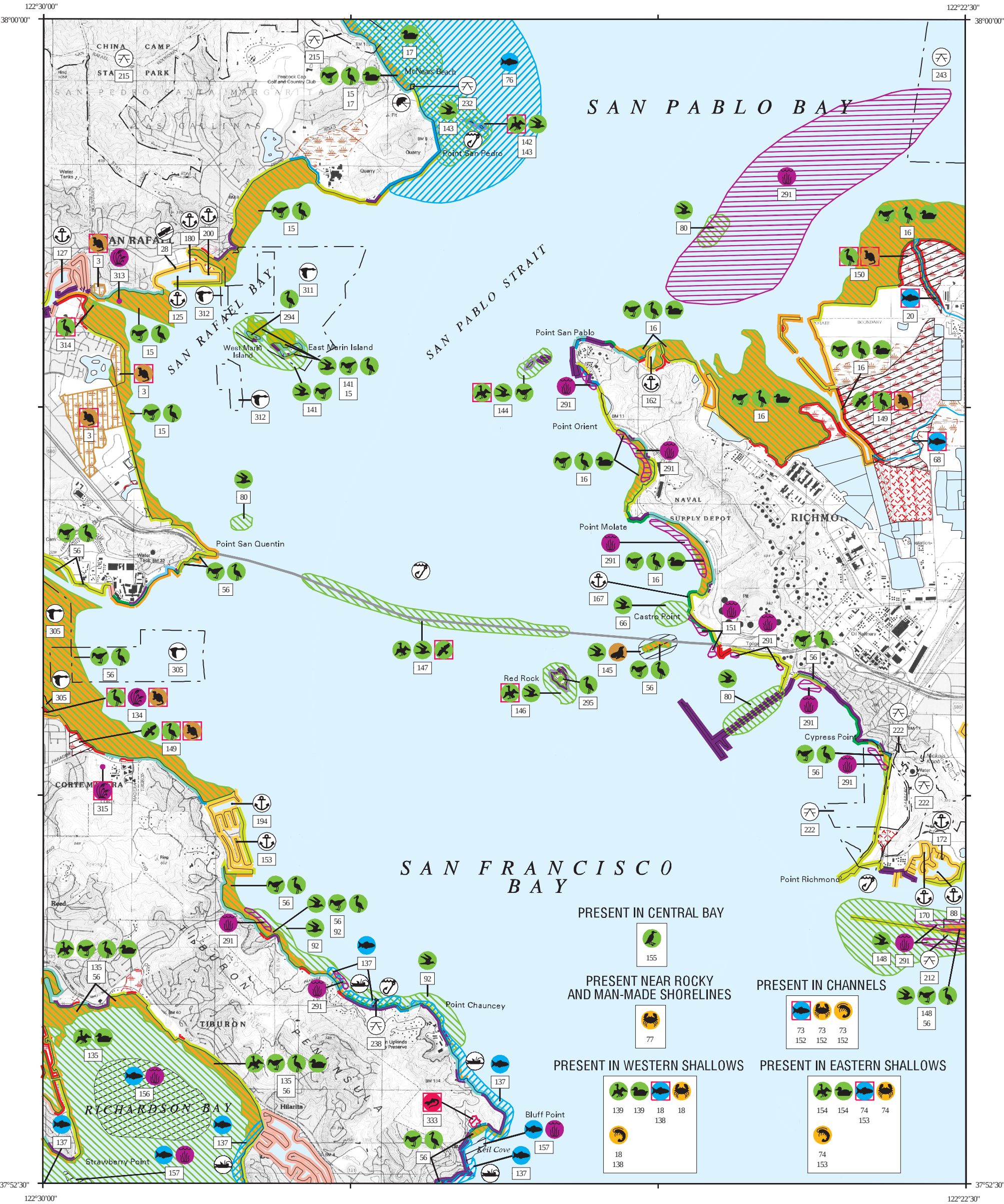
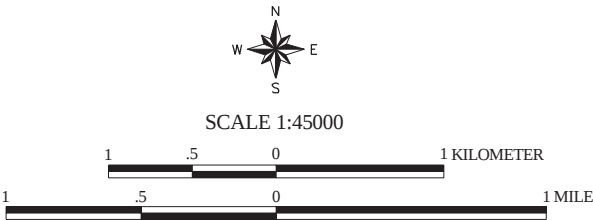


