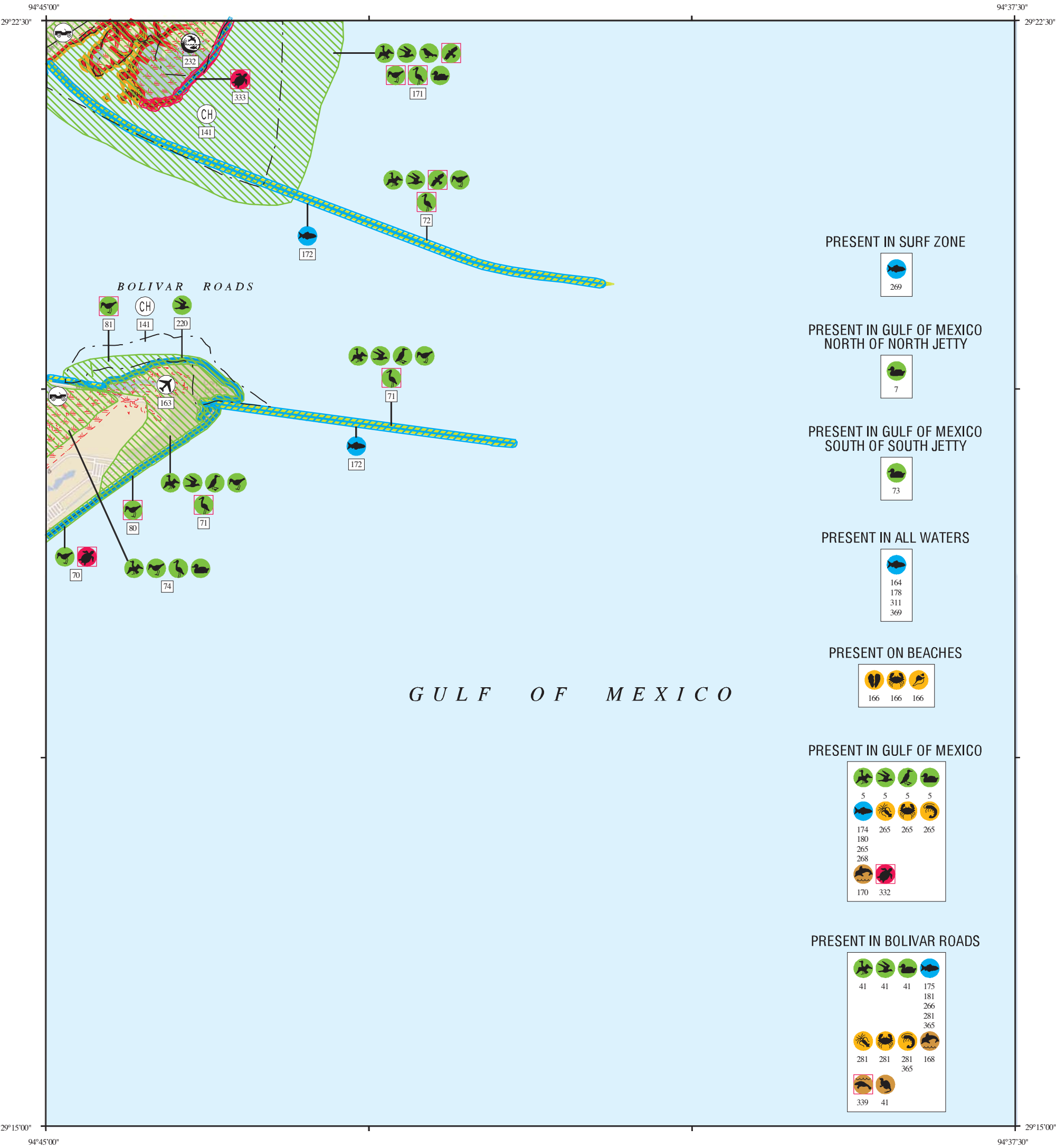


ENVIRONMENTAL SENSITIVITY INDEX MAP



SHORELINE HABITATS (ESI)

