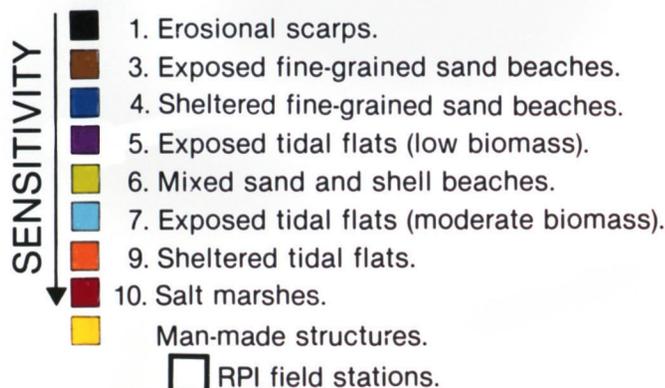


# Sensitivity of Coastal Environments to Oil Spills Galveston Bay Region, Texas

## INDEX OF SHORELINE TYPES

The shoreline types of the Galveston Bay region are ranked below according to probable oil damage and persistence. The higher the ESI value, the greater the need for spill protection. The Hayes et al. report on South Texas ESI environments (available from USCG Marine Safety Office, Corpus Christi) contains cleanup recommendations for each shoreline type.



## BIOLOGICAL FEATURES

These ESI maps define the principal habitats for the major biological species or groups in the Galveston Bay area. A response or action (e.g., bird hazing) may be necessary during a spill, depending on the recommendations of the designated Scientific Support Coordinator.

## WILDLIFE SYMBOL AND OCCURRENCE

<b>MAMMALS</b>		Whales, porpoises or dolphins	Range or feeding areas
<b>BIRDS</b>		Gulls or terns	Nesting, migrating or wintering areas
		Wading birds	Nesting areas
		Shorebirds	Sandpipers, plovers, oystercatchers migrating or wintering areas
		Waterfowl	Ducks and geese migrating or wintering areas
		Raptors	Migration areas
<b>REPTILES</b>		Alligators	Resident areas
<b>FISH</b>		Commercial/sport fish	Nursery, breeding areas, adult range
<b>SHELLFISH</b>		Shrimp	White, brown, pink shrimp areas
		Crabs	Blue crab areas
		Oysters	Oyster reefs

## PRINCIPAL REFERENCES

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- Liebow, E. B., K. S. Butler, T. R. Plaut, et al., 1980, Texas Barrier Islands Region Ecological Characterization: A Socioeconomic Study: Volume I: Synthesis Papers, U.S. Fish and Wildlife Service, Office of Biological Services, FWS/OBS-80/19.
- Liebow, E. B., K. S. Butler, T. R. Plaut, et al., 1980, Texas Barrier Islands Region Ecological Characterization: A Socioeconomic Study: Vol. 2: Data Appendix, U.S. Fish and Wildlife Service, Office of Biological Services, FWS/OBS-80/20.
- Thebeau, L. C., Personal observation.

## SOCIOECONOMIC FEATURES

Parks and refuges are designated as having high socioeconomic value and should be given special considerations when determining priority spill protection or cleanup in a particular area.

