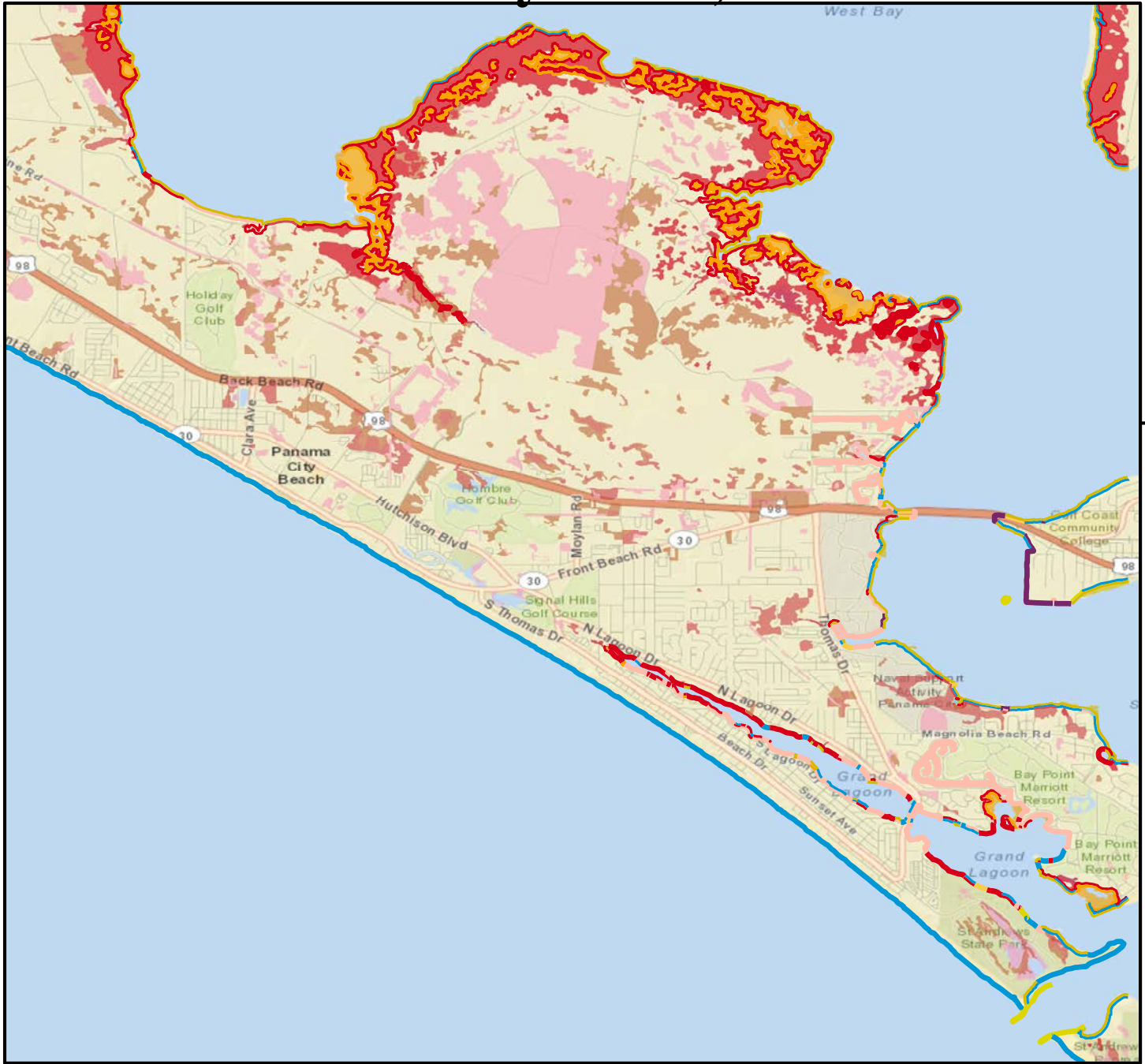


# Panama City Beach, Florida



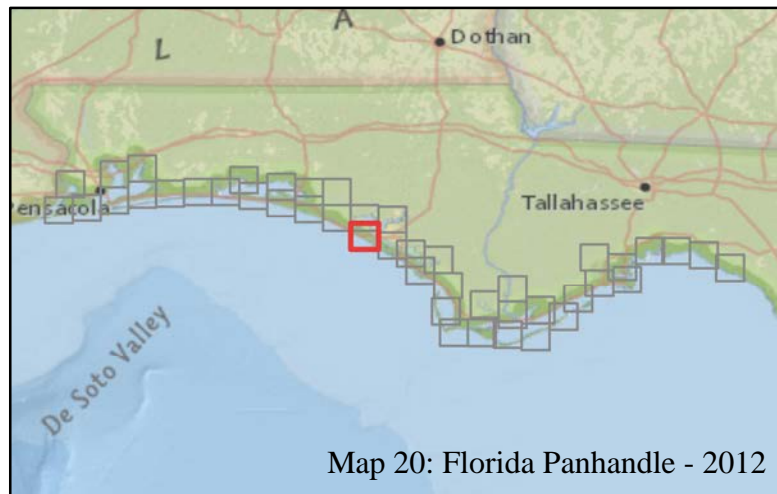
85°48'0\"/>

## ESI Shoreline Habitats on Map

- 10A Salt- and brackish-water marshes
- 10B Freshwater marshes
- 10C Swamps
- 10D Scrub-shrub wetlands
- 9A Sheltered tidal flats
- 9B Vegetated low banks
- 8B Sheltered, solid man-made structures
- 8C Sheltered riprap
- 7 Exposed tidal flats
- 6B Riprap
- 5 Mixed sand and gravel beaches
- 3A Fine- to medium-grained sand beaches

Additional shoreline types are present - see back of map for complete listing.








Content from Florida Panhandle - 2012 ESI Atlas




Map 20: Florida Panhandle - 2012





# Panama City Beach, Florida

## BIOLOGICAL RESOURCES

Birds																			
Subelement	Species	S	F	Concentration	J	F	M	A	M	J	J	A	S	O	N	D	NESTING	MIGRATING	MOLTING
 Diving	Brown pelican	C		-	X	X	X	X	X	X	X	X	X	X	X	X	Nov-Sep		
	Common loon			-	X	X	X	X							X	X			
 Gull/Tern	Black skimmer	C		-					X	X	X	X	X			May-Sep			
	Laughing gull			-	X	X	X	X	X	X	X	X	X	X	X	X	May-Aug		
	Least tern	T		-					X	X	X	X					Apr-Aug		
	Ring-billed gull			-	X	X	X	X	X	X	X	X	X	X	X	X			
	Royal tern			2-ADULTS	X	X	X	X	X	X	X	X	X	X	X	X	Apr-Aug		
 Pelagic	Northern gannet			-	X	X	X	X							X				