- 1B EXPOSED, SOLID MAN-MADE STRUCTURES
- 2A EXPOSED WAVE-CUT PLATFORMS IN CLAY
- 2B EXPOSED SCARPS AND STEEP SLOPES IN CLAY
- 3A FINE- TO MEDIUM-GRAINED SAND BEACHES
- 3B SCARPS AND STEEP SLOPES IN SAND
- 5 MIXED SAND AND GRAVEL (SHELL) BEACHES
- 6A GRAVEL BEACHES
- 6B RIPRAP
- 7 EXPOSED TIDAL FLATS
- 8A SHELTERED SCARPS IN CLAY OR BEDROCK
- 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 1:50000

1 KILOMETER

1 MILE

1 NAUTICAL MILE

Not For Navigation
Published: June 2013

Published at Seattle, Washington
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Response and Restoration
Emergency Response Division

TEXAS

GULF OF MEXICO

Upper Texas Coast: 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
5	American white pelican	COMMON	X X X X X X X X X X	-	-	-
	Brown pelican	COMMON	X X X X X X X X X X	-	-	-
	Bufflehead	UNCOMMON	X X X X X X	-	-	-
	Canvasback	UNCOMMON	X X X X X X	-	-	-
	Cormorants	COMMON	X X X X X X X X X X	-	-	-
	Diving birds		X X X X X X X X X X	-	-	-
	Diving ducks		X X X X X X X X	-	-	-
	Greater scaup	UNCOMMON	X X X X X X	-	-	-
	Grebes	UNCOMMON	X X X X X X X X X X	-	-	-
	Gulls	COMMON-ABUNDANT	X X X X X X X X X X	-	-	-
	Lesser scaup	COMMON	X X X X X X X X	-	-	-
	Loons		X X X X X X X X	-	-	-
	Magnificent frigatebird	COMMON	X X X X X X X X	-	-	-
	Masked booby	UNCOMMON	X X X X X X X X	-	-	-
	Northern gannet	COMMON	X X X X X X X X	-	-	-
	Scoters	RARE	X X X X X X X X	-	-	-
	Shearwaters	UNCOMMON	X X X X X X X X	-	-	-
	Storm-petrels	RARE	X X X X X X X X	-	-	-
	Terns	COMMON-ABUNDANT	X X X X X X X X X X	-	-	-
7	Redhead	0-300 BIRDS	X X X X X X X X	-	-	-
41	Black skimmer		X X X X X X X X X X	-	-	-
	Cormorants		X X X X X X X X X X	-	-	-
	Diving birds		X X X X X X X X X X	-	-	-
	Diving ducks		X X X X X X X X	-	-	-
	Grebes		X X X X X X X X X X	-	-	-
	Gulls		X X X X X X X X X X	-	-	-
	Loons		X X X X X X X X	-	-	-
	Pelicans		X X X X X X X X X X	-	-	-
	Terns		X X X X X X X X X X	-	-	-
70	Black-bellied plover	100S	X X X X X X X X X X	-	MAR-MAY JUL-NOV	-
	Sanderling	100S	X X X X X X X X X X	-	APR-MAY AUG-AUG	-
	Shorebirds	100S	X X X X X X X X X X	-	-	-
	Wilson's plover		X X X X X X X X	-	-	-
71	American avocet		X X X X X X X X X X	-	MAR-APR JUL-NOV	-
	Black skimmer		X X X X X X X X X X X X	-	-	-
	Brown pelican		X X X X X X X X X X X X	-	-	-
	Dunlin		X X X X X X X X X X	-	-	-
	Gulls		X X X X X X X X X X X X	-	-	-
	Magnificent frigatebird		X X X X X X X X	-	-	-
	Reddish egret	T	X X X X X X X X X X X X	-	-	-
	Shorebirds	HIGH	X X X X X X X X X X X X	-	-	-
	Short-billed dowitcher		X X X X X X X X X X X X	-	MAR-MAY JUL-OCT	-
	Terns		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	-	-	-
	Western sandpiper		X X X X X X X X X X X X	-	FEB-MAY JUL-NOV	-
	Willet		X X X X X X X X X X X X	-	APR-APR AUG-AUG	-
72	American white pelican		X X X X X X X X X X	-	-	-
	Black skimmer		X X X X X X X X X X X X	-	-	-
	Brown pelican		X X X X X X X X X X X X	-	-	-
	Cormorants		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	-	-	-
	Northern harrier		X X X X X X X X X X	-	-	-
	Peregrine falcon	T	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	-	-	-
	Reddish egret	T	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	-	-	-
	Wading birds		X X X X X X X X X X X X	-	-	-
	Wilson's plover		X X X X X X X X	-	-	-
73	Redhead	100-7000 BIRDS	X X X X X X X X X X	-	-	-
74	Grebes		X X X X X X X X X X X X	-	-	-
	Loons		X X X X X X X X X X	-	-	-
	Marsh birds		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	-	-	-
	Wading birds		X X X X X X X X X X X X	-	-	-
	Waterfowl		X X X X X X X X X X X X	-	-	-
80	Piping plover	T T 3 INDIV	X X X X X X X X X X X X	-	-	-
81	Piping plover	T T 4 INDIV	X X X X X X X X X X X X	-	-	-
171	American avocet	1000S	X X X X X X X X X X X X	-	MAR-APR JUL-NOV	-
	American oystercatcher	PRESENT	X X X X X X X X X X X X	-	-	-
	American white pelican		X X X X X X X X X X X X	-	-	-
	Black skimmer	100S	X X X X X X X X X X X X	-	-	-
	Black-bellied plover	100S	X X X X X X X X X X X X	-	MAR-MAY JUL-NOV	-
	Black-necked stilt		X X X X X X X X X X X X	-	-	-
	Brown pelican		X X X X X X X X X X X X	-	-	-
	Clapper rail		X X X X X X X X X X X X	-	FEB-SEP	-
	Cormorants		X X X X X X X X X X X X	-	-	-
	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	-	-	-
	Dowitchers	1000S	X X X X X X X X X X X X	-	MAR-MAY JUL-NOV	-
	Dunlin	1000S	X X X X X X X X X X X X	-	-	-
	Forster's tern		X X X X X X X X X X X X	-	-	-
	Grebes		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	-	-	-
	Killdeer	10S	X X X X X X X X X X X X	-	DEC-MAR	-
	Least tern		X X X X X X X X X X	-	-	-
	Long-billed curlew	PRESENT	X X X X X X X X X X X X	-	FEB-APR JUN-NOV	-
	Loons		X X X X X X X X X X X X	-	-	-
	Marbled godwit	100S	X X X X X X X X X X X X	-	MAR-APR JUL-NOV	-
	Marsh birds		X X X X X X X X X X X X	-	-	-
	Northern harrier		X X X X X X X X X X X X	-	-	-
	Peregrine falcon	T	X X X X X X X X X X X X	-	-	-
	Piping plover	T T 275 INDIV	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	-	-	-
	Red knot		X X X X X X X X X X	-	-	-
	Reddish egret	T PRESENT	X X X X X X X X X X X X	-	-	-
	Ruddy turnstone	PRESENT	X X X X X X X X X X X X	-	-	-
	Sanderling	100S	X X X X X X X X X X X X	-	APR-MAY AUG-AUG	-
	Seaside sparrow		X X X X X X X X X X X X	-	MAR-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.

