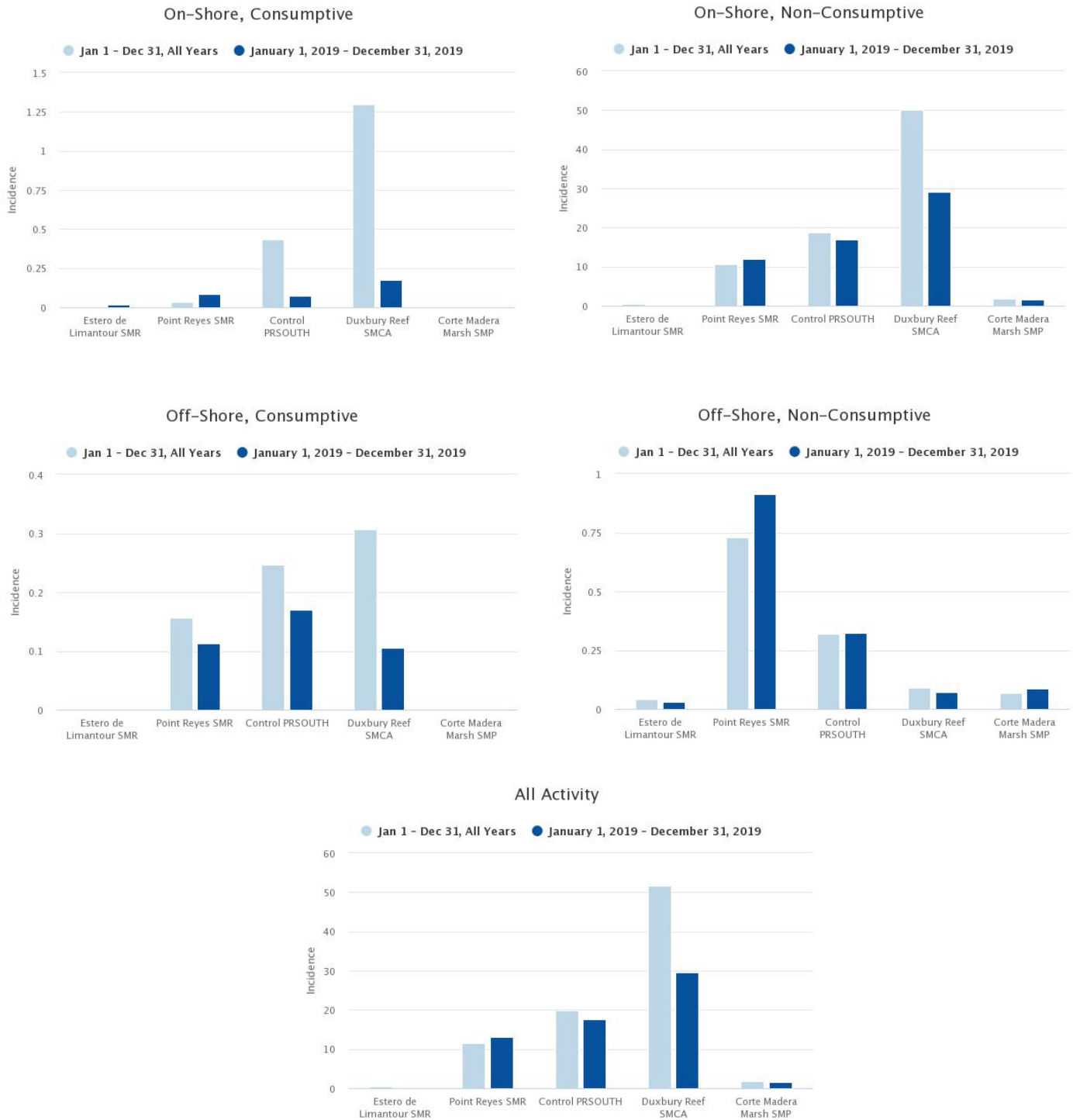
### Corte Madera Marsh SMP

January 1, 2019 – December 31, 2019  
55 activity events



- On-Shore Nonconsumptive  
52 (95%)
- On-Shore Consumptive  
0 (< 1%)
- Off-Shore Nonconsumptive  
3 (5%)
- Off-Shore Consumptive  
0 (< 1%)

## Activity Incidence by MPA



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

## Activity Incidence by MPA

MPA	On-Shore				
	Non-Consumptive			Consumptive	
	Jan 1 Dec 31	Jan 1, 2019 through Dec 31, 2019		Jan 1 Dec 31	Jan 1, 2019 through Dec 31, 2019
	^	↕	↕	^	↕
	All Years			All Years	
Estero de Limantour SMR		0.4	0.2		0.0
Point Reyes SMR		10.6	11.9		0.0
Control PRSOUTH		18.7	17.0		0.4
Duxbury Reef SMCA		50.0	29.1		1.3
Corte Madera Marsh SMP		1.7	1.5		0.0
All MPAs Combined		10.3	8.5		0.2

