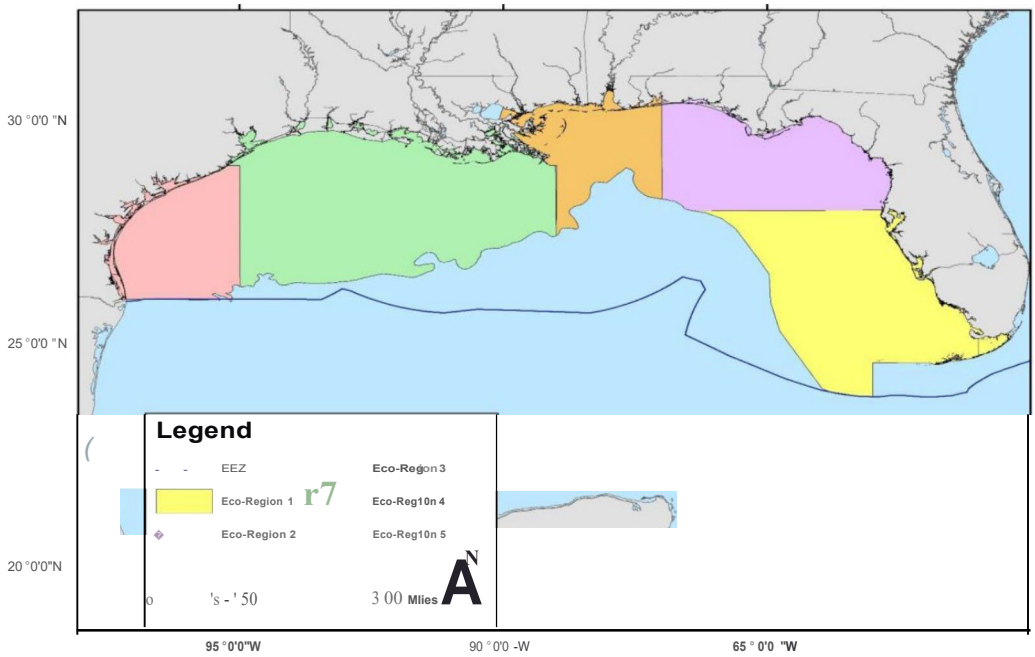
Essential Fish Habitat (EFH) Summary for Projects in Louisiana Waters

The Gulf of Mexico Fishery Management Council (GMFMC) described EFH for each federally managed species, and further refined their designations by establishing five "eco-regions" subdividing the Gulf of Mexico (Figure 1). The Mississippi River serves as the line of demarcation for eco-regions 3 and 4; therefore, Louisiana's coastal waters east of the Mississippi River are in eco-region 3, whereas those waters west of the river are in eco-region 4.

Within each eco-region EFH was further defined as occurring in estuarine, nearshore, or offshore waters (Figure 2). EFH designations for each species managed by GMFMC are based on species-specific life stage associations with different habitat types. NMFS also manages highly migratory species (HMS) such as tunas, billfish, and sharks; however, EFH designations for HMS are primarily based on species distribution data and are identified by geographical areas rather than specific habitat types.

Projects occurring in Louisiana's estuarine and nearshore waters in eco-region 3 may potentially impact EFH for various life stages of the following federally-managed species (Tables 1-3): brown shrimp, white shrimp, pink shrimp, red drum, gray snapper, lane snapper, red snapper, vermilion snapper, gray triggerfish, Spanish mackerel, king mackerel, greater amberjack, cobia, hammerhead shark, scalloped hammerhead shark, blacktip shark, bull shark, spinner shark, Atlantic sharpnose shark, blacknose shark, and finetooth shark.

Projects occurring in Louisiana's estuarine and nearshore waters in eco-region 4 may potentially impact EFH for various life stages of the following federally-managed species (Tables 4-6): brown shrimp, white shrimp, red drum, gray snapper, lane snapper, red snapper, vermilion snapper, gray triggerfish, king mackerel, almaco jack, greater amberjack, cobia, scalloped hammerhead shark, blacktip shark, bull shark, spinner shark, Atlantic sharpnose shark, blacknose shark, and finetooth shark.



