### AXIS MIDSTREAM PARTNERS, LLC



# Threatened and Endangered Species Report

Midway to Harbor Island Pipeline Project Nueces and San Patricio Counties, Texas

**Prepared By:** 



**Date:** 12/20/18

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### 1.0 INTRODUCTION

### 1.1 Background and Location

Project Consulting Services, Inc. (PCS) was contracted by Axis Midstream Partners, LLC (Axis) to conduct a threatened and endangered (T&E) species assessment for Midway to Harbor Island Pipeline Project (Project) in Nueces and San Patricio Counties, Texas. The project is located immediately 2.4 miles south of the Town of Aransas Pass, Texas Appendix A, Figure 1.

The Midway to Harbor Island Project consists of the following components (Appendix A, Figure 1):

- <u>Midway Tank Farm (Storage facility)</u>: 4-100K and 4-250K barrel Tanks, located at the intersection of FM 72 and FM 893 in San Patricio County, Texas (**Appendix A, Figure 1 & Figures 2a-2d**).
- <u>Midway to Redfish Bay Pipeline</u>: Installation of approximately 19.5 miles of 36" crude pipeline from the Midway Tank Farm to the Redfish Bay Facility (Appendix A, Figures 2a-2d).
- <u>Redfish Bay Facility</u>: An expansion of the existing Redfish Facility to include 16 250K Tanks, located off East Beasley Drive, south of the town of Aransas Pass (<u>Appendix A, Figure 1, Figures 2a-2d & Figures 3a-3e</u>).
- <u>Redfish to Harbor Island Pipelines</u>: Installation of 1-6", 1-12", and 2-42" pipelines across Redfish Bay to the Harbor Island Terminal. Although many pipeline routes were reviewed, three (3) preliminary pipeline routes were identified and further evaluated. (Appendix A, Figures 3a-3e).
- <u>Harbor Island Terminal</u>: The terminal end of the project located at Hwy 361 and the Corpus Christi Navigational Channel near Port Aransas, it is proposed that a 20K barrel Slop Tank be install at the site. Additional equipment and site design is currently under development. (**Appendix A, Figure 1 & Figures 3a-3e**).

The purpose of the assessment was to determine the presence or absence of state and federally listed T&E species and their habitat which may be subject to the Endangered Species Act (ESA) Section 7 consultation or permitting.

The ESA establishes measures for the protection of plant and animal species that are federally listed as threatened and endangered, and for the conservation of habitats that are critical to the continued existence of those species. A federally listed endangered species is any species that is in danger of extinction throughout all or a significant portion of its range. A federally listed threatened species is any species that is likely to become endangered in the foreseeable future throughout all or a significant portion of its range. Candidate species do not currently carry regulatory protection. The federal regulatory agencies responsible for enacting the ESA are the United States (U.S.) Fish and Wildlife Service (FWS) and National Oceanic Atmospheric Association, Fisheries (NOAA).

#### 1.2 Site Characterization

A review of topographic maps indicates that elevations range from approximately 15 feet at the Midway Tank Farm to 5 feet above mean sea level at the Redfish Facility and Harbor Island Terminal. A portion of the Project is situated within Aransas Bay (Appendix A, Figure 2).

The Site is situated within the Aransas (12100407, Aransas Bay (12100405 and North Corpus Christi Bay (12110201) Sub-Basins (**Appendix A, Figure 1**). The Project crosses tributaries of Gum Hollow, McCampbell Slough and several other man-made drainage features.



The Site is located within the Mid-Coast Barrier Islands and Coastal Marshes and Southern Sub-humid Gulf Coastal Prairies ecoregions of the Western Gulf Coastal Plain. The Western Gulf Coastal Plain is a relatively flat grassland situated adjacent to the Gulf of Mexico. This area has been affected by agriculture (e.g. cropland or pasture), residential, and commercial activities. The Mid-Coast Barrier Islands and Coastal Marshes are comprised of dunes, beaches, bays, estuaries, tidal marshes and barrier islands. The vegetation in this ecoregion is comprised primarily of cordgrass (*Spartina spp.*), saltgrass (*Distichalis sp.*), bluestems (*Schizachyrium spp.*) and paspalum (*Paspalum spp.*). The Southern Sub-humid Gulf Coastal Prairies are comprised of low flat plains of coastal prairies. The vegetation is dominated by a variety of grasses. There are some scattered areas of oaks (Quercus sp.) and some thorn-shrub (i.e. honey mesquite, huisache, etc.).

The Survey Area consists of agricultural lands, scrub shrub areas, riparian, freshwater and intertidal marsh habitats. The NWI maps the majority of the Site as upland. The Site contains estuarine deep-water (E1), estuarine intertidal (E2EM), lacustrine littoral (L2), palustrine emergent (PEM), palustrine (freshwater) ponds (PUB), and riverine lower perennial (R2) habitats. These habitats are associated with the various streams and the floodplain found within the Project area (Appendix A, Figure 3).

Numerous soils are mapped by the Natural Resources Conservation Service (NRCS) within the Project area. This data is presented in **Table 1**. The NRCS soils map is included in **Appendix A, Figure 4**.

Table 1: NRCS Mapped Soils within the Project Area

Map Unit Symbol	Map Unit Name	Drainage Class Rating	Hydric Soil Rating* (major component)
As	Aransas clay, 0 to 1 percent slopes, slightly saline, moderately sodic, frequently flooded	Poorly drained	Hydric
Ds	Dianola soils	Poorly drained	Hydric
Dt	Dietrich loamy fine sand, 0 to 1 percent slopes, very rarely flooded	Poorly drained	Hydric
Ec	Banquete clay, 0 to 1 percent slopes	Moderately well drained	Non-Hydric
GM	Galveston-Mustang complex, 0 to 3 percent slopes, occasionally flooded, frequently ponded	Moderately well drained to Poorly drained	Hydric
Is	ljam soils, rarely flooded	Poorly drained	Hydric
Mu	Mustang fine sand, 0 to 1 percent slopes, occasionally flooded, frequently ponded	Poorly drained	Hydric



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Map Unit Symbol	Map Unit Name	Drainage Class Rating	Hydric Soil Rating (major component)
Na	Narta loam, 0 to 1 percent slopes, rarely flooded	Poorly drained	Hydric
Nu	Nueces fine sand	Moderately well drained	Non-Hydric
Or	Orelia fine sandy loam, 0 to 1 percent slopes	Well drained	Non-Hydric
Os	Calallen sandy clay loam, 0 to 1 percent slopes	Well drained	Non-Hydric
PaA	Papalote fine sandy loam, 0 to 1 percent slopes	Moderately well drained	Non-Hydric
RaA	Raymondville clay loam, 0 to 1 percent slopes	Moderately well drained	Non-Hydric
RaB	Raymondville clay loam, 1 to 3 percent slopes	Moderately well drained	Non-Hydric
Та	Tidal flats, occasionally ponded	Very Poorly drained	Hydric
VcA	Victoria clay 0 to 1 percent slopes	Well drained	Non-Hydric
Vd	Victoria clay, depressional	Well drained	Non-Hydric
WfA	Willacy fine sandy loam, 0 to 1 percent slopes	Well drained	Non-Hydric

<sup>\*</sup>Hydric rating greater than 5.

### 2.0 METHODS

FWS, NOAA and Texas Parks and Wildlife Department (TPWD) maintain documentation federally listed species occurrences in Texas, by county. TPWD frequently lists the status of a federally listed species as "potentially occurring" in a county that is not documented as "occurring" on the FWS status list. TPWD also maintains documentation of rare, threatened and endangered (including federally listed species) species for the State of Texas. Although FWS and NOAA have authority over the status of species listed under the ESA, the FWS, NOAA and TPWD status lists were used in the analysis of this report as provided in **Table 3** (FWS 2016a, NOAA 2017, TPWD 2017).

PCS personnel conducted a desktop assessment of threatened and endangered species and critical habitats potentially occurring within the Survey Area. The assessment included a review of available maps of the area (topographic maps, infrared aerial photography), files and species lists available from natural resource agencies, and other published information.



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It should be understood the scope of this assessment was to determine whether or not any T&E species may occur within the Project area based on published data and is not a legal determination of the occurrence within the Project area. The FWS and NOAA have regulatory authority regarding federally listed species and the TPWD has regulatory authority regarding state listed species. The determinations found in this report are not official until they have been reviewed and approved by the FWS, NOAA and TPWD, as applicable.

### 3.0 <u>TEXAS NATURAL DIVERSITY DATABASE ELEMENT</u> OCCURANCE DATA

The TPWD maintains Element Occurrence data describing the presence of rare, threatened, and endangered species. Element occurrence data for the Survey Area was obtained from the TPWD Texas Natural Diversity Database in October, 2018. These data document the presence of several rare plant and animal species within the Survey Area. **Table 2** summarizes the rare, threatened and endangered species occurrences near the Survey Area. An Element of Occurrence Map is presented in **Appendix A**, **Figure 5**.

Table 2: Element Occurrences Near the Project Area

EO ID	Scientific Name	Common Name	TX Status	Federal Status	Distance from Project (miles)
5009	Allium elmendorfii	Elmendorf's onion			7.5 SW
6453	Echinocereus reichenbachii var. albertii	Black Lace Cactus	Endangered	Endangered	5.5 SW
10126	Euphorbia peplidion	Low Spurge			0.0
9532	Holbrookia lacerata	Spot-tailed Earless Lizard			0.0
3963	Malaclemys terrapin littoralis	Texas Diamondback Terrapin			6.0 S
1845	Notophthalmus meridionalis	Black-spotted Newt			7.5 SW
10477, 10314	Prunus texana	Texas Peachbush			7.0 SW
1773, 2541, 7201, 292, 7515, 3119, 3121, 6934, 5325, 4460,	Psilactis heterocarpa	Welder Machaeranthera			0.0
11082, 11046, 11000,	Rhynchospora indianolensis	Indianola Beakrush			3.0 SW
7119	Schizachyrium scoparium- sorghastrum nutans series	Little Bluestem- Indiangrass Series			2.0 W
3234	Siren sp. 1	South Texas Siren			7.5 SW
10068	Sporobolus tharpii	Tharp's Dropseed			7.0 SW
10322	Zephyranthes refugiensis	Refugio Rainlily			0.0

Source: Texas Natural Diversity Database (TNDD) 03/13/2017



### 4.0 **RESULTS AND FINDINGS**

There are 30 state listed and 22 federally listed T&E species listed for the Project area (TPWD 2018). The FWS Information for Planning and Conservation (IPaC) (FWS 2018) data reported 16 T&E species potentially occurring in the Project area, including the 5 sea turtle species. NOAA has 10 marine T&E species (NOAA 2018), including the 5 sea turtle species. The combined FWS, NOAA and TPWD information is shown in **Table 3**. No critical habitat is designated within the Project area for the federally listed species.

Table 3: T&E Species – Refugio County, Texas

Table 3: 1&E Species – Refugio	Federal	State	N C.	San Patricio	Source
Common Name	Status	Status	Nueces Co.	Co.	
		Amphibian	s		
Black-spotted newt		T	X	X	TPWD
Sheep frog		T	X	X	TPWD
South Texas Siren		T		X	TPWD
		Birds			
American Peregrine Falcon	DL	T	X	X	TPWD
Arctic Peregrine Falcon	DL		X	X	TPWD
Attwater's Greater Prairie-chicken	Е		X	X	FWS
Brown Pelican	DL		X	X	FWS, TPWD
Eskimo Curlew	Е	Е	X	X	TPWD
Henslow's Sparrow				X	TPWD
Interior Least Tern*	Е				FWS
Mountain Plover			X	X	TPWD
Northern Aplomado Falcon	Е	Е	X	X	FWS, TPWD
Peregrine Falcon	DL	T	X	X	TPWD
Piping Plover	T	T	X	X	FWS, TPWD
Red Knot	T		X	X	FWS, TPWD
Reddish Egret		T	X	X	TPWD
Sennett's Hooded Oriole			X	X	TPWD
Snowy Plover			X	X	TPWD
Sooty Tern		T	X	X	TPWD
Sprague's Pipit			X	X	TPWD
Western Burrowing Owl			X	X	TPWD
Western Snowy Plover			X	X	TPWD
White-faced Ibis		T	X	X	TPWD
White-tailed Hawk		T	X	X	TPWD
Whooping Crane	Е	Е	X	X	TPWD
Wood Stork		T	X	X	TPWD
Fishes					
American Eel			X	X	TPWD
Giant Manta Ray	T				NOAA



Oceanic Whitetip Shark	Т				NOAA
Opossum Pipefish	•	T	X	X	TPWD
Smalltooth Sawfish	Е	E	X	X	TPWD
Texas Pipefish	L		X	X	TPWD
Tokus Tipolisii		Mammals	71	71	11 (12
Bryde's Whale	С				NOAA
Fin Whale	Е				NOAA
Gulf Coast Jaguarundi	Е	Е		X	FWS, TPWD
Ocelot	Е	Е	X	X	FWS, TPWD
Maritime Pocket Gopher			X		TPWD
Plains Spotted Skunk			X	X	TPWD
Sei Whale	Е				NOAA
Southern Yellow Bat		T	X	X	TPWD
Sperm Whale	Е				NOAA
Red Wolf	Е	Е	X	X	TPWD
West Indian Manatee	Е	Е	X	X	FWS, TPWD
White-nosed Coati		Т	X	X	TPWD
		Mollusks			
Golden orb	С	Т		X	FWS, TPWD
		Reptiles			
Atlantic Hawksbill Sea Turtle	Е	Т	X	X	FWS, NOAA, TPWD
Green Sea Turtle	Т	Т	X	X	FWS, NOAA, TPWD
Keeled Earless Lizard			X		TPWD
Kemp's Ridley Sea Turtle	Е	Е	X	X	FWS, NOAA, TPWD
Leatherback Sea Turtle	Е	Е	X	X	FWS, NOAA, TPWD
Loggerhead Sea Turtle	Т	Т	X	X	FWS, NOAA, TPWD
Spot-tailed Earless Lizard			X	X	TPWD
Texas Diamondback Terrapin			X	X	TPWD
Texas Horned lizard		Т	X	X	TPWD
Texas Indigo Snake		T	X	X	TPWD
Texas Scarlet Snake		Т	X	X	TPWD
Texas Tortoise		Т	X	X	TPWD
Timber Rattlesnake		Т		X	TPWD
		Plants			
Arrowleaf Milkvine				X	TPWD
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Buckley's Spiderwort			X		TPWD
Cory's Croton			X		TPWD
Coastal Gay-feather			X		TPWD
Drummond's Rushpea			X	X	TPWD
Elmendorf's Onion			X	X	TPWD
Indianola Beakrush				X	TPWD
Jones' Nailwort			X		TPWD
Large Selenia			X	X	TPWD
Lila de los Llanos			X		TPWD
Low Spurge				X	TPWD
Net-leaf Bundleflower				X	TPWD
Mexican Mud-Plantain			X		TPWD
Plains Gumweed			X	X	TPWD
Refugio Rain-lily				X	TPWD
Sand Brazos Mint			X	X	TPWD
Slender Rush-pea	Е	Е	X		FWS, TPWD
South Texas Ambrosia	Е	Е	X		FWS, TPWD
South Texas Spikesedge			X	X	TPWD
Texas Peachbush					TPWD
Texas Stonecrop			X	X	TPWD
Texas Windmill-Grass			X		TPWD
Threeflower Broomweed				X	TPWD
Tree Dodder			X	X	TPWD
Velvet Spurge			X	X	TPWD
Welder Machaeranthera			X	X	TPWD
Wright's Trichocoronis			X	X	TPWD

C - Candidate, DL - Delisted, E - Endangered, T- Threatened

### 4.1 Birds

### 4.1.1 American and Arctic Peregrine Falcons

Both falcon species were federally delisted in the 1990's due to recovery; however, these birds remain state listed in Texas as threatened. This species is documented by TPWD as potentially occurring in Refugio County. The American Peregrine Falcon is a year-round resident of west Texas and breeds locally, nesting in tall cliff eyries (FWS 2017b, 2017c & TPWD 2017a). This species migrates across the state from more northern breeding areas in the U.S. and Canada and winters along the coast and farther south. The Arctic Peregrine Falcon is a migrant that winters along the coast and farther south. Both falcon species occupy a wide range of habitats during migration, including urban areas and open areas for foraging; however, it is usually found along the coast and barrier islands. Both falcon species are low-altitude migrants' that utilize landscape edges, such as lake shores, coastlines, and barrier islands during migration (FWS 2017b & c).



