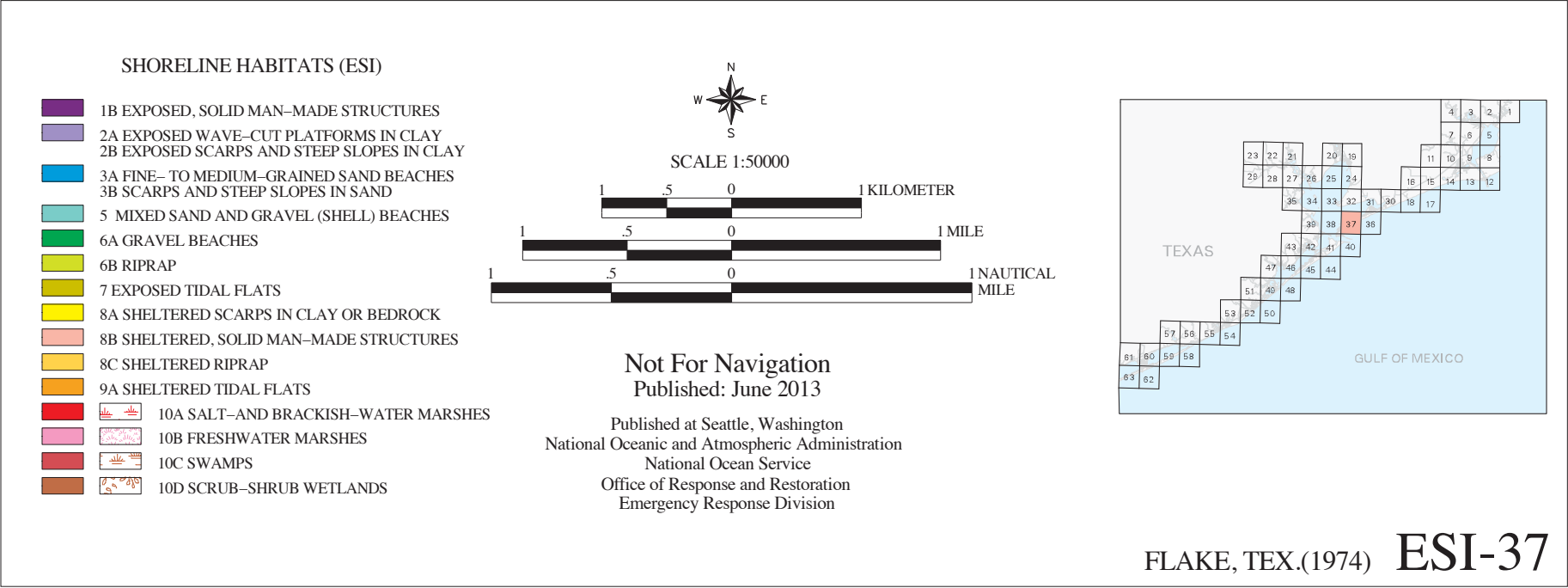
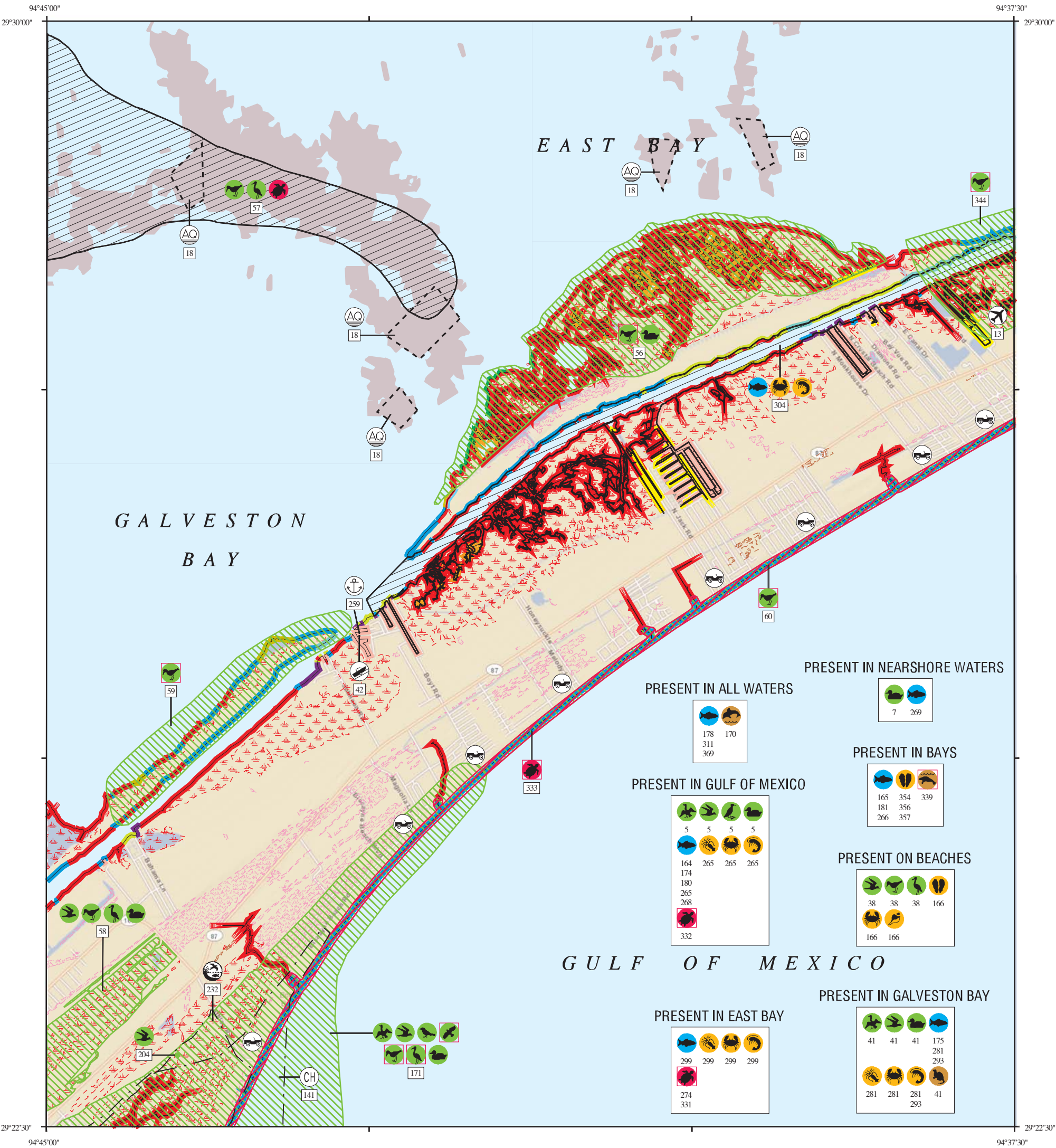


