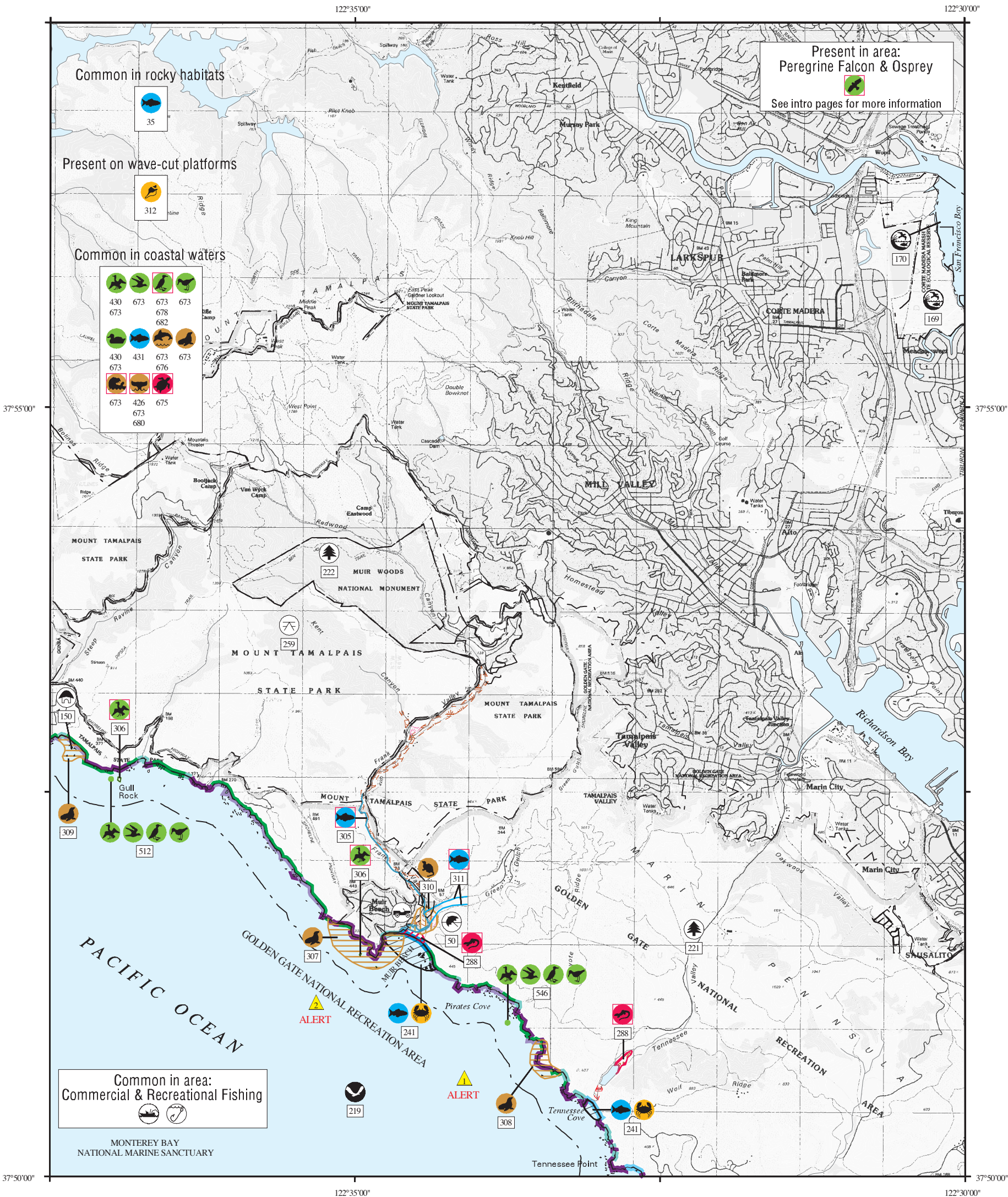


ENVIRONMENTAL SENSITIVITY INDEX MAP



**SHORELINE HABITATS (ESI)**

1A EXPOSED ROCKY SHORES	10A SALT- AND BRACKISH-WATER MARSHES
1B EXPOSED, SOLID, MAN-MADE STRUCTURES	10B FRESHWATER MARSHES
2A EXPOSED WAVE-CUT PLATFORMS IN BEDROCK	10C SWAMPS
3A FINE- TO MEDIUM-GRAINED SAND BEACHES	10D SCRUB-SHRUB WETLANDS
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	

