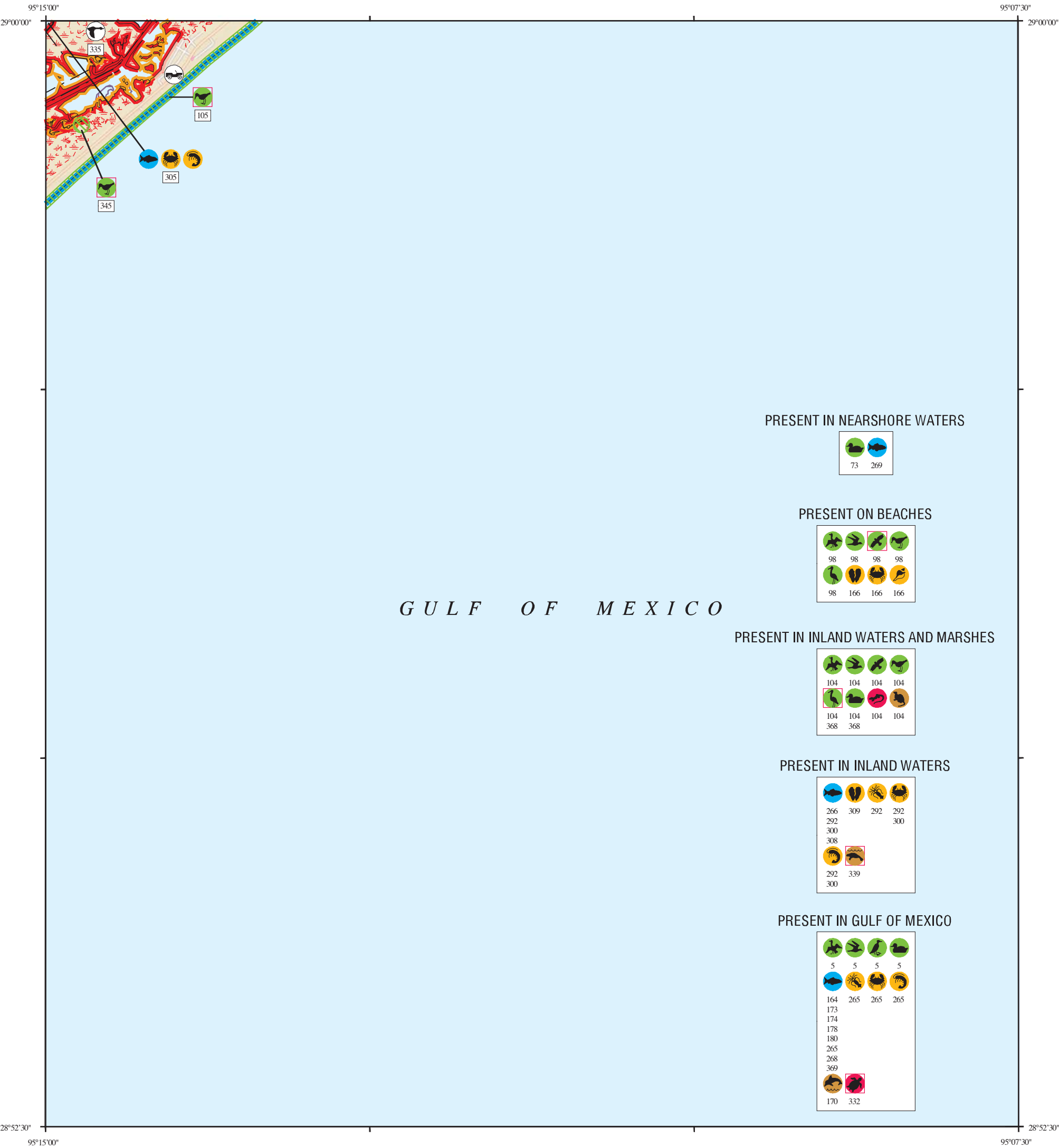


ENVIRONMENTAL SENSITIVITY INDEX MAP



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

N

W

E

S

SCALE 1:50000

1 .5 0 1 KILOMETER

1 .5 0 1 MILE

1 .5 0 1 NAUTICAL MILE

Not For Navigation

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National Ocean Service

Office of Response and Restoration

Emergency Response Division

TEXAS

GULF OF MEXICO

23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

CHRISTMAS POINT OE S, TEX.(1977)