 Raptor	Bald eagle			-	X	X	X	X	X	X	X	X	X	X	X	Nov-Jun			
	Osprey	C		-	X	X	X	X	X	X	X	X	X	X	X				
 Shorebird	Killdeer			1	X	X	X	X	X	X	X	X	X	X	X	Mar-Jul			
	Red knot			10	X	X	X	X	X	X	X	X	X	X	X				
	Snowy plover	T		2-3-NESTS			X	X	X	X	X						Mar-Aug		
	Wilson's plover			6-31-NESTS	X	X	X	X	X	X	X	X	X	X	X	Apr-Jul			
 Wading	Cattle egret			10	X	X	X	X	X	X	X	X	X	X	X	Mar-Aug			
	Great blue heron			30	X	X	X	X	X	X	X	X	X	X	X	Nov-Jul			
	Great egret			30	X	X	X	X	X	X	X	X	X	X	X	Jan-Jun			
	Snowy egret	C		30	X	X	X	X	X	X	X	X	X	X	X	Mar-Aug			
 Waterfowl	American black duck			-	X	X	X	X						X	X	X			
	American coot			10S	X	X							X	X	X	X			
	American wigeon			-	X	X	X	X						X	X	X			
	Bufflehead			100S	X	X									X				
	Canvasback			-	X	X	X								X	X			
	Common goldeneye			-	X	X	X								X				
	Gadwall			-	X	X	X							X	X	X			
	Lesser scaup			100S	X	X	X	X						X	X	X			
	Long-tailed duck			-	X	X									X				
	Mallard			-	X	X	X					X	X	X	X				
	Mottled duck			-	X									X	X	X			
	Northern pintail			-	X	X	X							X	X	X			
	Red-breasted merganser			100S	X	X	X	X						X	X	X			
	Redhead			100S	X	X	X							X	X				
	Ring-necked duck			-	X	X	X	X						X	X	X			
	Ruddy duck			-	X	X	X	X						X	X	X			
Wood duck			-	X	X	X	X	X	X	X	X	X	X	X	X				