ENVIRONMENTAL SENSITIVITY INDEX MAP



Upper Texas Coast: ESIMAP 37

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	X	X	-	-	-
	Bufflehead	UNCOMMON	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	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		-	-	-
	Greater scaup	UNCOMMON	X	X	X								X	X	-	-	-
	Grebes	UNCOMMON	X	X	X	X	X			X	X	X	X		-	-	-
	Gulls	COMMON-ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Lesser scaup	COMMON	X	X	X	X					X	X	X		-	-	-
	Loons		X	X	X	X					X	X	X		-	-	-
	Magnificent frigatebird	COMMON					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	-	-	-
	Shearwaters	UNCOMMON								X	X	X	X		-	-	-
	Storm-petrels	RARE					X	X	X						-	-	-
	Terns	COMMON-ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
7	Redhead	0-300 BIRDS	X	X	X							X	X	X	-	-	-
38	Black-bellied plover		X	X	X	X	X	X	X	X	X	X	X	X	-	MAR-MAY JUL-NOV	-
	Red knot				X	X	X			X	X	X	X		-	-	-
	Ruddy turnstone		X	X	X	X	X			X	X	X	X	X	-	-	-
	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	-	-	-
	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					APR-JUL	-	-
41	Black skimmer		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	-	-	-
	Diving birds		X	X	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		-	-	-
	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Loons		X	X	X	X					X	X	X		-	-	-
	Pelicans		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	-	-	-
56	Piping plover	T T HIGH	X	X	X	X	X			X	X	X	X	X	-	-	-
	Shorebirds	HIGH	X	X	X	X	X			X	X	X	X	X	-	-	-
	Waterfowl		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
57	Shorebirds		X	X	X	X	X			X	X	X	X	X	-	-	-
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
58	Gulls		X	X	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	-	-	-
	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	-	-	-
	Waterfowl		X	X	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	-	-	-
60	Piping plover	T T 16 INDIV	X	X	X	X	X			X	X	X	X	X	-	-	-
171	American avocet	1000S	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		-	-	-
	Black skimmer	100S	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		-	-	-
	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		-	-	-
	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		-	-	-
	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		-	-	-
	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				-	-	-
	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		-	-	-
	Marbled godwit	100S	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		-	-	-
	Peregrine falcon	T	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	-	-	-
	Raptors		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Red knot				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	-	-	-
	Sanderling	100S	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	-	-
	Shorebirds	10000S	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	-	-	-
	Western sandpiper	1000S	X	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	X	-	APR-APR AUG-AUG	-
	Wilson's plover				X	X	X	X	X	X					-	-	-
	Yellowlegs	100S	X	X	X	X	X			X	X	X	X	X	-	MAR-MAY JUL-NOV	-
204	Least tern	14-91 PAIRS			X	X	X	X	X	X	X				APR-SEP	-	-
344	Piping plover	T T	X	X	X	X	X			X	X	X	X	X	-	-	-

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	-
165	Atlantic sharpnose shark				X	X	X	X	X	X	X				JUN-JUN	MAY-JUN	JUN-OCT	-	APR-OCT
174	Bonnethead shark		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				-	SEP-NOV	-	APR-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.



