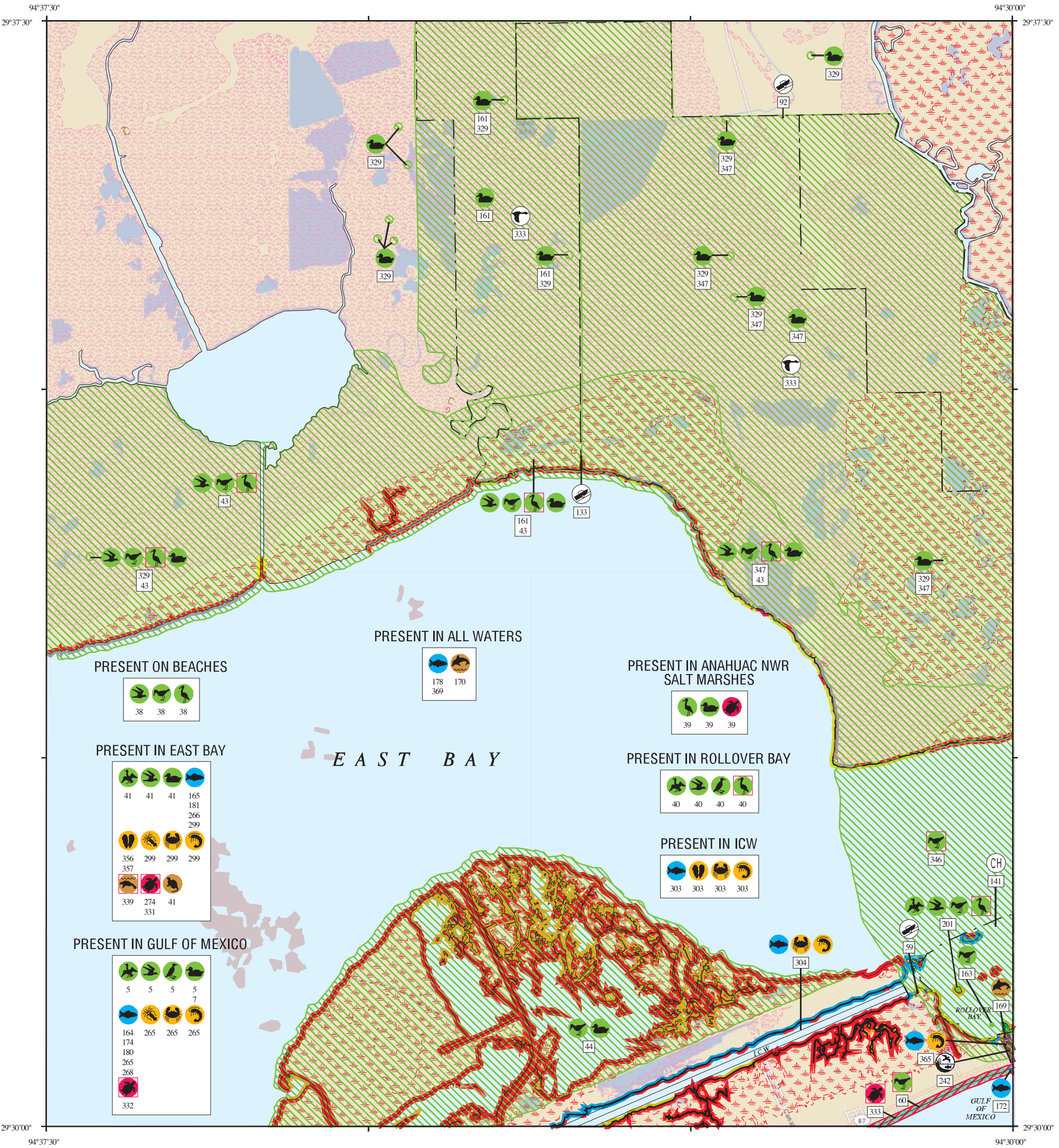
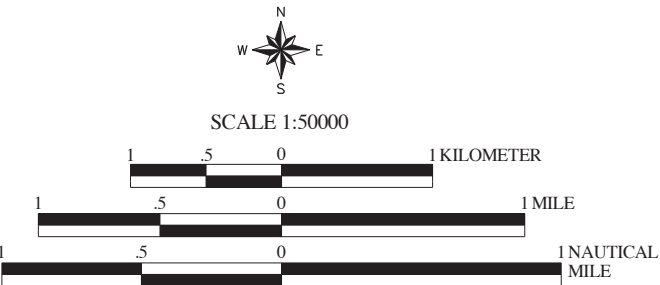


