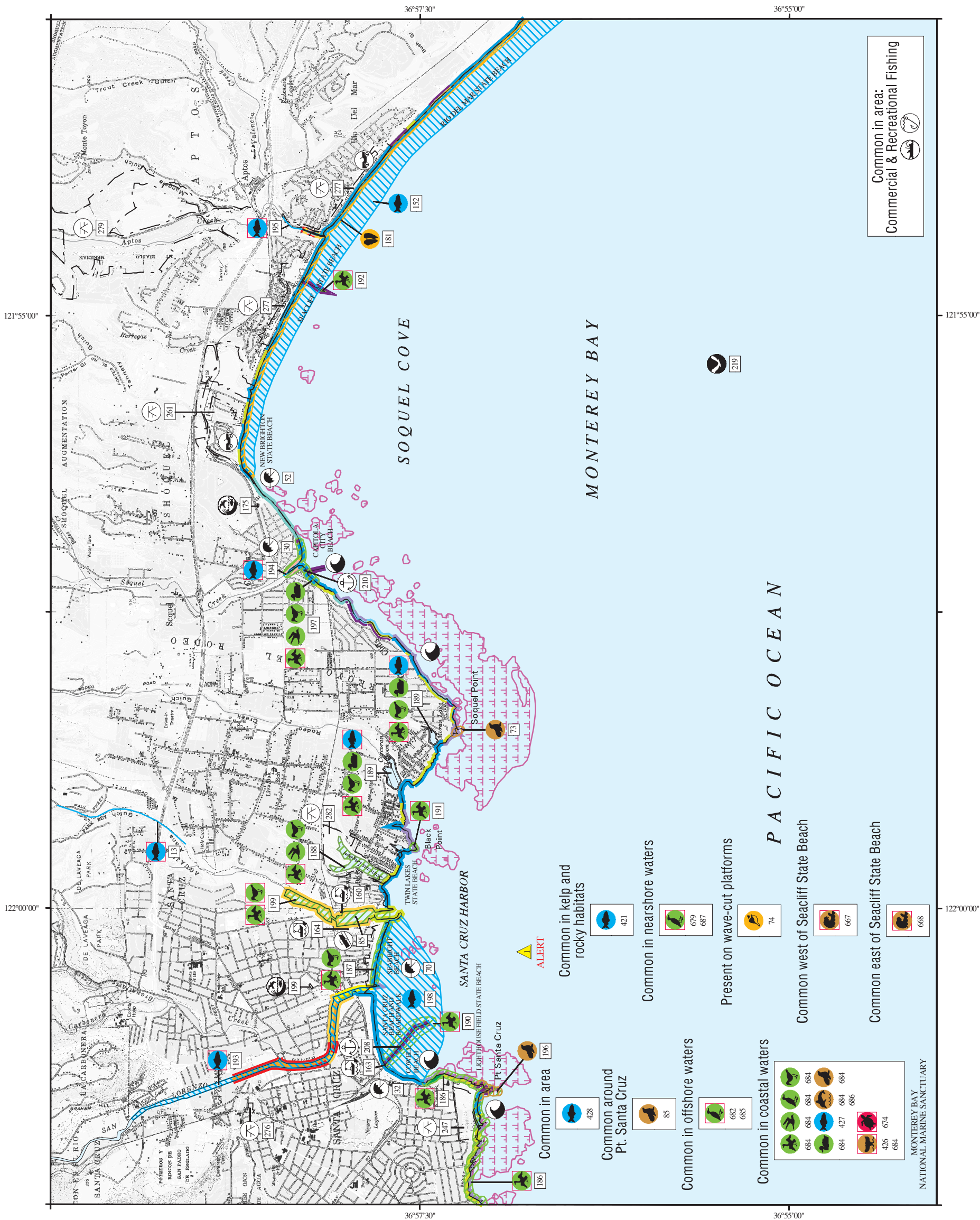


ENVIRONMENTAL SENSITIVITY INDEX MAP



**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	

1  
0.5  
0  
1 KILOMETER

1  
0.5  
0  
1 MILE

SCALE 1:50000

Not For Navigation

Published: May 2006

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

CALIFORNIA

MBNMS

PACIFIC OCEAN

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

Central California **ESI-28**

Central California: ESIMAP 28

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Nesting	Migrating	Molting
186	Brown pelican	E E 38-280 INDIV.	X X X X X X X X X X X X	-	JUL-NOV	-
187	Brown pelican	E E	X X X X X X X X X X X X	-	JUL-NOV	-
	Shorebirds		X X X X X X X X X X X X	-	-	-
188	Brown pelican	E E	X X X X X X X X X X X X	-	JUL-NOV	-
	Double-crested cormorant		X X X X X X X X X X X X	-	-	-
	Gulls		X X X X X X X X X X X X	-	-	-
	Shorebirds		X X X X X X X X X X X X	-	-	-
	Terns		X X X X X X X X X X X X	-	-	-
189	Brown pelican	E E	X X X X X X X X X X X X	-	JUL-NOV	-
	Diving birds		X X X X X X X X X X X X	-	-	-
	Diving ducks		X X X X X X X X X X X X	-	SEP-MAY	-
	Shorebirds		X X X X X X X X X X X X	-	-	-
190	Brown pelican	E E 0-96 INDIV.	X X X X X X X X X X X X	-	JUL-NOV	-
191	Brown pelican	E E 0-198 INDIV.	X X X X X X X X X X X X	-	JUL-NOV	-
192	Brown pelican	E E 55-79 INDIV.	X X X X X X X X X X X X	-	JUL-NOV	-
197	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 X X X X	-	SEP-MAR	-
	Diving birds		X X X X X X X X X X X X	-	-	-
	Diving ducks		X X X X X X X X X X X X	-	SEP-MAY	-
	Gulls		X X X X X X X X X X X X	-	-	-
	Shorebirds		X X X X X X X X X X X X	-	-	-
199	Brown pelican	E E	X X X X X X X X X X X X	-	JUL-NOV	-
	Cormorants		X X X X X X X X X X X X	-	-	-
	Shorebirds		X X X X X X X X X X X X	-	-	-
	Western snowy plover	T	X X X X X X X X X X X X	-	-	-
679	Sooty shearwater	HIGH	X X X X X X X X X X X X	-	-	JUN-SEP
682	Sooty shearwater	MODERATE	X X X X X X X X X X X X	-	-	APR-OCT
684	Cassin's auklet	MODERATE	X X X X X X X X X X X X	-	-	-
	Clark's grebe	MODERATE	X X X X X X X X X X X X	-	MAR-APR SEP-NOV	-
	Common murre	HIGH	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 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 X X X X	-	OCT-APR	-
	Loons	MODERATE	X X X X X X X X X X X X	-	OCT-MAY	-
	Pacific loon	MODERATE	X X X X X X X X X X X X	-	OCT-MAY	-
	Pelicans	MODERATE	X 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	MODERATE	X X X X X X X X X X X X	-	-	-
	Rhinoceros auklet	MODERATE	X X X X X X X X X X X X	-	-	-
	Shearwaters	LOW-MODERATE	X X X X X X X X X X X X	-	-	-
	Surf scoter	MODERATE	X X X 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 X X X	-	MAR-APR SEP-NOV	-
	White-winged scoter	LOW	X X X X X X X X X X X X	-	MAR-APR OCT-NOV	-
685	Marbled murrelet	E T MODERATE	X X X X X X X X X X X X	APR-JUL	AUG-MAR	-
