APPENDIX O
INSHORE STATE LISTED T&E SPECIES REPORT

STATE-LISTED THREATENED AND ENDANGERED SPECIES REPORT FOR INSHORE COMPONENTS OF THE PROPOSED BLUEWATER SPM PROJECT IN ARANSAS, NUECES, AND SAN PATRICIO COUNTIES, TEXAS

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1 INTRODUCTION

Lloyd Engineering, Inc. (Lloyd) retained SWCA Environmental Consultants (SWCA) to conduct a threatened and endangered species evaluation for inshore components associated with the proposed Bluewater SPM Project located in Aransas, Nueces, and San Patricio Counties, Texas. The proposed Bluewater SPM Project will be located within the U.S. Army Corps of Engineers (USACE) Galveston District area of responsibility (Figure 1, Appendix A).

The proposed Bluewater SPM Project consist of the construction and operation of onshore, inshore, and offshore components including a deepwater port to provide a logistical solution for the safe and reliable export of crude oil. This threatened and endangered species report presents the results of field surveys conducted for inshore project components including two 30-inch-diameter pipelines, booster station, and associated construction workspaces. The proposed inshore pipeline infrastructure originates near Aransas Pass, Texas, crosses to Stedman Island, and parallels State Highway 361 onto Harbor Island where a booster station will be constructed. From this point, the inshore pipelines will cross Lydia Ann Channel onto San Jose Island to extend offshore into the Gulf of Mexico. Refer to Figure 1 (Vicinity Map) in Appendix A for a depiction of the survey area investigated for inshore components associated with the proposed Bluewater SPM Project.

2 METHODS

2.1 Species Identification

The species evaluated in this report were based on the state-listed threatened and endangered species for Aransas, Nueces, and San Patricio Counties, Texas, available at the Texas Parks and Wildlife Department (TPWD) Rare, Threatened, and Endangered Species of Texas by County website (TPWD 2019a) (Appendix B). SWCA accessed the TPWD Natural Diversity Database (TXNDD), which provides known occurrence records for listed species (TXNDD 2019). Please refer to Figures 1 and 2 (Appendix A) for a vicinity map and a map of occurrence records for listed species near the project survey area, respectively and TXNDD element occurrence records in Appendix C. The potential for occurrence within the project survey area for the species addressed in this report is based on: 1) documented occurrences; 2) existing information on distribution; and 3) qualitative comparisons of the habitat requirements of each species with vegetation communities or landscape features observed within the project survey area. Possible impacts to these species resulting from construction and/or operation of the proposed project were evaluated based on reasonably foreseeable project-related activities.

2.2 Species Evaluation

The potential for occurrence of each state-listed species was summarized according to the categories listed below. In the evaluation, the rationale for category assignment is provided after each category in Table 1. Potential for occurrence categories are as follows:

- *Known to occur*—the species has been documented in the project survey area by a reliable observer.
- *May occur*—the survey area is within the species' currently known range, and habitat types within the survey area resemble those known to be used by the species.

- *Unlikely to occur*—the area is within the species' currently known range, but habitat types within the survey area do not resemble those known to be used by the species.
- *Does not occur*—the survey area is clearly outside the species' currently known range.

Those species listed as threatened or endangered by the TPWD were assigned to one of three categories of possible effect, following U.S. Fish and Wildlife (USFWS) recommendations. The evaluation of impact to species is limited to the project survey area and does not assess the impacts to the species or their habitats at regional or global levels. The effects determinations recommended by USFWS (USFWS 1998) include:

- *May affect, is likely to adversely affect/May impact*—adverse effects to listed species may occur, as a direct or indirect result of the proposed project, and the effect is not discountable, insignificant, or beneficial.
- *May affect, is not likely to adversely affect/May impact*—the proposed project may affect listed species and/or critical habitat; however, the effects are expected to be discountable, insignificant, or completely beneficial.
- *No effect*—the proposed project will not affect listed species or critical habitat.

2.3 Field Reconnaissance

SWCA conducted a field reconnaissance of the project survey area in January and February 2019. SWCA used global positioning system (GPS) data uploaded with the project survey area for general orientation and locating the project boundaries. The survey corridor boundary consists of a 500- to 800-foot-wide corridor centered on the pipeline centerline. The field reconnaissance consisted of pedestrian visual surveys to evaluate the absence or presence of suitable habitat and occurrences of listed species within the project survey area. SWCA was not contracted to complete, and did not complete, species-specific presence/absence surveys for this project.

3 RESULTS

3.1 Species Evaluation

SWCA evaluated impacts of the proposed project on 38 state-listed threatened or endangered species (TPWD 2019a) (Appendix C). Note that the list provided in Appendix C includes rare species which are not state-listed as threatened or endangered species; therefore, these species were not evaluated further.

Table 1 identifies the species carried forward for further evaluation of impacts from the proposed project. The table also includes a summary of species' habitat requirements, potential for occurrence, and determined effect caused by construction activities associated with the proposed project within the survey area.

Table 1. TPWD State-Listed Species in Aransas, Nueces, and San Patricio Counties, Texas

Common Name (Scientific Name)	State Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
AMPHIBIANS				
Black-Spotted Newt (*Notophthalmus meridionalis*)	T	The black-spotted newt's geographic range includes the Gulf coast plain from Texas, south of the San Antonio River, to central Mexico, never more than 80 miles inland (NatureServe 2019a; Herps of Texas 2019a). They prefer warm, shallow waters such as ponds, ditches, and quiet stream pools with submerged vegetation cover.	*Does not occur*. There have been no TXNDD occurrences for the project area since the 1930s, with the last observation located approximately 5.5 miles north of the project area in June 1930 (TXNDD 2019). The preferred habitat within the project area is limited to the freshwater aquatic ecosystems on San Jose Island. While they were once known to occur in Aransas, Nueces, and San Patricio Counties, the species is considered extirpated/possibly extirpated in all three counties (NatureServe 2019a).	*No effect*.
Sheep Frog (*Hypopachus variolosus*)	T	Sheep frogs range from south Texas to Costa Rica, often found in subterranean burrows, such as pack rat burrows (NatureServe 2019b; Herps of Texas 2019b). They can also be found burrowing under fallen trees, leaf litter, or rocks. Travels between breeding pools and terrestrial habitats, which includes savanna, grassland, and shrubland/chaparral ecosystems.	*Unlikely to occur*. There are no known TXNDD occurrences for the project area (TXNDD 2019). The species is usually found more inland where there is better habitat for burrowing and freshwater. The species is not generally found on barrier islands and brackish or saltwater ecosystems; thus, while the project site contains some herbaceous upland and freshwater wetland ecosystems, there is no ideal habitat located in the project area. The species was once known to occur in Nueces County, but they are now considered extirpated/possibly extirpated in this county (no data available on possible extirpation in Aransas and San Patricio counties) (NatureServe 2019b).	*No effect*.
South Texas Siren (Large Form) (*Siren* sp. 1)	T	TPWD determined that there is at least one species of siren endemic to south Texas, referred to as the "South Texas siren (large form *Siren* sp. 1)," although species identification and population dynamics are unclear (Kline and Carreon 2013; LaFortune 2015; TPWD 2019a). The siren is an aquatic, eel-like salamander which prefers wet or sometimes-wet areas, such as resacas, wetlands, arroyos, canals, ditches, or shallow depressions, with high edge vegetation cover (LaFortune 2015; TPWD 2019a; NatureServe 2019c).	*Unlikely to occur*. While more research is needed for the species, the project area is unlikely to contain suitable habitat due to the salt content of almost all aquatic habitat and wetlands (except those occurring on the central portion of San Jose Island). There have been no TXNDD occurrences for the project area (TXNDD 2019), and the species is considered extirpated/possibly extirpated in the Aransas watershed (NatureServe 2019c).	*No effect*.
BIRDS				
American Peregrine Falcon	T	Primarily resides and nests in the Trans-Pecos region of west Texas, although the species is sometimes	*Unlikely to occur*. The project area is outside of the species primary habitat area in the Trans-Pecos region	*No effect.* See section 3.1.1.

Common Name (Scientific Name)	State Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
(*Falco peregrinus anatum*)		found migrating throughout Texas (Campbell 2003; Lockwood and Freeman 2004; TPWD 2019a). Usually stay near their breeding areas in west Texas year-round or travelling slightly south towards Mexico. They can be found in a variety of habitat types, with a preference for nesting on mountain cliffs, river gorges, or artificial structures in urban areas, often adjacent to waterbodies where there is an abundant food supply.	and does not contain tall cliffs or structures preferred for nesting. The species is sometimes seen migrating throughout the state during the non-breeding season, though more often stay in the vicinity of their breeding grounds located several hundred miles west of the project area. There are no TXNDD occurrences for the project area (TXNDD 2019). See section 3.1.1.	
Peregrine Falcon (*Falco peregrinus*)	T	Listing includes both subspecies, *Falco peregrinus anatum* (described above) and *Falco peregrinus tundrius* (not listed by TPWD), because the two are not easily distinguishable (TPWD 2019a). The Arctic Peregrine falcon (*tundrius* ssp.) is known to migrate long distances from the Arctic to South America, with the Texas Gulf Coast an important wintering ground for the subspecies (Campbell 2003; Lockwood and Freeman 2004). The American Peregrine falcon (*anatum* ssp.) nests in the Trans-Pecos region of west Texas and is not known to travel far from their nesting areas compared to the Arctic Peregrine falcon. Both subspecies are occasionally found migrating throughout the state.	*Unlikely to occur/May occur*. There are no known TXNDD occurrences for the project area for either subspecies (TXNDD 2019). The Texas Gulf Coast is an important stopover for migrating Arctic peregrine falcons, particularly at Laguna Madre south of the project area; however, this subspecies has been delisted by TPWD (Campbell 2003; TPWD 2019a). See above for further description of the American peregrine falcon. See section 3.1.1.	*May affect, is not likely to adversely affect/May impact*. See section 3.1.1.
Eskimo Curlew (*Numenius borealis*)	E	The eskimo curlew is considered extirpated throughout Texas, with the last confirmed sighting in Texas in 1962 on Galveston island (Campbell 2003; Lockwood and Freeman 2004). Historically, they bred in the Artic region, migrating through Texas to South America. During migration the species was known to occupy a variety of habitat types.	*Does not occur*. The species is extirpated from the region. No known TXNDD occurrences are in the vicinity of the project area (TXNDD 2019).	*No effect.*
Northern Aplomado Falcon (*Falco femoralis septentrionalis*)	E	In Texas, northern aplomado falcons are found in the South Texas and Trans-Pecos regions (Campbell 2003; USFWS 2014). Their geographical distribution ranges from southern Argentina through Mexico and into the southwestern U.S., including south Texas. They inhabit a variety of habitats, generally containing open grassland with scattered patches of shrubs or trees or woodland and forest borders. In the Gulf Coast region of Texas and Mexico, the species occupies coastal prairie habitat, coastal savannas, marshes, and tidal flats with few trees, mesquite, yucca and cactus, or other tall succulent shrubs (Keddy-Hector 2000).	*Unlikely to occur*. The closest known populations occur near Brownsville, over 100 miles south of the project area, and in and near the Aransas National Wildlife Refuge on Matagorda Island and the northern end of San Jose Island, approximately 10 miles northeast of the project area (USFWS 2014). There are no known TXNDD occurrences for the project area (TXNDD 2019). No nest or falcons were observed during the time of SWCA's survey. See section 3.1.2.	*May affect, is not likely to adversely affect/May impact*. See section 3.1.2.

Common Name (Scientific Name)	State Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Piping Plover (*Charadrius melodus*)	T	The piping plover is a migratory species with a breeding distribution within the Great Lakes region and Atlantic coast and along central North America from Alberta, Canada to Colorado and Oklahoma (USFWS 2012a). The non-breeding or wintering distribution occurs mainly coastal from North Carolina to Florida and the Gulf Coast states including Texas (USFWS 2012a; NatureServe 2019d). Piping plovers nest on wide, gravelly beaches with little vegetation in alkali lakes and wetlands, inland lakes, reservoirs, and major rivers in the northern Atlantic coast, Great Lakes region, and around waterbodies of the Great Plains and Canada. Wintering habitat includes beaches, tidal sand flats, mud flats, algal mats, washover passes, and small dunes where they feed primarily on small invertebrates (Campbell 2003; NatureServe 2019d).	*Known to occur.* A large portion of San Jose Island is currently listed as critical habitat for the piping plover (USFWS 2019). Critical habitat for the wintering population of piping plovers was designated July 10, 2001, and divided into 137 units across eight states (USFWS 2001). The proposed project crosses one identified piping plover critical habitat designated unit, referred to as TX-16 (USFWS 2009a). Only 10 acres of the 1,378 acres of TX-16, or 0.007% of the total area, occur within the proposed project area. This area will be avoided by horizontal directional drill (HDD) (Figure 3, Appendix A) (USFWS 2001). See section 3.1.3.	*May affect, is not likely to adversely affect/May impact.* See section 3.1.3.
Reddish Egret (*Egretta rufescens*)	T	The reddish egret is a permanent resident of the Texas Gulf Coast, found in salt or brackish marshes and wetlands, shallow salt ponds, and tidal flats with some vegetation cover such as mangroves, brushy yucca-pricklypear cactus thickets, or other small trees, shrubs, or herbage (Jones 1998; TPWD 2019a; NatureServe 2019e). Laguna Madre, located south of the project area, accounts for a majority of the population distribution, although populations have been shifting northward towards Corpus Christi in recent years.	*May occur.* Though there are no TXNDD occurrences in or near the project vicinity, the species is known to occur along the Texas Gulf Coast and there is preferred habitat within the project area (Jones 1998; TXNDD 2019). See section 3.1.4.	*May affect, is not likely to adversely affect/May impact.* See section See section 3.1.4.
Sooty Tern (*Onychoprion fuscatus*)	T	A pelagic species, the sooty tern (formerly in the genus *Sterna*, now classified as *Onychoprion*) inhabits tropical and subtropical oceans worldwide, including the Gulf of Mexico and Texas Gulf Coast (Tweit 2009; NatureServe 2019f). They are usually seen along the central to south Texas coast, particularly at Laguna Madre, from late March to early October. The species only comes to land to breed, preferring near-shore marine habitats for nesting. Their breeding season is from April through late June to early July, nesting in small colonies along remote outlying islets and rocks, sandy beaches, sparsely vegetated flats, or coral (Tweit 2009; NatureServe 2019f).	*May occur.* There are no TXNDD occurrences for the project area (TXNDD 2019). The species spends most of its life at sea; it is occasionally seen along the Texas Gulf coast during breeding season (Tweit 2009). The project area contains potential breeding habitat, particularly along San Jose island, although the species is only rarely seen in this area compared to other regions around the Gulf of Mexico. See section 3.1.5.	*May affect, is not likely to adversely affect/May impact.* See section See section 3.1.5.

Common Name (Scientific Name)	State Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Texas Botteri's Sparrow (*Peucaea botterii texana*)	T	The Texas Botteri's sparrow (formerly in the genus *Aimophila,* now separately classified as *Peucaea*) is a complex of nine subspecies which range across Mexico and Central America, some of which extend into south Texas, Arizona and New Mexico during the breeding season (Lockwood and Freeman 2004; Tweit 2007). Seasonally found in south Texas within 20 miles of the coast from late March to early October, breeding from early April to mid-July, and flying south for the winter. Prefers coastal grasslands with scattered bushes or shrubs such as mesquite, huisache, sagebrush, or yucca (Tweit 2007; TPWD 2019a). Uses bunch grasses for nesting.	*Unlikely to occur*. There are no TXNDD occurrences for the vicinity of the project area (TXNDD 2019). While the species has occasionally been seen as far north as San Patricio County, the species is usually found closer to the southern tip of Texas at Laguna Atascosa National Wildlife Refuge and King Ranch (Lockwood and Freeman 2004; Tweit 2007). The project area does not contain much scrub-shrub cover as preferred by the species.	*No effect.*
White-faced Ibis (*Plegadis chihi*)	T	The white-faced ibis ranges across the western U.S. and is a permanent resident of the Texas Gulf Coast (Lockwood and Freeman 2004; NatureServe 2019g). The species primarily inhabits freshwater wetlands, but when feeding, the species will use a larger variety of habitat types including flooded hay meadows, agricultural fields such as rice fields, and brackish or saltwater estuarine wetlands (Telfair II 2007a). Usually nests in colonies on islands along the central and upper coast but can also be found nesting further inland in marshes and swamps. Nests are generally placed in emergent vegetation or shrubs, low trees, bulrushes, reeds, or on floating mats in marshes either floating on the water or perched slightly above water-level on vegetation (Telfair II 2007a; NatureServe 2019g; TPWD 2019a).	*May occur.* There are no TXNDD occurrences for the project area (TXNDD 2019). The species is a permanent resident along the Texas Gulf coast and is commonly found throughout the region (Lockwood and Freeman 2004; Telfair II 2007a). While the species prefers freshwater habitats, they will also use brackish or saltwater marshes for feeding and are known to breed on coastal islands (Lockwood and Freeman 2004; TPWD 2019a). The project area is thus not considered preferred habitat, due to the majority of wetlands being estuarine wetlands, but the species could be found foraging in the area. See section 3.1.6.	*May affect, is not likely to adversely affect/May impact.* See section 3.1.6.
White-tailed Hawk (****Buteo albicaudatus***)	T	The white-tailed hawk (previously classified as a member of the genus *Buteo*, but recently changed to *Geranoaetus albicaudatus*) is found in coastal prairies along the Texas Gulf Coast south of Matagorda Bay (Lockwood and Freeman 2004; NatureServe 2019h). Outside of Texas, the species is found throughout Mexico and central America to South America, although the species is not known to migrate between regions (NatureServe 2019h). Breeding occurs from late January to July (Tweit 2008). Nests are found in savanna and coastal prairie ecosystems in short trees or shrubs, such as mesquite, scrub-live oaks, or mixed	*Unlikely to occur*. Though the species is found along the Texas Gulf Coast, it usually is found further inland on scrub-shrub coastal prairies and savannas as opposed to barrier island systems (TPWD 2019a). The project area does not contain a significant amount of scrub-shrub upland habitat as preferred by the species. There are no TXNDD occurrences for the project area (TXNDD 2019).	*No effect.*

Common Name (Scientific Name)	State Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
		savanna-chaparral (Tweit 2008; TPWD 2019a; NatureServe 2019h).		
Whooping Crane (*Grus americana*)	E	Endemic to North America, the species is currently only found in three locations. Breeding occurs in northern Canada and Wisconsin, and the species winters along the Texas Gulf Coast within and near the Aransas National Wildlife Refuge (USFWS 2012b). A variety of habitats are used during migration including croplands and wetlands (Austin and Richert 2001).	*May occur*. Project site near the known migration pattern of the species. The closest designated critical wildlife habitat is approximately 19 miles away at the Aransas Wildlife Refuge (USFWS 2019); no critical habitat areas are located within the project boundaries and associated activities. No known TXNDD occurrences are in the vicinity of the project area (TXNDD 2019). See section 3.1.7.	*May affect, is not likely to adversely affect/May impact*. See section 3.1.7.
Wood Stork (*Mycteria Americana*)	T	Ranges throughout the Atlantic and Gulf Coasts from South Carolina to Texas, through Mexico and central America, to South America (NatureServe 2019i). Nesting has not been reported in Texas since 1960 (Lockwood and Freeman 2004; Telfair II 2007b, TPWD 2019a). Populations found in Texas are generally post-breeding visitors from breeding populations of Mexico, and can be found east of Dallas, San Antonio, and Zapata towards the coast from late May to mid-October. Prefers freshwater marshes, swamps, lagoons, ponds, wetlands, or flooded fields but will also use shallow brackish or saltwater marsh and wetland habitat (NatureServe 2019i; TPWD 2019a). Nests mostly in swamps or on islands surrounded by shallow, open water in cypress trees, mangroves, or dead hardwoods.	*May occur.* There are no known TXNDD occurrences in the project vicinity (TXNDD 2019). The species does not breed in Texas, and only passes through post-breeding season. Similar to the white-faced ibis, the species prefers freshwater habitats but will use brackish or saltwater marshes for feeding (Telfair II 2007b; NatureServe 2019i; TPWD 2019a). The project area is thus not considered preferred habitat due to the predominance of estuarine wetlands present, but the species may temporarily pass through the project area. See section 3.1.8.	*May affect, is not likely to adversely affect/May impact*. See section 3.1.8.
FISHES				
Opossum Pipefish (*Microphis brachyurus*)	T	Range throughout tropical and subtropical oceans including the Indo-Pacific, eastern Pacific, and eastern and western Atlantic oceans (NatureServe 2019j). The subspecies *lineatus* is found from New Jersey to the Gulf of Mexico and Caribbean to Sao Paulo, Brazil, with Florida, Louisiana, and Texas considered areas of greatest conservation need in the U.S. (National Oceanic and Atmospheric Administration [NOAA] 2009). In the U.S., permanent populations only exist in southeastern Florida, particularly at the Indian River Lagoon.	*May occur*. The project area is within the known range of the species, though there are no known permanent populations in Texas (NOAA 2009). Possible habitat exists for juveniles in or near the project area. There are no TXNDD occurrences for the vicinity of the project area (TXNDD 2019). See section 3.1.9.	*May affect, is not likely to adversely affect/May impact*. See section 3.1.9.