Upper Texas Coast: ESIMAP 40 (cont.)

BIOLOGICAL RESOURCES: (cont.)

BIRD: (cont.)

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Nesting	Migrating	Molting
171	Shorebirds	10000S	X X X X X X X X X X X	-	-	-
	Terns		X X X X X X X X X X X	-	-	-
	Wading birds		X X X X X X X X X X X	-	-	-
	Western sandpiper	1000S	X X X X X X X X X X X	-	FEB-MAY	-
					JUL-NOV	
	Willet	100S	X X X X X X X X X X X	-	APR-APR	-
					AUG-AUG	
	Wilson's plover		X X X X X X X	-	-	-
	Yellowlegs	100S	X X X X X X X X X X X	-	MAR-MAY	-
					JUL-NOV	
220	Least tern	9-115 PAIRS	X X X X X X X X X	APR-SEP	-	-

FISH:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Spawning	Eggs	Larvae	Juveniles	Adults
164	Atlantic sharpnose shark		X X X X X X X X	-	-	-	APR-OCT	-
172	Blennies		X X X X X X X X X X X	-	-	-	-	-
	Sheepshead		X X X X X X X X X X X	FEB-APR	-	-	-	JAN-DEC
174	Bonnethead shark		X X X X X X X X	-	SEP-NOV	-	FEB-MAR	-
							NOV-DEC	
	Tarpon	RARE	X X X X X X	-	-	-	-	JUN-OCT
175	Bonnethead shark		X X X X X X X X	-	SEP-NOV	-	APR-NOV	-
178	Bull shark	ABUNDANT	X X X X X X X X X X X	-	MAY-AUG	MAY-AUG	APR-NOV	JAN-DEC
180	Blacktip shark		X X X X X X X X X X X	-	-	-	MAR-DEC	MAR-DEC
181	Blacktip shark		X X X X X X X X X X X	MAY-JUN	MAY-JUN	MAY-NOV	MAR-NOV	MAY-JUN
265	Atlantic bumper		X X X X X X X X	-	-	-	-	MAY-NOV
	Atlantic croaker	HIGHLY ABUNDANT	X X X X X X X X X X X	AUG-APR	-	-	APR-NOV	JAN-DEC
	Atlantic spadefish		X X X X X X X X X X X	-	-	-	APR-NOV	JAN-DEC
	Atlantic tripletail		X X X X X X X X X X X	-	-	-	-	-
	Banded drum		X X X X X X	-	-	-	-	-
	Bay anchovy		X X X X X X X X X X X	MAR-NOV	MAR-NOV	MAR-NOV	JAN-DEC	JAN-DEC
	Black drum		X X X X X X X X X X X	FEB-JUL	-	MAR-JUL	AUG-JAN	JAN-DEC
	Blackfin tuna		X X X X X X	-	-	-	-	MAY-OCT
	Cobia		X X X X	-	-	-	-	-
	Crevalle jack		X X X X X X X X X X X	-	-	MAR-NOV	-	JAN-DEC
	Florida pompano		X X X X X X X X X X X	-	-	MAY-AUG	MAY-DEC	JAN-DEC
	Gafftopsail catfish		X X X X X X	-	-	-	-	-
	Gray snapper		X X X X X X X X X X X	-	-	APR-NOV	JAN-DEC	JAN-DEC
	Gray triggerfish	ABUNDANT	X X X X X X X X X X X	-	-	-	-	JAN-DEC
	Greater amberjack		X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Gulf butterfish	HIGHLY ABUNDANT	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Gulf menhaden		X X X X X X X X	JUL-OCT	-	-	-	MAR-OCT
	Hardhead catfish		X X X X X X X X X X X	MAY-SEP	-	-	-	JAN-DEC
	King mackerel		X X X X X X	-	-	-	-	MAY-OCT
	Lane snapper		X X X X X X X X X X X	-	-	-	-	-
	Pinfish		X X X X X X X X X X X	AUG-APR	-	-	-	JAN-DEC
	Red drum		X X X X X X X X X X X	AUG-OCT	-	-	-	JAN-DEC
	Red snapper		X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Sand seatrout	ABUNDANT	X X X X X X X X X X X	MAR-SEP	MAR-SEP	MAR-SEP	-	SEP-FEB
