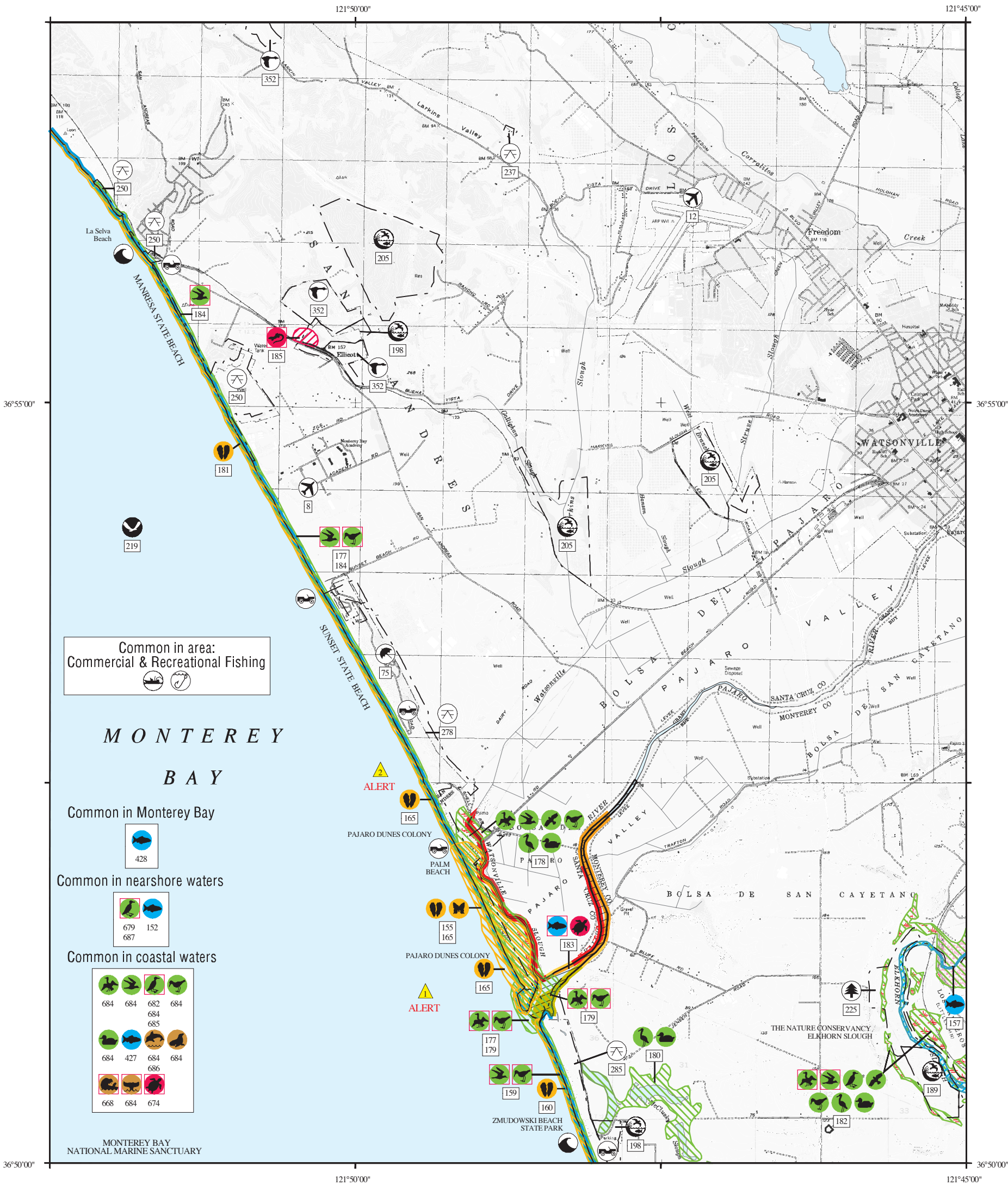


ENVIRONMENTAL SENSITIVITY INDEX MAP



**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

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Office of Spill Prevention and Response  
California Department of Fish and Game