MPA	Off-Shore				
	Non-Consumptive			Consumptive	
	Jan 1 Dec 31	Jan 1, 2019 through Dec 31, 2019		Jan 1 Dec 31	Jan 1, 2019 through Dec 31, 2019
	^	↕	↕	^	↕
	All Years			All Years	
Estero de Limantour SMR		0.0	0.0		0.0
Point Reyes SMR		0.7	0.9		0.2
Control PRSOUTH		0.3	0.3		0.2
Duxbury Reef SMCA		0.1	0.1		0.3
Corte Madera Marsh SMP		0.1	0.1		0.0
All MPAs Combined		0.2	0.3		0.1

MPA	Total		
	Combined		
	Jan 1 Dec 31	Jan 1, 2019 through Dec 31, 2019	
	^	↕	↕
	All Years		
Estero de Limantour SMR		0.4	0.2
Point Reyes SMR		11.6	13.0
Control PRSOUTH		19.7	17.5
Duxbury Reef SMCA		51.7	29.4
Corte Madera Marsh SMP		1.8	1.6
All MPAs Combined		10.9	8.9

The above table shows incidence values for each MPA monitored by MPA Watch in Marin 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 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.

## **Breakdown by MPA**

### **Estero de Limantour State Marine Reserve**

This transect is located along Limantour Beach and Drakes Beach within Point Reyes National Seashore. Between the months of January through December 2019, Marin MPA Watch data recorded a rate of 0.2 total use count per miles surveyed. This is the same as the prior year rate and a decrease of 50% for all survey years from 2014-2017.

Observations in the control include a blend of onshore and offshore non-consumptive activities that includes activities like kayaking, paddle boarding, beach recreation. This accounted for 94% of the observed activities. The remaining 6% of activities included onshore (2 observations of hand-collection of biota) consumptive activities.

Dogs are restricted from the MPA due to the presence of marine mammals and critical habitat for Western Snowy Plovers. In 2019, volunteers conducted 48 surveys and recorded 2 dog observations (2 on leash and 0 off leash). This is an increase from 2018 surveys where 1 dog observations (0 on leash and 1 off leash) were recorded. Data collected from 2014-2019 recorded 4 dogs (2 on leash and 2 off leash) with 2019 being the highest year of recorded dog observations.

### **Point Reyes State Marine Reserve**

This transect is located along Drakes Beach and the western end of Limantour Beach within Point Reyes National Seashore. Between the months of January through December 2019, Marin MPA Watch data recorded a rate of 13.0 total use count per miles surveyed. This is an increase of 51% compared to the prior year rate and an increase of 12% for all survey years from 2014-2018.

Observations in the MPA include a blend of onshore and offshore non-consumptive activities that includes activities like surfing, boating, kayaking, paddle boarding, and beach recreation. This accounted for 98% of the observed activities. The remaining 2% of activities included both onshore (9 fishing or collecting observations) and offshore (12 fishing boat observations) consumptive activities. The instances of offshore boating activity (consumptive and non-consumptive) observed in the MPA is higher than the survey area outside of the MPA.

The increased rate of incidence is interesting since the access point at Drakes Beach Point Reyes National Seashore, was closed to the public during the months of January through March 2019 due the federal government shutdown. Due to this public beach closure, the visiting elephant seals found the beach and occupied it in high numbers through March 2019.



Volunteers for this transect report finding large amounts of plastic marine debris that is a mix of small plastics, fishing gear, ropes, tires, and shotgun shells. During the winter months when the elephant seals arrive, there are concerns that beach visitors create disturbance issues and create public safety concerns as they venture too close the large animals. In the winter of 2019, the Point Reyes National Seashore placed concrete barriers to block the elephant seals from occupying the parking lot, but did not close the beach to visitors.

Dogs are restricted from access on Drakes Beach and the north-west portion of Limantour Beach due to the presence of marine mammals and critical habitat for Western Snowy Plovers. In 2019, volunteers conducted 83 surveys and recorded 2 dog observations (1 on leash and 1 off leash). This is a decrease from 2018 surveys where 6 dog observations (5 on leash and 1 off leash) were recorded. Data collected from 2014-2019 recorded 15 dogs with 2018 being the highest year of recorded dog observations.

### **South of Point Reyes State Marine Reserve (CONTROL)**

This transect is located along Limantour Beach within Point Reyes National Seashore is south and borders the Point Reyes State Marine Reserve. Between the months of January through December 2019, Marin MPA Watch data recorded a rate of 17.5 total use count per miles surveyed. This is a decrease of 10% compared to the prior year rate and a decrease of 11% for all survey years from 2014-2018.

Observations in the control include a blend of onshore and offshore non-consumptive activities that includes activities like surfing, boating, and beach recreation. This accounted for 99% of the observed activities. The remaining 1% of activities included both onshore (4 fishing or hand-collection of biota) and offshore (9 fishing boat observations) consumptive activities. This area borders an MPA, therefore consumptive uses, like fishing from shore or offshore is allowable within the appropriate season and licenses.

