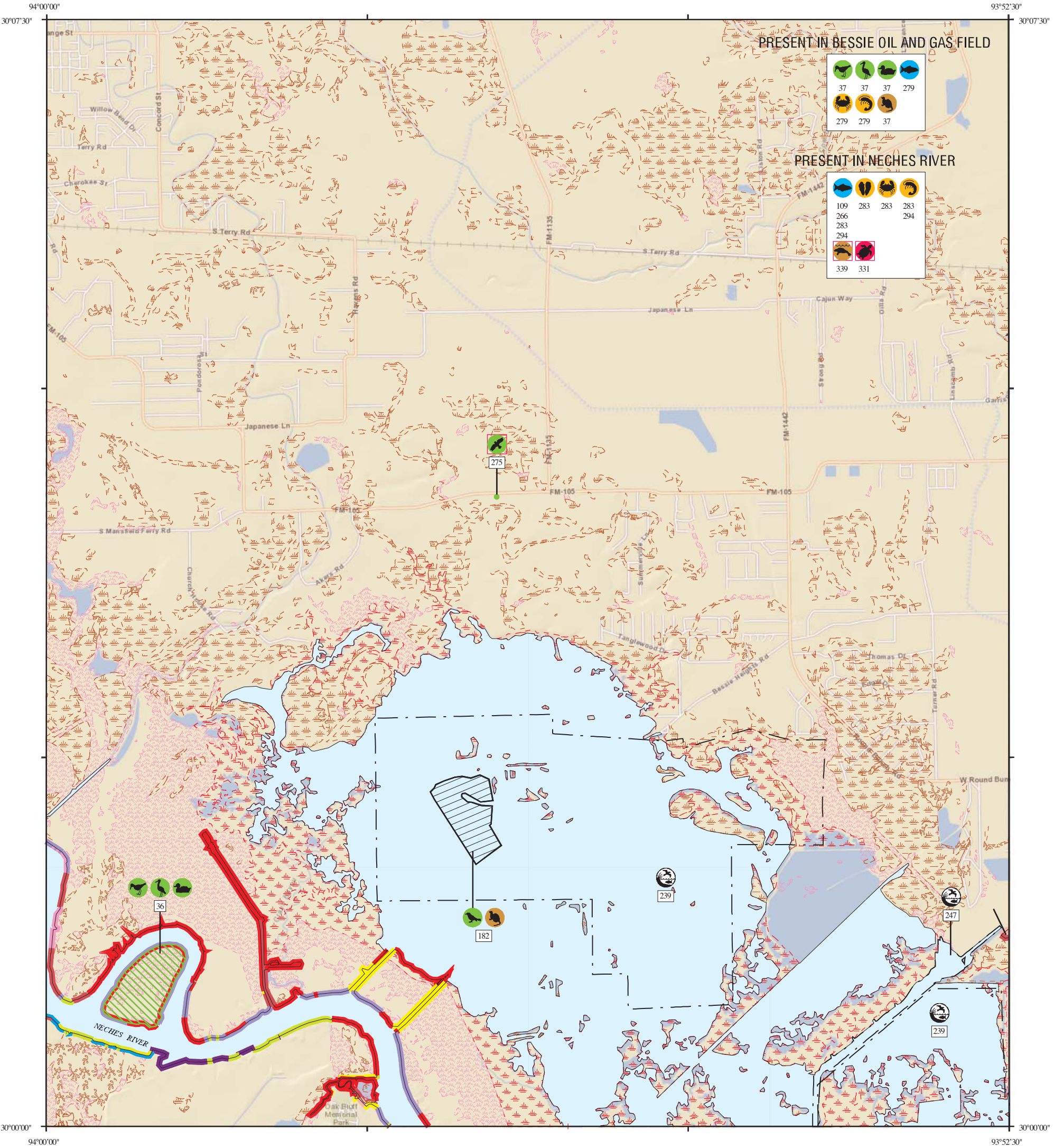
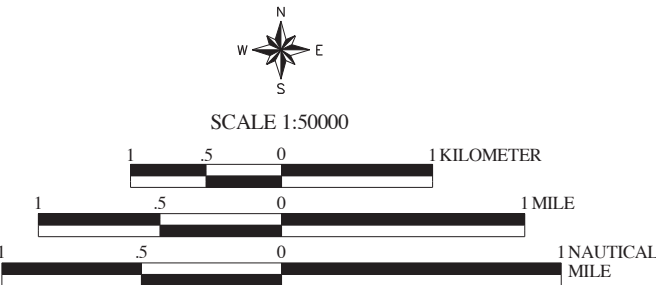


