

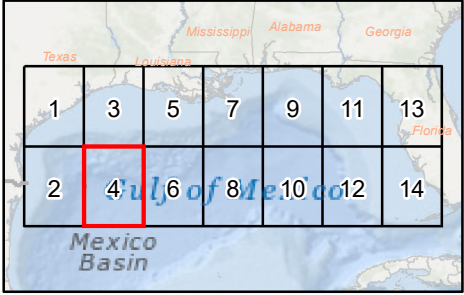
# **Biology Map 4** **Gulf of Mexico** **Offshore ESI**



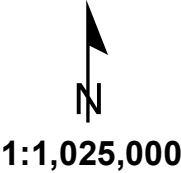
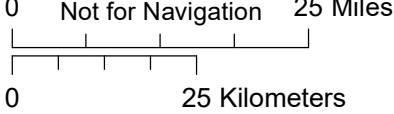
Bureau of Safety and  
Environmental Enforcement

- Benthic
- Birds
- Fish
- Herpetofauna
- Invertebrates
- Marine Mammals

- Benthic Points
- USCG Captain Of The Port Zones
- Bathymetry (Meters)
- US Exclusive Economic Zone
- AOI



**SEE MAP DATA TABLE**  
 for Status, Seasonality, and Breed  
 information about mapped species.  
 Published: February 2023



Gulf of Mexico Offshore ESI: Biology Map 4

BIOLOGICAL RESOURCES:

BENTHIC:

RAR#	Species	S F	Concentration	Mapping Qualifier	Monthly Presence (Jan-Dec)
20	Stony cup coral		Solitary	Vulnerable Occurrence	J F M A M J J J A S O N D
21	Stony branching coral		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
25	Stony branching coral		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
	Stony cup coral		Solitary	Vulnerable Occurrence	J F M A M J J J A S O N D
28	Black coral		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
34	Gorgonian corals		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
	Stony cup coral		Solitary	Vulnerable Occurrence	J F M A M J J J A S O N D
37	Gorgonian corals		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
38	Sea pens		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
41	Black coral		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
	Gorgonian corals		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
42	Gorgonian corals		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
	Sea pens		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
43	Gorgonian corals		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
	Soft coral		Solitary	Vulnerable Occurrence	J F M A M J J J A S O N D
44	Deep sea sponge		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
	Gorgonian corals		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
46	Soft coral		Solitary	Vulnerable Occurrence	J F M A M J J J A S O N D
47	Soft coral		Solitary	Vulnerable Occurrence	J F M A M J J J A S O N D
	Stony cup coral		Solitary	Vulnerable Occurrence	J F M A M J J J A S O N D
85	Deep sea sponge		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
88	Deep sea sponge		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
	Stony cup coral		Solitary	Vulnerable Occurrence	J F M A M J J J A S O N D
117	Deep sea sponge		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
	Stony branching coral		Structure-Forming	Vulnerable Occurrence	J F M A M J J J A S O N D
	Stony cup coral		Solitary	Vulnerable Occurrence	J F M A M J J J A S O N D
164	Deep sea coral		0 To 1 Genera	General Distribution	J F M A M J J J A S O N D
165	Deep sea coral		>1 To 2 Genera	General Distribution	J F M A M J J J A S O N D
228	Sargassum		-	General Distribution	M A M J J J A S

BIRD:

RAR#	Species	S F	Concentration	Mapping Qualifier	Monthly Presence (Jan-Dec)	Nesting	Migrating	Molting
1	Audubon's shearwater		-	General Distribution	M A M J J J A S O N	-	-	-
	Band-rumped storm-petrel		-	General Distribution	M A M J J J A S O N	-	-	-
	Black tern		-	General Distribution	M A M J J J A S O N	-	-	-
	Bonaparte's gull		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Bridled tern		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Brown booby		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Brown noddy		-	General Distribution	J J A S O N	-	-	-
	Brown pelican		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Common loon		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Common tern		-	General Distribution	M A M J J J A S O N	-	-	-
	Cory's shearwater		-	General Distribution	J J A S O N	-	-	-
	Great shearwater		-	General Distribution	J J A S O N	-	-	-
	Herring gull		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Laughing gull		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Magnificent frigatebird		-	General Distribution	M A M J J J A S O N	-	-	-
	Masked booby		-	General Distribution	M A M J J J A S O N	-	-	-
	Northern gannet		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Parasitic jaeger		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Pomarine jaeger		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Royal tern		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Sandwich tern		-	General Distribution	M A M J J J A S O N	-	-	-
	Seabirds		High-Vessel Srvy Ppo	Concentration Area	J F M A M J J J A S O N D	-	-	-
	Sooty tern		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Wilson's storm-petrel		-	General Distribution	M A M J J J A S O N	-	-	-
3	Audubon's shearwater		-	General Distribution	M A M J J J A S O N	-	-	-
	Band-rumped storm-petrel		-	General Distribution	M A M J J J A S O N	-	-	-
	Black tern		-	General Distribution	M A M J J J A S O N	-	-	-
	Bonaparte's gull		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Bridled tern		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Brown booby		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Brown noddy		-	General Distribution	J J A S O N	-	-	-
	Brown pelican		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Common loon		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Common tern		-	General Distribution	M A M J J J A S O N	-	-	-
	Cory's shearwater		-	General Distribution	J J A S O N	-	-	-
	Great shearwater		-	General Distribution	J J A S O N	-	-	-
	Herring gull		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Laughing gull		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Magnificent frigatebird		-	General Distribution	M A M J J J A S O N	-	-	-
	Masked booby		-	General Distribution	M A M J J J A S O N	-	-	-
	Northern gannet		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Parasitic jaeger		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Pomarine jaeger		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Royal tern		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Sandwich tern		-	General Distribution	M A M J J J A S O N	-	-	-
	Seabirds		Med-Vessel Srvy Ppo	General Distribution	J F M A M J J J A S O N D	-	-	-
	Sooty tern		-	General Distribution	J F M A M J J J A S O N D	-	-	-
	Wilson's storm-petrel		-	General Distribution	M A M J J J A S O N	-	-	-
16	Black-capped petrel		High-Vessel Srvy Ppo	Concentration Area	F M A M J J J A S O N	-	-	-
17	Black-capped petrel		Low-Vessel Srvy Ppo	General Distribution	F M A M J J J A S O N	-	-	-
18	Black-capped petrel		Med-Vessel Srvy Ppo	General Distribution	F M A M J J J A S O N	-	-	-

