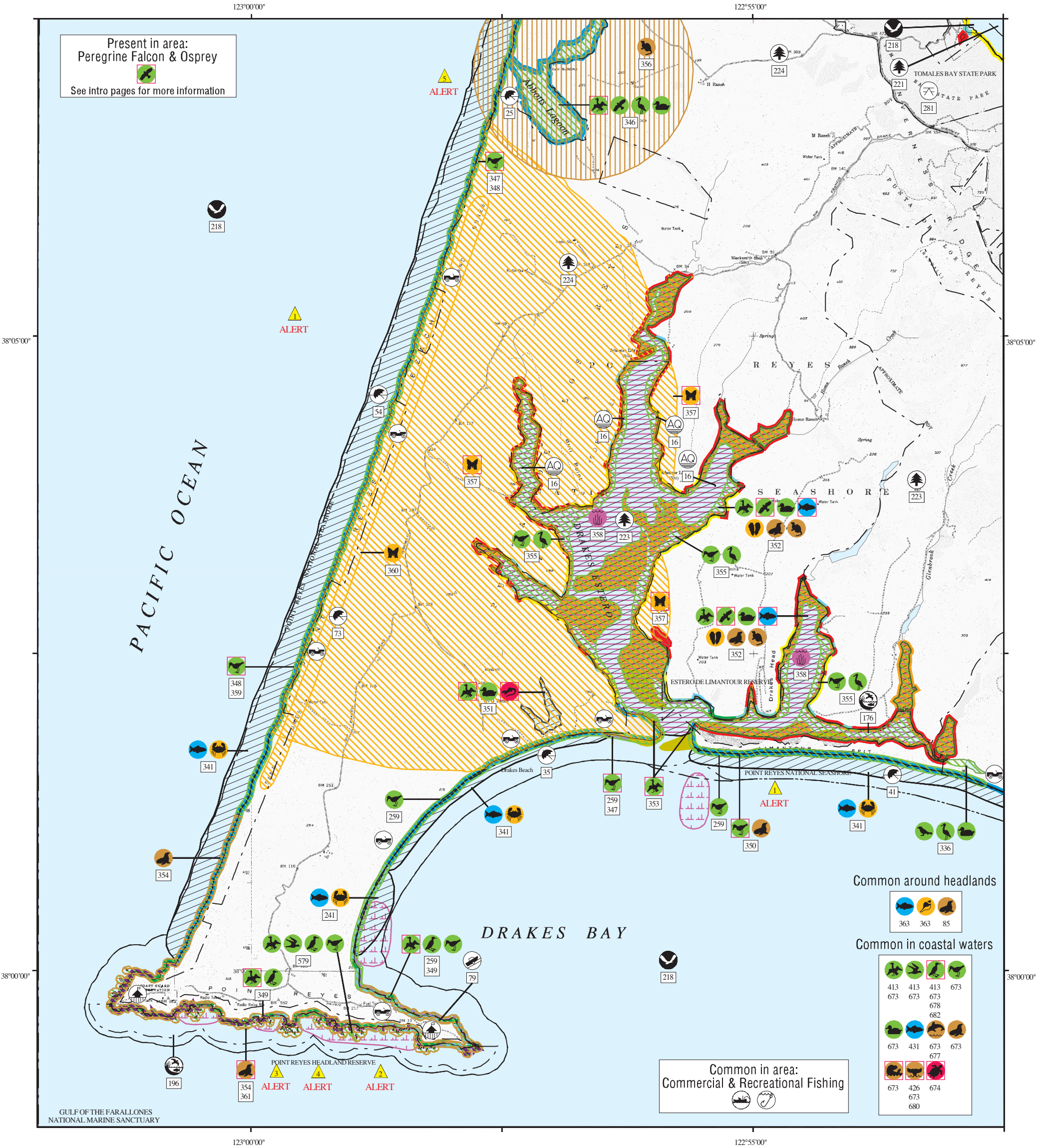


ENVIRONMENTAL SENSITIVITY INDEX MAP



SHORELINE HABITATS (ESI)

- 1A EXPOSED ROCKY SHORES
- 1B EXPOSED, SOLID, MAN-MADE STRUCTURES
- 2A EXPOSED WAVE-CUT PLATFORMS IN BEDROCK
- 3A FINE- TO MEDIUM-GRAINED SAND BEACHES
- 4 COARSE-GRAINED SAND BEACHES
- 5 MIXED SAND AND GRAVEL BEACHES
- 6A GRAVEL BEACHES
- 6D BOULDER RUBBLE
- 6B RIPRAP
- 7 EXPOSED TIDAL FLATS
- 8A SHELTERED ROCKY SHORES
- 8B SHELTERED, SOLID, MAN-MADE STRUCTURES
- 8C SHELTERED RIPRAP
- 9A SHELTERED TIDAL FLATS
- 10A SALT- AND BRACKISH-WATER MARSHES
- 10B FRESHWATER MARSHES
- 10C SWAMPS
- 10D SCRUB-SHRUB WETLANDS

