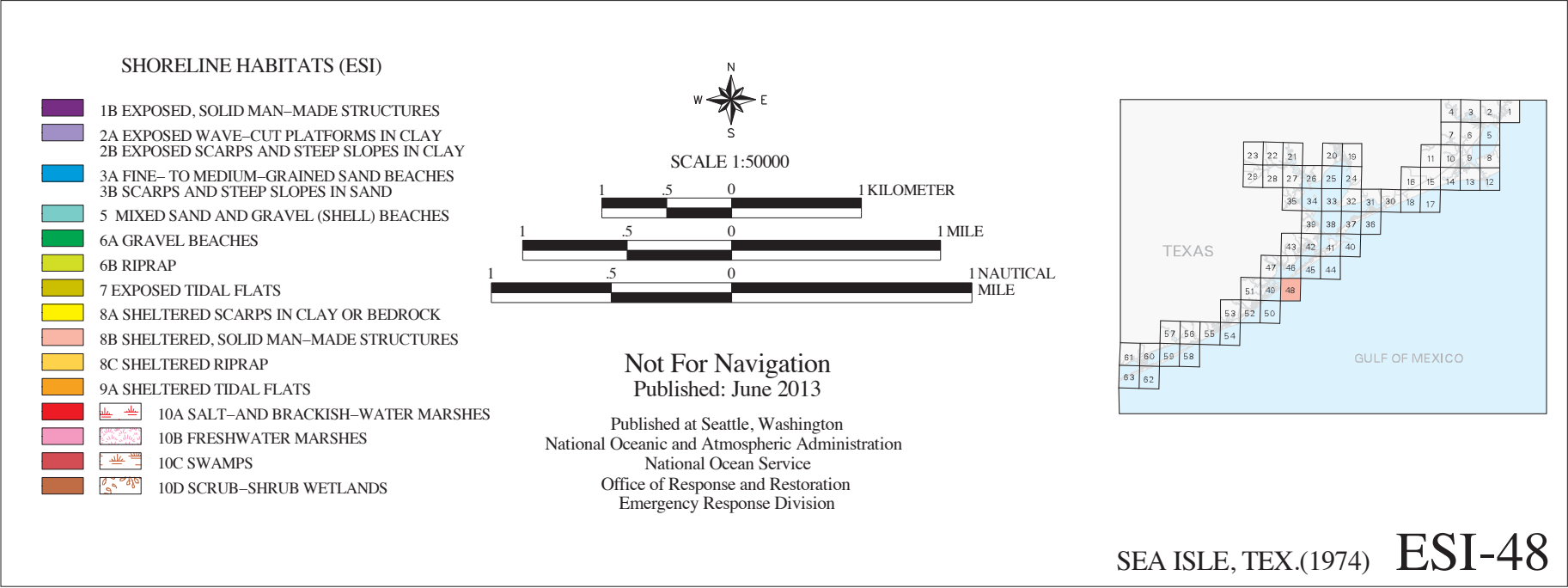
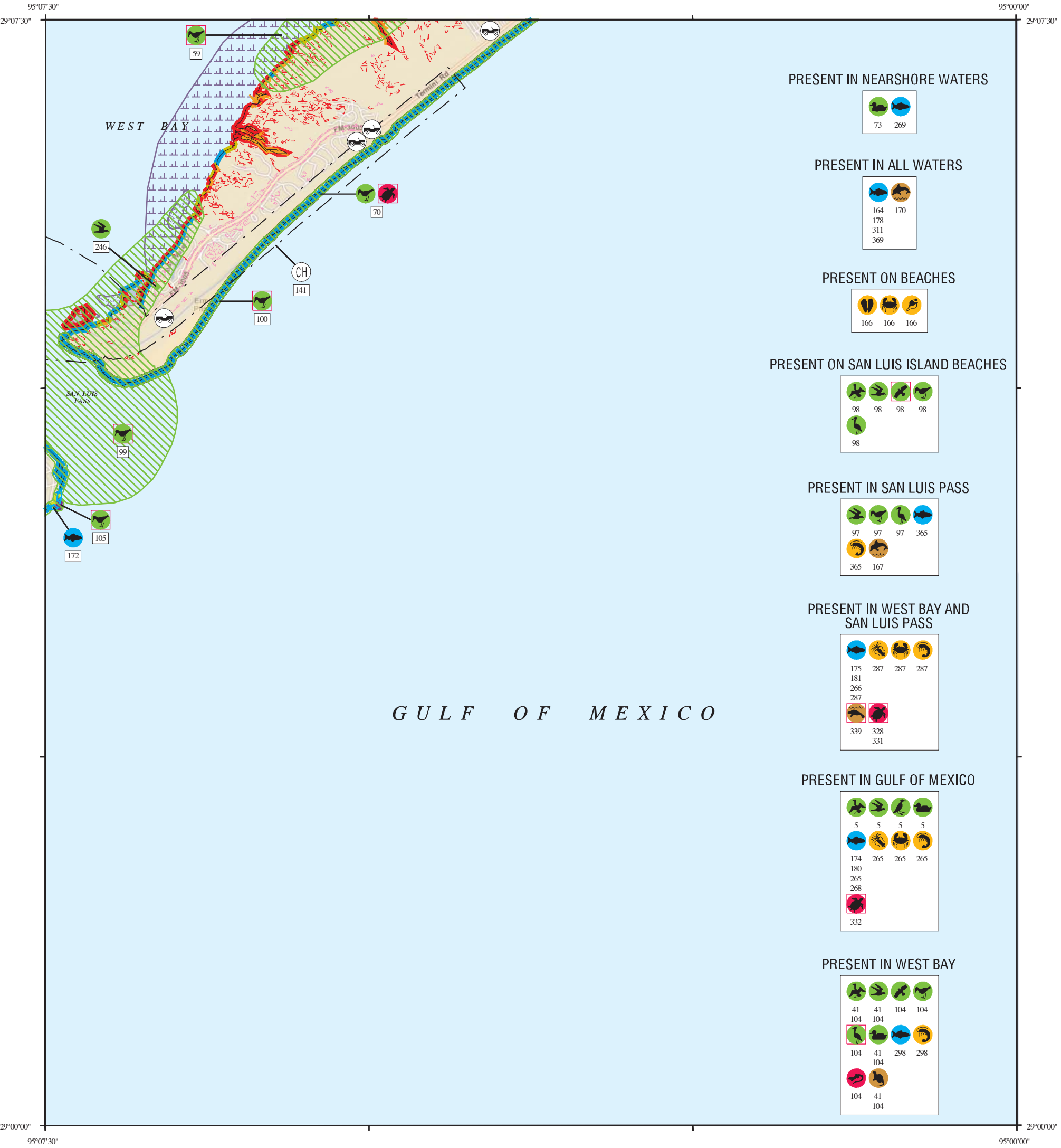