<sup>\*</sup> FWS reported on IPaC data but not in the county species list

The Project area may provide the falcons with foraging habitat during migration. However, the peregrine falcon is a highly motile species and will likely avoid areas of activity. This project may affect, but is not likely to adversely affect, this species.

#### 4.1.2 Attwater's Greater Prairie-Chicken

The Attwater's Prairie-Chicken is a member of the North American grouse family. This species was listed by FWS as endangered on March 3<sup>rd</sup>, 1967. Ideal Attwater's prairie chicken habitat can be found on coastal prairie with native grasses including little bluestem, big bluestem, Indiangrass, and switchgrass. The birds require both tall and short grasses in their habitat. Mating occurs in areas of bare ground or short grass, where the males can be seen easily by the females. Mating occurs from February through mid-May. Dense tall grasses are critical during nesting season. Hens build their nests are brood their young in these areas. Habitat is degraded by agriculture, urbanization, and encroachment of woody species (FWS 2017d, NatureServe, 2017 & TPWD 2017a).

The Project Area lacks suitable roosting and foraging habitat for the Attwater's Prairie-Chicken. The activity will have no effect on this species.

#### 4.1.3 Brown Pelican

The brown pelican was federally delisted on June 2<sup>nd</sup>, 1970 due to recovery of the species (50 CFR Part 17); however, remains state listed in Texas as threatened. Brown pelicans have a long bill, extensible gular pouch, and all four toes joined by extensive webbing. Brown pelicans inhabit mainly coastal waters and rarely are seen inland or far out offshore. They feed mostly in shallow estuarine waters. They feed mainly on fishes. Nesting usually occurs on small isolated coastal islands, on the ground or in small bushes and trees along spoil banks (FWS 2017f, & NatureServe, 2017a).

The Project Area may provide the brown pelican with roosting and foraging habitat; however, this is a highly motile species and will likely avoid areas of activity. This project may affect, but is not likely to adversely affect, this species.

#### 4.1.4 Eskimo Curlew

The Eskimo curlew is a shorebird and a member of the sandpiper family. The Eskimo curlew is a long-distance migrant that nests in the Arctic tundra flies to grasslands in southern South America and returns through Central America, the Midwest United States and northwestern Canada returning to its breeding grounds in late May to early June. During migration, they fed on grasshoppers and other insects on the grasslands (TPWD 2018). FWS notes few if any Eskimo curlew still exist. Conversion of native grasslands to cropland, in the South American wintering area and along the migration route through the tall grass prairies of the United States, is thought to be the reason for the birds' failure to recover (FWS 2018).

The Project Area lacks suitable roosting and foraging habitat for the Eskimo Curlew. The activity will have no effect on this species.



#### 4.1.5 Interior Least Tern

The least tern is the smallest of the terns found in North America. There are three subspecies of the least tern recognized. These are the Eastern Least Tern (*Sterna antillarum antillarum*), the California Least Tern (*Sterna antillarum browni*) and the Interior Least Tern (*Sterna antillarum athalassos*). The Interior Least Tern breeds inland along the Missouri, Mississippi, Colorado, Arkansas, Red, and Rio Grande River systems. In Texas, Interior Least Terns are found at three reservoirs along the Rio Grande River, on the Canadian River in the northern Panhandle, on the Prairie Dog Town Fork of the Red River in the eastern Panhandle, and along the Red River (Texas/Oklahoma boundary) into Arkansas. The Least Tern is primarily a fish-eater, feeding in shallow water. Nesting habitat includes bare or sparsely vegetated sand, shell, and gravel beaches, sandbars, islands, and salt flats associated with rivers and reservoirs. The Interior Least Tern prefers open habitat, avoiding thick vegetation and narrow beaches. This species is known to winter along the coastal beaches of Texas (TPWD 2017g).

The Project Area lacks suitable nesting, foraging and roosting habitat for the Interior Least Tern and the activity is not a wind related project (FWS 2017). The activity will have no effect on this species.

### 4.1.6 Northern Aplomado Falcon

This species was listed by FWS as endangered on February 25<sup>th</sup>, 1986. Aplomado falcons require open grassland or savannah habitat with scattered trees or shrubs. In Texas, Aplomado falcons are found in the South Texas and Trans-Pecos regions. These birds feed primarily on small to medium sized birds (up to rock dove size), and to a lesser extent on insects, rodents, small snakes, and lizards. Severe overgrazing by domestic livestock and resultant brush encroachment in the Southwest, including Texas, has been most frequently implicated as the principal cause for the species' decline (FWS 2017o, NatureServe 2017c & TPWD 2017m).

The Project area may provide the northern Aplomado falcon with foraging habitat; this species is a highly mobile and will likely avoid areas of activity. This project may affect, but is not likely to adversely affect, this species.

#### 4.1.7 Peregrine Falcon

Three subspecies of the peregrine falcon inhabit North America. These include the American peregrine falcon, the Arctic peregrine and Peale's peregrine falcon. Only the American and Artic peregrine falcons were listed as endangered in the 1970. The Artic peregrine falcon was delisted by the FWS in 1994 and the American peregrine falcon was delisted in 1999. Peregrine falcons migrate across Texas to winter along the coast and stop at a wide range of habitats during migration, including open areas, lake shores, coastlines, and barrier islands (FWS 2017b & TPWD 2017a).

The Project area may provide the falcons with foraging habitat during migration. However, the peregrine falcon is a highly motile species and will likely avoid areas of activity. This project may affect, but is not likely to adversely affect, this species.



### 4.1.8 Piping Plover

The piping plover is federally, and state listed as threatened and documented by FWS and TPWD as potentially occurring in Refugio County. The piping plover is a small, stocky shorebird and winter migrant along the Texas Gulf Coast. The plovers inhabit beaches and bayside mud or salt flats (TPWD 2013o). Piping plovers are present along the Texas Gulf Coast between July and mid-May, and designated critical habitat for this species is located in sandy beaches along the Texas Gulf Coast (FWS 2017p).

The Project Area contains suitable foraging and roosting habitat for the piping plover. This project may affect, but is not likely to adversely affect, this species.

### 4.1.9 Red Knot

This species received protection under the ESA as threatened in December 2014. The red knot is a large, bulky sandpiper with a short, straight, black bill. During the breeding season, the legs are dark brown to black, and the breast and belly are a characteristic russet color that ranges from salmon-red to brick-red (FWS 2017q). The rufa red knot breeds in the tundra of the central Canadian Arctic and winters in the southern tip of South America, northern Brazil, the Caribbean, and the southeastern and Gulf coasts of the U.S. Red knots are shore birds that feed on invertebrates, especially small clams, mussels, and snails, but also crustaceans, marine worms, and horseshoe crab eggs. The FWS notes this species needs only be considered for wind projects along migratory routes (FWS 2017).

The Project Area lacks suitable foraging and roosting habitat for the red knot and the activity is not a wind related project. The activity will have no effect on this species.

### 4.1.10 Whooping Crane

The whooping crane is federally, and state listed as endangered by TPWD and FWS as potentially occurring in Refugio County. While the historical wintering range of whooping cranes may have included tall grass prairies along the Gulf Coast, the present wintering grounds are located at Aransas National Wildlife Refuge (ANWR) which southeast of the Project Area. The wintering habitat includes salt marshes and tidal flats on the mainland and barrier islands. In their wintering grounds their diet consists of various crustaceans, mollusks, frogs, fish, small reptiles and berries (FWS 2017u & TPWD 2017q).

Due to the proximity to the ANWR, the Project area may provide the wintering whooping cranes with foraging habitat. However, the whooping crane is a highly motile species and will likely avoid areas of activity. This project may affect, but is not likely to adversely affect, this species.

### 4.2 Fishes

#### 4.2.1 Giant Manta Ray & Oceanic Whitetip Shark

These fish species are listed by NOAA for Texas (NOAA 2018). The giant manta ray is a is a migratory species, and seasonal visitor along productive coastlines with regular upwelling, in oceanic island groups, and near offshore pinnacles and seamounts (NOAA 2018a). The oceanic whitetip shark is a pelagic species (NOAA 2018b). Neither species are likely to occur within the Project area.



The Project Area lacks suitable habitat for these species. The activity will have no effect on this species.

#### 4.2.2 Smalltooth Sawfish

The smalltooth sawfish is listed as threatened by TPWD. This species is not listed by NOAA in Texas (NOAA 2018). It was federally listed on January 26, 2016 (79 FR 3914 3916). This marine species prefers inhabits shallow coastal, estuarine, and fresh waters; often in brackish water near river mouths and large embayments, in deeper holes on bottoms of mud or muddy sand (FWS 2013, FWS 2017s, NatureServe, 2017e & NOAA 2017e). Commercial bycatch may have played the primary role in the decline of this species. Recreational harvest also may have also had a significant impact and is currently a significant threat to the species. Smalltooth sawfish may be especially vulnerable to coastal habitat degradation such as loss of wetlands, non-point source pollution and hydrologic modifications.

The Project Area may provide suitable habitat for the smalltooth sawfish. This project may affect, but is not likely to adversely affect, this species.

#### 4.3 Mammals

### 4.3.1 Fin Whale, Sei Whale and Sperm Whale

All the whale species listed by NOAA in Texas are pelagic (NOAA 2018, c, d & e). None of these species are likely to occur within the Project area.

The Project Area lacks suitable habitat for these species. The activity will have no effect on this species.

#### 4.3.2 Gulf Coast Jaguarundi

The Gulf Coast jaguarundi is listed as endangered by FWS and TPWD. was federally listed throughout its range on June 14th, 1976 (41 FR 24062 24067). The jaguarundi is a small cat, with a long neck, short legs and a long tail, slightly larger than a house cat. It resembles a weasel more than other felines. The Gulf Coast jaguarundi is found in the Tamaulipan Biotic Province. In southern Texas, jaguarundis used dense thorny shrub-lands. Jaguarundis are active mainly at night, but also move around during the day to access water. The main threats to the jaguarundi throughout its range are habitat loss, degradation, and fragmentation (FWS 2013, FWS 2017j & TPWD 2017h). The 2013 FWS Recovery Plan notes that the last confirmed sighting of this subspecies within the U.S. was in April 1986, when a roadkill specimen was collected two miles east of Brownsville, Texas, and positively identified as a jaguarundi (FWS 2013).

The Project Area lacks suitable habitat for the jaguarundi. The activity will have no effect on this species.

### 4.3.3 Ocelot

The Ocelot is listed as endangered by FWS and TPWD. This cat species was federally listed on March 28th, 1972. The ocelot is a smallish cat, weighing as much as 35 pounds. These cates are primarily nocturnal feeding on birds, rabbits and small rodents. Historical records indicate that the Ocelot once occurred throughout south Texas, the southern Edwards Plateau, and along the Coastal Plain. Today, its range is the south Texas brush country and lower Rio Grande valley (TPWD 2017p). The ocelot seems to prefer dense cover but can use a variety of habitats, hunting in the brushy forests and semiarid deserts in the northern part of its range. Their range overlaps that of the jaguarundi. The initial threats to the ocelot were habitat loss and hunting. The current threats are vehicular strikes and inbreeding (FWS 2016).



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The current known range for the ocelot is at or near the Laguna Atascosa National Wildlife Refuge near Brownsville, Texas. The activity will have no effect on this species.

#### **4.3.4** Red Wolf

The red wolf is federally, and state listed as endangered. This species is documented by TPWD as potentially occurring in Refugio County. Preferred habitat for the red wolf includes upland and lowland forest, scrubshrub, and coastal prairies and marshes. The red wolf was formerly known to inhabit the eastern part of Texas in scrub-shrub and forested areas. However, this species has been extirpated in Texas (FWS 2017r & NatureServe, 2017b).

The red wolf is extirpated in Texas; therefore, the Project will have no effect to this species.

#### 4.3.5 West Indian Manatee

The West Indian manatee is listed as endangered by FWS and TPWD. Manatees were placed on the endangered species list on March 11, 1967. On January 8, 2016 FWS proposed to reclassify the manatee from endangered to threatened under the Endangered Species Act based on an increase in population numbers. The manatee is a large, aquatic mammal. Manatees are protected under the Endangered Species Act and under the Marine Mammal Protection Act. Manatees live in marine, brackish, and freshwater systems in coastal and riverine areas throughout their range. Historically, West Indian manatees were found along the U.S. Atlantic and Gulf of Mexico coasts, throughout the Caribbean. Hunting, habitat fragmentation and loss, and other factors are responsible for population decrease. Preferred habitats include areas near the shore featuring underwater vegetation like seagrass and eelgrass. During the summer manatees expand their range and on rare occasions are seen as far west as Texas on the Gulf Coast (FWS 2017t)

The Project Area may provide suitable habitat for the West Indian manatee. This project may affect, but is not likely to adversely affect, this species.

### 4.4 Mollusks

#### 4.4.1 Golden Orb

The golden orb mussel was State-listed as threatened on January 17, 2010 and added as federal candidate on October 6, 2011. The golden orb is a species of freshwater mussel that is endemic to Texas, with historic distributions throughout the Guadalupe-San Antonio and the Nueces-Frio river basins. These mussels live in a mixture of mud, sand, and gravel on the bottoms of streams and rivers. They require good water quality, stable stream channels and flowing water (FWS 2017h, NatureServe 2017d & TPWD 2009). Only seven extant populations of this mussel have been noted from the upper and central Guadalupe River, central San Antonio River, lower San Marcos River, and Lake Corpus Christi (TPWD 2009).