Common Name (Scientific Name)	State Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
		Uses low salinity estuaries and freshwater riverine systems for breeding and spawning (NOAA 2009; NatureServe 2019j). Juveniles will spend the first portion of their lives in oceanic or coastal marine environments, migrating to freshwater riverine systems within 30 miles of the coast in adulthood.		
Smalltooth Sawfish (*Pristis pectinate*)	E	Historically occurring in the Gulf Coast from Texas to Florida, the smalltooth sawfish is now only found near Florida and is extirpated from the Texas coast due to habitat loss and accidental captures (NOAA 2019a). Reside in tropical seas and estuaries, feeding on a variety of fish and invertebrates such as shrimp and crabs.	*Does not occur*. The species is extirpated from the region and now is only found near Florida (NOAA 2019a). There are no TXNDD occurrences for the project area (TXNDD 2019).	*No effect.*
MAMMALS				
Red Wolf (*Canis rufus*)	E	Extirpated; historically found in eastern half of Texas within brushy and forested areas and coastal prairies (TPWD 2019a).	*Does not occur*. The species is extirpated from the region. No known TXNDD occurrences are in the vicinity of the project area (TXNDD 2019).	*No effect.*
Louisiana Black Bear (*Ursus americanus luteolus*)	T	Transient; found in bottomland hardwoods and large tracts of inaccessible forested areas (TPWD 2019a). While their historical range included parts of Texas, the nearest permanent population occurs in neighboring Louisiana; the species is occasionally seen wandering in east Texas (Campbell 2003).	*Does not occur*. No known TXNDD occurrences for the vicinity of the project area (TXNDD 2019), and the project area lacks forested habitat preferred by the species. Louisiana black bears are only occasionally seen in eastern Texas forests, located 200 miles or more away from the project area, and there are no known permanent populations of the species in Texas (Campbell 2003).	*No effect.*
Black Bear (*Ursus americanus*)	T	Found in bottomland hardwoods and large tracts of inaccessible forested areas (TPWD 2019b). The Louisiana black bear (*luteolus* ssp.) (described above) is only rarely seen wandering in eastern Texas forests, and no permanent populations exist in Texas (Campbell 2003). The Mexican black bear (*eremicus* ssp.) and New Mexico black bear (*amblyceps* ssp.) are thought to occur in west Texas desert scrub or woodland habitat within the Chisos and Guadalupe Mountains (TPWD 2019b).	*Does not occur*. No known TXNDD occurrences for the vicinity of the project area (TXNDD 2019), and the project area does not contain preferred habitat. The species is only occasionally seen in eastern Texas forests or scattered mountain ranges in west Texas, both located at least 200 miles or more away from the project area (Campbell 2003; TPWD 2019b).	*No effect.*
Gulf Coast Jaguarundi	E	The jaguarundi's historic range occurs from southern Texas and coastal Mexico in the north, through Central and South America east of the Andes, and as far south	*Does not occur*. The closest known population occurs more than 100 miles to the southwest in Mexico (USFWS 2013). While there are two TXNDD occurrence records for the vicinity	*No effect.*

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(*Puma yagouaroundi cacomitli*)		as northern Argentina (Campbell 2003). Within the U.S., jaguarundis historically occurred primarily in dense thorny scrublands in Cameron, Hidalgo, Willacy, and Starr Counties, Texas (USFWS 2013). Because of its secretive nature, its status and distribution within its historic northern range limits in the Lower Rio Grande Valley (LRGV) of southern Texas are poorly known. Habitat is lowland brush areas close to a source of running water, including dry, dense thorn forest to wet grassland (Campbell 2003).	of the project area (one dated 1984 and another dated 1991 [TXNDD 2019]), they are listed as needing review; TPWD lists the last jaguarundi sighting within the state of Texas in Brownsville, located over 100 miles south of the project, in 1986, and the species is largely considered extinct in Texas (Campbell 2003; TPWD 2019c). According to the SpaceX (2013) Biological and Conference Opinion Summary, there have been three sightings of the species since 1993 in south Texas. Due to the small number of sightings which are concentrated in south Texas, distances over 100 miles away from the project area, and the lack of potential habitat in the project area, it is concluded that the species does not occur in the project area.	
Ocelot (*Leopardus pardalis*)	E	Ocelots historically ranged throughout south Texas, Mexico, Central America, and South America (USFWS 2016, 2018a; Navarro-Lopez et al. 1993). Habitat preference includes dense Tamualipan thornscrub and woodland habitats with >75% canopy cover (and canopy height greater than 6 feet), and dense ground cover interspersed with alkali sacaton grasses (Tewes and Everett 1986; Simpson 2010).	*Does not occur*. The only known populations in Texas are restricted to two disparate aggregations in Willacy and Cameron Counties with population sizes of less than 50 individuals (Campbell 2003; Janečka et al. 2011). One aggregation is in Cameron County and is contained in and around the Laguna Atascosa National Wildlife Refuge (LANWR). The other is a smaller group of ocelots present in northern Willacy County on the privately owned Yturria Ranch (Navarro-Lopez et al. 1993; USFWS 2016). Both populations occur more than 100 miles south of the proposed project area. There are no TXNDD occurrences in the project vicinity (TXNDD 2019), and the project area does not contain suitable habitat.	*No effect.*
Southern Yellow Bat (*Lasiurus* [*Dasypterus*] *ega*)	T	The Southern Yellow Bat (taxonomically classified in the genus *Lasiurus*, subgenus *Dasypterus*) is a subtropical species ranging throughout southern Texas, California, and Arizona (Davis and Schmidly 1994a; TPWD 2019d). In Texas, it is generally associated with palm trees (*Sabal* sp.) near Brownsville, although is occasionally found as far north as Corpus Christi (Davis and Schmidly 1994a; TPWD 2019a, 2019d).	*Unlikely to occur.* There are no TXNDD occurrence records for the project area (TXNDD 2019). The species is most often found in south Texas near Brownsville, although has been found as far north as Corpus Christi. The project area is located on the northern-most extent of the species known range and additionally does not contain preferred habitat due to the lack of palm trees for roosting (TPWD 2019d).	*No effect*.
West Indian Manatee (*Trichechus manatus*)	E	Found in shallow coastal waters, estuaries, bays, rivers, and lakes from Florida to Texas. However, the Texas Gulf Coast is at the very western extent of their range, and manatees are rarely sighted in the region. Known to prefer rivers and estuaries over marine	*Known to occur/Unlikely to occur*. The project area is outside of critical habitat areas. Manatees have occasionally been seen in bays near the project area, with the most recent TXNDD occurrence approximately 0.5 miles from the project area near Port Aransas in 2016 (TXNDD 2019). While nearby bays and channels of the project area could be traversed by the species,	*No effect.* See section 3.1.10.

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		habitats and can travel through dredged canals or quiet marinas (NatureServe 2019k).	the species is not known to occur year-round in the region due to winter temperatures, thus reducing the likelihood that the species will occur in the vicinity of the project area. Any possible contact during construction will be avoided by HDD methods to bypass waterways. See section 3.1.10.	
White-Nosed Coati (*Nasua narica*)	T	Range across North, Central, and South America from Arizona to Argentina (Davis and Schmidly 1994b; Smithsonian's National Zoo and Conservation Biology Institute [SCBI] 2019). Transient from Mexico in south Texas, generally from Brownsville to the Big Bend region of the Trans-Pecos (Davis and Schmidly 1994b; TPWD 2019a). Inhabit a variety of habitats, including dry, open forests, tropical woodlands, riparian corridors and canyons (SCBI 2019; TPWD 2019a). Forages for food on ground and in trees, such as fruit, invertebrates, small rodents, and lizards.	*Does not occur.* There are no known TXNDD occurrences for the vicinity of the project area (TXNDD 2019). The species has been previously reported in Aransas County, but within Texas they are generally only found in south Texas from Brownsville to Big Bend (Davis and Schmidly 1994b); occurrences in Texas are considered transient visitors from Mexico and there are no known permanent populations in the area (Davis and Schmidly 1994b; TPWD 2019a). Are known to inhabit a variety of habitat types but are not generally associated with barrier island systems (Davis and Schmidly 1994b; SCBI 2019; TPWD 2019a).	*No effect*.
REPTILES				
Texas Horned Lizard (*Phrynosoma cornutum*)	T	Reside from Kansas to Louisiana through Texas to New Mexico and northern Mexico (Herps of Texas 2019c; NatureServe 2019l). Historically they are permanent residents across most of Texas, including coastal barrier islands, though their numbers have declined over the years. Preferred habitat includes warm, sandy to rocky soils in arid and semi-arid regions with flat, open areas with sparse vegetation (Herps of Texas 2019c; TPWD 2019a; NatureServe 2019l). Seeks shelter by burrowing into soils, rodent burrows, or hiding under rocks.	*Known to occur.* TXNDD occurrence in 2009 adjacent to the project area near highway 361 on Harbor Island (TXNDD 2019). The project area contains loose, sandy soils with sparsely vegetated areas near beaches which could be inhabited by the species, but the majority of the project area is likely more vegetated and wet than the arid to semi-arid regions preferred by the species. See section 3.1.11.	*May affect, is not likely to adversely affect/May impact.* See section 3.1.11.
Texas Indigo Snake (*Drymarchon melanurus erebennus*)	T	A primarily terrestrial species, the Texas indigo snake inhabits riparian areas of thick mesquite savannas and thornbrush-chaparral woodlands in south Texas (Herps of Texas 2019d; TPWD 2019a; NatureServe 2019m). As one of the largest snakes in Texas, they are voracious foragers, preying on any vertebrate small enough to swallow including other large snakes, birds, turtles, toads, lizards, salamanders, and small mammals (Schaffer 2015; Herps of Texas 2019d); the species is known to eat rattlesnakes.	*Does not occur*. There are no known TXNDD occurrences for the project area (TXNDD 2019), and there is no suitable habitat in the area. The project is located at the northern-most extent of the known range, although the species is more often found further south in remaining areas of mesquite savanna and thornbrush woodland (Herps of Texas 2019d).	*No effect*.

Common Name (Scientific Name)	State Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Texas Scarlet Snake (*Cemophora coccinea lineri*)	T	While both the Texas scarlet snake (*lineri* ssp.) and northern scarlet snake (*copei* ssp.) are protected in Texas, only the Texas scarlet snake is found near the project area (TPWD 2019a). This subspecies ranges along the south Texas coast from Matagorda County to Kennedy County and inland to Jim Hogg and Brooks Counties (Herps of Texas 2019e). Associated with sandy soils with mixed hardwood scrub (Herps of Texas 2019e; TPWD 2019a).	*May occur.* Nearest TXNDD occurrence from approximately 6 miles southwest of the project area in 2006 (TXNDD 2019), and the species has been recorded in Rockport, north of the project area (Dixon et al. 2005). While sandy soils are prevalent in the project area, there is minimal scrub-shrub habitat outside of mangrove wetlands. See section 3.1.12.	*May affect, is not likely to adversely affect/May impact.* See section 3.1.12.
Texas Tortoise (*Gopherus berlandieri*)	T	The smallest tortoise species in North America, the Texas tortoise ranges from the southern tip of Texas to northern Mexico (Herps of Texas 2019f). Inhabit scrub-shrub and brushlands with a grass understory (Herps of Texas 2019f; TPWD 2019a). High population densities have been found on loma habitat along the coast (NatureServe 2019n). Favors prickly pear cactus (*Opuntia* sp.) for feeding but will also eat other grasses and forbs (Herps of Texas 2019f; NatureServe 2019n).	*Unlikely to occur*. There are no TXNDD occurrences for the vicinity of the project area (TXNDD 2019). The project is located at the northern-most range of the species and they are often found more inland than the project area (Herps of Texas 2019f, NatureServe 2019n; TPWD 2019a). There is no preferred habitat within the project vicinity due to minimal scrub-shrub upland found in the project area.	*No effect*.
Timber Rattlesnake (*Crotalus horridus*)	T	Found throughout most of the eastern U.S., extending into the eastern portion of Texas (Herps of Texas 2019g; NatureServe 2019o). Inhabit wooded forests and well-vegetated lowlands within floodplains, particularly heavily vegetated riparian habitats (Herps of Texas 2019g; TPWD 2019a).	*Does not occur*. There are no TXNDD occurrences for the project area (TXNDD 2019). The project is located outside of the main geographic range of the species, which in Texas is generally found in forested regions of east Texas (Herps of Texas 2019g; NatureServe 2019o). The project area lacks forested riparian habitat preferred by the species.	*No effect*.
Kemp's Ridley Sea Turtle (*Lepidochelys kempii*)	E	Ranges from north Atlantic Ocean across the east coast and west into the Gulf of Mexico as far west as Texas and northern Mexico, particularly at Tamaulipas, Mexico (USFWS 2015). Adult and sub-adult Kemp's Ridley sea turtles primarily occupy nearshore habitats that contain muddy or sandy bottoms where prey can be found (Herps of Texas 2019h). Kemp's Ridley hatchlings and small juveniles inhabit a very different environment than adults. After emerging from the nest, hatchlings enter the water and quickly swim offshore to open ocean developmental habitat where they associate with floating sargassum seaweed (National Marine Fisheries Service [NMFS] et al. 2011; National Park Service [NPS] 2019).	*Known to occur/May occur.* In Texas, these species can be found along South Texas inshore and near-shore coastal waters. This species is known to occur at the Padre Island National Seashore (PINS) vicinity, approximately 20 to 100 miles south of the project area. There are no known TXNDD occurrences for the project vicinity (TXNDD 2019). See section 3.1.13.	*May affect, is not likely to adversely affect/May impact*. See section 3.1.13.

Common Name (Scientific Name)	State Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Green Sea Turtle (*Chelonia mydas*)	T	Global distributions in either the tropics, subtropics, or temperate waters (NOAA 2019b; Herps of Texas 2019i). Dependent upon life history stage the green sea turtle has been documented using a variety of habitats. Adults spend most of their time within shallow coastal waterways with large sea grass beds (Reich et al. 2007). Juvenile turtles will spend most of their time within deep pelagic waters (Reich et al. 2007).	*Known to occur.* Several TXNDD occurrences within 5 miles of the project area in Redfish Bay in 2004 and 2008 (TXNDD 2019). The green sea turtle is known to occur in the inshore Texas waters in relative abundance (Landry 2010). SWCA biologists have observed the species in Lydia Ann Channel in 2017. See section 3.1.13.	*May affect, is not likely to adversely affect/May impact*. See section 3.1.13.
Loggerhead Sea Turtle (*Caretta caretta*)	T	The loggerhead sea turtle occurs in both hemispheres in temperate and tropical waters, typically found along the continental shelf region and estuaries nearshore (NMFS and USFWS 2007; SpaceX 2013; NOAA 2019b). Juveniles will spend time within sargassum. The species is known for its relatively large head and powerful jaw which allows it to feed on hard-shelled prey (NOAA 2019b).	*Known to occur.* Last TXNDD occurrence approximately 7.5 miles southwest of the project area in Corpus Christi Bay (TXNDD 2019). The loggerhead sea turtle is known to occur in the inshore Texas waters in relative abundance (Landry 2010). See section 3.1.13.	*May affect, is not likely to adversely affect/May impact*. See section 3.1.13.
Atlantic Hawksbill Sea Turtle (*Eretmochelys imbricata*)	E	Global distributions in either the tropics, subtropics or temperate waters (NOAA 2019b). The Atlantic Hawksbill sea turtle gets its name from its hawk-like beak and is typically small to medium sized (NMFS and USFWS 2013a; SpaceX 2013; Herps of Texas 2019j). While they occupy different marine environments throughout their lifecycle, such as shallow coastal areas and lagoons, they have a preference for coral reefs where there is adequate shelter from predators and areas for resting.	*Known to occur/unlikely to occur.* Last TXNDD occurrence near port Aransas in 1958 (TXNDD 2019). Project area does not contain the preferred habitat of coral reefs. See section 3.1.13.	*May affect, is not likely to adversely affect/May impact*. See section 3.1.13.
Leatherback Sea Turtle (*Dermochelys coriacea*)	T	Global distributions in either the tropics, subtropics or temperate waters (NMFS and USFWS 2013; SpaceX 2013; NOAA 2019b). Found primarily in open ocean habitat. This species has been documented traveling distances of over 6,800 miles. The species is a the most pelagic of sea turtle species and is typically found in deeper waters of the open ocean (SpaceX 2013).	*Unlikely to occur.* The leatherback sea turtle is usually found in the deeper, open ocean rather than nearshore regions. There are no known TXNDD occurrences in the project area (TXNDD 2019; NPS 2019). See section 3.1.13.	*No effect*. See section 3.1.13.
CLAMS				
Golden Orb (*Quadrula aurea*)	T	The Golden Orb prefers flowing fresh waters in moderately sized rivers with firm and stable substrate	*Does not occur*. The Golden Orb is a freshwater species with habitat requirements not found within the project area. There	*No effect*.

Common Name (Scientific Name)	State Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
		(USFWS 2009b, 2011). The species is restricted to flowing waters with sand, gravel, and cobble bottoms at depths of a few centimeters to over 3 meters. Distribution is restricted to the Guadalupe, San Antonio, and Nueces-Frio River basins in central Texas.	are no TXNDD occurrences for the project vicinity (TXNDD 2019). Aside from the upper Guadalupe River, all existing populations occur in the lower portion of occupied basins in a small geographical area (USFWS 2011). The proposed project area does not include any of the known range of the golden orb. The nearest known occurrence of the species is in Lake Corpus Christi, a part of the lower Nueces River drainage located approximately 45 miles to the northwest (USFWS 2009b).	
FLOWERING PLANTS				
Slender rush-pea (*Hoffmannseggia tenella*) South Texas Ambrosia (*Ambrosia cheiranthifolia*)	E	Both plants have very small and localized ranges in south Texas, limited to Nueces and Kleberg Counties and tied to specific drainage systems (USFWS 2008b, 2010, 2018b). The slender rush-pea and South Texas ambrosia have two and four verified extant populations, respectively. The slender rush-pea prefers coastal prairie grasslands on level uplands and on gentle slopes along drainages, usually in areas of shorter or sparse vegetation with Blackland clay soils (NatureServe 2019p). The South Texas ambrosia prefers thorn shrub and mesquite wooded habitats. Both prefer fine, calcareous clay soils associated with Pleistocene deltas (USFWS 2018b).	*Unlikely to occur*. Both species are unlikely to occur due to lack of suitable habitat in the project area. Though the two species have been found in other parts of Nueces County and nearby Kleberg County, the habitat present within the survey area does not have favorable growing conditions for these two species. They are more likely to occur inland where typical habitat still exists. There are no TXNDD occurrences for the project vicinity (TXNDD 2019).	*No effect*.

*State Status values include:

E = Endangered.

T = Threatened.

TPWD regulations prohibit the taking, possession, transportation, or sale of any of the animal species designated by state law as endangered or threatened without the issuance of a permit.

** The white-tailed hawk is now taxonomically classified as *Geranoaetus albicaudatus* (NatureServe 2019h), though TPWD still officially lists the species by its previous classification, *Buteo albicaudatus.*

Based on the best available information, 23 state-listed species do not occur in the project area or are unlikely to occur based on their known range and habitat preference, and thus the project is anticipated to have no effect on these species (see Table 1). All other species are further evaluated in the following sections for potential project impacts. No proposed state-listed species are being considered for these counties that could be affected by the proposed project.

3.1.1 *Peregrine Falcons*

Current State Status: Threatened

Habitat and Range Requirements: Listing includes both subspecies, *Falco peregrinus anatum*, known as the American Peregrine falcon, and *Falco peregrinus tundrius*, known as the Arctic Peregrine falcon (not listed by TPWD), because the two are not easily distinguishable (TPWD 2019a). The Arctic Peregrine falcon (*tundrius* ssp.) is known to migrate long distances from the Arctic to South America, with the Texas Gulf Coast an important migration stopover and wintering grounds for the subspecies (Campbell 2003; Lockwood and Freeman 2014). The American Peregrine falcon (*anatum* ssp.) nests in the Trans-Pecos region of west Texas and is not known to travel far from their nesting areas compared to the Arctic Peregrine falcon. Both subspecies are occasionally found migrating throughout the state.

The American Peregrine falcon primarily resides and nests in the Trans-Pecos region of west Texas, although the subspecies is sometimes found migrating throughout Texas (Campbell 2003; TPWD 2019a). The subspecies usually stay near their breeding areas year-round or travelling slightly south towards Mexico. They can be found in a variety of habitat types, with a preference for nesting on mountain cliffs, river gorges, or artificial structures in urban areas, often adjacent to waterbodies where there is an abundant food supply.

Potential for Occurrence: There are no known TXNDD occurrences for the vicinity of the project area for either subspecies (TXNDD 2019). The Texas Gulf Coast is an important stopover for migrating Arctic Peregrine falcons, particularly at Laguna Madre located south of the project area (Campbell 2003; TPWD 2019a), and thus the Arctic Peregrine falcon subspecies *may occur* in or near the project area.

The project area is outside of the American Peregrine falcon's primary habitat area in the Trans-Pecos region and does not contain tall cliffs or structures preferred for nesting. The subspecies is sometimes found to migrate throughout the state during the non-breeding season, though more often stay in the vicinity of their breeding grounds located several hundred miles west of the project area (Campbell 2003). Therefore, the American Peregrine falcon subspecies is *unlikely to occur* in or near the project area. Thus, the species as a whole is *unlikely to occur/may occur* in the project area.

Determination of Impact: The American Peregrine falcon, which is listed as threatened by TPWD, is unlikely to be found in the project vicinity as they are more commonly found in the Trans-Pecos region of west Texas (Campbell 2003; TPWD 2019a). The Texas Gulf coast is known to be an important migration stopover and wintering grounds for the Arctic Peregrine falcon. Thus, while the project is expected to have *no impact* on the threatened American Peregrine falcon, the project *may affect, is not likely to adversely affect/may impact* the Arctic Peregrine falcon subspecies and the species as a whole.

3.1.2 *Northern Aplomado Falcon*

Current State Status: Endangered

Habitat and Range Requirements: The Northern aplomado falcon (*Falco femoralis septentrionalis*) ranges from southern Argentina through Mexico and into the southwestern U.S., including south Texas

(Campbell 2003; USFWS 2014). They can be found in a variety of habitats, generally containing open grassland with scattered patches of shrubs or trees or woodland and forest borders. In the Gulf Coast region of Texas and Mexico, the species occupies coastal prairie habitat, coastal savannas, marshes, and tidal flats with few trees, mesquite, yucca and cactus, or other tall succulent shrubs. In northern Mexico, southeastern Arizona, New Mexico, and west Texas, the species has a strong association with Chihuahuan desert grasslands with scattered tall yuccas. In the southwestern U.S., the northern aplomado falcon uses old nests of ravens and other raptors. Nests can be found in Spanish dagger (*Yucca treculeana*), mesquite (*Prosopis* spp.), and man-made structures like power poles. Nests built in Spanish dagger are typically 6 to 10 feet off the ground and average 1 to 3 feet in diameter. Nesting/breeding activities occur between February 1 and August 31; however, this species is territorial and pairs may stay near and defend their nest or nest site throughout the year. Their diet consists primarily of birds, but also includes insects, small snakes, lizards, and rodents (Keddy-Hector 2000).