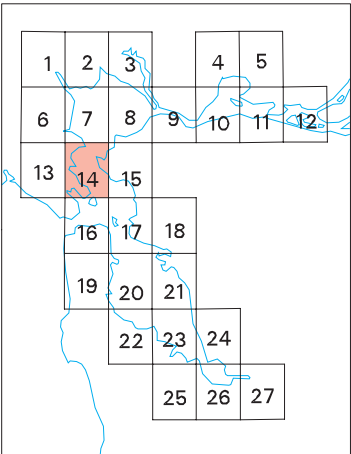
ENVIRONMENTAL SENSITIVITY INDEX MAP



- SHORELINE HABITATS**
- 1A EXPOSED ROCKY SHORES
 - 1B EXPOSED, SOLID MAN-MADE STRUCTURES
 - 2A EXPOSED WAVE-CUT PLATFORMS IN BEDROCK
 - 3A FINE-TO MEDIUM-GRAINED SAND BEACHES
 - 3B SCARPS AND STEEP SLOPES IN SAND
 - 4 COARSE-GRAINED SAND BEACHES
 - 5 MIXED SAND AND GRAVEL BEACHES
 - 6A GRAVEL BEACHES
 - 6B RIPRAP
 - 7 EXPOSED TIDAL FLATS
 - 8A SHELTERED ROCKY SHORES
 - 8B SHELTERED, SOLID MAN-MADE STRUCTURES
 - 8C SHELTERED RIPRAP
 - 9A SHELTERED TIDAL FLATS
 - 9B VEGETATED LOW RIVERINE BANKS
 - 10A SALT- AND BRACKISH-WATER MARSHES
 - TIDAL MARSHES
 - MUTED TIDAL MARSHES
 - MANAGED MARSHES
 - DIKED MARSHES
 - SALT PONDS



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BIOLOGICAL RESOURCES:

RAR#	Species	S/F	T/E	Concen	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Laying	Hatching	Fledging
15	Shorebirds			HIGH	X	X	X	X	X	-	-	-	X	X	X	X	X	-	-	-
	Wading birds			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
16	Dabbling ducks			HIGH	X	X	X	X	-	-	-	-	X	X	X	X	-	-	-	-
	Shorebirds			HIGH	X	X	X	X	X	-	-	-	X	X	X	X	X	-	-	-
	Wading birds			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
17	Canvasback			MEDIUM	X	X	X	X	-	-	-	-	X	X	X	X	-	-	-	-
	Diving ducks			HIGH	X	X	X	X	-	-	-	-	X	X	X	X	-	-	-	-
	Ruddy duck			MEDIUM	X	X	X	X	-	-	-	-	X	X	X	X	-	-	-	-
56	Shorebirds			LOW	X	X	X	X	X	-	-	-	X	X	X	X	X	-	-	-
	Wading birds			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
66	Western gull			4	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-JUN	MAY-JUL	JUL-AUG
80	Western gull			3	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-JUN	MAY-JUL	JUL-AUG
92	Western gull			2	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-JUN	MAY-JUL	JUL-AUG
134	California black rail	S	T	PRESENT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	-	-	-
	California clapper rail	S/F	E/E	PRESENT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	-	-	-
135	Canvasback			MEDIUM	X	X	X	X	-	-	-	-	X	X	X	X	-	-	-	-
	Diving ducks			HIGH	X	X	X	X	-	-	-	-	X	X	X	X	-	-	-	-
	Western grebe			VERY HIGH	X	X	X	X	X	-	-	-	X	X	X	X	-	-	-	-
139	Canvasback			MEDIUM	X	X	X	X	-	-	-	-	X	X	X	X	-	-	-	-
	Diving ducks			HIGH	X	X	X	X	-	-	-	-	X	X	X	X	-	-	-	-
	Western grebe			HIGH	X	X	X	X	X	-	-	-	X	X	X	X	-	-	-	-
141	Black oystercatcher			1	X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-JUL	JUN-AUG	JUL-OCT
	Western gull			18	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-JUN	MAY-JUL	JUL-AUG
142	California brown pelican	S/F	E/E	HIGH	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-
	Double-crested cormorant			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Gulls			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
143	Western gull			48	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-JUN	MAY-JUL	JUL-AUG
144	Black oystercatcher				X	X	X	X	X	X	X	X	X	X	X	X	MAY-OCT	MAY-JUL	JUN-AUG	JUL-OCT
	California brown pelican	S/F	E/E	HIGH	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-
	Double-crested cormorant			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Gulls			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-
	Western gull			89	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-JUN	MAY-JUL	JUL-AUG
145	Western gull			2	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-JUN	MAY-JUL	JUL-AUG
146	California brown pelican	S/F	E/E	HIGH	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-
	Double-crested cormorant	</																		