SCALE 1:55000

Not For Navigation

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Monterey Bay National Marine Sanctuary
and
Office of Spill Prevention and Response
California Department of Fish and Game

CALIFORNIA

PACIFIC OCEAN

Central California

ESI-40

Prepared by: Research Planning, Inc.
Columbia, South Carolina

Central California: ESIMAP 40

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
259	Shorebirds		X	X	X	X		X	X	X	X	X	X		-	-	-
336	American bittern		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	Common yellowthroat		X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	APR-MAY SEP-OCT	-
	Dabbling ducks		X	X	X	X				X	X	X	X		-	SEP-MAR	-
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
346	American bittern		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	American white pelican		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Brown pelican	E E	X	X	X	X	X	X	X	X	X	X	X	X	-	JUL-NOV	-
	Dabbling ducks		X	X	X	X				X	X	X	X		-	SEP-MAR	-
	Diving ducks		X	X	X	X				X	X	X	X		-	SEP-MAY	-
	Geese		X	X	X	X	X	X	X	X	X	X	X	X	-	OCT-MAR	-
	Raptors		X	X	X	X	X	X	X	X	X	X	X	X	-	AUG-NOV	-
347	Western snowy plover	T	X	X	X	X	X	X	X	X	X	X	X	X	MAR-SEP	-	-
348	Shorebirds		X	X	X	X				X	X	X	X	X	-	-	-
349	Brown pelican	E E 108-288 INDIV.	X	X	X	X	X	X	X	X	X	X	X	X	-	JUL-NOV	-
	Seabirds	HIGH	X	X	X	X	X	X							FEB-AUG	-	-
350	Western snowy plover	T	X	X	X	X	X	X	X	X	X	X	X	X	MAR-SEP	-	-
351	American white pelican		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Brown pelican	E E	X	X	X	X	X	X	X	X	X	X	X	X	-	JUL-NOV	-
	Ducks	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	SEP-MAR	-
352	American peregrine falcon	E	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUL	-	-
	American white pelican		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Brant	HIGH	X	X	X	X	X				X	X	X		-	FEB-JUN OCT-DEC	-
	Diving birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Osprey		X	X	X	X	X	X	X	X	X	X	X	X	-	FEB-JUL	-
	Waterfowl		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
353	Brown pelican	E E 0-1000 INDIV.	X	X	X	X	X	X	X	X	X	X	X	X	-	JUL-NOV	-
355	Shorebirds		X	X	X	X				X	X	X	X	X	-	-	-
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
359	Western snowy plover	T	X	X	X	X				X	X	X	X	X	-	-	-
413	Diving birds	15000 INDIV.	X	X	X	X	X	X	X						FEB-AUG	-	-
	Gulls	20000 INDIV.	X	X	X	X	X	X							FEB-AUG	-	-
	Seabirds	300000 INDIV.	X	X	X	X	X	X							FEB-AUG	-	-
579	Ashy storm-petrel	15 INDIV.	X	X	X	X	X	X	X	X	X	X	X	X	FEB-NOV	-	-
	Black oystercatcher	6 INDIV.	X	X	X	X	X	X	X	X	X	X	X	X	MAR-SEP	-	-
	Brandt's cormorant	1522 INDIV.	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
	Common murre	15155 INDIV.	X	X	X	X	X	X	X	X	X	X	X	X	DEC-JUL	-	-
	Pelagic cormorant	266 INDIV.	X	X	X	X	X	X	X	X	X	X	X	X	MAR-SEP	-	-
	Pigeon guillemot	616 INDIV.	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
	Rhinoceros auklet		X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-
	Tufted puffin	4 INDIV.	X	X	X	X	X	X	X	X	X	X	X	X	APR-NOV	-	-
	Western gull	178 INDIV.	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	-	-
673	Cassin's auklet	LOW	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Clark's grebe	MODERATE	X	X	X	X					X	X	X	X	-	MAR-APR SEP-NOV	-
	Common murre	MODERATE	X	X	X	X	X	X	X	X	X	X	X	X	-	-	JUL-SEP
	Cormorants	MODERATE	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Eared grebe	LOW	X	X	X	X					X	X	X	X	-	MAR-APR SEP-OCT	-
	Gulls	MODERATE	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Horned grebe	LOW	X	X	X	X					X	X	X	X	-	OCT-APR	-
	Pacific loon	MODERATE	X	X	X	X					X	X	X		-	OCT-MAY	-
	Pelicans	MODERATE		X	X	X	X	X	X	X	X	X	X	X	-	JUL-NOV	-
	Phalaropes	LOW	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Pigeon guillemot	LOW	X	X	X	X	X	X	X						-	-	-
	Rhinoceros auklet	MODERATE	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Shearwaters	LOW-HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Surf scoter	MODERATE	X	X	X	X					X	X	X	X	-	MAR-APR SEP-DEC	-
	Western grebe	MODERATE	X	X	X	X					X	X	X	X	-	MAR-APR SEP-NOV	-
	White-winged scoter	MODERATE	X	X	X	X						X	X	X	-	MAR-APR OCT-NOV	-
678	Marbled murrelet	E T MODERATE	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
682	Sooty shearwater	MODERATE		X	X	X	X	X	X	X	X	X	X	X	-	-	APR-OCT