FISH:

RAR#	Species	S F	Concentration	Mapping Qualifier	Monthly Presence (Jan-Dec)	Spawning	Eggs	Larvae	Juveniles	Adults
19	Bluefin tuna		Bluefin Tuna Hapc	Spawning Area	M A M J	Apr-Jun	-	Apr-Jun	Apr-Jun	-
191	Albacore		-	General Distribution	J F M A M J J J A S O N D	-	-	-	-	-
	Bigeye thresher		-	General Distribution	J F M A M J J J A S O N D	-	-	-	-	-
	Bigeye tuna		-	General Distribution	J F M A M J J J A S O N D	-	-	-	Jan-Dec	Jan-Dec
	Blue marlin		-	General Distribution	J F M A M J J J A S O N D	May-Nov	-	May-Nov	May-Nov	Jan-Dec
	Bluefin tuna		-	General Distribution	J F M A M J J J A S O N D	-	-	-	-	Dec-Jun
	Dusky shark		-	General Distribution	J F M A M J J J A S O N D	-	-	-	Jan-Dec	Jan-Dec
	Longbill spearfish		-	General Distribution	J F M A M J J J A S O N D	-	-	-	-	-
	Longfin mako		-	General Distribution	J F M A M J J J A S O N D	-	-	-	-	-
	Red snapper		-	General Distribution	J F M A M J J J A S O N D	Apr-Oct	-	Jul-Nov	Jul-Nov	Jan-Dec
	Sailfish		-	General Distribution	M A M J J J A S O	May-Sep	-	May-Sep	Mar-Oct	Mar-Oct
	Scamp		-	General Distribution	J F M A M J J J A S O N D	Feb-Jun	-	Mar-May	Mar-May	Jan-Dec
	Shortfin mako		-	General Distribution	J F M A M J J J A S O N D	-	-	-	Jan-Dec	Jan-Dec
	Silky shark		-	General Distribution	J F M A M J J J A S O N D	-	-	-	-	-
	Skipjack tuna		-	General Distribution	J F M A M J J J A S O N D	Apr-May	-	-	Jun-Oct	Jan-Dec
	Swordfish		-	General Distribution	J F M A M J J J A S O N D	Jan-Dec	-	Jan-Dec	Jan-Dec	Jan-Dec
	Tiger shark		-	General Distribution	J F M A M J J J A S O N D	-	-	-	Jan-Dec	Jan-Dec
	Tilefish spp.		-	General Distribution	J F M A M J J J A S O N D	Mar-Sep	-	-	-	Jan-Dec
	Vermilion snapper		-	General Distribution	J F M A M J J J A S O N D	May-Sep	-	Jun-Nov	Jun-Nov	-
	Whale shark		-	General Distribution	J F M A M J J J A S O N D	-	-	-	-	-

Species Threatened/Endangered



Gulf of Mexico Offshore ESI: Biology Map 4 (cont.)

BIOLOGICAL RESOURCES: (cont.)