Leashed dogs are allowed access to the southern portion of Limantour Beach and restricted from the northern portion of Limantour Beach due to the presence of marine mammals and critical habitat for Western Snowy Plovers. In 2019, volunteers conducted 24 surveys and recorded 46 dog observations (33 on leash and 13 off leash). The locations of the dogs (restricted or allowed area may not be determined from historical data). This is a decrease from 2018 surveys where 75 dog observations (43 on leash and 32 off leash) were recorded. Data collected from 2014-2019 recorded 208 dogs (130 on leash and 78 off leash) with 2018 being the highest year of recorded dog observations.



### **Duxbury Reef State Marine Conservation Area**

This transect is located along Agate Beach and Duxbury Reef located within Marin County Parks and Open Space and Point Reyes National Seashore. Between the months of January through December 2019, Marin MPA Watch data recorded a rate of 29.4 total use count per miles surveyed. This is an increase of 90% compared to the prior year rate.

MPA Watch data has a high outlier count in the year of 2017 due to a washed-up Blue Whale that brought thousands of visitors the Agate Beach to view the animal. On average, the total use count per mile surveyed for the years 2014, 2015, 2016, 2018 and 2019 is 31.65. Duxbury State Marine Conservation Area has the highest rate of use and arguably the most sensitive habitat in the tidepools than the other MPAs observed by Marin MPA Watch.

Observations in the control include a blend of onshore consumptive and non-consumptive activities including activities like recreation, tidepooling, wildlife watching, hook and line fishing and minimal offshore recreation like kayaking. On-shore non-consumptive activities account for 99% of the observations. The remaining 1% of activities included both onshore (5 hook and line fishing or hand-collection of biota) and offshore (3 fishing boats) consumptive activities. This area is a State Marine Conservation Area and consumptive uses, like hook and line fishing for finfish is allowable within the appropriate season and licenses.

Leashed dogs are allowed access Agate Beach and Duxbury Reef. In 2019, volunteers conducted 63 surveys and recorded 56 dog observations (21 on leash and 35 off leash). This is an increase from 2018 surveys where 31 dog observations (8 on leash and 23 off leash) were recorded. Data collected from 2014-2019 recorded 429 dogs (146 on leash and 283 off leash) with 2017 being the highest year of recorded dog observations (162 dogs).

### **Corte Madera Marsh State Marine Park**

This transect is located at Corte Madera Marsh. Between the months of January through December 2019, Marin MPA Watch data recorded a rate of 1.6 total use count per miles surveyed. This is a decrease of 6% compared to the prior year rate and a decrease of 11% for all survey years from 2015-2018.

Observations of this location include a blend of onshore consumptive and non-consumptive activities including activities like recreation, wildlife watching, hook and line fishing and offshore activities including kayaking and a commuter ferry boat. On-shore non-consumptive activities account for 95% of the observations. The remaining 5% of

activities included offshore non-consumptive activities. This area is a State Marine Park and consumptive uses, like hook and line fishing is allowable within the appropriate season and licenses.

Leashed dogs are allowed access on the walking paths within the Corte Madera Marsh to protect endangered and threatened species of birds. In 2019, volunteers conducted 17 surveys and recorded 11 dog observations (5 on leash and 6 off leash). This is a decrease from 2018 surveys where 13 dog observations (12 on leash and 1 off leash) were recorded. Data collected from 2014-2019 recorded 137 dogs (68 on leash and 69 off leash) with 2016 being the highest year of recorded dog observations (52 dogs).

### **Potential Violations**

Rate of consumptive activities observed remains relatively low in all MPAs surveyed, accounting for less than 1% of all observations recorded. Anecdotal evidence suggests rates may be higher than reflected in the data. According to volunteers, recurring issues with the illegal take and disturbance of tide pool organisms in Duxbury Reef State Marine Conservation Area is an ongoing problem during low tides. Even if the noncompliance rate is low, it is important to note that any illegal take from MPAs jeopardizes the success of the MPA and health of the ecosystems which they protect.

### **Next Steps**

Marin MPA Watch is working to implement a pilot program for boat based MPA Watch surveys into our data reporting to monitor human use within our MPAs. In addition, the program has installed cameras that overlook Point Reyes State Marine Reserve and Special Closure at Point Resistance. The data from these cameras continues to be analyzed and will be integrated into a future report.

Marin MPA Watch is working with California Academy of Science Rocky Shore Naturalists, community members, and Marin County Parks 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 and enforcement. 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 fall of 2020 and implementation of the program in the spring of 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 (CDFW) 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.

### **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](http://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](http://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. EAC administers and manages the program. For more information to become involved with the program, please visit [eacmarin.org/mpa-watch](http://eacmarin.org/mpa-watch).