FISH:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
241	Barred surfperch		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	MAR-NOV
	Calico surfperch		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	MAR-NOV
	California grunion			X	X	X	X	X	X						MAR-AUG	MAR-SEP	-	-	MAR-AUG
	Jacksmelt		X	X	X	X	X	X	X	X	X	X	X	X	NOV-JUN	NOV-JUN	NOV-JUN	APR-NOV	NOV-JUN
	Redtail surfperch		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	JAN-DEC
	Striped bass			X	X	X	X								-	-	-	MAY-SEP	MAY-SEP
	Walleye surfperch		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	JAN-DEC
	White seabass			X	X	X	X	X	X	X					APR-AUG	-	-	-	MAR-NOV
	White seaperch		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	FEB-AUG
341	California grunion			X	X	X	X	X	X						MAR-AUG	MAR-SEP	-	-	MAR-AUG
	Jacksmelt		X	X	X	X	X	X	X	X	X	X	X	X	NOV-JUN	NOV-JUN	NOV-JUN	APR-NOV	NOV-JUN
	Striped bass			X	X	X	X	X							-	-	-	MAY-SEP	MAY-SEP
	White seabass			X	X	X	X	X	X	X					APR-AUG	-	-	-	MAR-NOV
352	Coho salmon	E E	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	NOV-FEB
	Steelhead	T	X	X	X	X	X	X	X	X	X	X	X	X	NOV-APR	NOV-APR	NOV-JUN	JAN-DEC	NOV-APR
363	Black-and-yellow rockfish		X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUN	-	-	MAY-JUL	JAN-DEC
	Cabazon		X	X	X	X	X	X	X	X	X	X	X	X	OCT-APR	-	-	JAN-DEC	JAN-DEC
	Calico surfperch		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	MAR-NOV
	Gopher rockfish		X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUN	-	-	MAY-JUL	JAN-DEC
	Grass rockfish		X	X	X	X	X	X	X	X	X	X	X	X	JAN-MAR	-	-	MAY-JUL	JAN-DEC
	Lingcod		X	X	X	X	X	X	X	X	X	X	X	X	NOV-APR	DEC-APR	-	JAN-DEC	JAN-DEC
	Monkeyface prickpleback		X	X	X	X	X	X	X	X	X	X	X	X	JAN-APR	-	-	JAN-DEC	JAN-DEC
	Rubberlip seaperch		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Striped seaperch		X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUN	-	-	-	JAN-DEC
	Walleye surfperch		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	JAN-DEC
431	California halibut		X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	FEB-SEP	JAN-DEC	FEB-NOV
	Salmon			X	X	X	X								-	-	-	-	APR-SEP
	White shark		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC

HABITAT:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D
358	Eelgrass		X	X	X	X	X	X	X	X	X	X	X	X

INVERTEBRATE:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
241	Dungeness crab							X	X	X	X				-	-	-	-	JUN-SEP
341	Dungeness crab							X	X	X	X				-	-	-	-	JUN-SEP

Biological information shown on the maps represents known concentration areas or occurrences, but does not necessarily represent the full distribution or range of each species. This is particularly important to recognize when considering potential impacts to protected species.

Central California: ESIMAP 40 (cont.)

BIOLOGICAL RESOURCES: (cont.)

INVERTEBRATE: (cont.)