687	Marbled murrelet	E T HIGH	X X X X X X X X X X X X	APR-JUL	AUG-MAR	-

FISH:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Spawning	Eggs	Larvae	Juveniles	Adults
13	Steelhead	T	X X X X X X X X X X X X	-	-	-	JUN-OCT	OCT-JUN
152	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 X X X X X X	MAR-AUG	MAR-SEP	-	-	MAR-AUG
	Striped bass		X X X X X X X X 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 X X X X X	APR-AUG	-	-	-	MAR-NOV
189	Tidewater goby	E	X X X X X X X X X X X X	JAN-DEC	-	-	-	JAN-DEC
193	Coho salmon	E E	X X X X X X X X X X X X	-	-	-	JUN-OCT	OCT-JUN
	Pacific lamprey		X X X X X X X X X X X X	-	-	-	JUN-OCT	OCT-JUN
	Steelhead	T	X X X X X X X X X X X X	-	-	-	JUN-OCT	OCT-JUN
	Tidewater goby	E	X X X X X X X X X X X X	JAN-DEC	-	-	-	JAN-DEC
194	Pacific lamprey		X X X X X X X X X X X X	-	-	-	JUN-OCT	OCT-JUN
	Steelhead	T	X X X X X X X X X X X X	-	-	-	JUN-OCT	OCT-JUN
	Tidewater goby	E	X X X X X X X X X X X X	JAN-DEC	-	-	-	JAN-DEC
195	Coho salmon	E E	X X X X X X X X X X X X	-	-	-	JUN-OCT	OCT-JUN
	Steelhead	T	X X X X X X X X X X X X	-	-	-	JUN-OCT	OCT-JUN
	Tidewater goby	E	X X X X X X X X X X X X	JAN-DEC	-	-	-	JAN-DEC
198	Northern anchovy		X X X X X X X X X X X X	-	-	-	MAY-SEP	MAY-SEP
	Pacific chub mackerel		X X X X X X X X X X X X	-	-	-	MAY-SEP	MAY-SEP
	Pacific sardine		X X X X X X X X X X X X	-	-	-	-	JUN-SEP
	Striped bass		X X X X X X X X X X X X	-	-	-	MAY-SEP	MAY-SEP
	Surfperch		X X X X X X X X X X X X	APR-AUG	-	-	JAN-DEC	APR-NOV
	White croaker		X X X X X X X X X X X X	-	-	-	-	MAY-SEP
421	Black rockfish		X X X X X X X X X X X X	JAN-MAY	-	-	APR-JUL	JAN-DEC
	Black-and-yellow rockfish		X X X X X X X X X X X X	MAR-JUN	-	-	MAY-JUL	JAN-DEC
	Blue rockfish		X X X X X X X X X X X X	NOV-MAR	-	-	APR-JUL	JAN-DEC
	Bocaccio		X X X X X X X X X X X X	-	-	-	JAN-DEC	-
	Canary rockfish (orange)		X X X X X X X X X X X X	-	-	-	JAN-DEC	-
	China rockfish		X X X X X X X X X X X X	JAN-JUL	-	-	MAY-JUL	JAN-DEC
	Copper rockfish		X X X X X X X X X X X X	FEB-APR	-	-	APR-JUL	JAN-DEC
	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
	Kelp rockfish		X X X X X X X X X X X X	FEB-APR	-	-	APR-AUG	JAN-DEC
	Olive rockfish		X X X X X X X X X X X X	JAN-MAR	-	-	APR-JUL	JAN-DEC
	Vermilion rockfish		X X X X X X X X X X X X	SEP-NOV	-	-	FEB-JUL	JAN-DEC
	Widow rockfish		X X X X X X X X X X X X	-	-	-	JAN-DEC	-
	Yellowtail rockfish		X X X X X X X X X X X X	-	-	-	JAN-DEC	-
427	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 X X X X X X X X	-	-	-	-	APR-SEP
428	Bat ray		X X X X X X X X X X X X	MAR-AUG	-	-	-	MAR-SEP
	Leopard shark		X X X X X X X X X X X X	MAR-JUN	-	-	JAN-DEC	JAN-DEC
	Northern anchovy		X X X X X X X X X X X X	-	-	-	MAY-SEP	MAY-SEP
	Pacific sardine		X X X X X X X X X X X X	-	-	-	-	JUN-SEP