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

W N E S

1 0.5 0 1 KILOMETER

1 0.5 0 1 MILE

SCALE 1:50000

Not For Navigation

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California Department of Fish and Game



Central California: ESIMAP 37

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Nesting	Migrating	Molting
306	Brown pelican	E E	X X X X X X X X X X X	-	JUL-NOV	-
430	Grebes	HIGH	X X X X X X X X X X	-	MAR-APR SEP-NOV	-
	Loons	HIGH	X X X X X X X X X	-	OCT-MAY	-
	Scoters	HIGH	X X X X X X X X X	-	MAR-APR SEP-DEC	-
512	Black oystercatcher	1 INDIV.	X X X X X X X X X X X	MAR-SEP	-	-
	Pelagic cormorant	9 INDIV.	X X X X X X X X X X X	MAR-SEP	-	-
	Pigeon guillemot	7 INDIV.	X X X X X X X X X X X	FEB-AUG	-	-
	Western gull	6 INDIV.	X X X X X X X X X X X	MAR-AUG	-	-
546	Black oystercatcher	1 INDIV.	X X X X X X X X X X X	MAR-SEP	-	-
	Brandt's cormorant		X X X X X X X X X X X	-	-	-
	Pelagic cormorant	42 INDIV.	X X X X X X X X X X X	MAR-SEP	-	-
	Pigeon guillemot	34 INDIV.	X X X X X X X X X X X	FEB-AUG	-	-
	Western gull	20 INDIV.	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	-	-	-
	Clark's grebe	MODERATE	X 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	-	-	JUL-SEP
	Cormorants	MODERATE	X X X X X X X X X X X	-	-	-
	Eared grebe	LOW	X 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	-	-	-
	Horned grebe	LOW	X X X X X X X X X	-	OCT-APR	-
	Pacific loon	MODERATE	X X X X X X X X X	-	OCT-MAY	-
	Pelicans	MODERATE	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	-	-	-
	Pigeon guillemot	LOW	X X X X X X X X X	-	-	-
	Rhinoceros auklet	MODERATE	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	-	-	-
	Surf scoter	MODERATE	X X X X X X X X X	-	MAR-APR SEP-DEC	-
	Western grebe	MODERATE	X X X X X X X X X	-	MAR-APR SEP-NOV	-
	White-winged scoter	MODERATE	X X 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	APR-JUL	-	-
682	Sooty shearwater	MODERATE	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
35	Black-and-yellow rockfish		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	OCT-APR	-	-	JAN-DEC	JAN-DEC
	Calico surfperch		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	MAR-JUN	-	-	MAY-JUL	JAN-DEC
	Grass rockfish		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	NOV-APR	DEC-APR	-	JAN-DEC	JAN-DEC
	Monkeyface prickleback		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	-	-	-	-	JAN-DEC
	Striped seaperch		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	APR-AUG	-	-	JAN-DEC	JAN-DEC
241	Barred surfperch		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	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	NOV-JUN	NOV-JUN	NOV-JUN	APR-NOV	NOV-JUN
	Redtail surfperch		X X X X X X X X X X X	APR-AUG	-	-	JAN-DEC	JAN-DEC
	Striped bass		X X X X X X	-	-	-	MAY-SEP	MAY-SEP
	Walleye surfperch		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 X X X	APR-AUG	-	-	-	MAR-NOV
	White seaperch		X X X X X X X X X X X	APR-AUG	-	-	JAN-DEC	FEB-AUG
305	Coho salmon	E E HIGH	X X X X X X X X X X X	NOV-FEB	NOV-FEB	DEC-MAR	JAN-DEC	NOV-FEB
	Steelhead	T	X X X X X X X X X X X	NOV-APR	NOV-APR	NOV-JUN	JAN-DEC	NOV-APR
311	Coho salmon	E E	X X X X X X X X X X X	NOV-FEB	NOV-FEB	DEC-MAR	JAN-DEC	NOV-FEB
	Steelhead	T	X X X X X X X X X X X	NOV-APR	NOV-APR	NOV-JUN	JAN-DEC	NOV-APR
431	California halibut		X X X X X X X X X X X	FEB-JUN	-	FEB-SEP	JAN-DEC	FEB-NOV
	Salmon		X X X X X X	-	-	-	-	APR-SEP
	White shark		X X X X X X X X X X X	-	-	-	-	JAN-DEC