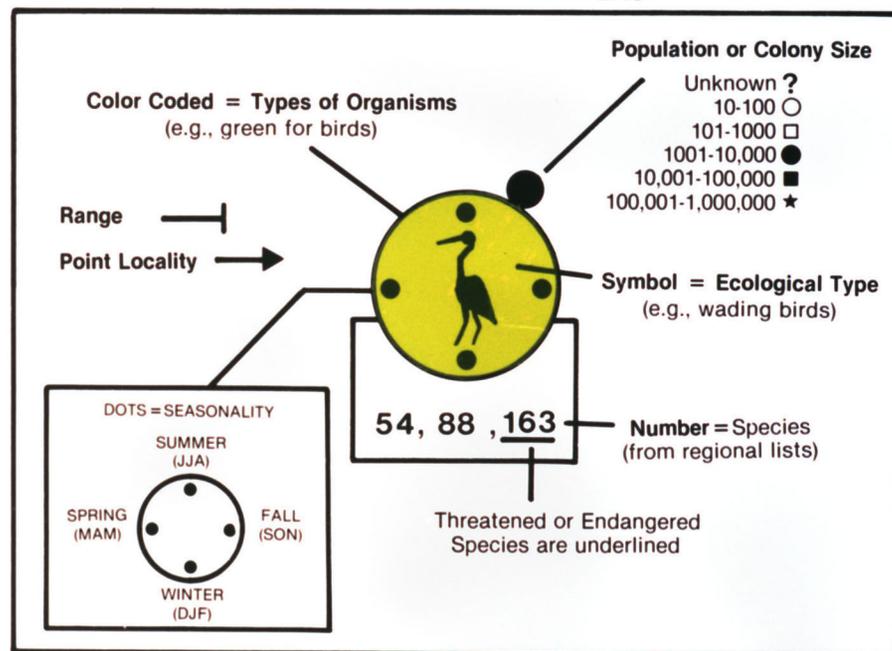
## SPILL RESPONSE INFORMATION

The locations for deploying several types of spill response equipment are indicated on these maps. Generally, an offshore or central bay spill situation was envisioned.

### Symbols:

- Open-water boom
- Harbor boom
- Open-water skimmer
- Boat ramps

## KEY TO WILDLIFE MARKERS



## NUMBER KEY TO BIOLOGICAL DATA

<b>MAMMALS</b>	17. Atlantic bottlenose dolphin ( <i>Tursiops truncatus</i> )	149. White-faced ibis ( <i>Plegadis chihi</i> )
<b>BIRDS</b>	B. Shorebirds	163. Reddish egret ( <i>Egretta rufescens</i> )
	C. Waterfowl	168. Olivaceous cormorant ( <i>Phalacrocorax olivaceus</i> )
	F. Seabirds	<b>REPTILES</b>
	54. Great blue heron ( <i>Ardea herodias</i> )	1. American alligator ( <i>Alligator mississippiensis</i> )
	86. Least tern ( <i>Sterna albigrons</i> )	<b>FISH</b>
	87. Little blue heron ( <i>Florida caerulea</i> )	107. Spotted seatrout ( <i>Cynoscion nebulosus</i> )
	88. Great egret ( <i>Casmerodius albus</i> )	108. Flounder ( <i>Paralichthys sp.</i> )
	89. Snowy egret ( <i>Leucophoyx thula</i> )	109. Red drum ( <i>Sciaenops ocellata</i> )
	90. Black-crowned night heron ( <i>Nycticorax nycticorax</i> )	116. Mullet ( <i>Mugil sp.</i> )
	93. Cattle egret ( <i>Bubulcus ibis</i> )	122. Black drum ( <i>Pogonias cromis</i> )
	94. Louisiana heron ( <i>Hydranassa tricolor</i> )	123. Croaker ( <i>micropogon undulatus</i> )
	98. Laughing gull ( <i>Larus atricilla</i> )	124. Whiting ( <i>Menticirrhus littoralis</i> )
	107. Peregrine falcon ( <i>Falco rusticolus</i> )	<b>SHELLFISH</b>
	115. White ibis ( <i>Eudocimus ruber</i> )	4. Pink Shrimp ( <i>Penaeus duorarum</i> )
	116. Roseate spoonbill ( <i>Ajaia ajaja</i> )	43. Eastern oyster ( <i>Crassostrea virginica</i> )
	133. Black skimmer ( <i>Rynchops niger</i> )	49. Blue crab ( <i>Callinectes sapidus</i> )
	134. Gull-billed tern ( <i>Gelochelidon nilotica</i> )	50. White Shrimp ( <i>Penaeus setiferous</i> )
	136. Caspian tern ( <i>Sterna caspia</i> )	51. Brown Shrimp ( <i>Penaeus aztecus</i> )
	138. Forster's tern ( <i>Sterna forsteri</i> )	