Potential for Occurrence: There are no known TXNDD occurrences for the vicinity of the proposed project area (TXNDD 2019). The nearest populations, which were reintroduced into the region starting in 1978, occur near Brownsville, over 100 miles south of the project area, and in and near the Aransas National Wildlife Refuge (ANWR) on Matagorda Island and the northern end of San Jose Island, approximately 10 miles northeast (USFWS 2014). While the project area does contain coastal wetland and prairie habitat, there are minimal shrub and trees for perching and nesting, and consequently it is not considered prime habitat. Additionally, no nests nor individuals were observed during the time of SWCA's survey, and thus the species is *unlikely to occur* in the project area.

Determination of Impact: The northern aplomado falcon historically ranges throughout northern Mexico and the southern tip of Texas, with the nearest population introduced to the ANWR in 1978 (USFWS 2014). This population is located at least 10 miles from the project area, and there are no TXNDD documented occurrences for the project area (USFWS 2014; TXNDD 2019). Therefore, it is SWCA's professional opinion that the project *may affect, but is not likely to adversely affect/may impact* the northern aplomado falcon.

3.1.3 *Piping Plover*

Current State Status: Threatened

Habitat and Range Requirements: The piping plover (*Charadrius melodus)* is a small, pale sand-colored shorebird with a weight of 1.5 to 2.5 ounces, a body length of 7 inches and a wingspan of 15 inches (Palmer 1967; Elliot-Smith and Haig 2004). Plumage differs in breeding and wintering seasons by the presence of a single black breast band, often incomplete, and a black bar across the forehead in the breeding season. The bill color may also turn from orange to black. It is a migratory species with a breeding distribution within the Great Lakes region and Atlantic coast and along central North America from Alberta, Canada to Colorado and Oklahoma (USFWS 2012a). The non-breeding or wintering distribution occurs mainly coastal from North Carolina to Florida and the Gulf Coast states, including Texas (USFWS 2012a; NatureServe 2019d).

The piping plover was listed as threatened in Texas wintering grounds on January 10, 1986 (USFWS 1985). The primary threats to the species occur in its breeding areas, where it is listed as federally endangered. Population declines were historically due to hunting and currently due to habitat alteration at nesting grounds, nest depredation, and nest disturbance on beach habitat. Secondary threats occur in wintering habitats where the species is no longer listed as endangered and instead listed as federally threatened. Wintering habitats on the Texas Gulf Coast are threatened by industrial activities, urban development, and maintenance activities for commercial waterways, with the potential for pollution from spills of petrochemicals or other hazardous materials also being a concern (Campbell 2003). Human

activity on beaches can also disturb wintering piping plovers and degrade habitat conditions (Campbell 2003; USFWS 2003a). The Texas wintering population census indicates a fluctuating to increasing trend in populations from 1,904 plovers in 1991 to 2,145 plovers in 2011 (Haig et al. 2005; USFWS 2012a). Fluctuations may be due to localized effects of weather conditions; changes in roosting, foraging, or nesting habitats; or variance in survey efforts among observers.

Piping plovers nest on wide, gravelly beaches with little vegetation in alkali lakes and wetlands, inland lakes, reservoirs, and major rivers in the northern Atlantic coast, Great Lakes region, and around waterbodies of the Great Plains and Canada. Wintering habitat includes beaches, tidal sand flats, mud flats, algal mats, washover passes, and small dunes where they feed primarily on small invertebrates (Campbell 2003). The migration and wintering period may last as long as 10 months (mid-July through Mid-May). Migration to breeding grounds may occur from mid-February through mid-May, with peak migrations in March (USFWS 2012a). The piping plover exhibits intra and inter-annual wintering site fidelity (Drake et al. 2001; Noel and Chandler 2008; Stucker et al. 2010) and the mean-average home-range size for piping plovers in southern Texas is 4.9 square miles with a core area of 1.1 square miles. They may move 2 miles between sites within a season (Drake et al. 2001). Piping plovers can also be seen foraging along sandy, wet areas along waterways and wetlands beaches. Wintering piping plovers forage on invertebrates located on top of the sand or just below the surface along wrack lines. Specific prey items may include polychaete marine worms, crustaceans, fly larvae, beetles, and bivalve mollusks (USFWS 2012a).

Potential for Occurrence: Critical habitat for the wintering population of piping plovers was designated July 10, 2001, and divided into 137 units across eight states (USFWS 2001). Critical habitat for the piping plover has been designated and revised based on current use and conditions of the habitat (USFWS 2012a). With revisions of critical habitats in North Carolina (USFWS 2008a) and Texas (USFWS 2009a), there are now 141 designated units, totaling 256,513 acres, still among eight states; 18 of these units are located along the Texas coastline and comprise 139,029 acres. Although these units are designated to protect essential life cycle needs of the species (i.e. primary constituent elements), these critical habitat units are protecting the wintering habitat of the species, which are not associated with the leading threats to the species. The project area contains critical habitat areas along San Jose Island, designated as TX-16 by the USFWS, and piping plovers are *known to occur* in the area (USFWS 2009a, 2019b; TXNDD 2019).

Determination of Impact: The project area contains designated critical habitat along the eastern shore of San Jose Island (USFWS 2009a, 2019b). Sightings recorded by the TXNDD are as close as 1 mile south of the project area and 1.4 miles north of the project area (TXNDD 2019). The beachfront of San Jose Island, containing TX-16, will be strictly avoided during construction by use of specialized construction methods such as horizontal directional drilling (HDD). Therefore, it is SWCA's professional opinion that the project *may affect, is not likely to adversely affect/may impact* the piping plover.

3.1.4 *Reddish Egret*

Current State Status: Threatened

Habitat and Range Requirements: The reddish egret (*Egretta rufescens*) is a permanent resident of the Texas Gulf Coast, found in salt or brackish marshes and wetland, shallow salt ponds, and tidal flats (Jones 1998; TPWD 2019a; NatureServe 2019e). Some vegetation cover is preferred for nesting and foraging, with a preference for red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*), white mangrove (*Laguncularia racemosa*), Brazilian pepper (S*chinus terebinthefolius*), cactus (*Opuntia* spp.), mesquite (*Prosopis* spp.), huisache (*Acacia* spp.), ragweed (*Ambrosia artemisiifolia*), sea oxeye daisy (*Borrichia frutescens*), sea purslane (*Sesuvium portulacastrum*), camphor daisy (*Machaeranthera*

phyllocephala), and spanish bayonet (*Yucca* spp.) (Jones 1998; NatureServe 2019e). The species breeds along coastal bays and lagoons and has only rarely been known to breed further inland. Breeding season in Texas extends from early March to late June or early August.

Population decline originated in the nineteenth century plume trade (Jones 1998). Since protections have been put in place the population has largely stabilized, particularly in Texas, with the Texas Gulf Coast representing a majority of its worldwide range. Laguna Madre, located south of the project area, accounts for a majority of the population distribution, although populations have been shifting northward towards Corpus Christi in recent years.

Potential for Occurrence: While there have been no TXNDD occurrences for the project area (TXNDD 2019), the species is known to occur along the Texas Gulf Coast. Additionally, the project area contains preferred habitat such as brackish or salty mangroves, wetlands, and marshes along coastal barrier islands. Therefore, the species *may occur* in the vicinity of the project.

Determination of Impact: While the reddish egret may occur in or near the project area, the project will have localized, temporary impacts among most of the corridor and specialized construction techniques such as HDD will be used in more sensitive habitat areas such as San Jose Island and waterbody crossings. Consequently, the project *may affect, is not likely to adversely affect/may impact* the reddish egret.

3.1.5 *Sooty Tern*

Current State Status: Threatened

Habitat and Range Requirements: A pelagic species, the sooty tern (*Onychoprion fuscata*) inhabits tropical and subtropical oceans worldwide, including the Gulf of Mexico and Texas Gulf Coast (Tweit 2009; NatureServe 2019f). They are the most abundant seabird in the world, with an estimated worldwide population of 60-80 million birds (Tweit 2009). However, their presence along the Texas Gulf coast has declined over the years, and they are now rarely seen in the region. Habitat degradation, egg collecting, and predator introduction are the greatest threats to the species in Texas. They are usually seen along the central to south Texas coast, particularly at Laguna Madre, from late March to early October (Lockwood and Freeman 2004; Tweit 2009; NatureServe 2019f). The species only comes to land to breed, preferring near-shore marine habitats for nesting. Their breeding season is from April to early July, nesting in small colonies along remote outlying islets and rocks, sandy beaches, sparsely vegetated flats, or coral. It feeds on small fish and squid at the surface of marine waters. Large-numbers are commonly found pushed towards the coasts and further inland than usual following hurricanes or tropical storms (Lockwood and Freeman 2004; Tweit 2009).

Potential for Occurrence: There are no TXNDD occurrences for the project area (TXNDD 2019). The species spends most of its life at sea, occasionally seen along the Texas Gulf Coast during breeding season (Tweit 2009). The project area contains potential breeding habitat, particularly along San Jose Island, although the species is only rarely seen in this area compared to other regions around the Gulf of Mexico. Thus, the species *may occur* near the project area.

Determination of Impact: While the project area contains potential habitat for breeding, particularly at San Jose Island, the project will have localized, temporary impacts among most of the corridor and specialized construction techniques such as HDD will be used in more sensitive habitat areas. Therefore, the project *may affect, is not likely to adversely affect/may impact* the sooty tern.

3.1.6 *White-Faced Ibis*

Current State Status: Threatened

Habitat and Range Requirements: The white-faced ibis (*Plegadis chihi*) ranges across the western U.S. and is a permanent resident of the Texas Gulf Coast (Lockwood and Freeman 2004; NatureServe 2019g). In the 1970s populations were decimated by exposure to insecticides in rice fields, but since 1974 have been recovering (Telfair II 2007a). The species is now common to abundant across the Texas Gulf Coast and has expanded its breeding range across the eastern third of the state (Lockwood and Freeman 2004). Large rookeries can be found in a few locations; in 2001, a rookery in Galveston County was estimated to have 20,000 breeding pairs, although the average breeding population fluctuates between 350 and 6,500 pairs. Breeding occurs from early April to late July, and most of the population will migrate to the southern regions of Texas during the winter (Telfair II 2007a).

The species primarily inhabits freshwater wetlands, favoring cattail (*Typha* spp.) and bulrush (*Scirpus* ssp.) marshes (Telfair II 2007a). When feeding, the species will use a larger variety of habitat types including flooded hay meadows, agricultural fields such as rice fields, and brackish or saltwater estuarine wetlands. It usually nests in colonies on islands along the central and upper coasts but can also be found nesting further inland in marshes and swamps. Nests are generally placed in emergent vegetation or shrubs, low trees, bulrushes, reeds, or on floating mats in marshes either floating on the water or perched slightly above water-level on vegetation (Telfair II 2007a; NatureServe 2019g; TPWD 2019a).

Potential for Occurrence: There are no TXNDD occurrences for locations in or near the project area (TXNDD 2019). The species is a permanent resident along the Texas Gulf Coast and is commonly found throughout the region (Lockwood and Freeman 2004; Telfair II 2007a). While the species prefers freshwater habitats, they will also use brackish or saltwater marshes for feeding and are known to breed on coastal islands (Lockwood and Freeman 2004; TPWD 2019a). The project area is thus not considered preferential habitat due to the brackish/saltwater content, but the species *may occur* in the project area, due to some freshwater marshes being located in the central portion of San Jose Island.

Determination of Impact: The white-faced ibis is commonly found throughout the Texas Gulf Coast. With a preference for freshwater habitats, the project area is not prime habitat for the species, although they are known to occasionally feed in brackish or saltwater marshes. Due to the localized, temporary nature of impacts from project activities and the preference for freshwater habitats by the species, it is anticipated that the project *may affect, is not likely to adversely affect/may impact* the white-faced ibis.

3.1.7 *Whooping Crane*

Current State Status: Endangered

Habitat and Range Requirements: Whooping cranes (*Grus americana*) use a variety of habitats during migration, including croplands for feeding and wetlands for roosting (Howe 1989; Lingle et al. 1991). Austin and Richert (2001) report that migrant whooping cranes observed at feeding sites have primarily been recorded in upland crop fields, including row crops, and that they have also been observed feeding in palustrine wetlands, seasonally flooded habitats, permanent water, pastures, and meadows.

Migrant whooping cranes roost predominantly in palustrine or riverine wetland systems, with these types of wetlands accounting for 91.5% of roost sites recorded (Austin and Richert 2001). Most palustrine roost sites were adjacent to cropland or grassland; less than 8% of palustrine roost sites were reported as occurring adjacent to woodland (Austin and Richert 2001). Studies cited by Canadian Wildlife Service

(CWS) and USFWS (2007) suggest landscapes characterized as "wetland mosaics" provide the most suitable stopover habitat.

Whooping cranes currently exist in the wild at three locations and in captivity at 12 sites (USFWS 2012b). In April 2011 the wild population was estimated at 279. There is only one self-sustaining wild population, the Aransas-Wood Buffalo National Park population, which nests in Wood Buffalo National Park (WBNP) and adjacent areas in the Northwest Territories and Alberta Provinces of Canada, and winters mainly in and adjacent to ANWR along the central Texas coast in Aransas, Calhoun, and Refugio Counties. The cranes migrate during spring and fall through an approximately 170-mile-wide corridor between ANWR and WBNP. The migration corridor follows a straight line through the Great Plains, with the cranes traveling through Alberta, Saskatchewan, extreme eastern Montana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas (CWS and USFWS 2007). The birds begin to arrive at their wintering grounds in mid-October, with most birds arriving from late October through mid-November. Spring migration generally begins in late March, with some birds remaining on the wintering grounds into early May.

Potential for Occurrence: There are no known TXNDD occurrences for the vicinity of the proposed project area (TXNDD 2019). The project area does not occur within the nesting grounds (Northwest Territories and Alberta) or wintering grounds (Aransas, Calhoun, and Refugio Counties), and is located outside of the main migratory corridor used by whooping cranes; the project area does cross the southernmost end of Aransas County, but is located approximately 20 miles southwest of the wintering grounds at the ANWR. Due to the proximity to their known wintering grounds, whooping crane *may occur* in the project area, though are not known to regularly occur as far south as the project location.

Determination of Impact: While populations of whooping cranes winter along the Texas Gulf Coast, the project area is outside of the main wintering grounds and migratory route, and the species has not been sighted near the project area (TXNDD 2019). Due to the low likelihood for species to occur in the project vicinity and the localized, temporary nature of construction impacts, it is SWCA's professional opinion that the project *may affect, is not likely to adversely affect/may impact* the whooping crane.

3.1.8 *Wood Stork*

Current Federal Status: Threatened

Habitat and Range Requirements: The wood stork (*Mycteria americana*) ranges throughout the Atlantic and Gulf Coasts from South Carolina to Texas, through Mexico and central America, to South America (NatureServe 2019i). The species once nested in Chambers, Jefferson, and Harris Counties, but nesting has not been reported in Texas since 1960 (Lockwood and Freeman 2004; Telfair II 2007b, TPWD 2019a); the only known breeding colonies north of Mexico today are found in Florida, coastal Georgia, South Carolina, and occasionally in North Carolina (Telfair II 2007b; NatureServe 2019i). Populations found in Texas are generally post-breeding visitors from breeding populations of Mexico as opposed to Florida, with numbers peaking in the late summer and fall (Lockwood and Freeman 2004; Telfair II 2007b). In Texas, wood storks are found east of Dallas, San Antonio, and Zapata towards the coast from late May to mid-October. Once formerly abundant, populations in Texas have declined over the years.

The species prefers to inhabit freshwater marshes, swamps, lagoons, ponds, wetlands, or flooded fields but will also use shallow brackish or saltwater marsh and wetland habitat (NatureServe 2019i; TPWD 2019a). It nests mostly in swamps or on islands surrounded by shallow, open water in cypress trees, mangroves, or dead hardwoods and often roosts in multi-species colonies with other wading birds (Telfair II 2007b; TPWD 2019a).

Potential for Occurrence: There are no known TXNDD occurrences for the project vicinity (TXNDD 2019). The species does not breed in Texas, and only passes through during post-breeding season. Similar to the white-faced ibis, the species prefers freshwater habitats but will use brackish or saltwater marshes for feeding (Telfair II 2007b; NatureServe 2019i; TPWD 2019a). The project area is thus not considered preferred habitat due to the predominance of brackish/saltwater wetlands, but the species *may occur* in the project area.

Determination of Impact: The wood stork is found throughout the Texas Gulf Coast. With a preference for freshwater habitats, the project area is not prime habitat for the species, although they are known to occasionally feed in brackish or saltwater marshes. The species does not breed in Texas, and occurrences are only associated with post-breeding visitors. Due to the localized, temporary impacts from project activities and the preference for freshwater habitats by the species, it is anticipated that the project *may affect, is not likely to adversely affect/may impact* the wood stork.

3.1.9 *Opossum Pipefish*

Current State Status: Threatened

Habitat and Range Requirements: The opossum pipefish (*Microphis brachyurus*) range throughout tropical and subtropical oceans including the Indo-Pacific, eastern Pacific, and eastern and western Atlantic oceans (NatureServe 2019j). The subspecies *lineatus* is found from New Jersey to the Gulf of Mexico and Caribbean to Sao Paulo, Brazil, with Florida, Louisiana, and Texas considered areas of greatest conservation need in the U.S. (National Oceanic and Atmospheric Administration [NOAA] 2009; NatureServe 2019j). In the U.S., permanent populations only exist in southeastern Florida, particularly at the Indian River Lagoon (NOAA 2009). More information is needed on population size and distribution.

The species uses low salinity estuaries and freshwater riverine systems for breeding and spawning (NOAA 2009; NatureServe 2019j). Juveniles will spend the first portion of their lives in oceanic or coastal marine environments, migrating to freshwater riverine systems within 30 miles of the coast in adulthood. Vegetation cover is important for feeding and breeding; juveniles are sometimes found in patches of floating *Sargassum* algae in the open ocean. Distribution of the species in riverine ecosystems is generally patchy, associated with emergent vegetation clumps such as *Panicum* spp. and *Polygonum* spp. They are ambush predators, preying on crustaceans and small fish in dense vegetation (NOAA 2009).

Potential for Occurrence: The project area is within the known range of the species, though there are no known permanent populations in Texas (NOAA 2009). Possible habitat exists for juveniles in or near the project area. There are no TXNDD occurrences for the vicinity of the project area (TXNDD 2019). Though permanent populations are unlikely to occur in the project area, the opossum pipefish *may occur* in the project area based on their known range and habitat preference.

Determination of Impact: While there are no known permanent populations near the project area, it is within the species' known range and contains potential preferred habitat. However, project activities are unlikely to adversely affect potential habitat areas as construction activities will be localized and temporary in most areas and specialized constructions methods such as HDD will be used to avoid impacts to waterbodies and more sensitive habitat areas. Therefore, it is anticipated that the project *may affect, is not likely to adversely affect/may impact* the opossum pipefish.

3.1.10 *West Indian Manatee*

Current State Status: Endangered

Habitat and Range Requirements: The West Indian manatee (*Trichechus manatus*) is a migratory marine mammal of Florida, the Greater Antilles, Central America, and South America. Texas is the extreme western extent of this species' distribution, and they are rarely sighted along the Texas Gulf Coast because waters are too cold during parts of the year (USFWS 2003b). Year-round populations only occur near Florida and Georgia; the animals are only found in Texas occasionally. Manatees are found in estuaries, rivers, bays, shallow coastal waters, and lakes, with a preference for estuaries and river environments with warm waters (greater than 20 degrees Celsius) around 3–5 meters deep (NatureServe 2019k). Their diet is primarily submergent, emergent, and floating vegetation. The manatee is protected under the Marine Mammal Protection Act (MMPA) of 1972, which prohibits the take of marine mammals in U.S. waters.

Potential for Occurrence: The project area is located outside of critical habitat areas, and occurrences in Texas are rare since it is at the extreme western extent of the species' range. Manatees have occasionally been seen in bays near the project area, with the most recent TXNDD occurrence approximately 0.5 mile from the project area near Port Aransas in 2016 (TXNDD 2019). While nearby bays and channels of the project area could be traversed by the species, the species is not known to occur year-round in the region due to low winter temperatures, thus the species is *unlikely to occur* in the vicinity of the project area.

Determination of Impact: Texas is at the extreme western extent of this species' distribution and occurrences are rare. It is unlikely that the species would be found in the project area. While the species could possibly traverse through nearby bays and coastal waters, the project will use specialized construction methods such as HDD to bypass waterways and avoid impacts. Consequently, it is SWCA's professional opinion that project activities will have *no effect* on the manatee.

3.1.11 *Texas Horned Lizard*

Current State Status: Threatened

Habitat and Range Requirements: The Texas horned lizard (*Phrynosoma cornutum*) ranges from Kansas to Louisiana through Texas to New Mexico and northern Mexico (Herps of Texas 2019c; NatureServe 2019l). Historically they are permanent residents across most of Texas, including coastal barrier islands, though their numbers have declined over the years. Preferred habitat includes warm, sandy to rocky soils in arid and semi-arid regions with flat, open areas with sparse vegetation (Herps of Texas 2019c; TPWD 2019a; NatureServe 2019l). The species has a small home range, usually less than 0.5 acre (NatureServe 2019l). The species seeks shelter by burrowing into soils, rodent burrows, or hiding under rocks. It hibernates from late summer to the following spring, and breeds in late spring after emergence from hibernation (Herps of Texas 2019c; TPWD 2019a).

Potential for Occurrence: The Texas horned lizard is *known to occur* near the project area, with a TXNDD occurrence in 2009 adjacent to the project area near highway 361 on Harbor Island (TXNDD 2019). The project area contains loose, sandy soils with sparsely vegetated areas near beaches which could be inhabited by the species; however, the majority of the project area is more vegetated and wetter than the arid to semi-arid habitat preferred by the species.

Determination of Impact: The species is known to occur in the vicinity of the project area based on TXNDD records (TXNDD 2019). The project site does contain loose, sandy soils and sparsely vegetated areas near beaches, although a majority of the project area is more vegetated and wet than the arid to semi-arid habitat preferred by the species. Project impacts will be localized and temporary during construction, so possible impacts to potential habitat will be minimal. Consequently, it is anticipated that the project *may affect, is not likely to adversely affect/may impact* the Texas horned lizard.