The Project Area is outside the known extent of range for the golden orb mussel and lacks suitable habitat for; therefore, the activity will have no effect to this species.



### 4.5 Reptiles

#### 4.5.1 Atlantic Hawksbill Sea Turtle

The Atlantic Hawksbill Sea Turtle is listed as endangered by FWS and TPWD. The hawksbill sea turtle was placed on the endangered species list on June 2<sup>nd</sup>, 1970. The hawksbill is a small to medium-sized marine turtle having an elongated oval shell with overlapping scutes on the carapace, a relatively small head with a distinctive hawk-like beak (FWS 2017j). Hawksbill turtles are circumtropical feeding on a highly variable diet consisting mostly of invertebrates such as sponges, jellyfish, crustaceans, sea urchins, and molluscs (TPWD 2017f). In the continental U.S., hawksbills are found primarily in Florida and Texas, though they have been recorded in all the Gulf States (NOAA 2017b). Threats to this species include loss of coral reef habitat, increased recreational and commercial use of nesting beaches, artificial lighting and incidental capture in fishing gear.

The Project Area does not contain habitat able to support the hawksbill sea turtle; therefore, the activity will have no effect to this species.

#### 4.5.2 Green Sea Turtle

The green sea turtle was listed under the ESA on July 28<sup>th</sup>, 1978. Green sea turtles are the largest of all the hard-shelled sea turtles. In U.S. Atlantic and Gulf of Mexico waters, green turtles are found in inshore and nearshore waters. In Texas, green sea turtles are found in the Gulf of Mexico, occasionally visiting the coast (FWS 2017g & TPWD 2017e). Hatchlings and juveniles feed offshore on a variety of pelagic plants and animals. Adult green turtles feed nearshore on sea grasses and algae. Nesting season for the green sea turtle varies from location to location in the southeastern U.S.. Females generally nest in the summer between June and September; peak nesting occurs in June and July. The TXNDD Element Occurrence data shows the Project area to occur in green sea turtle habitat. Threats to this species include harvest of eggs and adults, degradation of nesting beaches, artificial lighting and incidental capture in fishing gear (NOAA 2107a).

The Project area does contain green sea turtle foraging habitat. However, the green sea turtles are mobile and will avoid areas of high activity. Therefore, the project may affect, but is not likely to adversely affect, this species.

### 4.5.3 Kemp's Ridley Sea Turtle

The Kemp's Ridley turtle was first listed under the Endangered Species Conservation Act of 1970 on December 2<sup>nd</sup>, 1970, and subsequently under the Endangered Species Act (ESA) of 1973. On February 17<sup>th</sup>, 2010, NOAA Fisheries and USFWS were jointly petitioned to designate critical habitat for Kemp's Ridley sea turtles for nesting beaches along the Texas coast and marine habitats in the Gulf of Mexico and Atlantic Ocean (FWS 2017k & NOAA 2017c). The Kemp's Ridley is the smallest of all the sea turtles (TPWD 2017i). Adult Kemp's primarily occupy neritic zone habitats typically with muddy or sandy bottoms. Their diet consists mainly of swimming crabs, but may also include fish, jellyfish, and an array of mollusks. Threats to this species include degradation of nesting beaches, artificial lighting and incidental capture in fishing gear (NOAA 2017c).

The Project Area does not contain habitat suitable to support the hawksbill sea turtle; therefore, the activity will have no effect to this species.



#### 4.5.4 Leatherback Sea Turtle

The leatherback sea turtle was listed, as endangered, under the Endangered Species Act on June 6<sup>th</sup>, 1970. The Leatherback is the largest of all sea turtles. The leatherback is the only sea turtle that doesn't have a hard-bony shell (NOAA 2017d). The leatherback prefers the open ocean and moves into coastal waters only during the reproductive season. The leatherback sea turtle is a rare visitor to the Texas Gulf Coast (FWS 2017l & TPWD 2017k). Threats to this species include harvest of eggs and turtles, degradation of nesting beaches and incidental capture in fishing gear (NOAA 2017d).

The Project Area does not contain habitat suitable to support the hawksbill sea turtle; therefore, the activity will have no effect to this species.

#### 4.5.5 Loggerhead Sea Turtle

The loggerhead sea turtle was listed, as endangered, under the Endangered Species Act on July 28<sup>th</sup>, 1978. Loggerheads were named for their relatively large heads, which support powerful jaws and enable them to feed on hard-shelled prey, such as whelks and conch (FWS 2017m & NOAA 2017e). This species is capable of living in a variety of environments, such as in brackish waters of coastal lagoons, river mouths, and tropical and temperate waters. Loggerheads nest on ocean beaches, generally preferring high energy, relatively narrow, steeply sloped, coarse-grained beaches. In Texas, they are found in the Gulf of Mexico and are occasional visitors to the Texas coast. Only minor and solitary nesting has been recorded along the coasts of the Gulf of Mexico (TPWD 2017l). Threats to this species include harvest of eggs and turtles and incidental capture in fishing gear.

The Project Area does not contain habitat suitable to support the hawksbill sea turtle; therefore, the activity will have no effect to this species.

### 4.6 Plants

### 4.6.1 Slender Rush-pea

The slender rush-pea is a perennial in the pea family with stems 3 to 6 inches tall with salmon-colored flowers that usually begin blooming in the spring and then appear sporadically thereafter in response to adequate rainfall (NatureServe 2018). This species is found in sparsely vegetated openings within bluestem-sacahuista grasslands on heavy clay soils of the South Texas Coastal Plain, occasionally on creek banks. This species is reported in Nueces and Kleberg Counties associated with the South Corpus Christi Bay (12110202), San Fernando (12110204) and Baffin Bay (12110205) watershed. The Project area does contain clay soils and some habitat similar to that described. However, most of the Project area has been converted from native grasslands to cropland.

The undisturbed portions of the Project area do contain clay soils and may represent suitable habitat. However, the Project area is outside the known extent of range of the slender rush-pea. Therefore, the Project will have no effect to this species.



### 4.6.2 South Texas Ambrosia

South Texas ambrosia is a perennial, herbaceous plant in the Asteraceae (sunflower) family that grows to be 10 4 to 12 inches in height. This species grows at low elevations, typically on well-drained, heavy soils associated with subtropical woodland communities in openings of coastal prairies and savannas. This ragweed is currently found scattered across its known range in Nueces and Kleberg counties in a patchy, distribution, due to the extensive fragmentation of native prairie habitat (FWS 2011). No known sites are reported in or near the Project area.

The undisturbed portions of the Project area may represent suitable habitat. However, the Project area is outside the known extent of range of the South Texas ambrosia. Therefore, the Project will have no effect to this species.

### 5.0 <u>CONCLUSION</u>

There are 33 and 14 T&E species listed for Refugio County, Texas by TPWD and FWS, respectively (TPWD 2017). The FWS Information for Planning and Conservation (IPaC) (FWS 2017) data showed 16 T&E species potentially occurring in the Survey Area. NOAA has 7 marine T&E species (NOAA 2017). The Texas Natural Diversity Database indicates there have been no occurrences of a listed species within the Project Area.

**Table 4** presents the effect determinations using language of the ESA based upon habitat requirements and field observations. The ESA language is as follows:

- No effect the proposed action will not affect a federally-listed species or critical habitat
- May affect, but not likely to adversely affect the project may affect listed species and/or critical habitat; however, the effects are expected to be discountable, insignificant, or completely beneficial; or
- *Likely to adversely affect* adverse effects to listed species and/or critical habitat may occur as a direct result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or completely beneficial.

**Table 4: IPaC Species Effect Determination** 

Common Name	Status	Effect Determination
Gulf Coast Jaguarundi	Endangered	No effect
Ocelot	Endangered	No effect
West Indian Manatee	Endangered	May affect
Attwater's Greater Prairie-chicken	Endangered	No effect
Least Tern*	Endangered	No effect
Northern Aplomado Falcon	Endangered	May affect
Piping Plover	Threatened	May affect
Red Knot*	Threatened	No effect
Whooping Crane	Endangered	May affect
Green Sea Turtle	Threatened	May affect



Hawksbill Sea Turtle	Endangered	No effect
Kemp's Ridley Sea Turtle	Endangered	No effect
Leatherback Sea Turtle	Endangered	No effect
Loggerhead Sea Turtle	Threatened	No effect
Slender Rush-pea	Endangered	No effect
South Texas Ambrosia	Endangered	No effect

<sup>\*</sup> Species only needs to be considered if proposed project is a wind energy project.

A complete effect determination review of federal listed T&E species in Nueces and San Patricio Counties, Texas is outlined in **Table 5**.

**Table 5: Listed Federal T&E Species Effect Determination** 

Table 5: Listed Federal 1&E Spo	Federal	State					
Common Name	Status	Status	Effect Determination				
Birds							
Attwater's Greater Prairie-chicken	Е	Е	No effect				
Eskimo Curlew	Е	Е	No effect				
Least Tern*	Е	Е	No effect				
Northern Aplomado Falcon	Е	Е	May affect, but not likely to adversely affect				
Piping plover	T	T	May affect, but not likely to adversely affect				
Red Knot	T		No effect				
Whooping crane	Е	Е	May affect, but not likely to adversely affect				
		Fishes					
Giant Manta Ray	T		No effect				
Oceanic Whitetip Shark	T		No effect				
Smalltooth Sawfish	Е	Е	May affect, but not likely to adversely affect				
		Mammals					
Fin Whale	Е		No effect				
Gulf Coast Jaguarundi	Е	T	No effect				
Ocelot	Е	Е	No effect				
Red Wolf	Е	Е	No effect				
Sei Whale	Е		No effect				
Sperm Whale	Е		No effect				
West Indian Manatee	Е	Е	May affect, but not likely to adversely affect				
		Mollusks					
Golden Orb	С	T	No effect				
Reptiles							
Hawksbill Sea Turtle	Е	Е	No effect				
Green Sea Turtle	T	T	May affect, but not likely to adversely affect				
Kemp's Ridley Sea Turtle	Е	Е	No effect				
Leatherback Sea Turtle	Е	Е	No effect				
Loggerhead Sea Turtle	T	T	No effect				



Plants			
Slender Rush-pea	Е	Е	No effect
South Texas Ambrosia	Е	Е	No effect

Aerial photography shows the Survey Area is primarily composed of agricultural lands, mixed grasslands and scrub shrub areas, riparian, freshwater marsh habitat, intertidal marsh habitats and estuarine open water habitats. These habitats are suitable as foraging habitat for some of the listed species. The activity may affect, but is not likely to adversely affect, those species using the Project area for foraging. FWS did not identify any critical habitat for these listed species within the Project area.