	Sheepshead		X X X X X X X X X X X	-	-	JAN-MAY	-	JAN-DEC
	Silver perch	HIGHLY ABUNDANT	X X X X X	-	-	-	-	DEC-FEB
	Silver seatrout		X X X X X X X X X X X	-	-	-	-	-
	Southern flounder		X X X X X X X X	SEP-FEB	-	-	OCT-DEC	SEP-FEB
	Southern kingfish		X X X X X X	-	-	-	-	JUN-OCT
	Spanish mackerel	ABUNDANT	X X X X X X X X X X	MAY-SEP	MAY-SEP	-	MAR-NOV	MAR-NOV
	Spot		X X X X X X X X X X	DEC-APR	-	-	-	DEC-SEP
	Spotted seatrout		X X X X X X X X	-	-	-	-	SEP-FEB
	Star drum	COMMON	X X X X X X X X X X X	-	-	-	-	JAN-DEC
266	Tarpon	RARE	X X X X X X X X	-	-	-	MAR-NOV	-
268	Striped mullet	ABUNDANT	X X X X X X X X X	OCT-DEC	-	-	-	SEP-FEB
269	Striped mullet	HIGHLY ABUNDANT	X X X X X X X	-	-	-	-	MAY-NOV
281	Atlantic bumper	ABUNDANT	X X X X X	-	-	-	-	JUN-OCT
	Atlantic spadefish	RARE	X X X X X	-	-	-	AUG-SEP	-
	Bay anchovy	HIGHLY ABUNDANT	X X X X X X X X X X X	MAR-NOV	MAR-NOV	MAR-NOV	JAN-DEC	JAN-DEC
	Bay whiff	COMMON	X X X X X X X X X X X	-	-	-	APR-MAY	JAN-DEC
	Crevalle jack	COMMON	X X X X X X X X X	-	-	-	MAR-NOV	SEP-NOV
	Gafftopsail catfish	COMMON	X X X X X X X	APR-MAY	-	-	APR-OCT	APR-OCT
	Gizzard shad	RARE	X X X X X X X X X X X	-	-	-	-	JAN-DEC
	Gulf butterfish	RARE	X X X X X X	-	-	-	-	-
	Gulf killifish	COMMON	X X X X X X X X X X X	MAR-SEP	MAR-SEP	MAR-OCT	JAN-DEC	JAN-DEC
	Gulf menhaden	HIGHLY ABUNDANT	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Hardhead catfish	ABUNDANT	X X X X X X X X X X X	MAY-AUG	MAY-SEP	MAY-SEP	MAY-OCT	JAN-DEC
	Pinfish	COMMON	X X X X X X X X X X X	-	-	-	FEB-OCT	JUN-FEB
	Sand seatrout	COMMON	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Sheepshead	COMMON	X X X X X X X X X X X	-	-	-	DEC-MAR	JAN-DEC
	Silver perch	COMMON	X X X X X X X X X X X	MAY-SEP	MAY-SEP	MAY-SEP	MAR-JUN	JAN-DEC
							OCT-DEC	
	Silversides	COMMON	X X X X X X X X X X X	MAR-AUG	MAR-AUG	MAR-AUG	JAN-DEC	JAN-DEC
	Southern kingfish	COMMON	X X X X X X X X X	-	-	-	APR-NOV	-
	Spanish mackerel	COMMON	X X X X X X X X X	-	-	-	APR-NOV	APR-NOV
	Spotfin mojarra	RARE	X X X X X	-	-	-	-	-
	Striped mullet	COMMON	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	White mullet	ABUNDANT	X X X X X X X	-	-	-	MAY-OCT	-
311	Finetooth shark		X X X X X X	-	MAY-JUN	MAY-OCT	-	MAY-JUN
365	Atlantic croaker	HIGHLY ABUNDANT	X X X X X X X X X X X	-	DEC-APR	DEC-APR	DEC-APR	APR-NOV
	Black drum	COMMON	X X X X X X X X X X X	FEB-JUL	-	MAR-JUL	AUG-JAN	JAN-DEC
	Red drum	COMMON	X X X X X X X X X X X	-	-	SEP-NOV	-	JAN-DEC
	Southern flounder	ABUNDANT	X X X X X X X X	-	-	-	-	OCT-NOV
	Spot	HIGHLY ABUNDANT	X X X X X X X X X X X	-	-	FEB-JUN	FEB-JUN	JAN-DEC
	Spotted seatrout	COMMON	X X X X X X X X X X X	FEB-OCT	FEB-OCT	-	-	JAN-DEC
369	Spinner shark		X X X X X X	MAY-JUN	MAY-JUN	MAY-JUL	MAY-OCT	MAY-OCT