ESI-50

Upper Texas Coast: ESIMAP 50

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	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	-	-	-
	Loons			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	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	-	-	-
73	Redhead		100-7000 BIRDS	X	X	X								X	X	-	-	-
98	Brown pelican			X	X	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	X	X	FEB-AUG	-	-
	Wading birds			X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Wilson's plover					X	X	X	X	X	X	X				APR-JUL	-	-
104	American avocet		100S	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	-	-	-
	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	-
	Dabbling ducks			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	-	-	-
	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	-	-	-
	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	-
	Long-billed curlew		PRESENT	X	X	X	X	X	X	X	X	X	X	X	X	-	FEB-APR JUN-NOV	-
	Marbled godwit		100S	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	-	-	-
	Raptors			X	X	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	-	-	-
	Redhead			X	X	X								X	X	-	-	-
	Ruddy turnstone		PRESENT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Shorebirds		1000S	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	-	-	-
	Waterfowl			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	-
	Yellowlegs		100S	X	X	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	X	X	-	-	-
345	Piping plover	T T	1 INDIV	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
368	American coot		100S	X	X	X	X					X	X	X	X	-	-	-
	American wigeon		100S	X	X	X						X	X	X	X	-	-	-
	Blue-winged teal		1000S	X	X	X	X	X			X	X	X	X	X	-	-	-
	Bufflehead		100S	X	X	X								X	X	-	-	-
	Canada goose		10S	X	X	X							X	X	X	-	-	-
	Canvasback		100S	X	X	X								X	X	-	-	-
	Gadwall		1000S	X	X	X	X					X	X	X	X	-	-	-
	Greater white-fronted goose		100S	X	X	X								X	X	-	-	-
	Green-winged teal		1000S	X	X	X	X					X	X	X	X	-	-	-
	Lesser scaup		100S	X	X	X	X							X	X	-	-	-
	Mallard		10S	X	X	X								X	X	-	-	-
	Mottled duck		10S	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	JUN-AUG
	Northern pintail		10S	X	X	X						X	X	X	X	-	-	-
	Northern shoveler		100S	X	X	X	X					X	X	X	X	-	-	-
	Redhead		10S	X	X	X								X	X	-	-	-
	Ruddy duck		100S	X	X	X								X	X	-	-	-
	Sandhill crane		PRESENT	X	X									X	X	-	-	-
	Snow goose		1000S	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	X			-	-	-	APR-OCT	-
173	Bonnethead shark				X	X	X	X	X	X	X	X	X	X	X	-	SEP-NOV	-	FEB-MAR NOV-DEC	FEB-DEC
	Tarpon		COMMON						X	X	X	X	X			-	-	-	-	JUN-OCT
174	Bonnethead shark				X	X						X	X	X	X	-	SEP-NOV	-	FEB-MAR NOV-DEC	-
	Tarpon		RARE						X	X	X	X	X			-	-	-	-	JUN-OCT
178	Bull shark		ABUNDANT	X	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
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	X	X	AUG-APR	-	-	APR-NOV	JAN-DEC
	Atlantic spadefish			X	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	X	-	-	-	-	-
	Banded drum				X	X	X	X	X							-	-	-	-	-
	Bay anchovy			X	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	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	X	-	-	MAR-NOV	-	JAN-DEC
	Florida pompano			X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAY-AUG	MAY-DEC	JAN-DEC
	Gafftopsail catfish							X	X	X	X					-	-	-	-	-
	Gray snapper			X	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	X	-	-	-	-	JAN-DEC
	Greater amberjack			X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Gulf butterflyfish		HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Gulf menhaden				X	X	X	X	X	X	X					JUL-OCT	-	-	-	MAR-OCT