ENVIRONMENTAL SENSITIVITY INDEX MAP



Upper Texas Coast: ESIMAP 48

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 X	-	-	-
	Canvasback	UNCOMMON	X 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	-	-	-
	Scoters	RARE	X X X X X X X	-	-	-
	Shearwaters	UNCOMMON	X X X X X X X	-	-	-
	Storm-petrels	RARE	X X X X X X	-	-	-
	Terns	COMMON-ABUNDANT	X X 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	-	-	-
59	Piping plover	T T 3 INDIV	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	-	-	-
73	Redhead	100-7000 BIRDS	X X X X X X X X	-	-	-
97	Least tern		X X X X X X X X	-	-	-
	Roseate spoonbill		X X X X X X X X X X	-	-	-
	Snowy plover		X X X X X X X X X X	-	-	-
98	Brown pelican		X X X X X X X X X X	-	-	-
	Least tern		X X X X X X X X	-	-	-
	Peregrine falcon	T	X X X X X X X X X	-	-	-
	Shorebirds		X X X X X X X X X X	-	-	-
	Snowy plover		X X X X X X X X X X	FEB-AUG	-	-
	Wading birds		X X X X X X X X X X	-	-	-
	Wilson's plover		X X X X X X X	APR-JUL	-	-
99	Piping plover	T T 70 INDIV	X X X X X X X X X X	-	-	-
100	Piping plover	T T 41 INDIV	X X X X X X X X X X	-	-	-
104	American avocet	100S	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	-	-	-
	American white pelican		X X X X X X X X	-	-	-
	Black skimmer	100S	X X X X X X X X X X	-	-	-
	Black-bellied plover	100S	X X X X X X X X X X	-	MAR-MAY JUL-NOV	-
	Dabbling ducks		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	-	-	-
	Dowitchers	1000S	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	-	-	-
	Gulls		X X X X X X X X X X	-	-	-
	Killdeer	10S	X X X X X X X X X X	-	DEC-MAR	-
	Long-billed curlew	PRESENT	X X X X X X X X X X	-	FEB-APR	-
	Marbled godwit	100S	X X X X X X X X X X	-	JUN-NOV MAR-APR JUL-NOV	-
	Marsh birds		X X X X X X X X X X	-	-	-
	Raptors		X X X X X X X X X X	-	-	-
	Reddish egret	T PRESENT	X X X X X X X X X X	-	-	-
	Redhead		X X X X X X X	-	-	-
	Ruddy turnstone	PRESENT	X X X X X X X X X X	-	-	-
	Shorebirds	1000S	X X X X X X X X X X	-	-	-
	Terns		X X X X X X X X X X	-	-	-
	Wading birds		X X X X X X X X X X	-	-	-
	Waterfowl		X X X X X X X X X X	-	-	-
	Western sandpiper	1000S	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	-	APR-APR AUG-AUG	-
	Yellowlegs	100S	X X X X X X X X X X	-	MAR-MAY JUL-NOV	-
105	Piping plover	T T 54 INDIV	X X X X X X X X X X	-	-	-
246	Black skimmer	55-192 PAIRS	X X X X X X X X X X	APR-SEP	-	-
	Forster's tern	18 PAIRS	X X X X X X X X X X	MAR-AUG	-	-
	Laughing gull	140-800 PAIRS	X X X X X X X X X X	FEB-AUG	-	-