3.1.12 *Texas Scarlet Snake*

Current State Status: Threatened

Habitat and Range Requirements: While both the Texas scarlet snake (*lineri* ssp.) and northern scarlet snake (*copei* ssp.) are protected in Texas, only the Texas scarlet snake is found near the project area (TPWD 2019a). This subspecies ranges along the south Texas coast from Matagorda County to Kennedy County and inland to Jim Hogg and Brooks Counties (Herps of Texas 2019e). This snake is associated with sandy soils in mixed hardwood scrub (Herps of Texas 2019e; TPWD 2019a).

Potential for Occurrence: The nearest TXNDD occurrence was from a location approximately 6 miles southwest of the project area in 2006 (TXNDD 2019), and the species has been recorded in Rockport, north of the project area (Dixon et al. 2005). While sandy soils are prevalent in the project area, there is minimal scrub-shrub habitat outside of mangrove wetlands. Thus, the Texas scarlet snake *may occur* in the project area.

Determination of Impact: The Texas scarlet snake is known to occur in the surrounding region of the project area (Dixon et al. 2005; Herps of Texas 2019e; TXNDD 2019). The project area does contain sandy soils preferred by the species but lacks mixed hardwood scrub habitat. Though it is possible the species could occur in the project area, it is anticipated that the project *may affect, is not likely to adversely affect/may impact* the Texas scarlet snake due to the temporary, localized impacts of project activities to potential habitat within the project area.

3.1.13 *Sea Turtles*

Current State Status: Threatened and Endangered

There are five sea turtle species listed by USFWS as having the potential to occur in the counties associated with the survey area: Kemps' Ridley sea turtle (*Lepidochelys kempii*), green sea turtle (*Chelonia mydas*), loggerhead sea turtle (*Caretta caretta*), Atlantic hawksbill sea turtle (*Eretmochelys imbricata*), and leatherback sea turtle (*Dermochelys coriacea*) (USFWS 2019). All but the Kemp's Ridley sea turtle have global distributions in either the tropics, subtropics, or temperate waters (NOAA 2019b).

The primary nesting areas for all sea turtle species are located outside of Texas, though all are known to occur along the Texas Gulf Coast and Gulf of Mexico (SpaceX 2013; USFWS 2019). These species exhibit site fidelity, returning to the same nesting area annually and across generations. Although there are slight temporal differences in the specific nesting dates for each species, most nesting occurs during the summer months (March – November) with peak activities occurring May – July (National Marine Fisheries Service [NMFS] and USFWS 2007, 2013a, b; NMFS et al. 2011; SpaceX 2013; NOAA 2019b). The leatherback and hawksbill typically nest outside of Texas but are known to use Texas offshore waters for feeding, resting, and migration (NMFS and USFWS 2013a, b; SpaceX 2013; NOAA 2019b).

The prime habitat area for sea turtle nesting or activity in the project area is at San Jose Island, which contains uninhabited beachfront; however, prime habitat areas along the beachfront will be avoided by specialized construction methods such as HDD to mitigate potential impacts to wildlife. Areas suitable for foraging, resting, or travel will only experience localized, temporary impacts during construction, such as disruption of sediments, and are not expected to cause significant environmental impacts for any of these species.

KEMP'S RIDLEY SEA TURTLE

The Kemp's Ridley sea turtle is the smallest of sea turtles at 2 feet in length and weighing 75-100 pounds at maturity (SpaceX 2013). The Kemp's Ridley sea turtle distribution is limited to the Gulf of Mexico, primarily near Tamaulipas, Mexico, though juveniles may be found along the U.S. Atlantic coast (NMFS et al. 2011; USFWS 2015; National Park Service [NPS] 2019). In Texas, these species can be found along South Texas inshore and nearshore coastal waters. During adult non-nesting and juvenile stages, these species occur in pelagic, coral reefs, or nearshore coastal areas for foraging and breeding. This species is relatively common in inshore waters of Texas and has a broad preference for hard-shelled marine invertebrates, crabs, shrimp, snails, bivalves, jellyfish, and sometimes marine plants and algae (USFWS 2015; Herps of Texas 2019h).

Potential for Occurrence: In the terrestrial environment, suitable beach nesting habitat is present in the project area on San Jose Island; however, the probability of a nesting occurrence is low given the primary nesting areas are in Mexico and secondarily at the Padre Island National Seashore (PINS). While there have been no TXNDD sightings in the project vicinity (TXNDD 2019), the species is *known to occur* in the region and thus *may occur* in the project area, particularly at San Jose Island.

Determination of Impact: While the species may occur in the project area, particularly along San Jose Island, there will be no effects on beach habitat in the action area because it will be avoided via HDD construction methods, and offshore construction is anticipated to occur outside of sea turtle nesting season. This species is relatively common in inshore waters of Texas and has a broad preference for hard-shelled marine invertebrates not limited to the vicinity of the project area. Individuals would be able to continue foraging outside the project area and after the temporary disturbance of inshore construction activities. The sediment plume associated with inshore construction activities will be localized and temporary, and thus not expected to appreciably affect foraging activities of the Kemp's Ridley sea turtle. Biological monitors will be present to ensure there will be no unanticipated take of Kemp's Ridley sea turtles during construction activities. Consequently, the project *may affect, but is not likely to adversely affect/may impact* the Kemp's Ridley sea turtle in the terrestrial and marine environments.

GREEN SEA TURTLE

The green sea turtle is one of the largest sea turtles and has a worldwide geographical range (NOAA 2019b; Herps of Texas 2019i). The species is unique in that they are herbivores, primarily consuming seagrasses and algae. They are commonly found in inshore waters of Texas foraging for food. The green sea turtle has been documented using a variety of habitats dependent upon life history and stage. Adults spend most of their time within shallow coastal waterways with large sea grass beds (Reich et al. 2007). Juvenile turtles will spend most of their time within deep pelagic waters (Reich et al. 2007).

Potential for Occurrence: The species is *known to occur* in the project area, with several occurrences documented within 5 miles of the project area in 2004 and 2008 (TXNDD 2019). The species is common along the Texas coast in nearshore waters, such as at the PINS, and future occurrences are likely (Landry 2010; NPS 2019). SWCA biologists have observed the species in the Lydia Ann Channel in 2017.

Determination of Impact: The green sea turtle is known to occur in the project area, with suitable nesting habitat present on San Jose Island and foraging areas in nearby waters. There will be no effects on beach habitat in the action area because it will be avoided via HDD construction methods, and inshore construction is anticipated to occur outside of sea turtle nesting season. There are no anticipated effects to food sources given avoidance of construction in sea grass beds that occur in the action area. Furthermore, biological monitors will be present to ensure there will be no unanticipated take of green sea turtles

during offshore construction. Consequently, the project *may affect, but is not likely to adversely affect/may impact* green sea turtle in the terrestrial and marine environments.

LOGGERHEAD SEA TURTLE

The loggerhead sea turtle occurs in both hemispheres in temperate and tropical waters, typically found along the continental shelf region and estuaries nearshore (NMFS and USFWS 2007; SpaceX 2013; NOAA 2019b). The species is known for its relatively large head and powerful jaw which allows it to feed on hard-shelled prey (NOAA 2019b); they are primarily carnivorous and rarely eat plant material. Juveniles are known to spend time within sargassum.

Potential for Occurrence: The species is *known to occur* in the project area, with the last TXNDD occurrence approximately 7.5 miles southwest of the project area in Corpus Christi Bay in 2009 (TXNDD 2019). Loggerhead sea turtles are known to occur in the inshore Texas waters in relative abundance (NMFS and USFWS 2007; Landry 2010). Nesting occurrences have been documented at the PINS, located south of the project area, and thus are anticipated to continue to occur in the region (SpaceX 2013). The project is located outside of final critical habitat for the species (USFWS 2019).

Determination of Impact: In the terrestrial environment, suitable beach nesting habitat is present in the action area at San Jose Island. There will be no effects on beach habitat in the action area because it will be avoided via HDD construction methods, and offshore construction is anticipated to occur outside of sea turtle nesting season. This species is known to inhabit the inshore waters of Texas and has a broad preference for hard-shelled marine invertebrates not limited to the vicinity of the survey area, and individuals would be able to continue foraging outside and after the temporary disturbance of offshore construction activities. The sediment plume associated with inshore construction activities will be localized and temporary, and thus is not expected to affect foraging activities of the loggerhead sea turtle. Additionally, biological monitors will be present to ensure there will be no unanticipated take of loggerhead sea turtles during inshore construction. Consequently, the project *may affect, but is not likely to adversely affect/may impact* loggerhead sea turtle in the terrestrial and marine environments.

ATLANTIC HAWKSBILL SEA TURTLE

The Atlantic Hawksbill sea turtle gets its name from its hawk-like beak and are typically small to medium sized (NMFS and USFWS 2013a; SpaceX 2013; Herps of Texas 2019j). They are not generally deep divers compared to other sea turtle species, and thus are often found in shallow coastal areas as opposed to the open ocean (NMFS and USFWS 2013a). While they occupy different marine environments throughout their lifecycle, such as shallow coastal areas and lagoons, they have a preference for coral reefs where there is adequate shelter from predators and areas for resting. They feed primarily on sponges but will also feed on other invertebrates and algae (NMFS and USFWS 2013a; SpaceX 2013).

Potential for Occurrence: There is one TXNDD occurrence record for the project area, near Port Aransas in 1958 (TXNDD 2019). The project is located outside of final critical habitat (USFWS 2019). The project area does not contain their preferred habitat and food source of coral reefs and sponges. Though the species has historically been known to occur near the project area, there have been no recent occurrences and there is no preferred habitat near the project vicinity. Therefore, the species is *unlikely to occur* in or near the project area.

Determination of Impact: In the terrestrial environment, suitable beach nesting habitat is present in the survey area at San Jose Island, though the species is not known to nest in Texas (SpaceX 2013). There will be no effects on the beach habitat because it will be avoided via HDD construction methods, and inshore construction is anticipated to occur outside of sea turtle nesting season. The preferred prey

species, sponges, are uncommon in this portion of the Gulf of Mexico and the sediment plume associated with inshore construction activities will be localized and temporary, thus construction activities are not anticipated to affect foraging activities of this species. Biological monitors will be present to ensure there will be no take of Atlantic hawksbill sea turtle during offshore construction. Consequently, project activities m*ay affect, is not likely to adversely affect/may impact* the species.

LEATHERBACK SEA TURTLE

The leatherback sea turtle has a global distribution and is found in the tropical waters of the Atlantic, Pacific, Indian oceans, and Gulf of Mexico (NMFS and USFWS 2013b; SpaceX 2013; NOAA 2019b). They can migrate significant distances and are known to travel up to 6,800 miles from their breeding areas (USFWS 2013). They are a large, pelagic species that prefers deep, open ocean as opposed to nearshore environments. The species almost exclusively feeds on jellyfish (SpaceX 2013). While the species has been seen along the Texas Gulf Coast, the region is not part of their major nesting range (NMFS and USFWS 2013b).

Potential for Occurrence: There have been no TXNDD occurrences in the project vicinity (TXNDD 2019). Additionally, the species is known to prefer deeper waters of the open ocean and are not commonly found in nearshore areas such as the project area (SpaceX 2013). The project is located outside of final critical habitat for this species (USFWS 2019). Thus, while the species has been known to occur in the Gulf of Mexico, they are *unlikely to occur* in the project area.

Determination of Impact: In the terrestrial environment, suitable beach nesting habitat is present in the survey area at San Jose Island. However, the probability of a nesting occurrence is very low given the rarity of nesting on the Texas coast and the very few sightings of these species in near-shore marine environments (NMFS and USFWS 2013b; SpaceX 2013). There will be no effects on the beach habitat because it will be avoided via HDD construction methods, and inshore construction is anticipated to occur outside of sea turtle nesting season. The leatherback sea turtle prefers jellyfish, of which some species do occur in the area. The sediment plume associated with inshore construction activities will be localized, temporary, and thus not expected to affect foraging activities of the leatherback sea turtle. Biological monitors will be present to ensure there will be no take of leatherback sea turtles during offshore construction. Consequently, the project is anticipated to have *no effect* on the leatherback sea turtle.

4 SUMMARY AND CONCLUSIONS

SWCA performed an evaluation of impacts of the proposed project on the 38 state-listed threatened and endangered species for Aransas, Nueces, and San Patricio Counties, Texas (TPWD 2019a). This review included a field reconnaissance of habitat conditions, a review of species' habitat requirements, and a desktop literature review of species' temporal and spatial distributions and occurrences. Based upon this information, it is SWCA's opinion that the proposed project will have *no effect* on 23 state-listed threatened and endangered species (Table 1); there are 15 additional species which may occur in the project area, but based on the localized, temporary impacts of most construction activities or mitigation measures such as HDD to avoid more sensitive habitat along San Jose Island and waterbodies, it is anticipated that the project *may affect, is not likely to adversely affect/may impact* these species of concern.

5 LIMITATIONS AND WARRANTY

Within the limitations of schedule, budget, and scope of work, SWCA warrants that this study was conducted in accordance with technical guidelines, evaluation criteria, and species' listing status in effect at the time this evaluation was performed.

The results and conclusions of this report represent the best professional judgment of SWCA scientists. No other warranty, expressed or implied, is made.

Please be aware that the USFWS and NOAA NMFS are the federal agencies charged with administration of the ESA and have final authority to either concur or not concur with determinations provided herein.

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APPENDIX A

Vicinity and Threatened and Endangered Species Maps

Legend

Project Boundary

Coordinate System: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US
Basemap: ESRI Street Map
1 inch = 8,333 feet

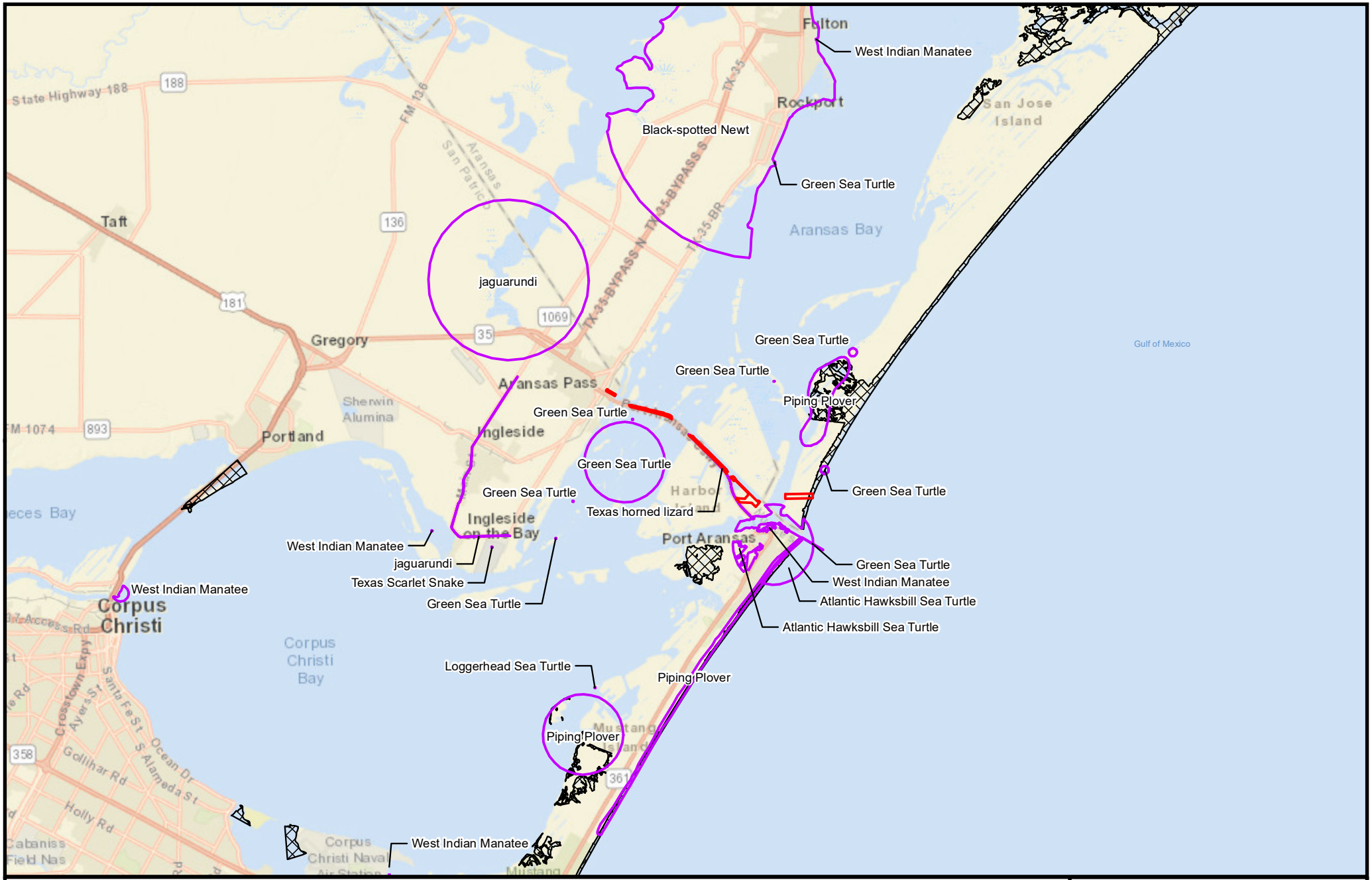
0 0.5 1 2 Miles

N W E S

BLUEWATER SPM PROJECT

VICINITY MAP

FIGURE 1



Legend

- Project Boundary
- TXNDD Occurrence Record
- Piping Plover Critical Habitat

Coordinate System: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US
Basemap: ESRI Street Map
1 inch = 20,833 feet

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BLUEWATER SPM PROJECT

THREATENED AND ENDANGERED SPECIES MAP

FIGURE 2

APPENDIX B

TPWD Annotated List of Rare Species: Aransas, Nueces, and San Patricio Counties

ARANSAS COUNTY

AMPHIBIANS

		Federal Status	State Status
Black-spotted newt	*Notophthalmus meridionalis*		T

can be found in wet or sometimes wet areas, such as arroyos, canals, ditches, or even shallow depressions; aestivates in the ground during dry periods; Gulf Coastal Plain south of the San Antonio River

Sheep frog	*Hypopachus variolosus*		T

predominantly grassland and savanna; moist sites in arid areas

BIRDS

		Federal Status	State Status
American Peregrine Falcon	*Falco peregrinus anatum*	DL	T

year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Arctic Peregrine Falcon	*Falco peregrinus tundrius*	DL	

migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Brown Pelican	*Pelecanus occidentalis*	DL	

largely coastal and near shore areas, where it roosts and nests on islands and spoil banks

Eskimo Curlew	*Numenius borealis*	LE	E

historic; nonbreeding: grasslands, pastures, plowed fields, and less frequently, marshes and mudflats

Henslow's Sparrow	*Ammodramus henslowii*		

wintering individuals (not flocks) found in weedy fields or cut-over areas where lots of bunch grasses occur along with vines and brambles; a key component is bare ground for running/walking

Mountain Plover	*Charadrius montanus*		

breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous

Northern Aplomado Falcon	*Falco femoralis septentrionalis*	LE	E

open country, especially savanna and open woodland, and sometimes in very barren areas; grassy plains and valleys with scattered mesquite, yucca, and cactus; nests in old stick nests of other bird species

Peregrine Falcon	*Falco peregrinus*	DL	T

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.

ARANSAS COUNTY

BIRDS

		Federal Status	State Status
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

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.