CALIFORNIA

PACIFIC OCEAN

MBNMS

ESI-27

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

Central California: ESIMAP 27

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
159	California least tern	E E LOW						X	X	X	X	X	X		-	APR-SEP	-
	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	MAR-SEP	-	-
177	Shorebirds	HIGH	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	MAR-SEP	-	-
178	Diving birds		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	-	-	-
	Raptors		X	X	X	X	X	X	X	X	X	X	X	X	-	AUG-NOV	-
	Shorebirds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
	Waterfowl		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
179	Brown pelican	E E 23-695 INDIV.	X	X	X	X	X	X	X	X	X	X	X	X	-	JUL-NOV	-
	Phalaropes	HIGH	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	MAR-SEP	-	-
180	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
	Waterfowl		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
182	American white pelican		X	X	X	X		X	X	X	X	X	X	X	-	-	-
	Brown pelican	E E 23-695 INDIV.	X	X	X	X	X	X	X	X	X	X	X	X	-	JUL-NOV	-
	California least tern	E E					X	X	X	X	X				-	APR-SEP	-
	Cormorants	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Dabbling ducks	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	SEP-MAR	-
	Diving ducks	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	SEP-MAY	-
	Geese	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	OCT-MAR	-
	Grebes	COMMON	X	X	X	X				X	X	X	X		-	MAR-APR	-
																SEP-NOV	
	Gulls	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Loons	COMMON	X	X	X	X				X	X	X			-	OCT-MAY	-
	Phalaropes	HIGH	X		X	X	X	X	X	X	X	X	X	X	-	-	-
	Raptors	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	AUG-NOV	-
	Shorebirds	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Sooty shearwater	COMMON					X	X	X	X	X	X			-	-	-
	Terns	COMMON		X	X	X	X	X	X	X	X				-	-	-
	Wading birds	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
184	California least tern	E E					X	X	X	X	X	X			-	APR-SEP	-
679	Sooty shearwater	HIGH							X	X	X	X			-	-	JUN-SEP
682	Sooty shearwater	MODERATE				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		-	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		-	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	-
	Loons	MODERATE	X	X	X	X				X	X	X			-	OCT-MAY	-
	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	MODERATE		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		-	MAR-APR	-
																SEP-DEC	
	Western grebe	MODERATE	X	X	X	X				X	X	X	X		-	MAR-APR	-
																SEP-NOV	
	White-winged scoter	LOW	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
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				MAR-AUG	MAR-SEP	-	-	MAR-AUG
	Striped bass				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	APR-AUG	-	-	-	MAR-NOV
157	Bat ray	COMMON		X	X	X	X	X	X	X					MAR-AUG	-	-	-	MAR-SEP
	California halibut		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	English sole	VERY COMMON		X	X	X	X	X							-	-	-	MAY-OCT	-
	Gobies	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	JAN-JUN	-	-	-	JAN-DEC
	Jacksmelt	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	NOV-JUN	NOV-JUN	NOV-JUN	APR-NOV	NOV-JUN
	Leopard shark	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUN	-	-	JAN-DEC	-
	Northern anchovy	COMMON	X	X	X	X	X	X	X	X	X				-	-	JAN-MAR	MAR-OCT	MAR-OCT
																	SEP-OCT		
	Pacific herring	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	JAN-APR	JAN-MAY	JAN-MAY	JAN-DEC	JAN-APR
	Pacific sanddab			X	X										-	-	-	APR-MAY	-
	Pacific staghorn sculpin	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	SEP-APR	JAN-DEC	JAN-DEC
	Speckled sanddab	VERY COMMON	X	X	X	X	X	X	X	X	X	X	X	X	MAR-OCT	-	AUG-DEC	JAN-DEC	JAN-DEC
	Starry flounder		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Striped bass			X	X	X	X								-	-	-	MAY-SEP	MAY-SEP
	Surfperch	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	APR-NOV
	Topsmelt	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	APR-SEP	APR-OCT	JAN-DEC	FEB-DEC
183	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
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							-	-	-	-	APR-SEP
428	Bat ray			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						-	-	-	MAY-SEP	MAY-SEP
	Pacific sardine					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
155	Globose dune beetle		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
160	Pismo clam	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	-	-	-	JUN-SEP
165	Pismo clam	MEDIUM	X	X	X	X	X	X	X	X	X	X	X	X	JUN-SEP	-	-	-	JUN-SEP
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
668	Sea otter	T 287 INDEP / 9 PUPS	X	X	X	X	X	X	X	X	X	X	X	X	-	-	JAN-MAR	-
684	Blue whale	E LOW						X	X	X	X	X	X		-	-	SEP-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 impacts to protected species.

Central California: ESIMAP 27 (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
684	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 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
183	Western pond turtle		X X X X X	-	-	-	JUN-OCT	-
185	Santa Cruz long-toed salamander	E E	X X X X X X X X X X X	-	-	-	-	JAN-DEC
674	Leatherback sea turtle	E HIGH	X X X X X X X	-	-	-	-	MAY-NOV

HUMAN USE RESOURCES:

ALERT:

ID#	Description
1	Snowy plovers, March-July, no vehicles without escort.
2	Threatened/endangered or rare terrestrial plants potentially in the area.

AIRPORT:

HUN#	Name	Contact	Phone
8	MONTEREY BAY ACADEMY LANDING STRIP		
12	WATSONVILLE MUNICIPAL AIRPORT		

BEACH:

HUN#	Name	Contact	Phone
75	SUNSET STATE BEACH		

MANAGEMENT AREA:

HUN#	Name	Contact	Phone
189	MOSS LANDING WA	CA DEPT OF FISH AND GAME	
198	SANTA CRUZ LONG-TOED SALAMANDER NERR	CA DEPT OF FISH AND GAME	
205	WATSONVILLE SLOUGH NERR	CA DEPT OF FISH AND GAME	

MARINE SANCTUARY:

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

NATURE CONSERVANCY:

HUN#	Name	Contact	Phone
225	ELKHORN SLOUGH	THE NATURE CONSERVANCY	

PARK:

HUN#	Name	Contact	Phone
237	CASTRO ADOBE	CA DEPT OF PARKS AND RECREATION	
250	MANRESA SB	CA DEPT OF PARKS AND RECREATION	
278	SUNSET SB	CA DEPT OF PARKS AND RECREATION	
285	ZMUDOWSKI SB	CA DEPT OF PARKS AND RECREATION	

WILDLIFE REFUGE:

HUN#	Name	Contact	Phone
352	ELLICOTT SLOUGH NWR	US FISH AND WILDLIFE SERVICE	