

SEABIRD AND MARINE MAMMAL EVALUATIONS FOR THE MLPA NORTH CENTRAL COAST STUDY REGION

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BREEDING COLONIES

- Species most likely to benefit
 - Brandt's Cormorant
 - Pelagic Cormorant
 - Double-crested Cormorant
 - Pigeon Guillemot
 - Common Murre
 - Harbor seal
 - Steller sea lion
 - Northern fur seal
- Main benefits: reductions in disturbance; increased forage for some species(analyzed separately)
- Special Closures would provide maximum benefit from disturbance
- MPAs likely would provide benefit by reducing vessel activity
- Reduced bycatch for some species (current and future)

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Numbers and Percentages of Breeding Marine Birds at Colonies, Point Reyes to Pigeon Point subregion.

Colony Name	Brandt's Cormorant	Brandt's Cormorant%	Double-crested Cormorant	Double-crested Cormorant%	Pelagic Cormorant	Pelagic Cormorant%	Common Murre	Common Murre%	Pigeon Guillemot	Pigeon Guillemot%
Point Reyes	1,160	39.1		0.0	266	30.0	40,810	62.2	616	46.8
Coast Campground South		0.0		0.0		0.0		0.0	63	4.8
Point Resistance	28	0.9	0	0.0	0	0.0	7,091	10.8	50	3.8
Millers Point Rocks	296	10.0		0.0	59	6.7	1,510	2.3	55	4.2
Double Point Rocks	328	11.1		0.0	9	1.0	15,818	24.1	22	1.7
Stinson Beach to Rocky Point		0.0		0.0		0.0		0.0		0.0
Gull Rock Area		0.0		0.0	9	1.0		0.0	7	0.5
Muir Beach Headlands to Tennessee Cove		0.0		0.0	42	4.7		0.0	34	2.6
Bird Island (Marin Co.)	0	0.0		0.0		0.0		0.0	5	0.4
Point Bonita		0.0		0.0	95	10.7		0.0	66	5.0
Bonita Cove		0.0		0.0	2	0.2		0.0	2	0.2
Point Diablo Bluffs and Needles		0.0		0.0	15	1.7		0.0	0	0.0
Fort Point Rock to Helmut Rock		0.0		0.0		0.0		0.0		0.0
Lobos Rock and Land's End	238	8.0		0.0		0.0		0.0	18	1.4
Seal Rocks	184	6.2	0	0.0		0.0		0.0	0	0.0
Eel Rock Cliffs		0.0		0.0	9	1.0		0.0	0	0.0
Mussel Rock Area		0.0		0.0		0.0		0.0	10	0.8
Mori Point		0.0		0.0	31	3.5		0.0	18	1.4
San Pedro Rock	0	0.0		0.0	0	0.0	0	0.0	128	9.7
Devil's Slide Rock and Mainland	692	23.4		0.0	114	12.9	380	0.6	160	12.2
Pillar Point		0.0	0	0.0	5	0.6		0.0	2	0.2
Seal Rock Cliffs	37	1.2		0.0	123	13.9		0.0	12	0.9
Martin's Beach	0	0.0		0.0	108	12.2		0.0	20	1.5
Pomponio Beach to Pescadero Beach		0.0		0.0		0.0		0.0	20	1.5
Pigeon Point		0.0		0.0		0.0		0.0	8	0.6
TOTALS	2,963	100.0	0	0.0	887	100.0	65,609	100.0	1,316	100.0

BENEFITS TO COLONIES EVALUATIONS

- Based on percent of subregional population captured in proposed MPA.
- Preliminary benefit categories (conducted separately for seabirds and marine mammals):
 - High - Captures \geq 10% of population of any species.
 - Medium - Captures \geq 1% of population of any species.
 - Low - \geq 0.1% of population of any species.
 - None - $<$ 0.1% of population of any species.

BENEFITS TO ROOSTS / HAUL-OUTS

- For pinnipeds, same as for colonies.
- For seabirds, use data on major Brown Pelican roosts (endangered species):
 - High - Captures any roost of ≥ 500 birds.
 - Medium - Captures any roost ≥ 100 birds.
 - Low – Captures no major roosts (i.e., < 100 birds).

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BENEFITS TO FORAGING AREAS

- Species most likely to benefit:
 - Brandt's Cormorant
 - Pelagic Cormorant
 - Pigeon Guillemot
 - Harbor seal
- Buffer colonies 3 miles alongshore and 1 mile offshore.
- Overlay colony foraging ranges and proposed MPAs.
- Compute percentage of foraging range captured.

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WATERFOWL WINTERING IN COASTAL ESTUARIES

•Main potential benefit: Reduced disturbance

•Evaluations based on % of estuary populations captured in proposed MPAs.

Species	Bodega Bay	Tomales Bay	Abbott's Lagoon	Drakes/ Esteros	Bolinas Lagoon	Rodeo Lagoon	Total
Brant	313	904	2	245	40	0	1437
	21.8%	62.9%	0.1%	17.1%	2.8%	0.0%	100.0%
Scaup sp.	794	7325	55	1321	338	15	9804
	8.1%	74.7%	0.6%	13.5%	3.4%	0.1%	100.0%
Surf Scoter	325	1669	8	351	59	0	2397
	13.6%	69.6%	0.3%	14.6%	2.4%	0.0%	100.0%
Bufflehead	511	2386	42	1945	173	10	5057
	10.1%	47.2%	0.8%	38.5%	3.4%	0.2%	100.0%
All species	2281	13793	283	6483	3042	132	25981
	8.8%	53.1%	1.1%	25.0%	11.7%	0.5%	100.0%