Upper Texas Coast: ESIMAP 37 (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
304	Sheepshead	COMMON	X X X X X X X X X X X	-	-	-	JUN-JUN DEC-MAR	JAN-DEC
	Silver perch	RARE	X X X X X X X X X X X	MAY-SEP	MAY-SEP	MAY-SEP	SEP-NOV	JAN-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 flounder	COMMON	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Spot	HIGHLY ABUNDANT	X X X X X X X X X X X	-	-	-	JAN-DEC	NOV-JUN
	Spotted seatrout	COMMON	X X X X X X X X X X X	APR-OCT	APR-OCT	APR-OCT	SEP-NOV	JAN-DEC
	Striped mullet	COMMON	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
311	Finetooth shark		X X X X X X	-	MAY-JUN	MAY-OCT	-	MAY-JUN
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 AUG-AUG	-	-	-	JAN-DEC
	Atlantic surfclam		X X X X X X X X X X X	MAR-MAY SEP-NOV	-	-	-	JAN-DEC
	Lettered olive		X X X X X X X X X X X	-	-	-	-	-
	Mole crab		X X X X X X X X X X X	APR-MAY	-	-	-	JAN-DEC
	Speckled swimming crab	COMMON	X X X X X X X X X X X	-	-	-	-	-
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 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	-	-	-	-	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
	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 X	-	-	-	APR-NOV	APR-NOV
293	Brown shrimp	ABUNDANT	X X X X X X X X X X X	-	-	FEB-APR	APR-DEC	-
	White shrimp	ABUNDANT	X X X X X X X X X X X	-	-	JUN-OCT	JUN-DEC	JAN-DEC
299	Atlantic seabob shrimp	RARE	X X	-	-	-	-	SEP-OCT
	Blue crab	HIGHLY ABUNDANT	X X X X X X X X X X X	MAR-OCT	MAR-OCT	MAR-NOV	JAN-DEC	JAN-DEC
	Brief squid	COMMON	X X X X X X X X X X X	MAR-DEC	MAR-DEC	MAR-DEC	MAR-DEC	MAR-DEC
	Brown shrimp	ABUNDANT	X X X X X X X X X	-	-	FEB-APR	APR-NOV	-
	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	-	-	-	JAN-DEC	JAN-DEC
	Lesser blue crab	COMMON	X X X X X X X X X	-	-	-	APR-OCT	APR-NOV
	White shrimp	HIGHLY ABUNDANT	X X X X X X X X X X X	-	-	MAY-OCT	MAY-DEC	JAN-DEC
304	Blue crab	HIGHLY ABUNDANT	X X X X X X X X X X X	MAR-OCT	MAR-OCT	MAR-NOV	JAN-DEC	JAN-DEC
	Brown shrimp	ABUNDANT	X X X X X X X X X X	-	-	FEB-APR	APR-NOV	-
	Gulf stone crab	RARE	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Lesser blue crab	ABUNDANT	X X X X X X X X X	-	-	-	SEP-NOV	-
	White shrimp	ABUNDANT	X X X X X X X X X X X	-	-	MAY-OCT	MAY-DEC	JAN-DEC
354	Eastern oyster	LOW	X X X X X X X X X X X	MAR-DEC	MAR-DEC	-	-	JAN-DEC
356	Eastern oyster	UNCONSOLIDATED	X X X X X X X X X X X	MAR-DEC	MAR-DEC	-	-	JAN-DEC
357	Eastern oyster	REEF	X X X X X X X X X X X	MAR-DEC	MAR-DEC	-	-	JAN-DEC

MARINE MAMMAL:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Mating	Calving	Pupping	Molting
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	Internesting	Juveniles	Adults
57	Diamondback terrapin		X X X X X X X X X X X	APR-MAY	JUN-SEP	-	JAN-DEC	JAN-DEC
274	Diamondback terrapin		X X X X X X X X X X X	APR-MAY	JUN-SEP	-	JAN-DEC	JAN-DEC
331	Kemp's ridley sea turtle	E E COMMON	X X X X X X X X	-	-	-	APR-NOV	-
332	Green sea turtle	T T OCCASIONAL	X 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:

AIRPORT:

HUN#	Name	Contact	Phone
13	SEAFOOD WAREHOUSE PARK		

AQUACULTURE:

HUN#	Name	Contact	Phone
18	OYSTER LEASES		

BOAT RAMP:

HUN#	Name	Contact	Phone
42	BOLIVAR YACHT BASIN		

CRITICAL HABITAT:

HUN#	Name	Contact	Phone
141	PIPING PLOVER CRITICAL HABITAT	USFWS	

MANAGEMENT AREA:

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

MARINA:

HUN#	Name	Contact	Phone
259	BOLIVAR YACHT BASIN	ADRIAN VAN LUZEN	409/687-7777

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