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	-	-	-	APR-OCT	-
172	Blennies		X X X X X X X X X X	-	-	-	-	-
	Sheepshead		X X X X X X X X X X	FEB-APR	-	-	-	JAN-DEC
174	Bonnethead shark		X X X X X X X	-	SEP-NOV	-	FEB-MAR NOV-DEC	-
	Tarpon	RARE	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	-	MAY-AUG	MAY-AUG	APR-NOV	JAN-DEC
180	Blacktip shark		X X X X X X X X	-	-	-	MAR-DEC	MAR-DEC
181	Blacktip shark		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	-	-	-	-	MAY-NOV
	Atlantic croaker	HIGHLY ABUNDANT	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	-	-	-	APR-NOV	JAN-DEC
	Atlantic tripletail		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	MAR-NOV	MAR-NOV	MAR-NOV	JAN-DEC	JAN-DEC
	Black drum		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	-	-	-	-	MAY-OCT
	Cobia		X X X X	-	-	-	-	-
	Crevalle jack		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	-	-	MAY-AUG	MAY-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 48 (cont.)

BIOLOGICAL RESOURCES: (cont.)

FISH: (cont.)

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Spawning	Eggs	Larvae	Juveniles	Adults
265	Gafftopsail catfish							
	Gray snapper							
	Gray triggerfish	ABUNDANT				APR-NOV	JAN-DEC	JAN-DEC
	Greater amberjack						JAN-DEC	JAN-DEC
	Gulf butterflyfish	HIGHLY ABUNDANT					JAN-DEC	JAN-DEC
	Gulf menhaden				JUL-OCT			MAR-OCT
	Hardhead catfish				MAY-SEP			JAN-DEC
	King mackerel							MAY-OCT
	Lane snapper							
	Pinfish				AUG-APR			JAN-DEC
	Red drum				AUG-OCT			JAN-DEC
	Red snapper							
	Sand seatrout	ABUNDANT			MAR-SEP	MAR-SEP	MAR-SEP	SEP-FEB
	Sheepshead					JAN-MAY		JAN-DEC
	Silver perch	HIGHLY ABUNDANT						DEC-FEB
	Silver seatrout							
	Southern flounder				SEP-FEB		OCT-DEC	SEP-FEB
	Southern kingfish							JUN-OCT
	Spanish mackerel	ABUNDANT			MAY-SEP	MAY-SEP	MAR-NOV	MAR-NOV
	Spot				DEC-APR			DEC-SEP
	Spotted seatrout							SEP-FEB
	Star drum	COMMON						JAN-DEC
266	Tarpon	RARE					MAR-NOV	
268	Striped mullet	ABUNDANT			OCT-DEC			SEP-FEB
269	Striped mullet	HIGHLY ABUNDANT						MAY-NOV
287	Atlantic bumper	COMMON						SEP-SEP
	Atlantic spadefish	RARE					JUL-NOV	
	Bay anchovy	ABUNDANT			MAR-NOV	MAR-NOV	MAR-NOV	APR-NOV
	Bay whiff	COMMON					MAR-SEP	JAN-DEC
	Crevalle jack	COMMON					MAR-NOV	
	Gafftopsail catfish	COMMON			APR-MAY		APR-NOV	MAR-NOV
	Gizzard shad	RARE						JAN-DEC
	Gray snapper	COMMON					AUG-OCT	JAN-DEC
	Gulf butterflyfish	RARE						
	Gulf killifish	ABUNDANT			MAR-SEP	MAR-SEP	MAR-OCT	JAN-DEC
	Gulf menhaden	ABUNDANT					JAN-DEC	FEB-DEC
	Hardhead catfish	ABUNDANT			MAY-AUG	MAY-SEP	MAY-SEP	MAY-OCT
	Pinfish	ABUNDANT					MAR-NOV	JAN-DEC
	Sand seatrout	COMMON					JAN-DEC	JAN-DEC
	Sheepshead	ABUNDANT					NOV-AUG	JAN-DEC
	Silver perch	COMMON			MAY-SEP	MAY-SEP	MAY-SEP	FEB-DEC