ENVIRONMENTAL SENSITIVITY INDEX MAP



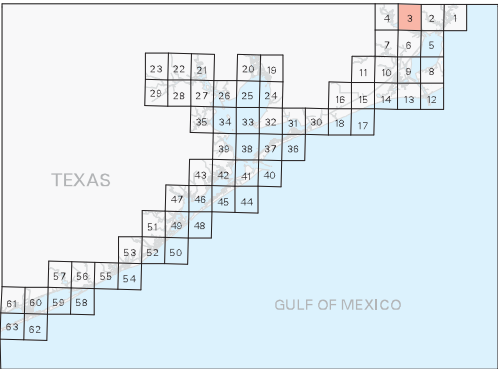
SHORELINE HABITATS (ESI)

- 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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Emergency Response Division



Upper Texas Coast: ESIMAP 3

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Nesting	Migrating	Molting
36	Ducks		X X X X X X X X X	-	-	-
	Shorebirds		X X X X X X X X X X X	-	-	-
	Wading birds		X X X X X X X X X X X	-	-	-
37	Black-necked stilt	10S	X X X X X X X X X	-	-	-
	Dowitchers	100S	X X X X X X X X X X X	-	MAR-MAY JUL-NOV	-
	Dunlin	100S	X X X X X X X X X X	-	-	-
	Killdeer	100S	X X X X X X X X X X X	-	DEC-MAR	-
	Marsh birds		X X X X X X X X X X X	-	-	-
	Mottled duck		X X X X X X X X X X X	FEB-AUG	-	JUN-AUG
	Shorebirds	100S	X X X X X X X X X X X	-	-	-
	Wading birds		X X X X X X X X X X X	-	-	-
	Waterfowl		X X X X X X X X X X X	-	-	-
	Western sandpiper	100S	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	-
	Yellowlegs	10S	X X X X X X X X X X X	-	MAR-MAY JUL-NOV	-
182	Swamp sparrow		X X X X X X X X	-	-	-
275	Bald eagle	T 1 NEST	X X X X X X X X X X X	OCT-JUL	-	-