Figm·e 1. Map of eco-regions textually described in the table above and referenced in the habitat association tables

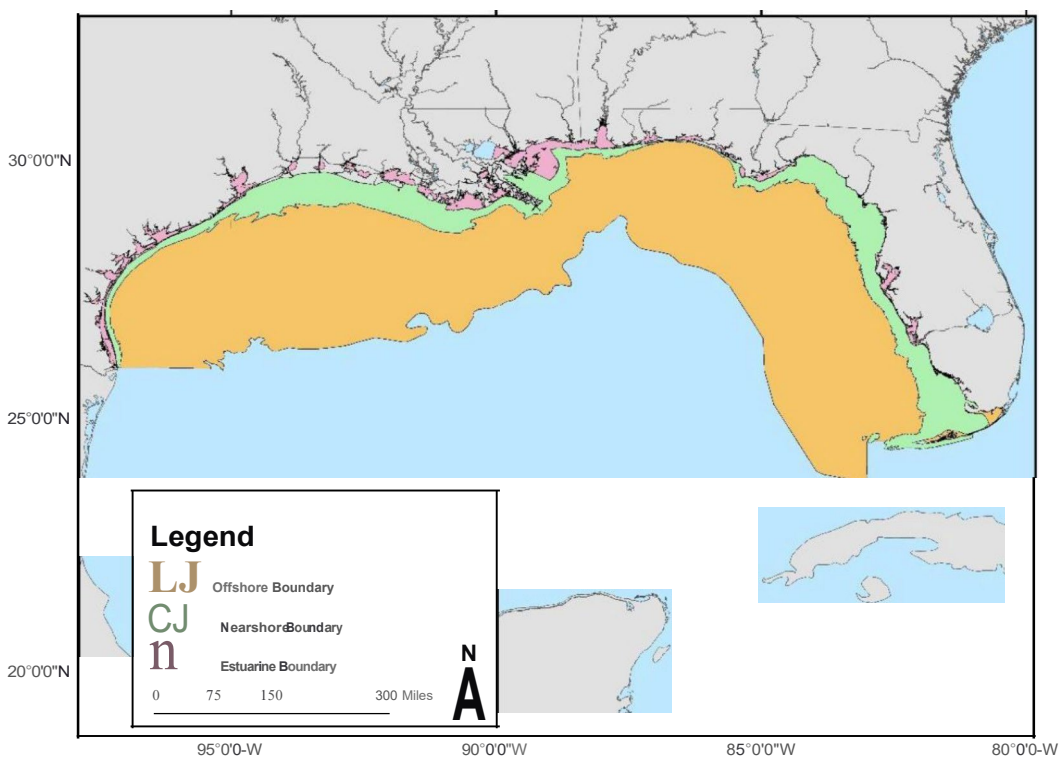


Figure 2. Spatial depiction of habitat zones: estuarine (inside barrier islands and estuaries) , nearshore (60 feet (18m) or less in depth) and offshore (greater than 60 feet (18m) in depth.

Table 1. Estuarine Habitats – Gulf Council Managed Species – Eco-Region 3
(● indicates habitat type designated as EFH for species' life stage)

Estuarine Emergent Marsh							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum			●	●		●	
Gray Snapper						●	
Brown Shrimp				●			
White Shrimp				●			
Mangrove							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Gray Triggerfish				●			
Lane Snapper				●	●		
Estuarine Submerged Aquatic Vegetation							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum		●	●		●	●	
Lane Snapper			●	●	●		
Brown Shrimp				●			
Pink Shrimp				●			
Estuarine Pelagic							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Spanish Mackerel				●	●	●	
Estuarine Oyster Reef							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Brown Shrimp				●			
Estuarine Sand and Shell Bottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum			●			●	
Gray Snapper						●	
Lane Snapper				●	●		
Brown Shrimp				●			
Estuarine Mud/Soft Bottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum		●	●	●		●	
Gray Snapper						●	
Lane Snapper				●	●		
Brown Shrimp				●			
White Shrimp				●			

Table 2. Nearshore Habitats – Gulf Council Managed Species – Eco-Region 3
(● indicates habitat type designated as EFH for species' life stage)

Nearshore Submerged Aquatic Vegetation							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Lane Snapper			●	●	●		
Pink Shrimp				●			
Nearshore Hardbottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum					●	●	
Gray Snapper						●	
Red Snapper				●			
Vermilion Snapper				●	●		
Nearshore Sand/Shell Bottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum					●	●	
Gray Snapper						●	
Gray Triggerfish						●	●
Lane Snapper				●	●	●	
Red Snapper				●			
Brown Shrimp						●	
Pink Shrimp	●	●				●	●
White Shrimp	●						
Nearshore Mud/Soft Bottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Gray Snapper						●	
Lane Snapper				●	●		
Brown Shrimp						●	
White Shrimp	●					●	●
Nearshore Shoal/Banks							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Gray Snapper							●
Lane Snapper						●	
Nearshore Reefs							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Gray Snapper						●	●
Gray Triggerfish	●				●	●	●
Lane Snapper			●	●	●	●	
Vermilion Snapper				●	●		