ENVIRONMENTAL SENSITIVITY INDEX MAP

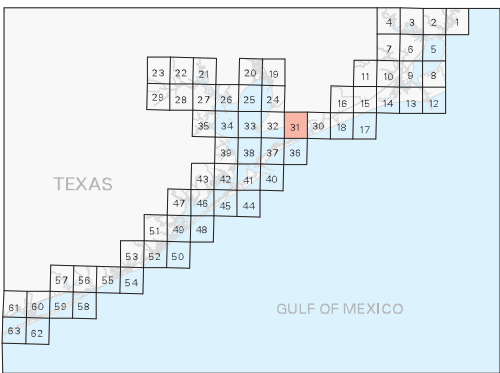


SHORELINE HABITATS (ESI)

- 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



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Upper Texas Coast: ESIMAP 31

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	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	X	-	-	-
	Ruddy turnstone		X	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	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				APR-JUL	-	-
	Black rail	RARE	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Rails	HIGH	X	X	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	-	-	-
	Waterfowl	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	American white pelican		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	-	-	-
	Forster's tern		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
40	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	-	-	-
	Roseate spoonbill		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	-	-	-
	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	-	-	-
	Grebes		X	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	-	-	-
	American avocet	100S	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	-	-	-
	Black skimmer	100S	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
41	Black-bellied plover	100S	X	X	X	X	X	X	X	X	X	X	X	X	-	MAR-MAY JUL-NOV	-
	Dowitchers	1000S	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	-	-	-
	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	-
	Rails		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	-	-	-
	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	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	-
	Whimbrel	HIGH			X	X	X								-	-	-
	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	-	MAR-MAY JUL-NOV	-
44	Dabbling ducks		X	X	X	X				X	X	X	X	X	-	-	-
	Shorebirds		X	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	X	-	-	-
161	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	X	X	MAY-JUL	-	-
	Bufflehead	10S	X	X	X								X	X	-	-	-
	Canada goose	10S	X	X	X								X	X	-	-	-
	Fulvous whistling-duck	10S	X	X	X	X	X	X	X	X	X	X	X	X	MAY-AUG	-	-
	Gadwall	1000S	X	X	X	X					X	X	X	X	-	-	-
	Greater white-fronted goose	100S	X	X	X							X	X	X	-	-	-
	Green-winged teal	1000S	X	X	X	X						X	X	X	-	-	-
	Lesser scaup	100S	X	X	X	X							X	X	X	-	-
	Mallard	10S	X	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	100S	X	X	X							X	X	X	-	-	-
	Northern shoveler	100S	X	X	X	X						X	X	X	-	-	-
	Redhead	PRESENT	X	X	X								X	X	X	-	-
	Ruddy duck	100S	X	X	X								X	X	X	-	-
	Snow goose	1000S	X	X	X								X	X	-	-	-
163	American oystercatcher	1 PAIR	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUL	-	-
201	American oystercatcher	1 PAIR	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUL	-	-
	Black-crowned night-heron	5-40 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-MAY	-
	Brown pelican	35-100 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	Cattle egret	10-15 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Forster's tern	50-200 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	-	-
	Great blue heron	6-15 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-
	Great egret	250-400 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	MAR-APR	-
	Gull-billed tern	300 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Laughing gull	40-900 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
	Neotropic cormorant	15-60 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-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 31 (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
201	Reddish egret	T	2-4 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	-	-