Fish																					
Subelement	Species	S	F	Concentration	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	EGGS	LARVAE	JUVENILE	ADULT
 Diadromous	Alabama shad	C		COMMON	X	X	X				X	X	X	X	X	X				Jan-Dec	Jan-Dec
	Gulf sturgeon	T	T	PRESENT	X	X	X	X	X	X	X	X	X	X	X	X				Oct-Apr	Oct-Apr*
	Striped bass			PRESENT	X	X	X	X	X	X	X	X	X	X	X	X					

## Panama City Beach, Florida (continued)

Fish (continued)																					
Subelement	Species	S	F	Concentration	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	EGGS	LARVAE	JUVENILE	ADULT
 Estuarine Nursery	Atlantic croaker			ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	Sep-Apr	Sep-Apr	Sep-Apr	Jan-Dec	Jan-Dec
	Atlantic sharpnose shark			PRESENT				X	X	X	X	X	X	X			May-Jul		Apr-Oct	Apr-Oct	Apr-Oct
	Bay anchovy			ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	Mar-Nov	Mar-Nov	Mar-Nov	Jan-Dec	Jan-Dec
	Black drum			COMMON	X	X	X	X	X	X	X	X	X	X	X	X	Nov-Apr	Nov-Apr	Dec-May	Jan-Dec	Jan-Dec
	Black sea bass			PRESENT	X	X	X	X	X	X	X	X	X	X	X	X	Dec-Apr	Dec-Apr	Dec-May	Jan-Dec	Jan-Dec
	Bluefish			ABUNDANT			X	X	X	X	X	X	X	X	X	X	Sep-Jan*	Sep-Jan*	Sep-Jan*	Jan-Dec	Jan-Dec
	Bonnethead shark			PRESENT	X	X	X	X	X	X	X	X	X	X	X	X	Oct-Nov		Aug-Sep	Oct-Jan*	Jul-May
	Bull shark			COMMON	X	X	X	X	X	X	X	X	X	X	X	X	Jun-Aug		Apr-Jun	Jan-Dec	Jan-Dec
	Goliath grouper			-	X	X	X	X	X	X	X	X	X	X	X	X				Jan-Dec	Jan-Dec
	Gray snapper			COMMON							X	X	X	X	X	X	Jun-Nov	Jun-Nov	Jun-Dec	Jan-Dec	Jan-Dec
	Grunts			COMMON			X	X	X	X	X	X	X	X	X	X				Jun-Sep	
	Gulf flounder			COMMON	X	X	X	X	X	X	X	X	X	X	X	X	Nov-Feb	Nov-Feb	Nov-Mar	Jan-Dec	Jan-Dec
	Gulf menhaden			HIGHLY-ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	Oct-Mar	Oct-Mar	Oct-May	Jan-Dec	Jan-Dec
	Hardhead catfish			HIGHLY-ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	May-Aug	May-Aug	May-Sep	Jan-Dec	Jan-Dec
	Kingfishes			COMMON							X	X	X	X	X	X				Jun-Dec	
	Ladyfish			ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	Jan-Nov	Jan-Nov	Jan-Dec	Jan-Dec	Jan-Dec
	Lane snapper			COMMON									X	X			Sep-Jan*	Sep-Jan*	Sep-Jan*	Sep-Jan*	Sep-Jan*