Nearshore Pelagic							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Cobia	●		●	●	●	●	●
King Mackerel				●	●		
Spanish Mackerel	●	●		●	●	●	●
Red Drum	●					●	
Greater Amberjack						●	
Red Snapper		●					
Pink Shrimp		●					
White Shrimp		●					
Nearshore Drift Algae (*Sargassum*)							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Gray Triggerfish		●	●	●	●		
Greater Amberjack				●	●		

Table 3. Highly Migratory Species EFH Designations – State Waters of Eco-Region 3

Species Common Name	Life Stage	EFH State Waters of Eco-Region 3
Atlantic Yellowfin Tuna	Juvenile	Mississippi River birdfoot delta
	Adult	Off the mouth of Mississippi River
Swordfish	Juvenile	Mississippi River birdfoot eelta
Sailfish	Juvenile	Off mouth of Mississippi River
Hammerhead Shark	All	Mississippi Sound west of Mobile Bay to Cat Island and south to Chandeleur Islands
Scalloped Hammerhead Shark	Neonate	All estuaries and nearshore waters
	Juvenile	Mississippi River birdfoot delta and all estuarine and nearshore waters east of Horn Island to Gulf Breeze
	Adult	Mississippi Sound Horn Island to Dauphin Island; nearshore waters Horn Island east to Gulf Breeze
Nurse Shark	Adult	Nearshore and offshore Pensacola and Perdido Bays
Bignose Shark	All	Seaward edge of state waters offshore Mississippi River birdfoot delta
Blacktip Shark	Neonate & Juvenile	All estuarine, nearshore, and offshore waters (ex. Lake Borgne)
	Adult	All estuarine, nearshore, and offshore waters (ex. Lake Borgne, Mobile, Perdido, and Pensacola Bays)
Bull Shark	Neonate & Juvenile	Lake Borgne east to waters around Ship Island; Lower Mobile Bay and nearshore waters off Dauphin Island to Gulf Breeze
	Juvenile	All waters Mississippi River delta to Perdido Bay (ex. portions of Chandeleur Sound and Lake Borgne)
	Adults	Estuarine waters of birdfood delta, Chandeleur Island; Lower Mobile Bay and Mississippi Sound around Dauphin Island and Perdido Bay; nearshore and offshore waters Hat Island east to Pensacola Bay

Species Common Name	Life Stage	EFH State Waters of Eco-Region 3
Dusky Shark	All	Gulf of Mexico nearshore and offshore water >30 feet off mouth of Pensacola Bay
Lemon Shark	Juvenile	Nearshore waters off Terrebonne Bay
Sandbar Shark	Neonate	Portions of Perdido Bay, Pensacola Bay and nearshore and offshore waters off mouth of Pensacola Bay
Silky Shark	All	Mississippi River birdfoot delta; nearshore and offshore waters off Escambia County
Spinner Shark	Juvenile	Mississippi River birdfoot delta, outer Chandeleur Sound, Mississippi Sound, Mobile Bay, and Perdido Bay; nearshore waters (ex. off Pensacola Bay)
	Adult	Mississippi River birdfoot delta, waters off Chandeleur Island, and nearshore waters off Pensacola Bay into East Pensacola Bay and Santa Rosa Sound
Tiger Shark	Neonate	Nearshore waters east of Gulf Shores; Perdido Bay, lower Pensacola Bay and Santa Rosa Sound
	Juvenile	Eastern Mississippi Sound from Pascagoula (ex. Grande and Portersville Bays), lower Mobile and Bon Secour Bays, Perdido and Escambia Bays; all nearshore waters east of Horn Island
Whale Shark	All	Waters off Mississippi River birdfoot delta; waters around Chandeleur Islands
Bonnethead Shark	Neonate and Juvenile	Mississippi Sound east of Ship Island; nearshore waters to 60 feet
	Adult	Mobile Bay; Mississippi Sound east of Ship Island; nearshore waters to 60 feet
Atlantic Sharpnose Shark	Neonate	Estuarine, nearshore, and offshore waters to 90 feet
	Juvenile	All NS and offshore waters to 90 feet; Estuarine waters W of Mobile Bay (ex. Lake Borgne)
	Adult	Estuarine waters west of Mobile Bay, nearshore and offshore waters to 200 feet
Blacknose Shark	Juvenile	Waters around Chandeleur and Dauphin Islands
	Adult	All nearshore waters Perdido Bay to Mississippi River birdfoot delta, estuarine waters of Mississippi Sound to Horn Island and seaward band of state waters around Chandeleur Islands
Finetooth Shark	Neonate	Nearshore waters west of Perdido Bay to Chandeleur Island; Mississippi Sound (ex. Lake Borgne)
	Juvenile & Adult	Nearshore and offshore waters Pensacola Bay to Mississippi River birdfoot delta; Mississippi Sound and Chandeleur Sound (ex. Lake Borgne)