INVERTEBRATE:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Spawning	Eggs	Larvae	Juveniles	Adults
166	Atlantic ghost crab		X X X X X X X X X X X	APR-APR	-	-	-	JAN-DEC
	Atlantic surfclam		X X X X X X X X X X X	AUG-AUG	-	-	-	JAN-DEC
				MAR-MAY				
	Lettered olive		X X X X X X X X X X X	SEP-NOV	-	-	-	-
	Mole crab		X X X X X X X X X X X	-	-	-	-	JAN-DEC
	Speckled swimming crab	COMMON	X X X X X X X X X X X	APR-MAY	-	-	-	-
265	Atlantic seabob shrimp		X X X X X X X X X	-	-	-	-	OCT-JAN
	Blue crab	ABUNDANT	X X X X X X X X X X X	-	-	JAN-DEC	-	-
	Brief squid		X X X X X X X X X X X	MAR-DEC	MAR-DEC	MAR-DEC	JAN-DEC	JAN-DEC
	Brown shrimp		X X X X X X X X	-	-	-	-	MAR-OCT
	Lesser blue crab		X X X X X X X X X X X	-	-	MAR-DEC	-	-
	White shrimp	ABUNDANT	X X X X X X X X X X X	MAR-SEP	-	-	-	JAN-DEC
281	Atlantic seabob shrimp	RARE	X X X X X X X	-	-	-	-	JUN-SEP
	Blue crab	ABUNDANT	X X X X X X X X X X X	MAR-OCT	MAR-OCT	MAR-NOV	JAN-DEC	JAN-DEC