	Mojarras			ABUNDANT				X	X	X	X	X	X	X	X	X	Apr-Nov	Apr-Nov	Apr-Nov	Apr-Nov	Apr-Nov
	Pigfish			PRESENT	X	X	X	X	X								Jan-May	Jan-May	Jan-May		Jan-May
	Pinfish			HIGHLY-ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	Oct-Apr	Oct-Apr	Oct-Apr	Jan-Dec	Jan-Dec
	Porgy spp.			PRESENT	X	X	X	X	X	X	X	X	X	X	X	X	Jan-Aug	Jan-Aug	Jan-Sep	Jan-Dec	Apr-Dec
	Red drum			COMMON	X	X	X	X	X	X	X	X	X	X	X	X	Sep-Dec	Sep-Jan	Sep-Jan	Jan-Dec	Jan-Dec
	Sand seatrout			ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	Mar-Sep	Mar-Sep	Mar-Oct	Jan-Dec	Jan-Dec
	Sheepshead			COMMON	X	X	X	X	X	X	X	X	X	X	X	X	Feb-May	Feb-May	Feb-Jul	Jan-Dec	Jan-Dec
	Silver mullet			COMMON	X	X	X	X	X	X	X	X	X	X	X	X				May-Oct	Jan-Dec
	Southern flounder			COMMON	X	X	X	X	X	X	X	X	X	X	X	X	Nov-Jan	Nov-Jan	Nov-Mar	Jan-Dec	Jan-Dec
Spot			ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	Oct-Apr	Oct-Apr	Oct-Apr	Jan-Dec	Jan-Dec	
Spotted seatrout			PRESENT	X	X	X	X	X	X	X	X	X	X	X	X	Apr-Dec	Apr-Sep	Apr-Oct	Jan-Dec	Jan-Dec	
Striped mullet			HIGHLY-ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	Oct-Mar	Oct-Mar	Oct-Mar	Jan-Dec	Jan-Dec	
Tarpon			COMMON						X	X	X	X						Aug-Dec	May-Sep	Jun-Oct	
 Estuarine Resident	Code goby			ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	Apr-Sep	Apr-Sep	Apr-Sep	Jan-Dec	Jan-Dec	
	Gulf killifish			COMMON	X	X	X	X	X	X	X	X	X	X	X	Mar-Sep	Mar-Sep	Mar-Oct	May-Feb	Jan-Dec	
	Sheepshead minnow			ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	Mar-Sep	Mar-Sep	Apr-Oct	May-Mar	Jan-Dec	
	Silver perch			ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	Mar-Jul	Mar-Jul	Mar-Aug	Jan-Dec	Jan-Dec	
	Silversides			ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	Mar-Sep	Mar-Sep	Mar-Oct	Jan-Dec	Jan-Dec	
	Smalltooth sawfish	E		PRESENT	X	X	X	X	X	X	X	X	X	X	X				Jan-Dec	Jan-Dec	
 Fish	Vermillion snapper			COMMON				X	X	X	X	X	X	X	X	Apr-Nov	Apr-Nov	Apr-Nov	Apr-Nov	Apr-Nov	
 Freshwater	Bluegill			COMMON	X	X	X	X	X	X	X	X	X	X	X	Apr-Sep	Apr-Sep	Apr-Sep	Jan-Dec	Jan-Dec	
	Largemouth bass			COMMON	X	X	X	X	X	X	X	X	X	X	X	Mar-May	Mar-May	Mar-May	Jan-Dec	Jan-Dec	