Table 4. Estuarine Habitats – Gulf Council Managed Species – Eco-Region 4
(● indicates habitat type designated as EFH for species' life stage)

Estuarine Emergent Marsh							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum			●	●		●	
Gray Snapper						●	
Brown Shrimp				●			
White Shrimp				●			
Mangrove							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Gray Triggerfish				●			
Lane Snapper				●	●		
Estuarine Submerged Aquatic Vegetation							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum		●	●		●	●	
Lane Snapper			●	●	●		
Brown Shrimp				●			
Estuarine Hard Bottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
none							
Estuarine Oyster Reef							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Brown Shrimp				●			
Estuarine Sand and Shell Bottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum			●			●	
Gray Snapper						●	
Lane Snapper				●	●		
Brown Shrimp				●			
Estuarine Mud/Soft Bottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum		●	●	●		●	
Gray Snapper						●	
Lane Snapper				●	●		
Brown Shrimp				●			
White Shrimp				●			

Table 5. Nearshore Habitats – Gulf Council Managed Species – Eco-Region 4
(● indicates habitat type designated as EFH for species' life stage)

Nearshore Submerged Aquatic Vegetation							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Lane Snapper			●	●	●		
Nearshore Hardbottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum					●	●	
Gray Snapper						●	
Red Snapper				●			
Vermilion Snapper				●	●		
Nearshore Sand/Shell Bottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum					●	●	
Gray Snapper						●	
Gray Triggerfish						●	●
Lane Snapper				●	●	●	
Red Snapper						●	
Brown Shrimp						●	
White Shrimp	●						
Nearshore Mud/Soft Bottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Gray Snapper						●	
Lane Snapper				●	●		
Red Snapper				●			
Brown Shrimp						●	
White Shrimp	●					●	●
Nearshore Shoal/Banks							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Gray Snapper							●
Lane Snapper						●	
Nearshore Reefs							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Gray Snapper						●	●
Gray Triggerfish	●				●	●	●
Lane Snapper			●	●	●	●	
Vermilion Snapper				●	●		

Nearshore Pelagic							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Cobia	●		●	●	●	●	●
King Mackerel				●	●		
Red Drum	●					●	
Greater Amberjack						●	
Red Snapper		●					
White Shrimp		●					
Nearshore Drift Algae (*Sargassum*)							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Almaco Jack				●	●		
Gray Triggerfish		●	●	●	●		
Greater Amberjack				●	●		

Table 6. Highly Migratory Species EFH Designations – State Waters of Eco-Region 4

Species Common Name	Life Stage	EFH State Waters Eco-Region 4
Atlantic Yellowfin Tuna	Juvenile	Mississippi River birdfoot delta
	Adults	Off the mouth of the Mississippi River
Swordfish	Juvenile & Adult	Mississippi River birdfoot delta
Sailfish	Juvenile	Off the mouth of the Mississippi River
Hammerhead Shark	All	Nearshore and offshore Brazoria and Galveston Counties
Scalloped Hammerhead Shark	Neonate	Galveston Bay; Vermilion Bay to West Bay; All nearshore waters to 30 fathoms
	Juvenile	West Galveston Bay; nearshore off Galveston Island
	Adult	Mississippi River birdfoot delta
Bignose Shark	All	Seaward edge of state waters off Mississippi River birdfoot delta
Blacktip Shark	Neonate & Juvenile	Estuarine waters of Galveston, Terrebonne and Timbalier Bays; all nearshore and offshore waters
	Adult	Estuarine waters of Vermilion, Atchafalaya, Terrebonne and Timbalier Bays; all nearshore and offshore waters
Bull Shark	Neonate	All estuarine waters; nearshore waters Freeport to mouth of Sabine Lake; nearshore waters off west Cameron Parrish
	Juvenile	All estuarine waters; nearshore waters Freeport to mouth of Sabine Lake; nearshore waters off west Cameron Parrish; Terrebonne Bay to Mississippi River delta
	Adults	Estuarine waters Christmas Bay to Galveston Bay (ex. North Galveston/Trinity and East Bay); nearshore and offshore waters off Brazoria and Galveston Counties; Mississippi River birdfoot delta
Lemon Shark	Neonate	Estuarine waters from Freeport to Pelican Island; nearshore and offshore waters from Freeport to Pelican Island (ex. Waters off east Galveston Island)