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.

Upper Texas Coast: 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
281	Brief squid	ABUNDANT	X X X X X X X X X X X	MAR-DEC	MAR-DEC	MAR-DEC	JAN-DEC	JAN-DEC
	Grass shrimp	ABUNDANT	X X X X X X X X X X X	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC
	Gulf stone crab	RARE	X X X X X X X X X X X	NOV-MAR	MAR-NOV	MAR-DEC	JAN-DEC	JAN-DEC
	Lesser blue crab	ABUNDANT	X X X X X X X X	-	-	-	APR-NOV	APR-NOV
365	Brown shrimp	ABUNDANT	X X X X X X X X	-	-	FEB-APR	-	MAR-OCT
	White shrimp	ABUNDANT	X X X X X X X	-	-	MAY-NOV	-	-

MARINE MAMMAL:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Mating	Calving	Pupping	Molting
168	Bottlenose dolphin	HIGH	X X X X X X X X X X X	-	JAN-DEC	-	-
170	Bottlenose dolphin		X X X X X X X X X X X	-	JAN-DEC	-	-
339	West Indian manatee	E E VERY RARE	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
70	Kemp's ridley sea turtle	E E 7-15 NESTS	X X X X X X X	MAR-JUL	APR-SEP	-	APR-SEP	MAR-JUL
332	Green sea turtle	T T OCCASIONAL	X X X X X X X X	-	-	-	MAR-NOV	-
	Hawksbill sea turtle	E E OCCASIONAL	X X X X X X X X	-	-	-	MAR-OCT	-
	Kemp's ridley sea turtle	E E COMMON	X X X X X X X X	-	-	-	APR-NOV	APR-NOV
	Loggerhead sea turtle	T T OCCASIONAL	X X X X X X X X X X X	-	-	-	JAN-DEC	-
333	Kemp's ridley sea turtle	E E 0-6 NESTS	X X X X X X X	MAR-JUL	APR-SEP	-	APR-SEP	MAR-JUL
	Loggerhead sea turtle	T T 0-1 NEST	X X X X X X X X	APR-SEP	MAY-OCT	-	MAY-OCT	APR-SEP

TERRESTRIAL MAMMAL:

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

HUMAN USE RESOURCES:

CRITICAL HABITAT:

HUN#	Name	Contact	Phone
141	PIPING PLOVER CRITICAL HABITAT	USFWS	

HELIPORT:

HUN#	Name	Contact	Phone
163	GALVESTONIAN		

MANAGEMENT AREA:

HUN#	Name	Contact	Phone
232	BOLIVAR FLATS	HOUSTON AUDUBON (RICAHRD GIBBONS)	713/932-1639