## Panama City Beach, Florida (continued)

### Fish (continued)



Subelement	Species	S	F	Concentration	J	F	M	A	M	J	J	A	S	O	N	D	SPAWNING	EGGS	LARVAE	JUVENILE	ADULT
 Marine Benthic	Atlantic spadefish			PRESENT	X	X	X	X	X	X	X	X	X	X	X		May-Sep	May-Sep	May-Oct	Jan-Dec	Jan-Dec
	Cusk eels			COMMON	X	X	X	X	X	X	X	X	X	X	X		Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec
	Flatfish			PRESENT	X	X	X	X	X	X	X	X	X	X	X		Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec
	Florida pompano			COMMON			X	X	X	X	X	X	X	X	X		Mar-Oct	Mar-Oct	Mar-Sep	Mar-Nov	Mar-Dec
	Gag grouper			COMMON	X	X	X	X	X	X	X	X	X	X	X					Jan-Dec	Jan-Dec
	Goatfishes			PRESENT	X	X	X	X	X	X	X	X	X	X	X		Mar-Jun	Mar-Jun	Mar-Jul	Jan-Dec	Jan-Dec
	Gray triggerfish			PRESENT	X	X	X	X	X	X	X	X	X	X	X		May-Sep	May-Sep	May-Oct	Apr-Nov	Apr-Nov
	Little tunny			HIGHLY-ABUNDANT	X	X	X	X	X	X	X	X	X	X	X						
	Lizardfishes			PRESENT	X	X	X	X	X	X	X	X	X	X	X		Apr-Aug	Apr-Aug	Apr-Oct	Jan-Dec	Jan-Dec
	Permit			PRESENT							X	X	X	X			Apr-Jun	Apr-Jun	Mar-Oct	Aug-Nov	Mar-Nov
	Rays			COMMON	X	X	X	X	X	X	X	X	X	X	X		Jan-Dec	Jan-Dec		Jan-Dec	Jan-Dec
	Red snapper			COMMON								X	X	X			May-Oct	May-Oct	May-Nov	Apr-Jan	Apr-Jan
	Rock sea bass			ABUNDANT				X	X	X	X	X	X	X	X		Mar-Jun	Mar-Jun	Mar-Jul	Jan-Dec	Jan-Dec
	Scamp grouper			ABUNDANT			X	X	X	X	X	X	X	X			Mar-May	Mar-May	Mar-Jun	Mar-Nov	Apr-Nov
	Searobins			ABUNDANT	X	X	X	X	X	X	X	X	X	X	X		Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec
	Skates			COMMON	X	X	X	X	X	X	X	X	X	X	X		Jan-Dec	Jan-Dec		Jan-Dec	Jan-Dec
	Tonguefish			PRESENT	X	X	X	X	X	X	X	X	X	X	X		Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec
 Marine Pelagic	Amberjacks			ABUNDANT				X	X	X	X	X	X	X		Apr-Nov	Apr-Nov	Apr-Dec	Apr-Dec	Apr-Dec	
	Atlantic tripletail			PRESENT	X	X	X	X	X	X	X	X	X	X		May-Sep	May-Sep	May-Oct	Jan-Dec	Jan-Dec	
	Ballyhoo			PRESENT					X	X	X										
	Bigeye scad			HIGHLY-ABUNDANT	X	X	X	X	X	X	X	X	X	X		Jun-Nov	Jun-Nov	Jun-Dec	Jan-Dec	Jan-Dec	
	Blackfin tuna			PRESENT				X	X	X	X	X	X	X		Apr-Dec	Apr-Dec	Apr-Dec	Apr-Dec	Oct	
	Blacknose shark			PRESENT	X	X	X	X	X	X	X	X	X	X		May-Jul		May-Oct	May-Oct	Jan-Dec	
	Blacktip shark			PRESENT			X	X	X	X	X	X	X			May-Jun		May-Sep	Mar-Nov	Apr-Nov	
	Blue runner			ABUNDANT					X	X	X	X	X			Apr-Aug	Apr-Aug	Apr-Sep	Jan-Dec	Jan-Dec	
	Bluefin tuna	C		PRESENT				X	X	X						Apr-Jun	Apr-Jun	Apr-Jun	Apr-Jun	Apr-Jun	
	Cobia			COMMON			X	X	X	X	X	X	X			May-Sep	May-Sep	May-Sep	Mar-Nov	Mar-Nov	
	Crevalle jack			COMMON					X	X	X	X	X			Apr-Aug	Apr-Aug	Apr-Sep	Jan-Dec	Jan-Dec	
	Dolphin			ABUNDANT	X	X	X	X	X	X	X	X	X	X		Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jul-Aug	
	Finetooth shark			-					X	X	X	X						May-Sep	May-Sep	May-Sep	
	King mackerel			PRESENT						X	X	X	X			Jun-Oct	Jun-Oct	Jun-Oct	Jun-Nov	Jun-Nov	
	Red grouper			PRESENT	X	X	X	X	X	X	X	X	X	X		Mar-Jul				Jan-Dec	
	Round scad			HIGHLY-ABUNDANT	X	X	X	X	X	X	X	X	X	X		Sep-Jan*	Sep-Jan*	Sep-Jan*	Jan-Dec	Jan-Dec	
	Scalloped hammerhead			PRESENT	X	X	X	X	X	X	X	X	X	X		May-Jun		Apr-Oct	Jan-Dec	Apr-Nov	
	Spanish mackerel			ABUNDANT				X	X	X	X	X	X			May-Oct	May-Oct	May-Oct	Feb-Dec	Feb-Dec	
	Spanish sardine			ABUNDANT	X	X						X	X	X		Mar-Nov	Mar-Nov	Mar-Nov	Jan-Dec	Jan-Dec	
	Spinner shark			-					X	X	X	X				May-Jun			Jun-Sep	May-Jun	
Thread herring			ABUNDANT	X	X				X	X	X	X	X		Mar-Sep	Mar-Sep	Mar-Sep	Apr-Feb	Jan-Dec		
Tiger shark			-							X	X						Jul-Aug	Jul-Aug			
Wahoo			ABUNDANT	X	X	X	X	X	X	X	X	X	X		Apr-Sep	Apr-Sep	Apr-Sep	Jan-Dec	Jan-Dec		

(\*) = This life stage occurs during the months listed, but not continuously.