Species Common Name	Life Stage	EFH State Waters Eco-Region 4
	Juvenile	Nearshore and offshore waters off Galveston and Brazoria Counties; estuarine waters of Galveston Bay, West Bay and Christmas Bay (ex. Portions of Galveston, Trinity and East Bays)
Silky Shark	ALL	Mississippi River birdfoot delta
Spinner Shark	Neonate	Galveston Bay (including East, West and Trinity Bays) and nearshore waters off Brazoria, Galveston, and Chambers Counties; Terrebonne Bay and estuarine and nearshore waters to Grand Isle
	Juvenile	Galveston Bay (including East, West and Trinity Bays) all nearshore waters (ex. off mouth of Mermentau River and between Vermilion and Atchafalaya Bays); Terrebonne and Barataria Bays and the Mississippi birdfoot delta
	Adult	Mississippi River birdfoot delta
Tiger Shark	Adult	Nearshore waters off Mississippi River birdfoot delta
Whale Shark	All	Waters off Mississippi River birdfoot delta
Atlantic Angel Shark	All	Offshore waters at seaward edge of state waters off West Pass
Bonnethead Shark	Neonate and Juvenile	Estuarine and nearshore waters of Brazoria and Galveston Counties
Atlantic Sharpnose Shark	Neonate	All nearshore and offshore waters Freeport to the mouth of the Mississippi, Christmas Bay, Galveston Bay (incl. West, Trinity and East Bays), Vermilion, West Cote Blanche, Atchafalaya, lower Terrebonne and Timbalier Bays and Barataria Bay
	Juvenile	All nearshore and offshore waters Freeport to the mouth of the Mississippi, Christmas Bay, West Bay, lower Terrebonne and Timbalier Bays
	Adult	All nearshore and offshore waters Freeport to the mouth of the Mississippi, Christmas Bay, Galveston Bay (incl. West, Trinity and East Bays), lower Terrebonne and Timbalier Bays and Barataria Bay
Blacknose Shark	Adult	Nearshore waters off Galveston Island and Mississippi River birdfoot delta
Finetooth Shark	Neonate	Lower Galveston Bay, West Bay and nearshore waters off Galveston Island and Boliver Peninsula; Timbalier Bay and waters offshore Timbalier islands
	Juvenile & Adult	Estuarine and nearshore waters E of Terrebonne Bay

Appendix 3. Gulf of Mexico Essential Fish Habitat – Eco-Region 3

Pensacola Bay, Florida, west to the Mississippi River Delta.

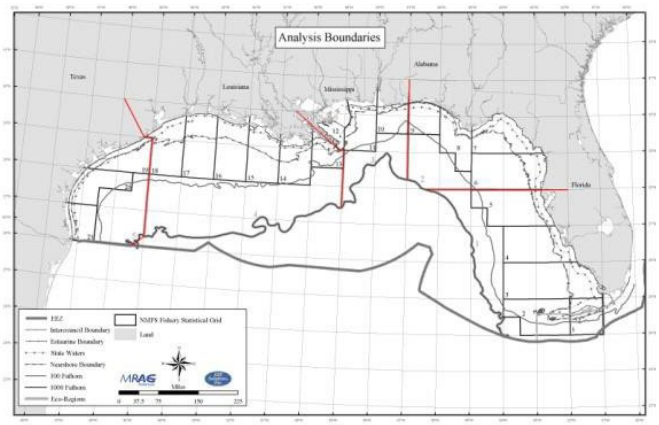
Purpose

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires regional fishery management councils, and NOAA's National Marine Fisheries Service (NMFS), to designate essential fish habitat (EFH) in fishery management plans for all federally managed fisheries. Some EFH designations extend beyond state territorial boundaries into the Gulf of Mexico and can extend to the 200-mile boundary of the United States' exclusive economic zone.