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 50 (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	Hardhead catfish		X	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	X	-	-	-	-	-
	Pinfish		X	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	X	AUG-OCT	-	-	-	JAN-DEC
	Red snapper		X	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	X	MAR-SEP	MAR-SEP	MAR-SEP	-	SEP-FEB
	Sheepshead		X	X	X	X	X	X	X	X	X	X	X	X	-	-	JAN-MAY	-	JAN-DEC
	Silver perch	HIGHLY ABUNDANT	X	X									X		-	-	-	-	DEC-FEB
	Silver seatrout		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Southern flounder		X	X						X	X	X	X		SEP-FEB	-	-	OCT-DEC	SEP-FEB
	Southern kingfish								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		-	-	-	-	SEP-FEB
	Star drum	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
266	Tarpon	RARE			X	X	X	X	X	X	X	X	X		-	-	-	MAR-NOV	-
268	Striped mullet	ABUNDANT	X	X						X	X	X	X		OCT-DEC	-	-	-	SEP-FEB
269	Striped mullet	HIGHLY ABUNDANT					X	X	X	X	X	X	X		-	-	-	-	MAY-NOV
292	Atlantic bumper	RARE								X	X				-	-	-	-	SEP-OCT
	Atlantic croaker	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	JAN-JUN	JAN-DEC	JAN-DEC
	Atlantic spadefish	RARE						X	X	X	X	X			-	-	-	JUL-NOV	-
	Bay anchovy	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-NOV	MAR-NOV	MAR-NOV	MAR-NOV	JAN-DEC
	Bay whiff	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-OCT	JAN-DEC
	Black drum	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	APR-MAY	APR-MAY	JAN-DEC	JAN-DEC
	Crevalle jack	COMMON		X	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	X	-	-	-	-	JAN-DEC
	Gray snapper	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	AUG-OCT	JAN-DEC
	Gulf killifish	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-SEP	MAR-SEP	MAR-OCT	JAN-DEC	JAN-DEC
	Gulf menhaden	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	APR-NOV
	Hardhead catfish	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAY-AUG	MAY-SEP	MAY-SEP	MAY-SEP	JAN-DEC
	Pinfish	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	FEB-NOV	FEB-DEC
	Red drum	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	SEP-NOV	JAN-DEC	JAN-DEC
	Sand seatrout	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Sheepshead	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	NOV-SEP	JAN-DEC
	Silver perch	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	MAY-SEP	MAY-SEP	MAY-SEP	FEB-DEC	JAN-DEC
	Silversides	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	MAR-AUG	MAR-AUG	JAN-DEC	JAN-DEC
	Southern flounder	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Southern kingfish	RARE							X	X	X	X			-	-	-	JUL-OCT	-
	Spanish mackerel	RARE					X	X	X	X	X	X			-	-	-	MAY-OCT	MAY-OCT
	Spot	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	FEB-OCT	JAN-DEC
	Spotfin mojarra	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Spotted seatrout	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	APR-OCT	APR-OCT	APR-OCT	JUN-NOV	JAN-DEC
	Striped mullet	COMMON	X	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				-	-	-	APR-OCT	-
300	Alligator gar	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Atlantic croaker	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	JAN-JUN	JAN-DEC	JAN-DEC
	Bay anchovy	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	MAR-NOV	MAR-NOV	MAR-NOV	JAN-NOV	JAN-DEC
	Bay whiff	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	FEB-NOV	JAN-DEC
	Black drum		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Crevalle jack	COMMON					X	X	X						-	-	-	JUN-AUG	-
	Gafftopsail catfish	COMMON			X	X	X	X	X	X					APR-MAY	-	-	APR-SEP	APR-SEP
	Gizzard shad	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Gulf killifish	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-SEP	MAR-SEP	MAR-OCT	JAN-DEC	JAN-DEC
	Gulf menhaden	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	APR-OCT
	Hardhead catfish	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAY-AUG	MAY-SEP	MAY-SEP	APR-OCT	JAN-DEC
	Pinfish	COMMON			X	X	X	X	X	X					-	-	-	APR-OCT	APR-OCT
	Red drum	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Sand seatrout	COMMON	X	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	X	-	-	-	OCT-JUN	JAN-DEC