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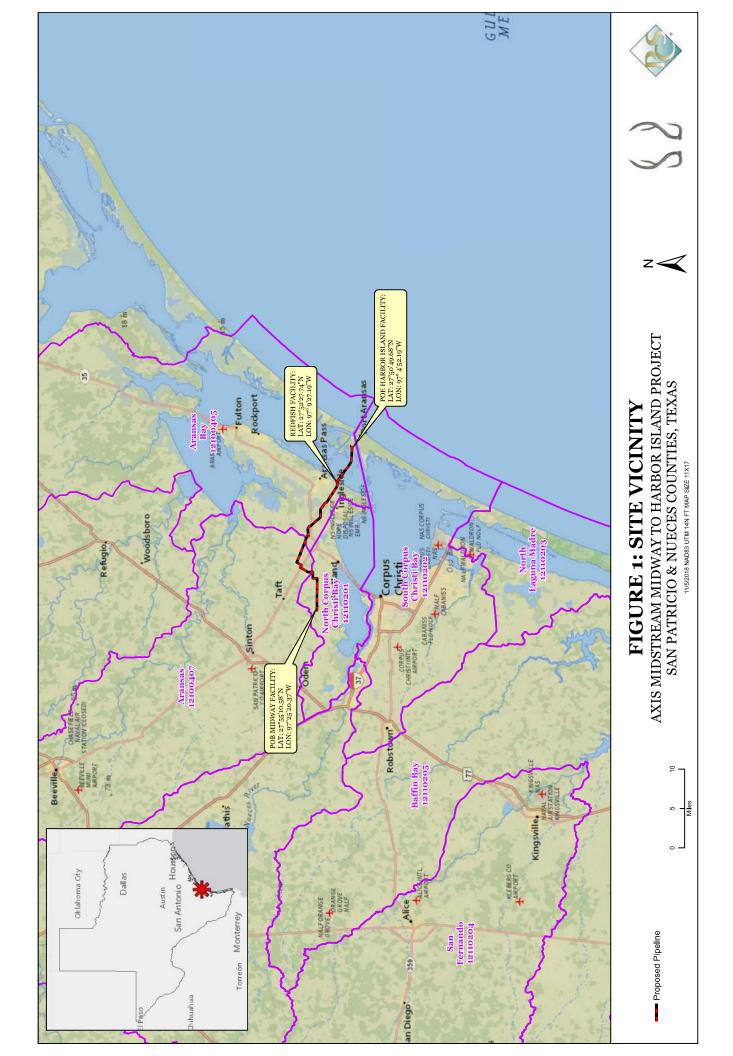
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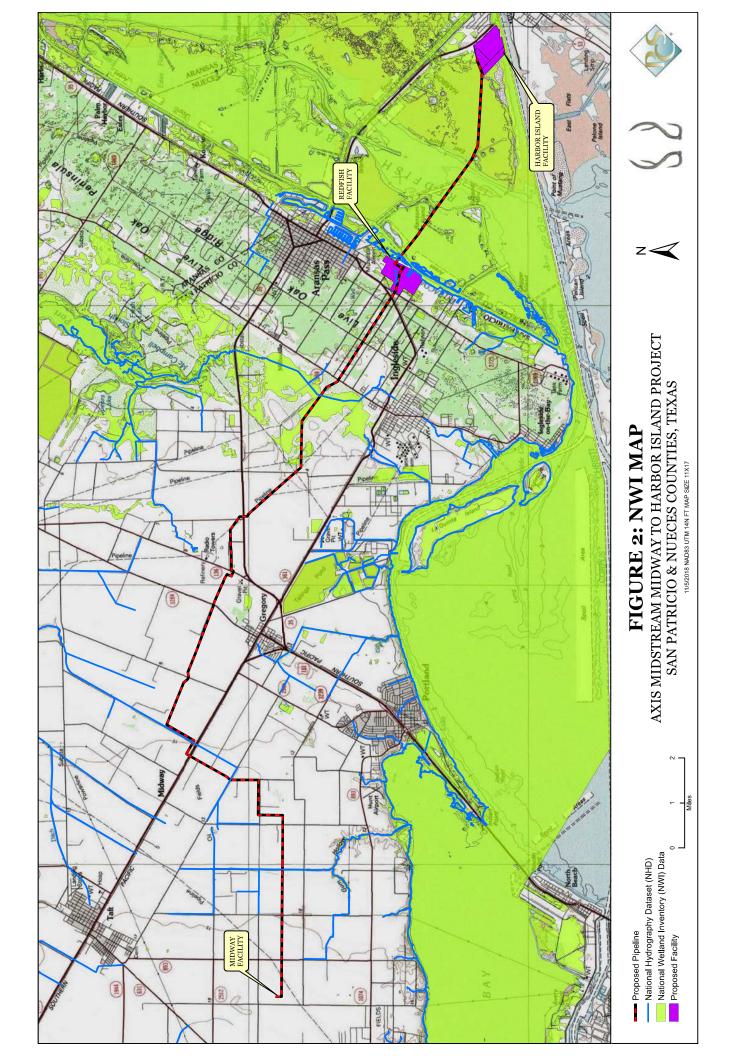
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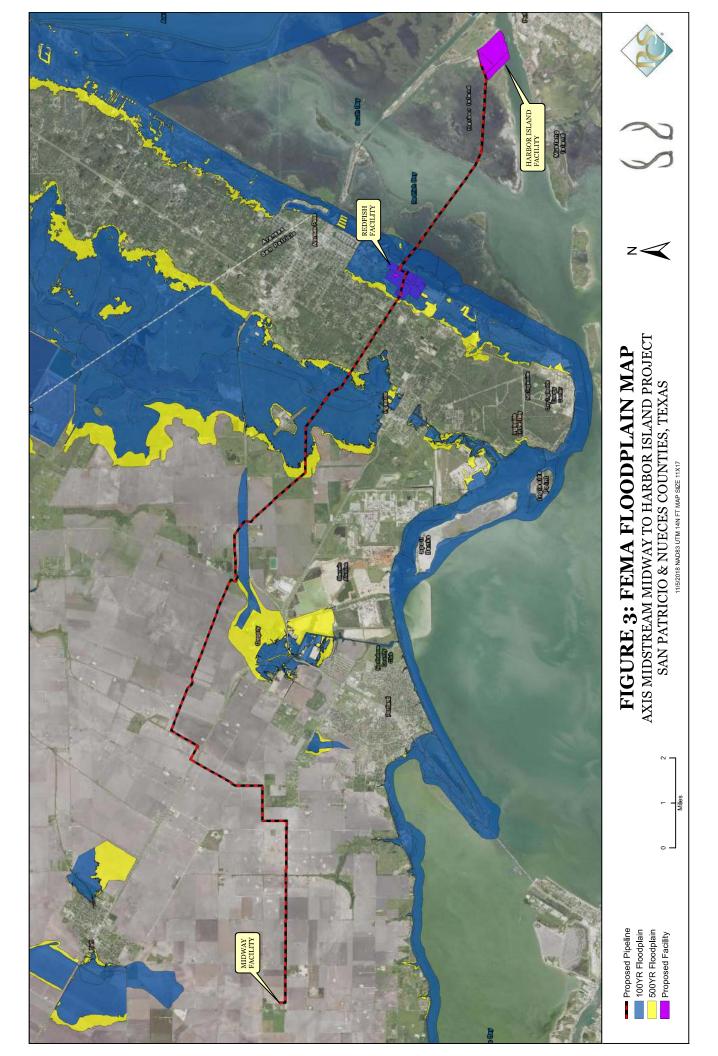
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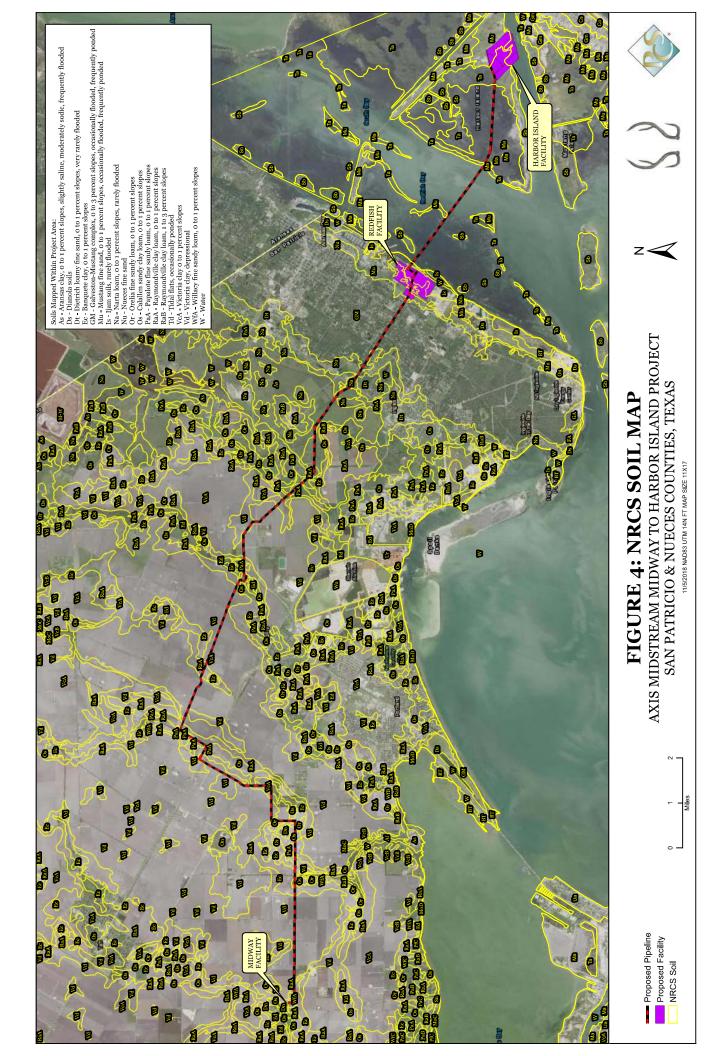


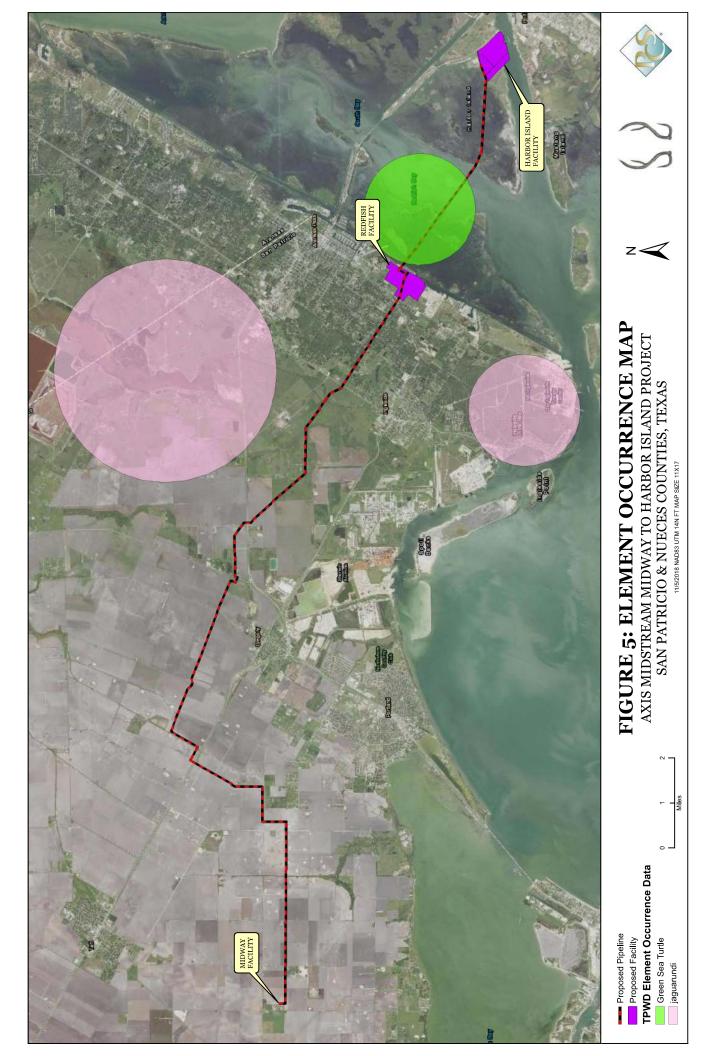
Appendix A
Figures











# Appendix B IPAC Trust Report

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IPaC Information for Planning and Consultation u.s. Fish & Wildlife Service

### IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

### Location

Aransas, Nueces and San Patricio counties, Texas



### Local office

Texas Coastal Ecological Services Field Office

**\( (281) 286-8282** 

**(281)** 488-5882

17629 El Camino Real #211 Houston, TX 77058

http://www.fws.gov/southwest/es/TexasCoastal/ http://www.fws.gov/southwest/es/ES Lists Main2.html IPaC: Explore Location Page 2 of 24



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### Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- Click REQUEST SPECIES LIST.

### Listed species

<sup>1</sup> and their critical habitats are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact <u>NOAA Fisheries</u> for <u>species under their jurisdiction</u>.

- 1. Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information.
- 2. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

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### **Mammals**

NAME STATUS

Gulf Coast Jaguarundi Herpailurus (=Felis) yagouaroundi cacomitli

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/3945

Endangered

Ocelot Leopardus (=Felis) pardalis

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/4474

Endangered

West Indian Manatee Trichechus manatus

There is **final** critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/4469

Threatened

Marine mammal

**Birds** 

NAME STATUS

Attwater's Greater Prairie-chicken Tympanuchus cupido attwateri No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/7259

Endangered

Least Tern Sterna antillarum

This species only needs to be considered if the following condition applies:

· Wind Related Projects Within Migratory Route

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/8505

Endangered

Northern Aplomado Falcon Falco femoralis septentrionalis

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/1923

Endangered

Piping Plover Charadrius melodus

There is **final** critical habitat for this species. Your location is outside the

critical habitat.

https://ecos.fws.gov/ecp/species/6039

Threatened

**Red Knot** Calidris canutus rufa

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/1864

Threatened

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Whooping Crane Grus americana

**Endangered** 

There is final critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/758

Reptiles

NAME **STATUS** 

Green Sea Turtle Chelonia mydas

**Threatened** 

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/6199

Hawksbill Sea Turtle Eretmochelys imbricata

There is final critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/3656

Kemp's Ridley Sea Turtle Lepidochelys kempii

There is proposed critical habitat for this species. The location of the critical habitat is not available.

https://ecos.fws.gov/ecp/species/5523

Leatherback Sea Turtle Dermochelys coriacea

There is final critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/1493

Loggerhead Sea Turtle Caretta caretta

There is final critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/1110

Endangered

Endangered

Endangered

Threatened

Flowering Plants

NAME **STATUS** 

Slender Rush-pea Hoffmannseggia tenella

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/5298

Endangered

South Texas Ambrosia Ambrosia cheiranthifolia

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/3331

Endangered

### Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered

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species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

### Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <a href="http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php">http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php</a>
- Measures for avoiding and minimizing impacts to birds
   http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds
   http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the <u>USFWS Birds of Conservation Concern</u> (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ <u>below</u>. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the <u>E-bird data mapping tool</u> (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found <u>below</u>.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA IPaC: Explore Location

SOMETIME WITHIN THE
TIMEFRAME SPECIFIED, WHICH IS A
VERY LIBERAL ESTIMATE OF THE
DATES INSIDE WHICH THE BIRD
BREEDS ACROSS ITS ENTIRE
RANGE. "BREEDS ELSEWHERE"
INDICATES THAT THE BIRD DOES
NOT LIKELY BREED IN YOUR
PROJECT AREA.)

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American Golden-plover Pluvialis dominica

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

American Oystercatcher Haematopus palliatus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/8935

Breeds Apr 15 to Aug 31

Black Scoter Melanitta nigra

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds elsewhere

Black Skimmer Rynchops niger

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/5234

Breeds May 20 to Sep 15

Black-legged Kittiwake Rissa tridactyla

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds elsewhere

Bonaparte's Gull Chroicocephalus philadelphia

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds elsewhere

Brown Pelican Pelecanus occidentalis

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/6034

Breeds Jan 15 to Sep 30

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**Buff-breasted Sandpiper** Calidris subruficollis

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9488

Clapper Rail Rallus crepitans

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Common Loon gavia immer

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/4464

Common Tern Sterna hirundo

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/4963

Double-crested Cormorant phalacrocorax auritus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/3478

Dunlin Calidris alpina arcticola

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Gull-billed Tern Gelochelidon nilotica

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9501

Herring Gull Larus argentatus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Hudsonian Godwit Limosa haemastica

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Breeds Apr 10 to Oct 31

Breeds Apr 15 to Oct 31

Breeds May 10 to Sep 10

Breeds Apr 20 to Aug 31

Breeds elsewhere

Breeds May 1 to Jul 31

Breeds Apr 20 to Aug 31

Breeds elsewhere

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King Rail Rallus elegans

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/8936

Breeds May 1 to Sep 5

Le Conte's Sparrow Ammodramus leconteii

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds elsewhere

Least Tern Sterna antillarum

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds Apr 20 to Sep 10

**Lesser Yellowlegs** Tringa flavipes

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9679

Breeds elsewhere

Long-billed Curlew Numenius americanus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/5511

Breeds elsewhere

Magnificent Frigatebird Fregata magnificens

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Marbled Godwit Limosa fedoa

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9481

Breeds elsewhere

Mountain Plover Charadrius montanus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/3638

Breeds elsewhere

Nelson's Sparrow Ammodramus nelsoni

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Northern Gannet Morus bassanus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds elsewhere

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Prothonotary Warbler Protonotaria citrea

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 1 to Jul 31

Red-breasted Merganser Mergus serrator

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds elsewhere

Red-necked Phalarope Phalaropus lobatus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds elsewhere

Reddish Egret Egretta rufescens

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/7617

Breeds Mar 1 to Sep 15

Ring-billed Gull Larus delawarensis

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds elsewhere

Royal Tern Thalasseus maximus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds Apr 15 to Aug 31

Ruddy Turnstone Arenaria interpres morinella

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds elsewhere

Seaside Sparrow Ammodramus maritimus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Aug 20

Semipalmated Sandpiper Calidris pusilla

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

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Short-billed Dowitcher Limnodromus griseus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9480

Breeds elsewhere

Sooty Tern Onychoprion fuscatus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds Mar 10 to Jul 31

Swallow-tailed Kite Elanoides forficatus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/8938

Breeds Mar 10 to Jun 30

Whimbrel Numenius phaeopus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9483

Breeds elsewhere

White-winged Scoter Melanitta fusca

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds elsewhere

Willet Tringa semipalmata

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 20 to Aug 5

Wilson's Plover Charadrius wilsonia

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 1 to Aug 20

# **Probability of Presence Summary**

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

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Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