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

ARANSAS COUNTY

BIRDS

		Federal Status	State Status
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

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
Aransas short-tailed shrew	*Blarina hylophaga plumbea*		

excavates burrows in sandy soils underlying mottes of live oak trees or in areas with little to no ground cover; 2-3 litters of 4-6 young per year

Black bear	*Ursus americanus*		T

bottomland hardwoods and large tracts of inaccessible forested areas

ARANSAS COUNTY

MAMMALS

		Federal Status	State Status
Jaguarundi	*Herpailurus yaguarondi*	LE	E

thick brushlands, near water favored; 60 to 75 day gestation, young born sometimes twice per year in March and August, elsewhere the beginning of the rainy season and end of the dry season

Louisiana black bear	*Ursus americanus luteolus*	DL	T

possible as transient; bottomland hardwoods and large tracts of inaccessible forested areas

Ocelot	*Leopardus pardalis*	LE	E

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	E

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

West Indian manatee	*Trichechus manatus*	LT	E

Gulf and bay system; opportunistic, aquatic herbivore

White-nosed coati	*Nasua narica*		T

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

Green sea turtle	*Chelonia mydas*	LT	T

Gulf and bay system; shallow water seagrass beds, open water between feeding and nesting areas, barrier island beaches; adults are herbivorous feeding on sea grass and seaweed; juveniles are omnivorous feeding initially on marine invertebrates, then increasingly on sea grasses and seaweeds; nesting behavior extends from March to October, with peak activity in May and June

Kemp's Ridley sea turtle	*Lepidochelys kempii*	LE	E

Gulf and bay system, adults stay within the shallow waters of the Gulf of Mexico; feed primarily on crabs, but also snails, clams, other crustaceans and plants, juveniles feed on sargassum and its associated fauna; nests April through August

ARANSAS COUNTY

REPTILES

Leatherback sea turtle *Dermochelys coriacea* Federal Status: LE State Status: E

Gulf and bay systems, and widest ranging open water reptile; omnivorous, shows a preference for jellyfish; in the US portion of their western Atlantic nesting territories, nesting season ranges from March to August

Loggerhead sea turtle *Caretta caretta* Federal Status: LT State Status: T

Gulf and bay system primarily for juveniles, adults are most pelagic of the sea turtles; omnivorous, shows a preference for mollusks, crustaceans, and coral; nests from April through November

Texas diamondback terrapin *Malaclemys terrapin littoralis*

coastal marshes, tidal flats, coves, estuaries, and lagoons behind barrier beaches; brackish and salt water; burrows into mud when inactive; may venture into lowlands at high tide

Texas horned lizard *Phrynosoma cornutum* State Status: T

open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September

Texas scarlet snake *Cemophora coccinea lineri* State Status: T

mixed hardwood scrub on sandy soils; feeds on reptile eggs; semi-fossorial; active April-September

Texas tortoise *Gopherus berlandieri* State Status: T

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* State Status: 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

Awnless bluestem *Bothriochloa exaristata*

GLOBAL RANK: G4; Coastal prairies on black clay; Perennial; Flowering April-Dec; Fruiting April- 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

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

ARANSAS COUNTY

PLANTS

Federal Status State Status

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

Sand Brazos mint *Brazoria arenaria*

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

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

Tharp's rhododon *Rhododon angulatus*

Texas endemic; deep, loose sands in sparsely vegetated areas on stabilized dunes of Pleistocene barrier islands; flowering (May-) June-September, sometimes later with appropriate rainfall

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

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

NUECES COUNTY

AMPHIBIANS

		Federal Status	State Status
Black-spotted newt	*Notophthalmus meridionalis*		T

can be found in wet or sometimes wet areas, such as arroyos, canals, ditches, or even shallow depressions; aestivates in the ground during dry periods; Gulf Coastal Plain south of the San Antonio River

Sheep frog	*Hypopachus variolosus*		T

predominantly grassland and savanna; moist sites in arid areas

BIRDS

		Federal Status	State Status
American Peregrine Falcon	*Falco peregrinus anatum*	DL	T

year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Arctic Peregrine Falcon	*Falco peregrinus tundrius*	DL	

migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Brown Pelican	*Pelecanus occidentalis*	DL	

largely coastal and near shore areas, where it roosts and nests on islands and spoil banks

Eskimo Curlew	*Numenius borealis*	LE	E

historic; nonbreeding: grasslands, pastures, plowed fields, and less frequently, marshes and mudflats

Mountain Plover	*Charadrius montanus*		

breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous

Northern Aplomado Falcon	*Falco femoralis septentrionalis*	LE	E

open country, especially savanna and open woodland, and sometimes in very barren areas; grassy plains and valleys with scattered mesquite, yucca, and cactus; nests in old stick nests of other bird species

Peregrine Falcon	*Falco peregrinus*	DL	T

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

NUECES COUNTY

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*	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*	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*	T

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

NUECES COUNTY

BIRDS

		Federal Status	State Status
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

		Federal Status	State Status
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

		Federal Status	State Status
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

		Federal Status	State Status
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

		Federal Status	State Status
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

		Federal Status	State Status
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

		Federal Status	State Status
Texas pipefish	*Syngnathus affinis*		

Corpus Christi Bay; seagrass beds

NUECES 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

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	E

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	E

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

Southern yellow bat	*Dasypterus ega*		T

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	E

Gulf and bay system; opportunistic, aquatic herbivore

White-nosed coati	*Nasua narica*		T

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

Gulf and bay system; shallow water seagrass beds, open water between feeding and nesting areas, barrier island beaches; adults are herbivorous feeding on sea grass and seaweed; juveniles are omnivorous feeding initially on marine invertebrates, then increasingly on sea grasses and seaweeds; nesting behavior extends from March to October, with peak activity in May and June

Keeled earless lizard *Holbrookia propinqua*

coastal dunes, barrier islands, and other sandy areas; eats insects and likely other small invertebrates; eggs laid underground March-September (most May-August)

Kemp's Ridley sea turtle	*Lepidochelys kempii*	LE	E

Gulf and bay system, adults stay within the shallow waters of the Gulf of Mexico; feed primarily on crabs, but also snails, clams, other crustaceans and plants, juveniles feed on sargassum and its associated fauna; nests April through August

Leatherback sea turtle	*Dermochelys coriacea*	LE	E

Gulf and bay systems, and widest ranging open water reptile; omnivorous, shows a preference for jellyfish; in the US portion of their western Atlantic nesting territories, nesting season ranges from March to August

Loggerhead sea turtle	*Caretta caretta*	LT	T

Gulf and bay system primarily for juveniles, adults are most pelagic of the sea turtles; omnivorous, shows a preference for mollusks, crustaceans, and coral; nests from April through November

Spot-tailed earless lizard *Holbrookia lacerata*

central and southern Texas and adjacent Mexico; moderately open prairie-brushland; fairly flat areas free of vegetation or other obstructions, including disturbed areas; eats small invertebrates; eggs laid underground

Texas diamondback terrapin *Malaclemys terrapin littoralis*

coastal marshes, tidal flats, coves, estuaries, and lagoons behind barrier beaches; brackish and salt water; burrows into mud when inactive; may venture into lowlands at high tide

Texas horned lizard	*Phrynosoma cornutum*	T

open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September

Texas indigo snake	*Drymarchon melanurus erebennus*	T

Texas south of the Guadalupe River and Balcones Escarpment; thornbush-chaparral woodlands of south Texas, in particular dense riparian corridors; can do well in suburban and irrigated croplands if not molested or indirectly poisoned; requires moist microhabitats, such as rodent burrows, for shelter

Texas scarlet snake	*Cemophora coccinea lineri*	T

mixed hardwood scrub on sandy soils; feeds on reptile eggs; semi-fossorial; active April-September

Texas tortoise	*Gopherus berlandieri*	T

NUECES COUNTY

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

NUECES 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

Sand Brazos mint *Brazoria arenaria*

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

Slender rushpea *Hoffmannseggia tenella* LE E

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 highway 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

NUECES COUNTY

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

SAN PATRICIO COUNTY

AMPHIBIANS		Federal Status	State Status
Black-spotted newt	*Notophthalmus meridionalis*		T

can be found in wet or sometimes wet areas, such as arroyos, canals, ditches, or even shallow depressions; aestivates in the ground during dry periods; Gulf Coastal Plain south of the San Antonio River

Sheep frog	*Hypopachus variolosus*		T

predominantly grassland and savanna; moist sites in arid areas

South Texas siren (large form)	*Siren sp 1*		T

wet or sometimes wet areas, such as arroyos, canals, ditches, or even shallow depressions; aestivates in the ground during dry periods, but does require some moisture to remain; southern Texas south of Balcones Escarpment; breeds February-June

BIRDS		Federal Status	State Status
American Peregrine Falcon	*Falco peregrinus anatum*	DL	T

year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Arctic Peregrine Falcon	*Falco peregrinus tundrius*	DL	

migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Brown Pelican	*Pelecanus occidentalis*	DL	

largely coastal and near shore areas, where it roosts and nests on islands and spoil banks

Eskimo Curlew	*Numenius borealis*	LE	E

historic; nonbreeding: grasslands, pastures, plowed fields, and less frequently, marshes and mudflats

Henslow's Sparrow	*Ammodramus henslowii*		

wintering individuals (not flocks) found in weedy fields or cut-over areas where lots of bunch grasses occur along with vines and brambles; a key component is bare ground for running/walking

Mountain Plover	*Charadrius montanus*		

breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous

Northern Aplomado Falcon	*Falco femoralis septentrionalis*	LE	E

open country, especially savanna and open woodland, and sometimes in very barren areas; grassy plains and valleys with scattered mesquite, yucca, and cactus; nests in old stick nests of other bird species

SAN PATRICIO COUNTY

BIRDS

		Federal Status	State Status
Peregrine Falcon	*Falco peregrinus*	DL	T

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*	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.

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

MAMMALS

		Federal Status	State Status
Jaguarundi	*Herpailurus yaguarondi*	LE	E

thick brushlands, near water favored; 60 to 75 day gestation, young born sometimes twice per year in March and August, elsewhere the beginning of the rainy season and end of the dry season

Ocelot	*Leopardus pardalis*	LE	E

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	E

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

Southern yellow bat	*Dasypterus ega*		T

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	E

Gulf and bay system; opportunistic, aquatic herbivore

White-nosed coati	*Nasua narica*		T

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

MOLLUSKS

		Federal Status	State Status
Golden orb	*Quadrula aurea*	C	T

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

SAN PATRICIO COUNTY

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

Green sea turtle	*Chelonia mydas*	LT	T

Gulf and bay system; shallow water seagrass beds, open water between feeding and nesting areas, barrier island beaches; adults are herbivorous feeding on sea grass and seaweed; juveniles are omnivorous feeding initially on marine invertebrates, then increasingly on sea grasses and seaweeds; nesting behavior extends from March to October, with peak activity in May and June

Kemp's Ridley sea turtle	*Lepidochelys kempii*	LE	E

Gulf and bay system, adults stay within the shallow waters of the Gulf of Mexico; feed primarily on crabs, but also snails, clams, other crustaceans and plants, juveniles feed on sargassum and its associated fauna; nests April through August

Leatherback sea turtle	*Dermochelys coriacea*	LE	E

Gulf and bay systems, and widest ranging open water reptile; omnivorous, shows a preference for jellyfish; in the US portion of their western Atlantic nesting territories, nesting season ranges from March to August

Loggerhead sea turtle	*Caretta caretta*	LT	T

Gulf and bay system primarily for juveniles, adults are most pelagic of the sea turtles; omnivorous, shows a preference for mollusks, crustaceans, and coral; nests from April through November

Spot-tailed earless lizard *Holbrookia lacerata*

central and southern Texas and adjacent Mexico; moderately open prairie-brushland; fairly flat areas free of vegetation or other obstructions, including disturbed areas; eats small invertebrates; eggs laid underground

Texas diamondback terrapin *Malaclemys terrapin littoralis*

coastal marshes, tidal flats, coves, estuaries, and lagoons behind barrier beaches; brackish and salt water; burrows into mud when inactive; may venture into lowlands at high tide

Texas horned lizard	*Phrynosoma cornutum*	T

open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September

Texas indigo snake	*Drymarchon melanurus erebennus*	T

Texas south of the Guadalupe River and Balcones Escarpment; thornbush-chaparral woodlands of south Texas, in particular dense riparian corridors; can do well in suburban and irrigated croplands if not molested or indirectly poisoned; requires moist microhabitats, such as rodent burrows, for shelter

Texas scarlet snake	*Cemophora coccinea lineri*	T

mixed hardwood scrub on sandy soils; feeds on reptile eggs; semi-fossorial; active April-September

SAN PATRICIO COUNTY

REPTILES

		Federal Status	State Status
Texas tortoise	*Gopherus berlandieri*		T

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

APPENDIX C

TPWD TXNDD Element Occurrence Records

Occurrence List for Quads Surrounding Request Area

Scientific Name:	Common Name:	Occurrence Number:	State Status:	Federal Status:	Eo Id:
Allium elmendorfii	Elmendorf's onion	11			5009
Allium elmendorfii	Elmendorf's onion	15			6813
Atractosteus spatula	Alligator Gar	19			14063
Brazoria arenaria	sand Brazos mint	20			11187
Cemophora coccinea lineri	Texas Scarlet Snake	2	T		2808
Cemophora coccinea lineri	Texas Scarlet Snake	6	T		4814
Centropomus parallelus	Fat Snook	1			12898
Charadrius melodus	Piping Plover	1	T	LT	66
Charadrius melodus	Piping Plover	2	T	LT	4066
Charadrius melodus	Piping Plover	28	T	LT	1482
Charadrius melodus	Piping Plover	31	T	LT	2083
Charadrius melodus	Piping Plover	32	T	LT	7725
Charadrius melodus	Piping Plover	33	T	LT	2950
Charadrius melodus	Piping Plover	34	T	LT	1605
Charadrius melodus	Piping Plover	35	T	LT	4418
Charadrius melodus	Piping Plover	36	T	LT	3369

Scientific Name:	Common Name:	Occurrence Number:	State Status:	Federal Status:	Eo Id:
Charadrius melodus	Piping Plover	37	T	LT	7324
Charadrius melodus	Piping Plover	38	T	LT	628
Charadrius melodus	Piping Plover	40	T	LT	125
Charadrius melodus	Piping Plover	41	T	LT	5554
Charadrius melodus	Piping Plover	68	T	LT	1698
Chelonia mydas	Green Sea Turtle	1	T	LT	1881
Chloris texensis	Texas windmill grass	28			7590
Conepatus leuconotus	Western hog-nosed skunk	41			13896
Croton coryi	Cory's croton	7			10208
Cuscuta exaltata	tree dodder	5			8763
Cuscuta exaltata	tree dodder	27			11282
Desmanthus reticulatus	net-leaf bundleflower	7			10192
Echinocereus reichenbachii var. albertii	black lace cactus	5	E	LE	6453
Eleocharis austrotexana	South Texas spikesedge	7			10873
Euphorbia innocua	velvet spurge	1			8407
Euphorbia innocua	velvet spurge	2			8408
Euphorbia innocua	velvet spurge	3			8409

Scientific Name:	Common Name:	Occurrence Number:	State Status:	Federal Status:	Eo Id:
Euphorbia innocua	velvet spurge	20			11169
Euphorbia innocua	velvet spurge	22			11283
Geomys personatus maritimus	maritime pocket gopher	1			316
Geomys personatus maritimus	maritime pocket gopher	3			10802
Geomys personatus maritimus	maritime pocket gopher	4			10805
Grus americana	Whooping Crane	2	E	LE	4226
Holbrookia lacerata	Spot-tailed Earless Lizard	58			9529
Holbrookia propinqua	Keeled Earless Lizard	5			6070
Holbrookia propinqua	Keeled Earless Lizard	9			1060
Lasiurus ega	Southern yellow bat	4	T		3660
Lenophyllum texanum	Texas stonecrop	7			6500
Lepidochelys kempii	Kemp's Ridley Sea Turtle	3	E	LE	2550
Lepidochelys kempii	Kemp's Ridley Sea Turtle	16	E	LE	8984
Liatris bracteata	coastal gay-feather	13			5277
Malaclemys terrapin littoralis	Texas Diamondback Terrapin	1			3963
Malaclemys terrapin littoralis	Texas Diamondback Terrapin	22			12451
Menidia clarkhubbsi	Texas Silverside	1			13888

Scientific Name:	Common Name:	Occurrence Number:	State Status:	Federal Status:	Eo Id:
Notophthalmus meridionalis	Black-spotted Newt	10	T		7800
Notophthalmus meridionalis	Black-spotted Newt	25	T		1845
Notophthalmus meridionalis	Black-spotted Newt	38	T		12665
Paronychia jonesii	Jones' nailwort	1			10352
Paronychia jonesii	Jones' nailwort	2			10195
Paronychia jonesii	Jones' nailwort	9			10000
Prosopis glandulosa-acacia smallii series	Mesquite-huisache Series	8			7904
Prunus texana	Texas peachbush	20			10400
Prunus texana	Texas peachbush	23			10314
Pseudacris streckeri	Strecker's Chorus Frog	4			12752
Puma yagouaroundi	jaguarundi	12	E	LE	2516
Quercus virginiana-persea borbonia series	Coastal Live Oak-redbay Series	1			754
Quercus virginiana-persea borbonia series	Coastal Live Oak-redbay Series	2			1975
Rhododon angulatus	Tharp's rhododon	1			1009
Rhododon angulatus	Tharp's rhododon	6			8476
Rhynchospora indianolensis	Indianola beakrush	2			11082
Rookery		39			6087

Scientific Name:	Common Name:	Occurrence Number:	State Status:	Federal Status:	Eo Id:
Rookery		40			6086
Rookery		41			627
Rookery		42			7569
Rookery		53			7625
Rookery		54			2721
Rookery		55			8048
Rookery		68			2145
Rookery		69			4309
Rookery		70			4308
Rookery		71			1900
Rookery		72			7540
Rookery		73			2302
Rookery		74			7314
Rookery		75			5657
Rookery		386			2564
Rookery		387			5184
Rookery		590			8403

Scientific Name:	Common Name:	Occurrence Number:	State Status:	Federal Status:	Eo Id:
Salicornia bigelovii/salicornia virginiana-batis maritima series	Glasswort-saltwort Series	1			6836
Salicornia bigelovii/salicornia virginiana-batis maritima series	Glasswort-saltwort Series	5			3421
Schizachyrium littorale - Paspalum monostachyum Herbaceous Vegetation	Seacoast Bluestem - Gulfdune Paspalum Tallgrass Prairie	1			11384
Schizachyrium scoparium - Paspalum plicatulum - Sorghastrum nutans - Dichanthelium oligosanthes - Paspalum setaceum - Symphyotrichum pratense Alfisol Grassland	Alfisol Coastal Prairie	108			11778
Schizachyrium scoparium - Sorghastrum nutans - Bifora americana Alfisol Grassland	Alfisol Blackland Prairie	2			11378
Schizachyrium scoparium var. littoralis-paspalum monostachyum series	Seacoast Bluestem-gulfdune Paspalum Series	3			150
Sesuvium trianthemoides	roughseed sea-purslane	2			10885
Sesuvium trianthemoides	roughseed sea-purslane	3			10926
Siren sp. 1	South Texas Siren (Large Form)	22	T		3234
Spartina spartinae - Schizachyrium scoparium Herbaceous Vegetation	Gulf Cordgrass - Little Bluestem Wet Prairie	4			11413
Spartina spartinae - Schizachyrium scoparium Herbaceous Vegetation	Gulf Cordgrass - Little Bluestem Wet Prairie	6			11415
Spartina spartinae Herbaceous Vegetation	Salty Prairie	6			11516
Spartina spartinae Herbaceous Vegetation	Salty Prairie	7			11517
Spartina spartinae Herbaceous Vegetation	Salty Prairie	9			11519
Spartina spartinae Herbaceous Vegetation	Salty Prairie	10			11520
Spartina spartinae Herbaceous Vegetation	Salty Prairie	11			11521
Spartina spartinae Herbaceous Vegetation	Salty Prairie	12			11522

Scientific Name:	Common Name:	Occurrence Number:	State Status:	Federal Status:	Eo Id:
Spilogale putorius	Eastern spotted skunk	30			12778
Spilogale putorius interrupta	plains spotted skunk	30			12640
Sporobolus tharpii	Tharp's dropseed	1			10395
Sporobolus tharpii	Tharp's dropseed	5			10068
Sporobolus tharpii	Tharp's dropseed	20			10360
Trichechus manatus	West Indian Manatee	1	E	LT	6570
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	1			10229
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	3			10390
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	20			10264
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	24			10080
Uniola paniculata-panicum amarum series	Sea Oats-bitter Panicum Series	2			2025
Zephyranthes refugiensis	Refugio rainlily	2			10024

Element Occurrence Record

Scientific Name: Brazoria arenaria **Occurrence #:** 1 **Eo Id:** 8416

Common Name: sand Brazos mint **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G3 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

West edge of Wisconsin Blvd. ca. 500 feet south of its curving intersection with Ticonderoga Blvd of Naval Air Station Ingleside.

Survey Information:

First Observation: 1996-04-09 **Survey Date:** 1996-04-09 **Last Observation:** 1996-04-09

Eo Type: **Eo Rank:** E **Eo Rank Date:** 1996-04-09

Observed Area:

Comments:

General Description: Unshaded margin of coastal live oak-redbay woodland on deep, loose sand of Pleistocene barrier island.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: Rare, one plant observed. Specimen collected.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

CARR, W.R. (15169). 1996. SPECIMEN # NONE TEX-LL.

Specimen:

CARR, W.R. (15169). 1996. SPECIMEN # NONE TEX-LL. (S96CAR01TXUS)

University of Texas Herbarium. 1996. W.R. Carr (15169). Specimen # none. 9 April 1996. (TEX-LL).

Element Occurrence Record

Scientific Name: Caretta caretta **Occurrence #:** 7 **Eo Id:** 8973

Common Name: Loggerhead Sea Turtle **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:** T

Global Rank: G3 **State Rank:** S4 **Federal Status:** LT

Location Information:

Directions

Shamrock Island, on the bay side of Mustang Island. The directions were created by database staff.

Survey Information:

First Observation: 2001-04-10 **Survey Date:** 2001-04-10 **Last Observation:** 2001-04-10

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2001-04-10

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 10 April 2001: One individual was observed with a curved carapace length of 250 millimeters.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Texas Parks and Wildlife Department. 2008. Texas Parks and Wildlife Department - Coastal Fisheries Division summary of stranding and catch information for tracked sea turtles and terrapin.

Specimen:

Element Occurrence Record

Scientific Name: Cemophora coccinea lineri **Occurrence #:** 13 **Eo Id:** 12829

Common Name: Texas Scarlet Snake **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:** T

Global Rank: G5T2 **State Rank:** S1S2 **Federal Status:**

Location Information:

Directions

0.2 miles south of the main gate at Naval Station Ingleside.

Survey Information:

First Observation: 2006-06-29 **Survey Date:** 2006-06-29 **Last Observation:** 2006-06-29

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2006-06-29

Observed Area:

Comments:

General Description:

Comments: The taxonomy of this EO was changed from C. c. copei to C. c. lineri based on genetic data described in A17WEI01TXUS (Reference ID 394420).

Protection Comments:

Management Comments:

Data:

EO Data: 2006: 1 individual was collected

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

LaDuc, Travis. 2014. Creating a centralized catalog for georeferenced specimen records of Texas reptiles and amphibians : the Herps of Texas Database. Contract # 441514. Prepared for USFWS. 3 pp. 9 January 2014.

Weinell, J.L. and C.C. Austin. 2017. Refugia and speciation in North American Scarlet snakes (Cemophora). Journal of Herpetology 51:161-171

Specimen:

Texas Natural History Collection, University of Texas at Austin, Austin, TX; Mike Duran (#unknown), 85151, 29 June 2006, TNHC.

Element Occurrence Record

Scientific Name: Charadrius melodus **Occurrence #:** 1 **Eo Id:** 66

Common Name: Piping Plover **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:** T

Global Rank: G3 **State Rank:** S2N **Federal Status:** LT

Location Information:

Directions

MUSTANG ISLAND BEACH, NUECES COUNTY

Survey Information:

First Observation: 1978 **Survey Date:** **Last Observation:** 1988

Eo Type: **Eo Rank:** C **Eo Rank Date:**

Observed Area:

Comments:

General Description: SANDY BEACH BACKED BY DUNES; MUCH BEACH TRAFFIC, DEVELOPMENT

Comments: IMPORTANT WINTER GROUNDS FOR BOTH POPULATIONS OF PIPING PLOVER; PLAINS AND GREAT LAKES

Protection Comments:

Management Comments:

Data:

EO Data: WEEKLY SURVEYS FOR PAST TEN YEARS SHOW UNIFORM DISTRIBUTION ALONG BEACH; PEAK NUMBERS IN SEPT-OCT AND AGAIN IN MAY-APR; 10 YEAR TREND IS FEWER BIRDS ANNUALLY

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

AMOS, TONY, PhD. UNDATED. MARINE SCIENCE INSTITUTE. UT. PORT ARANSAS, TEXAS 76373-1267. 512/749-6711.