The Magnuson-Stevens Act also requires federal agencies which permit/license, fund, or carry out activities which may adversely affect EFH to consult with NMFS regarding potential impacts of their actions on EFH, and respond in writing to NMFS recommendations. Because the vast majority of activities requiring consultation occur in the coastal zone, the scope of this document is focused on estuarine and nearshore state waters.

Background Summary

The Gulf of Mexico Fishery Management Council (Gulf Council) manages over 40 species[1], plus corals, in the Gulf of Mexico. During the process of analyzing, identifying, and describing EFH for each managed species, the Gulf Council refined their designations by establishing five "eco-regions" utilizing an existing statistical grid system subdividing the Gulf of Mexico. Within each eco-region EFH was further defined as occurring either in estuarine (inside barrier islands and estuaries), nearshore (waters less than 18-meters/60-feet deep) or offshore waters (greater than 18-meters/60-feet deep).



Map of NOAA Fisheries Statistical Grids (black gridlines) and Gulf Council Eco-regions (red lines).

Eco-region 3 extends from Pensacola Bay, Florida, to the Mississippi River Delta. This eco-region is subject to nearshore salinity fluctuations influenced by the Mississippi and Atchafalaya Rivers. This eco-region contains predominantly soft bottom habitats and greater amounts of marsh and oyster reefs.

[1] The Gulf Council designated EFH in 2005 for 55 species (plus corals) under management at that time. Since 2005, several fishery species have been identified as not requiring federal fishery management by the Gulf Council.

The Gulf Council utilized a variety of scientific literature to identify species distribution data, relative density information, and species-specific life stage associations with different habitat types. This information was analyzed to develop EFH designations for each species managed by the Council.

NMFS also manages highly migratory species (HMS) such as tunas, billfish, and sharks. EFH designations within state territorial waters of the Gulf Council's eco-region are also provided for HMS managed by NMFS. EFH designations for HMS are primarily based on species distribution data. Rather than specific habitat types, NMFS identified geographic areas as EFH. The spatial boundaries were established using a geographic information system analysis tool to desisnate areas containing a high percentage (95%) of spatial distribution information.

EFH Tables

The tables on the following pages summarize EFH categories for estuarine and nearshore state waters of eco-region 3. Table 1identifies Gulf Council managed species' life stages where distribution and density information was known and met the Gulf Council identified threshold for designating EFH (EFH was not designated for species or species life stages which did not occur, or occurred at a very low density, in an eco-region) and the preferred depth ranges, if known. Tables 2 and 3 identify estuarine and nearshore habitat types, respectively, identified and described as EFH by species' life stage. Table 4 identifies areas in state waters identified and described as EFH for HMS species.

Questions:

Questions regarding these EFH summary tables should be directed to David Dale, Southeast Regional Office EFH Coordinator at 727-824-5317 or david.dale@noaa.gov.

References:

16 U.S.C. §1853(a)(7)

50 Code of Federal Regulations Part 600

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NMFS. 2011. Fisheries of the United States 2010. National Marine Fisheries Service, Office of Science and Technology, Silver Spring, MD. 118 pages.

Table 1. Gulf Council EFH Designations and Depth Preferences – Eco-Region 3

EFH Designations and Depth Preferences by Life Stage in meters (m)
NOTE: Gulf Council EFH designations extend to 182-m (100 fathoms) except for royal red shrimp (585-m or 325 fathoms).

Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Cobia	ND	11-53	11-53	5-300	6-9	1-70	1-70
King Mackerel	35-180	35-180	ND	9 max	ND	35 min	35-180
Spanish Mackerel	50 max	9-84	ND	ND	50 max	3-75	50 max
Red Drum	ND	ND	ND	0-3	0-5	1-70	40-70
Almaco Jack	NE	NE	NE	15-160	15-160	15-160	NE
Gag Grouper	NE	NE	NE	NE	NE	20-100	50-120
Golden Tilefish	80-450	80-450	80-450	80-450	80-450	80-450	80-450
Goldface Tilefish	60-256	60-256	60-256	ND	ND	60-256	60-256
Gray Snapper	NE	NE	NE	NE	NE	0-180	0-180
Gray Triggerfish	10-100	ND	ND	ND	10-100	10-100	10-100
Greater Amberjack	1-360	1-360	1-360	1-360	1-360	1-360	1-360
Lane Snapper	4-132	4-132	ND	0-20	0-20	4-132	4-132
Lesser Amberjack	ND	ND	ND	55-130	55-130	55-130	55-130
Red Snapper	18-37	18-37	18-37	17-183	20-46	7-146	18-37
Vermillion Snapper	180-300	180-300	180-300	1-25	1-25	180-300	180-300
Warsaw Grouper	40-525	40-525	40-525	20-30	20-30	40-525	40-525
Wenchman	80-200	80-200	80-200	19-378	19-378	19-378	80-200
Brown Shrimp	18-110	0-82	NA	0-18	NA	14-110	18-110
Pink Shrimp	9-48	1-50	NA	1-65	NA	1-110	9-48
Royal Red Shrimp	250-550	250-550	NA	250-550	NA	140-730	520-550
White Shrimp	9-34	1-82	NA	1-30	NA	9-27	9-34
Spiny Lobster	NA	1-100	NA	NE	NE	NE	NA
Coral	EFH for coral consists of the total distribution of coral species and life stages throughout the Gulf of Mexico.						

NOTES:
ND = No Data
NA = Post Larvae and Late Juvenile life stages not utilized for Shrimp; Eggs, Post Larvae, and Spawning Adult life stages not utilized for Spiny Lobster
NE = EFH not designated; presence/absence or density threshold not met in this eco-region for this life statge

Table 2. Estuarine Habitats – Gulf Council Managed Species – Eco-Region 3

(● indicates habitat type designated as EFH for species' life stage)

Estuarine Emergent Marsh							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum			●	●		●	
Gray Snapper						●	
Brown Shrimp				●			
White Shrimp				●			
Mangrove							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Gray Triggerfish				●			
Lane Snapper				●	●		
Estuarine Submerged Aquatic Vegetation							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum		●	●		●	●	
Lane Snapper			●	●	●		
Brown Shrimp				●			
Pink Shrimp				●			
Estuarine Pelagic							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Spanish Mackerel				●	●	●	
Estuarine Oyster Reef							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Brown Shrimp				●			
Estuarine Sand and Shell Bottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum			●			●	
Gray Snapper						●	
Lane Snapper				●	●		
Brown Shrimp				●			
Estuarine Mud/Soft Bottom							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Red Drum		●	●	●		●	
Gray Snapper						●	
Lane Snapper				●	●		
Brown Shrimp				●			
White Shrimp				●			

Table 3. Nearshore Habitats – Gulf Council Managed Species

(● indicates habitat type designated as EFH for species' life stage)

Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Nearshore Submerged Aquatic Vegetation							
Lane Snapper			●	●	●		
Pink Shrimp				●			
Nearshore Hardbottom							
Red Drum					●	●	
Gray Snapper						●	
Red Snapper				●			
Vermilion Snapper				●	●		
Nearshore Sand/Shell Bottom							
Red Drum					●	●	
Gray Snapper						●	
Gray Triggerfish						●	●
Lane Snapper				●	●	●	
Red Snapper				●			
Brown Shrimp						●	
Pink Shrimp	●	●				●	●
White Shrimp	●						
Nearshore Mud/Soft Bottom							
Gray Snapper						●	
Lane Snapper				●	●		
Brown Shrimp						●	
White Shrimp	●					●	●
Nearshore Shoal/Banks							
Gray Snapper							●
Lane Snapper						●	
Nearshore Reefs							
Gray Snapper						●	●
Gray Triggerfish	●				●	●	●
Goliath Grouper				●	●	●	
Lane Snapper			●	●	●	●	
Vermilion Snapper				●	●		

Nearshore Pelagic							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Cobia	●		●	●	●	●	●
King Mackerel				●	●		
Spanish Mackerel	●	●		●	●	●	●
Red Drum	●					●	
Greater Amberjack						●	
Red Snapper		●					
Pink Shrimp		●					
White Shrimp		●					
Nearshore Drift Algae (*Sargassum*)							
Species Common Name	Eggs	Larvae	Post Larvae	Early Juvenile	Late Juvenile	Adult	Spawning Adult
Gray Triggerfish		●	●	●	●		
Greater Amberjack				●	●		

Table 4. Highly Migratory Species EFH Designations – State Waters of Eco-Region 3