#### Breeding Season (

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

#### Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

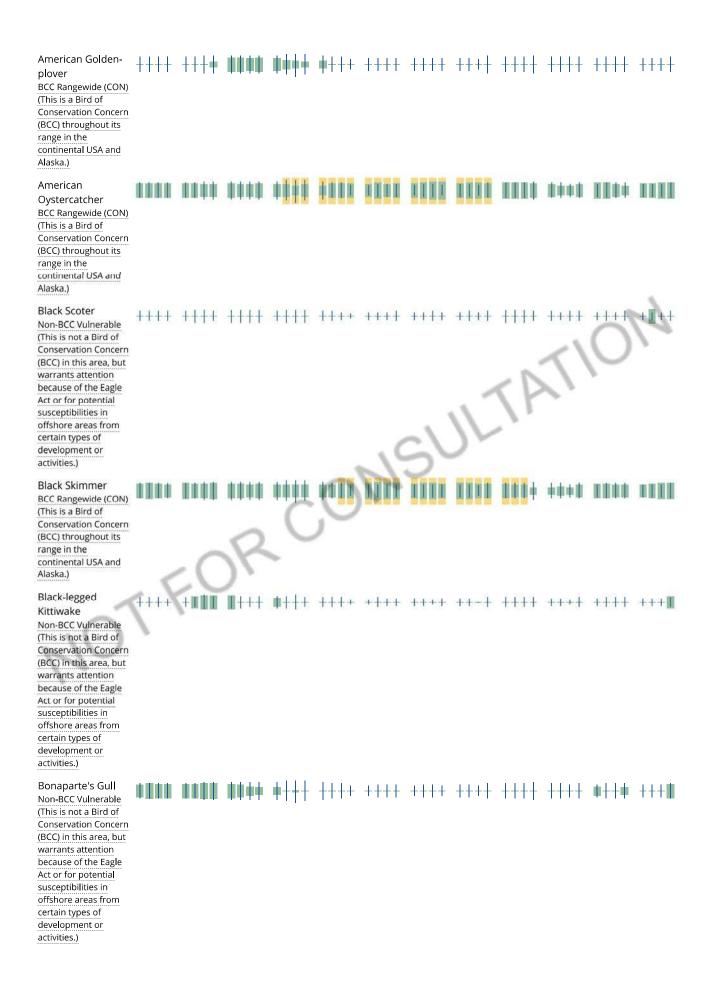
#### No Data (-)

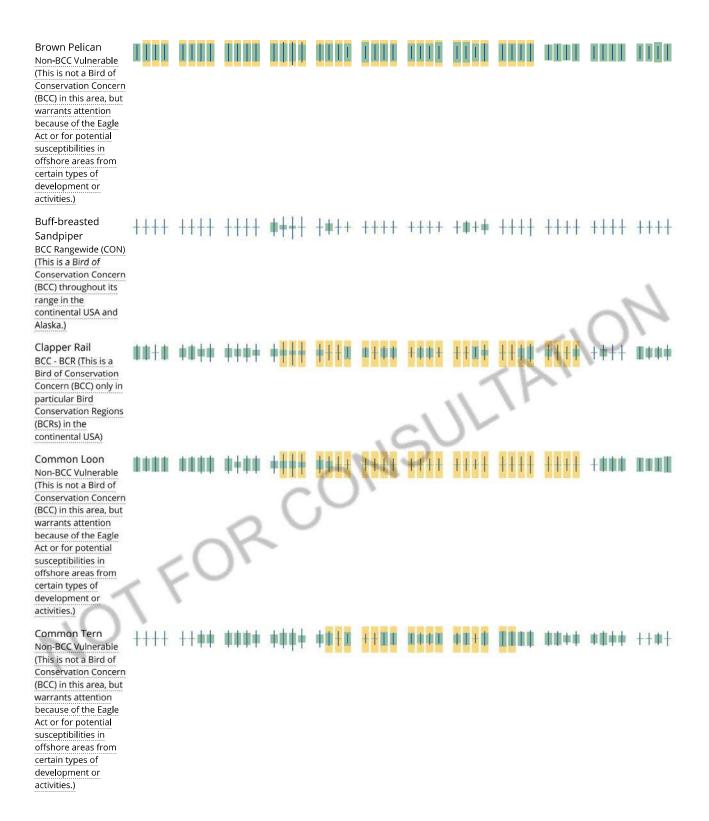
A week is marked as having no data if there were no survey events for that week.

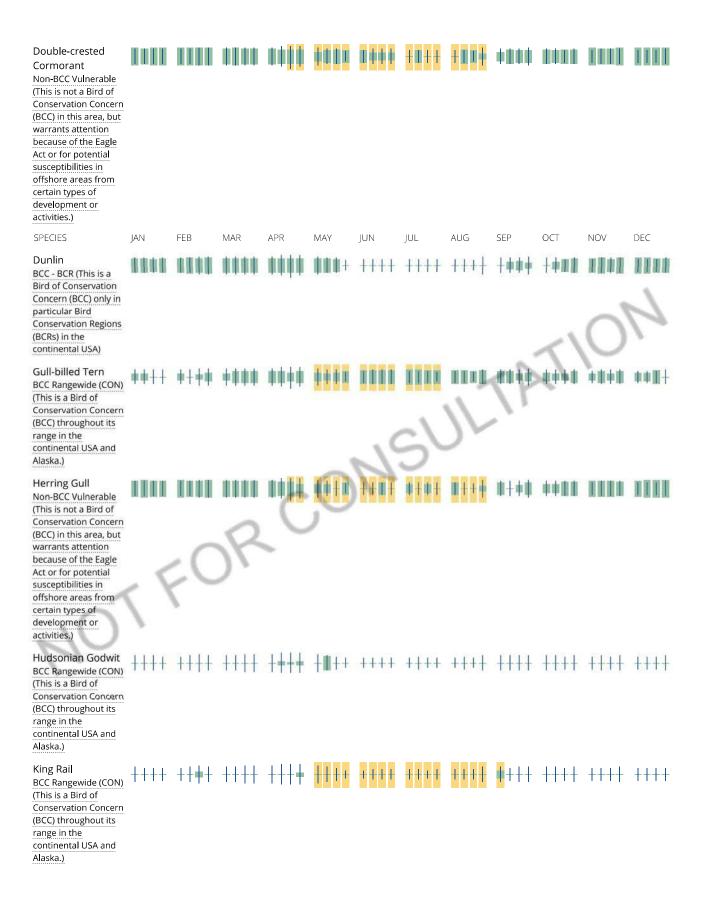
#### **Survey Timeframe**

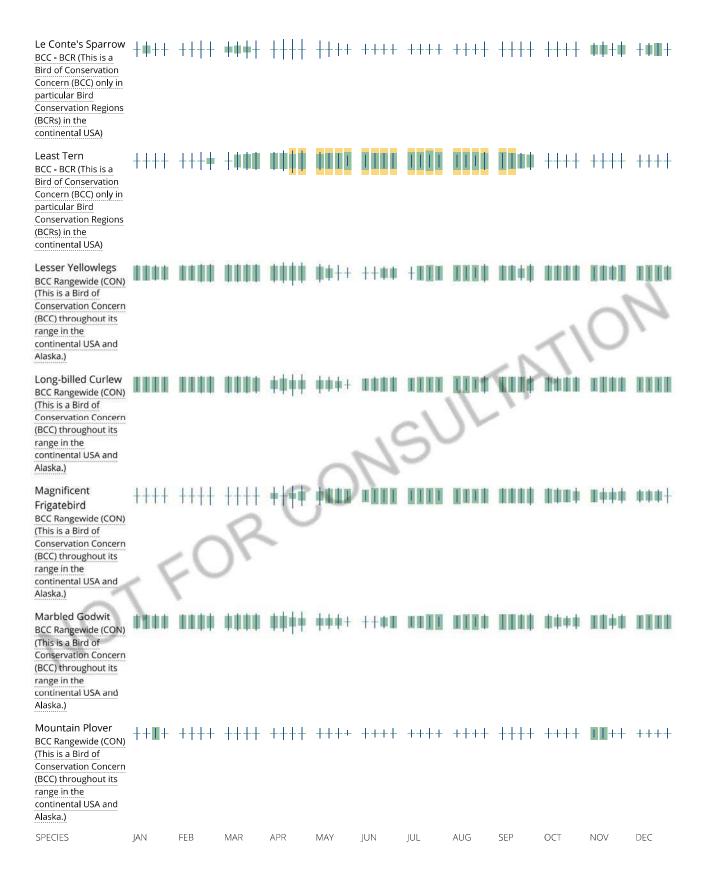
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

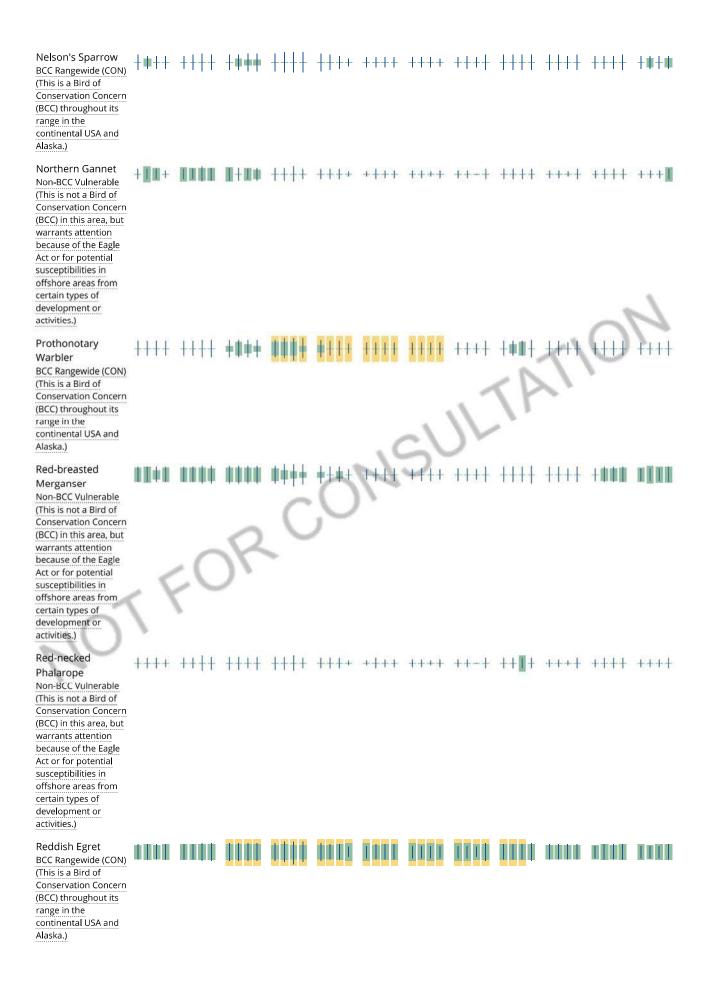


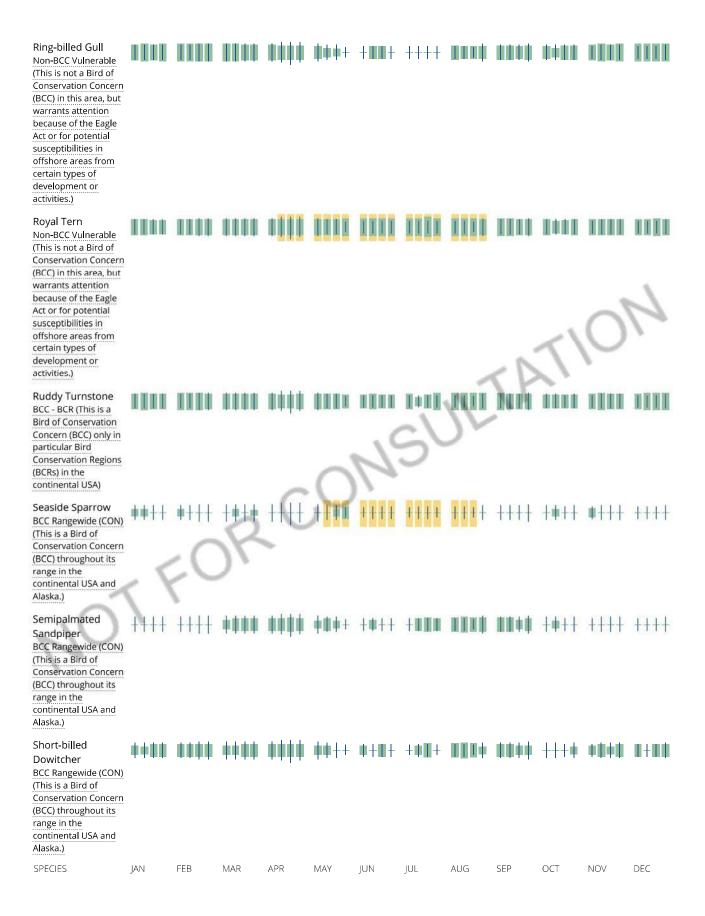


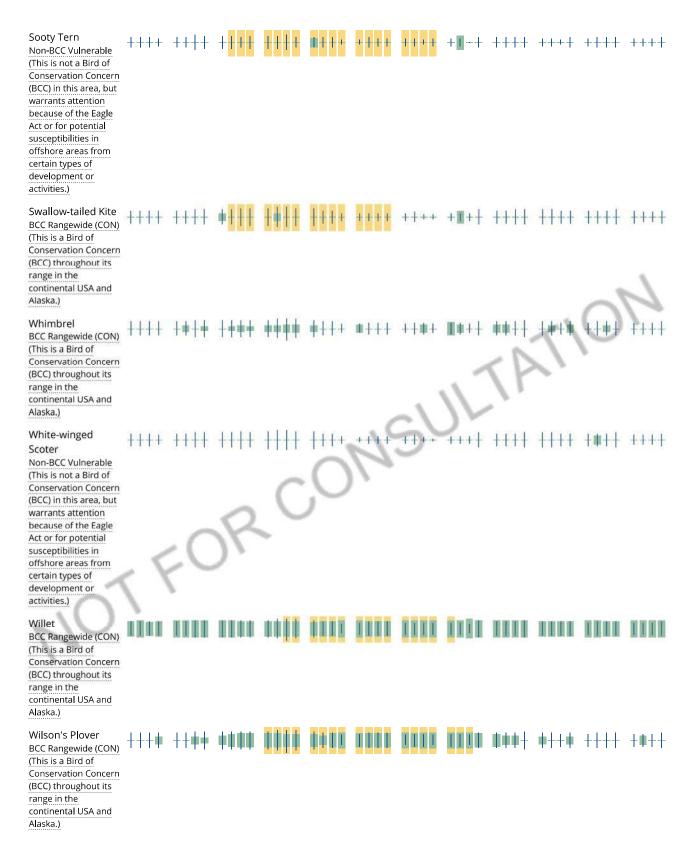












Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

<u>Nationwide Conservation Measures</u> describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding

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their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. <u>Additional measures</u> and/or <u>permits</u> may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

#### What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>E-bird Explore Data Tool</u>.

# What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

#### How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

#### What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

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Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

#### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

#### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to <u>obtain a permit</u> to avoid violating the Eagle Act should such impacts occur.

#### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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# Marine mammals

Marine mammals are protected under the <u>Marine Mammal Protection Act</u>. Some are also protected under the Endangered Species Act

<sup>1</sup> and the Convention on International Trade in Endangered Species of Wild Fauna and Flora<sup>2</sup>.