RAR#	Species	S/F	T/E	Concen	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
18	American shad			HIGH	-	-	-	-	-	X	X	X	X	X	X	X	-	-	-	AUG-DEC	MAY-JUL
	Chinook salmon (fall)			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Chinook salmon (late fall)			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Chinook salmon (spring)			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Chinook salmon (winter)			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Green sturgeon	S/F	E/E	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Striped bass			MEDIUM	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	White sturgeon			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	SEP-NOV
20	Rainbow trout (steelhead)	F	T	LOW	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
68	Rainbow trout (steelhead)	F	T	LOW	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	FEB-JUN	JUL-FEB
73	American shad			HIGH						X	X	X	X	X	X	X	-	-	-	FEB-JUN	JUL-FEB
	Chinook salmon (fall)			HIGH						X	X	X	X	X	X	X	-	-	-	AUG-DEC	MAY-JUL
	Chinook salmon (late fall)			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JUL-NOV
	Chinook salmon (spring)			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	OCT-MAR
	Chinook salmon (winter)			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	FEB-AUG
	Green sturgeon	S/F	E/E	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	NOV-MAY
	Striped bass			MEDIUM	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	White croaker			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	SEP-NOV
	White sturgeon			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	SEP-MAR	JAN-DEC	-
74	American shad			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	California halibut			HIGH						X	X	X	X	X	X	X	-	-	-	AUG-DEC	MAY-JUL
	Chinook salmon (fall)			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	OCT-MAR	JAN-DEC	JAN-DEC
	Chinook salmon (late fall)			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Chinook salmon (spring)			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Chinook salmon (winter)			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Green sturgeon	S/F	E/E	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Striped bass			MEDIUM	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	White sturgeon			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	SEP-NOV
76	California halibut			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
137	Pacific herring			HIGH	X	X	X	X							X	X	NOV-MAR	NOV-APR	OCT-MAR	JAN-DEC	NOV-MAR
138	American shad			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	NOV-MAR
	Bat ray			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	AUG-DEC	MAY-JUL
	California halibut			MEDIUM	X																

SAN FRANCISCO BAY – ESIMAP 14 (continued)

BIOLOGICAL RESOURCES (continued):

HABITAT/PLANT:

RAR#	Species	S/F	T/E	Concen	J	F	M	A	M	J	J	A	S	O	N	D
134	Point Reyes bird's-beak			HIGH	X	X	X	X	X	X	X	X	X	X	X	X
	Rare plants			PRESENT	X	X	X	X	X	X	X	X	X	X	X	X
151	Eelgrass				X	X	X	X	X	X	X	X	X	X	X	X
156	Eelgrass				X	X	X	X	X	X	X	X	X	X	X	X
	Gracilaria				X	X	X	X	X	X	X	X	X	X	X	X
157	Eelgrass				X	X	X	X	X	X	X	X	X	X	X	X
291	Eelgrass				X	X	X	X	X	X	X	X	X	X	X	X
313	Point Reyes bird's-beak			PRESENT	X	X	X	X	X	X	X	X	X	X	X	X
315	Marin western flax	S/F	T/T	PRESENT	X	X	X	X	X	X	X	X	X	X	X	X

INVERTEBRATE:

RAR#	Species	S/F	T/E	Concen	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
18	Blacktail bay shrimp			MEDIUM	X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAR-SEP	MAR-OCT	JAN-NOV
	California bay shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAR-SEP	MAR-OCT	JAN-NOV
	Dungeness crab			HIGH				X	X	X	X	X	X	X	X	X	-	-	-	APR-DEC	-
73	California bay shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	JAN-MAR	JAN-SEP	MAR-SEP	-	JAN-NOV
	Dungeness crab			HIGH	X	X		X	X	X						X	-	-	-	APR-JUN	-
																				NOV-FEB	
74	Blacktail bay shrimp			MEDIUM	X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAR-SEP	MAR-OCT	JAN-NOV
	California bay shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAR-SEP	MAR-OCT	JAN-NOV
	Dungeness crab			HIGH				X	X	X	X	X	X	X	X	X	-	-	-	APR-DEC	-
77	Pacific rock crab			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Red rock crab			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
138	Blacktail bay shrimp			MEDIUM	X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAR-SEP	MAR-OCT	JAN-NOV
152	Blacktail bay shrimp			MEDIUM	X	X	X	X	X	X	X	X	X	X	X	X	JAN-MAR	JAN-SEP	MAR-SEP	-	JAN-NOV
	California bay shrimp			HIGH	X	X	X	X	X	X	X	X	X	X	X	X	JAN-MAR	JAN-SEP	MAR-SEP	-	JAN-NOV
	Dungeness crab			HIGH	X	X		X	X	X						X	-	-	-	APR-JUN	-
																				NOV-FEB	
153	Blacktail bay shrimp			MEDIUM	X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAR-SEP	MAR-OCT	JAN-NOV

MARINE MAMMAL:

RAR#	Species	S/F	T/E	Concen	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Pupping	Molting
145	Harbor seal			195	X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAR-MAY	JUN-AUG

REPTILE/AMPHIBIAN:

RAR#	Species	S/F	T/E	Concen	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Hatching	Interinteresting	Juveniles	Adults
333	California red-legged frog	F	T	PRESENT	X	X	X	X	X	X	X	X	X	X	X	X	JAN-JUL	-	-	JAN-DEC	JAN-DEC

TERRESTRIAL MAMMAL:

RAR#	Species	S/F	T/E	Concen	J	F	M	A	M	J	J	A	S	O	N	D
3	Salt-marsh harvest mouse	S/F	E/E	PRESENT	X	X	X	X	X	X	X	X	X	X	X	X
134	Salt-marsh harvest mouse	S/F	E/E	PRESENT	X	X	X	X	X	X	X	X	X	X	X	X
149	Salt-marsh harvest mouse	S/F	E/E	LOW	X	X	X	X	X	X	X	X	X	X	X	X
	San Pablo vole			LOW	X	X	X	X	X	X	X	X	X	X	X	X
150	Salt-marsh harvest mouse	S/F	E/E	LOW	X	X	X	X	X	X	X	X	X	X	X	X
	Saltmarsh wandering shrew			LOW	X	X	X	X	X	X	X	X	X	X	X	X
	San Pablo vole			PRESENT	X	X	X	X	X	X	X	X	X	X	X	X

HUMAN USE RESOURCES:

BOAT RAMP:

HUN#	Name
28	BOAT RAMP

MARINA:

HUN#	Name
88	BRICKYARD COVER MARINA
125	LOCH LOMOND MARINA
127	MARIN YACHT CLUB
153	PARADISE CAY YACHT HARBOR
162	POINT SAN PABLO YACHT HARBOR
167	REDROCK MARINA
170	RICHMOND YACHT CLUB
172	RICHMOND YACHT SERVICE
180	SAN RAFAEL YACHT HARBOR
194	TIBURON YACHT CLUB
200	WESTERN BOAT SHOP

STATE/REGIONAL PARK:

HUN#	Name	Owner	Contact	Phone
212	BROOKS ISLAND REGIONAL PRESERVE	EBRP	DISPATCH	510-881-1833
215	CHINA CAMP STATE PARK	CDPR	DISPATCH	916-988-7322
222	G.MILLER JR./JOHN T. KNOX REG. SHORELINE	EBRP	DISPATCH	510-881-1833
232	MCNEAR'S BEACH STATE FISHING PIER	CDPR	DISPATCH	916-988-7322
238	PARADISE BEACH STATE FISHING PIER	CDPR	DISPATCH	916-988-7322
243	POINT PINOLE REGIONAL SHORELINE	EBRP	DISPATCH	510-881-1833

WILDLIFE REFUGE/MGMT AREA:

HUN#	Name	Owner	Contact	Phone
305	CORTE MADERA MARSH STATE ECOLOGICAL RES.	CDFG	REGIONAL OFFICE	707-944-5500
311	MARIN ISLANDS NATIONAL WILDLIFE REFUGE	USFWS	REGIONAL MANAGER	510-792-0222
312	MARIN ISLANDS NATIONAL WILDLIFE REFUGE	USFWS	REGIONAL MANAGER	510-792-0222