FISH (cont.):																							
RAR#	Species	S	F	Concentration	Mapping Qualifier	Monthly Presence (Jan-Dec)												Spawning		Eggs	Larvae	Juveniles	Adults
194	White marlin			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	Jun-Jun	-	-	-	Jan-Dec	Jan-Dec
	Yellowedge grouper			Common	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	Feb-Nov	-	-	-	-	Jan-Dec
	Yellowfin tuna			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	May-Sep	-	May-Sep	May-Sep	Jan-Dec	Jan-Dec
	Albacore			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	-	-
	Bigeye thresher			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	-	-
	Bigeye tuna			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	Jan-Dec	Jan-Dec
	Blue marlin			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	May-Nov	-	May-Nov	May-Nov	Jan-Dec	Jan-Dec
	Bluefin tuna			-	General Distribution	J	F	M	A	M	J						D	-	-	-	-	Dec-Jun	
	Longbill spearfish			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	-	-
	Longfin mako			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	-	-
	Sailfish			-	General Distribution			M	A	M	J	J	A	S	O			May-Sep	-	May-Sep	Mar-Oct	Mar-Oct	Mar-Oct
	Shortfin mako			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	Jan-Dec	Jan-Dec	Jan-Dec
	Silky shark			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	-	-
	Skipjack tuna			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	Apr-May	-	-	Jun-Oct	Jan-Dec	Jan-Dec
	Swordfish			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	Jan-Dec	-	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec
	Tiger shark			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	Jan-Dec	Jan-Dec
Whale shark			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	-	-	
	White marlin			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	Jun-Jun	-	-	-	Jan-Dec	Jan-Dec
	Yellowfin tuna			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	May-Sep	-	May-Sep	May-Sep	Jan-Dec	Jan-Dec
200	Giant manta	T		High Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	-	-
201	Giant manta	T		-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	-	-
217	Oceanic whitetip shark	T		High Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	Jan-Dec	Jan-Dec
218	Oceanic whitetip shark	T		-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	Jan-Dec	Jan-Dec
252	Albacore			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	-	-
	Bigeye thresher			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	-	-
	Bigeye tuna			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	Jan-Dec	-
	Blue marlin			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	May-Nov	-	May-Nov	May-Nov	Jan-Dec	Jan-Dec
	Bluefin tuna			-	General Distribution	J	F	M	A	M	J						D	-	-	-	-	-	Dec-Jun
	Dusky shark			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	Jan-Dec	Jan-Dec
	Longbill spearfish			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	-	-
	Red snapper			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	Apr-Oct	-	Jul-Nov	Jul-Nov	Jan-Dec	Jan-Dec
	Sailfish			-	General Distribution			M	A	M	J	J	A	S	O			May-Sep	-	May-Sep	Mar-Oct	Mar-Oct	Mar-Oct
	Skipjack tuna			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	Apr-May	-	-	Jun-Oct	Jan-Dec	Jan-Dec
	Swordfish			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	Jan-Dec	-	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec
	Tilefish spp.			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	Mar-Sep	-	-	-	Jan-Dec	Jan-Dec
	Whale shark			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	-	-
	White marlin			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	Jun-Jun	-	-	-	Jan-Dec	Jan-Dec
	Yellowedge grouper			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	Feb-Nov	-	-	-	-	Jan-Dec
	Yellowfin tuna			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	May-Sep	-	May-Sep	May-Sep	Jan-Dec	Jan-Dec

HERPETOFAUNA:

RAR#	Species	S	F	Concentration	Mapping Qualifier	Monthly Presence (Jan-Dec)												Nesting	Hatching	Internest	Juveniles	Adults
180	Green sea turtle		T	Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	Jan-Dec
	Kemp's ridley sea turtle		E	Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	Jan-Dec
	Loggerhead sea turtle		T	Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	Jan-Dec
197	Leatherback sea turtle		E	-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-	Jan-Dec
243	Green sea turtle		T	-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	Jan-Dec	-
	Kemp's ridley sea turtle		E	-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	Jan-Dec	-
	Leatherback sea turtle		E	-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	Jan-Dec	-
	Loggerhead sea turtle		T	-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	Jan-Dec	-

INVERTEBRATE:

RAR#	Species	S	F	Concentration	Mapping Qualifier	Monthly Presence (Jan-Dec)												Spawning	Eggs	Larvae	Juveniles	Adults	
7	Royal red shrimp			-	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	Jan-Dec	-	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec

MARINE MAMMAL:

RAR#	Species	S	F	Concentration	Mapping Qualifier	Monthly Presence (Jan-Dec)												Mating	Calving	Pupping	Molting
11	Atlantic spotted dolphin			Present	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
	Bottlenose dolphin			Present	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
12	Beaked whales			High Use Area	Concentration Area	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
13	Beaked whales			Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
14	Blackfish			High Use Area	Concentration Area	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
15	Blackfish			Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
162	Clymene dolphin			High Use Area	Concentration Area	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
163	Clymene dolphin			Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
187	Kogia spp.			High Use Area	Concentration Area	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
188	Kogia spp.			Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
213	Atlantic spotted dolphin			High Use Area	Concentration Area	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
214	Atlantic spotted dolphin			Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
215	Bottlenose dolphin			High Use Area	Concentration Area	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
216	Bottlenose dolphin			Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
220	Pantropical spotted dolphin			Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
221	Pilot whales			High Use Area	Concentration Area	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
222	Pilot whales			Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
226	Risso's dolphin			High Use Area	Concentration Area	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
227	Risso's dolphin			Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
237	Sperm whale		E	High Use Area	Concentration Area	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
238	Sperm whale		E	Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
240	Spinner dolphin			Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-
245	Striped dolphin			Low Use Area	General Distribution	J	F	M	A	M	J	J	A	S	O	N	D	-	-	-	-