INVERTEBRATE:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Spawning	Eggs	Larvae	Juveniles	Adults
74	Black abalone		X X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
181	Pismo clam	LOW	X X X X X X X X X X X X	JUN-SEP	-	-	-	JUN-SEP

MARINE MAMMAL:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Mating	Calving	Pupping	Molting
73	Harbor seal	9 INDIV.	X X X X X X X X X X X X	-	-	MAR-MAY	-

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 28 (cont.)

BIOLOGICAL RESOURCES: (cont.)

MARINE MAMMAL: (cont.)

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	-	-	-	-
196	California sea lion	3-167 INDIV.	X X X X X X X X X X X	-	-	-	-
426	Gray whale		X X X X X X X X	-	DEC-FEB	-	-
667	Sea otter	T 189 INDEP / 27 PUPS	X X X X X X X X X X X	-	-	JAN-MAR SEP-NOV	-
668	Sea otter	T 287 INDEP / 9 PUPS	X X X X X X X X X X X	-	-	JAN-MAR SEP-NOV	-
684	Blue whale	E LOW	X X X X X X X X X X	-	-	-	-
	Bottlenose dolphin	MODERATE	X X X X X X X X X X X	-	-	-	-
	Dall's porpoise	MODERATE	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	-	-	-	-
	Humpback whale	E MODERATE	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	LOW	X X X X X X X X X X X	-	MAR-MAY	-	-
	Northern right whale	E LOW	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	MODERATE	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	-	-	-	-
686	Harbor porpoise	1600 INDIV.	X X X X X X X X X X X	JUL-SEP	JUN-AUG	-	-

REPTILE:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Nesting	Hatching	Interesting	Juveniles	Adults
674	Leatherback sea turtle	E HIGH	X X X X X X X X	-	-	-	-	MAY-NOV

HUMAN USE RESOURCES:

ALERT:

ID#	Description
1	Keep out of kelp when transiting. Note potential presence of sea otters if operating outboard motor.

BEACH:

HUN#	Name	Contact	Phone
30	CAPITOLA CITY BEACH		
32	COWELL BEACH		
52	NEW BRIGHTON STATE BEACH		
70	SEABRIGHT BEACH		

BOAT RAMP:

HUN#	Name	Contact	Phone
85	SANTA CRUZ SMALL CRAFT HARBOR		

HOIST:

HUN#	Name	Contact	Phone
160	HARBOR MARINA, INC.		
163	SANTA CRUZ MUNICIPAL WHARF		
164	SANTA CRUZ YACHT CLUB		

MANAGEMENT AREA:

HUN#	Name	Contact	Phone
175	ESCALONA GULCH	CA DEPT OF FISH AND GAME	
199	SOUTH BRANCIFORTE	CA DEPT OF FISH AND GAME	

MARINA:

HUN#	Name	Contact	Phone
208	BOAT ANCHORAGE		
210	CAPITOLA BOAT AND BAIT		

MARINE SANCTUARY:

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

PARK:

HUN#	Name	Contact	Phone
247	LIGHTHOUSE FIELD SB	CA DEPT OF PARKS AND RECREATION	
261	NEW BRIGHTON SB	CA DEPT OF PARKS AND RECREATION	
276	SANTA CRUZ MISSION SHP	CA DEPT OF PARKS AND RECREATION	
277	SEACLIFF SB	CA DEPT OF PARKS AND RECREATION	
279	THE FOREST OF NISENE MARKS SP	CA DEPT OF PARKS AND RECREATION	
282	TWIN LAKES SB	CA DEPT OF PARKS AND RECREATION	