Specimen:

Element Occurrence Record

Scientific Name: Charadrius melodus **Occurrence #:** 31 **Eo Id:** 2083

Common Name: Piping Plover **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:** T

Global Rank: G3 **State Rank:** S2N **Federal Status:** LT

Location Information:

Directions

BAYSIDE FLATS AND ISLANDS JUST NORTH OF WILSONS CUT ON MUSTANG ISLAND

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1991

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Linam, Lee Ann Johnsom. 1992. Performance Report. Job No. 9.1: Piping plover and peregrine falcon coastal habitat use. Grant No. E-1-3 Endangered and Threatened Species Conservation. Submitted to Texas Parks and Wildlife Department, Austin, TX. January 3, 1992.

Specimen:

Element Occurrence Record

Scientific Name: Charadrius melodus
Occurrence #: 39 **Eo Id:** 126
Common Name: Piping Plover
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status: T
Global Rank: G3 **State Rank:** S2N
Federal Status: LT

Location Information:

Directions

BAYSIDE FLATS OF SAN JOSE ISLAND FROM LYDIA ANN CHANNEL TO AND INCLUDING NORTH PASS

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1991

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description: SAND/SILT AND SAND/MUD

Comments:

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Linam, Lee Ann Johnsom. 1992. Performance Report. Job No. 9.1: Piping plover and peregrine falcon coastal habitat use. Grant No. E-1-3 Endangered and Threatened Species Conservation. Submitted to Texas Parks and Wildlife Department, Austin, TX. January 3, 1992.

Specimen:

Element Occurrence Record

Scientific Name: Chelonia mydas **Occurrence #:** 1 **Eo Id:** 1881

Common Name: Green Sea Turtle **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:** T

Global Rank: G3 **State Rank:** S4 **Federal Status:** LT

Location Information:

Directions

The coastal bays between Rockport and Port Ingleside, and both sides of San Jose Island. The directions were created by database staff. The directions are generalized as this record consists of multiple populations/observations.

Survey Information:

First Observation: 1967-06-23 **Survey Date:** 2008-11-10 **Last Observation:** 2008-11-10

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2008-10-11

Observed Area:

Comments:

General Description: 2008, Port Aransas Jetty: The sides of the jetty descend to, and continue below, the surface of the water through a series of stepped blocks. Exposed portions of the jetty are barren. Submerged portions of the jetty support algal development in places. The gaps between blocks of granite attract and hold schools of small fish, which in turn can attract larger, predatory fish. The deeper water on either side of the jetty is used by even larger fish, such as redfish, speckled sea trout, black drum, flounder, etc. Water in the channel between the north and south jetties can be rough, but is usually calmer than water on the outside of the jetty. The channel is used by a variety of boats and ships, including small fishing boats, larger fishing boats and shrimp trawlers, tugboats, crew ships, and large freighters.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 23 June 1967: A specimen was collected. 22 Oct 1991: One individual was observed with a curved carapace length of 235 millimeters. 25 MAY 1993: One individual was observed with a curved carapace length of 280 millimeters. 02 Nov 1994: One individual was observed with a curved carapace length of 397 millimeters. 27 April 2000: One individual was observed with a curved carapace length of 280 millimeters. 20 April 2001: One individual was observed with a curved carapace length of 394 millimeters. 10 May 2001: One individual was observed with a curved carapace length of 344 millimeters. 23 May 2007: One individual was observed with a curved carapace length of 290 millimeters. 11 Oct 2008: Three individuals were observed foraging along the Port Aransas Jetty.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Texas Parks and Wildlife Department. 2008. Texas Parks and Wildlife Department - Coastal Fisheries Division summary of stranding and catch information for tracked sea turtles and terrapin.

Sunby, Paul. 2008. Texas Natural Diversity Database Reporting Form documenting an observation of three Chelonia mydas (green sea turtle) at the Port Aransas Jetty in Nueces County.

Specimen:

Texas A&M University Museum. 1967. Zimmerman and Chaney, Specimen # 1854 AI. 23 June 1967.

Element Occurrence Record

Scientific Name: Conepatus leuconotus **Occurrence #:** 41 **Eo Id:** 13896

Common Name: Western hog-nosed skunk **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4 **State Rank:** S4 **Federal Status:**

Location Information:

Directions

The specimen labels state that they were located in Rockport. The georeferenced coordinates, based on VertNet Best Practices Guidelines, were used.

Survey Information:

First Observation: 1893-03-15 **Survey Date:** 1893-10-30 **Last Observation:** 1893-10-30

Eo Type: **Eo Rank:** H **Eo Rank Date:** 1893-10-30

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 30 October, 15 August, and 15 March 1893: Skin and skull of two male preserved specimens and one preserved specimen of unknown sex.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Ferguson, Adam. 2014. Texas Skunk Record Database regarding five specices of skunk in Texas.

Dragoo, Jerry W., G. D. Baumgardner, D. B. Fagre, and D. J. Schmidly. 1988. Status survey of the Gulf Coast hog-nosed skunk (Conepatus leuconotus) in South Texas. Report submitted to Texas Parks and Wildlife Department, Austin, TX. August 1988.

Specimen:

American Museum of Natural History, New York, NY; H. P. Attwater (#151), Catalog #MS-7277, 15 Mar 1893, AMNH.

American Museum of Natural History, New York, NY; H. P. Attwater (#153), Catalog #MO-5883, 30 Oct 1893, AMNH.

American Museum of Natural History, New York, NY; H. P. Attwater (#unknown), Catalog #MO-5130, 15 Aug 1893, AMNH.

Element Occurrence Record

Scientific Name: Cuscuta exaltata **Occurrence #:** 1 **Eo Id:** 8414

Common Name: tree dodder **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G3 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

East edge of perimeter road on west edge of Naval Station Ingleside. Ca. 5,200 feet southwest of junction of FM 2725 and FM 1069.

Survey Information:

First Observation: 1992-09-11 **Survey Date:** 1996-09-10 **Last Observation:** 1996-09-10

Eo Type: **Eo Rank:** E **Eo Rank Date:** 1996-09-10

Observed Area:

Comments:

General Description: 1992 - Oak-redbay woodland on well drained sand. 1996 - Edge of live oak-redbay woodland on deep, neutral, loose, somewhat excessively drained fine sand (Galveston Series, Typic Udipsamments) on slope of Pleistocene-era relict barrier island dune. PARASITIC ON QUERCUS VIRGINIANA ON OAK-REDBAY WOODLAND ON DEEP, WELL-DRAINED SAND OF BARRIER ISLAND.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 11 September 1992 - Local, parasitic on a few large Quercus virginiana. 10 September 1996 - rare, parasitic on low growing (3-4 ft.) Quercus virginiana or Q. hemisphaerica. There are scattered plants in other parts of the base that were not mapped.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

CARR, W.R. & D. WOLFE (15719). 1996. TEX-LL.

Specimen:

CARR, W.R. & D. WOLFE (15719). 1996. TEX-LL. (S96CAR01TXUS)

CARR, W.R. & R. CARTER (12341). 1992. TEX-LL. (S92CAR01TXUS)

University of Texas Herbarium. 1992. W.R. Carr (12341) with R. Carter. Specimen # none. 11 September 1992. (TEX-LL).

University of Texas Herbarium. 1996. W.R. Carr (15719) with D. Wolfe. Specimen # none. 10 September 1996. (TEX-LL).

Element Occurrence Record

Scientific Name: Cuscuta exaltata **Occurrence #:** 8 **Eo Id:** 11138

Common Name: tree dodder **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G3 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

Aransas Pass.

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1922-05-22

Eo Type: **Eo Rank:** H **Eo Rank Date:** 2006-12-07

Observed Area:

Comments:

General Description:

Comments: Complete label citation: Aransas Pass, 24 May 1922, B. C. Tharp s.n. (TEX-LL). Orig. det. Cassytha filiformis; ann. to Cuscuta exaltata by Alan Prather, 1993.

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Tharp. B.C. 1922. Specimen # none TEX-LL

Specimen:

Tharp. B. C. 1922. Specimen # none TEX-LL (S22THATXTXUS)

Element Occurrence Record

Scientific Name: Eleocharis austrotexana **Occurrence #:** 6 **Eo Id:** 10908

Common Name: South Texas spikesedge **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G3 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

Ca. 3 mi NE of Ingleside.

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1968-06-13

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description: In sandy low grounds in cultivated field.

Comments: Complete specimen citation: Ca. 3 mi NE of Ingleside in sandy low grounds in cultivated field, 13 Jun 1968, F. B. Jones 7378 (CCM).

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Jones, F. B. (7378). 1968. Specimen # ? Corpus Christi Museum.

Specimen:

Jones, F. B. (7378). 1968. Specimen # ? Corpus Christi Museum. (S68JONCCTXUS)

Element Occurrence Record

Scientific Name: Eretmochelys imbricata **Occurrence #:** 1 **Eo Id:** 5451

Common Name: Atlantic Hawksbill Sea Turtle **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:** E

Global Rank: G3 **State Rank:** S2 **Federal Status:** LE

Location Information:

Directions

PORT ARANSAS

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1958-10-05

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description:

Comments: COLLECTED 5 OCTOBER 1958

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

DEGENHARDT, D.W. 1958. SPECIMEN # 38321. ONE SPECIMEN. UNIV. OF NEW MEXICO

Specimen:

DEGENHARDT, D.W. 1958. SPECIMEN # 38321. ONE SPECIMEN. UNIV. OF NEW MEXICO (S58DEGNMTXUS)

University of New Mexico Museum, Albuquerque. 1958. W.G. Degenhardt #1915, Specimen # 38321 UNM. 5 October 1958.

Element Occurrence Record

Scientific Name: Euphorbia innocua **Occurrence #:** 7 **Eo Id:** 11221

Common Name: velvet spurge **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G3 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

Marine Station apartment house, 1/4 mi S of Station, Mustang Island, Port Aransas.

Survey Information:

First Observation: 1976-02-14 **Survey Date:** **Last Observation:** 1976-02-28

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description: Sand dunes

Comments: Complete label citation: Sand dunes at Marine Station apartment house, 1/4 mi S of Station, Mustang Island, Port Aransas, 28 Feb 1976, W. V. Brown s.n. (TEX-LL). Also: sand dunes, Mustang Island, at Marine Station apartment house, 1/4 mi S of the main building, common, in flower, 14 Feb 1976, W. V. Brown s.n. (TEX-LL).

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Brown, W.V. (s.n.). 1976. TEX-LL.

Specimen:

Brown, W.V. (s.n.). 1976. TEX-LL. (S76BROTXTXUS)

Element Occurrence Record

Scientific Name: Euphorbia innocua **Occurrence #:** 8 **Eo Id:** 11237

Common Name: velvet spurge **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G3 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

Mustang Island, ca. 1/2 mi S of Port Aransas.

Survey Information:

First Observation: 1965-04-30 **Survey Date:** **Last Observation:** 1967-04-12

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description: On low dune.

Comments: Complete label citation: Mustang Island, ca. 1/2 mi S of Port Aransas on low dune, 30 Apr 1965, F. B. Jones 6381 and 12 Apr 1967, F. B. Jones 7064 (CCM).

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Jones, F.B. (7064). 1967. Corpus Christi Museum.

Specimen:

Jones, F.B. (6381). 1965. Corpus Christi Museum. (S65JONCCTXUS)

Jones, F.B. (7064). 1967. Corpus Christi Museum. (S67JONCCTXUS)

Element Occurrence Record

Scientific Name: Euphorbia innocua
Occurrence #: 17 **Eo Id:** 11129
Common Name: velvet spurge
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G3 **State Rank:** S3
Federal Status:

Location Information:

Directions

Mustang Island, about 2 mi S of Port Aransas.

Survey Information:

First Observation: 1948-05-01 **Survey Date:** **Last Observation:** 1948-05-01
Eo Type: **Eo Rank:** H **Eo Rank Date:** 2006-12-07
Observed Area:

Comments:

General Description: Sand dunes.

Comments: Complete label citation: Mustang Island, about 2 mi S of Port Aransas, sand dunes, 1 May 1948, E. Whitehouse 19842 (BRIT/SMU).

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Whitehouse, E. (19842). 1948. BRIT/SMU.

Specimen:

Whitehouse, E. (19842). 1948. BRIT/SMU. (S48WHISMTXUS)

Element Occurrence Record

Scientific Name: Holbrookia propinqua **Occurrence #:** 9 **Eo Id:** 1060

Common Name: Keeled Earless Lizard **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

1 MILE WEST OF INGLESIDE

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1961-05-19

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Elliott, Lee. 1994. Memorandum to Dorinda Sullivan dated December 2, 1994 concerning Texas A&M-Kingsville Vertebrate Specimens Catalogue.

Specimen:

1962. SPECIMEN #57. VERTEBRATE COLLECTION, TEXAS A & M UNIVERSITY, KINGSVILLE.

TEXAS A & M UNIVERSITY-KINGSVILLE--VERTEBRATE COLLECTION. 1961. UNKNOWN COLLECTOR, SPECIMEN #57 AI. 19 MAY 1961.

Element Occurrence Record

Scientific Name: Malaclemys terrapin littoralis
Occurrence #: 1
Eo Id: 3963
Common Name: Texas Diamondback Terrapin
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G4T3Q
State Rank: S2
Federal Status:

Location Information:

Directions

Texas coast from Copano Bay to San Antonio Bay. The directions were created by database staff. The directions are generalized as this record consists of multiple observations.

Survey Information:

First Observation: 1942
Survey Date: 2007-05-30
Last Observation: 2007-05-30
Eo Type:
Eo Rank: E
Eo Rank Date: 2007-05-30
Observed Area:

Comments:

General Description:

Comments: This record represents the consolidation of EO #s 2-5, 7, 22-24, and 26 which were EOIDs 5807, 2188, 6823, 2036, 4565, 2413, 7109, 1802, and 6102, respectively.

Protection Comments:

Management Comments:

Data:

EO Data: 1942, 15 Aug 1948, Apr 1950, 19 Aug 1951, 1952: A specimen was collected. 24 May 1983, 06 Sep and 01 Oct 1984, 16 May and 08 Oct 1985, 15 Apr, 18 June, and 17 Sep 1986: A single terrapin was observed. June, July, Aug 1985-1987: Terrapin were confirmed in 8 different areas. 24 July 1989 and 19 Oct 1992: A single terrapin was observed. 13 May 1994: Three dead terrapins were collected from a crab trap. 09 Aug 1996, 26 Sep 2000, 01 June 2001, 16 Apr 2002, 06 May 2003, and 30 May 2007: A single terrapin was observed.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Mabie, David W. 1988. Progress report on the Texas diamondback terrapin. Internal report to Bruce Thompson, Wildlife Division, Texas Parks and Wildlife Dept.

Texas Parks and Wildlife Department. 2008. Texas Parks and Wildlife Department - Coastal Fisheries Division summary of stranding and catch information for tracked sea turtles and terrapin.

BARRERA, T. 1994. FIELD EVALUATION FOR CONTAMINANTS IN SAN ANTONIO BAY BY USFWS ON 13 MAY 1994. FIELD NOTES.

Specimen:

Bryce C. Brown Collection at the Mayborn Museum, Baylor University, Waco, TX; Owen Axtell, Catalog # 6214, April 1950, BCB.

Field Museum of Natural History, Chicago, IL; Dr. Gordon Gunter, Catalog # 43599, 1942, FMNH.

Museum Of Zoology, University of Michigan, Ann Arbor, MI; R. Russell, Catalog # 103424, 19 August 1951, UMMZ, Topotype.

Texas Cooperative Wildlife Collection, Texas A & M University, College Station, TX; Unknown Collector, Catalog # 4642, 15 August 1948, TCWC.

Texas Natural History Collection, University of Texas at Austin, TX; Unknown Collector, Catalog # 31026, 1952, TNHC.

Element Occurrence Record

Scientific Name: Notophthalmus meridionalis **Occurrence #:** 10 **Eo Id:** 7800

Common Name: Black-spotted Newt **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:** T

Global Rank: G1 **State Rank:** S2 **Federal Status:**

Location Information:

Directions

ROCKPORT

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1930-06-27

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description:

Comments: COLLECTED 27 JUNE 1930

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Specimen:

University of Michigan, Museum of Zoology. 1930. H.K. Gloyd, Catalog # 69994 UMMZ. 27 June 1930.

Element Occurrence Record

Scientific Name: Panicum amarum - Paspalum monostachyum Herbaceous Vegetation
Occurrence #: 1 **Eo Id:** 11386
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G3? **State Rank:** SNR
Federal Status:

Location Information:

Directions

The site is located approximately 2.3 air miles directly northwest of Kosmos and 3.0 air miles directly west-southwest of Palm Harbor. The directions were created by database staff.

Survey Information:

First Observation: 2010-08-06 **Survey Date:** 2010-08-06 **Last Observation:** 2010-08-06
Eo Type: **Eo Rank:** E **Eo Rank Date:** 2010-08-06
Observed Area:

Comments:

General Description: See the Composition Tab for other species within the area.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 6 August 2010: One site of this plant community of medium quality grass species consisting 50 percent high quality increasers, and 50 percent decreasers; Forb species are of medium quality consisting of 50 percent high quality forbs, and 50 percent increasers; Exotic species are present; Woody cover is less than 1 percent.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:
Chamaecrista fasciculata	Herb (field)	N	Forb	SFID: 23391
Helianthus debilis	Herb (field)	N	Forb	SFID: 23391
Panicum amarum	Herb (field)	Y	Graminoid	SFID: 23391
Paspalum monostachyum	Herb (field)	Y	Graminoid	SFID: 23391
Quercus virginiana	Tree (canopy & subcanopy)	N	Broad-leaved deciduous tree	SFID: 23391
Schizachyrium scoparium	Herb (field)	Y	Graminoid	SFID: 23391
Smilax bona-nox	Herb (field)	N	Liana	SFID: 23391

Reference:

Citation:

Native Prairies Association of Texas. 2011. Tallgrass prairie survey project that includes shapefiles, excel files, documents, images, and protocol for multiple counties in Texas (2000-2013).

Specimen:

Element Occurrence Record

Scientific Name: Panicum amarum - Paspalum monostachyum Herbaceous Vegetation
Occurrence #: 2 **Eo Id:** 11387
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G3? **State Rank:** SNR
Federal Status:

Location Information:

Directions

The two sites are located approximately 1.0 air miles almost directly east of Aransas Pass, San Patricio County. They are located off of Canal Street on the Peninsula jutting out past Turning Basin Conn Brown Harbor. The directions were created by database staff. The directions are generalized as this record consists of multiple observations.

Survey Information:

First Observation: 2010-08-06 **Survey Date:** 2010-08-06 **Last Observation:** 2010-08-06
Eo Type: **Eo Rank:** E **Eo Rank Date:** 2010-08-06
Observed Area:

Comments:

General Description: See the Composition Tab for other species within the area.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 6 August 2010: Two sites of this plant community are of medium quality grass species; Forb species are poor quality; Exotic species are present; Woody cover is less than 1 percent of the total vegetation.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:
Ambrosia psilostachya	Herb (field)	N	Forb	SFID: 23377, 23378
Chamaecrista fasciculata	Herb (field)	N	Forb	SFID: 23377, 23378
Panicum amarum	Herb (field)	Y	Graminoid	SFID: 23377, 23378
Paspalum floridanum	Herb (field)	Y	Graminoid	SFID: 23377, 23378
Paspalum monostachyum	Herb (field)	Y	Graminoid	SFID: 23377, 23378
Paspalum plicatulum	Herb (field)	Y	Graminoid	SFID: 23377, 23378
Spartina spartinae	Herb (field)	N	Graminoid	SFID: 23377, 23378

Reference:

Citation:

Native Prairies Association of Texas. 2011. Tallgrass prairie survey project that includes shapefiles, excel files, documents, images, and protocol for multiple counties in Texas (2000-2013).

Specimen:

Element Occurrence Record

Scientific Name: Phrynosoma cornutum **Occurrence #:** 61 **Eo Id:** 12500

Common Name: Texas horned lizard **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:** T

Global Rank: G4G5 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

Observations were made on Harbor Island near Port Aransas.

Survey Information:

First Observation: 2009 **Survey Date:** 2009 **Last Observation:** 2009

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2009

Observed Area:

Comments:

General Description:

Comments: 2009: Individuals appeared to be eating ants other than harvester ants (photos included).

Protection Comments:

Management Comments:

Data:

EO Data: 2009: Several horned lizards were observed.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Skoruppa, Mary Kay. 2014. E-mail of 17 July to Lee Ann Linam, retired Texas Parks & Wildlife Dept. biologist, concerning observations of Phrynosoma cornutum by Jerry Batey on Harbor Island near Port Aransas .

Specimen:

Element Occurrence Record

Scientific Name: Pseudacris streckeri **Occurrence #:** 4 **Eo Id:** 12752

Common Name: Strecker's Chorus Frog **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G5 **State Rank:** S3 **Federal Status:**

Location Information:

Directions

Live Oak Peninsula W and SW of Rockport.

Survey Information:

First Observation: 1968-04-06 **Survey Date:** 1968-04-11 **Last Observation:** 1968-04-11

Eo Type: **Eo Rank:** H **Eo Rank Date:**

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 1968: 9 individuals were collected.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

LaDuc, Travis. 2014. Creating a centralized catalog for georeferenced specimen records of Texas reptiles and amphibians : the Herps of Texas Database. Contract # 441514. Prepared for USFWS. 3 pp. 9 January 2014.

Specimen:

Texas Natural History Collections, The University of Texas at Austin, Austin, TX; D. Armentrout (#unknown), Catalog# (unknown), 6 Apr 1968, TNHC

Texas Natural History Collections, The University of Texas at Austin, Austin, TX; Ramsey (#unknown), Catalog# (unknown), 11 Apr 1968, TNHC

Texas Natural History Collections, The University of Texas at Austin, Austin, TX; Ramsey (#unknown), Catalog# (unknown), 9 Apr 1968, TNHC

Element Occurrence Record

Scientific Name: Puma yagouaroundi **Occurrence #:** 8 **Eo Id:** 1473

Common Name: jaguarundi **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:** E

Global Rank: G4 **State Rank:** SX **Federal Status:** LE

Location Information:

Directions

The observation was made crossing FM 1069 near Ingleside, Texas.

Survey Information:

First Observation: 1984-FA **Survey Date:** 1984-FA **Last Observation:** 1984-FA

Eo Type: **Eo Rank:** H **Eo Rank Date:** 2016-12-09

Observed Area:

Comments:

General Description: Fall 1984: The habitat consisted of oak mottes.

Comments: Fall 1984: The observer was driving.