### Habitats and Rare Plants

Subelement	Species	S	F	Concentration	J	F	M	A	M	J	J	A	S	O	N	D
 Plant	Godfrey's goldenaster	E		-	X	X	X	X	X	X	X	X	X	X	X	
	Large-leaved jointweed	T		-	X	X	X	X	X	X	X	X	X	X	X	
	Telephus spurge	E	T	-	X	X	X	X	X	X	X	X	X	X	X	
	Wiregrass gentian	E		-	X	X	X	X	X	X	X	X	X	X	X	

### Marine Mammals

Subelement	Species	S	F	Concentration	J	F	M	A	M	J	J	A	S	O	N	D	MATING	CALVING	PUPPING	MOLTING
 Dolphin	Bottlenose dolphin			-	X	X	X	X	X	X	X	X	X	X	X					
 Manatee	West Indian manatee	E	E	LOW			X	X	X	X	X	X	X	X						

## Panama City Beach, Florida (continued)

Reptiles and Amphibians																					
Subelement	Species	S	F	Concentration	J	F	M	A	M	J	J	A	S	O	N	D	NESTING	HATCHING	INTERESTING	JUVENILE	ADULT
Alligator	American alligator		S	-	X	X	X	X	X	X	X	X	X	X	X	X	May-Jul	Aug-Sep			
Snake	Gulf salt marsh snake			-	X	X	X	X	X	X	X	X	X	X	X	X	Mar-Apr	Jul-Aug			Jan-Dec
Turtle	Diamondback terrapin			-			X	X	X	X	X	X	X	X	X	X	Apr-Jun	Aug-Sep			
	Gopher tortoise	T		-	X	X	X	X	X	X	X	X	X	X	X	X	Mar-Dec				
	Green sea turtle	E	E	RARE	X	X	X	X	X	X	X	X	X	X	X	X			May-Nov	Jan-Dec	Jan-Dec
	Hawksbill sea turtle	E	E	RARE	X	X	X	X	X	X	X	X	X	X	X	X				Jan-Dec	Jan-Dec
	Kemp's ridley sea turtle	E	E	PRESENT	X	X	X	X	X	X	X	X	X	X	X	X				Jan-Dec	Jan-Dec
	Leatherback sea turtle	E	E	RARE	X	X	X	X	X	X	X	X	X	X	X	X	Jun-Jul	Aug-Sep		Jan-Dec	Jan-Dec
	Loggerhead sea turtle	T	T	PRESENT	X	X	X	X	X	X	X	X	X	X	X	X	May-Aug	Jul-Nov	Apr-Sep	Jan-Dec	Jan-Dec

Terrestrial Mammals																
Subelement	Species	S	F	Concentration	J	F	M	A	M	J	J	A	S	O	N	D
Small Mammal	Choctawhatchee beach mouse	E	E	-	X	X	X	X	X	X	X	X	X	X	X	X

### SHORELINE RESOURCES:

#### ESI Polygon Habitats

Pattern	ESI Rank	Habitat	Area (meters <sup>2</sup> )
	10A	Salt- and brackish-water marshes	7,045,360
	10B	Freshwater marshes	7,846,040
	10C	Swamps	1,924,168
	10D	Scrub-shrub wetlands	5,325,821
	9A	Sheltered tidal flats	2,113,777
	7	Exposed tidal flats	397,573

#### Shoreline Types (Length of ESI Shoreline on Map = 187,105 meters ; Length of Shoreline on Map = 156,752 meters)

Color	ESI Rank	Shoreline Habitat	Length (meters)	% of ESI Shoreline
	10A	Salt- and brackish-water marshes	123,045	65
	10B	Freshwater marshes	567	<1
	10C	Swamps	1,652	<1
	10D	Scrub-shrub wetlands	1,100	<1
	9A	Sheltered tidal flats	79,454	42
	9B	Vegetated low banks	326	<1
	8B	Sheltered, solid man-made structures	26,269	14
	8C	Sheltered riprap	1,365	<1
	7	Exposed tidal flats	41,310	22
	6B	Riprap	2,604	1
	5	Mixed sand and gravel beaches	340	<1
	3A	Fine- to medium-grained sand beaches	43,188	23
	1B	Exposed, solid man-made structures	2,508	1

**Note:** A shoreline segment may include multiple shoreline habitats. If any segments include multiple habitats, the combined length of all habitats will exceed the length of the mapped ESI shoreline, and the percent of ESI shoreline values will sum to greater than 100%.