	Silversides	COMMON	X	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	X	-	-	-	JAN-DEC	JAN-DEC
	Southern kingfish	RARE					X	X	X	X	X	X			-	-	-	JUN-NOV	-
	Spot	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-OCT	JAN-DEC
	Spotfin mojarra	COMMON			X	X	X	X	X	X					-	-	-	-	-
	Spotted seatrout	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	MAR-OCT	MAR-OCT	MAR-OCT	SEP-NOV	JAN-DEC
	Striped mullet	COMMON	X	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	X	X	X	X	X	-	-	-	JAN-DEC	-
305	Atlantic croaker	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	JAN-JUN	JAN-DEC	JAN-DEC
	Atlantic spadefish	COMMON			X	X	X	X	X	X	X	X			-	-	-	MAY-DEC	-
	Bay anchovy	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	MAR-NOV	MAR-NOV	MAR-NOV	JAN-NOV	JAN-DEC
	Bay whiff	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Black drum	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Bull shark	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	MAY-AUG	MAY-AUG	APR-NOV	JAN-DEC
	Gafftopsail catfish	COMMON			X	X	X	X	X	X					APR-MAY	-	-	APR-OCT	APR-OCT
	Gray snapper	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	AUG-OCT	JAN-DEC
	Gulf menhaden	COMMON	X	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	X	MAY-AUG	MAY-SEP	MAY-SEP	MAY-OCT	JAN-DEC
	Pinfish	RARE			X	X	X	X	X	X	X				-	-	-	MAR-NOV	MAR-NOV
	Red drum	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	SEP-NOV	JAN-DEC	JAN-DEC
	Sand seatrout	COMMON	X	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	X	-	-	-	OCT-JUN	JAN-DEC
	Silver perch	RARE	X	X	X	X	X	X	X	X	X	X	X	X	MAY-SEP	MAY-SEP	MAY-SEP	OCT-FEB	JAN-DEC
	Southern flounder	COMMON	X	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	X	-	-	-	FEB-NOV	JAN-DEC
	Spotted seatrout	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	MAR-OCT	MAR-OCT	MAR-OCT	SEP-NOV	JAN-DEC
	Striped mullet	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
308	Red drum	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	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	X	APR-APR AUG-AUG	-	-	-	JAN-DEC
	Atlantic surfclam		X	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	X	-	-	-	-	-
	Mole crab		X	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	X	-	-	-	-	-
265	Atlantic seabob shrimp		X							X	X	X			-	-	-	-	OCT-JAN
	Blue crab	ABUNDANT	X	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	X	MAR-DEC	MAR-DEC	MAR-DEC	JAN-DEC	JAN-DEC
	Brown shrimp				X	X	X	X	X	X					-	-	-	-	MAR-OCT
	Lesser blue crab		X	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	X	MAR-SEP	-	-	-	JAN-DEC
292	Blue crab	ABUNDANT	X	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	X	MAR-DEC	MAR-DEC	MAR-DEC	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 50 (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
292	Brown shrimp	ABUNDANT	X X X X X X X X X X X	-	-	FEB-APR	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	COMMON	X X X X X X X X X X X	NOV-MAR	MAR-NOV	MAR-DEC	JAN-DEC	JAN-DEC
	Lesser blue crab	COMMON	X X X X X X X	-	-	-	APR-OCT	-
	White shrimp	ABUNDANT	X X X X X X X X	-	-	JUN-OCT	JUN-DEC	APR-DEC
300	Blue crab	ABUNDANT	X X X X X X X X X X X	MAY-NOV	MAY-NOV	MAY-DEC	JAN-DEC	JAN-DEC
	Brown shrimp	ABUNDANT	X X X X X X X X X	-	-	FEB-APR	APR-NOV	-
	Grass shrimp	COMMON	X X X X X X X X X X X	MAR-OCT	MAR-OCT	MAR-OCT	JAN-DEC	JAN-DEC
	Gulf stone crab	COMMON	X X X X X X X X X X X	NOV-MAR	MAR-NOV	MAR-DEC	JAN-DEC	JAN-DEC
	Lesser blue crab	COMMON	X X X X X X X	-	-	-	APR-NOV	-
	White shrimp	ABUNDANT	X X X X X X X X	-	-	JUN-OCT	JUN-DEC	MAY-JUN
305	Blue crab	HIGHLY ABUNDANT	X X X X X X X X X X X	MAY-NOV	MAY-NOV	MAY-DEC	JAN-DEC	JAN-DEC
	Brown shrimp	ABUNDANT	X X X X X X X X X X	-	-	FEB-APR	APR-DEC	-
	Gulf stone crab	COMMON	X X X X X X X X X X X	NOV-MAR	MAR-NOV	MAR-DEC	JAN-DEC	JAN-DEC
	White shrimp	ABUNDANT	X X X X X X X X	-	-	JUN-OCT	JUN-DEC	MAY-JUN
309	Eastern oyster	PRESENT	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
104	Gulf salt marsh snake		X X X X X X X X X X X	MAR-MAY	JUL-AUG	-	JAN-DEC	JAN-DEC
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	-

TERRESTRIAL MAMMAL:

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

HUMAN USE RESOURCES:

WILDLIFE REFUGE:

HUN#	Name	Contact	Phone
335	BRAZORIA NATIONAL WILDLIFE REFUGE		