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries

<sup>3</sup> [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the <u>Marine Mammals</u> page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

- 1. The Endangered Species Act (ESA) of 1973.
- The <u>Convention on International Trade in Endangered Species of Wild Fauna and Flora</u> (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
- 3. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

West Indian Manatee Trichechus manatus https://ecos.fws.gov/ecp/species/4469

# **Facilities**

# National Wildlife Refuge lands

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

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#### Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

# Wetlands in the National Wetlands Inventory

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers</u> <u>District</u>.

#### WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the <u>NWI map</u> to view wetlands at this location.

#### **Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

#### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

#### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or

local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

# Appendix C TPWD & USFWS Annotated County Lists NOAA Fisheries Texas List

Last Revision: 8/9/2018 11:45:00 AM

# **NUECES COUNTY**

	NUECES COUNT I		
	<b>AMPHIBIANS</b>	Federal Status	State Status
Black-spotted newt	Notophthalmus meridionalis		T
	es wet areas, such as arroyos, canals, ditch ry periods; Gulf Coastal Plain south of the		·
Sheep frog	Hypopachus variolosus		T
predominantly grassland and sa	vanna; moist sites in arid areas		
	BIRDS	Federal Status	State Status
American Peregrine Falcon	Falco peregrinus anatum	DL	T
more northern breeding areas in of habitats during migration, inc	eeder in west Texas, nests in tall cliff eyriculus and Canada, winters along coast and faluding urban, concentrations along coast and dscape edges such as lake shores, coastling	arther south; occup nd barrier islands;	ies wide range low-altitude
<b>Arctic Peregrine Falcon</b>	Falco peregrinus tundrius	DL	
south; occupies wide range of ha	ubspecies' far northern breeding range, with abitats during migration, including urban, crant, stopovers at leading landscape edges	concentrations alon	g coast and
Brown Pelican	Pelecanus occidentalis	DL	
largely coastal and near shore a	reas, where it roosts and nests on islands ar	nd spoil banks	
Eskimo Curlew	Numenius borealis	LE	E
historic; nonbreeding: grassland	s, pastures, plowed fields, and less frequer	ntly, marshes and n	nudflats
<b>Mountain Plover</b>	Charadrius montanus		
	r shortgrass prairie, on ground in shallow oplowed) fields; primarily insectivorous	lepression; nonbre	eding:
Northern Aplomado Falcon	Falco femoralis septentrionalis	LE	E
	a and open woodland, and sometimes in voite, yucca, and cactus; nests in old stick ne	•	• •
Peregrine Falcon	Falco peregrinus	DL	T
along coast and farther south; su subspecies' listing statuses differ	the state from more northern breeding area bspecies (F. p. anatum) is also a resident b r, F.p. tundrius is no longer listed in Texas stance, reference is generally made only to	reeder in west Tex; but because the si	as; the two ubspecies are
Piping Plover	Charadrius melodus	LT	T

wintering migrant along the Texas Gulf Coast; beaches and bayside mud or salt flats

**BIRDS** 

Federal Status

State Status

**Red Knot** 

Calidris canutus rufa

LT

Red knots migrate long distances in flocks northward through the contiguous United States mainly April-June, southward July-October. A small plump-bodied, short-necked shorebird that in breeding plumage, typically held from May through August, is a distinctive and unique pottery orange color. Its bill is dark, straight and, relative to other shorebirds, short-to-medium in length. After molting in late summer, this species is in a drab gray-and-white non-breeding plumage, typically held from September through April. In the non-breeding plumage, the knot might be confused with the omnipresent Sanderling. During this plumage, look for the knot's prominent pale eyebrow and whitish flanks with dark barring. The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (Donax spp.) on beaches and dwarf surf clam (Mulinia lateralis) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.

**Reddish Egret** 

Egretta rufescens

Т

resident of the Texas Gulf Coast; brackish marshes and shallow salt ponds and tidal flats; nests on ground or in trees or bushes, on dry coastal islands in brushy thickets of yucca and prickly pear

**Sennett's Hooded Oriole** 

Icterus cucullatus sennetti

often builds nests in and of Spanish moss (Tillandsia unioides); feeds on invertebrates, fruit, and nectar; breeding March to August

**Snowy Plover** 

Charadrius alexandrinus

formerly an uncommon breeder in the Panhandle; potential migrant; winter along coast

**Sooty Tern** 

Onychoprion fuscatus

T

predominately 'on the wing'; does not dive, but snatches small fish and squid with bill as it flies or hovers over water; breeding April-July

Sprague's Pipit

Anthus spragueii

only in Texas during migration and winter, mid September to early April; short to medium distance, diurnal migrant; strongly tied to native upland prairie, can be locally common in coastal grasslands, uncommon to rare further west; sensitive to patch size and avoids edges.

Texas Botteri's Sparrow

Peucaea botterii texana

Т

grassland and short-grass plains with scattered bushes or shrubs, sagebrush, mesquite, or yucca; nests on ground of low clump of grasses

**Western Burrowing Owl** 

Athene cunicularia hypugaea

open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

Western Snowy Plover

Charadrius alexandrinus nivosus

uncommon breeder in the Panhandle; potential migrant; winter along coast

**BIRDS** Federal Status State Status Т White-faced Ibis Plegadis chihi prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats Т White-tailed Hawk Buteo albicaudatus near coast on prairies, cordgrass flats, and scrub-live oak; further inland on prairies, mesquite and oak savannas, and mixed savanna-chaparral; breeding March-May LE Whooping Crane Grus americana E potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties Wood Stork Т Mycteria americana forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960 **FISHES** Federal Status State Status American eel Anguilla rostrata coastal waterways below reservoirs to gulf; spawns January to February in ocean, larva move to coastal waters, metamorphose, then females move into freshwater; most aquatic habitats with access to ocean, muddy bottoms, still waters, large streams, lakes; can travel overland in wet areas; males in brackish estuaries; diet varies widely, geographically, and seasonally **Opossum** pipefish Microphis brachyurus Т brooding adults found in fresh or low salinity waters and young move or are carried into more saline waters after birth: southern coastal areas Smalltooth sawfish Pristis pectinata LE E different life history stages have different patterns of habitat use; young found very close to shore in muddy and sandy bottoms, seldom descending to depths greater than 32 ft (10 m); in sheltered bays, on shallow banks, and in estuaries or river mouths; adult sawfish are encountered in various habitat types (mangrove, reef, seagrass, and coral), in varying salinity regimes and temperatures, and at various water depths, feed on a variety of fish species and crustaceans

Syngnathus affinis

Corpus Christi Bay; seagrass beds

Texas pipefish

**INSECTS** Federal Status State Status

Manfreda giant-skipper

Stallingsia maculosus

most skippers are small and stout-bodied; name derives from fast, erratic flight; at rest most skippers hold front and hind wings at different angles; skipper larvae are smooth, with the head and neck constricted; skipper larvae usually feed inside a leaf shelter and pupate in a cocoon made of leaves fastened together with silk

MAMMALS

Federal Status State Status

Maritime pocket gopher Geomys personatus maritimus

fossorial, in deep sandy soils; feeds mostly from within burrow on roots and other plant parts, especially grasses; ecologically important as prey species and in influencing soils, microtopography, habitat heterogeneity, and plant diversity

**Ocelot** 

Leopardus pardalis

LE

Ε

dense chaparral thickets; mesquite-thorn scrub and live oak mottes; avoids open areas; breeds and raises young June-November

Plains spotted skunk

Spilogale putorius interrupta

catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

Red wolf

Canis rufus

LE

Ε

extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal prairies

Southern yellow bat

Dasypterus ega

Т

associated with trees, such as palm trees (Sabal mexicana) in Brownsville, which provide them with daytime roosts; insectivorous; breeding in late winter

West Indian manatee

Trichechus manatus

LT

Ε

Gulf and bay system; opportunistic, aquatic herbivore

White-nosed coati

Nasua narica

Τ

woodlands, riparian corridors and canyons; most individuals in Texas probably transients from Mexico; diurnal and crepuscular; very sociable; forages on ground and in trees; omnivorous; may be susceptible to hunting, trapping, and pet trade

REPTILES

Federal Status

State Status

Atlantic hawksbill sea turtle Eretmochelys imbricata

LE

E

Gulf and bay system, warm shallow waters especially in rocky marine environments, such as coral reefs and jetties, juveniles found in floating mats of sea plants; feed on sponges, jellyfish, sea urchins, molluscs, and crustaceans, nests April through November

	NUECES COUNTY		
	REPTILES	Federal Status	State Status
Green sea turtle	Chelonia mydas	LT	T
island beaches; adults are herbiv	vater seagrass beds, open water between feet vorous feeding on sea grass and seaweed; ju then increasingly on sea grasses and seaw ak activity in May and June	veniles are omniv	orous feeding
Keeled earless lizard	Holbrookia propinqua		
coastal dunes, barrier islands, a laid underground March-Septem	nd other sandy areas; eats insects and likely aber (most May-August)	other small inver	tebrates; eggs
Kemp's Ridley sea turtle	Lepidochelys kempii	LE	E
ŭ ŭ	y within the shallow waters of the Gulf of Naceans and plants, juveniles feed on sarga		•
Leatherback sea turtle	Dermochelys coriacea	LE	E
•	est ranging open water reptile; omnivorous, on Atlantic nesting territories, nesting seaso	-	• •
Loggerhead sea turtle	Caretta caretta	LT	T
	for juveniles, adults are most pelagic of the eans, and coral; nests from April through N		orous, shows a
Spot-tailed earless lizard	Holbrookia lacerata		
	adjacent Mexico; moderately open prairie- including disturbed areas; eats small inver	-	
Texas diamondback terrapin	Malaclemys terrapin littoralis		
	es, estuaries, and lagoons behind barrier be ; may venture into lowlands at high tide	aches; brackish an	d salt water;
Texas horned lizard	Phrynosoma cornutum		T
<u>-</u>	s with sparse vegetation, including grass, ca om sandy to rocky; burrows into soil, enter ch-September		
Texas indigo snake	Drymarchon melanurus erebennus		T
Texas, in particular dense riparia	River and Balcones Escarpment; thornbush- an corridors; can do well in suburban and in moist microhabitats, such as rodent burrow	rigated croplands	
Texas scarlet snake	Cemophora coccinea lineri		T
mixed hardwood scrub on sand	y soils; feeds on reptile eggs; semi-fossoria	l; active April-Sep	tember
Texas tortoise	Gopherus berlandieri		T

REPTILES

Federal Status

State Status

open brush with a grass understory is preferred; open grass and bare ground are avoided; when inactive occupies shallow depressions at base of bush or cactus, sometimes in underground burrows or under objects; longevity greater than 50 years; active March-November; breeds April-November

**PLANTS** 

Federal Status

State Status

**Buckley's spiderwort** 

Tradescantia buckleyi

Occurs on sandy loam or clay soils in grasslands or shrublands underlain by the Beaumount Formation.

Cory's croton

Croton coryi

GLOBAL RANK: G3; Grasslands and woodland openings on barrier islands and coastal sands of South Texas, inland on South Texas Sand Sheet; Annual; Flowering July-Oct; Fruiting July-Nov

Drummond's rushpea

Caesalpinia drummondii

GLOBAL RANK: G4; Open areas on sandy clay; Perennial

Elmendorf's onion

Allium elmendorfii

Texas endemic; grassland openings in oak woodlands on deep, loose, well-drained sands; in Coastal Bend, on Pleistocene barrier island ridges and Holocene Sand Sheet that support live oak woodlands; to the north it occurs in post oak-black hickory-live oak woodlands over Queen City and similar Eocene formations; one anomalous specimen found on Llano Uplift in wet pockets of granitic loam; Perennial; Flowering March-April, May

Jones' nailwort

Paronychia jonesii

GLOBAL RANK: G3; Occurs in early successional open areas on deep well-drained sand; Biennial Annual; Flowering March-Nov; Fruiting April-Nov

Large selenia

Selenia grandis

GLOBAL RANK: G4; Occurs in seasonally wet clayey soils in open areas; Annual; Flowering Jan-April; Fruiting Feb-April

Lila de los llanos

Echeandia chandleri

most commonly encountered among shrubs or in grassy openings in subtropical thorn shrublands on somewhat saline clays of lomas along Gulf Coast near mouth of Rio Grande; also observed in a few upland coastal prairie remnants on clay soils over the Beaumont Formation at inland sites well to the north and along railroad right-of-ways and cemeteries; flowering (May-) September-December, fruiting October-December

Mexican mud-plantain

Heteranthera mexicana

wet clayey soils of resacas and ephemeral wetlands in South Texas and along margins of playas in the Panhandle; flowering June-December, only after sufficient rainfall

State Status

#### **NUECES COUNTY**

**PLANTS** Federal Status

Plains gumweed Grindelia oolepis

coastal prairies on heavy clay (blackland) soils, often in depressional areas, sometimes persisting in areas where management (mowing) may maintain or mimic natural prairie disturbance regimes; 'crawfish lands'; on nearly level Victoria clay, Edroy clay, claypan, possibly Greta within Orelia fine sandy loam over the Beaumont Formation, and Harlingen clay; roadsides, railroad rights-of-ways, vacant lots in urban areas, cemeteries; flowering April-December

Sand Brazos mint

Brazoria arenaria

GLOBAL RANK: G3; Sandy areas in South Texas; Annual; Flowering/Fruiting March-April

Slender rushpea

Hoffmannseggia tenella

LE

Ε

Texas endemic; coastal prairie grasslands on level uplands and on gentle slopes along drainages, usually in areas of shorter or sparse vegetation; soils often described as Blackland clay, but at some of these sites soils are coarser textured and lighter in color than the typical heavy clay of the coastal prairies; flowering April-November

South Texas ambrosia

Ambrosia cheiranthifolia

LE

E

Grasslands and mesquite-dominated shrublands on various soils ranging from heavy clays to lighter textured sandy loams, mostly over the Beaumont Formation on the Coastal Plain; in modified unplowed sites such as railroad and highyway right-of-ways, cemeteries, mowed fields, erosional areas along small creeks; Perennial; Flowering July-November

South Texas spikesedge

Eleocharis austrotexana

GLOBAL RANK: G3; Occurring in miscellaneous wetlands at scattered locations on the coastal plain; Perennial; Flowering/Fruiting Sept

Texas peachbush

Prunus texana

GLOBAL RANK: G3; Occurs at scattered sites in various well drained sandy situations; deep sand, plains and sand hills, grasslands, oak woods, 0-200 m elevation; Perennial; Flowering Feb-Mar; Fruiting Apr-Jun

Texas stonecrop

Lenophyllum texanum

GLOBAL RANK: G3; Found in shrublands on clay dunes (lomas) at the mouth of the Rio Grande and on xeric calcareous rock outcrops at scattered inland sites; Perennial; Flowering/Fruiting Nov-Feb

Texas windmill-grass

Chloris texensis

Texas endemic; sandy to sandy loam soils in relatively bare areas in coastal prairie grassland remnants, often on roadsides where regular mowing may mimic natural prairie fire regimes; flowering in fall