	Roseate spoonbill		30-100 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	Snowy egret		60-425 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Tricolored heron		10-340 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	White ibis		60-100 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUL	-	-
329	Greater white-fronted goose			X	X	X	X							X	X	-	-	-
	Snow goose			X	X	X								X	X	-	-	-
346	Piping plover	T 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	-	-	-
347	American coot		1000S	X	X	X	X							X	X	-	-	-
	American wigeon		1000S	X	X	X								X	X	-	-	-
	Blue-winged teal		10000S	X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUL	-	-
	Bufflehead		10S	X	X	X								X	X	-	-	-
	Canada goose		100S	X	X	X								X	X	-	-	-
	Canvasback		10S	X	X	X								X	X	-	-	-
	Fulvous whistling-duck		10S	X	X	X	X	X	X	X	X	X	X	X	X	MAY-AUG	-	-
	Gadwall		1000S	X	X	X	X							X	X	-	-	-
	Greater white-fronted goose		1000S	X	X	X								X	X	-	-	-
	Green-winged teal		10000S	X	X	X	X							X	X	-	-	-
	Lesser scaup		100S	X	X	X	X							X	X	-	-	-
	Mallard		100S	X	X	X								X	X	-	-	-
	Mottled duck		100S	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	JUN-AUG
	Northern pintail		1000S	X	X	X								X	X	-	-	-
	Northern shoveler		10000S	X	X	X	X							X	X	-	-	-
	Redhead		10S	X	X	X								X	X	-	-	-
	Ring-necked duck		10S	X	X	X								X	X	-	-	-
	Ruddy duck		1000S	X	X	X								X	X	-	-	-
	Snow goose		10000S	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
172	Blennies			X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Sheepshead			X	X	X	X	X	X	X	X	X	X	X	X	FEB-APR	-	-	-	JAN-DEC
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
181	Blacktip shark				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			-	-	-	-	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	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						-	-	-	-	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	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
	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	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	X	MAY-SEP	MAY-SEP	-	MAR-NOV	MAR-NOV
	Spot			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	X		OCT-DEC	-	-	-	SEP-FEB
299	Alligator gar		COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Atlantic bumper		RARE									X				-	-	-	-	SEP-SEP
	Atlantic croaker		HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	JAN-JUN	JAN-DEC	MAR-DEC
	Atlantic spadefish		RARE		X	X	X	X	X	X	X	X				-	-	-	JUL-SEP	-
	Bay anchovy		ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-NOV	MAR-NOV	MAR-NOV	FEB-DEC	JAN-DEC
	Bay whiff		COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	APR-SEP	JAN-DEC
	Black drum		COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Crevalle jack		COMMON		X	X	X	X	X	X	X	X				-	-	-	MAR-NOV	-
	Gafftopsail catfish		ABUNDANT		X	X	X	X	X	X	X	X	X			APR-MAY	-	-	MAR-NOV	MAR-NOV
	Gizzard shad		COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Gulf butterflyfish		RARE		X	X	X	X	X	X	X					-	-	-	-	-
	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	MAR-NOV
	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		COMMON		X	X	X	X	X	X	X					-	-	-	MAR-OCT	JUL-NOV
	Red drum		COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	SEP-NOV	JAN-DEC	JAN-DEC
	Sand seatrout		ABUNDANT	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	-	-	-	JUN-JUN DEC-MAR	JAN-DEC
	Silver perch		RARE	X	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	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		-	-	-	JAN-DEC	JAN-DEC
	Southern kingfish		RARE			X	X	X	X	X	X					-	-	-	JUN-NOV	-
	Spanish mackerel		COMMON				X	X								-	-	-	SEP-OCT	SEP-OCT
	Spot		HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-OCT	JAN-DEC
	Spotfin mojarra		RARE				X	X	X							-	-	-	-	-
	Spotted seatrout		COMMON	X	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	X	-	-	-	JAN-DEC	JAN-DEC
	White mullet		COMMON			X	X	X	X	X						-	-	-	MAY-OCT	-
303	Alligator gar			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