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
312	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
307	California sea lion	8 INDIV.	X X X X X X X X X X X	-	-	-	-
308	Harbor seal	6 INDIV.	X X X X X X X X X X X	-	-	MAR-JUN	-
309	Harbor seal	20 INDIV.	X X X X X X X X X X X	-	-	MAR-JUN	-
426	Gray whale		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	-	-	-	-
	Dall's porpoise	LOW	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	-	-	-	-
	Killer whale	LOW	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	-	-	-	-
	Minke whale	MODERATE	X X X X X X X X X X X	-	MAR-MAY	-	-
	Northern right whale	E LOW	X X X X X X	-	-	-	-
	Pacific white-sided dolphin	LOW	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	-	-	-	-
	Sea lions	LOW-MODERATE	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	-	-	-	-
	Seals	LOW-MODERATE	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	-	-	-	-
	Short-finned pilot whale	LOW	X X X X X X X X X X X	-	-	-	-
676	Harbor porpoise	8500 INDIV.	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	-	-	-	-
	Humpback whale	E MODERATE	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
288	California red-legged frog	T	X X X X X X X X X X X	NOV-APR	-	-	JAN-DEC	JAN-DEC
	San Francisco garter snake	E E	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
675	Leatherback sea turtle	E MODERATE	X X X X X X X	-	-	-	-	MAY-NOV

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 impactsto protected species.

Central California: ESIMAP 37 (cont.)

BIOLOGICAL RESOURCES: (cont.)

TERRESTRIAL MAMMAL:

RAR#	Species	S F Conc.	J F M A M J J A S O N D
310	Northern river otter		X X X X X X X X X X X

HUMAN USE RESOURCES:

ALERT:

ID#	Description
1	Harbor seal haul outs and colonial seabird nesting.
2	Potential peregrine falcon nesting around Muir Beach.

BEACH:

HUN#	Name	Contact	Phone
50	MUIR BEACH		

SAMPLING SITE:

HUN#	Name	Contact	Phone
150	PISCO:SLIDE RANCH	JAN ROLETTO	415/561-6622

MANAGEMENT AREA:

HUN#	Name	Contact	Phone
169	CORTE MADERA MARSH - SMP	CDF&G	
170	CORTE MADERA MARSH NERR	CA DEPT OF FISH AND GAME	

MARINE SANCTUARY:

HUN#	Name	Contact	Phone
219	MONTEREY BAY NATIONAL MARINE SANCTUARY	SUPERINTENDENT	831/647-4201

NATIONAL PARK:

HUN#	Name	Contact	Phone
221	GOLDEN GATE NATIONAL RECREATION AREA	NATIONAL PARK SERVICE	415/561-4700
222	MUIR WOODS NATIONAL MONUMENT	NATIONAL PARK SERVICE	

PARK:

HUN#	Name	Contact	Phone
259	MOUNT TAMALPAIS SP	CA DEPT OF PARKS AND RECREATION	