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Spawning	Eggs	Larvae	Juveniles	Adults
352	Pacific littleneck		X X X X X X X X X X X X	APR-SEP	-	-	-	JAN-DEC
357	Myrtle's Silverspot	E	X X X X X X X X X X X	AUG-SEP	AUG-NOV	MAR-MAY	-	AUG-SEP
360	Globose dune beetle		X X X X X X X X X X X	-	-	-	-	JAN-DEC
363	Black abalone		X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC

MARINE MAMMAL:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Mating	Calving	Pupping	Molting
85	Pinnipeds	HIGH	X X X X X X X X X X X X	-	-	-	-
350	Harbor seal		X X X X X X X X X X X X	-	-	-	-
352	Harbor seal	2000 INDIV.	X X X X X X X X X X X X	-	-	-	-
354	Northern elephant seal	2000 INDIV.	X X X X X X X X X X X X	DEC-MAR	-	DEC-MAR	MAY-JUN
361	California sea lion	11-1388 INDIV.	X X X X X X X X X X X X	-	-	-	-
	Harbor seal	292-319 INDIV.	X X X X X X X X X X X X	-	-	MAR-JUN	-
	Steller sea lion	T 0-13 INDIV.	X X X X X X X X X X X X	-	-	-	-
426	Gray whale		X X X X X X X X X X X	-	DEC-FEB	-	-
673	Bottlenose dolphin	LOW	X X X X X X X X X X X X	-	-	-	-
	Dall's porpoise	LOW	X X X X X X X X X X X X	-	-	-	-
	Fin whale	E LOW	X X X X X X X X X X X X	-	-	-	-
	Killer whale	LOW	X X X X X X X X X X X X	-	-	-	-
	Long-beaked common dolphin	LOW	X X X X X X X X X X X X	-	-	-	-
	Minke whale	MODERATE	X X X X X X X X X X X X	-	MAR-MAY	-	-
	Northern right whale	E LOW	X X X X X X X X X X X	-	-	-	-
	Pacific white-sided dolphin	LOW	X X X X X X X X X X X X	-	-	-	-
	Risso's dolphin	LOW	X X X X X X X X X X X X	-	-	-	-
	Sea lions	LOW-MODERATE	X X X X X X X X X X X X	-	-	-	-
	Sea otter	T LOW	X X X X X X X X X X X X	-	-	-	-
	Seals	LOW-MODERATE	X X X X X X X X X X X X	-	-	-	-
	Short-beaked common dolphin	LOW	X X X X X X X X X X X X	-	-	-	-
	Short-finned pilot whale	LOW	X X X X X X X X X X X X	-	-	-	-
677	Harbor porpoise	MODERATE	X X X X X X X X X X X X	JUL-SEP	JUN-AUG	-	-
680	Blue whale	E LOW	X X X X X X X X X X X	-	-	-	-
	Humpback whale	E MODERATE	X X X X X X X X X X X	-	-	-	-

REPTILE:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Nesting	Hatching	Interesting	Juveniles	Adults
351	California red-legged frog	T 100 INDIV.	X X X X X X X X X X X X	NOV-APR	-	-	JAN-DEC	JAN-DEC
674	Leatherback sea turtle	E HIGH	X X X X X X X X X X X	-	-	-	-	MAY-NOV

TERRESTRIAL MAMMAL:

RAR#	Species	S F Conc.	J F M A M J J A S O N D
352	Northern river otter		X X X X X X X X X X X X
356	Point Reyes jumping mouse		X X X X X X X X X X X X

HUMAN USE RESOURCES:

ALERT:

ID#	Description
1	Snowy plovers, March-September, no vehicles without escort.
2	Colonial seabirds, keep aircraft away, March-August.
3	Seal and sea lion haul-outs and rookeries, no vehicles without escort along entire headlands.
4	Peregrine falcons nest along headlands.
5	Sensitive plant species present at high tide line and in dunes throughout area.

AQUACULTURE:

HUN#	Name	Contact	Phone
16	JOHNSON'S DRAKES BAY OYSTER CO.		415/669-1149

BEACH:

HUN#	Name	Contact	Phone
25	ABBOTTS BEACH		
35	DRAKES BEACH AND DRAKES BAY		
41	LIMANTOUR BEACH		
54	NORTH BEACH		
73	SOUTH BEACH		

BOAT RAMP:

HUN#	Name	Contact	Phone
79	BOAT RAMP		

MANAGEMENT AREA:

HUN#	Name	Contact	Phone
176	ESTERO DE LIMANTOUR - SMCA	CDF&G	
196	POINT REYES HEADLANDS - SMCA	CDF&G	

MARINE SANCTUARY:

HUN#	Name	Contact	Phone
218	GULF OF THE FARALLONES NMS	NOAA	415/561-6622

NATIONAL PARK:

HUN#	Name	Contact	Phone
221	GOLDEN GATE NATIONAL RECREATION AREA	NATIONAL PARK SERVICE	415/561-4700
223	PHILIP BURTON WILDERNESS	NATIONAL PARK SERVICE	415/464-5100
224	POINT REYES NATIONAL SEASHORE	NATIONAL PARK SERVICE	415/464-5100

PARK:

HUN#	Name	Contact	Phone
281	TOMALES BAY SP	CA DEPT OF PARKS AND RECREATION	

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