	Silversides	ABUNDANT			MAR-AUG	MAR-AUG	MAR-AUG	JAN-DEC
	Southern kingfish	COMMON					JUL-NOV	
	Spanish mackerel	COMMON					MAY-NOV	MAY-NOV
	Spotfin mojarra	COMMON						
	Striped mullet	COMMON					JAN-DEC	JAN-DEC
	White mullet	COMMON					MAY-NOV	
298	Atlantic croaker	HIGHLY ABUNDANT					JAN-JUN	JAN-DEC
	Black drum	COMMON					JAN-DEC	JAN-DEC
	Red drum	COMMON					SEP-NOV	JAN-DEC
	Southern flounder	ABUNDANT					JAN-DEC	JAN-DEC
	Spot	HIGHLY ABUNDANT					FEB-NOV	JAN-DEC
	Spotted seatrout	COMMON			APR-OCT	APR-OCT	APR-OCT	JUL-NOV
311	Finetooth shark					MAY-JUN	MAY-OCT	
365	Atlantic croaker	HIGHLY ABUNDANT				DEC-APR	DEC-APR	DEC-APR
	Black drum	COMMON			FEB-JUL		MAR-JUL	AUG-JAN
	Red drum	COMMON					SEP-NOV	
	Southern flounder	ABUNDANT						OCT-NOV
	Spot	HIGHLY ABUNDANT					FEB-JUN	FEB-JUN
	Spotted seatrout	COMMON			FEB-OCT	FEB-OCT		JAN-DEC
369	Spinner shark				MAY-JUN	MAY-JUN	MAY-JUL	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				APR-APR			JAN-DEC
	Atlantic surfclam				AUG-AUG			
					MAR-MAY			JAN-DEC
					SEP-NOV			
	Lettered olive							
	Mole crab							
	Speckled swimming crab	COMMON			APR-MAY			JAN-DEC
265	Atlantic seabob shrimp							
	Blue crab	ABUNDANT						OCT-JAN
	Brief squid							
	Brown shrimp							
	Lesser blue crab							
	White shrimp	ABUNDANT						
287	Blue crab	ABUNDANT			MAR-SEP			JAN-DEC
	Brief squid	ABUNDANT			MAR-OCT	MAR-OCT	MAR-NOV	JAN-DEC
	Grass shrimp	ABUNDANT			MAR-DEC	MAR-DEC	MAR-DEC	JAN-DEC
	Gulf stone crab	COMMON			JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC
	Lesser blue crab	COMMON			NOV-MAR	MAR-NOV	MAR-DEC	JAN-DEC
								APR-OCT
298	Brown shrimp	ABUNDANT						
	White shrimp	ABUNDANT						
365	Brown shrimp	ABUNDANT						
	White shrimp	ABUNDANT						

MARINE MAMMAL:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Mating	Calving	Pupping	Molting
167	Bottlenose dolphin	HIGH					
170	Bottlenose dolphin				JAN-DEC		
339	West Indian manatee	E E VERY RARE					

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			MAR-JUL	APR-SEP		MAR-JUL
104	Gulf salt marsh snake				MAR-MAY	JUL-AUG		JAN-DEC
328	Diamondback terrapin				APR-MAY	JUN-SEP		JAN-DEC
	Green sea turtle	T T OCCASIONAL						MAR-NOV
331	Kemp's ridley sea turtle	E E COMMON						APR-NOV
332	Green sea turtle	T T OCCASIONAL						MAR-NOV
	Hawksbill sea turtle	E E OCCASIONAL						MAR-OCT
	Kemp's ridley sea turtle	E E COMMON						APR-NOV
	Loggerhead sea turtle	T T OCCASIONAL						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 48 (cont.)

BIOLOGICAL RESOURCES: (cont.)

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
104	Northern river otter		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	

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.