	Atlantic spadefish		RARE				X	X	X	X	X	X	X	X	X	-	-	-	MAY-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 31 (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
303	Bay anchovy	COMMON	X X X X X X X X X X X	MAR-NOV	MAR-NOV	MAR-NOV	FEB-DEC	JAN-DEC
	Bay whiff	RARE	X X X X X X X X X X X	-	-	-	APR-SEP	JAN-DEC
	Black drum	COMMON	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Blue catfish	ABUNDANT	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	-	MAY-AUG	MAY-AUG	APR-NOV	JAN-DEC
	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 menhaden	ABUNDANT	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	MAY-AUG	MAY-SEP	MAY-SEP	MAY-SEP	JAN-DEC
	Red drum	COMMON	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Sand seatrout	RARE	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-JAN	JAN-DEC
	Silver perch	RARE	X X X X X X X X X X X	MAY-SEP	MAY-SEP	MAY-SEP	JUN-DEC	JUN-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	-	-	-	FEB-NOV	APR-NOV
	Spotted seatrout	COMMON	X X X X X X X X X X X	-	-	-	AUG-NOV	JAN-DEC
	Striped mullet	COMMON	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
304	Atlantic croaker	HIGHLY ABUNDANT	X X X X X X X X X X X	-	-	JAN-JUN	JAN-DEC	MAR-DEC
	Atlantic spadefish	COMMON	X X X X X X X X X X	-	-	-	MAR-DEC	-
	Bay anchovy	ABUNDANT	X X X X X X X X X X X	MAR-NOV	MAR-NOV	MAR-NOV	FEB-DEC	JAN-DEC
	Bay whiff	COMMON	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	-	-	-	JAN-DEC	JAN-DEC
	Gafftopsail catfish	COMMON	X X X X X X X X	APR-MAY	-	-	APR-OCT	APR-OCT
	Gizzard shad	COMMON	X X X X X X X X X X X	-	-	-	-	JAN-DEC
	Gulf butterfish	RARE	X X X X X X X X X X	-	-	-	-	-
	Gulf menhaden	ABUNDANT	X X X X X X X X X X X	-	-	-	JAN-DEC	MAR-NOV
	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	-	-	-	MAR-OCT	JUL-NOV
	Red drum	COMMON	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	-	-	-	JAN-DEC	JAN-DEC
	Sheepshead	COMMON	X X X X X X X X X X X	-	-	-	JUN-JUN	JAN-DEC
							DEC-MAR	
	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
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 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
265	Atlantic seabob shrimp		X 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	-	-	-	-	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
299	Atlantic seabob shrimp	RARE	X X X X X 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	MAR-DEC	MAR-DEC	MAR-DEC	MAR-DEC	MAR-DEC
	Brown shrimp	ABUNDANT	X 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
303	Atlantic rangia		X X X X X X X X X X X	MAR-OCT	-	MAR-OCT	JAN-DEC	JAN-DEC
	Atlantic seabob shrimp	RARE	X X X X X X X X X	-	-	-	-	AUG-NOV
	Blue crab	ABUNDANT	X X X X X X X X X X X	MAR-NOV	-	MAR-NOV	JAN-DEC	JAN-DEC
	Brown shrimp	COMMON	X X X X X X X X X	-	-	MAR-APR	MAY-NOV	-
	White shrimp	ABUNDANT	X X X X X X X X X X X	-	-	MAY-JUN	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
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
365	Brown shrimp	ABUNDANT	X X X X X X X X X	-	-	FEB-APR	-	MAR-OCT
	White shrimp	ABUNDANT	X 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
169	Bottlenose dolphin		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	Internesting	Juveniles	Adults
39	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	-	-	-	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	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

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 31 (cont.)

HUMAN USE RESOURCES:

BOAT RAMP:

HUN#	Name	Contact	Phone
59	DR. LLOYD K. LAUDERDALE RAMP		
92	OYSTER BAYOU RAMP		
133	WEST LINE DITCH		

CRITICAL HABITAT:

HUN#	Name	Contact	Phone
141	PIPING PLOVER CRITICAL HABITAT	USFWS	

MANAGEMENT AREA:

HUN#	Name	Contact	Phone
242	ROLLOVER ISLAND	HOUSTON AUDUBON (RICAHRD GIBBONS)	713/932-1639

WILDLIFE REFUGE:

HUN#	Name	Contact	Phone
333	ANAHUAC NATIONAL WILDLIFE REFUGE		