FISH:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Spawning	Eggs	Larvae	Juveniles	Adults
109	Bull shark	RARE	X X X X X X X X X X X	-	MAY-AUG	MAY-AUG	APR-NOV	JAN-DEC
266	Tarpon	RARE	X X X X X X X X X	-	-	-	MAR-NOV	-
279	Alligator gar	COMMON	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	-	-	JAN-JUN	JAN-DEC	JAN-DEC
	Black drum	COMMON	X X X X X X X X X X X	-	-	-	JAN-DEC	-
	Blue catfish	RARE	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 X	APR-MAY	-	-	APR-OCT	APR-OCT
	Gizzard shad	ABUNDANT	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Gulf menhaden	ABUNDANT	X X X X X X X X X X X	-	-	-	JAN-DEC	SEP-OCT
	Hardhead catfish	ABUNDANT	X X X X X X X X X X X	MAY-AUG	MAY-SEP	MAY-SEP	MAR-NOV	JAN-DEC
	Longnose gar	COMMON	X X X X X X X X X X X	-	-	-	-	-
	Red drum	ABUNDANT	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	-	-	-	JAN-DEC	JAN-DEC
	Smallmouth buffalo		X X X X X X X X X X X	-	-	-	-	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	MAR-NOV
	Spotted gar	ABUNDANT	X X X X X X X X X X X	APR-MAY	APR-MAY	-	JAN-DEC	JAN-DEC
	Spotted seatrout	COMMON	X X X X X X X X X	-	-	APR-OCT	SEP-NOV	APR-OCT
	Striped mullet	COMMON	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
283	Alligator gar	COMMON	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Atlantic bumper	RARE	X X X X X	-	-	-	-	AUG-SEP
	Atlantic spadefish	RARE	X X X X X	-	-	-	JUL-OCT	-
	Bay anchovy	COMMON	X X X X X X X X X X X	MAR-NOV	MAR-NOV	MAR-NOV	JAN-DEC	JAN-DEC
	Bay whiff	RARE	X X X X X X X X X X X	-	-	-	JUL-AUG	JAN-DEC
	Crevalle jack	COMMON	X X X X X	-	-	-	JUN-AUG	-
	Gafftopsail catfish	ABUNDANT	X X X X X X X X X	APR-MAY	-	-	APR-OCT	APR-OCT
	Gizzard shad	ABUNDANT	X X X X X X X X X X X	-	-	-	-	JAN-DEC
	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	ABUNDANT	X X X X X X X X X X X	-	-	-	JAN-DEC	APR-DEC
	Hardhead catfish	ABUNDANT	X X X X X X X X X X X	MAY-AUG	MAY-SEP	MAY-SEP	JUN-SEP	JAN-DEC
	Pinfish	RARE	X X X X X X X X X	-	-	-	APR-OCT	APR-OCT
	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-FEB	JAN-DEC
	Silver perch	RARE	X X X X X X X X X X X	MAY-SEP	MAY-SEP	MAY-SEP	OCT-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
	Spanish mackerel	COMMON	X X X X X X X X	-	-	-	SEP-OCT	SEP-OCT
	Spotfin mojarra	RARE	X X X X X	-	-	-	-	-
	Spotted gar	ABUNDANT	X X X X X X X X X X X	APR-MAY	APR-MAY	-	JAN-DEC	JAN-DEC
	Star drum		X X X X X X 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	COMMON	X X X X X X X	-	-	-	JUN-SEP	-
294	Atlantic croaker	HIGHLY ABUNDANT	X X X X X X X X X X X	-	-	JAN-JUN	JAN-DEC	JAN-DEC
	Black drum	COMMON	X X X X X X X X X X X	-	-	-	JAN-DEC	JAN-DEC
	Red drum	COMMON	X X X X X X X X X X X	-	-	-	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	-	-	-	MAR-OCT	MAR-NOV
	Spotted seatrout	COMMON	X X X X X X X X X X X	APR-OCT	APR-OCT	APR-OCT	OCT-NOV	JAN-DEC

INVERTEBRATE:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Spawning	Eggs	Larvae	Juveniles	Adults
279	Blue crab	HIGHLY 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 X	-	-	MAR-APR	APR-DEC	-
	Grass shrimp	COMMON	X X X X X X X X X X X	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC
	White shrimp	COMMON	X X X X X X X X X X X	-	-	MAY-JUN	APR-DEC	MAR-JAN
283	Atlantic rangia	ABUNDANT	X X X X X X X X X X X	MAR-OCT	-	MAR-OCT	JAN-DEC	JAN-DEC
	Blue crab	ABUNDANT	X X X X X X X X X X X	MAR-NOV	-	MAR-NOV	JAN-DEC	JAN-DEC
	Grass shrimp	COMMON	X X X X X X X X X X X	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC
294	Brown shrimp	ABUNDANT	X X X X X X X X X X	-	-	MAR-APR	APR-DEC	-
	White shrimp	HIGHLY ABUNDANT	X X X X X X X X X X X	-	-	MAY-JUN	APR-DEC	MAR-JAN

MARINE MAMMAL:

RAR#	Species	S F Conc.	J F M A M J J A S O N D	Mating	Calving	Pupping	Molting
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
331	Kemp's ridley sea turtle	E E COMMON	X X X X X X X X	-	-	-	APR-NOV	-

TERRESTRIAL MAMMAL:

RAR#	Species	S F Conc.	J F M A M J J A S O N D
37	Northern river otter		X X X X X X X X X X X
182	Muskrat		X X X X X X X X X X X
	Swamp rabbit		X X X X X X X X X X X

HUMAN USE RESOURCES:

MANAGEMENT AREA:

HUN#	Name	Contact	Phone
239	LOWER NECHES WMA	TPWD	
247	THERMAL GAME FISH REFUGE	TPWD	

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.