Tree dodder

Cuscuta exaltata

GLOBAL RANK: G3; Parasitic on various Quercus, Juglans, Rhus, Vitis, Ulmus, and Diospyros species as well as Acacia berlandieri and other woody plants; Annual; Flowering May-Oct; Fruiting July-Oct

Velvet spurge

Euphorbia innocua

GLOBAL RANK: G3; Open or brushy areas on coastal sands and the South Texas Sand Sheet; Perennial; Flowering Sept-April; Fruiting Nov-July

**PLANTS** 

Federal Status

**State Status** 

Welder machaeranthera Psilactis heterocarpa

Texas endemic; grasslands, varying from midgrass coastal prairies, and open mesquite-huisache woodlands on nearly level, gray to dark gray clayey to silty soils; known locations mapped on Victoria clay, Edroy clay, Dacosta sandy clay loam over Beaumont and Lissie formations; flowering September-November

Wright's trichocoronis

Trichocoronis wrightii var. wrightii

GLOBAL RANK: G4T3; Most records from Texas are historical, perhaps indicating a decline as a result of alteration of wetland habitats; Annual; Flowering Feb-Oct; Fruiting Feb-Sept

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#### SAN PATRICIO COUNTY

	SAN PATRICIO COUNTY	(	
	<b>AMPHIBIANS</b>	Federal Status	State Status
Black-spotted newt	Notophthalmus meridionalis		T
	nes wet areas, such as arroyos, canals, ditodry periods; Gulf Coastal Plain south of the		_
Sheep frog	Hypopachus variolosus		T
predominantly grassland and sa	vanna; moist sites in arid areas		
South Texas siren (large form	) Siren sp 1		T
	ch as arroyos, canals, ditches, or even sha loes require some moisture to remain; so tine	•	
	BIRDS	Federal Status	State Status
American Peregrine Falcon	Falco peregrinus anatum	DL	T
more northern breeding areas in of habitats during migration, inc migrant, stopovers at leading lan	US and Canada, winters along coast and cluding urban, concentrations along coast and education description and cape edges such as lake shores, coastle	farther south; occup and barrier islands; ines, and barrier isla	oies wide range low-altitude
Arctic Peregrine Falcon	Falco peregrinus tundrius	DL	
south; occupies wide range of ha	subspecies' far northern breeding range, values during migration, including urban rant, stopovers at leading landscape edge	, concentrations alor	g coast and
Brown Pelican	Pelecanus occidentalis	DL	
largely coastal and near shore a	reas, where it roosts and nests on islands	and spoil banks	
Eskimo Curlew	Numenius borealis	LE	E
historic; nonbreeding: grassland	ds, pastures, plowed fields, and less frequ	ently, marshes and r	nudflats
Henslow's Sparrow	Ammodramus henslowii		
	as) found in weedy fields or cut-over area a key component is bare ground for runn		h grasses occur
<b>Mountain Plover</b>	Charadrius montanus		
	or shortgrass prairie, on ground in shallow plowed) fields; primarily insectivorous	depression; nonbre	eding:
Northern Aplomado Falcon	Falco femoralis septentrionalis	LE	E
	na and open woodland, and sometimes in uite, yucca, and cactus; nests in old stick	•	• •

T

#### SAN PATRICIO COUNTY

**BIRDS** Federal Status State Status

DL

**Peregrine Falcon** Falco peregrinus

both subspecies migrate across the state from more northern breeding areas in US and Canada to winter along coast and farther south; subspecies (F. p. anatum) is also a resident breeder in west Texas; the two subspecies' listing statuses differ, F.p. tundrius is no longer listed in Texas; but because the subspecies are not easily distinguishable at a distance, reference is generally made only to the species level; see subspecies for habitat.

Piping Plover Charadrius melodus LT T

wintering migrant along the Texas Gulf Coast; beaches and bayside mud or salt flats

**Red Knot** Calidris canutus rufa LT

Red knots migrate long distances in flocks northward through the contiguous United States mainly April-June, southward July-October. A small plump-bodied, short-necked shorebird that in breeding plumage, typically held from May through August, is a distinctive and unique pottery orange color. Its bill is dark, straight and, relative to other shorebirds, short-to-medium in length. After molting in late summer, this species is in a drab gray-and-white non-breeding plumage, typically held from September through April. In the non-breeding plumage, the knot might be confused with the omnipresent Sanderling. During this plumage, look for the knot's prominent pale eyebrow and whitish flanks with dark barring. The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (Donax spp.) on beaches and dwarf surf clam (Mulinia lateralis) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.

**Reddish Egret**Egretta rufescens
T

resident of the Texas Gulf Coast; brackish marshes and shallow salt ponds and tidal flats; nests on ground or in trees or bushes, on dry coastal islands in brushy thickets of yucca and prickly pear

**Sennett's Hooded Oriole** *Icterus cucullatus sennetti* 

often builds nests in and of Spanish moss (Tillandsia unioides); feeds on invertebrates, fruit, and nectar; breeding March to August

**Snowy Plover** Charadrius alexandrinus

formerly an uncommon breeder in the Panhandle; potential migrant; winter along coast

Sooty Tern Onychoprion fuscatus

predominately 'on the wing'; does not dive, but snatches small fish and squid with bill as it flies or hovers over water; breeding April-July

Sprague's Pipit Anthus spragueii

only in Texas during migration and winter, mid September to early April; short to medium distance, diurnal migrant; strongly tied to native upland prairie, can be locally common in coastal grasslands, uncommon to rare further west; sensitive to patch size and avoids edges.

Western Burrowing Owl Athene cunicularia hypugaea

open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

#### SAN PATRICIO COUNTY

BIRDS Federal Status State Status

Western Snowy Plover Charadrius alexandrinus nivosus

uncommon breeder in the Panhandle; potential migrant; winter along coast

White-faced Ibis Plegadis chihi T

prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats

White-tailed Hawk

Buteo albicaudatus

T

near coast on prairies, cordgrass flats, and scrub-live oak; further inland on prairies, mesquite and oak savannas, and mixed savanna-chaparral; breeding March-May

Whooping Crane Grus americana LE E

potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties

Wood Stork Mycteria americana T

forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960

**FISHES** Federal Status State Status

**American eel** Anguilla rostrata

coastal waterways below reservoirs to gulf; spawns January to February in ocean, larva move to coastal waters, metamorphose, then females move into freshwater; most aquatic habitats with access to ocean, muddy bottoms, still waters, large streams, lakes; can travel overland in wet areas; males in brackish estuaries; diet varies widely, geographically, and seasonally

Opossum pipefish Microphis brachyurus T

brooding adults found in fresh or low salinity waters and young move or are carried into more saline waters after birth; southern coastal areas

Smalltooth sawfish Pristis pectinata LE E

different life history stages have different patterns of habitat use; young found very close to shore in muddy and sandy bottoms, seldom descending to depths greater than 32 ft (10 m); in sheltered bays, on shallow banks, and in estuaries or river mouths; adult sawfish are encountered in various habitat types (mangrove, reef, seagrass, and coral), in varying salinity regimes and temperatures, and at various water depths, feed on a variety of fish species and crustaceans

**Texas pipefish** Syngnathus affinis

Corpus Christi Bay; seagrass beds

#### **SAN PATRICIO COUNTY**

**INSECTS** Federal Status State Status

Manfreda giant-skipper Stallingsia maculosus

most skippers are small and stout-bodied; name derives from fast, erratic flight; at rest most skippers hold front and hind wings at different angles; skipper larvae are smooth, with the head and neck constricted; skipper larvae usually feed inside a leaf shelter and pupate in a cocoon made of leaves fastened together with silk

WIUI SIIK			
	MAMMALS	Federal Status	State Status
Jaguarundi	Herpailurus yaguarondi	LE	E
	vored; 60 to 75 day gestation, young born some beginning of the rainy season and end of		er year in
Ocelot	Leopardus pardalis	LE	E
dense chaparral thickets; mesqu young June-November	uite-thorn scrub and live oak mottes; avoid	s open areas; breed	s and raises
Plains spotted skunk	Spilogale putorius interrupta		
catholic; open fields, prairies, c wooded, brushy areas and tallgr	croplands, fence rows, farmyards, forest ed cass prairie	ges, and woodlands	s; prefers
Red wolf	Canis rufus	LE	E
extirpated; formerly known throprairies	oughout eastern half of Texas in brushy and	d forested areas, as	well as coastal
Southern yellow bat	Dasypterus ega		T
associated with trees, such as p daytime roosts; insectivorous; b	alm trees (Sabal mexicana) in Brownsville breeding in late winter	, which provide the	em with
West Indian manatee	Trichechus manatus	LT	E
Gulf and bay system; opportun	istic, aquatic herbivore		
White-nosed coati	Nasua narica		T
	and canyons; most individuals in Texas proceiable; forages on ground and in trees; om	•	
	MOLLUSKS	Federal Status	State Status
Golden orb	Quadrula aurea	C	T
	1 1	1 . 0 11 0	

sand and gravel in some locations and mud at others; found in lentic and lotic; Guadalupe, San Antonio, Lower San Marcos, and Nueces River basins

Almotated County Lists of Rafe Species			
	SAN PATRICIO COUNTY		
	REPTILES	Federal Status	State Status
Atlantic hawksbill sea turtle	Eretmochelys imbricata	LE	E
• •	low waters especially in rocky marine enviating mats of sea plants; feed on sponges, agh November		
Green sea turtle	Chelonia mydas	LT	T
island beaches; adults are herbive	ater seagrass beds, open water between fee brous feeding on sea grass and seaweed; ju then increasingly on sea grasses and seawe k activity in May and June	veniles are omnive	orous feeding
Kemp's Ridley sea turtle	Lepidochelys kempii	LE	E
	within the shallow waters of the Gulf of Naceans and plants, juveniles feed on sargas		
Leatherback sea turtle	Dermochelys coriacea	LE	E
	st ranging open water reptile; omnivorous, a Atlantic nesting territories, nesting season		
Loggerhead sea turtle	Caretta caretta	LT	T
	or juveniles, adults are most pelagic of the ans, and coral; nests from April through N		orous, shows a
Spot-tailed earless lizard	Holbrookia lacerata		
	ndjacent Mexico; moderately open prairie-lincluding disturbed areas; eats small invert	•	
Texas diamondback terrapin	Malaclemys terrapin littoralis		
	s, estuaries, and lagoons behind barrier bea may venture into lowlands at high tide	aches; brackish and	d salt water;
Texas horned lizard	Phrynosoma cornutum		T
	with sparse vegetation, including grass, ca om sandy to rocky; burrows into soil, enters h-September		
Texas indigo snake	Drymarchon melanurus erebennus		T
Texas, in particular dense riparia	iver and Balcones Escarpment; thornbush- n corridors; can do well in suburban and ir noist microhabitats, such as rodent burrows	rigated croplands	

Texas scarlet snake Cemophora coccinea lineri T mixed hardwood scrub on sandy soils; feeds on reptile eggs; semi-fossorial; active April-September

#### Annotated County Lists of Rare Species

#### SAN PATRICIO COUNTY

REPTILES

Federal Status

State Status

Texas tortoise

Gopherus berlandieri

Т

open brush with a grass understory is preferred; open grass and bare ground are avoided; when inactive occupies shallow depressions at base of bush or cactus, sometimes in underground burrows or under objects; longevity greater than 50 years; active March-November; breeds April-November

Timber rattlesnake

Crotalus horridus

T

swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland; limestone bluffs, sandy soil or black clay; prefers dense ground cover, i.e. grapevines or palmetto

**PLANTS** 

Federal Status

State Status

Arrowleaf milkvine

Matelea sagittifolia

GLOBAL RANK: G3; Most consistently encountered in thornscrub in South Texas; Perennial; Flowering March-July; Fruiting April-July & Dec?

Coastal gay-feather

Liatris bracteata

Texas endemic; coastal prairie grasslands of various types, from salty prairie on low-lying somewhat saline clay loams to upland prairie on nonsaline clayey to sandy loams; flowering in fall

Drummond's rushpea

Caesalpinia drummondii

GLOBAL RANK: G4; Open areas on sandy clay; Perennial

Elmendorf's onion

Allium elmendorfii

Texas endemic; grassland openings in oak woodlands on deep, loose, well-drained sands; in Coastal Bend, on Pleistocene barrier island ridges and Holocene Sand Sheet that support live oak woodlands; to the north it occurs in post oak-black hickory-live oak woodlands over Queen City and similar Eocene formations; one anomalous specimen found on Llano Uplift in wet pockets of granitic loam; Perennial; Flowering March-April, May

Indianola beakrush

Rhynchospora indianolensis

GLOBAL RANK: G3Q; Locally abundant in cattle pastures in some areas (at least during wet years), possibly becoming a management problem in such sites; Perennial; Flowering/Fruiting April-Nov

Large selenia

Selenia grandis

GLOBAL RANK: G4; Occurs in seasonally wet clayey soils in open areas; Annual; Flowering Jan-April; Fruiting Feb-April

Low spurge

Euphorbia peplidion

GLOBAL RANK: G3; Occurs in a variety of vernally-moist situations in a number of natural regions; Annual; Flowering Feb-April; Fruiting March-April

Net-leaf bundleflower

Desmanthus reticulatus

GLOBAL RANK: G3; Mostly on clay prairies of the coastal plain of central and south Texas; Perennial; Flowering April-July; Fruiting April-Oct

#### SAN PATRICIO COUNTY

**PLANTS** 

Federal Status

State Status

#### Plains gumweed

Grindelia oolepis

coastal prairies on heavy clay (blackland) soils, often in depressional areas, sometimes persisting in areas where management (mowing) may maintain or mimic natural prairie disturbance regimes; 'crawfish lands'; on nearly level Victoria clay, Edroy clay, claypan, possibly Greta within Orelia fine sandy loam over the Beaumont Formation, and Harlingen clay; roadsides, railroad rights-of-ways, vacant lots in urban areas, cemeteries; flowering April-December

#### Refugio rain-lily

Zephyranthes refugiensis

Occurs on deep heavy black clay soils or sandy loams in swales or drainages on herbaceous grasslands or shrublands on level to rolling landscapes underlain by the Lissie Formation.

Sand Brazos mint

Brazoria arenaria

GLOBAL RANK: G3; Sandy areas in South Texas; Annual; Flowering/Fruiting March-April

South Texas spikesedge

Eleocharis austrotexana

GLOBAL RANK: G3; Occurring in miscellaneous wetlands at scattered locations on the coastal plain; Perennial; Flowering/Fruiting Sept

Texas peachbush

Prunus texana

GLOBAL RANK: G3; Occurs at scattered sites in various well drained sandy situations; deep sand, plains and sand hills, grasslands, oak woods, 0-200 m elevation; Perennial; Flowering Feb-Mar; Fruiting Apr-Jun

**Texas stonecrop** 

Lenophyllum texanum

GLOBAL RANK: G3; Found in shrublands on clay dunes (lomas) at the mouth of the Rio Grande and on xeric calcareous rock outcrops at scattered inland sites; Perennial; Flowering/Fruiting Nov-Feb

Threeflower broomweed

Thurovia triflora

Texas endemic; near coast in sparse, low vegetation on a veneer of light colored silt or fine sand over saline clay along drier upper margins of ecotone between between salty prairies and tidal flats; further inland associated with vegetated slick spots on prairie mima mounds; flowering September-November

Tree dodder

Cuscuta exaltata

GLOBAL RANK: G3; Parasitic on various Quercus, Juglans, Rhus, Vitis, Ulmus, and Diospyros species as well as Acacia berlandieri and other woody plants; Annual; Flowering May-Oct; Fruiting July-Oct

Velvet spurge

Euphorbia innocua

GLOBAL RANK: G3; Open or brushy areas on coastal sands and the South Texas Sand Sheet; Perennial; Flowering Sept-April; Fruiting Nov-July

Welder machaeranthera

Psilactis heterocarpa

Texas endemic; grasslands, varying from midgrass coastal prairies, and open mesquite-huisache woodlands on nearly level, gray to dark gray clayey to silty soils; known locations mapped on Victoria clay, Edroy clay, Dacosta sandy clay loam over Beaumont and Lissie formations; flowering September-November

Wright's trichocoronis

Trichocoronis wrightii var. wrightii

### **SAN PATRICIO COUNTY**

**PLANTS** 

Federal Status

**State Status** 

GLOBAL RANK: G4T3; Most records from Texas are historical, perhaps indicating a decline as a result of alteration of wetland habitats; Annual; Flowering Feb-Oct; Fruiting Feb-Sept



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### Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the <u>IPaC</u> application.

County: Nueces, Texas

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Need to contact a FWS field office about a species? Follow this link to find your local FWS Office.

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status
Birds	Whooping crane ( <u>Grus</u> <u>americana</u> )	Wherever found, except where listed as an experimental population	Endangered	Assistant Regional Director- Ecological Services	Whooping Crane Recovery Plan, Final Third Revision	Implementation Progress
Birds	Attwater's greater prairie-chicken ( <i>Tympanuchus cupido attwateri</i> )	Wherever found	Endangered	Attwater Prairie Chicken National Wildlife Refuge	Attwater's Prairie-Chicken (Tympanuchus cupido attwateri) Recovery Plan, Second Revision	Implementation Progress
Birds	Brown pelican (Pelecanus occidentalis)	except U.S. Atlantic coast, FL, AL	Recovery	Ventura Fish and Wildlife Office		
Birds	Northern Aplomado Falcon ( <u>Falco</u> <u>femoralis</u> <u>septentrionalis</u> )	Wherever found, except where listed as an experimental population	Endangered	New Mexico Ecological Services Field Office	Northern Aplomado Falcon Recovery Plan	Implementation Progress

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status
Birds	Piping Plover ( <u>Charadrius</u> <u>melodus</u> )	[Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.	Threatened	Office of the Regional Director	Volume I: Draft Revised Recovery Plan for the Northern Great Plains Piping Plover (Charadrius melodus)	Recovery efforts in progress, but no implementation information yet to display.
Birds	Piping Plover ( <u>Charadrius</u> <u>melodus</u> )	[Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.	Threatened	Office of the Regional Director	Piping Plover Atlantic Coast Population Revised Recovery Plan	Implementation Progress
Birds	Red knot ( <u>Calidris canutus</u> <u>rufa</u> )	Wherever found	Threatened	New Jersey Ecological Services Field Office		
Clams	Golden orb ( <u>Quadrula aurea</u> )	Wherever found	Candidate	Texas Coastal Ecological Services Field Office		

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status
Flowering Plants	South Texas ambrosia ( <u>Ambrosia</u> <u>cheiranthifolia</u> )	Wherever found	Endangered	Texas Coastal Ecological Services Field Office	Texas Coastal Bend Shortgrass Prairie Multi- Species Recovery Plan: Including Slender Rush- Pea (Hoffmannseggia tenella) and South Texas Ambrosia (Ambrosia cheiranthifolia)	Recovery efforts in progress, but no implementation information yet to display.
Flowering Plants	Slender rush- pea ( <u>Hoffmannseggia</u> <u>tenella</u> )	Wherever found	Endangered	Texas Coastal Ecological Services Field Office	Texas Coastal Bend Shortgrass Prairie Multi- Species Recovery Plan: Including Slender Rush- Pea (Hoffmannseggia tenella) and South Texas Ambrosia (Ambrosia cheiranthifolia)	Recovery efforts in progress, but no implementation information yet to display.
Mammals	West Indian Manatee ( <i>Trichechus</i> <i>manatus</i> )	Wherever found	Threatened	North Florida Ecological Services Field Office	Recovery Plan Puerto Rican Population of the West Indian (Antillean) Manatee	Implementation Progress
Mammals	West Indian Manatee ( <i>Trichechus</i> <i>manatus</i> )	Wherever found	Threatened	North Florida Ecological Services Field Office	Florida Manatee Recovery Plan, Third Revision	Implementation Progress
Mammals	Gulf Coast jaguarundi ( <u>Herpailurus</u> ( <u>=Felis)</u> yagouaroundi cacomitli)	Wherever found	Endangered	Laguna Atascosa National Wildlife Refuge	GULF COAST JAGUARUNDI RECOVERY PLAN (Puma yagouaroundi cacomitli)	Implementation Progress

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status
Mammals	Ocelot ( <u>Leopardus</u> ( <u>=Felis) pardalis</u> )	wherever found	Endangered	Laguna Atascosa National Wildlife Refuge	Recovery Plan for the Ocelot (Leopardus pardalis) First Revision	Recovery efforts in progress, but no implementation information yet to display.
Reptiles	Hawksbill sea turtle ( <u>Eretmochelys</u> <u>imbricata</u> )	Wherever found	Endangered	North Florida Ecological Services Field Office	Recovery Plan for U.S. Pacific Populations of the Hawksbill Turtle	Implementation Progress
Reptiles	Hawksbill sea turtle ( <u>Eretmochelys</u> <u>imbricata</u> )	Wherever found	Endangered	North Florida Ecological Services Field Office	Recovery Plan for the Hawksbill Turtle in the U.S. Caribbean, Atlantic and Gulf of Mexico	Implementation Progress
Reptiles	Leatherback sea turtle ( <u>Dermochelys</u> <u>coriacea</u> )	Wherever found	Endangered	North Florida Ecological Services Field Office	Recovery Plan for U.S. Pacific Populations of the Leatherback Turtle	Implementation Progress
Reptiles	Leatherback sea turtle ( <u>Dermochelys</u> <u>coriacea</u> )	Wherever Endangered North Recovery Plan		Implementation Progress		
Reptiles	Kemp's ridley sea turtle ( <u>Lepidochelys</u> <u>kempii</u> )	Wherever found	Endangered	Texas Coastal Ecological Services Field Office	Bi-National Recovery Plan for the Kemp's Ridley Sea Turtle (Lepidochelys kempii) SECOND REVISION	Implementation Progress

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status
Reptiles	Green sea turtle ( <u>Chelonia</u> <u>mydas</u> )	North Atlantic DPS	Threatened	North Florida Ecological Services Field Office	Recovery Plan for U.S. Population of Atlantic Green Turtle	Implementation Progress
Reptiles	Loggerhead sea turtle ( <u>Caretta</u> <u>caretta</u> )	Northwest Atlantic Ocean DPS	Threatened	North Florida Ecological Services Field Office	Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (Caretta caretta); Second Revision	Implementation Progress



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# Species By County Report

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County: San Patricio, Texas

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Need to contact a FWS field office about a species? Follow this link to find your local FWS Office.

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Birds	Whooping crane ( <i>Grus</i> americana)	Wherever found, except where listed as an experimental population	Endangered	Assistant Regional Director- Ecological Services	Whooping Crane Recovery Plan, Final Third Revision	Implementation Progress	Final Revision 3
Birds	Attwater's greater prairie-chicken ( <i>Tympanuchus cupido attwateri</i> )	Wherever found	Endangered	Attwater Prairie Chicken National Wildlife Refuge	Attwater's Prairie- Chicken (Tympanuchus cupido attwateri) Recovery Plan, Second Revision	Implementation Progress	Final Revision 2
Birds	Brown pelican (Pelecanus occidentalis)	except U.S. Atlantic coast, FL, AL	Recovery	Ventura Fish and Wildlife Office			
Birds	Piping Plover ( <u>Charadrius</u> <u>melodus</u> )	[Atlantic Coast and Northern Great Plains populations]	Threatened	Office of the Regional Director	Volume I: Draft Revised Recovery Plan for the Northern	Recovery efforts in progress, but no implementation	Draft Revision 1

		- Wherever found, except those areas where listed as endangered.			Great Plains Piping Plover (Charadrius melodus)	information yet to display.	
Birds	Piping Plover (Charadrius melodus)	[Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.	Threatened	Office of the Regional Director	Piping Plover Atlantic Coast Population Revised Recovery Plan	Implementation Progress	Final Revision 1
Birds	Red knot ( <i>Calidris</i> <i>canutus rufa</i> )	Wherever found	Threatened	New Jersey Ecological Services Field Office			
Clams	Golden orb (Quadrula aurea)	Wherever found	Candidate	Texas Coastal Ecological Services Field Office			
Mammals	West Indian Manatee ( <i>Trichechus</i> <i>manatus</i> )	Wherever found	Threatened	North Florida Ecological Services Field Office	Recovery Plan Puerto Rican Population of the West Indian (Antillean) Manatee	Implementation Progress	Final
Mammals	West Indian Manatee ( <i>Trichechus</i> <i>manatus</i> )	Wherever found	Threatened	North Florida Ecological Services Field Office	Florida Manatee Recovery Plan, Third Revision	Implementation Progress	Final Revision 3
Mammals	Gulf Coast jaguarundi ( <u>Herpailurus</u>	Wherever found	Endangered	Laguna Atascosa National	GULF COAST JAGUARUNDI RECOVERY	Implementation Progress	Final

	(=Felis) yagouaroundi cacomitli)			Wildlife Refuge	PLAN (Puma yagouaroundi cacomitli)		
Mammals	Ocelot (Leopardus (=Felis) pardalis)	wherever found	Endangered	Laguna Atascosa National Wildlife Refuge	Recovery Plan for the Ocelot (Leopardus pardalis) First Revision	Recovery efforts in progress, but no implementation information yet to display.	Final
Reptiles	Hawksbill sea turtle ( <u>Eretmochelys</u> <u>imbricata</u> )	Wherever found	Endangered	North Florida Ecological Services Field Office	Recovery Plan for U.S. Pacific Populations of the Hawksbill Turtle	Implementation Progress	Final Revision 1
Reptiles	Hawksbill sea turtle ( <i>Eretmochelys</i> <i>imbricata</i> )	Wherever found	Endangered	North Florida Ecological Services Field Office	Recovery Plan for the Hawksbill Turtle in the U.S. Caribbean, Atlantic and Gulf of Mexico	Implementation Progress	Final Revision 1
Reptiles	Leatherback sea turtle ( <u>Dermochelys</u> <u>coriacea</u> )	Wherever found	Endangered	North Florida Ecological Services Field Office	Recovery Plan for U.S. Pacific Populations of the Leatherback Turtle	Implementation Progress	Final Revision 1
Reptiles	Leatherback sea turtle ( <u>Dermochelys</u> <u>coriacea</u> )	Wherever found	Endangered	North Florida Ecological Services Field Office	Recovery Plan for Leatherback Turtles in the U.S. Caribbean, Atlantic, and Gulf of Mexico	Implementation Progress	Final Revision 1
Reptiles	Kemp's ridley sea turtle ( <i>Lepidochelys</i> <i>kempii</i> )	Wherever found	Endangered	Texas Coastal Ecological Services Field Office	Bi-National Recovery Plan for the Kemp's Ridley Sea Turtle (Lepidochelys	Implementation Progress	Final Revision 2

					kempii) SECOND REVISION		
Reptiles	Green sea turtle ( <u>Chelonia</u> <u>mydas</u> )	North Atlantic DPS	Threatened	North Florida Ecological Services Field Office	Recovery Plan for U.S. Population of Atlantic Green Turtle	Implementation Progress	Final Revision 1
Reptiles	Loggerhead sea turtle ( <u>Caretta</u> <u>caretta</u> )	Northwest Atlantic Ocean DPS	Threatened	North Florida Ecological Services Field Office	Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (Caretta caretta); Second Revision	Implementation Progress	Final Revision 2

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# **Texas' Threatened and Endangered Species**

For more information on listed species please visit: http://www.nmfs.noaa.gov/pr/species/esa/listed.htm http://sero.nmfs.noaa.gov/protected\_resources/index.html

<b>Marine Mammal Species</b>	Scientific Name	Status
fin whale	Balaenoptera physalus	Endangered
sei whale	Balaenoptera borealis	Endangered
sperm whale	Physeter macrocephalus	Endangered
Gulf of Mexico Bryde's whale	Balaenoptera edeni - subspecies	Proposed - Endangered
Sea Turtle Species		C
green sea turtle	Chelonia mydas	Threatened <sup>1</sup>
hawksbill sea turtle	Eretmochelys imbricata	Endangered
Kemp's ridley sea turtle	Lepidochelys kempii	Endangered
leatherback sea turtle	Dermochelys coriacea	Endangered
loggerhead sea turtle	Caretta caretta	Threatened <sup>2</sup>
Fish Species		
oceanic whitetip shark	Carcharhinus longimanus	Threatened
giant manta ray	Manta birostris	Threatened
<b>Invertebrate Species</b>		
lobed star coral	Orbicella annularis	Threatened
mountainous star coral	Orbicella faveolata	Threatened
boulder star coral	Orbicella franksi	Threatened
elkhorn coral	Acropora palmata	Threatened <sup>3</sup>

# **Critical Habitat Designations**

For final rules, maps, and GIS data please visit:

http://sero.nmfs.noaa.gov/maps gis data/protected resources/critical habitat/index.html

Loggerhead sea turtle: There are 38 designated marine areas that occur throughout the Southeast Region.

<sup>&</sup>lt;sup>1</sup> North Atlantic and South Atlantic Distinct Population Segments.

<sup>&</sup>lt;sup>2</sup> Northwest Atlantic Distinct Population Segment.

<sup>&</sup>lt;sup>3</sup> Colonies located at Flower Garden Banks National Marine Sanctuary.



# **Species Proposed for Listing Under the Endangered Species Act**

Federal action agencies are encouraged to include species proposed for listing under the Endangered Species Act (ESA) in their Section 7 consultation requests. Species that are proposed for listing are those which have been found to warrant federal protection under the ESA, but a final rule formally listing the species has not yet published. By including these species in your Section 7 consultation, reinitiating consultation after the ESA listing is finalized may not be necessary.

For more information on species proposed for listing under the ESA, please visit: <a href="http://www.nmfs.noaa.gov/pr/species/esa/candidate.htm#proposed">http://www.nmfs.noaa.gov/pr/species/esa/candidate.htm#proposed</a>