Species Common Name	Life Stage	EFH State Waters of Eco-Region 3
Atlantic Yellowfin Tuna	Juvenile	Mississippi River birdfoot delta
	Adult	Off the mouth of Mississippi River
Swordfish	Juvenile	Mississippi River birdfoot eelta
Sailfish	Juvenile	Off mouth of Mississippi River
Hammerhead Shark	All	Mississippi Sound west of Mobile Bay to Cat Island and south to Chandeleur Islands
Scalloped Hammerhead Shark	Neonate	All estuaries and nearshore waters
	Juvenile	Mississippi River birdfoot delta and all estuarine and nearshore waters east of Horn Island to Gulf Breeze
	Adult	Mississippi Sound Horn Island to Dauphin Island; nearshore waters Horn Island east to Gulf Breeze
Nurse Shark	Adult	Nearshore and offshore Pensacola and Perdido Bays
Bignose Shark	All	Seaward edge of state waters offshore Mississippi River birdfoot delta
Blacktip Shark	Neonate & Juvenile	All estuarine, nearshore, and offshore waters (ex. Lake Borgne)
	Adult	All estuarine, nearshore, and offshore waters (ex. Lake Borgne, Mobile, Perdido, and Pensacola Bays)
Bull Shark	Neonate & Juvenile	Lake Borgne east to waters around Ship Island; Lower Mobile Bay and nearshore waters off Dauphin Island to Gulf Breeze
	Juvenile	All waters Mississippi River delta to Perdido Bay (ex. portions of Chandeleur Sound and Lake Borgne)
	Adults	Estuarine waters of birdfood delta, Chandeleur Island; Lower Mobile Bay and Mississippi Sound around Dauphin Island and Perdido Bay; nearshore and offshore waters Hat Island east to Pensacola Bay
Dusky Shark	All	Gulf of Mexico nearhsore and offshore water >30 feet off mouth of Pensacola Bay
Lemon Shark	Juvenile	Nearshore waters off Terrebonne Bay
Sandbar Shark	Neonate	Portions of Perdido Bay, Pensacola Bay and nearshore and offshore waters off mouth of Pensacola Bay

Species Common Name	Life Stage	EFH State Waters of Eco-Region 3
Silky Shark	All	Mississippi River Birdfoot Delta; nearshore and offshore waters off Escambia County
Spinner Shark	Juvenile	Mississippi River birdfoot delta, outer Chandaleur Sound, Mississippi Sound, Mobile Bay, and Perdido Bay; nearshore waters (Ex. off Pensacola Bay)
	Adult	Mississippi River birdfoot delta, waters off Chandeleur Island, and nearshore waters off Pensacola Bay into East Pensacola Bay and Santa Rosa Sound
Tiger Shark	Neonate	Nearshore waters east of Gulf Shores; Perdido Bay, lower Pensacola Bay and Santa Rosa Sound
	Juvenile	Eastern Mississippi Sound from Pascagoula (ex. Grande and Portersville Bays), lower Mobile and Bon Secour Bays, Perdido and Escambia Bays; all nearshore waters east of Horn Island
Whale Shark	All	Waters off Mississippi River birdfoot delta; waters around Chandeleur Islands
Bonnethead Shark	Neonate and Juvenile	Mississippi Sound east of Ship Island; nearshore waters to 60 feet
	Adult	Mobile Bay; Mississippi Sound east of Ship Island; nearshore waters to 60 feet
Atlantic Sharpnose Shark	Neonate	Estuarine, nearshore, and offshore waters to 90 feet
	Juvenile	All NS and offshore waters to 90 feet; Estuarine waters W of Mobile Bay (ex. Lake Borgne)
	Adult	Estuarine waters west of Mobile Bay, nearshore and offshore waters to 200 feet
Blacknose Shark	Juvenile	Waters around Chandeleur and Dauphin Islands
	Adult	All nearshore waters Perdido Bay to Mississippi River birdfoot delta, estuarine waters of Mississippi Sound to Horn Island and seaward band of state waters around Chandeleur Islands
Finetooth Shark	Neonate	Nearshore waters west of Perdido Bay to Chandeleur Island; Mississippi Sound (ex. Lake Borgne)
	Juvenile & Adult	Nearshore and offshore waters Pensacola Bay to Mississippi River birdfoot delta; Mississippi Sound and Chandeleur Sound (ex. Lake Borgne)

For more information, please visit us on the internet at:

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NOAA Habitat Program

Conserving Habitats for the Future

NOAA Fisheries Service
Southeast Regional Office
Habitat Conservation Division
263 13th Avenue South
St. Petersburg, Florida 33701

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