Protection Comments:

Management Comments:

Data:

EO Data: Fall 1984: One observation was made, in the Summer or Fall, near dusk.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Withers, Kim. 1994. Letter of 18 August 1994 to Texas Parks and Wildlife Department Endangered Species Program concerning jaguarundi sightings on Aransas National Wildlife Refuge , near Ingleside, TX, and near Cotulla, TX.

Specimen:

Element Occurrence Record

Scientific Name: Puma yagouaroundi **Occurrence #:** 44 **Eo Id:** 804

Common Name: jaguarundi **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:** E

Global Rank: G4 **State Rank:** SX **Federal Status:** LE

Location Information:

Directions

MCCAMPBELL SLOUGH

Survey Information:

First Observation: **Survey Date:** **Last Observation:** 1991-03-09

Eo Type: **Eo Rank:** H **Eo Rank Date:** 2016-12-09

Observed Area:

Comments:

General Description:

Comments: This record was originally identified as General ("G"), Class II = Reliable Observation/Observer. 23 January 2019: A final decision to treat Puma yagouaroundi Class II, and III, and/or unmappable (Precision BCD "U") records as MisIDs was determined by the TXNDD staff. On 8 August 2017, Jonah Evans, Texas Parks and Wildlife Department Mammalogist, brought up the issue of unreliable sightings of this species and wanted to remove them from the Database. 20 February 2019, Stephanie Shelton, TXNDD Data Manager, went through the MisID process, removing these records and adding them to the MisID layer and supporting documentation to the MisID folder.

Protection Comments:

Management Comments:

Data:

EO Data: ONE CLASS II OBSERVATION

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Homerstad, Gary E. 1987. Performance Report. Job No. 12: Endangered feline status study. Grant No. W-103-R-17 Federal Aid in Wildlife Restoration. Submitted to Texas Parks and Wildlife Department, Austin, TX. 9 October 1987.

Homerstad, Gary E. 1988. Performance Report. Job No. 12: Endangered feline status study. Grant No. W-103-R-18 Federal Aid in Wildlife Restoration Act. Submitted to Texas Parks and Wildlife Department, Austin, TX. 9 November 1988.

Homerstad, Gary E. 1989. Performance Report. Job No. 12: Endangered feline status study. Grant No. W-103-R-19 Federal Aid in Wildlife Restoration. Submitted to Texas Parks and Wildlife Department, Austin, TX. 6 October 1989.

Prieto, F. G. 1990. Performance Report. Job No. 12: Endangered feline population and habitat enhancement. Grant No. W-125-R-1 and ESEC6-1 Federal Aid in Wildlife Restoration Act and Endangered and Threatened Species Conservation. Submitted to Texas Parks and Wildlife Department, Austin, TX. 29 October 1990.

Prieto, Felipe G. 1991. Performance Report. Job No. 12: Endangered feline population and habitat enhancement. Grant No. W-125-R-2 and ESEC6-2 Federal Aid in Wildlife Restoration Act and Endangered and Threatened Species Conservation. Submitted to Texas Parks and Wildlife Department, Austin, TX. 8 November 1991.

Benn, S. J. 1993. Performance Report. Job No. 12: Endangered feline population and habitat enhancement. Grant No. W-125-R-3 Federal Aid in Wildlife Restoration Act. Submitted to Texas Parks and Wildlife Department, Austin, TX. 22 September 1993.

McKelvey, K. S., K. B. Aubry, and M. K. Schwartz. 2008. Using anecdotal occurrence data for rare or elusive species: the illusion of reality and a call for evidentiary standards. Bioscience 58(6):549-555.

Aubry, K. B, C. M. Raley, and K. S. McKelvey. 2017. The importance of data quality for generating reliable distribution models for rare, elusive, and cryptic species. PLOS ONE 12(6):1-17.

Aubry, K. B., and L. A. Jagger. 2006. The importance of obtaining verifiable occurrence data on forest carnivores and an interactive website for archiving results from standardized surveys. Pages 159-176 in: M. Santos-Reis, J. D. S. Birks, E. C. O'Doherty, and G. Proulx, editors. Alpha Wildlife Publications, Sherwood Park, Alberta, Canada.

Specimen:

Element Occurrence Record

Scientific Name: Quercus virginiana-persea borbonia series **Occurrence #:** 3 **Eo Id:** 5746

Common Name: Coastal Live Oak-redbay Series **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G2? **State Rank:** S3 **Federal Status:**

Location Information:

Directions

NAVAL STATION INGLESIDE, SOUTH OF FM 1069, WEST OF FM 2725, NORTH OF CORPUS CHRISTI SHIP CHANNEL, BETWEEN PORT INGLESIDE AND INGLESIDE-ON-THE-BAY

Survey Information:

First Observation: **Survey Date:** 1992-06-17 **Last Observation:** 1992-06-17

Eo Type: **Eo Rank:** BC **Eo Rank Date:** 1992-06-17

Observed Area:

Comments:

General Description: QUERCUS VIRGINIANA-Q. HEMISPHAERICA-PERSEA BORBONIA DENSE THICKETY WOODLAND OR SHRUBLAND, FEW OPENINGS, HUNDREDS OF POTHOLES, SOME PERMANENT PONDS, DIVERSE GROUND LAYER, DEEP SANDS OF INGLESIDE BARRIER

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: NONE

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

CARR, W.R. 1992. FIELD SURVEY OF NAVAL STATION INGLESIDE, 17 JUNE 1992.

Specimen:

Element Occurrence Record

Scientific Name: Rhododon angulatus **Occurrence #:** 5 **Eo Id:** 4694

Common Name: Tharp's rhododon **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G1Q **State Rank:** S1 **Federal Status:**

Location Information:

Directions

FIVE MILES NORTH OF ARANSAS PASS, EAST SIDE OF STATE HIGHWAY 35

Survey Information:

First Observation: 1964-06-16 **Survey Date:** 1994 **Last Observation:** 1964-06-16

Eo Type: **Eo Rank:** X **Eo Rank Date:** 1994-01-01

Observed Area:

Comments:

General Description: 1964, LARGE STABILIZED SAND DUNES ON EAST SIDE OF HIGHWAY, IN LIVE OAK MOTT

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 16 JUNE 1964, TWO PLANTS; SITE REVISITED IN 1994, NO PLANTS, PROMINENT DUNES ALONG ROAD HAD BEEN LEVELED FOR HIGHWAY EXPANSION AND COMMERCIAL DEVELOPMENT

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Turner, B. L. 1995. Synoptical study of Rhododon (Lamiaceae). Phytologia 78(6):448-451. June 1995.

Specimen:

UNIVERSITY OF TEXAS AT AUSTIN HERBARIUM. 1964. B.L. TURNER #5030, SPECIMEN # ? TEX. 16 JUNE 1964.

Element Occurrence Record

Scientific Name: Rhynchospora indianolensis
Occurrence #: 17
Eo Id: 11036
Common Name: Indianola beakrush
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G3Q
State Rank: S3
Federal Status:

Location Information:

Directions

Ca. 1 mi N of Ingleside.

Survey Information:

First Observation: 1956-05-20
Survey Date:
Last Observation: 1956-05-20
Eo Type:
Eo Rank:
Eo Rank Date:
Observed Area:

Comments:

General Description: Clay loam in roadside ditch.

Comments: Complete specimen citation: Ca. 1 mi N of Ingleside in roadside ditch, clay loam, 20 May 1956, F. B. Jones 1202 (CCM).

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Jones, F.B. (1202). 1956. Specimen No. unknown. CCM.

Specimen:

Jones, F.B. (1202). 1956. Specimen No. unknown. CCM. (S56JONCCTXUS)

Element Occurrence Record

Scientific Name: Rookery **Occurrence #:** 43 **Eo Id:** 5841

Common Name: **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G5 **State Rank:** SNR **Federal Status:**

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 1.5 MILES NORTHWEST OF PORT ARANSAS

Survey Information:

First Observation: 1980 **Survey Date:** **Last Observation:** 1981

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description: SPOIL ISLANDS (2) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 4 METERS; IS IN A PETROLEUM AND INDUSTRIAL COMPLEX

Comments: COLONY NUMBER 614-202

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LEAST TERN

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1981-1985. TEXAS COLONIAL WATERBIRD CENSUS SUMAMRY.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 44 **Eo Id:** 2946
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 3 MILES TO THE WEST-NORTHWEST OF PORT ARANSAS

Survey Information:

First Observation: 1977 **Survey Date:** **Last Observation:** 1992
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLANDS (8) ON THE INTRACOASTAL WATERWAY; ELEVATION IS UP TO 3 METERS

Comments: COLONY NUMBER 614-201

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE BLACK SKIMMER, GREAT BLUE HERON, SNOWY EGRET, BLACK-CROWNED NIGHT-HERON, GULL-BILLED TERN

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Wagner, Matt. 1992. Texas Colonial Waterbird Census Summary 1991 - 1992. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 1992.

Martin, Catrina. 1991. Texas Colonial Waterbird Census Summary - 1990. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 13 March 1991.

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 45 **Eo Id:** 4807
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 2.75 MILES NORTHWEST OF THE ARANSAS PASS LIGHTHOUSE

Survey Information:

First Observation: 1979 **Survey Date:** **Last Observation:** 1981
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLAND (1) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 4.4 METERS; SITE IS ON ORIGINAL NATURAL ISLAND

Comments: COLONY NUMBER 614-200

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LEAST TERN, GULL-BILLED TERN, BLACK SKIMMER

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1981-1985. TEXAS COLONIAL WATERBIRD CENSUS SUMAMRY.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 46 **Eo Id:** 1089
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

NATURAL ISLAND IN THE INTRACOASTAL WATERWAY; THE SHAMROCK ISLANDS, 5 MILES SOUTH OF PORT INGLESIDE

Survey Information:

First Observation: 1973 **Survey Date:** **Last Observation:** 1992
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: NATURAL ISLAND (1) IN THE INTRACOASTAL WATERWAYS; ELEVATION IS 2 METERS

Comments: COLONY NUMBER 614-186

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LAUGHING GULL, SANDWICH TERN, ROYAL TERN, GREAT EGRET, REDDISH EGRET, CATTLE EGRET, SNOWY EGRET, BLACK SKIMMER, ROSEATE SPOONBILL, GREAT BLUE HERON, TRICOLORED HERON, BLACK-CROWNED NIGHT-HERON, WHITE-FACED IBIS, LITTLE BLUE HERON, WHITE IBIS, CASPIAN TERN, SOOTY TERN

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Wagner, Matt. 1992. Texas Colonial Waterbird Census Summary 1991 - 1992. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 1992.

Martin, Catrina. 1991. Texas Colonial Waterbird Census Summary - 1990. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 13 March 1991.

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery **Occurrence #:** 47 **Eo Id:** 7543

Common Name: **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G5 **State Rank:** SNR **Federal Status:**

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 0.5 MILE SOUTH OF PORT INGLESIDE

Survey Information:

First Observation: 1973 **Survey Date:** **Last Observation:** 1992

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description: SPOIL ISLANDS (2) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 10 METERS

Comments: COLONY NUMBER 614-185

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE BLACK SKIMMER, LEAST TERN

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Wagner, Matt. 1992. Texas Colonial Waterbird Census Summary 1991 - 1992. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 1992.

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 48 **Eo Id:** 3130
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 2 MILES EAST OF PORT INGLESIDE

Survey Information:

First Observation: 1973 **Survey Date:** **Last Observation:** 1992
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLAND (1) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 6 METERS MAXIMUM

Comments: COLONY NUMBER 614-184

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LAUGHING GULL, TRICOLORED HERON, GREAT BLUE HERON, BLACK-CROWNED NIGHT-HERON, CATTLE EGRET, GREAT EGRET, SNOWY EGRET, REDDISH EGRET, WHITE-FACED IBIS, BLACK SKIMMER, BROWN PELICAN, ROSEATE SPOONBILL, WHITE IBIS, LITTLE BLUE HERON

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Wagner, Matt. 1992. Texas Colonial Waterbird Census Summary 1991 - 1992. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 1992.

Martin, Catrina. 1991. Texas Colonial Waterbird Census Summary - 1990. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 13 March 1991.

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 49 **Eo Id:** 1214
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

NATURAL ISLAND IN THE INTRACOASTAL WATERWAY 4 MILES EAST OF PORT INGLESIDE

Survey Information:

First Observation: 1977 **Survey Date:** **Last Observation:** 1992
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: NATURAL ISLAND (1) IN THE INTRACOASTAL WATERWAY; ELEVATION IS 2 METERS; DREDGED MATERIAL DEPOSITS

Comments: COLONY NUMBER 614-183

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LEAST TERN

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Wagner, Matt. 1992. Texas Colonial Waterbird Census Summary 1991 - 1992. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 1992.

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 50 **Eo Id:** 1215
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 2 MILES WEST-NORTHWEST OF PORT INGLESIDE

Survey Information:

First Observation: 1977 **Survey Date:** **Last Observation:** 1989
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLAND (1) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 4 METERS

Comments: COLONY NUMBER 614-182

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE GREAT BLUE HERON

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 51 **Eo Id:** 4522
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 4.25 MILES EAST OF PORT INGLESIDE

Survey Information:

First Observation: 1978 **Survey Date:** **Last Observation:** 1992
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLAND (1) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 1 METER

Comments: COLONY NUMBER 614-181

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LEAST TERN

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Wagner, Matt. 1992. Texas Colonial Waterbird Census Summary 1991 - 1992. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 1992.

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 52 **Eo Id:** 3921
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 3 MILES EAST OF INGLESIDE

Survey Information:

First Observation: 1978 **Survey Date:** **Last Observation:** 1990
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLAND (1) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 0.5 METER

Comments: COLONY NUMBER 614-180

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE GREAT BLUE HERON

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Martin, Catrina. 1991. Texas Colonial Waterbird Census Summary - 1990. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 13 March 1991.

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 54 **Eo Id:** 2721
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 2 MILES SOUTHWEST OF INGLESIDE

Survey Information:

First Observation: 1978 **Survey Date:** **Last Observation:** 1988
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLAND (1) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 6 METERS

Comments: COLONY NUMBER 614-160

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE GREAT BLUE HERON

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery **Occurrence #:** 57 **Eo Id:** 4201

Common Name: **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G5 **State Rank:** SNR **Federal Status:**

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY IN CORPUS CHRISTI BAY SOUTH OF PORT ARANSAS CAUSEWAY

Survey Information:

First Observation: 1977 **Survey Date:** **Last Observation:** 1990

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description: SPOIL ISLANDS (2) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 3 METERS; BUILT ON NATURAL ISLAND

Comments: COLONY NUMBER 614-125

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LEAST TERN

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Martin, Catrina. 1991. Texas Colonial Waterbird Census Summary - 1990. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 13 March 1991.

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 58 **Eo Id:** 4984
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS IN THE INTRACOASTAL WATERWAYS 0-4 MILES NORTH OF PORT ARANSAS

Survey Information:

First Observation: 1976 **Survey Date:** **Last Observation:** 1992
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLANDS (+) IN THE INTRACOASTAL WATERWAYS; ELEVATION IS 1.5 METERS

Comments: COLONY NUMBER 614-124

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE BLACK SKIMMER

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Wagner, Matt. 1992. Texas Colonial Waterbird Census Summary 1991 - 1992. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 1992.

Martin, Catrina. 1991. Texas Colonial Waterbird Census Summary - 1990. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 13 March 1991.

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 59 **Eo Id:** 60
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 3 MILES DUE SOUTH OF CITY-BY-THE-SEA

Survey Information:

First Observation: 1973 **Survey Date:** **Last Observation:** 1992
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLANDS (3) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 1.5 METERS

Comments: COLONY NUMBER 614-123

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE GREAT BLUE HERON, GREAT EGRET, BLACK-CROWNED NIGHT-HERON

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Wagner, Matt. 1992. Texas Colonial Waterbird Census Summary 1991 - 1992. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 1992.

Martin, Catrina. 1991. Texas Colonial Waterbird Census Summary - 1990. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 13 March 1991.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 60 **Eo Id:** 61
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 2 MILES SOUTHEAST OF CITY-BY-THE-SEA

Survey Information:

First Observation: 1975 **Survey Date:** **Last Observation:** 1992
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLANDS (2) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 1 METER

Comments: COLONY NUMBER 614-122

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LAUGHING GULL, GREAT EGRET, SNOWY EGRET, TRICOLORED HERON, REDDISH EGRET, FORSTER'S TERN, GREAT BLUE HERON

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Wagner, Matt. 1992. Texas Colonial Waterbird Census Summary 1991 - 1992. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 1992.

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 61 **Eo Id:** 6807
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 1 MILE SOUTH OF CITY-BY-THE-SEA

Survey Information:

First Observation: 1973 **Survey Date:** **Last Observation:** 1992
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLANDS (20+) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 1 METER; ALSO, ERODING REMAINS OF OLD CAUSEWAY AND PETROLEUM PRODUCTION PLATFORMS AND DUCK BLINDS

Comments: COLONY NUMBER 614-121

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LAUGHING GULL, TRICOLORED HERON, GREAT BLUE HERON, REDDISH EGRET

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Wagner, Matt. 1992. Texas Colonial Waterbird Census Summary 1991 - 1992. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 1992.

Martin, Catrina. 1991. Texas Colonial Waterbird Census Summary - 1990. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 13 March 1991.

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery **Occurrence #:** 62 **Eo Id:** 4152

Common Name: **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G5 **State Rank:** SNR **Federal Status:**

Location Information:

Directions

RESIDENTIAL CANAL DEVELOPMENT SITE AT PALM HARBOR

Survey Information:

First Observation: 1980 **Survey Date:** **Last Observation:** 1980

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description: RESIDENTIAL CANAL DEVELOPMENT SITE AT PALM HARBOR; ELEVATION 1.4 METERS

Comments: COLONY NUMBER 614-120

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LEAST TERN

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 63 **Eo Id:** 2795
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

NATURAL AND SPOIL ISLANDS IN THE INTRACOASTAL WATERWAY 1 MILE SOUTHEAST OF ARANSAS PASS

Survey Information:

First Observation: 1973 **Survey Date:** **Last Observation:** 1987
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: NATURAL ISLANDS (2)AND 7 DREDGED MATERIAL ISLANDS IN THE INTRACOASTAL WATERWAY; ELEVATION IS 2 METERS

Comments: COLONY NUMBER 614-103

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LAUGHING GULL, CASPIAN TERN, GREAT BLUE HERON, TRICOLORED HERON, SNOWY EGRET, GREAT EGRET, FORSTER'S TERN

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 64 **Eo Id:** 4542
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 0.5 MILE WEST OF ARANSAS PASS TO 2 MILES WEST

Survey Information:

First Observation: 1973 **Survey Date:** **Last Observation:** 1989
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY; ELEVATION IS 1 METER; ALONG ARANSAS CHANNEL AND OIL WELL CHANNELS

Comments: COLONY NUMBER 614-102

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LAUGHING GULL

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 65 **Eo Id:** 1372
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ON MAINLAND ADJACENT TO THE INTRACOASTAL WATERWAY

Survey Information:

First Observation: 1980 **Survey Date:** **Last Observation:** 1981
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: CONFINED DREDGED DISPOSAL SITE ADJACENT TO INTRACOASTAL WATERWAY; ELEVATION IS 2.4 METERS

Comments: COLONY NUMBER 614-101

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE LEAST TERN, BLACK SKIMMER

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1981-1985. TEXAS COLONIAL WATERBIRD CENSUS SUMAMRY.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Rookery
Occurrence #: 66 **Eo Id:** 7224
Common Name:
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G5 **State Rank:** SNR
Federal Status:

Location Information:

Directions

SPOIL ISLANDS ON THE INTRACOASTAL WATERWAY 0.5 MILE EAST OF ARANSAS PASS

Survey Information:

First Observation: 1973 **Survey Date:** **Last Observation:** 1992
Eo Type: **Eo Rank:** **Eo Rank Date:**
Observed Area:

Comments:

General Description: SPOIL ISLAND (1) ON THE INTRACOASTAL WATERWAY; ELEVATION IS 3 METERS

Comments: COLONY NUMBER 614-100

Protection Comments:

Management Comments:

Data:

EO Data: NESTING COLONY OF THE GREAT BLUE HERON, GREAT EGRET

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Wagner, Matt. 1992. Texas Colonial Waterbird Census Summary 1991 - 1992. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 1992.

Martin, Catrina. 1991. Texas Colonial Waterbird Census Summary - 1990. Compiled for Texas Parks & Wildlife Dept. and Texas Colonial Waterbird Society. 13 March 1991.

TEXAS COLONIAL WATERBIRD SOCIETY AND TEXAS PARKS & WILDLIFE DEPARTMENT. 1986-1989. TEXAS COLONIAL WATERBIRD CENSUS SUMMARY. SPECIAL ADMINISTRATIVE REPORTS.

Mullins, L.M. ET.AL. 1982. An atlas and census of Texas waterbird colonies, 1973-1980. Texas Colonial Waterbird Society.

Specimen:

Element Occurrence Record

Scientific Name: Schizachyrium littorale - Paspalum monostachyum Herbaceous Vegetation
Occurrence #: 1 **Eo Id:** 11384
Common Name: Seacoast Bluestem - Gulfdune Paspalum Tallgrass Prairie
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G3? **State Rank:** SNR
Federal Status:

Location Information:

Directions

The site is on Mustang Island, between Port Aransas and Padre Island, on the north side of Texas State Highway 361. The directions were created by database staff.

Survey Information:

First Observation: 2010-06-24 **Survey Date:** 2010-06-24 **Last Observation:** 2010-06-24
Eo Type: **Eo Rank:** E **Eo Rank Date:** 2010-06-24
Observed Area:

Comments:

General Description: 24 June 2010: This site is on ocean front property; See the Composition Tab for other species within the area.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 24 June 2010: One plant community of low-medium quality grass species with some areas of high quality; Forb species are of medium quality; Exotic species are present; Woody cover is 1-5 percent.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:
Avicennia germinans	Tree (canopy & subcanopy)	N	Tree	SFID: 25007
Paspalum monostachyum	Herb (field)	Y	Graminoid	SFID: 25007
Prosopis glandulosa	Tree (canopy & subcanopy)	N	Thorn tree	SFID: 25007
Schizachyrium scoparium ssp. littorale	Herb (field)	Y	Graminoid	SFID: 25007

Reference:

Citation:

Native Prairies Association of Texas. 2011. Tallgrass prairie survey project that includes shapefiles, excel files, documents, images, and protocol for multiple counties in Texas (2000-2013).

Specimen:

Element Occurrence Record

Scientific Name: Schizachyrium scoparium - Paspalum plicatulum - Sorghastrum nutans - Dichanthelium oligosanthes - Paspalum setaceum - Symphyotrichum pratense Alfisol Grassland

Occurrence #: 109 **Eo Id:** 11779

Common Name: Alfisol Coastal Prairie

Track Status: Track all extant and selected historical EOs

Identification Confirmed: Y - Yes

TX Protection Status:

Global Rank: G1 **State Rank:** SNR

Federal Status:

Location Information:

Directions

This site is located approximately 3.0 air miles southwest of Aransas Pass, and 2.0 air miles almost directly east of Ingleside, on the north side of Texas State Highway 361 and the Union Pacific rail line. The directions were created by database staff.

Survey Information:

First Observation: 2009-04-24 **Survey Date:** 2009-04-24 **Last Observation:** 2009-04-24

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2009-04-24

Observed Area:

Comments:

General Description: See the Composition Tab for other species within the area.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 24 April 2009: One plant community of low quality grass species; Forb species are poor; Exotic species are present; Woody cover is 6-25 percent.

Community Information:

Element Occurrence Record

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:
Convolvulus arvensis	Herb (field)	N	Liana	SFID: 25694
Dichanthelium oligosanthes	Herb (field)	Y	Graminoid	SFID: 25694
Monarda citriodora	Herb (field)	N	Forb	SFID: 25694
Paspalum plicatulum	Herb (field)	Y	Graminoid	SFID: 25694
Paspalum setaceum	Herb (field)	Y	Graminoid	SFID: 25694
Phyla nodiflora	Herb (field)	N	Forb	SFID: 25694
Prosopis glandulosa	Tree (canopy & subcanopy)	N	Thorn tree	SFID: 25694
Quercus virginiana	Tree (canopy & subcanopy)	N	Broad-leaved deciduous tree	SFID: 25694
Schizachyrium scoparium	Herb (field)	Y	Graminoid	SFID: 25694
Sorghastrum nutans	Herb (field)	Y	Graminoid	SFID: 25694
Symphyotrichum pratense	Herb (field)	Y	Forb	SFID: 25694

Reference:

Citation:

Native Prairies Association of Texas. 2011. Tallgrass prairie survey project that includes shapefiles, excel files, documents, images, and protocol for multiple counties in Texas (2000-2013).

Specimen:

Element Occurrence Record

Scientific Name: Spartina spartinae - Schizachyrium scoparium Herbaceous Vegetation
Occurrence #: 2 **Eo Id:** 11411
Common Name: Gulf Cordgrass - Little Bluestem Wet Prairie
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G3 **State Rank:** SNR
Federal Status:

Location Information:

Directions

This site is located approximately 1.5 air miles almost directly north of Aransas Pass, on the south side of West Young Avenue. The directions were created by database staff.

Survey Information:

First Observation: 2010-08-06 **Survey Date:** 2010-08-06 **Last Observation:** 2010-08-06
Eo Type: **Eo Rank:** E **Eo Rank Date:** 2010-08-06
Observed Area:

Comments:

General Description: See the Composition Tab for other species within the area.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 6 August 2010: One plant community of low quality grass species, and low quality invaders; Forb species are of poor quality; Exotic species are present; Woody cover is 6-25 percent.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:
Ambrosia psilostachya	Herb (field)	N	Forb	SFID: 23376
Chamaecrista fasciculata	Herb (field)	N	Forb	SFID: 23376
Panicum virgatum	Herb (field)	N	Graminoid	SFID: 23376
Prosopis glandulosa	Tree (canopy & subcanopy)	N	Thorn tree	SFID: 23376
Quercus virginiana	Tree (canopy & subcanopy)	N	Broad-leaved deciduous tree	SFID: 23376
Schizachyrium scoparium	Herb (field)	Y	Graminoid	SFID: 23376
Spartina spartinae	Herb (field)	Y	Graminoid	SFID: 23376

Reference:

Citation:

Native Prairies Association of Texas. 2011. Tallgrass prairie survey project that includes shapefiles, excel files, documents, images, and protocol for multiple counties in Texas (2000-2013).

Specimen:

Element Occurrence Record

Scientific Name: Spartina spartinae - Schizachyrium scoparium Herbaceous Vegetation
Occurrence #: 3 **Eo Id:** 11412
Common Name: Gulf Cordgrass - Little Bluestem Wet Prairie
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G3 **State Rank:** SNR
Federal Status:

Location Information:

Directions

This site is located approximately 5.5 air miles north-northeast of Aransas Pass, on the south side of Lamar Drive, to the west of Portia Avenue. The directions were created by database staff.

Survey Information:

First Observation: 2010-08-06 **Survey Date:** 2010-08-06 **Last Observation:** 2010-08-06
Eo Type: **Eo Rank:** E **Eo Rank Date:** 2010-08-06
Observed Area:

Comments:

General Description: See the Composition Tab for other species within the area.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 6 August 2010: One plant community of medium quality grass species, and low quality invaders; Forb species are of poor quality; Exotic species are present; Woody cover is 26-50 percent.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:
Ambrosia psilostachya	Herb (field)	N	Forb	SFID: 23248
Panicum virgatum	Herb (field)	N	Graminoid	SFID: 23248
Paspalum plicatulum	Herb (field)	N	Graminoid	SFID: 23248
Prosopis glandulosa	Tree (canopy & subcanopy)	N	Thorn tree	SFID: 23248
Quercus virginiana	Tree (canopy & subcanopy)	N	Broad-leaved deciduous tree	SFID: 23248
Schizachyrium scoparium	Herb (field)	Y	Graminoid	SFID: 23248
Spartina spartinae	Herb (field)	Y	Graminoid	SFID: 23248

Reference:

Citation:

Native Prairies Association of Texas. 2011. Tallgrass prairie survey project that includes shapefiles, excel files, documents, images, and protocol for multiple counties in Texas (2000-2013).

Specimen:

Element Occurrence Record

Scientific Name: Spartina spartinae - Schizachyrium scoparium Herbaceous Vegetation
Occurrence #: 4 **Eo Id:** 11413
Common Name: Gulf Cordgrass - Little Bluestem Wet Prairie
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G3 **State Rank:** SNR
Federal Status:

Location Information:

Directions

This site is located approximately 7.5 air miles north-northeast of Aransas Pass, on the south side of 12th Street, and the west side of Fort Worth Street. The directions were created by database staff.

Survey Information:

First Observation: 2010-08-06 **Survey Date:** 2010-08-06 **Last Observation:** 2010-08-06
Eo Type: **Eo Rank:** E **Eo Rank Date:** 2010-08-06
Observed Area:

Comments:

General Description: See the Composition Tab for other species within the area.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 6 August 2010: One plant community of low quality grass species, and low quality invaders; Forb species are of poor quality; Exotic species are present; Woody cover is 51-75 percent.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:
Ambrosia psilostachya	Herb (field)	N	Forb	SFID: 23247
Panicum virgatum	Herb (field)	N	Graminoid	SFID: 23247
Quercus virginiana	Tree (canopy & subcanopy)	N	Broad-leaved deciduous tree	SFID: 23247
Schizachyrium scoparium	Herb (field)	Y	Graminoid	SFID: 23247
Spartina spartinae	Herb (field)	Y	Graminoid	SFID: 23247

Reference:

Citation:

Native Prairies Association of Texas. 2011. Tallgrass prairie survey project that includes shapefiles, excel files, documents, images, and protocol for multiple counties in Texas (2000-2013).

Specimen:

Element Occurrence Record

Scientific Name: Spartina spartinae Herbaceous Vegetation **Occurrence #:** 3 **Eo Id:** 11418

Common Name: Salty Prairie **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4 **State Rank:** SNR **Federal Status:**

Location Information:

Directions

This site is located approximately 2.0 road miles northeast of Aransas Pass on its northeastern edge, on the southeast side of Texas State Highway 35 and Union Pacific rail line. The directions were created by database staff.

Survey Information:

First Observation: 2010-08-06 **Survey Date:** 2010-08-06 **Last Observation:** 2010-08-06

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2010-08-06

Observed Area:

Comments:

General Description: See the Composition Tab for other species within the area.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 6 August 2010: One plant community of low quality grass species; Forb species are of poor quality, and low quality invaders; Exotic species are absent; Woody cover is less than 1 percent of the total vegetation.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:
Ambrosia psilostachya	Herb (field)	N	Forb	SFID: 23249
Panicum virgatum	Herb (field)	N	Graminoid	SFID: 23249
Spartina spartinae	Herb (field)	Y	Graminoid	SFID: 23249

Reference:

Citation:

Native Prairies Association of Texas. 2011. Tallgrass prairie survey project that includes shapefiles, excel files, documents, images, and protocol for multiple counties in Texas (2000-2013).

Specimen:

Element Occurrence Record

Scientific Name: Spartina spartinae Herbaceous Vegetation **Occurrence #:** 5 **Eo Id:** 11515

Common Name: Salty Prairie **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4 **State Rank:** SNR **Federal Status:**

Location Information:

Directions

This site is located approximately 5.5 air miles north-northwest of Aransas Pass, and 8.5 air miles southeast of Bayside, on the southwest side of County Road 188, and to the east of Copano Bay. The directions were created by database staff.

Survey Information:

First Observation: 2010-08-07 **Survey Date:** 2010-08-07 **Last Observation:** 2010-08-07

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2010-08-07

Observed Area:

Comments:

General Description: 7 August 2010: This site slopes to Copano Bay; See the Composition Tab for other species within the area.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 7 August 2010: One plant community of low quality grass species consisting of 60 percent low quality natives, and 40 percent decreasers; Forb species are low quality consisting of 75 percent low quality forbs, and 25 percent overgrazed high quality native forbs; Woody cover is less than 1 percent.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:
Bothriochloa laguroides	Herb (field)	N	Graminoid	SFID: 23386
Opuntia littoralis	Herb (field)	N	Succulent shrub	SFID: 23386
Prosopis glandulosa	Tree (canopy & subcanopy)	N	Thorn tree	SFID: 23386
Quercus virginiana	Tree (canopy & subcanopy)	N	Broad-leaved deciduous tree	SFID: 23386
Setaria leucopila	Herb (field)	N	Graminoid	SFID: 23386
Spartina spartinae	Herb (field)	Y	Graminoid	SFID: 23386

Reference:

Citation:

Native Prairies Association of Texas. 2011. Tallgrass prairie survey project that includes shapefiles, excel files, documents, images, and protocol for multiple counties in Texas (2000-2013).

Specimen:

Element Occurrence Record

Scientific Name: Spartina spartinae Herbaceous Vegetation
Occurrence #: 7 **Eo Id:** 11517
Common Name: Salty Prairie
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G4 **State Rank:** SNR
Federal Status:

Location Information:

Directions

This site is located approximately 8.0 air miles directly north of Aransas Pass, and 7.5 air miles southeast of Bayside, on the west side of FM 1069, and to the east of Copano Bay. The directions were created by database staff.

Survey Information:

First Observation: 2010-08-06 **Survey Date:** 2010-08-06 **Last Observation:** 2010-08-06
Eo Type: **Eo Rank:** E **Eo Rank Date:** 2010-08-06
Observed Area:

Comments:

General Description: 6 August 2010: This site slopes from the road to the salt prairie and on to Port Bay; See the Composition Tab for other species within the area.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 6 August 2010: One plant community of medium quality grass species consisting of 50 percent high quality increasers, and 50 percent decreasers; Forb species are low quality consisting of 60 percent low quality forbs, and 40 percent increasers; Exotic species are present; Woody cover is 1-5 percent.

Community Information:

Element Occurrence Record

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:
Bothriochloa laguroides	Herb (field)	N	Graminoid	SFID: 23388
Gaillardia pulchella	Herb (field)	N	Forb	SFID: 23388
Myrica heterophylla	Shrub/sapling (tall & short)	N	Broad-leaved evergreen shrub	SFID: 23388
Opuntia littoralis	Herb (field)	N	Succulent shrub	SFID: 23388
Prosopis glandulosa	Tree (canopy & subcanopy)	N	Thorn tree	SFID: 23388
Quercus virginiana	Tree (canopy & subcanopy)	N	Broad-leaved deciduous tree	SFID: 23388
Setaria parviflora	Herb (field)	N	Graminoid	SFID: 23388
Spartina spartinae	Herb (field)	Y	Graminoid	SFID: 23388

Reference:

Citation:

Native Prairies Association of Texas. 2011. Tallgrass prairie survey project that includes shapefiles, excel files, documents, images, and protocol for multiple counties in Texas (2000-2013).

Specimen:

Element Occurrence Record

Scientific Name: Spartina spartinae Herbaceous Vegetation **Occurrence #:** 8 **Eo Id:** 11518

Common Name: Salty Prairie **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4 **State Rank:** SNR **Federal Status:**

Location Information:

Directions

This site is located approximately 6.0 air miles directly north of Aransas Pass, and 9.0 air miles southeast of Bayside, on the east side of FM 1069, to the north of Bee Road. The directions were created by database staff.

Survey Information:

First Observation: 2010-08-06 **Survey Date:** 2010-08-06 **Last Observation:** 2010-08-06

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2010-08-06

Observed Area:

Comments:

General Description: See the Composition Tab for other species within the area.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 6 August 2010: One plant community of low quality grass species consisting of 60 percent low quality natives, and 40 percent decreasers; Forb species are low quality consisting of 60 percent low quality forbs, and 40 percent increasers; Exotic species are present; Woody cover is less than 1 percent.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:
Bothriochloa laguroides	Herb (field)	N	Graminoid	SFID: 23389
Panicum amarum	Herb (field)	N	Graminoid	SFID: 23389
Prosopis glandulosa	Tree (canopy & subcanopy)	N	Thorn tree	SFID: 23389
Quercus virginiana	Tree (canopy & subcanopy)	N	Broad-leaved deciduous tree	SFID: 23389
Setaria parviflora	Herb (field)	N	Graminoid	SFID: 23389
Spartina spartinae	Herb (field)	Y	Graminoid	SFID: 23389

Reference:

Citation:

Native Prairies Association of Texas. 2011. Tallgrass prairie survey project that includes shapefiles, excel files, documents, images, and protocol for multiple counties in Texas (2000-2013).

Specimen:

Element Occurrence Record

Scientific Name: Spartina spartinae Herbaceous Vegetation
Occurrence #: 12 **Eo Id:** 11522
Common Name: Salty Prairie
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G4 **State Rank:** SNR
Federal Status:

Location Information:

Directions

These sites are located approximately 8.5 air miles north-northwest of Aransas Pass, and 5.6 air miles south-southeast of Bayside, on the east side of Refugio Taft Road/County Road 4339, and on the west side of Copano Bay. The directions were created by database staff. The directions are generalized as this record consists of multiple observations.

Survey Information:

First Observation: 2010-08-07 **Survey Date:** 2010-08-07 **Last Observation:** 2010-08-07
Eo Type: **Eo Rank:** E **Eo Rank Date:** 2010-08-07
Observed Area:

Comments:

General Description: 7 August 2010: There are stock tanks at one site (SFID: 23383); See the Composition Tab for other species within the area.

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 7 August 2010: Four plant communities of low to medium quality grass species; Forb species are poor quality, and low quality invaders; Exotic species are present; Woody cover is 6-25 percent.

Community Information:

Element Occurrence Record

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:
Ambrosia psilostachya	Herb (field)	N	Forb	SFID: 23379, 23380, 23383, 23384
Amphiachyris dracunculoides	Herb (field)	N	Forb	SFID: 23380, 23383, 23384
Hymenoxys odorata	Herb (field)	N	Forb	SFID: 23383, 23384
Panicum virgatum	Herb (field)	N	Graminoid	SFID: 23379
Paspalum plicatulum	Herb (field)	N	Graminoid	SFID: 23379, 23380, 23383, 23384
Prosopis glandulosa	Tree (canopy & subcanopy)	N	Thorn tree	SFID: 23379, 23380, 23383, 23384
Setaria parviflora	Herb (field)	N	Graminoid	SFID: 23379, 23380, 23383, 23384
Spartina alterniflora	Herb (field)	N	Graminoid	SFID: 23380, 23383, 23384
Spartina spartinae	Herb (field)	Y	Graminoid	SFID: 23379, 23380, 23383, 23384

Reference:

Citation:

Native Prairies Association of Texas. 2011. Tallgrass prairie survey project that includes shapefiles, excel files, documents, images, and protocol for multiple counties in Texas (2000-2013).

Specimen:

Element Occurrence Record

Scientific Name: Spilogale putorius interrupta **Occurrence #:** 30 **Eo Id:** 12640

Common Name: plains spotted skunk **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G4T4 **State Rank:** S1S3 **Federal Status:**

Location Information:

Directions

The specimen labels state that they were located in Rockport. The georeferenced coordinates, based on VertNet Best Practices Guidelines, were used.

Survey Information:

First Observation: 1893-05-20 **Survey Date:** 1893-09-24 **Last Observation:** 1893-09-24

Eo Type: **Eo Rank:** H **Eo Rank Date:** 1893-09-24

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 20 May, 2 June, 14 July, and 24 September 1893: Skin (whole), and skull (unmounted cranium and mandible) of four male, and 1 female preserved specimens.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Ferguson, Adam. 2014. Texas Skunk Record Database regarding five specices of skunk in Texas.

Patterson, Bruce D. 1995. Printed list of 6 April to Peggy Horner, Texas Parks and Wildlife Department, Conservation Scientist, regarding Spilogale putorius interrupta, and Spilogale putorius leucoparia from The Field Museum of Natural History, Division of Mammals, Chicago, IL.

Van Gelder, Richard G. 1959. A taxonomic revision of the spotted skunks (Genus Spilogale). Bulletin of the American Museum of Natural History 117(5):229-392.

Specimen:

American Museum of Natural History, New York, NY; H. P. Attwater (#152), Catalog #M-14818, 24 September 1893, AMNH.

American Museum of Natural History, New York, NY; H. P. Attwater (#6/11063), Catalog #M-12769, 20 May 1893, AMNH.

American Museum of Natural History, New York, NY; H. P. Attwater (#unknown), Catalog #MS-6516, 2 June 1893, AMNH.

American Museum of Natural History, New York, NY; H. P. Attwater (#unknown), Catalog #MS-6517, 14 July 1893, AMNH.

The Field Museum, Chicago, IL; H. P. Attwater (#12769), Catalog #5436, 20 May 1893, FMNH.

Element Occurrence Record

Scientific Name: Sporobolus tharpii
Occurrence #: 1
Eo Id: 10395
Common Name: Tharp's dropseed
Track Status: Track all extant and selected historical EOs
Identification Confirmed: Y - Yes
TX Protection Status:
Global Rank: G3
State Rank: S3
Federal Status:

Location Information:

Directions

St. Joseph Island.

Survey Information:

First Observation:
Survey Date:
Last Observation: 1964-11-07
Eo Type:
Eo Rank:
Eo Rank Date:
Observed Area:

Comments:

General Description: Broad sand mound, back-island sandflat.

Comments: Complete specimen citation: St. Joseph Island, broad sand mound, back-island sandflat, 7 Nov 1964, P. B. Andrews 21 (TEX-LL).

Protection Comments:

Management Comments:

Data:

EO Data:

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Andrews, P. B. (21). 1964. Specimen # none TEX-LL.

Specimen:

Andrews, P. B. (21). 1964. Specimen # none TEX-LL. (S64ANDTXTXUS)

Element Occurrence Record

Scientific Name: Thurovia triflora **Occurrence #:** 2 **Eo Id:** 858

Common Name: threeflower broomweed **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:**

Global Rank: G2G3 **State Rank:** S2S3 **Federal Status:**

Location Information:

Directions

INGLESIDE

Survey Information:

First Observation: 1936 **Survey Date:** **Last Observation:** 1936-09-19

Eo Type: **Eo Rank:** **Eo Rank Date:**

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: IN FLOWER

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Specimen:

Texas A & M University, Tracy Herbarium. 1936. H.B. Parks #20416, 20417, Specimen # 18987, 23120 TAES. 19 September 1936.

Element Occurrence Record

Scientific Name: Trichechus manatus **Occurrence #:** 1 **Eo Id:** 6570

Common Name: West Indian Manatee **Track Status:** Track all extant and selected historical EOs

Identification Confirmed: Y - Yes **TX Protection Status:** E

Global Rank: G2 **State Rank:** S1 **Federal Status:** LT

Location Information:

Directions

Corpus Christi Bay and Port Aransas. These are generalized directions as this record consists of multiple on-the-ground observations.

Survey Information:

First Observation: 2001-09-23 **Survey Date:** 2016-04-19 **Last Observation:** 2016-04-19

Eo Type: **Eo Rank:** E **Eo Rank Date:** 2016-04-19

Observed Area:

Comments:

General Description:

Comments:

Protection Comments:

Management Comments:

Data:

EO Data: 23 Sep 2001 and 5, 31 Oct 2006: One manatee observed. 23 Jan 2011: A manatee washed up on shore and later died; 19 April 2016: One manatee sighting.

Community Information:

Scientific Name:	Stratum:	Dominant:	Lifeform:	Composition Note:

Reference:

Citation:

Cobb, Robyn. 2006. E-mail sent to Sandy Birnbaum, Natural Diversity Database Manager, concerning a manatee sighting in the Jewell Fulton Channel, near Ingelside On-the-Bay, TX.

Cobb, Robyn. 2006. E-mail sent to Sandy Birnbaum, Natural Diversity Database Manager, on 10 October concerning a manatee sighting in the Port Aransas City Marina Boat Basin, Port Aransas, TX.

PRESSLY, LORETTA. 2001. E-MAIL TO GARETH ROWELL CONCERNING MANATEE SIGHTING IN CORPUS CHRISTI BAY. SEPTEMBER 28, 2001.

Kiii News. 2011. Rockport Manatee Dies. http://www.kiiitv.com/story/13897645/rockport-manatee-dies. (Posted: Jan 24, 2011. Updated: Jan 31, 2011. Accessed: Sep 16, 2011.)

Whitehead, Heidi R. 2016. Email of 19 April 2016 to the Texas Marine Mammal Stranding Network (TMMSN) contacts concerning a manatee sighting at the Corpus Christi Naval Air Station, Corpus Christi, TX.

Specimen: