Mitigation Bank Prospectus

ROCKHANDS MITIGATION BANK

SWG-2025-00405

CAMERON COUNTY, TEXAS

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Objectives:

Establishment of the Rockhands Mitigation Bank
The general objective of Rockhands Mitigation Bank (the "Bank") is to preserve wetlands and other aquatic resources within the South Laguna Madre hydrologic unit (HUC 12110208). Compensatory mitigation credits generated through the Bank will provide ecologically valuable functional offsets for permitted impacts to aquatic resources within the Bank's proposed Geographic Service Area as described herein.

Preservation of the Rockhands Mitigation Bank Site for Compensatory Mitigation Credits
The Rockhands Mitigation Bank Site (the "Site" or "Property") is approximately 1,050-acres and located within a larger approximately 1,200-acre tract of land situated south of South Bay and north of State Highway 4 (Boca Chica Boulevard, "SH 4") in Cameron County, Texas (**Attachment A, Figure 1: Vicinity Map**). As described herein, the Site will provide preservation-based mitigation credits in accordance with 2008 Compensatory Mitigation Rule (listed below and found in 33 CFRR 332.3(h)). Each of these factors is discussed in this Prospectus following the Site overview.

Preservation-Based Mitigation – Key Factors for Consideration:

- *Importance of Functions*
- *Contribution to Watershed*
- *Appropriateness and Practicability*
- *Threat of Loss or Degradation*
- *Permanent Protection*

The Site is composed primarily of wind-tidal flats and contains small areas of estuarine emergent wetlands, mangrove fringe, vegetated shallows, and upland lomas. Site photographs have been included in **Attachment B**. Wind-tidal flats are a rare and unique aquatic resource that are primarily found adjacent to hypersaline lagoons. The Site is within the Laguna Madre estuarine system, which is one of only five hypersaline lagoon systems in the world (Texas A&M, 2023). The Coastal Bend bay system, which extends from Corpus Christi southward through Kenedy County north of the Site, is one of 28 estuaries that have been identified by the U.S. Congress as Estuaries of National Significance (CCBNEP-26, 1998). Comparatively, the Laguna Madre system extends southward through Willacy and Cameron counties and into Mexico, but has no protective national designation, as shown on the Environmental Protection Agency's (EPA) National Estuary Program Study Areas map.

The Site was selected due to its proximity to and connectivity with ecologically significant lands, including the Lower Rio Grande Valley National Wildlife Refuge, South Bay, and the bi-national Laguna Madre ecosystem as well as the unique and rare aquatic resources that comprise the Site. The Site is generally bounded to the south by Starbase and numerous privately owned lots, by Port of Brownsville owned land and National Wildlife Refuge to the west, and by South Bay to the north and east (**Attachment A, Figure 2: Adjacent Properties Map**). The Site constitutes one of the last remaining large, privately-owned tracts of land in the South Bay wind tidal flat complex. Due to the proximity of expanding private properties and development to the south, port owned land and development to the northwest, and gas exploration within South Bay and the greater Laguna Madre, the Site is at considerable risk for development if not protected.

The ecological and landscape importance of this estuarine system has been well documented. Key functional aspects of the Site are discussed here. The primary activities for compensatory mitigation will be the documentation of Site baseline conditions, establishment of a Conservation Easement over the Site, long-term management and stewardship, and potential research opportunity within the Site. Due to the contiguity with existing protected areas, the Site and proposed mitigation approach provide a unique opportunity to preserve

ecological functions and protect rare habitat on a large scale.

The land that comprises the Site is under single ownership of the Bank Sponsor. Portions of the parcel that will not generate mitigation credit will not be included in the Conservation Easement area. The Bank Sponsor has contracted a licensed surveyor to perform a shoreline survey within the Site in accordance with Texas General Land Office (GLO) rules and regulations. Portions of the Site containing State Submerged Lands have been excluded from the proposed Mitigation Area. A 140-foot corridor along the southern boundary of the parcel has been excluded from the mitigation area for the purpose of enabling utilities to be extended to Starbase and associated facilities in the future. Any disturbance within this area will be located outside the Mitigation Area and temporary in nature. Additionally, at the request of the U.S. Army Corps of Engineers (USACE), a buffer has been located along the southeastern boundary to further separate the Mitigation Area from privately owned properties.

Project Location (UTM and Lat/Long in DD):

The approximately 1,050-acre Site is located northwest of the City of Starbase and adjacent to the southern border of South Bay in Cameron County, Texas, with a centroid at 26.0002997°N, -97.193139°W and within UTM Zone 14. The Site is contained within a larger approximately 1,200-acre tract of land composed of two separate property parcels (Cameron County PINs: 171646 & 171648). Note, title commitments and title opinion reflect a property that is 1,213 acres in size. The Bank Sponsor has conducted an updated boundary survey and shoreline survey which indicate the property is approximately 1,200 acres in size. The Site is bordered by residential and commercial development to the southeast and wind-tidal flats and open water on the remaining three sides (**Attachment A, Figure 2: Adjacent Properties Map**).

Ecological Suitability and Baseline Conditions:

Physical Setting
The Site is part of a large wind-tidal flat and loma system at the southern end of the Laguna Madre in South Bay. The Site and much of the surrounding area are dominated by flat, sparsely vegetated or completely unvegetated landscapes that are irregularly inundated via wind driven tides.

The majority of the proposed Site is relatively flat, with elevations of approximately 0-5 feet above mean sea level (**Attachment A, Figure 3: USGS Topographic Map**). Most of the Site is covered by wind-tidal flats. Two natural upland dunes (lomas) are present within the Site – one extends from SH 4 from the south into the southwestern portion of the Site and another ("Loma Plata") is located in the central portion fully surrounded by emergent wetlands and wind-tidal flats. Portions of the southwestern spit of land outside of the Mitigation Area appear to have been previously disturbed; however, the nature of past activities is not clear, and disturbance is minimal. The central loma stretches approximately 1,100 feet and crests at approximately 5 feet above mean sea level (**Attachment A, Figure 4: LiDAR Imagery Map**). A mangrove fringe borders deeper waters in the northern and eastern portions of the Site. Two linear open water features in the southwest and northwest portions of the Site support rooted aquatic vegetation and constitute vegetated shallows, as defined by 40 CFR 230.43.

Conservation lands occupy a substantial portion of the surrounding landscape. The Lower Rio Grande Valley National Wildlife Refuge (NWR) is immediately adjacent to the south of the parcel, covering nearly all the estuarine extents between the Site and the Rio Grande. The Laguna Atascosa NWR is located northwest of the Site across the Brownsville Ship Channel. Land east of the Site is partially conserved as Boca Chica State Park.

The southeastern boundary of the Site borders the development area of Starbase. This area is rapidly developing as a community, business center, manufacturing facility, and launch location for Space Exploration Technologies, Inc. (SpaceX). The western boundary of the Site borders land owned by the Port of Brownsville (the Port), a major center for intermodal transportation and industrial development. According to the Port's website, the Port owns approximately 40,000 acres of land available for development, which includes the area immediately west of the Site. Additionally, a review of the Railroad Commission of Texas (RRC) Oil and Gas GIS Application indicates that there has been substantial natural gas exploration within the immediate vicinity of the Site as well as numerous active/permitted gas wells in the larger Laguna Madre complex (RRC, 2025). The conservation of the Rockhands Site will provide an important stopping point for development pressures towards South Bay. Under the current regulatory conditions, energy demands, and the pressure for development, encroachment into this privately owned land would be likely.

Soils

The proposed Site consists of 3 mapped soil units (**Attachment A, Figure 5: USDA NRCS Soil Survey Map**). Nearly the entire Site consists of hydric soils, except for the upland loma, which contains Point Isabel clay loam. Below is a summary table of the soil types identified by the Natural Resources Conservation Service (NRCS) Web Soil Survey. The *NRCS Soil Resource Report for Cameron County, TX is* included in **Attachment C**.

Table 1. Soil Types within the Site

Soil Type	Hydric Rating	Acreage (%)
Barrada clay, 0 to 1 percent slopes, very frequently flooded, occasionally ponded	99%	1,143.8 ac. (92.9%)
Sejita silty clay loam, 0 to 1 percent slopes, occasionally ponded	100%	39.0 ac. (3.2%)
Point Isabel clay loam, 1 to 5 percent slopes, rarely flooded	10%	13.7 ac. (1.1%)
Water	N/A	34.5 ac. (2.8%)

Hydrology

Water levels in the region are controlled primarily by prevailing winds, a phenomenon referred to as "wind tides". The majority of the Site is inundated only by wind tides. No substantial freshwater or freshwater input is present within the Site or immediate vicinity. South Bay borders the Site to the north and, apart from rainfall, provides the only source of water circulation within the Site. South Bay opens to the north into the Brownsville Port Channel, which drains to the Gulf of America through the Brazos Santiago Pass. South Bay is saline/hypersaline and subject to diurnal lunar tidal influence. In this region, lunar tide ranges are generally small and typically account for 1-2 feet of surface water elevation change. Portions of the Site parcel subject to lunar tides have been surveyed in accordance with the GLO submerged lands rules and regulations and excluded from the Mitigation Area.

The groundwater table within the Site is generally near the ground surface. According to the NRCS Web Soil Survey, the entire site has a groundwater table within 36 inches of the surface, more than half of which is classified at 0-inch depth. Further details on the groundwater table can be found in the attached *NRCS Soil Resource Report for Cameron County, TX* (**Attachment C**) and the wetland data forms completed within the Site (**Attachment D**).

Vegetation

The Site is within the Western Gulf Coastal Plain ecoregion (EPA Level III), an area often dominated by hardwood communities which include live oak (*Quercus* virginiana), mesquite (*Prosopis glandulosa*),

huisache (*Vachellia farnesiana*), sugarberry (*Celtis laevigata*), and pecan (*Carya illinoinensis*). These sparsely forested communities give way to grasslands and flat estuarine and tidal resources along the coast. The coastal communities include mangrove areas, lomas, algal flats, seagrass beds, and open water, as is found within the Site.

The Texas Parks & Wildlife Department (TPWD) Ecological Mapping System of Texas (EMST) indicates the Site contains primarily Wind-Tidal Flats, Open Water, Seagrass Beds, Salt and Brackish High Tidal Marsh, and Loma Grassland. A site visit conducted in May 2025 found vegetation consistent with these communities.

The majority of the Site exists as irregularly flooded wind-tidal flats. The boundaries to State-submerged lands and open waters north and east of the Site are buffered with black mangroves (*Avicennia germinans*). Upland lomas are present in the southern portion of the Site. Vegetated emergent wetlands were observed surrounding upland lomas and gradually thinning until transitioning to wind-tidal flats dominated by blue-green algae at lower elevations.

Upland vegetation within the Site is characteristic of wind-blown lomas and dominated by spanish dagger (*Yucca aloifolia*), prickly pear (*Opuntia engelmannii*), huisache (*Vachellia farnesia)*, and prairie herbs. Emergent wetlands surrounding the lomas and extending from the black mangrove fringes consists of annual glasswort (*Salicornia bigelovii*), saltwort (*Batis maritima*), and salt-flat grass (*Monanthochloe littoralis*) with sporadic occurrences of sea ox-eye daisy (*Borrichia frutescens)* shrubs. Wind-tidal flats within the Site generally contain less than 5% coverage of any rooted vegetation and are dominated by blue-green algal mats. Vegetative species information can be found in wetland data forms included in **Attachment D**.

Existing Aquatic Resources
The US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) indicates that nearly the entire Site consists of estuarine and marine wetlands (**Attachment A, Figure 6: National Wetlands Inventory Map**). An approximately 10-acre loma is depicted as uplands near the site center. Extensive estuarine and marine wetlands are shown nearly encompassing the Site. South Bay, to the north, is depicted as estuarine and marine deepwater habitat.

A unique aspect of this area is that inundation and exposure are not regular or systematic as with areas subject to diurnal/semi-diurnal lunar tides (**Attachment A, Figures 7A – 7B: Aerial Imagery**). During the prevailing south-southeast wind, the wind-tidal flats within the Site are typically dry to saturated and contain extensive blue-green algal mats and surface soil cracks. **Figure 7A** in **Attachment A** depicts an aerial image of the Site during normal conditions during a period of south-southeast wind. When the wind shifts to the north, water pushes from South Bay onto the flats, inundating them to a depth of inches to no more than a few feet. Wind from the north in this area of the Gulf Coast is uncommon, but most often occurs during the fall and winter as northern cold fronts travel south and reverse the direction of the prevailing winds (CCBNEP-26, 1998). **Figure 7B** in **Attachment A** reveals an aerial image of the Site taken during a period of northern winds. This dynamic system is difficult to map, resulting in discrepancies between historic agency source mapping.

Kimley-Horn biologists visited the Site in May 2025 for the purpose of characterizing the ecosystems within the Site and gaining a better understanding of the baseline functional conditions. Based on observations and gathered data, the following ecosystems are found within the Site:

- Estuarine emergent wetlands
- Mangrove fringe
- Vegetated shallows/Submerged Aquatic Vegetation (SAV)
- Wind-tidal flats

- Uplands/Lomas

These communities are shown in **Figure 8: Existing Conditions Map** in **Attachment A**. Below is a summary table of communities identified on-site. Wetland data forms were completed in each community type and are included as **Attachment D**.

Table 2. Ecological Resource Types within Site

Resource Type	***Cowardin Classification***	***Area Preserved***
Estuarine Emergent Wetlands	*E2EM1P*	*39.45* acres
Wind-Tidal Flats	*E2USP/E2USN/E2AB1N/E2AB3M*	*952.06 acres*
Mangrove Fringe Wetlands	*E2SS3P*	*38.90 acres*
Vegetated Shallows/SAVs	*E1AB3L*	*1.36 acres*
Upland Lomas	*N/A*	*18.13 acres*
Total:		***1,049.9 Acres***

Threatened & Endangered Species

The USFWS Information for Planning and Consultation (IPaC) database and TPWD County List of Rare Species for Cameron County indicate that multiple protected species and species of concern have potential to occur within the Site vicinity. A review of the Texas Natural Diversity Database (TXNDD), received on May 27, 2025, revealed known occurrences of piping plover (*Charadrius melodus)* in and within 1.0 mile of the Site, and multiple known occurrences of ocelot (*Leopardus pardalis*) on lomas located just outside a 1.0-mile radius of the Site (**Attachment A, Figure 9: Protected Species Map**). A limited habitat assessment was conducted in May 2025 and concluded that potential habitat exists for multiple federally and state listed species. Below is a summary table of federal and state listed species identified as having potential habitat within the Site. The USFWS IPaC Report, TPWD County List of Rare Species for Cameron County, and the TXNDD Report for the Site are included in **Attachment E**.

Table 3. List of Protected Species with Potential Habitat within Site

Class	**Common Name**	**Scientific Name**	**Status**	**TXNDD Element Occurrences Near Site**
Mammals	Gulf Coast Jaguarundi	*Puma yagouaroundi cacomitli*	FE	No
	Ocelot	*Leopardus pardalis*	FE	Yes; 1.1 mi. west of Site
	West Indian Manatee	*Trichechus manatus*	FT	No
Birds	Northern Aplomado Falcon	*Falco femoralis septentrionalis*	FE	No
	Eastern Black Rail	*Laterallus jamaicensis* ssp. *jamaicensis*	FT	No
	Piping Plover[1]	*Charadrius meoldus*	FT	Yes; Within Site
	Rufa Red knot[1]	*Calidris canutus rufa*	FT	No*
	Reddish Egret	*Egretta rufrescens*	ST	No
	Rose-throated Becard	*Pachyramphus aglaiae*	ST	No
Reptiles	Texas Tortoise	*Gopherus berlandieri*	ST	No
	Texas Horned Lizard	*Phrynosoma cornutum*	ST	No
	Green Sea Turtle	*Chelonia mydas*	FT	No
	Kemp's Ridley Sea Turtle	*Lepidochelys kempii*	FE	No
	Loggerhead Sea Turtle	*Caretta caretta*	FT	No
Amphibians	Mexican Treefrog	*Smilisca baudinii*	ST	No
	White-Lipped Frog	*Leptodactylus fragilis*	ST	No
Plants	South Texas Ambrosia	*Ambrosia cheiranthifolia*	FE	No

[1]*Indicates designated or proposed critical habitat is present within the Site*

**Indicates species observed on Site on May 2, 2025; however, not within TXNDD database*

FE – Federally Endangered; FT – Federally Threatened; ST – State Threatened

Several species listed above have been selected as high-priority targets for local conservation efforts. Large tracts of land within the area have been dedicated to wildlife preserves with the goals of increasing suitable habitat and travel corridors for the ocelot and jaguarundi, amongst other species. Based on the TXNDD occurrence data, ocelots are known to utilize lomas within South Bay within the adjacent Lower Rio Grande Valley NWR. The proposed Site contains multiple upland lomas adjacent to those in the NWR, which likely provide ocelot habitat.

In addition, this tract lies directly within piping plover designated critical habitat and proposed rufa red knot critical habitat. Several rufa red knot were observed during the May 2025 Site reconnaissance. The Site lies within the Laguna Madre wetland complex, which has been designated by the Western Hemisphere Shorebird Network as a Site of International Importance and supports wintering habitat for up to 20% of the piping plover population (WHSRN, n.d.). The preservation of intertidal habitat anticipated on this Site is extremely valuable for these and many other federally protected shorebirds.

Cultural Resources
The Texas Historical Sites Atlas, provided by the Texas Historical Commission (THC), was reviewed for potential cultural resource sites within or near the proposed Site. No resources were found within the proposed Site.

A Desktop Archaeological Review was conducted for the Site and found that the Site has not undergone any previous cultural resource investigations, and that there are no previously recorded historic/cultural resources within the Site boundary. However, two historical markers and several historic sites related to the Mexican War and Civil War are within 1.0 mile of the Site. Based on a review of historic maps and aerial photographs, the Site has been minimally impacted.

Further archaeological or cultural resource investigations have not been performed at the time of this document. It is anticipated that Site conditions and protected resources will be confirmed through agency coordination during the agency comment period. Because the intended activity is preservation in perpetuity, impacts to historical and cultural resources are not anticipated.

Preservation Mitigation Approach:

The Rockhands Mitigation Bank will generate compensatory mitigation credits through preservation (by a Conservation Easement and long-term stewardship) of the mosaic of community types that occur on site, as shown in **Figure 8: Existing Conditions Map** in **Attachment A**. As shown, a 50-foot buffer will be established between the Bank and privately-owned land to the southeast. This buffer area, which is part of the Site parcel, will not generate mitigation credits but is considered necessary to further reduce the risk of the encroachment of development and associated potential land degradation on the Bank site. Additionally, a 140-foot corridor along the southern boundary of the parcel has been excluded from the mitigation area for the purpose of enabling utilities to be extended to Starbase and associated facilities in the future. Any disturbance within this area will be located outside the Mitigation Area and temporary in nature. Areas that have been established as state submerged lands by the GLO are also excluded from the Bank's credit generation.

The Bank will be established through coordination with the Interagency Review Team (IRT), led by the Galveston District of the USACE in accordance with the 2008 Compensatory Mitigation Rule (the "2008 Rule"). As set out the in the 2008 Rule, "preservation only" mitigation is appropriate when specific circumstances are demonstrated. Key factors for consideration in establishing preservation-based mitigation are included in 33 CFRR 332.3(h) and include Importance of Function, Contribution to Watershed,

Appropriateness and Practicability, Threat of Loss or Degradation, and Permanent Protection. These key factors and their applicability to the Site are discussed in the following paragraphs.

Importance of Functions
As presented above, the Rockhands Site is one of the largest remaining privately-owned properties in the internationally recognized important estuarine area. The mosaic of communities present within the Site provides important protected species habitat, water quality functions, recreational benefits as well as sequestration of nutrients and in particular coastal carbon.

As discussed above, the preservation of the Site will further protect a large area of designated piping plover critical habitat and proposed rufa red knot critical habitat. In *A Review of the Compensatory Mitigation in Estuarine and Marine Habitats,* the Environmental Protection Agency (EPA) states that several species of migratory shorebirds are in decline along the Gulf Coast due to loss of coastal wetlands, including tidal flats (EPA, 2023). Protection of these resources will add more than 1,000 acres of biologically important land to the contiguous, protected area in South Bay. The Bank Sponsor will steward the existing biological functions through long-term protection.

In addition to the important biological functions provided by the Site, these aquatic resources also serve a critical role in water quality improvement by filtering excess nutrients and suspended sediments before they are transported to the Gulf. The algal mats within the Site function as a cap on the substrate, retaining sediment and nutrients (EPA, 2023). Continuation of these critical water quality functions will be ensured through the long-term protection of the Site.

The mosaic of existing coastal communities found within the Site also provides important carbon sequestration and storage functions. The National Oceanic and Atmospheric Administration (NOAA) has a Coastal Blue Carbon program that has resulted in the inclusion of coastal wetlands in our understanding of the importance of these environments in managing greenhouse gas emissions (NOAA, 2024). Current studies indicate that coastal ecosystems, including mangroves, may store up to 10 times as much carbon as a tropical forest (Journal of Sea Research, 2024). The blue-green algae found on the wind tidal flats is a known fixer of atmospheric carbon dioxide through photosynthesis. Additionally, mangrove, emergent, and tidal flat coastal ecosystems are valuable carbon sinks due to the presence of anaerobic sediments in which carbon is stored. Site preservation will enable the continued growth of the Site algal mats and vegetation and continued contribution to natural carbon sequestration.

Furthermore, the Bank could provide opportunities to advance the limited research available on these complex coastal ecosystems. The Bank Sponsor is actively funding research programs to identify and develop tidal flat restoration methods through the HARTE Research Institute (Texas A&M University - Corpus Christi; *Developing Methods for Restoration of Cyanobacterial Mats on Wind-Tidal Flats*). Establishment of this Bank would preserve a potential reference Site in perpetuity, which is an important component to advancing wind-tidal flat restoration research. The Bank Sponsor may install passive monitoring equipment within the Site (e.g. a weather station, tide gauge(s), wildlife cameras, etc.) with long-term efforts focused on wind-tidal flat restoration and better scientific monitoring within these ecosystems.

Due to the size and location of the Site within the watershed, the important ecological functions provided by the resources on Site, and the Bank providing additional opportunity for monitoring and further developing restoration methodology, the development of this Mitigation Bank will preserve resources that provide important physical, chemical, and biological functions for the overall watershed.

Contribution to Watershed
The Site includes over 1,000 acres of undeveloped land and constitutes an important linkage between

federally and state-protected lands and South Bay. Preservation of the Site will enable important ecological processes, such as carbon sequestration, flood storage and buffering, nutrient cycling, and habitat for protected species, to continue in perpetuity without encroachment from common and permissible private land uses, including tourism, transit, development, and oil and gas exploration.

Due to the size and location of the Site within the watershed, the important ecological processes provided by the resources on Site, and the perpetual protection and stewardship proposed, the development of this Mitigation Bank will contribute significantly to the ecological sustainability of the watershed.

Appropriateness and Practicability
The Site is under single ownership by a private entity. Such an entity is willing and able to perform the activities described herein. In addition, there are no mitigation banks within the proposed Bank Service Area. As discussed above in detail, the Site is one of the largest remaining privately-owned properties in the internationally recognized important estuarine area.

Furthermore, little is known about tidal flat enhancement and restoration activities, and wind-tidal flat restoration or enhancement projects have been difficult to successfully implement (EPA, 2023). This is made evident by the on-going HARTE Institute research projects funded by the RESTORE Act and the Bank Sponsor, including the *Texas Wind-Tidal Flat Restoration Project* and *Developing Methods for Restoration of Cyanobacterial Mats on Wind-Tidal Flats* (Texas A&M, 2023, 2024). Historically, wind-tidal flat projects have sought to revegetate these areas through plantings or to restore hydraulic regimes through the removal of fill or other artificial barriers. Revegetation would result in the conversion of naturally occurring and ecologically important wind-tidal flat resources to herbaceous wetlands, which is not supported by the 2008 Rule. Additionally, the Applicant has conducted a thorough Mitigation Site Search and Analysis within the South Laguna Madre Watershed, evaluating more than 650 individual parcels for mitigation feasibility with a focus on wind-tidal flat restoration, enhancement, and preservation. No technically or logistically practicable wind-tidal flat restoration or enhancement sites were identified in this analysis.

As supported by the Memorandum of Agreement between the Department of the Army and the EPA Concerning Mitigation Sequence for Wetlands in Alaska, preservation may be appropriate when restoring, enhancing, or establishing wetlands may not be practicable due to limited availability of sites and/or technical or logistical limitations. In addition, the Galveston District of the USACE has established that preservation-only mitigation is appropriate and practicable on a case-by-case basis through the approval of the Lost Creek Brake Mitigation Bank (SWG-2014-00895) as well as numerous preservation-only Permittee Responsible Mitigation plans, including one immediately adjacent to the Site. For these reasons, the development of this preservation-only Mitigation Bank is appropriate and practicable pursuant to the 2008 Compensatory Mitigation Rule.

Threat of Loss or Degradation
As demonstrated by the USACE's request for a buffer area along the eastern boundary between privately owned parcels and the Bank, development pressures are evident in and around the Site (**Attachment A, Figure 10: Developmental Threats Map)**. The effects of development encroachment, such as increased recreational use, construction of utilities, and pollution (including light), are threats to the existing ecological conditions and functions of the Bank site. The Bank Sponsor will provide funding for enforcement of the Conservation Easement as well as long term management.

The southeastern boundary of the Site borders multiple privately-owned properties and is proximate to the development area of Starbase. This newly incorporated municipality is rapidly developing as a community, business center, and manufacturing hub, as well as a launch location for Space Exploration Technologies, Inc. (SpaceX). As the population of Starbase increases, construction of recreational and transportation amenities

is likely, including amenities such as pile supported structures (boardwalks, fishing piers, boat docks) which could infringe on the Site and may not require authorization from the USACE.

The western boundary of the Site borders land owned by the Port of Brownsville (the Port), a major center for intermodal transportation and industrial development. According to the Port's website, the Port owns approximately 40,000 acres of land available for development, which includes the area immediately west of the Site.

Additionally, a review of the Railroad Commission of Texas (RRC) Oil and Gas GIS Application indicates that there has been substantial natural gas exploration within the immediate vicinity of the Site as well as numerous active/permitted gas wells in the larger Laguna Madre complex (RRC, 2025). The mineral rights for the Bank parcel are held and leased by the GLO. The mineral rights within the parcel were under an active lease from the GLO until 2011. Long-term protection of the Bank parcel through a conservation easement would help ensure no additional oil and gas drilling activities would occur within the Site.

The preservation of the Site will provide an important stopping point for development pressures encroaching further towards South Bay. Under the current regulatory conditions, energy demands, and the pressure for development, encroachment into this privately owned land would be likely. Preservation of the Site will not only protect the specific acreage, but it will also enable increased public awareness and understanding of an ecological area that has been recognized as having worldwide significance.

Establishment and Operation:

It is anticipated that the proposed Site will generate wind-tidal flat credits, estuarine wetland credits, and vegetated shallows/SAV credits (**Attachment A, Figure 11: Proposed Mitigation Concept Map**). As discussed with the USACE, there are no functional assessments (such as HGM or iHGM) that are applicable to the resource types and locations within the Site, as such, mitigation credits will be quantified in accordance with the ecological condition of the Site and utilizing the Ratio Method.

The Sponsor proposes that mitigation credits will be established by community type at a ratio of 7 acres per credit. It is anticipated that mitigation credits will be used to compensate for impacts to the same resource type to the extent practicable, except on a case-by-case-basis as determined appropriate by the permitting agency. A table showing the mitigation credits to be generated by the Bank is shown below:

Resource Type	***Area Preserved***	***Credits Generated (7:1 Ratio)***
Estuarine Emergent Wetlands	*39.45 acres*	*5.6 credits*
Wind-Tidal Flats	*952.06 acres*	*136.0 credits*
Mangrove Fringe Wetlands	*38.90 acres*	*5.5 credits*
Vegetated Shallows/SAVs	*1.36 acres*	*0.2 credits*
Upland Lomas	*18.13 acres*	*-*
Total:	***1,049.9 acres***	***147.3 credits***

Proposed Service Area(s):

The proposed Bank will provide compensatory mitigation credits for the South Laguna Madre Tidal Service Area (2022 SWG Pre-Approved Tidal Service Area) as well as the South Bay area located east of the South Laguna Madre Tidal Service Area east to Brazos Island and south to the Rio Grande (**Attachment A, Figure 12: Proposed Service Area Map**). It is understood that mitigation from the Bank may be used to provide compensation for permitted impacts outside of the described service area on a case-by-case basis.

General Need and Technical Feasibility:

This Bank is proposed during a period of expanding development within a watershed with no available mitigation credits. These credits are necessary to offset the losses that are anticipated from continued growth in the region. Most of the surrounding portions of land that are not already conserved are proposed for future residential and commercial use. In addition, industrial properties in the area are expanding rapidly. Preserving this Site prior to development in the area will provide mitigation credits for future growth and positively impact habitat far beyond its footprint.

As discussed above in the Preservation Mitigation Approach section, the proposed Rockhands Site will preserve a mosaic of ecologically significant and threatened ecosystems in perpetuity. Because the Site is under single ownership, such preservation is feasible. Due to the significant ecological community, proximity to conserved lands, and total acreage, preservation of this Site will provide substantial long-term benefit to the bi-national Laguna Madre wetland complex. Preservation of these aquatic resource types within this critical watershed is a high priority.

Easements and Encumbrances:

The Bank Sponsor owns the property that will comprise the Mitigation Bank in fee simple. No title encumbrances have been identified to date. The following title documents have been included in **Attachment F**:

- A 100-Year Title search
- An attorney's Opinion of Title of the title search which addresses the scheduled exceptions to the title. Each exception is either cleared by the opinion or an explanation is provided as to how the exception is a permissible use in the Mitigation Bank
- A legal survey of the proposed Mitigation Bank Site

Proposed Ownership Arrangement and Long-term Management Strategy:

Prior to the initial credit release, the Rockhands Mitigation Bank will be protected in perpetuity by a conservation easement in a form acceptable to the Galveston District of the USACE. The City of Starbase, through its Conservation Committee, intends to be the conservation easement holder. The City will issue a Letter of Support confirming their intent to be the holder of the conservation easement. The Letter of Support is expected to be signed after vote by the City Commission during their August 20 meeting. The Sponsor will provide the USACE with a copy of the Letter of Support as soon as the final version is received. The Sponsor will provide funding in a sufficient amount to carry out the obligations of the holder in perpetuity.

The Bank Sponsor performed a shoreline survey to identify the extent of state submerged land within the Site per a request by the GLO. The attached figures and survey reflect the identified submerged lands. The Site's boundaries and mitigation credit generation depict the property owned by SpaceX and State Submerged Lands have been excluded.

Long-term management, which begins following regulatory close out of the Site, will be carried out by an appropriate conservation position with the City of Starbase, which may be the easement holder. The specific long-term management and maintenance activities will be determined during the development of the Mitigation Banking Instrument. The activities will be sufficient to maintain the ecological processes and

protection of the Site in perpetuity. The Bank Sponsor will provide funding for the same.

Qualifications of Sponsor:

The Bank Sponsor employs scientists, engineers, and regulatory specialists with extensive experience in the development of complex projects. Brandon Conroy, Ph.D., will be the lead contact for the Bank Sponsor. Dr. Conroy's experience includes seven and a half years as a Corps of Engineers regulatory project manager in Jacksonville District. During which time, in addition to Section 404 and Section 10 permit review, he served as a science advisee detailed to Headquarters, two details as Cocoa Section Chief, regulatory project manager for the Miccosukee Tribe of Indians of Florida and the Seminole Tribe of Florida, and one of the district subject matter experts on Section 7 ESA consultation with USFWS and National Marine Fisheries Service (NMFS). In addition, he was an adjunct professor at Florida Institute of Technology and taught undergraduate and graduate Environmental Law and Policy. His doctorate is from Virginia Institute of Marine Science and focused on coastal and oceanic plankton dynamics resulting in multiple peer reviewed publications and still serves as a journal referee on academic journals.

Assurance of Water Rights:

The proposed Site does not have existing water rights encumbrances as it is the southernmost extent of private land and waters in Texas. As stated above, the Bank Sponsor has contracted a licensed surveyor to perform a shoreline survey within the Site in accordance with GLO rules and regulations. Portions of the Site containing State Submerged Lands have been excluded from the proposed Mitigation Area.

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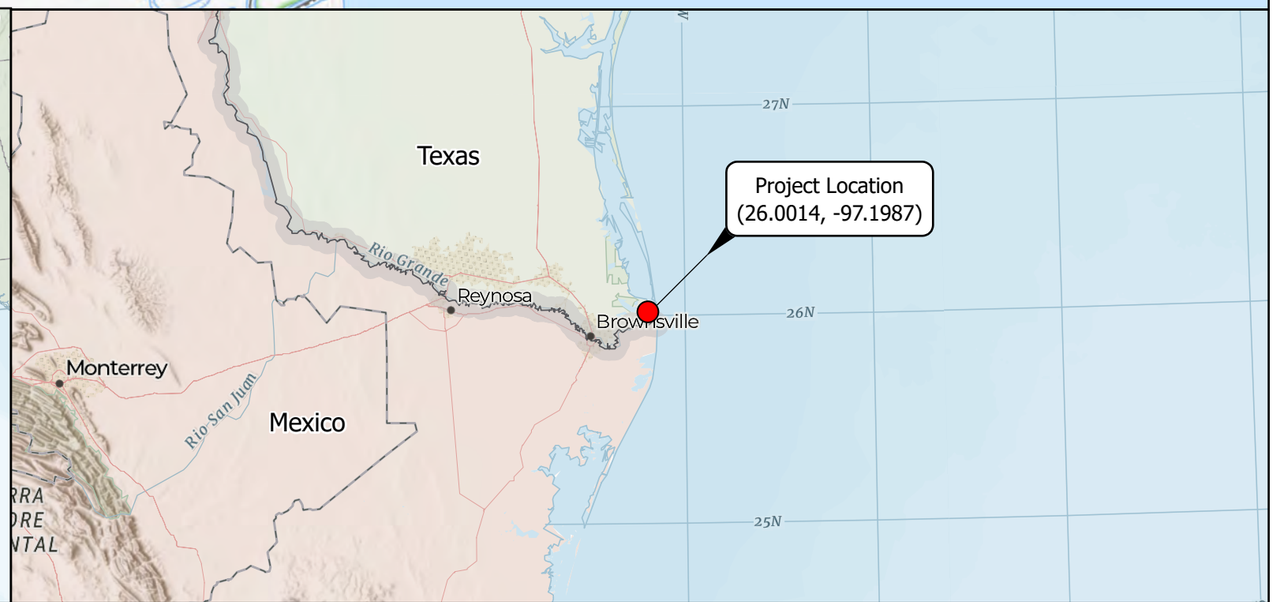
Attachment A

Rockhands Figures



Prepared for:

SPACEX

Prepared by:

Kimley»Horn

Figure 1. Vicinity Map
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025

Prepared for:

SPACEX

Prepared by:

Kimley»Horn

Figure 2. Adjacent Properties
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025

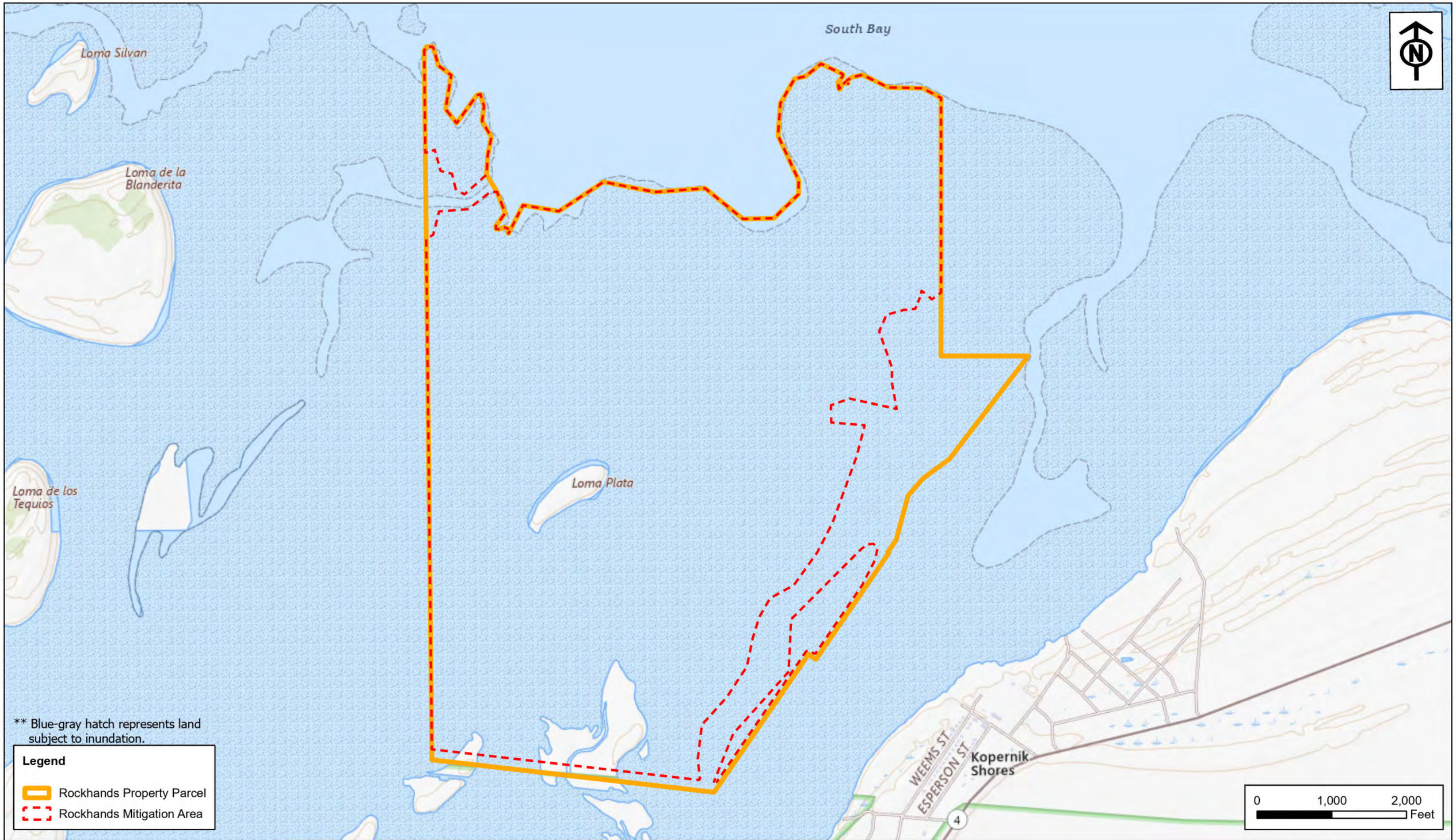


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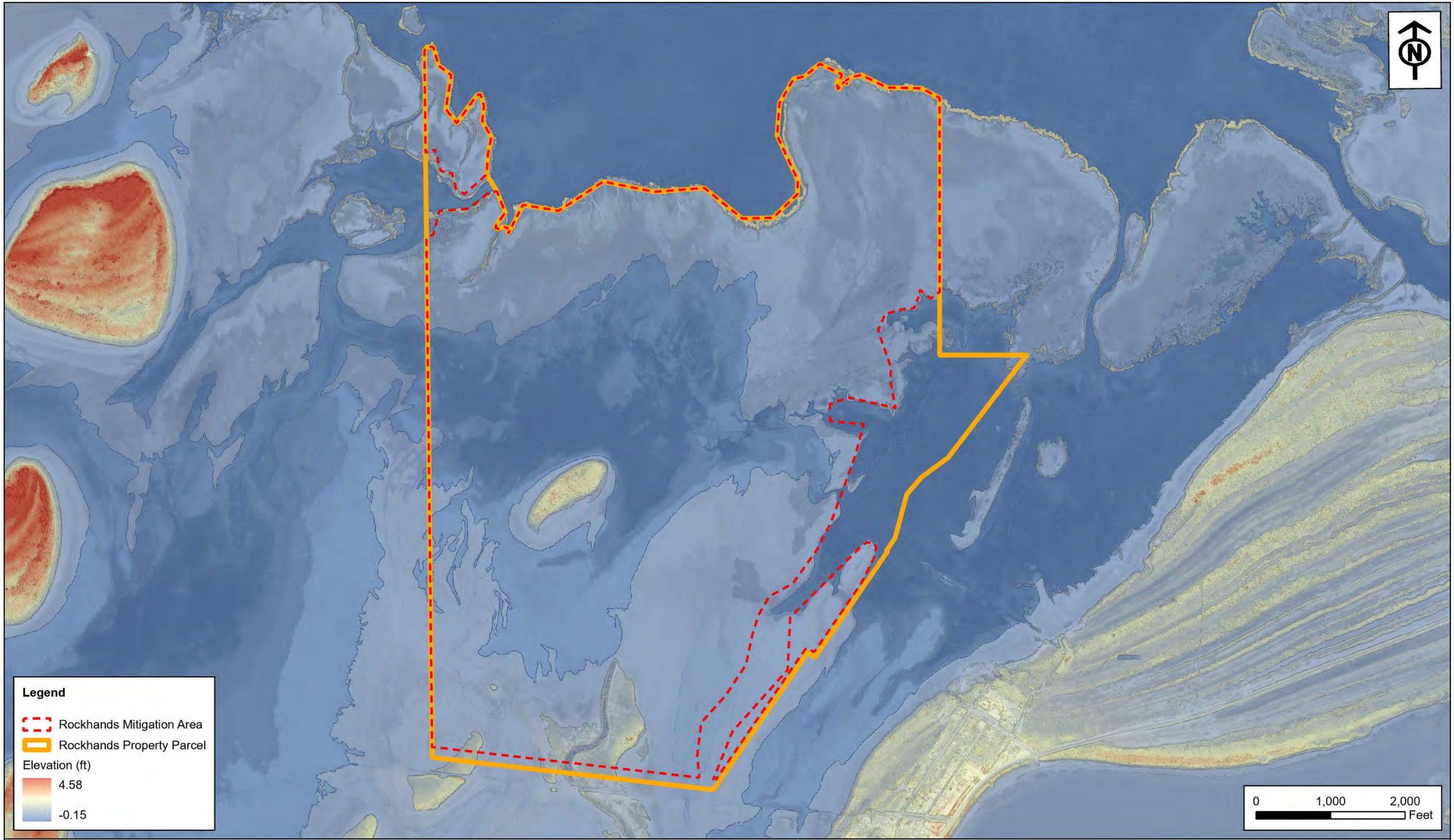
Figure 3. USGS Topographic Map
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025



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Kimley»Horn

Figure 4. LiDAR Imagery Map
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025

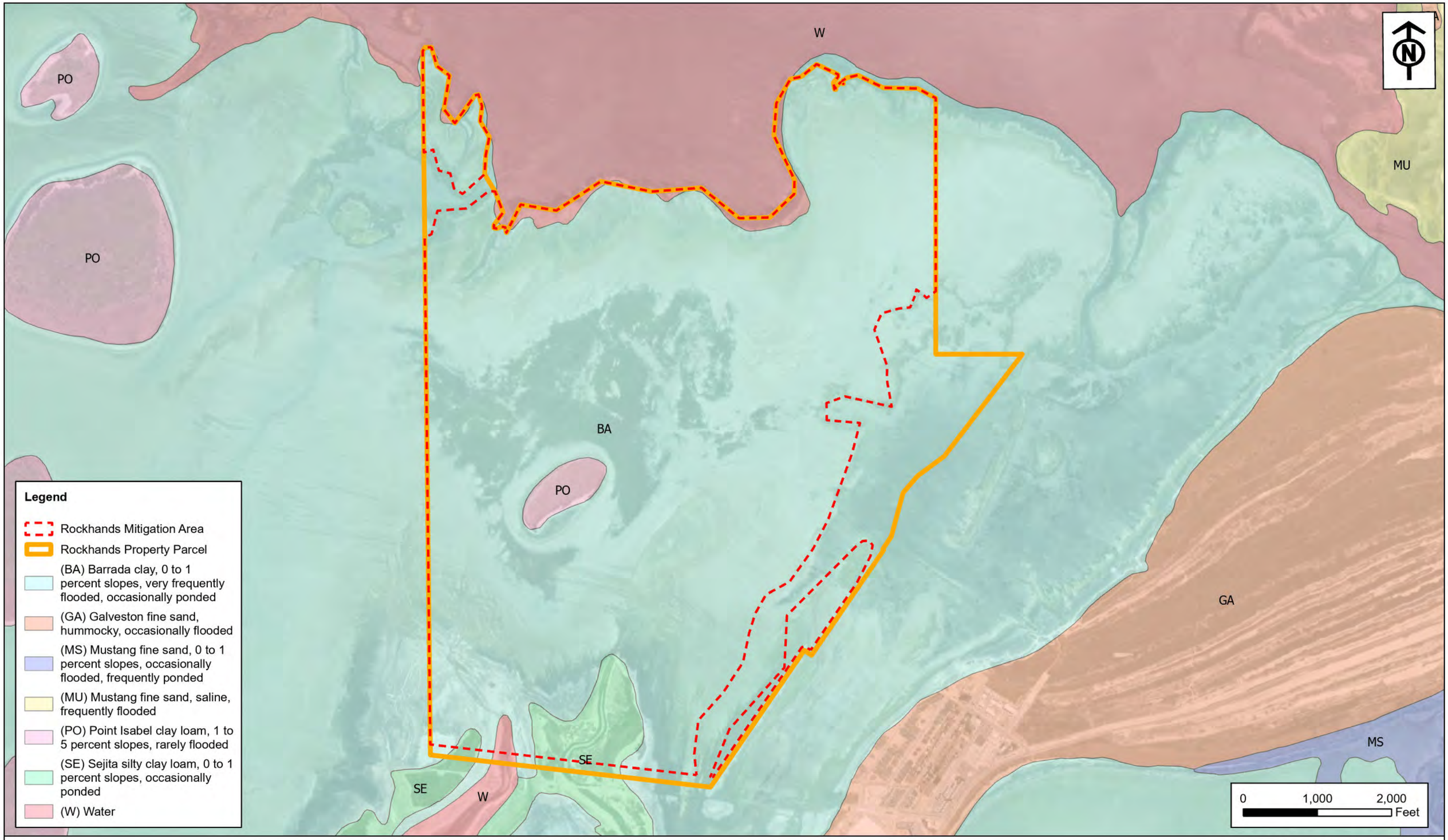

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Figure 5. USDA NRCS Soil Survey Map
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025

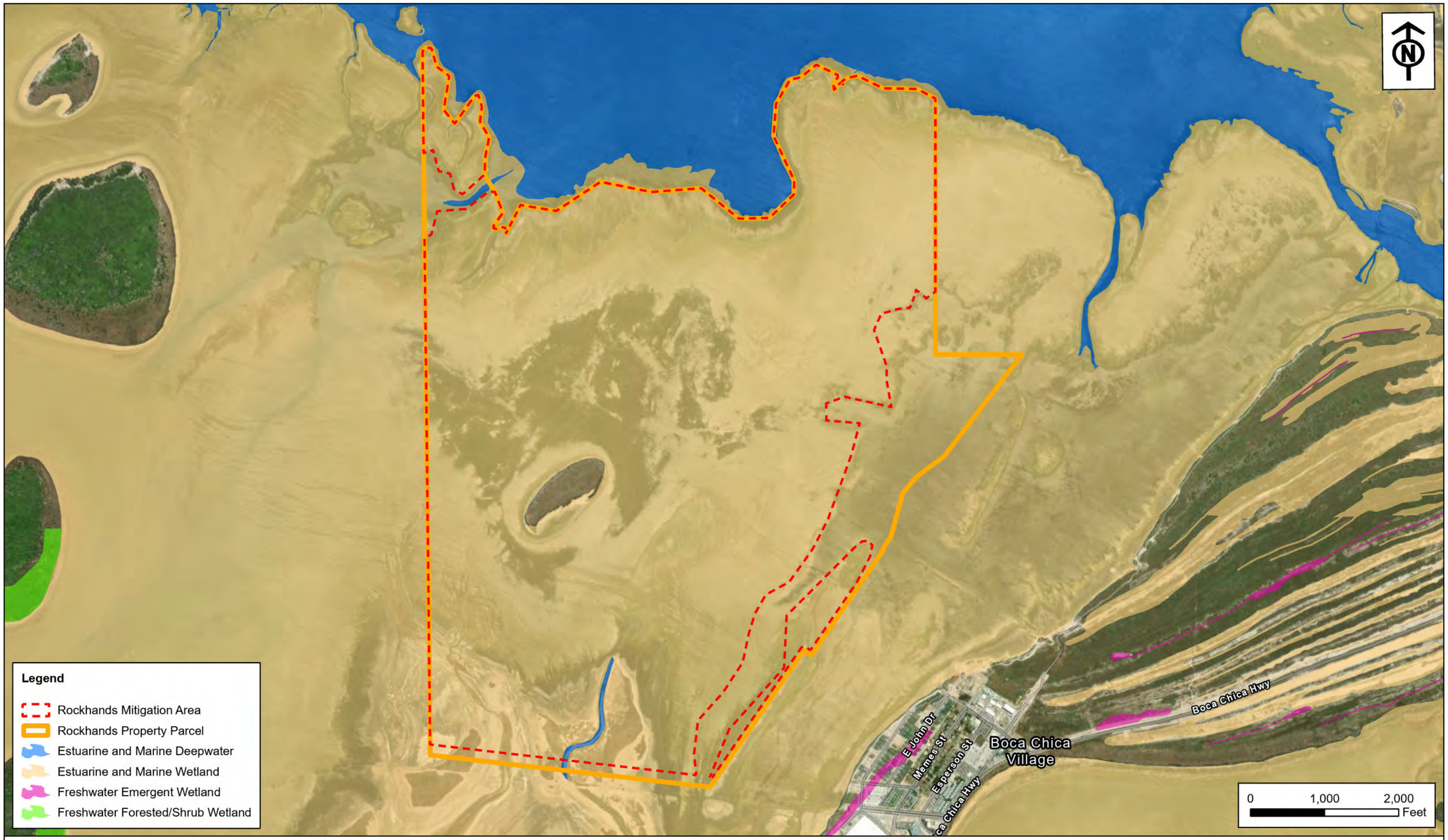

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Figure 6. National Wetlands Inventory (NWI) Map
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025

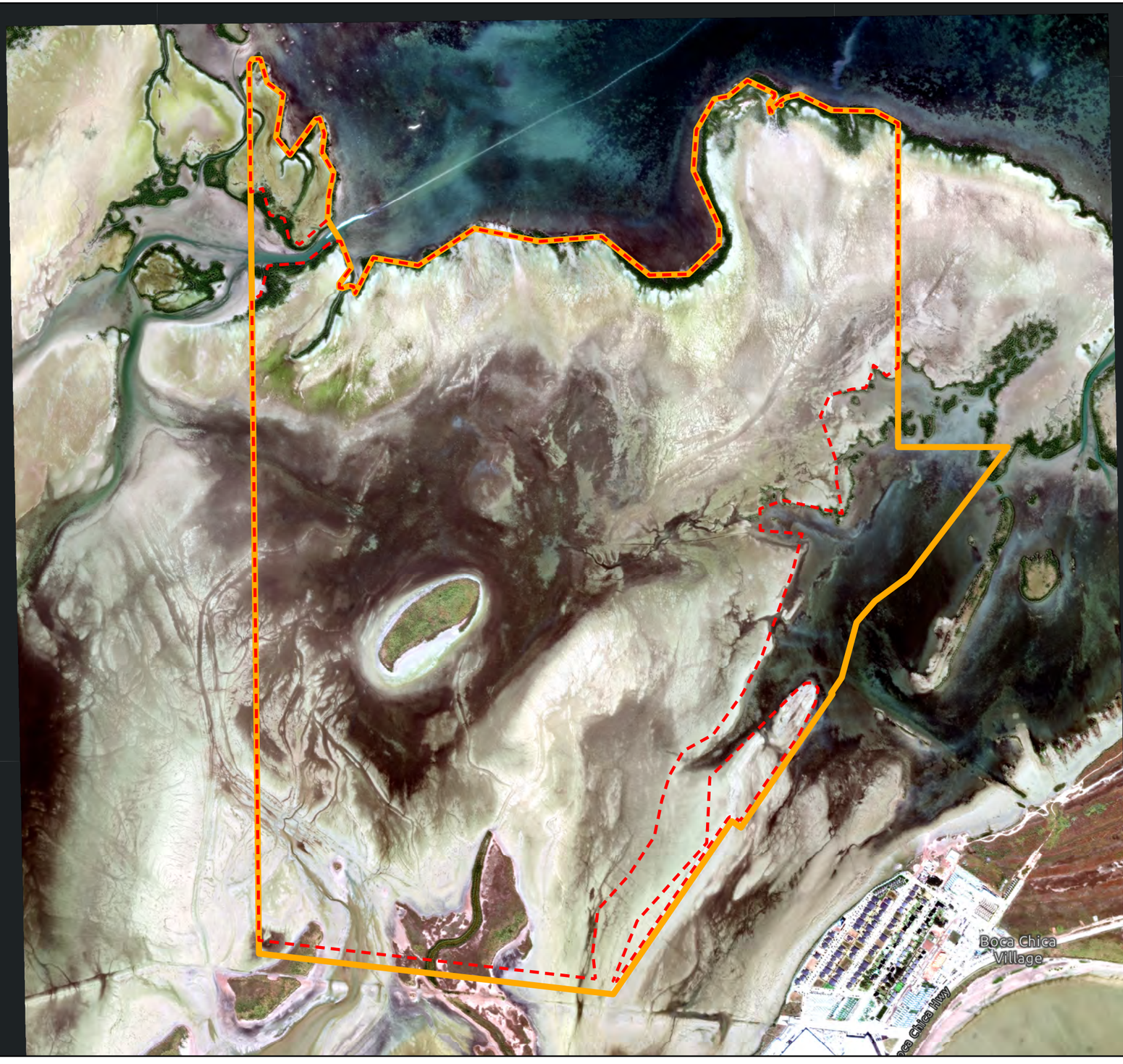

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Figure 7A. Aerial Imagery - Exposed (February 2025)
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025

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Figure 7B. Aerial Imagery - Inundated (May 2025)
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025

Legend

- Rockhands Mitigation Area (1,050 AC)
- Rockhands Property Parcel (1,200 AC)
- Estuarine Emergent (39.45 AC)
- Mangrove Fringe (38.90 AC)
- Vegetated Shallows / SAV (1.36 AC)
- Wind-Tidal Flat (952.06 AC)
- Upland (18.13 AC)

0 1,000 2,000 Feet

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Figure 8. Existing Conditions Map
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025

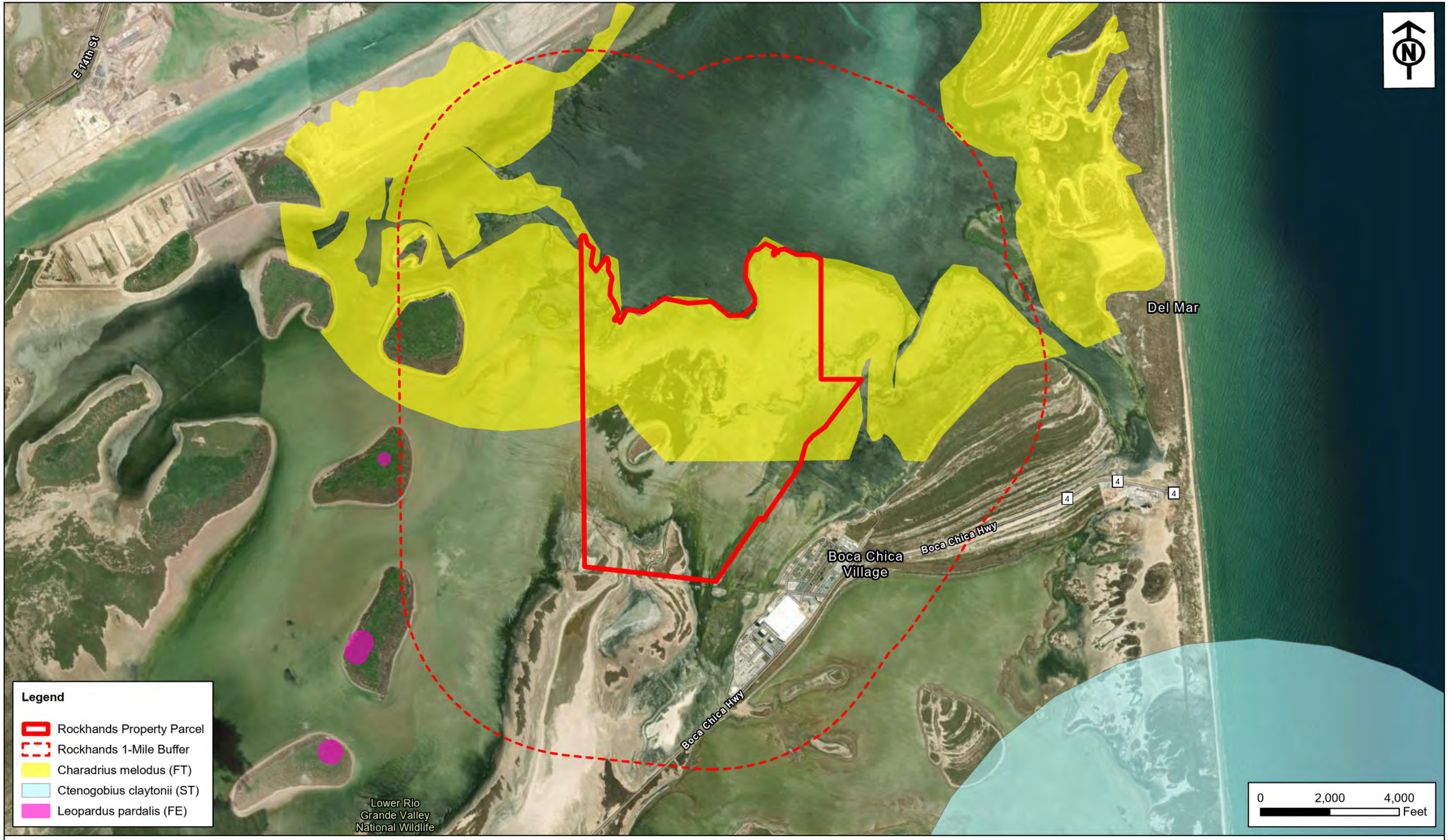

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Figure 9. TXNDD Element Occurrence Records
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025

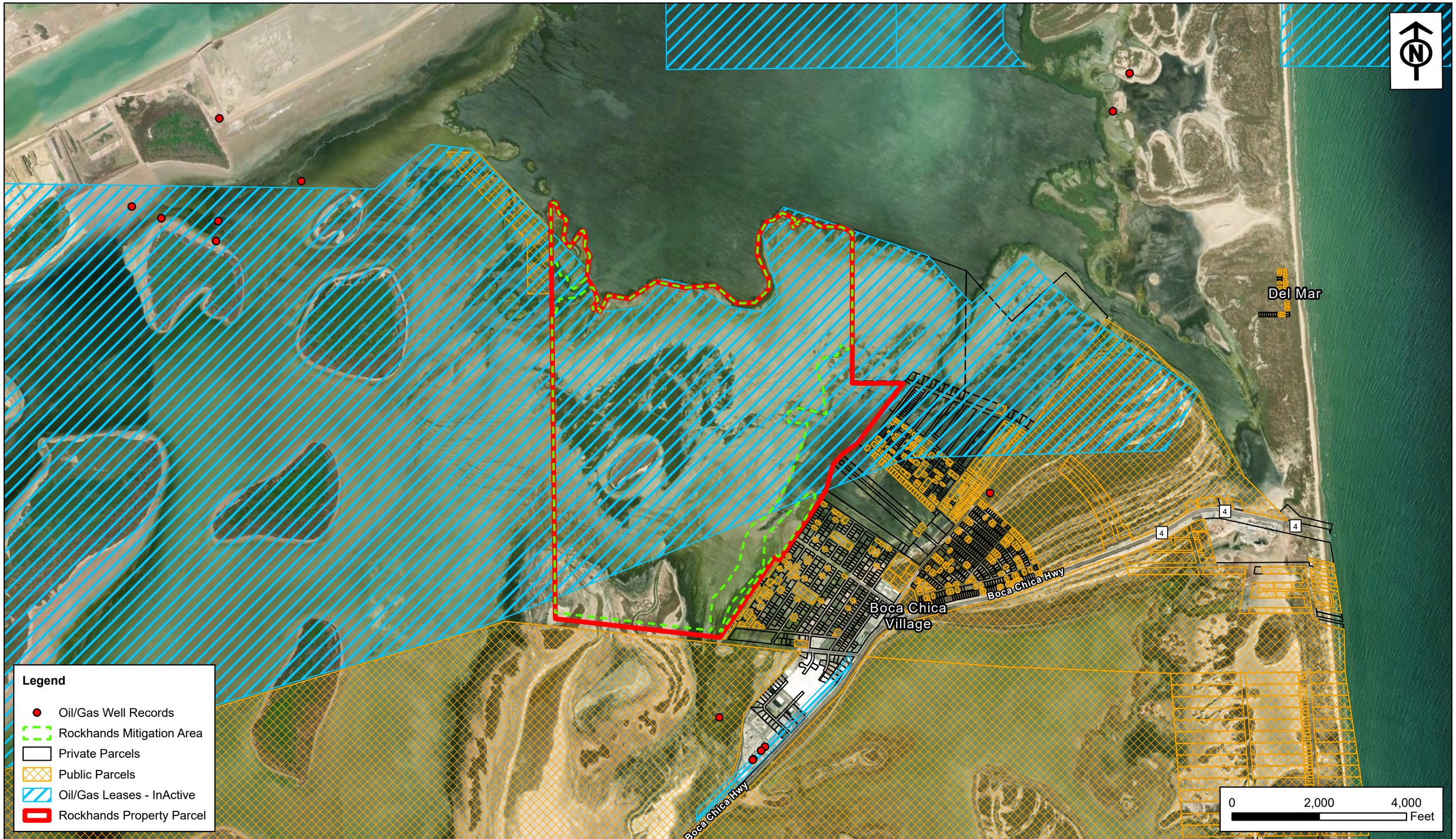

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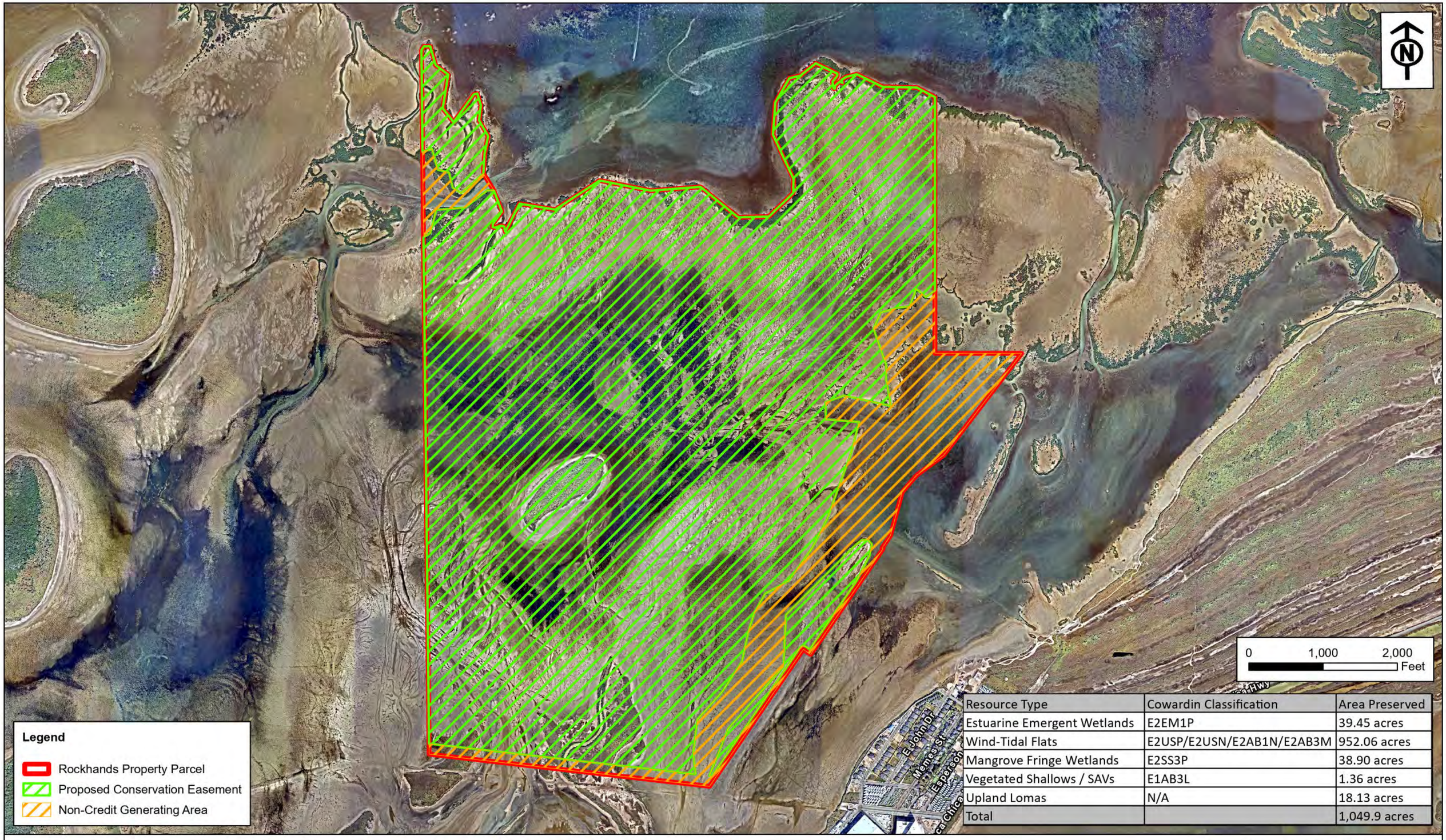
Figure 10. Developmental Threats
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025

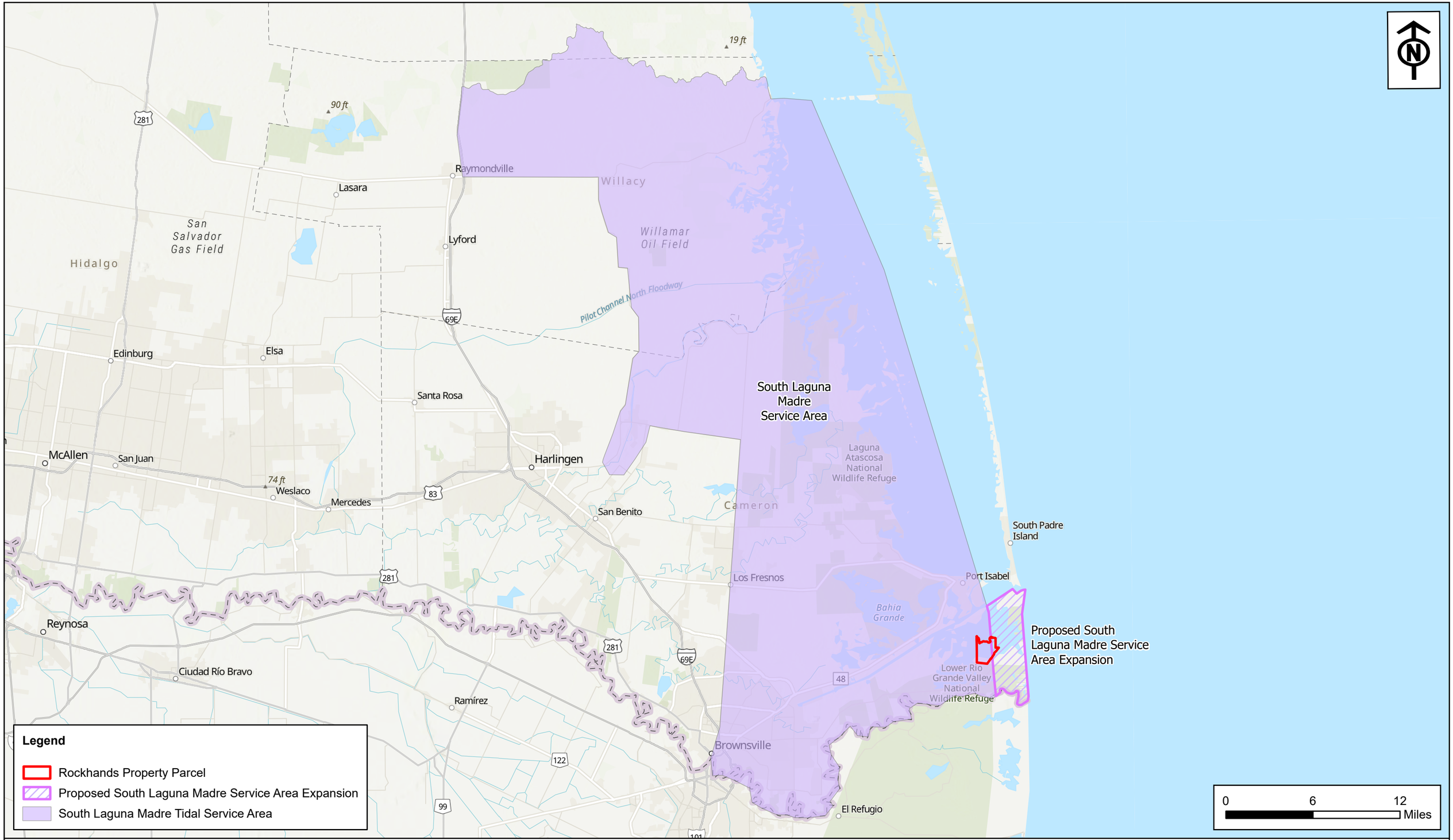


Resource Type	Cowardin Classification	Area Preserved
Estuarine Emergent Wetlands	E2EM1P	39.45 acres
Wind-Tidal Flats	E2USP/E2USN/E2AB1N/E2AB3M	952.06 acres
Mangrove Fringe Wetlands	E2SS3P	38.90 acres
Vegetated Shallows / SAVs	E1AB3L	1.36 acres
Upland Lomas	N/A	18.13 acres
Total		1,049.9 acres

Prepared for: SPACEX

Prepared by: Kimley»Horn

Figure 11. Proposed Mitigation Concept Map
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025



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Prepared by:

Kimley»Horn

Figure 12. Service Area
Rockhands Mitigation Bank
SWG-2025-00405
Cameron County, Texas
August 2025

Attachment B

Rockhands Photo Pages

Photo 1 – This photo depicts a typical view of the transition from upland lomas to wind-tidal flats within the Site.

Photo 2 – This photo depicts a typical view of the blue-green algal crust within the wind-tidal flats on Site.

Photo 3 – This photo depicts a typical view of an emergent wetland within the Site.

Photo 4 – This photo depicts a typical view of an emergent wetland and mangrove fringe within the Site.

Photo 5 – This photo depicts the mangrove fringe along the linear open water feature in the southeastern portion of the Site.

Photo 6 – This photo depicts a typical view of the transition between upland lomas and wind-tidal flat on Site.

Photo 7 – This photo depicts a typical view of the upland lomas within the Site.

Photo 8 – This photo depicts a typical view of the emergent wetlands within the Site.

Photo 9 – This photo depicts a typical view of wind-tidal flats within the Site, taken during northern wind phase pushing water onto the flats from South Bay.

Photo 10 – This photo depicts a wind-tidal flat as it transitions into mangrove fringe in the northwestern reaches of the Site.

Photo 11 – This photo depicts a typical view of the mangrove fringe transition along the northern boundary of the Site.

Photo 12 – This photo depicts the typical transition between uplands, emergent wetland fringes, and wind-tidal flats within the Site around Loma Plata.

Photo 13 – This photo depicts a typical view of the wind-tidal flats within the Site after <1 day of southernly winds.

Photo 14 – This photo depicts a typical view of the mangrove fringe and open water transition within the Site.

Photo 15 – This photo depicts a typical view of the Site facing southeast towards Starbase.

Photo 16 – This photo depicts a typical view of the wind-tidal flats with a northernly wind.

Photo 17 – This photo depicts the typical soil profile found in the emergent wetlands within the Site.

Photo 18 – This photo depicts the typical soil profile found in the wind tidal flats within the Site.

Attachment C

NRCS Soil Resource Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cameron County, Texas

Rockhands_Mitigation

May 29, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

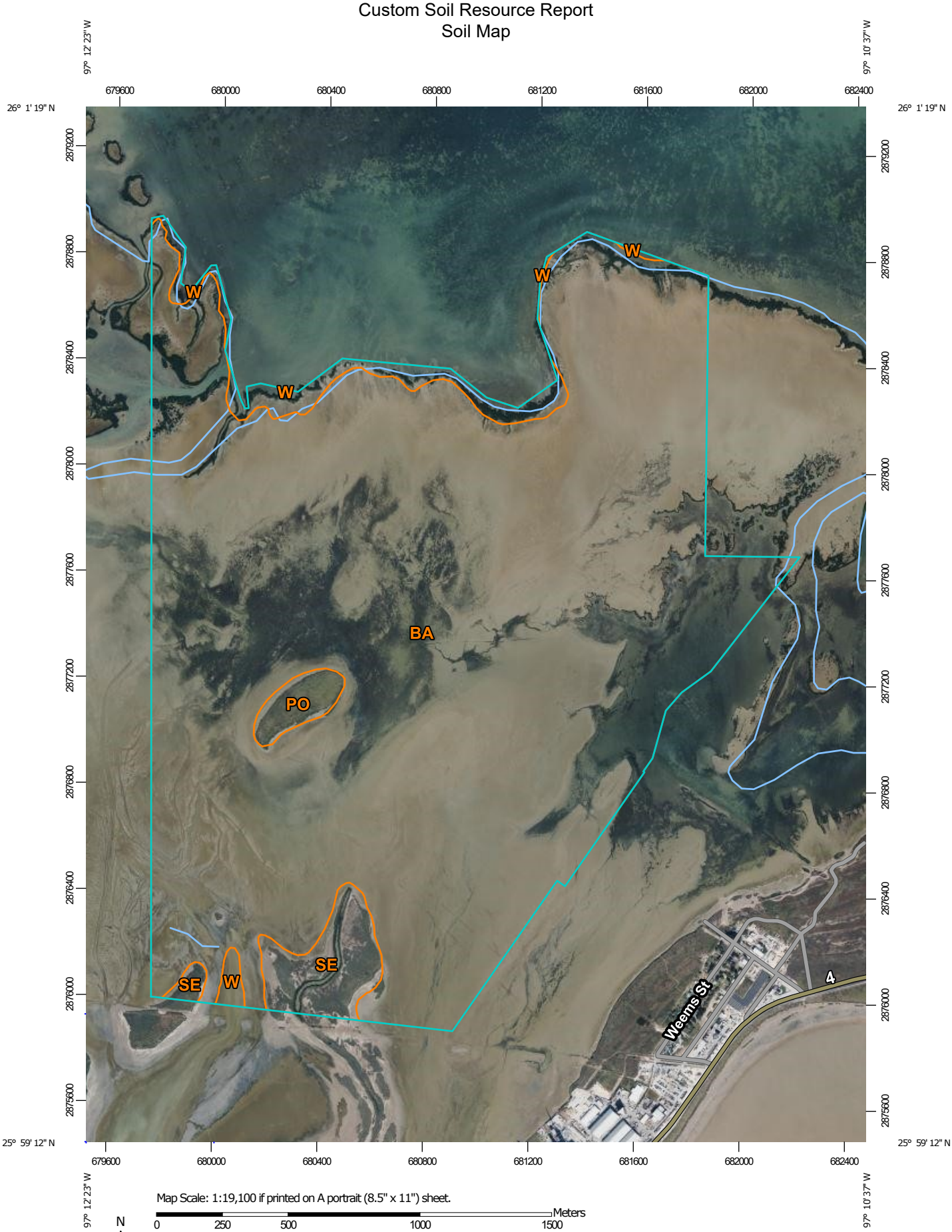
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:19,100 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 250 500 1000 1500

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cameron County, Texas
Survey Area Data: Version 21, Aug 30, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 21, 2021—Mar 2, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BA	Barrada clay, 0 to 1 percent slopes, very frequently flooded, occasionally ponded	1,143.8	92.9%
PO	Point Isabel clay loam, 1 to 5 percent slopes, rarely flooded	13.7	1.1%
SE	Sejita silty clay loam, 0 to 1 percent slopes, occasionally ponded	39.0	3.2%
W	Water	34.5	2.8%
Totals for Area of Interest		**1,230.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cameron County, Texas

BA—Barrada clay, 0 to 1 percent slopes, very frequently flooded, occasionally ponded

Map Unit Setting

National map unit symbol: 2v3d2
Elevation: 0 to 20 feet
Mean annual precipitation: 24 to 39 inches
Mean annual air temperature: 72 to 74 degrees F
Frost-free period: 300 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Barrada and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Barrada

Setting

Landform: Wind-tidal flats
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Clayey alluvium derived from igneous, metamorphic and sedimentary rock over loamy alluvium derived from igneous, metamorphic and sedimentary rock

Typical profile

Anzg - 0 to 4 inches: clay
BCnzg - 4 to 52 inches: clay
2BCnzg - 52 to 80 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 36 inches
Frequency of flooding: Very frequent
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Strongly saline (30.0 to 99.0 mmhos/cm)
Sodium adsorption ratio, maximum: 99.0
Available water supply, 0 to 60 inches: Very low (about 0.6 inches)

Interpretive groups

Land capability classification (irrigated): 8
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Ecological site: R150BY716TX - Wind Tidal Flat
Hydric soil rating: Yes

Minor Components

Arrada

Percent of map unit: 5 percent
Landform: Wind-tidal flats, wind-tidal flats
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R150BY716TX - Wind Tidal Flat
Hydric soil rating: Yes

Sauz

Percent of map unit: 2 percent
Landform: Sand sheets
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R083EY014TX - Sandy Flat
Hydric soil rating: Yes

Lomalta

Percent of map unit: 2 percent
Landform: Closed depressions
Landform position (three-dimensional): Dip
Microfeatures of landform position: Gilgai
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R150BY652TX - Southern Salt Marsh
Hydric soil rating: Yes

Lalinda

Percent of map unit: 1 percent
Landform: Blowouts
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R150BY647TX - Coastal Ridge
Hydric soil rating: No

PO—Point Isabel clay loam, 1 to 5 percent slopes, rarely flooded

Map Unit Setting

National map unit symbol: 2vv3m
Elevation: 0 to 30 feet
Mean annual precipitation: 25 to 30 inches
Mean annual air temperature: 72 to 75 degrees F
Frost-free period: 300 to 350 days
Farmland classification: Not prime farmland

Map Unit Composition

Point isabel and similar soils: 90 percent
Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Point Isabel

Setting

Landform: Dunes
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Holocene age clayey eolian deposits derived from sedimentary rock

Typical profile

A1 - 0 to 8 inches: clay loam
A2 - 8 to 12 inches: clay
Bkn - 12 to 37 inches: clay loam
Bknb - 37 to 80 inches: clay

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Slightly saline to strongly saline (4.0 to 40.0 mmhos/cm)
Sodium adsorption ratio, maximum: 95.0
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R150BY647TX - Coastal Ridge
Hydric soil rating: No

Minor Components

Lomalta

Percent of map unit: 5 percent
Landform: Tidal flats
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R150BY652TX - Southern Salt Marsh
Hydric soil rating: Yes

Sejita

Percent of map unit: 3 percent
Landform: Flats
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear

Ecological site: R150BY651TX - Salt Flat
Hydric soil rating: Yes

Barrada

Percent of map unit: 2 percent
Landform: Wind-tidal flats
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R150BY716TX - Wind Tidal Flat
Hydric soil rating: Yes

SE—Sejita silty clay loam, 0 to 1 percent slopes, occasionally ponded

Map Unit Setting

National map unit symbol: d6fp
Elevation: 0 to 10 feet
Mean annual precipitation: 28 to 32 inches
Mean annual air temperature: 72 to 73 degrees F
Frost-free period: 320 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Sejita and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sejita

Setting

Landform: Flats
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy eolian deposits and/or alluvium of quaternary age

Typical profile

H1 - 0 to 20 inches: silty clay loam
H2 - 20 to 60 inches: stratified silt loam to silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 10 percent

Gypsum, maximum content: 5 percent
Maximum salinity: Strongly saline (35.0 to 70.0 mmhos/cm)
Sodium adsorption ratio, maximum: 40.0
Available water supply, 0 to 60 inches: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C/D
Ecological site: R150BY651TX - Salt Flat
Hydric soil rating: Yes

Minor Components

Lomalta

Percent of map unit: 5 percent
Landform: Tidal flats
Ecological site: R150BY652TX - Southern Salt Marsh
Hydric soil rating: Yes

Latina

Percent of map unit: 4 percent
Landform: Marine terraces
Ecological site: R150BY651TX - Salt Flat
Hydric soil rating: Yes

Barrada

Percent of map unit: 1 percent
Landform: Tidal flats
Ecological site: R150BY716TX - Wind Tidal Flat
Hydric soil rating: Yes

W—Water

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: No

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Attachment D

U.S. Army Corps of Engineers
Wetland Data Forms

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Rockhands City/County: Cameron County Sampling Date: 2025-05-05

Applicant/Owner: State: Texas Sampling Point: EMW

Investigator(s): WTS /BL / BS / JL Section, Township, Range:

Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): T 150B Lat: 25.99471 Long: -97.196496 Datum: NAD 83

Soil Map Unit Name: SE - Sejita silty clay loam, 0 to 1 percent slopes, occasionally ponded NWI classification: E2EM1P

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☑ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present? Yes ____ No ✔ Depth (inches): ____

Water Table Present? Yes ____ No ✔ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ✔ No ____ Depth (inches): 12

Wetland Hydrology Present? Yes ✔ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: EMW

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 30 ft r)			
1. Batis maritima	30	✔	OBL
2. Salicornia bigelovii	20	✔	OBL
3. Monanthochloe littoralis	5		OBL
4. Borrichia frutescens	5		OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60 = Total Cover		
50% of total cover: 30.00	20% of total cover: 12.00		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	60 (A)		60 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

- ☑ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☑ 3 - Prevalence Index is ≤3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✔ No

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: EMW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 4/2	100					Loam	
4 - 8	10YR 5/2	100					Clay Loam	
8 - 24	10YR 5/2	95	10YR 5/8	5	C	M	Clay Loam	
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Rockhands City/County: Cameron County Sampling Date: 2025-05-20

Applicant/Owner: State: Texas Sampling Point: MFW

Investigator(s): WTS /BL / BS / JL Section, Township, Range:

Landform (hillslope, terrace, etc.): Fringe Local relief (concave, convex, none): Linear Slope (%): 3

Subregion (LRR or MLRA): T 150B Lat: 25.995267 Long: -97.196463 Datum: WGS 84

Soil Map Unit Name: SE - Sejita silty clay loam, 0 to 1 percent slopes, occasionally ponded NWI classification: E2AB1N

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☑ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☑ FAC-Neutral Test (D5)
- ☐ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No ✔	Depth (inches): _____
Water Table Present?	Yes _____	No ✔	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): 10

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: MFW

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 30 ft r)			
1. Avicennia germinans	50	✔	OBL
2. Borrichia frutescens	35	✔	OBL
3. Sesuvium portulacastrum	20		FACW
4. Batis maritima	10		OBL
5.			
6.			
7.			
8.			
	115 = Total Cover		
50% of total cover: 57.50	20% of total cover: 23.00		
Herb Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	95	x 1 =	95
FACW species	20	x 2 =	40
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	115 (A)		135 (B)

Prevalence Index = B/A = 1.17

Hydrophytic Vegetation Indicators:

- ☑ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☑ 3 - Prevalence Index is ≤3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ✔ **No** ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: MFW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 24	10YR 4/2	95	10YR 5/6	5	C	M	Clay	
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Rockhands City/County: Cameron County Sampling Date: 2025-05-20

Applicant/Owner: State: Texas Sampling Point: TFW

Investigator(s): WTS /BL / BS / JL Section, Township, Range:

Landform (hillslope, terrace, etc.): Dune Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): T 150B Lat: 25.995163 Long: -97.196234 Datum: WGS 84

Soil Map Unit Name: SE - Sejita silty clay loam, 0 to 1 percent slopes, occasionally ponded NWI classification: E2AB1N

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ✔, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✔	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	

Remarks:

Wind Tidal Flat

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☑ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No ✔	Depth (inches): ____
Water Table Present?	Yes ✔	No ____	Depth (inches): 3
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✔ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: TFW

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Sapling/Shrub Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☑ 3 - Prevalence Index is ≤3.0[1]
- ☑ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks: (If observed, list morphological adaptations below).

Sparse Saicornia bigelovii present within land type, but bare ground within plot. Blue-green algal mats also present.

SOIL

Sampling Point: TFW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 5/1	95	10YR 6/6	5	C	M	Clay	
8 - 24	10YR 5/1	95	10YR 6/6	5	C	M	Silty Clay	
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks:

Attachment E

Threatened and Endangered Species Database Reports

IPaC **U.S. Fish & Wildlife Service**

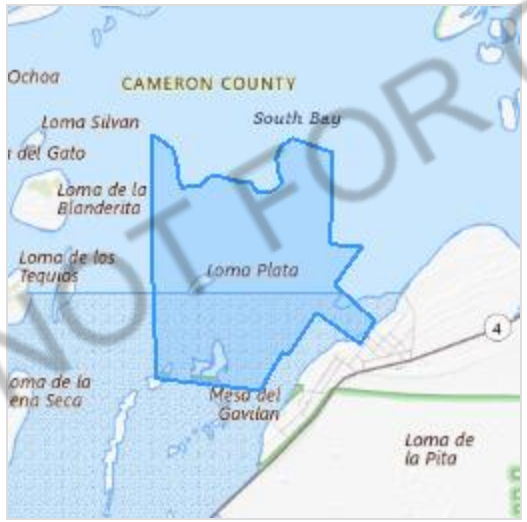
IPaC resource list

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

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

Location

Cameron County, Texas



Local office

Texas Coastal & Central Plains Esfo

(281) 286-8282
(281) 488-5882

MAILING ADDRESS
17629 El Camino Real, Suite 211

Houston, TX 77058-3051

PHYSICAL ADDRESS
17629 El Camino Real
Houston, TX 77058-3051

Endangered species

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

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

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

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

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

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

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

---

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

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

Mammals

NAME	STATUS
Gulf Coast Jaguarundi Puma yagouaroundi cacomitli Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3945	Endangered
Ocelot Leopardus (=Felis) pardalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4474	Endangered
West Indian Manatee Trichechus manatus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4469	Threatened Marine mammal

Birds

NAME	STATUS
Cactus Ferruginous Pygmy-owl Glaucidium brasilianum cactorum Wherever found There is **final** critical habitat for this species. https://ecos.fws.gov/ecp/species/1225	Threatened
Eastern Black Rail Laterallus jamaicensis ssp. jamaicensis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10477	Threatened
Northern Aplomado Falcon Falco femoralis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1923	Endangered
Piping Plover Charadrius melodus There is **final** critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/6039	Threatened

Rufa Red Knot Calidris canutus rufa — Threatened

Wherever found

There is **proposed** critical habitat for this species. Your location overlaps the critical habitat.

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

Reptiles

NAME	STATUS

Green Sea Turtle Chelonia mydas — Threatened

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.

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

Hawksbill Sea Turtle Eretmochelys imbricata — Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

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

Kemp's Ridley Sea Turtle Lepidochelys kempii — Endangered

Wherever found

There is **proposed** critical habitat for this species.

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

Leatherback Sea Turtle Dermochelys coriacea — Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

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

Loggerhead Sea Turtle Caretta caretta — Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

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

Clams

NAME	STATUS

NAME	STATUS
Salina Mucket Potamilus metnecktayi Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8753	Proposed Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Flowering Plants

NAME	STATUS
South Texas Ambrosia Ambrosia cheiranthifolia Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3331	Endangered
Texas Ayenia Ayenia limitaris Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4942	Endangered

Critical habitats

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

This location overlaps the critical habitat for the following species:

NAME	TYPE
Piping Plover Charadrius melodus https://ecos.fws.gov/ecp/species/6039#crithab	Final
Rufa Red Knot Calidris canutus rufa https://ecos.fws.gov/ecp/species/1864#crithab	Proposed

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The data in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the Supplemental Information on Migratory Birds and Eagles document to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Bald and Golden Eagle information is not available at this time

Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

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

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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

Survey Timeframe

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

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (FWS). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The FWS interprets the MBTA to prohibit incidental take.

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

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Migratory bird information is not available at this time

Migratory Bird FAQs

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

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

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

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

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

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);

2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

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

Proper interpretation and use of your migratory bird report

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

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

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

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

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

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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

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

Marine mammals

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

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

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

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

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on Federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

This location overlaps the following CBRS unit(s):

System Unit (SU)

Most new Federal expenditures and financial assistance, including Federal flood insurance, are prohibited within System Units. ***Federally-funded projects within System Units require consultation with the Service.*** *Consultation is not required for projects using private, state, or local funds.*

T12 - SU 11/16/1990 - FI 11/16/1990
T12 - SU 11/15/1993 - FI 11/16/1991

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

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

This location overlaps the following National Wildlife Refuge lands:

LAND	ACRES
LOWER RIO GRANDE VALLEY NATIONAL WILDLIFE REFUGE	82,548.44 acres

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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

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

Wetland information is not available at this time

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

Data limitations

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

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

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

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters.

Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

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

Last Update: 1/15/2025

CAMERON COUNTY

AMPHIBIANS

black-spotted newt *Notophthalmus meridionalis*

Terrestrial and aquatic: Terrestrial habitats used by adults are typically poorly drained clay soils that allow for the formation of ephemeral wetlands. A wide variety of vegetation associations are known to be used, such as thorn scrub and pasture. Aquatic habitats used for reprodution are a variety of ephemeral and permanent water bodies.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

Mexican treefrog *Smilisca baudinii*

Terrestrial and aquatic: Terrestrial habitas used include forested and brush around water bodies. Aquatic habitast used can any any body of water but preferred breeding sites are small, ephemeral wetlands.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

sheep frog *Hypopachus variolosus*

Terrestrial and aquatic: Predominantly grassland and savanna; largely fossorial in areas with moist microclimates.

Federal Status:	State Status: T	SGCN: N
Endemic: N	Global Rank: G5	State Rank: S4

South Texas siren (Large Form) *Siren sp. 1*

Aquatic: Mainly found in bodies of quiet water, permanent or temporary, with or without submergent vegetation. 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.

Federal Status:	State Status: T	SGCN: N
Endemic: N	Global Rank: GNRQ	State Rank: S1

Strecker's chorus frog *Pseudacris streckeri*

Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

white-lipped frog *Leptodactylus fragilis*

Terrestrial and aquatic: Lowlands, grasslands, cultivated fields, roadside ditches, and a wide variety of other habitats; often hides under rocks or in burrows under clumps of grass.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

CAMERON COUNTY

AMPHIBIANS

Woodhouse's toad *Anaxyrus woodhousii*

Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

BIRDS

Bank Swallow *Riparia riparia*

Bank Swallows live in low areas along rivers, streams, ocean coasts, and reservoirs. Their territories usually include vertical cliffs or banks where they nest in colonies of 10 to 2,000 nests. Though in the past Bank Swallows were most commonly found around natural bluffs or eroding streamside banks, they now often nest in human-made sites, such as sand and gravel quarries or road cuts. They forage in open areas and avoid places with tree cover.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2B,S4N

black rail *Laterallus jamaicensis*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

black skimmer *Rynchops niger*

Primarily coastal waters, including bays, estuaries, lagoons and mudflats in migration and winter (AOU 1983); also quiet waters of rivers and lakes (Stiles and Skutch 1989). Rest on mudflats, sandbars, beaches.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2B

Botteri's sparrow *Peucaea botterii*

Two allopatric subspecies occur in Texas. The arizonae subspecies found in the Trans Pecos is considered to be a vagrant because there is just one record from Presidio County in 1997. The other subspecies, texana, can be found regularly in sacahuista habitat (or cordgrass flats) in counties that along the lower coastline like Kenedy, Willacy, and Cameron counties, but also rarely in Kleberg and Brooks counties. This migratory species does not overwinter in Texas. Breeding birds return in spring and sit fairly visibly on (low) commanding perches like fence posts or mesquite limbs where males sing vigorously throughout summer.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S2B

CAMERON COUNTY

BIRDS

Brewer's Blackbird *Euphagus cyanocephalus*

Shrubby and bushy areas (especially near water), riparian woodland, aspen parklands, cultivated lands, marshes, and around human habitation; in migration and winter also in pastures and fields (AOU 1983).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

Brown Pelican *Pelecanus occidentalis*

Largely coastal and near shore areas, where it roosts and nests on islands and spoil banks. Feeds in lagunas and shallow seaward waters.

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G4	State Rank: S3B

Cactus Wren *Campylorhynchus brunneicapillus*

Desert (especially with cholla cactus or yucca), mesquite, arid scrub, coastal sage scrub, and in trees in towns in arid regions (Tropical to Subtropical zones) (AOU 1983). Nests in OPUNTIA cactus, or in twiggy, thorny, trees and shrubs, sometimes in buildings. Nest may be relined and used as a winter roost.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

common black-hawk *Buteogallus anthracinus*

Cottonwood-lined rivers and streams; willow tree groves on the lower Rio Grande floodplain; formerly bred in south Texas

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S2B

Common Nighthawk *Chordeiles minor*

Common Nighthawks nest in both rural and urban habitats including coastal sand dunes and beaches, logged forest, recently burned forest, woodland clearings, prairies, plains, sagebrush, grasslands, open forests, and rock outcrops. They also nest on flat gravel rooftops, though less often as gravel roofs are being replaced by smooth, rubberized roofs that provide an unsuitable surface.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

Elf Owl *Micrathene whitneyi*

In SW Texas and Coahuila, Mexico, nests in AGAVE-ACACIA-LEUCOPHYLLUM lowland desert, PROSOPIS-ACACIA-CELTIS-CHILOPSIS desert-wash woodland, POPULUS-SALIX-FRAXINUS-JUGLANS-ACER canyon riparian forest, and QUERCUS-PINUS-JUNIPERUS evergreen woodland; and in the lower Rio Grande valley of Texas and Tamaulipas and Nuevo Leon, Mexico, nests in ACACIA-PROSOPIS-CELTIS-DIOSPYRUS-BUMELIA subtropical thorn woodland and PITHECELLOBIUM-EHRETIA-ULMUS-LEUCAENA riparian woodland (Henry and Gehlbach 1999).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

Franklin's gull *Leucophaeus pipixcan*

CAMERON COUNTY

BIRDS

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. This species is only a spring and fall migrant throughout Texas. It does not breed in or near Texas. Winter records are unusual consisting of one or a few individuals at a given site (especially along the Gulf coastline). During migration, these gulls fly during daylight hours but often come down to wetlands, lake shore, or islands to roost for the night.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2N

gray hawk *Buteo plagiatus*

Locally and irregularly along U.S.-Mexico border; mature riparian woodlands and nearby semiarid mesquite and scrub grasslands; breeding range formerly extended north to southernmost Rio Grande floodplain of Texas

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2B

lark bunting *Calamospiza melanocorys*

Overall, it's a generalist in most short grassland settings including ones with some brushy component plus certain agricultural lands that include grain sorghum. Short grasses include sideoats and blue gramas, sand dropseed, prairie junegrass (Koeleria), buffalograss also with patches of bluestem and other mid-grass species. This bunting will frequent smaller patches of grasses or disturbed patches of grasses including rural yards. It also uses weedy fields surrounding playas. This species avoids urban areas and cotton fields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

Least Tern *Sternula antillarum*

Sand beaches, flats, bays, inlets, lagoons, islands, river sandbars and flat gravel rooftops in urban areas.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S2B

Loggerhead Shrike *Lanius ludovicianus*

Loggerhead Shrikes inhabit open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses, and cemeteries. Loggerhead Shrikes are often seen along mowed roadsides with access to fence lines and utility poles.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4B

Mottled Duck *Anas fulvigula*

Estuaries, ponds, lakes, secondary bays.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4B

CAMERON COUNTY

BIRDS

northern aplomado falcon *Falco femoralis septentrionalis*

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

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G4T2T3	State Rank: S1

northern beardless-tyrannulet *Camptostoma imberbe*

Mesquite woodlands; also cottonwood, willow, elm, and tepeguaje near the Rio Grande. Breeding April to July

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S1S2

Northern Bobwhite *Colinus virginianus*

Inhabits a wide variety of vegetation types, particularly early successional stages. Occurs in croplands, grasslands, pastures, fallow fields, grass-brush rangelands, open pinelands, open mixed pine-hardwood forests, and habitat mosaics (Brennan 1999).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S4B

piping plover *Charadrius melodus*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2N

Pyrrhuloxia *Cardinalis sinuatus*

Pyrrhuloxias live in upland deserts, mesquite savannas, riparian (streamside) woodlands, desert scrublands, farm fields with hedgerows, and residential areas with nearby mesquite. When not breeding, some Pyrrhuloxias wander into urban habitats, mesquite-hackberry habitats, and riparian habitats with Arizona sycamore and cottonwood.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

red-crowned parrot *Amazona viridigenalis*

CAMERON COUNTY

BIRDS

Starting in the late 1980s to early 1990s, this species has increased in numbers in urban settings in Cameron and Hidalgo counties. This cavity-nesting species prefers dead palm trees, including non-native Washingtonian palms, with abandoned cavities excavated by Golden-fronted Woodpeckers. Grooming of palms (i.e., trimming the dead, drooping fronds) does not appear to directly impact this species; however removal of dead palms with or without cavities should be avoided.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G2	State Rank: S2

reddish egret *Egretta rufescens*

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

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S2B

rose-throated becard *Pachyramphus aglaiae*

Riparian corridors; trees, woodlands, open forest, scrub, and mangroves; breeding April to July.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S1

rufa red knot *Calidris canutus rufa*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore. Bolivar Flats in Galveston County, sandy beaches Mustang Island, few on outer coastal and barrier beaches, tidal mudflats and salt marshes.

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4T2	State Rank: S2N

Sanderling *Calidris alba*

Nonbreeding: primarily sandy beaches, less frequently on mud flats and shores of lakes or rivers (AOU 1983) also on exposed reefs (Pratt et al. 1987). Sleeps/loafs on upper beach or on salt pond dike.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

Snowy Plover *Charadrius nivosus*

Algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. An optimal site characteristic would be large in size. The size of populations appear to be roughly proportional to the total area of suitable habitat used. Formerly an uncommon breeder in the Panhandle; potential migrant; winter along coast.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3B

CAMERON COUNTY

BIRDS

sooty tern *Onychoprion fuscatus*

Primarily an offshore bird; does nest on sandy beaches and islands, breeding April-July.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S1B

Sprague's pipit *Anthus spragueii*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat during migration and in winter consists of pastures and weedy fields (AOU 1983), including grasslands with dense herbaceous vegetation or grassy agricultural fields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3N

swallow-tailed kite *Elanoides forficatus*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Lowland forested regions, especially swampy areas, ranging into open woodland; marshes, along rivers, lakes, and ponds; nests high in tall tree in clearing or on forest woodland edge, usually in pine, cypress, or various deciduous trees.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2B

Texas Botteri's sparrow *Peucaea botterii texana*

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

Federal Status:	State Status: T	SGCN: N
Endemic: N	Global Rank: G4G5T4	State Rank: S2B

tropical parula *Setophaga pitiayumi*

Semi-tropical evergreen woodland along rivers and resacas. Texas ebony, anacua and other trees with epiphytic plants hanging from them. Dense or open woods, undergrowth, brush, and trees along edges of rivers and resacas; breeding April to July.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3B

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

Federal Status:	State Status:	SGCN: N
Endemic: N	Global Rank: G4T4	State Rank: S2

CAMERON COUNTY

BIRDS

white-faced ibis *Plegadis chihi*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status:	State Status: T	SGCN: N
Endemic: N	Global Rank: G5	State Rank: S4B

white-tailed hawk *Buteo albicaudatus*

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

Federal Status:	State Status: T	SGCN: N
Endemic: N	Global Rank: G4G5	State Rank: S4B

Willet *Tringa semipalmata*

Marshes, tidal mudflats, beaches, lake margins, mangroves, tidal channels, river mouths, coastal lagoons, sandy or rocky shores, and, less frequently, open grassland (AOU 1983, Stiles and Skutch 1989).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5B

Wilson's Warbler *Cardellina pusilla*

Wilson’s warblers key in on forests and scrubby areas along streams to fatten up during migration. During the nonbreeding season they use many types of habitats from lowland thickets near streams to high-elevation cloud forests in Mexico and Central America.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4

wood stork *Mycteria americana*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Prefers to nest in large tracts of baldcypress (Taxodium distichum) or red mangrove (Rhizophora mangle); 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.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: SHB,S3N

CAMERON COUNTY

BIRDS

yellow-billed cuckoo *Coccyzus americanus*

In Texas, the populations of concern are found breeding in riparian areas in the Trans Pecos (know as part of the Western Distinct Population Segment). It is the Western DPS that is on the U.S. ESA threatened list and includes the Texas counties Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, and Presidio. Riparian woodlands below 6,000' in elevation consisting of cottonwoods and willows are prime habitat. This species is a long-distant migrant that summers in Texas, but winters mainly in South America. Breeding birds of the Trans Pecos populations typically arrive on their breeding grounds possibly in late April but the peak arrival time is in May. Threats to preferred habitat include hydrologic changes that don't promote the regeneration of cottonwoods and willows, plus livestock browsing and trampling of sapling trees in sensitive riparian areas.

Federal Status: T	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4S5B

zone-tailed hawk *Buteo albonotatus*

Arid open country, including open deciduous or pine-oak woodland, mesa or mountain county, often near watercourses, and wooded canyons and tree-lined rivers along middle-slopes of desert mountains; nests in various habitats and sites, ranging from small trees in lower desert, giant cottonwoods in riparian areas, to mature conifers in high mountain regions

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3B

FISH

alligator gar *Atractosteus spatula*

From the Red River to the Rio Grande (Hubbs et al. 2008); occurs in the Trinity River upstream of Lake Livingston. Found in rivers, streams, lakes, swamps, bayous, bays and estuaries typically in pools and backwater habitats. Floodplains inundated with flood waters provide spawning and nursery habitats.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S4

american eel *Anguilla rostrata*

Originally found in all river systems from the Red River to the Rio Grande. Aquatic habtiats include large rivers, streams, tributaries, coastal watersheds, estuaries, bays, and oceans. Spawns in Sargasso Sea, larva move to coastal waters, metamorphose, and begin upstream movements. Females tend to move further upstream than males (who are often found in brackish estuaries). American Eel are habitat generalists and may be found in a broad range of habitat conditions including slow- and fast-flowing waters over many substrate types. Extirpation in upstream drainages attributed to reservoirs that impede upstream migration.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

Atlantic guitarfish *Rhinobatos lentiginosus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: GNR	State Rank: S2S3

CAMERON COUNTY

FISH

Atlantic tarpon *Megalops atlanticus*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G5 State Rank: S2S3

black grouper *Mycteroperca bonaci*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: GNR State Rank: S3S4

blacknose shark *Carcharhinus acronotus*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: GNR State Rank: S3

blue marlin *Makaira nigricans*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: GNR State Rank: SNR

Bull Shark *Carcharhinus leucas*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G5 State Rank: S5

Caribbean sharpnose shark *Rhizoprionodon porosus*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: GNR State Rank: S3

cobia *Rachycentron canadum*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: GNR State Rank: S3S4

CAMERON COUNTY

FISH

dusky shark *Carcharhinus obscurus*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G3 State Rank: S3

Finetooth Shark *Carcharhinus isodon*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: GNR State Rank: SNR

giant manta ray *Manta birostris*
Habitat description is not available at this time.
Federal Status: T State Status: SGCN: Y
Endemic: N Global Rank: G3G4 State Rank: SNR

great hammerhead *Sphyrna mokarran*
Habitat description is not available at this time.
Federal Status: State Status: T SGCN: Y
Endemic: N Global Rank: G3G4 State Rank: S2

greater amberjack *Seriola dumerili*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: GNR State Rank: S3

lemon shark *Negaprion brevirostris*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G3G4 State Rank: S1S3

Mexican goby *Ctenogobius claytonii*
Southern coastal area; brackish and freshwater coastal streams; tidal freshwater associated with silty sandbars and grass beds.
Federal Status: State Status: T SGCN: Y
Endemic: N Global Rank: GNR State Rank: S1

CAMERON COUNTY

FISH

oceanic whitetip shark *Carcharhinus longimanus*

Habitat description is not available at this time.

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: GNR	State Rank: S2

opossum pipefish *Microphis brachyurus*

Adults are only found in low salinity waters of estuaries or freshwater tributaries within 30 miles of the coast (Gilmore 1992), where they also give birth. Young move or are carried into more saline waters off the coast after birth. Newly released larvae must have conditions near 18 ppt salinity for at least two weeks after birth to survive, indicating a physiology adapted for downstream transport to estuarine and marine environments (Frias-Torres 2002). Juvenile migration toward the ocean depends on water flow regimes, salinity, and vegetation for cover and capturing prey (Frias-Torres 2002). Seawalls, docks, and riprap construction destroy habitat and poor water quality and alteration of flow regimes may prevent migration (NMFS 2009).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3N

Rio Grande shiner *Notropis jemezanus*

Rio Grande drainage. Occurs over substrate of rubble, gravel and sand, often overlain with silt

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S1

river goby *Awaous banana*

Formerly occupied the mainstream of the Rio Grande in Texas (northern most portion of their range). Generally occupies clear, well oxygenated streams and rivers with slow to moderate current (dependent on flowing water), sandy, muddy, or hard bottom, and little or no vegetation; also enters brackish and marine waters. Shaded areas of streams/rivers may be preferred. Spawning takes place in freshwater and eggs drift downstream to brackish or salt water where they hatch. Larvae migrate back into streams as they develop, but have a higher salinity tolerance than adults. Feeds mainly on filamentous algae.

Federal Status:	State Status: T	SGCN: N
Endemic: N	Global Rank: G5	State Rank: S1

sailfish *Istiophorus platypterus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: GNR	State Rank: S3

sandbar shark *Carcharhinus plumbeus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3S4

CAMERON COUNTY

FISH

scalloped hammerhead shark *Sphyrna lewini*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: SNR

scamp *Mycteroperca phenax*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: GNR	State Rank: SNR

shortfin mako shark *Isurus oxyrinchus*

Habitat description is not available at this time.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: GNR	State Rank: S2

silky shark *Carcharhinus falciformis*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

smalltail shark *Carcharhinus porosus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: GNR	State Rank: S3

smalltooth sawfish *Pristis pectinata*

Different life history stages have different patterns of habitat use: young of year, Age 1, and Age 2 are dependent upon shallow (<1m), eurahayline waters with red mangrove lined shoreline (Norton et al. 2012). These age classes are often found found very close to shore over muddy and sandy bottoms in sheltered bays, on shallow banks, and in estuaries or river mouths. These age classes can tolerate a wide range of salinities, but will move in and out of protected areas (estuaries) due to changes in flow and salinity (Poulakis and Seitz 2011). Larger juveniles may occupy greater depth strata in areas further from shore as they consistently occupy marine waters. Adult sawfish are encountered in various habitat types (mangrove, oyster reef, seagrass, and coral), in varying salinity regimes and temperatures, and at various water depths, feed on a variety of fish species. Adult female sawfish return to protected estuarine areas to give birth.

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1G3	State Rank: SNR

CAMERON COUNTY

FISH

snook *Centropomus undecimalis*

Juvenile common snook are generally restricted to the protection of riverine, salt marshes, seagrass beds, and estuary environments. These environments offer shallow water and an overhanging vegetative shoreline. Juvenile common snook can survive in waters with lower oxygen levels than adults. Adult common snook inhabit many fresh, estuarine, and marine environments including mangrove forests, beaches, river mouths, nearshore reefs, salt marshes, sea grass meadows, and near structure (pilings, artificial reefs, etc.). Adult common snook appear to be less sensitive to cold water temperatures than larvae or small juveniles. The lower lethal limit of water temperature is 48.2°-57.2° F (9°-14° C) for juveniles and 42.8°-53.6° F (6°-12° C) for adults (Hill 2005, Press 2010).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3?

southern flounder *Paralichthys lethostigma*

This is an estuarine-dependent species that inhabits riverine, estuarine and coastal waters, and prefers muddy, sandy, or silty substrates (Reagan and Wingo 1985). Individuals can tolerate wide temperature (~5-35°C) and salinity ranges (0-60 ppt). Southern Flounder spawn in offshore waters of the Gulf of Mexico from October to February (Reagan and Wingo 1985). The oceanic larval stage is pelagic and lasts 30–60 days. Metamorphosing individuals enter estuaries and migrate towards low-salinity headwaters, where settlement occurs (Burke et al. 1991, Walsh et al. 1999). The young fish enter the bays during late winter and early spring, occupying seagrass; some may move further into coastal rivers and bayous. Juveniles remain in estuaries until the onset of sexual maturation (approximately two years), at which time they migrate out of estuaries to join adults on the inner continental shelf. Adult southern flounder leave the bays during the fall for spawning in the Gulf of Mexico. They spawn for the first time when two years old at depths of 50 to 100 feet. Although most of the adults leave the bays and enter the Gulf for spawning during the winter, some remain behind and spend winter in the bays. Those in the Gulf will reenter the bays in the spring. The spring influx is gradual and does not occur with large concentrations that characterize the fall emigration.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

speckled hind *Epinephelus drummondhayi*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

spinner shark *Carcharhinus brevipinna*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: GNR	State Rank: S3

swordfish *Xiphias gladius*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

CAMERON COUNTY

FISH

white marlin *Kajikia albida*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: GNR State Rank: S3

INSECTS

American bumblebee *Bombus pensylvanicus*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Global Rank: G3G4 State Rank: SNR

Boca Chica flea beetle *Chaetocnema rileyi*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: GNR State Rank: S3

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

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G1 State Rank: S1

migratory monarch butterfly *Danaus plexippus plexippus*

Habitat description is not available at this time.

Federal Status: C State Status: SGCN: Y
Endemic: Global Rank: G4T3 State Rank: SNR

neojuvenile tiger beetle *Cicindela obsoleta neojuvenilis*

Bare or sparsely vegetated, dry, hard-packed soil; typically in previously disturbed areas; peak adult activity in Jul

Federal Status: State Status: SGCN: Y
Endemic: Global Rank: G5T1 State Rank: SH

No accepted common name *Sphingicampa blanchardi*

Woodland - hardwood; Tamaulipan thornscrub with caterpillars host plant, Texas Ebony (Pitheocellobium flexicaule) an important element

Federal Status: State Status: SGCN: Y
Endemic: P Global Rank: G1 State Rank: S1

CAMERON COUNTY

INSECTS

No accepted common name *Cisthene conjuncta*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1Q	State Rank: S1

No accepted common name *Heliastus subroseus*

Sand dunes with sparse vegeatation in back of the beach along the Texas coast.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2G3	State Rank: S2?

No accepted common name *Pachyschelus fisheri*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: GNR	State Rank: S1

No accepted common name *Calleida fimbriata*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: GNR	State Rank: S2

No accepted common name *Trichodesma pulchella*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: GNR	State Rank: S1

No accepted common name *Ormiscus albofasciatus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: GNR	State Rank: S2

No accepted common name *Ormiscus irroratus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: GNR	State Rank: S1

CAMERON COUNTY

INSECTS

No accepted common name *Phoenicobiella schwarzii*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: GNR	State Rank: S2

No accepted common name *Spectralia prosternalis*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: GNR	State Rank: S2

No accepted common name *Trigonogya reticulaticollis*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: GNR	State Rank: S1

No accepted common name *Heterobrenthus texanus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: GNR	State Rank: S1

subtropical black sky tiger beetle *Cicindela nigrocoerulea subtropica*

Most tiger beetles are active, usually brightly colored, and found in open, sunny areas; adult tiger beetles are predaceous and feed on a variety of small insects; larvae of tiger beetles are also predaceous and live in vertical burrows in soil of dry paths, fields, or sandy beaches

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G5T2	State Rank: SH

Tamaulipan agapema *Agapema galbina*

Tamaulipan thornscrub with adequate densities of the caterpillar foodplant Condalia hookeri hookeri (= obovata); adults occur Sep - Oct; eggs hatch within two weeks and larvae mature rapidly

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1	State Rank: SH

Tamaulipan clubtail dragonfly *Gomphus gonzalezi*

Rivers, muddy to clear and rocky, should be watched for in substantial creeks as well. This species is considered rare and has a very restricted range in the Rio Grande Valley and southward in eastern Mexico. Abundance information is lacking (Ware et al 2016; Abbott 2005).

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G2	State Rank: S2

MAMMALS

Atlantic spotted dolphin *Stenella frontalis*

CAMERON COUNTY

MAMMALS

Inhabits warm tropical, subtropical, and temperate waters throughout the Atlantic Ocean, including the Gulf of Mexico. Commonly found along the continental shelf and coastal waters that are 65-820 feet deep, usually inside or near 185 m contour (within 250-350 km of coast); occassionally found in deeper waters. Often dive to 30-200 feet preying upon fish, invertebrates, and cephalopods.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S1

Blainville's beaked whale *Mesoplodon densirostris*

Not applicable.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1

blue whale *Balaenoptera musculus*

Inhabits tropical, subtropical, temperate, and subpolar waters worldwide, but are infrequently sighted in the Gulf of Mexico. They migrate seasonally between summer feeding grounds and winter breeeding grounds, but specifics vary. Commonly observed at the surface in open ocean.

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: SH

bottlenosed dolphin *Tursiops truncatus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2

Bryde's whale *Balaenoptera edeni brydei*

Habitat description is not available at this time.

Federal Status:	State Status: E	SGCN: Y
Endemic: N	Global Rank: GNR	State Rank: SNR

cave myotis bat *Myotis velifer*

Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (Hirundo pyrrhonota) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S2S3

clymene dolphin *Stenella clymene*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1

Coues' rice rat *Oryzomys couesi*

CAMERON COUNTY

MAMMALS

Cattail-bulrush marsh with shallower zone of aquatic grasses (Echinochloa, Panicum, Paspalidium) near the shoreline; shade trees around the shoreline are important features. Freshwater marshes.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2

Coues' rice rat *Oryzomys couesi aquaticus*

Cattail-bulrush marsh with shallower zone of aquatic grasses near the shoreline; shade trees around the shoreline are important features; prefers salt and freshwater, as well as grassy areas near water; breeds April-August

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5T2T4	State Rank: S2

Cuvier's beaked whale *Ziphius cavirostris*

Inhabits tropical, subtropical, and temperate waters world wide, including the Gulf of Mexico. Commonly found in water over 3,300 feet deep near the continetal shelf near steep slopes or canyons, avoiding coastal areas. Mostly pelagic apparently confined by the 1,00 meter bthymetric contour. frequenly make deep dives to capture prey (squids and fishes).

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1

dwarf sperm whale *Kogia simus*

Inhabits tropical and temperate waters world wide, Commonly found in deep waters near the continental shelf and rarely seen at the surface, but may be more coastal than the pygmy sperm whale (Kogia breviceps). Dives to great depths (1,000 feet) to hunt for squid, fish, and crustaceans. Migration patterns are unknown.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1

eastern spotted skunk *Spilogale putorius*

Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1S3

false killer whale *Pseudorca crassidens*

Inhabits tropical, subtropical, and temperate waters world wide, including the Gulf of Mexico. Commonly found in deep, offshore waters deeper than 3,300 feet, making dives of up to 2,000 meters to catch their prey (fishes and squids). Gulf of Mexico distinct population segment is not well studied.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1

CAMERON COUNTY

MAMMALS

finback whale *Balaenoptera physalus*

Inhabits tropical, subtropical, temperate, and subpolar waters worldwide, but are less common in the tropics preferring cooler water. Commonly found in deep, offshore waters and migrate in the open ocean from the poles (feeding grounds) to warmer waters in the winter to give birth. They feed on krill, squid, and small schooling fish sometimes with other baleen whale species. They are very rare in the Gulf of Mexico and reported sightings are likely vagrants (Witt et al. 2011).

Federal Status: E | State Status: E | SGCN: Y
Endemic: N | Global Rank: G3G4 | State Rank: S1

Gervais's beaked whale *Mesoplodon europaeus*

Inhabits tropical, subtropical, and temperate waters of the northern Atlantic Ocean, Gulf of Mexico, and Caribbean. Commonly found in deep water and open ocean where they prey upon squids. They are difficult to distinguish from others in their family (Mesoplodon) and are cryptic and skittish, but the most commonly stranded species on the US southeastern coast. Migration patterns are unknown.

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G4 | State Rank: S1

ghost-faced bat *Mormoops megalophylla*

Winter roosts are in large limestone caves. Buildings and rock crevasses provide roosts, as well.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S2

hoary bat *Lasiurus cinereus*

Hoary bats are highly migratory, high-flying bats that have been noted throughout the state. Females are known to migrate to Mexico in the winter, males tend to remain further north and may stay in Texas year-round. Commonly associated with forests (foliage roosting species) but are found in unforested parts of the state and lowland deserts. Tend to be captured over water and large, open flyways.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G3G4 | State Rank: S3

humpback whale *Megaptera novaeangliae*

Inhabits tropical, subtropical, temperate, and subpolar waters world wide. Migrate up to 5,000 miles between colder water (feeding grounds) and warmer water (calving grounds) each year. They will use both open ocean and coastal waters, sometimes including inshore areas such as bays, and are often found near the surface; however, this species is rare in the Gulf of Mexico. The northwest Atlantic/Gulf of Mexico distinct population segment is not considered at risk of extinction and is not listed as Endangered on the Endangered Species Act.

Federal Status: E | State Status: | SGCN: Y
Endemic: N | Global Rank: G4 | State Rank: SNR

killer whale *Orcinus orca*

Inhabits tropical, subtropical, temperate, and polar waters world wide. In the Gulf of Mexico, they are commonly found in oceanic waters ranging from 256-2,652 meters deep beyond the 1,000 meter isobath and a very rarely found over the continental shelf and may be entirely absent from nearshore waters. May come in contact with pelagic longline fisheries targeting tunas and billfishes.

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G4G5 | State Rank: S1

CAMERON COUNTY

MAMMALS

Mexican spiny pocket mouse *Liomys irroratus*

Lives in dense brush on ridges forming the old Rio Grande river bed. Usually closely associated with prickly pear thickets. Nests are in underground burrows.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

minke whale *Balaenoptera acutorostrata*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S1

mountain lion *Puma concolor*

Generalist; found in a wide range of habitats statewide. Found most frequently in rugged mountains & riparian zones.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2S3

North Atlantic right whale *Eubalaena glacialis*

Inhabits subtropical and temperate waters in the northern Atlantic. Commonly found in coastal waters or clsoe to the continental shelf near the surface. They migrate from feeding grounds in cooler waters (Canada and New England) to warmer waters of the southeast US (South Carolina, Georgia, and Florida) to give birth in the fall/winter - both areas are identified as critical habitat by NOAA-NMFS. Nursery areas are in shallow, coastal waters. This species is very rare in the Gulf of Mexico and the few reported sightings are likely vagrants (Ward-Geiger etal 2011).

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1

ocelot *Leopardus pardalis*

Restricted to mesquite-thorn scrub and live-oak mottes; avoids open areas. Dense mixed brush below four feet; thorny shrublands; dense chaparral thickets; breeds and raises young June-November.

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1

plains spotted skunk *Spilogale interrupta*

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

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S1S3

CAMERON COUNTY

MAMMALS

pygmy killer whale *Feresa attenuata*

Inhabits tropical and subtropical waters worldwide, including the Gulf of Mexico. Commonly found in deeper, offshore waters where they dive for their prey (squids and fishes), but may occassionally occur close to shore. They are very rare and migration patterns are unknown.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1

pygmy sperm whale *Kogia breviceps*

Inhabits tropical, subtropical, and temperate waters world wide. Commonly found in deep water over the continental slope and rarely seen at the surface. Dives to great depths (over 1,000 feet) to hunt for squid, fish, and crustaceans.Migration patterns are unknown.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1

Rice's whale *Balaenoptera ricei*

Habitat description is not available at this time.

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: SNR

roughtoothed dolphin *Steno bredanensis*

Inhabits tropical, subtropical, and temperate waters worldwide, including the Gulf of Mexico. Records in Texas are only known from strandings. Commonly found in deep, oceanic water over 1,500-2,000 meters deep and ranging in temperature from 17-25 degrees Celsius. May associate with other cetaceans. Prey on squids and fish. No known migration patterns.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1

sei whale *Balaenoptera borealis*

Habitat description is not available at this time.

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G5?	State Rank: SNR

short-finned pilot whale *Globicephala macrorhynchus*

Inhabits tropical, subtropical, and temperate waters worldwide, including the Gulf of Mexico. Commonly found in deeper waters (>1,000 feet) and continental shelf where they make deep dives to capture squid, but may come closer to shore. Migration patterns unknown.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S1

southern yellow bat *Lasiurus ega*

Relict palm grove is only known Texas habitat. Neotropical species roosting in palms, forages over water; insectivorous; breeding in late winter. Roosts in dead palm fronds in ornamental palms in urban areas.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3S4

CAMERON COUNTY

MAMMALS

sperm whale *Physeter macrocephalus*

Inhabits tropical, subtropical, and temperate waters world wide, avoiding icey waters. Distribution is highly dependent on their food source (squids, sharks, skates, and fish), breeding, and composition of the pod. In general, this species migrates from north to south in the winter and south to north in the summer; however, individuals in tropical and temperate waters don't seem to migrate at all. Routinely dive to catch their prey (2,000-10,000 feet) and generally occupies water at least 3,300 feet deep near ocean trenches.

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S1

spinner dolphin *Stenella longirostris*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S1

tricolored bat *Perimyotis subflavus*

Forest, woodland and riparian areas are important. Caves are very important to this species.

Federal Status: PE	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S2

West Indian manatee *Trichechus manatus*

Large rivers, brackish water bays, coastal waters. Warm waters of the tropics, in rivers and brackish bays but may also survive in salt water habitats. Very sensitive to cold water temperatures. Rarely occurring as far north as Texas. Gulf and bay system; opportunistic, aquatic herbivore.

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G2G3	State Rank: S1

white-nosed coati *Nasua narica*

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

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S1

Yuma myotis *Myotis yumanensis*

Caves, mines, tunnels and buildings in Trans-Pecos.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3?

CAMERON COUNTY

MOLLUSKS

Glossy Wolfsnail *Euglandina texasiana*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1G2	State Rank: S3

Mexican fawnsfoot *Truncilla cognata*

Occurs in large rivers but may also be found in medium-sized streams. Is commonly found in habitats with some flowing water, often in protected near shore areas such as banks and backwaters but also at the head of riffles; the latter more often supporting both sub-adults and adults. Typically occurs in substrates of mixed sand and gravel as well as soft unconsolidated sediments. Considered intolerant of reservoirs (Randklev et al. 2017b; Randklev et al. forthcoming). [Mussels of Texas 2019]

Federal Status: PE	State Status: T	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1

No accepted common name *Praticolella candida*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S3

Salina mucket *Potamilus metnecktayi*

Occurs in medium to large rivers, where it may be found in substrates composed of various combinations of mud, sand, gravel, and cobble, as well as under rocks. It occurs in areas with slow to moderate current, most often in stable littoral habitats dominated by boulder or bedrock habitat; not known from reservoirs (Randklev et al. 2017b; Randklev et al. forthcoming). [Mussels of Texas 2019]

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1

Texas hornshell *Popenaias popeii*

Occurs in small streams to large rivers in slow to moderate current, often residing in rock crevices, travertine shelves, and under large boulders, where small-grained material, such as clay, silt, or sand gathers. Can also occur in riffles that are clean swept of soft silt; not known from reservoirs (Carman 2007; Inoue et al. 2014; Randklev et al. 2017b; Randklev et al. forthcoming). [Mussels of Texas 2019]

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1

REPTILES

American alligator *Alligator mississippiensis*

Aquatic: Coastal marshes; inland natural rivers, swamps and marshes; manmade impoundments.

Federal Status: SAT	State Status:	SGCN: N
Endemic: N	Global Rank: G5	State Rank: S4

CAMERON COUNTY

REPTILES

Atlantic hawksbill sea turtle *Eretmochelys imbricata*

Inhabits tropical and subtropical waters worldwide, in the Gulf of Mexico, especially Texas. Hatchling and juveniles are found in open, pelagic ocean and closely associated with floating lgae/seagrass mats. Juveniles then migrate to shallower, coastal areas, mainly coral reefs and rocky areas, but also in bays and estuaries near mangroves when reefs are absent; seldom in water lmore than 65 feet deep. They feed on sponges, jellyfish, sea urchins, molluscs, and crustaceans. Nesting occurs from April to November high up on the beach where there is vegetation for cover and little or no sand. Some migrate, but others stay close to foraging areas - females are philopatric.

Federal Status: E	State Status: E	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

black-striped snake *Coniophanes imperialis*

Terrestrial: Occurs in native thorn scrub and woodlands a well as modfied urban areas. Prefers warm, moist microhabitats, and sandy soils.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S2S3

eastern box turtle *Terrapene carolina*

Terrestrial: Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

green sea turtle *Chelonia mydas*

Inhabits tropical, subtropical, and temperate waters worldwide, including the Gulf of Mexico. Adults and juveniles occupy inshore and nearshore areas, including bays and lagoons with reefs and seagrass. They migrate from feeding grounds (open ocean) to nesting grounds (beaches/barrier islands) and some nesting does occur in Texas (April to September). Adults are herbivorous feeding on sea grass and seaweed; juveniles are omnivorous feeding initially on marine invertebrates, then increasingly on sea grasses and seaweeds.

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3B,S3N

keeled earless lizard *Holbrookia propinqua*

Terrestrial: Habitats include coastal dunes, barrier islands, and other sandy areas (Axtell 1983). Although it occurs well inland, this species is most abundant on coastal dunes, were it seeks shelter in the burrows of small mammals or crabs (Bartlett and Bartlett 1999).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

Kemp's Ridley sea turtle *Lepidochelys kempii*

Inhabits tropical, subtropical, and temperate waters of the northwestern Atlantic Ocean and Gulf of Mexico. Adults are found in coastal waters with muddy or sandy bottoms. Some males migrate between feeding grounds and breeeding grounds, but some don't. Females migrate between feeding and nesting areas, often returning to the same destinations. Nesting in Texas occurs on a smaller scale compared to other areas (i.e. Mexico). Hatchlings are quickly swept out to open water and are rarely found nearshore. Similarly, juveniles often congregate near floating algae/seagrass mats offshore, and move into nearshore, coastal, neritic areas after 1-2 years and remain until they reach maturity. They feed primarily on crabs, but also snails, clams, other crustaceans and plants, juveniles feed on sargassum and its associated fauna; nests April through August.

CAMERON COUNTY

REPTILES

Federal Status: E | State Status: E | SGCN: Y
Endemic: N | Global Rank: G1 | State Rank: S3

leatherback sea turtle *Dermochelys coriacea*

Inhabits tropical, subtropical, and temperate waters worldwide, including the Gulf of Mexico. Nesting is not common in Texas (March to July). Most pelagic of the seaturtles with the longest migration (>10,000 miles) between nesting and foraging sites. Are able to dive to depths of 4,000 feet. They are omnivorous, showing a preference for jellyfish.

Federal Status: E | State Status: E | SGCN: Y
Endemic: N | Global Rank: G2 | State Rank: S1S2

loggerhead sea turtle *Caretta caretta*

Inhabits tropical, subtropical, and temperate waters worldwide, including the Gulf of Mexico. They migrate from feeding grounds to nesting beaches/barrier islands and some nesting does occur in Texas (April to September). Beaches that are narrow, steeply sloped, with coarse-grain sand are preffered for nesting. Newly hatched individuals depend on floating alage/seaweed for protection and foraging, which eventually transport them offshore and into open ocean. Juveniles and young adults spend their lives in open ocean, offshore before migrating to coastal areas to breed and nest. Foraging areas for adults include shallow continental shelf waters.

Federal Status: T | State Status: T | SGCN: Y
Endemic: N | Global Rank: G2G4 | State Rank: S4

Mexican Hooknose Snake *Ficimia streckeri*

Habitats include thorn brush woodland (e.g., cactus, mesquite, acacia, paloverde; especially near water or along the edges of agricultural fields) and lower Rio Grande floodplain in lowland southern Texas. Thi ssanke burrows into soft soil.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G4 | State Rank: S3

northern cat-eyed snake *Leptodeira septentrionalis*

Terrestrial: Thorn scrub and decidious woodland; dense thickets bordering ponds and streams.

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S3

Rio Grande river cooter *Pseudemys gorzugi*

Aquatic: Habitat includes rivers and their more permanent spring-fed tributary streams, beaver ponds, and stock tanks (Garrett and Barker 1987). Occupied waters may have a muddy, sandy, or rocky bottom, and may or may not contain aquatic vegetation (Degenhardt et al. 1996).

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G3G4 | State Rank: S2

slender glass lizard *Ophisaurus attenuatus*

Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S3

CAMERON COUNTY

REPTILES

speckled racer *Drymobius margaritiferus*

Terrestrial: Dense thickets near water, palm groves, riparian woodlands; often in areas with much vegetation litter on ground.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S1

Texas horned lizard *Phrynosoma cornutum*

Terrestrial: Open habitats with sparse vegetation, including grass, prairie, 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. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

Texas tortoise *Gopherus berlandieri*

Terrestrial: Open scrub woods, arid brush, lomas, grass-cactus association; often in areas with sandy well-drained soils. When inactive occupies shallow depressions dug at base of bush or cactus; sometimes in underground burrow or under object. Eggs are laid in nests dug in soil near or under bushes.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S2

western box turtle *Terrapene ornata*

Terrestrial: Ornate or western box trutles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

western massasauga *Sistrurus tergeminus*

Terrestrial: Shortgrass or mixed grass prairie, with gravel or sandy soils. Often found associated with draws, floodplains, and more mesic habitats within the arid landscape. Frequently occurs in shrub encroached grasslands.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

PLANTS

Bailey's ballmoss *Tillandsia baileyi*

Epiphytic on various trees and tall shrubs, perhaps most common in mottes of Live oak on vegtated dunes and flats in coastal portions of the South Texas Sand Sheet, but also on evergreen sub-tropical woodlands along resacas in the Lower Rio Grande Valley; flowering (February-)April-May, but conspicuous throughout the year

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2G3	State Rank: S2

CAMERON COUNTY

PLANTS

Buckley's spiderwort *Tradescantia buckleyi*

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

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

dune dalea *Dalea austrotexana*

Restricted to deep loose sands of active and somewhat stabilized dunes in South Texas (Carr 2015).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S2

Green Island echeandia *Echeandia texensis*

On somewhat saline clays of lomas along the Gulf Coast near the mouth of Rio Grande, a habitat shared with E. chandleri; both species grow in areas dominated by herbaceous species with scattered brush and stunted trees, or in grassy openings in subtropical thorn shrublands; flowers April, June, and November, and likely in other months, as well

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S1

Greenman's bluet *Houstonia parviflora*

Grass pastures. Feb- Apr. (Correll and Johnston 1970).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Jones's rainlilly *Zephyranthes jonesii*

Hardpan swales and other seasonally moist low areas (Jones 1977). Flowering mid summer--early fall (Jul--Oct) (Flagg, Smith & Flory 2002).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

large selenia *Selenia grandis*

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

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

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

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2G3	State Rank: S2S3

CAMERON COUNTY

PLANTS

marsh-elder dodder *Cuscuta attenuata*

Parasitizes a particular sumpweed (Iva annua) almost exclusively as well as ragweed and heath aster. Host plants typically found in open, disturbed habitats like fallow fields and creek bottomlands; Annual; Flowering late summer through October

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G1G3	State Rank: S2

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

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2G3	State Rank: S1

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

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2	State Rank: S2

Runyon's cory cactus *Coryphantha macromeris var. runyonii*

Gravelly to sandy or clayey, calcareous, sometimes gypsiferous or saline soils, often over the Catahoula and Frio formations, on gentle hills and slopes to the flats between, at elevations ranging from 10 to 150 m (30 to 500 ft); ?late spring or early summer, November, fruit has been collected in August

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5T2T3	State Rank: S2S3

Runyon's water-willow *Justicia runyonii*

Margins of and openings within subtropical woodlands or thorn shrublands on calcareous, alluvial, silty or clayey soils derived from Holocene silt and sand floodplain deposits of the Rio Grande Delta; can be common in narow openings such as those provided by trails through dense ebony woodlands and is sometimes restricted to microdepressions; flowering (July-) September-November

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

Shinner's rocket *Thelypodiopsis shinnersii*

Mostly along margins of Tamaulipan thornscrub on clay soils of the Rio Grande Delta, including lomas near the mouth of the river; Tamaulipas, Mexico specimens are from mountains, with no further detail; flowering mostly March-April, with one collection in December

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2G3	State Rank: S2

CAMERON COUNTY

PLANTS

Siler's huaco *Manfreda sileri*

Rare in a variety of grasslands and shrublands on dry sites; Perennial; Flowering April-July; Fruiting June-July

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G3 State Rank: S3

Small's rainlily *Zephyranthes smallii*

Open low fields, swales and ditches on sandy loam. Flowering early fall (Sep--Oct) (Flagg, Smith & Flory 2002).

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1Q State Rank: S1

South Texas ambrosia *Ambrosia cheiranthifolia*

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

Federal Status: E State Status: E SGCN: Y
Endemic: N Global Rank: G1 State Rank: S1

South Texas spikesedge *Eleocharis austrotexana*

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

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G3 State Rank: S3

St. Joseph's staff *Manfreda longiflora*

Thorn shrublands on clays and loams with various concentrations of salt, caliche, sand, and gravel; rossettes are often obscured by low shrubs; flowering September-October

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G2 State Rank: S2

Texas ayenia *Ayenia limitaris*

Subtropical thorn woodland or tall shrubland on loamy soils of the Rio Grande Delta; known site soils include well-drained, calcareous, sandy clay loam (Hidalgo Series) and neutral to moderately alkaline, fine sandy loam (Willacy Series); also under or among taller shrubs in thorn woodland/thorn shrubland; flowering throughout the year with sufficient rainfall

Federal Status: E State Status: E SGCN: Y
Endemic: N Global Rank: G2 State Rank: S1

Texas milk vetch *Astragalus reflexus*

Grasslands, prairies, and roadsides on calcareous and clay substrates; Annual; Flowering Feb-June; Fruiting April-June

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G3 State Rank: S3

CAMERON COUNTY

PLANTS

Texas stonecrop *Lenophyllum texanum*

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

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

Texas willkommia *Willkommia texana var. texana*

Mostly in sparsely vegetated shortgrass patches within taller prairies on alkaline or saline soils on the Coastal Plain (Carr 2015).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4T3	State Rank: S3

Vasey's adelia *Adelia vaseyi*

Mostly subtropical evergreen/deciduous woodlands on loamy soils of Rio Grande Delta, but occassionally in shrublands on more xeric sandy to gravelly upland sites; Perennial; Flowering January-June

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

Wright's trichocoronis *Trichocoronis wrightii var. wrightii*

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

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4T3	State Rank: S2

yellow-flowered alicoche *Echinocereus papillosus*

Under shrubs or in open areas on various substrates; Perennial; Flowering Jan-April.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

Texas Natural Diversity Database

The Texas Natural Diversity Database (TXNDD), established in 1983, is the Texas Parks and Wildlife Department's (TPWD) most comprehensive source of information on rare, threatened, and endangered plants, animals, natural communities, and animal aggregations. The TXNDD is continually updated with information on statewide status and locations of these unique elements of natural diversity. However, the data are not complete, as there are gaps in coverage due to the lack of access to land or data and a lack of staff and resources to collect and process data on all rare and significant resources.

The TXNDD houses biological information from public information sources such as museum and herbarium collection records, peer-reviewed publications, experts in the scientific community, organizations, qualified individuals, and on-site field surveys conducted by TPWD staff on public lands or private lands with written permission. TPWD staff botanists, zoologists, and ecologists perform field surveys to locate and verify specific occurrences of high-priority biological elements and collect information on their condition, quality, and management needs.

The TXNDD can be used to help evaluate environmental impacts of routing and siting options for development projects, environmental review, and permit review as well as for natural resource management, scientific research, and educational applications. **Appropriate use of TXNDD data requires both interpretation and extrapolation because of the many data gaps across the state**. The current and historic lack of access to private lands and the restriction of only being able to distribute data from public data sources are two of the reasons for these data gaps. Other reasons include a skew in the available data toward listed and the rarest species as well as lack of precision in many secondary data sources.

Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state. Although it is based on the best data available to TPWD regarding rare species, these data cannot provide a definitive statement as to the presence, absence, or condition of special species, natural communities, or other significant features in any area. Nor can these data substitute for on-site evaluation by qualified biologists. The TXNDD information is intended to assist users in avoiding harm to rare species or significant ecological features. Refer all requests back to the TXNDD to obtain the most current information.

Contact:
TXNDD Administrator phone: (512) 389-8744
TXNDD Email: TexasNatural.DiversityDatabase@tpwd.texas.gov.

Shapefile Data Interpretation and Use

In our database, every element occurrence (EO) is represented geographically as a polygon. This polygon is a combination of the geographic location of the reported observation and the locational uncertainty of the observation for all elements of the same type within scientifically-determined separation distances.

Data Conversion from paper maps to a digital database

Historically, most of the data that were part of the original database was maintained geographically as points in latitude and longitude. Each point was one symbolized with either a circle, a triangle, or a square. These symbols represented the precision of the point occurrence: circles represented those records precise to seconds, the highest precision; triangles represented records precise to +/- 1 minute, the intermediate level of precision; and squares represented the least precise records and were used only when location description was especially vague.

When the database was converted to the new system (Biotics), the points were converted to polygons by applying an error buffer (*locational uncertainty*) to the point location based on the precision of that record. Records with seconds precision received a 100 m radius buffer; records with minutes precision received a 2,000 m radius buffer; and records with a general precision received an 8,000 m radius buffer. Thus, instead of point data, each record was now a polygon in which the imprecision and uncertainty of the data is graphically represented.

Alternatively, some of the data that were in the previous database was originally mapped as polygons with meaningful boundaries on paper topographic maps. In the conversion to the new database, each of these records was digitized as they were drawn as polygons using ArcGIS. Because the precision with which the boundaries of these records were initially mapped is unknown, each was given a 100 m radius buffer to achieve the final shape.

Current Mapping Methodology and Data Interpretation

When viewing the spatial data that have been provided in the shapefile, interpretation is not necessarily intuitive without an understanding of the current mapping methodology, which follows three general steps. First, an observation of an element is located on the map. Next, locational uncertainty is applied based on the precision with which the location information was collected, resulting in a *Source Feature*. At this point and/or after the last step (depending on when we receive/enter data), data obtained regarding the same element in the same location can be added to a source feature. Thus, each source feature can represent one or many observations over time. Finally, these source features are combined with other source features of the same element based on a scientifically-determined separation barriers and separation distance to create Element Occurrences (EOs). If two source features are within this distance, they become part of the same EO; if not, they become separate EOs. For this reason, you will see both single and multi-

polygon EOs in the data, which results in a better representation of that species in a specific area. Factors constituting *separation barriers* as well as the *separation distances* used to determine if an observation should be part of an existing EO or a new one can be found as part of the species information on the NatureServe Explorer web site (http://www.natureserve.org/explorer/).

Source features, then, can be interpreted as the smallest area that can be drawn in which we are confident the observed element was located. We cannot be certain where within that area the element was observed, but we have high confidence that it was somewhere within that area on the observation date(s). An EO, when complete, is a representation of a population of that element. However, due to the large amount of private land and other constraints to monitoring and surveying, **an absence of information on the map should not be interpreted as an absence of rare, threatened, or endangered species in that location**. These data cannot provide a definitive statement as to the presence, absence, or condition of species, natural communities, or other significant features in any area. Nor can these data substitute for on-site evaluation by qualified biologists. **The** Texas Wildlife Diversity Database **information is intended to assist users in avoiding harm to rare species or significant ecological features.**

Refer all requests for data or maps back to the Texas Natural Diversity Database to obtain the most current information. **The Texas Natural Diversity Database is a dynamic database that changes almost daily.** You are encouraged to request updates to data at least quarterly for ongoing long-term projects.

If you have any questions about use or interpretation of the data please call the TXNDD Administrator (contact information above).

Shapefile Export Attribute Explanations

Some attributes are exported automatically by the system, but do not provide any additional information about the EO. The following list includes fields relevant to most uses of TXNDD data and their descriptions. For questions regarding the remaining fields exported with the shapefile, contact the TXNDD Administrator (contact information above).

- EO_ID – Unique number automatically assigned by the TXNDD to the EO. If you have questions regarding a particular feature, use this number in any correspondence with the TXNDD to identify the feature in question.
- ELCODE – Unique code assigned to the particular taxon associated with this EO.
- SNAME – Subnational Scientific Name; Scientific name used in the state of Texas for the element.
- SCOMNAME – Subnational Common Name; Common name used in the state of Texas for the element.
- GNAME – Global Scientific Name; Scientific name used by the central NatureServe database for the element.
- GCOMMNAME – Global Common Name; Common name used by the central NatureServe database for the element.
- EST_REP_ACC – Estimated Representation Accuracy; a qualitative classification that indicates the accuracy associated with an Element Occurrence. It varies based on the area occupied by the observed Element relative to the area within the footprint of the EO. The field can be null. There is no default value.
- Y – Latitude of occurrence record point, or polygon link point located in the centroid of the polygon.
- X – Longitude of occurrence record point, or polygon link point located in the centroid of the polygon.
- BASIC_EO_R – EO Rank; indicates the estimated viability (species) or ecological integrity (community) of an EO, *i.e.*, the likelihood of persistence. EO Ranks provide an assessment of the likelihood that, if current conditions prevail, the occurrence will persist for a defined period of time, typically 20-100 years. The field can be null. There is no default value.
- NAME_CAT_1 – Name Category; broad biological label for the Element to which the Scientific Name applies. The field cannot be null. There is no default value.
- GRANK – Global Conservation Status Rank; rank for the Element's entire global range; factors together abundance, total range size, distribution, trends, threats, fragility, and number of adequately protected occurrences within global range. See table below for specific ranks. The field cannot be null. There is no default value.

- SRANK – State Conservation Status Rank; rank for the Element's state range; factors together abundance, state range size, distribution, trends, threats, fragility, and number of adequately protected occurrences within state range. See table below for specific ranks. The field cannot be null. The default value is 'SNR' (unranked).
- LAST_OBS_D – Last Observation Date; date a particular Element was last observed in the particular area of the EO as noted in the Reference(s); **refers only to species occurrence as noted in a reference and does not imply the last date the species was present.** The default value is null.
- SEPARATION – Separation Distance Comments; comments relating to the separation/combination of EOs if the default separation distances were not used to determine EOs. The field can be null. There is no default value.
- NEW_EO_REA – New EO Reason; comments relating to justification for creating a new EO from a source feature when the default separation distance would indicate that it should be part of an existing EO. Possible reasons include the presence of a separation barrier or a large difference in representation accuracy. The field can be null. There is no default value.

Code Key for Printouts from

This information is for your assistance only; due to continuing data updates, vulnerability of private land to trespass and of species to disturbance or collection, **please refer all requesters to our office to obtain the most current information available.** Also, please note, identification of a species in a given area does not necessarily mean the species currently exists at the point or area indicated.

LEGAL STATUS AND CONSERVATION RANKS

FEDERAL STATUS (as determined by the US Fish and Wildlife Service)

LE	Listed Endangered
LT	Listed Threatened
PE	Proposed to be listed Endangered
PT	Proposed to be listed Threatened
PDL	Proposed to be Delisted (Note: Listing status retained while proposed)
SAE, SAT	Listed Endangered on basis of Similarity of Appearance, Listed Threatened on basis of Similarity of Appearance
DL	Delisted Endangered/Threatened
C	Candidate. USFWS has substantial information on biological vulnerability and threats to support proposing to list as threatened or endangered. Data are being gathered on habitat needs and/or critical habitat designations.
C*	C, but lacking known occurrences
C**	C, but lacking known occurrences, except in captivity/cultivation
XE	Essential Experimental Population
XN	Non-essential Experimental Population
Blank	Species is not federally listed

TX PROTECTION (as determined by the Texas Parks and Wildlife Department)

E	Listed Endangered
T	Listed Threatened
Blank	Species not state-listed

GLOBAL RANK (as determined by NatureServe)

G1	Critically imperiled globally, extremely rare, typically 5 or fewer viable occurrences
G2	Imperiled globally, very rare, typically 6 to 20 viable occurrences
G3	Very rare and local throughout range or found locally in restricted range, typically 21 to 100 viable occurrences
G4	Apparently secure globally
G5	Demonstrably secure globally
GH	Of historical occurrence through its range
GU	Possibly in peril range-wide, but status uncertain
G#G#	Ranked within a range as status uncertain
GX	Apparently extinct throughout range
Q	Rank qualifier denoting taxonomic assignment is questionable
#?	Rank qualifier denoting uncertain rank
C	In captivity or cultivation only
G#T#	“G” refers to species rank; “T” refers to variety or subspecies rank

STATE (SUBNATIONAL) RANK (as determined by the Texas Parks and Wildlife Department)

S1	Critically imperiled in state, extremely rare, vulnerable to extirpation, typically 5 or fewer viable occurrences
S2	Imperiled in state, very rare, vulnerable to extirpation, typically 6 to 20 viable occurrences
S3	Rare or uncommon in state, typically 21 to 100 viable occurrences
S4	Apparently secure in State
S5	Demonstrably secure in State
S#S#	Ranked within a range as status uncertain
SH	Of historical occurrence in state and may be rediscovered
SU	Unrankable – due to lack of information or substantially conflicting information
SX	Apparently extirpated from State
SNR	Unranked – State status not yet assessed
SNA	Not applicable – species id not a suitable target for conservation activities
?	Rank qualifier denoting uncertain rank in State

ELEMENT OCCURRENCE RECORD

Element Occurrence Record (EO) Spatial and tabular record of an area of land and/or water in which a species, natural community, or other significant feature of natural diversity is, or was, present and associated information; may be a single contiguous area or may be comprised of discrete patches or subpopulations

Occurrence # Unique number assigned to each occurrence of each element when added to the TXNDD

LOCATION INFORMATION

Directions Directions to geographic location where occurrence was observed, as described by observer or in source

SURVEY INFORMATION

First/Last Observation Date a particular occurrence was first/last observed; refers only to species occurrence as noted in source and does not imply the first/last date the species was present

Survey Date Last date of survey. If the survey date and last observation date are the same, this indicates that the last time someone visited the EO and surveyed for the element and reported to us, the element was observed. If the survey date is later than the last observation date, this indicates that the last time that someone visited the EO to survey for the element and reported to us, the element was not observed.

EO Type State rank/EO rank qualifiers:

- **M** Migrant – species occurring regularly on migration at staging areas, or concentration along particular corridors; status refers to the transient population in the State
- **B** Qualifier indicating basic rank refers to the breeding population in State
- **N** Qualifier indicating basic rank refers to the non-breeding population in State

EO Rank

A	Excellent	**AI**	Excellent, Introduced
B	Good	**BI**	Good, Introduced
C	Marginal	**CI**	Marginal, Introduced
D	Poor	**DI**	Poor, Introduced
E	Extant/Present	**EI**	Extant, Introduced
H	Historical/No Field Information	**HI**	Historical, Introduced
X	Destroyed/Extirpated	**XI**	Destroyed, Introduced
O	Obscure	**OI**	Obscure, Introduced

EO Rank Date Latest date EO rank was determined or revised

Observed Area Acres, unless indicated otherwise

COMMENTS

General Description General physical description of area and habitat where occurrence is located, including associated species, soils, geology, and surrounding land use

Comments Comments concerning the quality or condition of the element occurrence at time of survey

Protection Comments Observer comments concerning legal protection of the occurrence

Management Comments Observer comments concerning management recommendations appropriate for occurrence conservation

DATA

EO Data Biological data; may include number of individuals, vigor, flowering/fruiting data, nest success, behaviors observed, or unusual characteristic, etc.

COMMUNITY INFORMATION

Stratum Stratum (or strata) in which the elements composing the community occurs within the specified geographic level (i.e., range-wide for global, within-state or province for subnational), *i.e.*, shrubland, herbaceous vegetation, woodland

Dominant Dominant element in the community as defined by the most abundant in terms of percent cover

Lifeform Type of lifeform of the elements composing the community, *i.e.*, tree, shrub, herbaceous, nonvascular, other)

Composition Note Notes regarding the community

Please use one of the following citations to credit the source for the printout information:

Texas Natural Diversity Database. [year of data export]. Element Occurrence data export. Wildlife Diversity Program of Texas Parks & Wildlife Department. [day month year of export].

Occurrence List for Quads Surrounding Request Area

Scientific Name:	Common Name:	Occurrence Number:	State Status:	Federal Status:	Eo Id:
Adelia vaseyi	Vasey's adelia	9			4915
Charadrius melodus	piping plover	13	T	T	6545
Chelonia mydas	green sea turtle	12	T	T	8993
Coniophanes imperialis	black-striped snake	3	T		2830
Drymobius margaritiferus	speckled racer	2	T		5937
Drymobius margaritiferus	speckled racer	3	T		3087
Echeandia chandleri	lila de los Llanos	1			4310
Echeandia chandleri	lila de los Llanos	2			891
Echeandia chandleri	lila de los Llanos	3			7046
Echeandia chandleri	lila de los Llanos	15			3961
Echeandia chandleri	lila de los Llanos	16			7039
Echeandia chandleri	lila de los Llanos	17			462
Echeandia chandleri	lila de los Llanos	18			395
Echeandia chandleri	lila de los Llanos	19			5583
Echeandia chandleri	lila de los Llanos	20			5582
Echeandia chandleri	lila de los Llanos	21			2736

Scientific Name:	Common Name:	Occurrence Number:	State Status:	Federal Status:	Eo Id:
Echeandia chandleri	lila de los Llanos	24			7181
Echeandia chandleri	lila de los Llanos	28			2093
Echeandia chandleri	lila de los Llanos	32			1835
Falco femoralis septentrionalis	northern aplomado falcon	2	E	E	5542
Gopherus berlandieri	Texas tortoise	23	T		5998
Gopherus berlandieri	Texas tortoise	24	T		3544
Gopherus berlandieri	Texas tortoise	25	T		4711
Gopherus berlandieri	Texas tortoise	31	T		5070
Gopherus berlandieri	Texas tortoise	34	T		8278
Gopherus berlandieri	Texas tortoise	35	T		8279
Gopherus berlandieri	Texas tortoise	36	T		8281
Gopherus berlandieri	Texas tortoise	44	T		9392
Gopherus berlandieri	Texas tortoise	55	T		9403
Gopherus berlandieri	Texas tortoise	62	T		9410
Gopherus berlandieri	Texas tortoise	63	T		9411
Gopherus berlandieri	Texas tortoise	158	T		15939
Lasiurus ega	southern yellow bat	2			6796

Scientific Name:	Common Name:	Occurrence Number:	State Status:	Federal Status:	Eo Id:
Lenophyllum texanum	Texas stonecrop	1			712
Lenophyllum texanum	Texas stonecrop	5			6917
Lenophyllum texanum	Texas stonecrop	8			6322
Lenophyllum texanum	Texas stonecrop	18			7461
Lenophyllum texanum	Texas stonecrop	19			2212
Leopardus pardalis	ocelot	1	E	E	6268
Leopardus pardalis	ocelot	15	E	E	881
Leopardus pardalis	ocelot	37	E	E	12928
Lepidochelys kempii	Kemp's Ridley sea turtle	17	E	E	12484
Notophthalmus meridionalis	black-spotted newt	1	T		1378
Notophthalmus meridionalis	black-spotted newt	4	T		6494
Notophthalmus meridionalis	black-spotted newt	33	T		2616
Phrynosoma cornutum	Texas horned lizard	37	T		8284
Phrynosoma cornutum	Texas horned lizard	38	T		8285
Phrynosoma cornutum	Texas horned lizard	39	T		8286
Phrynosoma cornutum	Texas horned lizard	40	T		8287
Phrynosoma cornutum	Texas horned lizard	41	T		8288

Scientific Name:	Common Name:	Occurrence Number:	State Status:	Federal Status:	Eo Id:
Phrynosoma cornutum	Texas horned lizard	286	T		15911
Rookery		2			8158
Rookery		3			3146
Rookery		5			5886
Rookery		99			2057
Smilisca baudinii	Mexican treefrog	6	T		8818
Thelypodiopsis shinnersii	Shinner's rocket	4			10374
Tillandsia baileyi	Bailey's ballmoss	17			8199
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	28			10033
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	30			10391

Element Occurrence Record

Scientific Name: *Atractosteus spatula* **EO ID:** 14064

Common Name: alligator gar

Global Rank: G3G4 **State Rank:** S4 **Identification Confirmed:** Y - Yes

TX Protection Status: **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 1940-08-28 **Survey Date:** 1940-08-28 **Last Observation:** 1940-08-28

EO Data: 28 Aug 1940: At least 1 specimen was collected.

Comments:

Habitat Description:

References:

Fishes of Texas. 2015. Database download from the Fishes of Texas online database (http://www.fishesoftexas.org/home/) of SGCN species on 11 May 2015. University of Texas, Texas Natural History Collections, Excel spreadsheet.

Specimens:

Museum of Natural History, University of Michigan, Ann Arbor, MI; Reeve M. Bailey, M.K. Bailey, M.E. Davis (#unknown), Catalog # 170935, 28 Aug 1940, UMMZ.

Source Feature Data:

EO ID: 14064

Source Feature ID: **35655**

Observation Date: 1940-08-28

Observer: Reeve M. Bailey, M.K. Bailey, M.E. Davis

Observation Data: At least 1 specimen was collected (UMMZ 170935).

Element Occurrence Record

Scientific Name: *Charadrius melodus* **EO ID:** 1152

Common Name: piping plover

Global Rank: G3 **State Rank:** S2N **Identification Confirmed:** Y - Yes

TX Protection Status: T **Federal Protection Status:** T

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

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

EO Data:

Comments:

Habitat Description: algal mat and sand/silt with algal mat

References:

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.

Specimens:

Source Feature Data:

EO ID: 1152

Source Feature ID: **8766**

Observation Date: 1991

Observer: Lee Ann Linam

Observation Data: only year provided

Element Occurrence Record

Scientific Name: *Chelonia mydas* **EO ID:** 8993

Common Name: green sea turtle

Global Rank: G3 **State Rank:** S3B,S3N **Identification Confirmed:** Y - Yes

TX Protection Status: T **Federal Protection Status:** T

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 1979-05-23 **Survey Date:** 2007-06-12 **Last Observation:** 2007-06-12

EO Data: 23 May 1979: Two individuals were observed with curved carapace lengths of 472 millimeters and 451 millimeters. 20 Sept 1990: One individual was observed with a curved carapace length of 390 millimeters. 7 June 1994: Two individuals were observed with curved carapace length of 290 millimeters and 295 millimeters. 10 Sep 1996: One individual was observed with a curved carapace length of 301 millimeters. 30 April 1997: One individual was observed with a curved carapace length of 371 millimeters. 07 July 1997: One individual was observed with a curved carapace length of 560 millimeters. 11 June 1998: One individual was observed with a curved carapace length of 293 millimeters. 13 May 1999: Three individuals were observed with curved carapace length of 390 millimeters, 382 millimeters and 282 millimeters. 18 Sep 2001: One individual was observed with a curved carapace length of 418 millimeters. 25 Jan 2005: One individual was observed with a curved carapace length of 676 millimeters. 12 June 2007: One individual was observed with a curved carapace length of 472 millimeters.

Comments:

Habitat Description:

References:

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.

Specimens:

Element Occurrence Record

Source Feature Data:

EO ID: 8993

Source Feature ID: **15691**
Observation Date: 1979-05-23
Observer: TPWD Coastal Fisheries Division
Observation Data: Two individuals were observed with curved carapace lengths of 472 millimeters and 451 millimeters.

Source Feature ID: **15693**
Observation Date: 1990-09-20
Observer: TPWD Coastal Fisheries Division
Observation Data: One individual was observed with a curved carapace length of 390 millimeters.

Source Feature ID: **15698**
Observation Date: 1994-06-07
Observer: TPWD Coastal Fisheries Division
Observation Data: Two individuals were observed with curved carapace length of 290 millimeters and 295 millimeters.

Source Feature ID: **15702**
Observation Date: 1996-09-10
Observer: TPWD Coastal Fisheries Division
Observation Data: One individual was observed with a curved carapace length of 301 millimeters.

Source Feature ID: **15703**
Observation Date: 1997-04-30
Observer: TPWD Coastal Fisheries Division
Observation Data: One individual was observed with a curved carapace length of 371 millimeters.

Source Feature ID: **15704**
Observation Date: 1997-07-07
Observer: TPWD Coastal Fisheries Division
Observation Data: One individual was observed with a curved carapace length of 560 millimeters.

Source Feature ID: **15705**
Observation Date: 1998-06-11
Observer: TPWD Coastal Fisheries Division
Observation Data: One individual was observed with a curved carapace length of 293 millimeters.

Source Feature ID: **15707**
Observation Date: 1999-05-13

Element Occurrence Record

Observer: TPWD Coastal Fisheries Division

Observation Data: One individual was observed with a curved carapace length of 390 millimeters.

Source Feature ID: **15709**

Observation Date: 1999-05-13

Observer: TPWD Coastal Fisheries Division

Observation Data: Two individuals were observed with curved carapace length of 382 millimeters and 282 millimeters.

Source Feature ID: **15715**

Observation Date: 2001-09-18

Observer: TPWD Coastal Fisheries Division

Observation Data: One individual was observed with a curved carapace length of 418 millimeters.

Source Feature ID: **15719**

Observation Date: 2005-01-25

Observer: TPWD Coastal Fisheries Division

Observation Data: One individual was observed with a curved carapace length of 676 millimeters.

Source Feature ID: **15726**

Observation Date: 2007-06-12

Observer: TPWD Coastal Fisheries Division

Observation Data: One individual was observed with a curved carapace length of 472 millimeters.

Element Occurrence Record

Scientific Name: *Ctenogobius claytonii* **EO ID:** 13887

Common Name: Mexican goby

Global Rank: GNR **State Rank:** S1 **Identification Confirmed:**

TX Protection Status: T **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 1987-11-21 **Survey Date:** 1987-11-21 **Last Observation:** 1987-11-21

EO Data: 21 Nov 1987: 2 specimens collected.

Comments:

Habitat Description:

References:

Fishes of Texas. 2015. Database download from the Fishes of Texas online database (http://www.fishesoftexas.org/home/) of SGCN species on 11 May 2015. University of Texas, Texas Natural History Collections, Excel spreadsheet.

Specimens:

Texas Natural History Collections, University of Texas at Austin, Austin, TX; Pons, Party (#unknown), Catalog # 43601, 21 Nov 1987, TNHC.

Source Feature Data:

EO ID: 13887

Source Feature ID: **28520**

Observation Date: 1987-11-21

Observer: Pons, Party

Observation Data: 2 specimens were collected (TNHC 43601; likely duplicates).

Element Occurrence Record

Scientific Name: *Echeandia chandleri* **EO ID:** 4310

Common Name: lila de los Llanos

Global Rank: G2G3 **State Rank:** S2S3 **Identification Confirmed:** Y - Yes

TX Protection Status: **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 1973-09-06 **Survey Date:** 1984-10-17 **Last Observation:** 1984-10-17

EO Data: IN FLOWER AND FRUIT; APPROXIMATELY 2600 INDIVIDUALS IN GOOD CONDITION; CLUSTERS OF NUMEROUS PLANTS SCATTERED ACROSS LENGTH OF LOMA

Comments: SOON TO BE LISTED AS CATEGORY ONE BY USF& WS, EVENTUALLY TO BE LT OR LE; FLOWERS OPEN EARLY IN THE MORNING

Habitat Description: CLAY DUNE SLIGHTLY ELEVATED ABOVE SURROUNDING SAND, WITH SCATTERED SHRUBBY TEXAS EBONIES AND THICK HERBACEOUS GROUND COVER

References:

POOLE, JACKIE M. NO DATE. TEXAS PARKS AND WILDLIFE DEPARTMENT, WILDLIFE DIVERSITY BRANCH, 4200 SMITH SCHOOL ROAD, AUSTIN, TEXAS 78744; 512/389-8019; jackie.poole@tpwd.state.tx.us

POOLE, J. M. & C. R. WAHL. 1984. FIELD SURVEY TO LOMA DE LA ESTRELLA OF OCTOBER 17, 1984.

Espey, Huston & Associates, Inc. 1987. Report on a survey for Anthericum chandleri on the Playa Del Rio project site, Cameron County, Texas. Espey, Huston & Associates, Job No. 10206; Document No. 870020. Prepared for Playa del Rio, Inc., Brownsville, TX. May 1987.

Specimens:

UNIVERSITY OF TEXAS-PAN AMERICAN HERBARIUM, EDINBURG. 1973. G. DONOHUE #799, SPECIMEN # NONE PAUH. 6 SEPTEMBER 1973.

Element Occurrence Record

Source Feature Data:

EO ID: 4310

Source Feature ID: 4310

Observation Date:

Observer:

Observation Data:

Source Feature ID: 8587

Observation Date:

Observer:

Observation Data:

Element Occurrence Record

Scientific Name: *Echeandia chandleri* **EO ID:** 7046

Common Name: lila de los Llanos

Global Rank: G2G3 **State Rank:** S2S3 **Identification Confirmed:** Y - Yes

TX Protection Status: **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 1967 **Survey Date:** **Last Observation:** 1967-10-15

EO Data: IN FRUIT

Comments: SOON TO BE LISTED AS CATEGORY ONE BY USF& WS, EVENTUALLY TO BE LT OR LE

Habitat Description: ROADSIDE

References:

Specimens:

UNIVERSITY OF TEXAS-PAN AMERICAN HERBARIUM, EDINBURG. 1967. E.H. GODFREY (S.N.), SPECIMEN # NONE PAUH. 15 OCTOBER 1967.

Source Feature Data:

EO ID: 7046

Source Feature ID: **8764**

Observation Date:

Observer:

Observation Data:

Element Occurrence Record

Scientific Name: *Echeandia chandleri* **EO ID:** 6669

Common Name: lila de los Llanos

Global Rank: G2G3 **State Rank:** S2S3 **Identification Confirmed:** Y - Yes

TX Protection Status: **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: **Survey Date:** **Last Observation:** 1987

EO Data: THREE COLONIES TOTALLING 3100 PLANTS

Comments:

Habitat Description: OPEN GRASSY AREAS NEAR EDGE OF BRUSH

References:

Espey, Huston & Associates, Inc. 1987. Report on a survey for Anthericum chandleri on the Playa Del Rio project site, Cameron County, Texas. Espey, Huston & Associates, Job No. 10206; Document No. 870020. Prepared for Playa del Rio, Inc., Brownsville, TX. May 1987.

Specimens:

Source Feature Data:

EO ID: 6669

Source Feature ID: **6669**

Observation Date:

Observer:

Observation Data:

Element Occurrence Record

Scientific Name: *Echeandia chandleri* **EO ID:** 1020

Common Name: lila de los Llanos

Global Rank: G2G3 **State Rank:** S2S3 **Identification Confirmed:** Y - Yes

TX Protection Status: **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: **Survey Date:** **Last Observation:** 1987

EO Data: 3250 PLANTS

Comments:

Habitat Description: OPEN GRASSY AREAS ALONG MARGIN OF IMPENETRABLE BRUSH

References:

Espey, Huston & Associates, Inc. 1987. Report on a survey for Anthericum chandleri on the Playa Del Rio project site, Cameron County, Texas. Espey, Huston & Associates, Job No. 10206; Document No. 870020. Prepared for Playa del Rio, Inc., Brownsville, TX. May 1987.

Specimens:

Source Feature Data:

EO ID: 1020

Source Feature ID: 1020

Observation Date:

Observer:

Observation Data:

Element Occurrence Record

Scientific Name: *Echeandia chandleri* **EO ID:** 7181

Common Name: lila de los Llanos

Global Rank: G2G3 **State Rank:** S2S3 **Identification Confirmed:** Y - Yes

TX Protection Status: **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: **Survey Date:** **Last Observation:** 1987

EO Data: FOUR POPULATIONS TOTALLING MORE THAN 400 PLANTS

Comments:

Habitat Description: OPEN GRASSY AREAS INTERMIXED WITH YUCCA AND OTHER BRUSH

References:

Espey, Huston & Associates, Inc. 1987. Report on a survey for Anthericum chandleri on the Playa Del Rio project site, Cameron County, Texas. Espey, Huston & Associates, Job No. 10206; Document No. 870020. Prepared for Playa del Rio, Inc., Brownsville, TX. May 1987.

Specimens:

Source Feature Data:

EO ID: 7181

Source Feature ID: **7181**

Observation Date:

Observer:

Observation Data:

Element Occurrence Record

Scientific Name: *Echeandia chandleri* **EO ID:** 7600

Common Name: lila de los Llanos

Global Rank: G2G3 **State Rank:** S2S3 **Identification Confirmed:** Y - Yes

TX Protection Status: **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: **Survey Date:** 1994-09-06 **Last Observation:** 1994-09-06

EO Data: NO COUNT ATTEMPTED, FEWER THAN 1000 PLANTS SEEN; NOT FLOWERING, NOT EVEN IN BUD

Comments:

Habitat Description: ONE POPULATION ON TOP OF HIGH BLUFF, AMONG TYPICAL LOMA BRUSH; OTHER ON FLAT SCARCELY ELEVATED ABOVE HALOPHYTE ZONE

References:

Carr, W. R. 1994. Field survey of the Lower Rio Grande Valley National Wildlife Refuge Loma Preserve Tract, 5-6 September 1994.

Specimens:

Source Feature Data:

EO ID: **7600**

Source Feature ID: **7600**

Observation Date:

Observer:

Observation Data:

Source Feature ID: **8588**

Observation Date:

Observer:

Observation Data:

Element Occurrence Record

Scientific Name: *Echeandia chandleri* **EO ID:** 14515

Common Name: lila de los Llanos

Global Rank: G2G3 **State Rank:** S2S3 **Identification Confirmed:** Y - Yes

TX Protection Status: **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 2015-10-07 **Survey Date:** 2015-10-07 **Last Observation:** 2015-10-07

EO Data: 7 October 2015: Seven plants were observed.

Comments:

Habitat Description: 7 October 2015: The plants were observed in loma evergreen shrubland habitat.

References:

ERM. 2020. Emails of 20 January, 13 February, 1, 9 and 10 April with Ross Hargrove and Julia Joy, ERM, David Glessner, Braemar Shipping Services, Anna Strong and Jason Singhurst, Texas Parks and Wildlife Department botanists, and Russell Hooten, Texas Parks and Wildlife Department Habitat Assessment, regarding locations of Echeandia chandleri along the Brownsville Ship Channel, Cameron County, Texas.

Specimens:

Element Occurrence Record

Source Feature Data:

EO ID: 14515

Source Feature ID: **39436**

Observation Date: 2015-10-07

Observer: O. Gockman

Observation Data: One plant was observed in loma evergreen shrubland habitat. Due to it being located in the permanent footprint of the proposed facility, it would be permanently lost.

Source Feature ID: **39437**

Observation Date: 2015-10-07

Observer: O. Gockman

Observation Data: Four plants were observed in loma evergreen shrubland habitat. Due to their being located in the permanent footprint of the proposed facility, they would be permanently lost.

Source Feature ID: **39438**

Observation Date: 2015-10-07

Observer: O. Gockman

Observation Data: Two plants were observed in loma evergreen shrubland habitat. Due to their being located in the permanent footprint of the proposed facility, they would be permanently lost.

Element Occurrence Record

Scientific Name: *Gopherus berlandieri* **EO ID:** 9392

Common Name: Texas tortoise

Global Rank: G4 **State Rank:** S2 **Identification Confirmed:** Y - Yes

TX Protection Status: T **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 2010-11-09 **Survey Date:** 2022-10-18 **Last Observation:** 2022-10-18

EO Data: 09 Nov 2010: One adult Texas tortoise was observed at approximately 12:30 in the afternoon.

Comments:

Habitat Description: 2010: Habitat in the immediate location of the tortoise consisted of an open area- mudflats, completely devoid of vegetation. Vegetation growing upland of the mudflats consisted of Grasses and short brush characteristic of area lomas including honey mesquite (Prosopis glandulosa) and narrow leaf yucca (Yucca treculeana). Other vegetation included fiddlewood (Citharexylum berlandieri), coyotillo (Karwinskia humboldtiana), knife-leaf condalia (Condalia spathulata), frogfruit (Phyla sp.), sea ox-eye daisy, screwbean mesquite (Prosopis reptans), coreopsis (Coreopsis sp.), mangle dulce (Maytenus texana) and Texas prickly pear cactus (Opuntia sp.). Two other species of cacti were also observed to be growing within this community and included pincushion cactus (Mammalaria heyderi), and horse crippler (Echinocactus texensis). Grasses in this upland area were dominated by buffelgrass (Pennisetum ciliare); other species of grasses included: sacahuista (Spartina spartinae), coastal sandbur (Cenchrus spinifex), windmillgrass (Chloris sp.), and clumps of big sacaton (Sporobolus wrightii).

References:

Paradise, Edd J. 2010. Texas Natural Diversity Database reporting form documenting an observation of Golpherus berlandieri near Port Isabel.

Specimens:

Element Occurrence Record

Source Feature Data:

EO ID: 9392

Source Feature ID: **21899**

Observation Date: 2010-11-09

Observer: Edd J. Paradise

Observation Data: One adult Texas tortoise was observed at approximately 12:30 in the afternoon of November 09, 2010 while conducting a site visit for a project located off of SH 48 near Port Isabel, Cameron County, Texas. Habitat in the immediate location of the tortoise consisted of an open area-mudflats, completely devoid of vegetation. Vegetation growing upland of the mudflats consisted of Grasses and short brush characteristic of area lomas including honey mesquite (Prosopis glandulosa) and narrow leaf yucca (Yucca treculeana). Other vegetation included fiddlewood (Citharexylum berlandieri), coyotillo (Karwinskia humboldtiana), knife-leaf condalia (Condalia spathulata), frogfruit (Phyla sp.), sea ox-eye daisy, screwbean mesquite (Prosopis reptans), coreopsis (Coreopsis sp.), mangle dulce (Maytenus texana) and Texas prickly pear cactus (Opuntia sp.). Two other species of cacti were also observed to be growing within this community and included pincushion cactus (Mammalaria heyderi), and horse crippler (Echinocactus texensis). Grasses in this upland area were dominated by buffelgrass (Pennisetum ciliare); other species of grasses included: sacahuista (Spartina spartinae), coastal sandbur (Cenchrus spinifex), windmillgrass (Chloris sp.), and clumps of big sacaton (Sporobolus wrightii).

Source Feature ID: **43778**

Observation Date: 2022-10-18

Observer: Drew R. Davis, Ph.D.

Observation Data: At least one Gopherus berlandieri(s) observed. iNaturalist ID: 139277349. https://www.inaturalist.org/observations/139277349 DOR

Source Feature ID: **43782**

Observation Date: 2022-06-27

Observer: Unknown

Observation Data: At least one Gopherus berlandieri(s) observed. iNaturalist ID: 123762945. https://www.inaturalist.org/observations/123762945 Cameron Co TX

Source Feature ID: **43783**

Observation Date: 2022-06-27

Observer: Unknown

Observation Data: At least one Gopherus berlandieri(s) observed. iNaturalist ID: 123762755. https://www.inaturalist.org/observations/123762755 Cameron Co TX

Source Feature ID: **43784**

Observation Date: 2022-06-15

Observer: Unknown

Observation Data: At least one Gopherus berlandieri(s) observed. iNaturalist ID: 121970387. https://www.inaturalist.org/observations/121970387 Cameron CO TX

Element Occurrence Record

Source Feature ID: **43785**

Observation Date: 2022-06-15

Observer: Unknown

Observation Data: At least one Gopherus berlandieri(s) observed. iNaturalist ID: 121970329. https://www.inaturalist.org/observations/121970329 Cameron CO TX

Source Feature ID: **43786**

Observation Date: 2022-06-15

Observer: Unknown

Observation Data: At least one Gopherus berlandieri(s) observed. iNaturalist ID: 121970246. https://www.inaturalist.org/observations/121970246 Cameron CO TX

Source Feature ID: **43787**

Observation Date: 2022-06-15

Observer: Unknown

Observation Data: At least one Gopherus berlandieri(s) observed. iNaturalist ID: 121970066. https://www.inaturalist.org/observations/121970066 Cameron CO TX

Source Feature ID: **43788**

Observation Date: 2022-06-15

Observer: Unknown

Observation Data: At least one Gopherus berlandieri(s) observed. iNaturalist ID: 121970012. https://www.inaturalist.org/observations/121970012 Cameron Co TX

Source Feature ID: **43789**

Observation Date: 2022-06-15

Observer: Drew R. Davis, Ph.D.

Observation Data: At least one Gopherus berlandieri(s) observed. iNaturalist ID: 121879178. https://www.inaturalist.org/observations/121879178

Source Feature ID: **43790**

Observation Date: 2022-06-06

Observer: Drew R. Davis, Ph.D.

Observation Data: At least one Gopherus berlandieri(s) observed. iNaturalist ID: 120610351. https://www.inaturalist.org/observations/120610351 DOR

Source Feature ID: **43791**

Observation Date: 2022-06-04

Observer: Drew R. Davis, Ph.D.

Observation Data: At least one Gopherus berlandieri(s) observed. iNaturalist ID: 120213176. https://www.inaturalist.org/observations/120213176 DOR

Source Feature ID: **43824**

Observation Date: 2021-09-28

Element Occurrence Record

Observer:	Drew R. Davis, Ph.D.
Observation Data:	At least one Gopherus berlandieri(s) observed. iNaturalist ID: 96549406. https://www.inaturalist.org/observations/96549406 DOR, male

Element Occurrence Record

Scientific Name: *Leopardus pardalis* **EO ID:** 881

Common Name: ocelot

Global Rank: G4 **State Rank:** S1 **Identification Confirmed:** Y - Yes

TX Protection Status: E **Federal Protection Status:** E

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 1990-03 **Survey Date:** **Last Observation:** 1998-08-10

EO Data: A male ocelot weighing 20 lbs. was captured on 27 April 1998 in a Tomahawk live trap. The ocelot was anesthitized, checked for injuries, and had vital signs and blood samples taken. It appeared healthy, though possibly a little underweight. The ocelot was fitted with a radio collar and tracked for 3 1/2 months. It was relocated twice in April, 24 times in May, and five times in June, last date of 13 June. Subsequent aerial fllight did not detect a signal. Second aerial flight on 14 July 1998 detected a signal ~8.5 mi northwest of last known location; one Class I observation in March 1990 and one Class I on 30 April 1991 in the vicinity of Holly Beach

Comments:

Habitat Description: Trap site was a brush covered loma

References:

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.

Blanton & Associates, Inc. 1998. Annual trapping survey - 1998 for the endangered ocelot and jaguarundi, Port of Brownsville proposed international crossing. October 1998.

Phillips, Rick. No Date. Blanton & Associates, 5 Lakeway Centre Court, Austin, Texas, 78734. 512/264-1095. <rphillips@blantonassociates.com>.

Specimens:

Element Occurrence Record

Source Feature Data:

EO ID: 881

Source Feature ID: **8590**
Observation Date: 1998-04-27
Observer: Blanton & Assoc. biologists
Observation Data: A male ocelot weighing 20 lbs. was trapped in a Tomahawk live trap. It was anesthitized, checked for injuries, vital signs and blood sample were taken, and fitted with radio collar.

Source Feature ID: **8591**
Observation Date: 1998-04-29
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8592**
Observation Date: 1998-05-10
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8593**
Observation Date: 1998-05-11
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8594**
Observation Date: 1998-04-30
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot
Observation Date: 1998-05-09
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot
Observation Date: 1998-05-26
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8595**
Observation Date: 1998-05-01
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8597**

Element Occurrence Record

Observation Date: 1998-05-02
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-05-04
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-05-05
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-05-06
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-05-08
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-05-12
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-05-13
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-05-22
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-05-23
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-05-24
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-05-25
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-06-04
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-06-06
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Observation Date: 1998-06-07

Element Occurrence Record

Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8598**
Observation Date: 1998-05-03
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot
Observation Date: 1998-06-05
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8599**
Observation Date: 1998-05-07
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8600**
Observation Date: 1998-05-14
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8601**
Observation Date: 1998-05-15
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8602**
Observation Date: 1998-05-18
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8603**
Observation Date: 1998-05-19
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8604**
Observation Date: 1998-05-20
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Element Occurrence Record

Source Feature ID: **8605**
Observation Date: 1998-05-21
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8606**
Observation Date: 1998-06-13
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8607**
Observation Date: 1998-07-28
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8608**
Observation Date: 1998-08-03
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8609**
Observation Date: 1998-08-10
Observer: Blanton & Assoc. biologists
Observation Data: radio collared ocelot

Source Feature ID: **8610**
Observation Date: 1998-07-27
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8611**
Observation Date: 1998-08-04
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8612**
Observation Date: 1998-07-14
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8613**

Element Occurrence Record

Observation Date: 1998-08-05
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8614**
Observation Date: 1998-07-31
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8615**
Observation Date: 1998-07-20
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8616**
Observation Date: 1998-07-25
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8617**
Observation Date: 1998-08-08
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8618**
Observation Date: 1998-08-09
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot

Source Feature ID: **8619**
Observation Date: 1998-07-16
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot
Observation Date: 1998-07-17
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot
Observation Date: 1998-07-18
Observer: Blanton & Assoc. biologists
Observation Data: located radio collared ocelot
Observation Date: 1998-07-24
Observer: Blanton & Assoc. biologists

Element Occurrence Record

Observation Data: located radio collared ocelot

Observation Date: 1998-07-26

Observer: Blanton & Assoc. biologists

Observation Data: located radio collared ocelot

Observation Date: 1998-08-01

Observer: Blanton & Assoc. biologists

Observation Data: located radio collared ocelot

Source Feature ID: **8620**

Observation Date: 1998-07-15

Observer: Blanton & Assoc. biologists

Observation Data: located radio collared ocelot

Observation Date: 1998-07-21

Observer: Blanton & Assoc. biologists

Observation Data: located radio collared ocelot

Observation Date: 1998-07-22

Observer: Blanton & Assoc. biologists

Observation Data: located radio collared ocelot

Observation Date: 1998-07-23

Observer: Blanton & Assoc. biologists

Observation Data: located radio collared ocelot

Observation Date: 1998-07-29

Observer: Blanton & Assoc. biologists

Observation Data: located radio collared ocelot

Observation Date: 1998-07-30

Observer: Blanton & Assoc. biologists

Observation Data: located radio collared ocelot

Observation Date: 1998-08-06

Observer: Blanton & Assoc. biologists

Observation Data: located radio collared ocelot

Observation Date: 1998-08-07

Observer: Blanton & Assoc. biologists

Observation Data: located radio collared ocelot

Source Feature ID: **8639**

Observation Date: 1991-04-30

Observer: unknown

Observation Data: Class I observation (cat "in hand")

Observation Date: 1990-03-01

Observer: unknown

Element Occurrence Record

Observation Data: Class I observation (cat "in hand")

Element Occurrence Record

Scientific Name: *Leopardus pardalis* **EO ID:** 12864

Common Name: ocelot

Global Rank: G4 **State Rank:** S1 **Identification Confirmed:** Y - Yes

TX Protection Status: E **Federal Protection Status:** E

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 2016-04-10 **Survey Date:** 2016-04-10 **Last Observation:** 2016-04-10

EO Data: 10 April 2016: One adult male ocelot roadkill specimen.

Comments:

Habitat Description:

References:

Swarts, Hilary. 2016. News release: endangered ocelot road deaths and installation of wildlife crossings. U. S. Department of the Interior Fish and Wildlife Service, Southwest Regions, Laguna Atascosa National Wildlife Refuge, Los Fresnos, Texas. 3 pp.

Specimens:

Source Feature Data:

EO ID: 12864

Source Feature ID: **31338**

Observation Date: 2016-04-10

Observer: unknown

Observation Data: One adult male ocelot roadkill specimen.

Element Occurrence Record

Scientific Name: *Lepidochelys kempii* **EO ID:** 12484

Common Name: Kemp's Ridley sea turtle

Global Rank: G1 **State Rank:** S3 **Identification Confirmed:**

TX Protection Status: E **Federal Protection Status:** E

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 1974 **Survey Date:** 2005 **Last Observation:** 2005

EO Data: 1974 - 1 nest; 1976 - 2 nests; 1997 - 2 nests; 1998 - 3 nests; 2000 - 5 nests; 2001 - 2 nests; 2002 - 5 nests; 2003 - 2 nests; 2004 - 5 nests; 2005 - 6 nests.

Comments:

Habitat Description:

References:

Rubio, Cynthia. 2006. E-mail correspondence of April 2006 to Jim Bergan, TNC, regarding Kemp's Ridley nesting sites on South Padre Island, including nest coordinates. Unpublished data.

DONNA SHAVER-MILLER. STATION LEADER, PADRE ISLAND NATIONAL SEASHORE, PO BOX 181300, CORPUS CHRISTI TX 78480-1300. DONNA_SHAVER@USGS.GOV; 361-949-8173, EXT. 226; 361-949-8023 FAX

Torres, Toni. 2001. E-mail message from Toni Torres (USGS?) to Mark Dumesnil, TNC, regarding the locations of sea turtles on South Padre Island.

Specimens:

Element Occurrence Record

Source Feature Data:

EO ID: 12484

Source Feature ID: **26637**
Observation Date: 2001-05-24
Observer: Turtle team, individual unknown
Observation Data: Nest of 86 eggs. Moved to protected corral on Boca Chica Beach.

Source Feature ID: **26638**
Observation Date: 2000-01-01
Observer: Turtle team, individual unknown
Observation Data: Nest. Month/day unknown.

Source Feature ID: **26639**
Observation Date: 2000-01-01
Observer: Turtle team, individual unknown
Observation Data: Nest. Month/day unknown.

Source Feature ID: **26640**
Observation Date: 2000-01-01
Observer: Turtle team, individual unknown
Observation Data: Next. Month/day unknown.

Source Feature ID: **26641**
Observation Date: 2000-01-01
Observer: Turtle team, individual unknown
Observation Data: Nest. Month/day unknown.

Source Feature ID: **26642**
Observation Date: 2000-01-01
Observer: Turtle team, individual unknown
Observation Data: Nest. Month/day unknown.

Source Feature ID: **26643**
Observation Date: 1998-06-01
Observer: Turtle team, individual unknown
Observation Data: Nest

Source Feature ID: **26644**
Observation Date: 1998-04-12
Observer: Turtle team, individual unknown

Element Occurrence Record

Observation Data: Nest

Source Feature ID: **26645**

Observation Date: 1976-06-11

Observer: Turtle team, individual unknown

Observation Data: Nest

Source Feature ID: **26646**

Observation Date: 1976-05-26

Observer: Turtle team, individual unknown

Observation Data: Nest

Source Feature ID: **26647**

Observation Date: 1997-05-25

Observer: Turtle team, individual unknown

Observation Data: Nest

Source Feature ID: **26648**

Observation Date:

Observer:

Observation Data:

Source Feature ID: **26649**

Observation Date:

Observer:

Observation Data:

Source Feature ID: **26650**

Observation Date:

Observer:

Observation Data:

Source Feature ID: **26651**

Observation Date:

Observer:

Observation Data:

Source Feature ID: **26652**

Observation Date:

Element Occurrence Record

Observer:

Observation Data:

Source Feature ID: **26653**

Observation Date:

Observer:

Observation Data:

Source Feature ID: **26654**

Observation Date:

Observer:

Observation Data:

Source Feature ID: **26655**

Observation Date:

Observer:

Observation Data:

Source Feature ID: **26656**

Observation Date:

Observer:

Observation Data:

Source Feature ID: **26657**

Observation Date:

Observer:

Observation Data:

Source Feature ID: **26658**

Observation Date:

Observer:

Observation Data:

Source Feature ID: **26659**

Observation Date:

Observer:

Observation Data:

Element Occurrence Record

Source Feature ID: 26660

Observation Date:

Observer:

Observation Data:

Source Feature ID: 26661

Observation Date:

Observer:

Observation Data:

Source Feature ID: 26662

Observation Date:

Observer:

Observation Data:

Source Feature ID: 26663

Observation Date:

Observer:

Observation Data:

Source Feature ID: 26664

Observation Date:

Observer:

Observation Data:

Source Feature ID: 26665

Observation Date:

Observer:

Observation Data:

Source Feature ID: 26666

Observation Date:

Observer:

Observation Data:

Element Occurrence Record

Source Feature ID: **26667**

Observation Date:

Observer:

Observation Data:

Source Feature ID: **26668**

Observation Date:

Observer:

Observation Data:

Element Occurrence Record

Scientific Name: *Macrhybopsis aestivalis* **EO ID:** 13479

Common Name: speckled chub

Global Rank: G3G4 **State Rank:** S1S2 **Identification Confirmed:** Y - Yes

TX Protection Status: T **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 1996-07-30 **Survey Date:** 1996-07-30 **Last Observation:** 1996-07-30

EO Data: 30 Jul 1996: 5 specimens collected.

Comments:

Habitat Description:

References:

Fishes of Texas. 2015. Database download from the Fishes of Texas online database (http://www.fishesoftexas.org/home/) of SGCN species on 11 May 2015. University of Texas, Texas Natural History Collections, Excel spreadsheet.

Specimens:

Texas Natural History Collections, University of Texas at Austin, Austin, TX; Biology 4404/5404 class (#unknown), Catalog # 34469, 30 Jul 1996, TNHC.

Source Feature Data:

EO ID: 13479

Source Feature ID: **34628**

Observation Date: 1996-07-30

Observer: Biology 4404/5404 class

Observation Data: 5 specimens were collected (TNHC 34469).

Element Occurrence Record

Scientific Name: *Notophthalmus meridionalis* **EO ID:** 15721

Common Name: black-spotted newt

Global Rank: G3 **State Rank:** S3 **Identification Confirmed:** Y - Yes

TX Protection Status: T **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 2021-05-02 **Survey Date:** 2022-03-14 **Last Observation:** 2022-03-14

EO Data:

Comments:

Habitat Description:

References:

iNaturalist. 2024. Herps of Texas project collected by Texas Nature Trackers. https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/texas_nature_trackers/amphibian_watch/index.phtml

Specimens:

Element Occurrence Record

Source Feature Data:

EO ID: 15721

Source Feature ID: **45054**

Observation Date: 2022-03-14

Observer: Drew R. Davis, Ph.D.

Observation Data: At least one Notophthalmus meridionalis(s) observed. iNaturalist ID: 108709860. https://www.inaturalist.org/observations/108709860 record part of a Texas Comptroller of Public Accounts funded project examining the distribution of Notophthalmus meridionalis in Texas

Observation Date: 2022-03-14

Observer: Drew R. Davis, Ph.D._2

Observation Data: At least one Notophthalmus meridionalis(s) observed. iNaturalist ID: 108709822. https://www.inaturalist.org/observations/108709822 record part of a Texas Comptroller of Public Accounts funded project examining the distribution of Notophthalmus meridionalis in Texas

Observation Date: 2021-05-02

Observer: Drew R. Davis, Ph.D.

Observation Data: At least one Notophthalmus meridionalis(s) observed. iNaturalist ID: 78799527. https://www.inaturalist.org/observations/78799527 record part of a Texas Comptroller of Public Accounts funded project examining the distribution of Notophthalmus meridionalis in Texas

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Source Feature ID: **45055**

Observation Date: 2022-03-14

Observer: Drew R. Davis, Ph.D.

Observation Data: At least one Notophthalmus meridionalis(s) observed. iNaturalist ID: 108709772. https://www.inaturalist.org/observations/108709772 record part of a Texas Comptroller of Public Accounts funded project examining the distribution of Notophthalmus meridionalis in Texas

Observation Date: 2022-03-14

Observer: Drew R. Davis, Ph.D._2

Observation Data: At least one Notophthalmus meridionalis(s) observed. iNaturalist ID: 108709734. https://www.inaturalist.org/observations/108709734 record part of a Texas Comptroller of Public Accounts funded project examining the distribution of Notophthalmus meridionalis in Texas

Observation Date: 2022-03-14

Observer: Drew R. Davis, Ph.D._3

Observation Data: At least one Notophthalmus meridionalis(s) observed. iNaturalist ID: 108709682. https://www.inaturalist.org/observations/108709682 record part of a Texas Comptroller of Public Accounts funded project examining the distribution of Notophthalmus meridionalis in Texas

Observation Date: 2022-03-14

Observer: Drew R. Davis, Ph.D._4

Observation Data: At least one Notophthalmus meridionalis(s) observed. iNaturalist ID: 108709655. https://www.inaturalist.org/observations/108709655 record part of a Texas Comptroller of Public Accounts funded project examining the distribution of Notophthalmus meridionalis in Texas

Observation Date: 2022-03-14

Observer: Drew R. Davis, Ph.D._5

Element Occurrence Record

Observation Data:	At least one Notophthalmus meridionalis(s) observed. iNaturalist ID: 108709627. https://www.inaturalist.org/observations/108709627 record part of a Texas Comptroller of Public Accounts funded project examining the distribution of Notophthalmus meridionalis in Texas
Observation Date:	2022-03-14
Observer:	Drew R. Davis, Ph.D._6
Observation Data:	At least one Notophthalmus meridionalis(s) observed. iNaturalist ID: 108709595. https://www.inaturalist.org/observations/108709595 record part of a Texas Comptroller of Public Accounts funded project examining the distribution of Notophthalmus meridionalis in Texas
Observation Date:	2022-03-14
Observer:	Drew R. Davis, Ph.D._7
Observation Data:	At least one Notophthalmus meridionalis(s) observed. iNaturalist ID: 108709471. https://www.inaturalist.org/observations/108709471 record part of a Texas Comptroller of Public Accounts funded project examining the distribution of Notophthalmus meridionalis in Texas

Element Occurrence Record

Scientific Name: *Notropis jemezanus* **EO ID:** 13724

Common Name: Rio Grande shiner

Global Rank: G3 **State Rank:** S1 **Identification Confirmed:** Y - Yes

TX Protection Status: T **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 1932-03-19 **Survey Date:** 1932-03-19 **Last Observation:** 1932-03-19

EO Data: 19 Mar 1932: At least 1 specimen collected.

Comments:

Habitat Description:

References:

Fishes of Texas. 2015. Database download from the Fishes of Texas online database (http://www.fishesoftexas.org/home/) of SGCN species on 11 May 2015. University of Texas, Texas Natural History Collections, Excel spreadsheet.

Specimens:

Museum of Natural History, University of Michigan, Ann Arbor, MI; Stanley Mulaik (#unknown), Catalog # 138369, 19 Mar 1932, UMMZ.

Source Feature Data:

EO ID: 13724

Source Feature ID: **35155**

Observation Date: 1932-03-19

Observer: Stanley Mulaik

Observation Data: At least 1 specimen was collected (UMMZ 138369).

Element Occurrence Record

Scientific Name: *Rookery* **EO ID:** 579

Common Name:

Global Rank: G5 **State Rank:** SNRB **Identification Confirmed:** Y - Yes

TX Protection Status: **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 1973 **Survey Date:** **Last Observation:** 1990

EO Data: NESTING COLONY OF THE BLACK SKIMMER

Comments: COLONY NUMBER 618-240

Habitat Description: SAND AND SHELL BEACH; LOW SHRUBS; BLACK MANGROVE ISLAND; ELEVATION 1.5 METERS; PROXIMITY TO HUMANS

References:

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.

WAHL, C. R. ET AL. 1986. SURVEY OF COASTAL WATERBIRD COLONIES ON NATURAL AND MAN-MADE ISLANDS IN THE S. LAGUNA MADRE, TEXAS. 2-6 JUNE 1986.

Specimens:

Source Feature Data:

EO ID: **579**

Source Feature ID: **579**

Observation Date:

Observer:

Observation Data:

Element Occurrence Record

Scientific Name: *Rookery* **EO ID:** 8158

Common Name:

Global Rank: G5 **State Rank:** SNRB **Identification Confirmed:** Y - Yes

TX Protection Status: **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 1973 **Survey Date:** **Last Observation:** 1990

EO Data: NESTING COLONY OF THE LAUGHING GULL, ROYAL TERN, BLACK SKIMMER, TRICOLORED HERON, REDDISH EGRET, CASPIAN TERN, SANDWICH TERN, FORSTER'S TERN

Comments: COLONY NUMBER 618-200

Habitat Description: DREDGE SPOIL ISLAND; SAND, SHELL, GRASS, FORBS AND LOW SHRUBS; WAVE EROSION THREATENS

References:

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.

WAHL, C. R. ET AL. 1986. SURVEY OF COASTAL WATERBIRD COLONIES ON NATURAL AND MAN-MADE ISLANDS IN THE S. LAGUNA MADRE, TEXAS. 2-6 JUNE 1986.

Specimens:

Source Feature Data:

EO ID: 8158

Source Feature ID: **8158**

Observation Date:

Observer:

Observation Data:

Element Occurrence Record

Scientific Name: *Smilisca baudinii* **EO ID:** 16166

Common Name: Mexican treefrog

Global Rank: G5 **State Rank:** S3 **Identification Confirmed:** Y - Yes

TX Protection Status: T **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: 2021-05-02 **Survey Date:** 2021-05-02 **Last Observation:** 2021-05-02

EO Data:

Comments:

Habitat Description:

References:

iNaturalist. 2024. Herps of Texas project collected by Texas Nature Trackers. https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/texas_nature_trackers/amphibian_watch/index.phtml

Specimens:

Source Feature Data:

EO ID: 16166

Source Feature ID: **45682**

Observation Date: 2021-05-02

Observer: Drew R. Davis, Ph.D.

Observation Data: At least one Smilisca baudinii(s) observed. iNaturalist ID: 78271468. https://www.inaturalist.org/observations/78271468

Observation Date: 2021-05-02

Observer: Drew R. Davis, Ph.D._2

Observation Data: At least one Smilisca baudinii(s) observed. iNaturalist ID: 78271241. https://www.inaturalist.org/observations/78271241

Element Occurrence Record

Scientific Name: *Thelypodiopsis shinnersii* **EO ID:** 10374

Common Name: Shinner's rocket

Global Rank: G2G3 **State Rank:** S2 **Identification Confirmed:** Y - Yes

TX Protection Status: **Federal Protection Status:**

Survey Information:

All fields in this report must be reviewed to understand this record. Some data may be duplicated across multiple fields.

First Observation: **Survey Date:** **Last Observation:** 1967-12-15

EO Data:

Comments: Complete specimen citation: In thickets on clay dunes on road to Boca Chica from Brownsville, 15 Dec 1967, D. S. Correll 35502 (TEX-LL).

Habitat Description: In thickets on clay dunes.

References:

Correll, D.S. (35502). 1967. Specimen # none TEX-LL.

Specimens:

Correll, D. S. (35502). 1967. Specimen # none TEX-LL. (S67CORTXTXUS)

Source Feature Data:

EO ID: 10374

Source Feature ID: **24396**

Observation Date:

Observer:

Observation Data:

Source Feature List for Quads Surrounding Request Area

Source Feature ID:	Scientific Name:	Source Feature Descriptor:	Source Feature Locator:
27740	Holbrookia propinqua		
28818	Microphis brachyurus	ID Confirmed: Yes	
30835	Paralichthys lethostigma	ID Confirmed: Yes	
31150	Centropomus undecimalis	ID Confirmed: Yes	
31151	Centropomus undecimalis	ID Confirmed: Yes	
31639	Coniophanes imperialis	ID Confirmed: Yes	
32292	Gopherus berlandieri	ID Confirmed: Yes	
32297	Gopherus berlandieri	ID Confirmed: Yes	
32445	Holbrookia propinqua	ID CONFIRMED: Yes	
32447	Holbrookia propinqua	ID CONFIRMED: Yes	
38159	Phrynosoma cornutum	ID Confirmed: Yes	
38319	Laterallus jamaicensis	ID Confirmed: Yes	
39729	Phrynosoma cornutum	ID Confirmed: Yes	
40398	Calleida fimbriata	ID Confirmed: Yes	

Source Feature Record

Scientific Name: Anguilla rostrata

Source Feature ID: 31015

Common Name: american eel

State Conservation Rank: S4

Global Conservation Rank: G4

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: The waterway was delimited using the NHDArea dataset upstream and downstream from the Fishes of Texas georeferenced coordinates for SMBU 407 to the extent of the VertNet calculated error.

Mapping Comments: Donor info: Port Isabel | FoTX georef remarks: | FoTX georef annotation: | VertNet georef calculator (http://www.herpnet.org/herpnet/documents/GeoreferencingQuickGuide.pdf) returned - Lat: 26.073729003 | Long: -97.208477826 | Error: 1241.41931040497 meters

Source Feature Data:

Observation Date:	Observer:	Observation Data:
1945-07-01	Owen W. Axtell	At least 1 specimen was collected (SMBU 407).

Reference Code:	Full Citation:
U15FIS01TXUS	Fishes of Texas. 2015. Database download from the Fishes of Texas online database (http://www.fishesoftexas.org/home/) of SGCN species on 11 May 2015. University of Texas, Texas Natural History Collections, Excel spreadsheet.

Source Feature Record

Scientific Name: Anguilla rostrata

Source Feature ID: 31018

Common Name: american eel

State Conservation Rank: S4

Global Conservation Rank: G4

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: The waterway was delimited using the NHDArea dataset upstream and downstream from the Fishes of Texas georeferenced coordinates for USNM 43108 to the extent of the VertNet calculated error.

Mapping Comments: Fishes of Texas donor information like Rio Grande at Boca Chica Beach.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
1854-12-31	John H. Clark	2 specimens were collected (USNM 43108, USNM 857).

Reference Code:	Full Citation:
U15FIS01TXUS	Fishes of Texas. 2015. Database download from the Fishes of Texas online database (http://www.fishesoftexas.org/home/) of SGCN species on 11 May 2015. University of Texas, Texas Natural History Collections, Excel spreadsheet.

Source Feature Record

Scientific Name: Calleida fimbriata

Source Feature ID: 40398

Common Name:

State Conservation Rank: S2

Global Conservation Rank: GNR

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: The specimen label states that it is located on Boca Chica Road, East of Brownsville, Cameron County, TX.

Mapping Comments: A point with a linear locational uncertainty was applied to take into account any uncertainty based on the general directions, and to encompass the entirety of Boca Chica Boulevard/Boca Chica Highway that is east of the town of Brownsville.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
1982-06-29	G. H. Nelson	Four specimens were observed on Pithecolobium flexicaule (Bentham) Coulter. Florida State Collection of Arthropods, Gainesville, FL; G. H. Nelson (#unknown), Catalog #unknown, 29 June 1982, FSCA.

Reference Code:	Full Citation:
R08OSW01TXUS	Oswald, J. D., and E. G. Riley. 2008. Interim Report. Invertebrates of special concern: beetles (Insecta: Coleoptera) of the South Texas Ecoregions. Grant No. T-41-1 State Wildlife Grant. Submitted to Texas Parks and Wildlife Department, Austin, TX. December 2008.

Source Feature Record

Scientific Name: Caretta caretta

Source Feature ID: 33241

Common Name: loggerhead sea turtle

State Conservation Rank: S4

Global Conservation Rank: G2G4

Texas Protection Status: T

Federal Protection Status: T

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with the estimated error equaling the positional accuracy given in the record

Mapping Comments: The iNaturalist observation this Source Feature is based on included the location (coordinates) and associated error.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2010-03-19	Herps of Texas iNaturalist project	iNaturalist observation ID: 1057976; Description: Possible Chelonia

Reference Code:	Full Citation:
W17INA01TXUS	iNaturalist Herps of Texas Project. 2017. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 14 Feb 2017; images downloaded 9 Feb 2017).

Source Feature Record

Scientific Name: Centropomus undecimalis **Source Feature ID:** 31153

Common Name: snook

State Conservation Rank: S3 **Global Conservation Rank:** G5

Texas Protection Status: **Federal Protection Status:**

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: The waterway was delimited using the NHDArea dataset upstream and downstream from the Fishes of Texas georeferenced coordinates for TCWC 575.03 to the extent of the VertNet calculated error.

Mapping Comments: Fishes of Texas donor information like Laguna Madre at Port Isabel and Mexiquita Flats.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
1924-12-31	A.C. Weed, L.L. Pray	At least 1 specimen was collected (FMNH 11305).
1969-09-27	Teerding	2 specimens were collected (TNHC 32827).
1975-09-27	WFS 613 class	24 specimens were collected (TCWC 575.03).
1980-07-25	R. Matheson	22 specimens were collected (TCWC 3587.05).

Reference Code:	Full Citation:
U15FIS01TXUS	Fishes of Texas. 2015. Database download from the Fishes of Texas online database (http://www.fishesoftexas.org/home/) of SGCN species on 11 May 2015. University of Texas, Texas Natural History Collections, Excel spreadsheet.

Source Feature Record

Scientific Name: Centropomus undecimalis

Source Feature ID: 31154

Common Name: snook

State Conservation Rank: S3

Global Conservation Rank: G5

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: The waterway was delimited using the NHDArea dataset upstream and downstream from the VertNet georeferenced coordinates for TNHC 32830 to the extent of the VertNet calculated error.

Mapping Comments: Donor info: Mouth of Rio Grande | FoTX georef remarks: Area includes the beach from Del Mar south to US/Mexico border. | FoTX georef annotation: | VertNet georef calculator (http://www.herpnet.org/herpnet/documents/GeoreferencingQuickGuide.pdf) returned - Lat: 25.9917722822 | Long: -97.1480562013 | Error: 2267.565696 meters

Source Feature Data:

Observation Date:	Observer:	Observation Data:
1987-08-16	Pons, Williges	1 specimen was collected (TNHC 32830).

Reference Code:	Full Citation:
U15FIS01TXUS	Fishes of Texas. 2015. Database download from the Fishes of Texas online database (http://www.fishesoftexas.org/home/) of SGCN species on 11 May 2015. University of Texas, Texas Natural History Collections, Excel spreadsheet.

Source Feature Record

Scientific Name: Centropomus undecimalis **Source Feature ID:** 31155

Common Name: snook

State Conservation Rank: S3 **Global Conservation Rank:** G5

Texas Protection Status: **Federal Protection Status:**

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: The waterway was delimited using the NHDArea dataset upstream and downstream from the Fishes of Texas georeferenced coordinates for TCWC 11192.13 to the extent of the calculated error.

Mapping Comments: Fishes of Texas donor information like Rio Grande at Boca Chica Beach.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
1857-12-31	William Hemsley Emory	6 specimens were collected (USNM 718).
1995-09-06	Bio 4404	86 specimens were collected (TNHC 36967).
2000-10-13	MARB 312 class	1 specimen was collected (TCWC 11192.13).

Reference Code:	Full Citation:
U15FIS01TXUS	Fishes of Texas. 2015. Database download from the Fishes of Texas online database (http://www.fishesoftexas.org/home/) of SGCN species on 11 May 2015. University of Texas, Texas Natural History Collections, Excel spreadsheet.

Source Feature Record

Scientific Name: Chaetocnema rileyi

Source Feature ID: 40399

Common Name: Boca Chica flea beetle

State Conservation Rank: S3

Global Conservation Rank: GNR

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: The specimen labels state that they were located at Boca Chica Beach behind the dunes, Cameron County, TX.

Mapping Comments: A point with a delimited buffer was applied to account for any uncertainty based on the general directions, and to encompass the area that could be considered "behind the dunes" that are found at Boca Chica Beach as well as Boca Chica Beach itself.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
1991-10-26	E. G. Riley	A total of 145 specimens were examined. Of these, a total of 17 were found on Fimbristylus castanea (Michx.) Vahl. and another 106 had no habitat or collection information, all deposited at the Edward G. Riley Collection, College Station, TX; E. G. Riley (#unknown), Catalog #unknown, 26 October 1991, EGRC. Another 21 of these specimens were deposited at the United States National Museum of Natural History, Washington, D.C.; E. G. Riley (#unknown), Catalog #unknown, 26 October 1991, USNM with one of them in the USNM type collection with a red type label reading "Holotype Chaetocnema riley White".
1992-10-24	E. G. Riley	One specimen was observed on Fimbristylus castanea (Michx.) Vahl. United States National Museum of Natural History, Washington, D.C.; E. G. Riley (#unknown), Catalog #unknown, 24 October 1992, USNM.

Reference Code:	Full Citation:
R08OSW01TXUS	Oswald, J. D., and E. G. Riley. 2008. Interim Report. Invertebrates of special concern: beetles (Insecta: Coleoptera) of the South Texas Ecoregions. Grant No. T-41-1 State Wildlife Grant. Submitted to Texas Parks and Wildlife Department, Austin, TX. December 2008.

Source Feature Record

Scientific Name: Chaetocnema rileyi

Source Feature ID: 40400

Common Name: Boca Chica flea beetle

State Conservation Rank: S3

Global Conservation Rank: GNR

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: The specimen labels state that they were located at Boca Chica Beach, Cameron County, TX.

Mapping Comments: A point with a delimited buffer was applied to account for any uncertainty based on the general directions, and to encompass the area that is generally considered to be Boca Chica Beach.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
1987-05-04	E. G. Riley	One specimen was examined. Edward G. Riley Collection, College Station, TX; E. G. Riley (#unknown), Catalog #unknown, 4 May 1987, EGRC.
1991-10-31	T. Carlow, E. Riley	Two specimens were observed by sweeping behind sand dunes on Fimbristylus castanea (Michx.) Vahl. United States National Museum of Natural History, Washington, D.C.; T. Carlow, E. Riley (#unknown), Catalog #unknown, 31 October 1991, USNM.
no date	E. G. Riley	A total of 232 specimens were taken from Fimbristylus castanea (Michx.) Vahl. (Cyperaceae).

Reference Code:	Full Citation:
R08OSW01TXUS	Oswald, J. D., and E. G. Riley. 2008. Interim Report. Invertebrates of special concern: beetles (Insecta: Coleoptera) of the South Texas Ecoregions. Grant No. T-41-1 State Wildlife Grant. Submitted to Texas Parks and Wildlife Department, Austin, TX. December 2008.

Source Feature Record

Scientific Name: Chelonia mydas

Source Feature ID: 33243

Common Name: green sea turtle

State Conservation Rank: S3B,S3N

Global Conservation Rank: G3

Texas Protection Status: T

Federal Protection Status: T

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with the estimated error equaling the positional accuracy given in the record. It was made a separate Source Feature from observation no. 12587629 because the centroids were approx. 202 m apart and the difference in error was large.

Mapping Comments: The iNaturalist observation this Source Feature is based on included the location (coordinates) and associated error.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2013-03-13	Herps of Texas iNaturalist project	iNaturalist observation ID: 2581401; Count of individuals observed: 2

Reference Code:	Full Citation:
W17INA01TXUS	iNaturalist Herps of Texas Project. 2017. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 14 Feb 2017; images downloaded 9 Feb 2017).

Source Feature Record

Scientific Name: Chelonia mydas

Source Feature ID: 33244

Common Name: green sea turtle

State Conservation Rank: S3B,S3N

Global Conservation Rank: G3

Texas Protection Status: T

Federal Protection Status: T

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with the estimated error equaling the positional accuracy given in the record

Mapping Comments: The iNaturalist observation this Source Feature is based on included the location (coordinates) and associated error.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2013-10-18	Herps of Texas iNaturalist project	iNaturalist observation ID: 437069; Description: Turtle was dead, unknown cause. Looked like there was a laceration around the front right flipper near the upper joint potentially from a piece of plastic (speculation since there was nothing present that looked like it could have caused the wound).

Reference Code:	Full Citation:
W17INA01TXUS	iNaturalist Herps of Texas Project. 2017. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 14 Feb 2017; images downloaded 9 Feb 2017).

Source Feature Record

Scientific Name: Chelonia mydas

Source Feature ID: 33245

Common Name: green sea turtle

State Conservation Rank: S3B,S3N

Global Conservation Rank: G3

Texas Protection Status: T

Federal Protection Status: T

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with the estimated error equaling the positional accuracy given in the record

Mapping Comments: The iNaturalist observation this Source Feature is based on included the location (coordinates) and associated error.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2013-10-18	Herps of Texas iNaturalist project	iNaturalist observation ID: 436749; Description: Found dead on the beach. Taken during the south Texas field trip in Dave Scotts wildlife tracking class. http://www.earthnativeschool.com/adult-programs/classes/wildlife-tracking/

Reference Code:	Full Citation:
W17INA01TXUS	iNaturalist Herps of Texas Project. 2017. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 14 Feb 2017; images downloaded 9 Feb 2017).

Source Feature Record

Scientific Name: Chelonia mydas

Source Feature ID: 33246

Common Name: green sea turtle

State Conservation Rank: S3B,S3N

Global Conservation Rank: G3

Texas Protection Status: T

Federal Protection Status: T

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with the estimated error equaling the positional accuracy given in the record

Mapping Comments: The iNaturalist observation this Source Feature is based on included the location (coordinates) and associated error.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2014-07-01	Herps of Texas iNaturalist project	iNaturalist observation ID: 770304

Reference Code:	Full Citation:
W17INA01TXUS	iNaturalist Herps of Texas Project. 2017. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 14 Feb 2017; images downloaded 9 Feb 2017).

Source Feature Record

Scientific Name: Chelonia mydas

Source Feature ID: 33257

Common Name: green sea turtle

State Conservation Rank: S3B,S3N

Global Conservation Rank: G3

Texas Protection Status: T

Federal Protection Status: T

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with the estimated error equaling the positional accuracy given in the record

Mapping Comments: The iNaturalist observation this Source Feature is based on included the location (coordinates) and associated error.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2017-01-27	Herps of Texas iNaturalist project	iNaturalist observation ID: 5015969

Reference Code:	Full Citation:
W17INA01TXUS	iNaturalist Herps of Texas Project. 2017. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 14 Feb 2017; images downloaded 9 Feb 2017).

Source Feature Record

Scientific Name: Chelonia mydas

Source Feature ID: 33259

Common Name: green sea turtle

State Conservation Rank: S3B,S3N

Global Conservation Rank: G3

Texas Protection Status: T

Federal Protection Status: T

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with the estimated error equaling the positional accuracy given in the record. It was made a separate Source Feature from observation no. 2581401 because the centroids were approx. 202 m apart and the difference in error was large.

Mapping Comments: The iNaturalist observation this Source Feature is based on included the location (coordinates) and associated error.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2008-11-28	Herps of Texas iNaturalist project	iNaturalist observation ID: 1587629; Description: Appeared to be strangled to death by a discarded fishing leader and line; Count of individuals observed: 1

Reference Code:	Full Citation:
W17INA01TXUS	iNaturalist Herps of Texas Project. 2017. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 14 Feb 2017; images downloaded 9 Feb 2017).

Source Feature Record

Scientific Name: Echeandia texensis **Source Feature ID:** 33469

Common Name: Green Island echeandia

State Conservation Rank: S1 **Global Conservation Rank:** G1

Texas Protection Status: **Federal Protection Status:**

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator: Brazos Island

Ditigizing Comments: Juno Trimble GPS Unit with Latiitude and Longtitude Coordinate System.

Mapping Comments:

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2016-12-8	Jason Singhurst	Observed 10-15 plants fruiting.

Reference Code:	Full Citation:
U17SIN04TXUS	Singhurst, Jason. 2017. Field survey of Rare Plants and Flora of Brazos Island State Park, Cameron County, Texas on 6 December 2016.

Source Feature Record

Scientific Name: Holbrookia propinqua

Source Feature ID: 27737

Common Name: keeled earless lizard

State Conservation Rank: S3

Global Conservation Rank: G4

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor:

Source Feature Locator:

Ditigizing Comments: The original specimen information included the following information - Specific Locality: Dunes on beach along TX Hwy 4 | Latitude: | Longitude: | Locality Comments: 25.956617, -97.148459. Texas Natural History Collections staff interpreted the specimen information for use in the MaNIS/HerpNet/ORNIS georeferencing calculator (protocol at http://manisnet.org/gci2.html) as the following - LocalityAnnotation: Coordinates given are not along SH 4, coordinates are within the extent. | GeoreferencedLocalityName: Dunes on beach along SH 4 | TreatedAs: Treated as named place | NamedPlaceExtent: 3 miles. The calculator returned the following NAD27 coordinates and areal estimated uncertainty - Latitude: 25.99606 | Longitude: -97.15014 | MaxError: 3.009 miles

Mapping Comments: Conceptually, this is a point with areal delimited uncertainty, thus the georeferenced coordinates were accepted, and the calculated error was used on the non-delimited sides of the feature.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2012-10-12	Jacob Owen	1 specimen was collected (TNHC 85794).

Reference Code:	Full Citation:
R14LAD01TXUS	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.

Source Feature Record

Scientific Name: Holbrookia propinqua

Source Feature ID: 27739

Common Name: keeled earless lizard

State Conservation Rank: S3

Global Conservation Rank: G4

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor:

Source Feature Locator:

Ditigizing Comments: The original specimen information included the following information - Specific Locality: South Padre Island, S tip; Port Isabel, 3 mi E on Padre Island | Latitude: | Longitude: | Locality Comments: . Texas Natural History Collections staff interpreted the specimen information for use in the MaNIS/HerpNet/ORNIS georeferencing calculator (protocol at http://manisnet.org/gci2.html) as the following - LocalityAnnotation: Found middle of South Padre Island and separated northern and southern portion. Place point in the middle of the southern portion. Extent is distance to the middle of South Padre Island from point | GeoreferencedLocalityName: South Padre Island, S tip | TreatedAs: Treated as named place | NamedPlaceExtent: 1.2 miles. The calculator returned the following NAD27 coordinates and areal estimated uncertainty - Latitude: 26.09561 | Longitude: -97.16403 | MaxError: 1.209 miles

Mapping Comments: Conceptually, this is a point with areal delimited uncertainty, thus the georeferenced coordinates were accepted, and the calculated error was used on the non-delimited sides of the feature.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
1946-08-28	Brown	2 specimens were collected (TNHC 13391-13392).
1970-03-29	F. Judd	5 specimens were collected (TNHC 70676-70677, 70713-70715).

Reference Code:	Full Citation:
R14LAD01TXUS	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.

Source Feature Record

Scientific Name: Holbrookia propinqua

Source Feature ID: 27740

Common Name: keeled earless lizard

State Conservation Rank: S3

Global Conservation Rank: G4

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor:

Source Feature Locator:

Ditigizing Comments: The original specimen information included the following information - Specific Locality: South Padre Island | Latitude: | Longitude: | Locality Comments: . Texas Natural History Collections staff interpreted the specimen information for use in the MaNIS/HerpNet/ORNIS georeferencing calculator (protocol at http://manisnet.org/gci2.html) as the following - LocalityAnnotation: | GeoreferencedLocalityName: South Padre Island | TreatedAs: Treated as named place | NamedPlaceExtent: 2.5 miles. The calculator returned the following NAD27 coordinates and areal estimated uncertainty - Latitude: 26.11075 | Longitude: -97.16719 | MaxError: 2.509 miles

Mapping Comments: Conceptually, this is a point with areal delimited uncertainty, thus the georeferenced coordinates were accepted, and the calculated error was used on the non-delimited sides of the feature.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
1970-3-29	F. Judd	1 specimen was collected (TNHC 70675).

Reference Code:	Full Citation:
R14LAD01TXUS	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.

Source Feature Record

Scientific Name: Holbrookia propinqua

Source Feature ID: 32439

Common Name: keeled earless lizard

State Conservation Rank: S3

Global Conservation Rank: G4

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor: ID CONFIRMED: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with the estimated error equaling the positional accuracy given in the record. It was made a separate Source Feature from observation no. 1061798 because the centroids are greater than 9 m apart and the difference in error was large.

Mapping Comments: The iNaturalist observation this Source Feature is based on included the location (coordinates) and associated error.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2012-03-16	Herps of Texas iNaturalist project	iNaturalist observation ID: 1619964

Reference Code:	Full Citation:
W17INA01TXUS	iNaturalist Herps of Texas Project. 2017. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 14 Feb 2017; images downloaded 9 Feb 2017).

Source Feature Record

Scientific Name: Holbrookia propinqua

Source Feature ID: 32440

Common Name: keeled earless lizard

State Conservation Rank: S3

Global Conservation Rank: G4

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor: ID CONFIRMED: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with the estimated error equaling the positional accuracy given in the record. It was made a separate Source Feature from observation no. 1619964 because the centroids are greater than 9 m apart and the difference in error was large.

Mapping Comments: The iNaturalist observation this Source Feature is based on included the location (coordinates) and associated error.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2013-03-13	Herps of Texas iNaturalist project	iNaturalist observation ID: 1061798

Reference Code:	Full Citation:
W17INA01TXUS	iNaturalist Herps of Texas Project. 2017. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 14 Feb 2017; images downloaded 9 Feb 2017).

Source Feature Record

Scientific Name: Holbrookia propinqua

Source Feature ID: 32441

Common Name: keeled earless lizard

State Conservation Rank: S3

Global Conservation Rank: G4

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor: ID CONFIRMED: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with the estimated error equaling the positional accuracy given in the record

Mapping Comments: The iNaturalist observation this Source Feature is based on included the location (coordinates) and associated error.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2016-10-01	Herps of Texas iNaturalist project	iNaturalist observation ID: 4255736; Count of individuals observed: 1; Air temp (c): 84

Reference Code:	Full Citation:
W17INA01TXUS	iNaturalist Herps of Texas Project. 2017. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 14 Feb 2017; images downloaded 9 Feb 2017).

Source Feature Record

Scientific Name: Holbrookia propinqua **Source Feature ID:** 32451

Common Name: keeled earless lizard

State Conservation Rank: S3 **Global Conservation Rank:** G4

Texas Protection Status: **Federal Protection Status:**

Source Feature Descriptor: ID CONFIRMED: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with the estimated error equaling the positional accuracy given in the record

Mapping Comments: The iNaturalist observation this Source Feature is based on included the location (coordinates) and associated error.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2016-09-09	Herps of Texas iNaturalist project	iNaturalist observation ID: 4477105

Reference Code:	Full Citation:
W17INA01TXUS	iNaturalist Herps of Texas Project. 2017. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 14 Feb 2017; images downloaded 9 Feb 2017).

Source Feature Record

Scientific Name: Holbrookia propinqua **Source Feature ID:** 32935

Common Name: keeled earless lizard

State Conservation Rank: S3 **Global Conservation Rank:** G4

Texas Protection Status: **Federal Protection Status:**

Source Feature Descriptor: ID CONFIRMED: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with the estimated error equaling the positional accuracy given in the record

Mapping Comments: The iNaturalist observation this Source Feature is based on included the location (coordinates) and associated error.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2015-11-08	Herps of Texas iNaturalist project	iNaturalist observation ID: 2413047

Reference Code:	Full Citation:
W17INA01TXUS	iNaturalist Herps of Texas Project. 2017. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 14 Feb 2017; images downloaded 9 Feb 2017).

Source Feature Record

Scientific Name: Holbrookia propinqua

Source Feature ID: 37914

Common Name: keeled earless lizard

State Conservation Rank: S3

Global Conservation Rank: G4

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor: ID CONFIRMED: Yes

Source Feature Locator:

Ditigizing Comments: This feature was mapped as a point with estimated error.

Mapping Comments: This feature was based on the coordinates and estimated error provided in iNaturalist ID 7611400. An error estimate of 2 was provided and was rounded to the minimum standard error of 25 m for mapping.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2017-08-19	iNaturalist Herps of Texas project	This visit is based on iNaturalist observation ID 7611400.

Reference Code:	Full Citation:
W18INA01TXUS	iNaturalist Herps of Texas Project. 2018. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 20180529; images downloaded 20180903).

Source Feature Record

Scientific Name: Holbrookia propinqua

Source Feature ID: 38264

Common Name: keeled earless lizard

State Conservation Rank: S3

Global Conservation Rank: G4

Texas Protection Status:

Federal Protection Status:

Source Feature Descriptor: ID CONFIRMED: Yes

Source Feature Locator:

Ditigizing Comments: The ocean was erased from the feature.

Mapping Comments: This feature was mapped based on the coordinates provided in iNaturalist ID 7611394. An error estimate of 2 was provided and was rounded to the minimum standard error of 25 m for mapping.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2017-08-19	iNaturalist Herps of Texas project	This visit is based on iNaturalist observation ID 7611394.

Reference Code:	Full Citation:
W18INA01TXUS	iNaturalist Herps of Texas Project. 2018. http://www.inaturalist.org/projects/herps-of-texas (data downloaded 20180529; images downloaded 20180903).

Source Feature Record

Scientific Name: Microphis brachyurus **Source Feature ID:** 28785

Common Name: opossum pipefish

State Conservation Rank: S3 **Global Conservation Rank:** G4G5

Texas Protection Status: **Federal Protection Status:**

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: The waterway was delimited from the Fishes of Texas georeferenced coordinates for TCWC 11192.03 to the extent of the VertNet calculated error.

Mapping Comments: Donor info: Gulf of Mexico; Rio Grande at Boca Chica | FoTX georef remarks: Treated as Rio Grande at Boca Chica Beach. Point is placed at mouth of Rio Grande and extent covers northward running US/Mexico border, which is likely an old river path, to coast. | FoTX georef annotation: | VertNet georef calculator (http://www.herpnet.org/herpnet/documents/GeoreferencingQuickGuide.pdf) returned - Lat: 25.956023681 | Long: -97.14607609 | Error: 1650.4615200066 meters

Source Feature Data:

Observation Date:	Observer:	Observation Data:
2000-10-13	MARB 312 Class	1 specimen was collected (TCWC 11192.03).

Reference Code:	Full Citation:
U15FIS01TXUS	Fishes of Texas. 2015. Database download from the Fishes of Texas online database (http://www.fishesoftexas.org/home/) of SGCN species on 11 May 2015. University of Texas, Texas Natural History Collections, Excel spreadsheet.

Source Feature Record

Scientific Name: Paralichthys lethostigma **Source Feature ID:** 30824

Common Name: southern flounder

State Conservation Rank: S2S3 **Global Conservation Rank:** G5

Texas Protection Status: **Federal Protection Status:**

Source Feature Descriptor: ID Confirmed: Yes

Source Feature Locator:

Ditigizing Comments: The waterway at the Fishes of Texas georeferenced coordinates for FMNH 10903 was delimited to an extent determined by the VertNet calculated error.

Mapping Comments: Fishes of Texas donor information like Laguna Madre at Point Isabel.

Source Feature Data:

Observation Date:	Observer:	Observation Data:
1924-08-13	A.C. Weed, L.L. Pray	At least 1 specimen was collected (FMNH 10903).
1924-12-31	A.C. Weed, L.L. Pray	At least 1 specimen was collected (FMNH 11307).

Reference Code:	Full Citation:
U15FIS01TXUS	Fishes of Texas. 2015. Database download from the Fishes of Texas online database (http://www.fishesoftexas.org/home/) of SGCN species on 11 May 2015. University of Texas, Texas Natural History Collections, Excel spreadsheet.

Attachment F

Land Title and Survey

WILLIAMS MULLEN

MEMORANDUM

TO: Space Exploration Technologies, Inc.

FROM: Sean M. Sullivan

DATE: August 15, 2025

RE: Analysis of Real Property Interests for Rockhands Mitigation Bank

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This memorandum provides an analysis of the existing and pending real property interests related to and affecting the proposed Rockhands Mitigation Bank (the "Bank") located within two parcels (PIN Numbers 171646 and 171648) totaling approximately 1,213 acres northwest of the City of Starbase and adjacent to the southern border of South Bay (the "Property") in Cameron County, Texas. The sponsor of the Bank is Space Exploration Technologies, Inc. (the "Sponsor").

This memorandum is provided in support of and as part of Prospectus for the Bank (the "Prospectus") and related information and other documents set forth in or included therein. The findings included in this memorandum are based on (i) information provided in the current title commitment received from Fidelity National Title Insurance Company effective as of June 27, 2025 and issued on July 16, 2025 ("Current Title Commitment"),[1] including exceptions to title in the Property and related real property instruments of record listed in Schedule B thereof; (ii) available property information and surveys relevant to the Bank; and (iii) information about the purposes and design of the proposed Bank.[2] A copy of the Current Title Commitment is included with the Prospectus documentation along with instruments of record relevant to the Bank listed in the Current Title Commitment, Schedule B ("Schedule B"), as exceptions to title.

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[1] Note that the Current Title Commitment addresses a total of three "tracts" totaling 1,256 acres of land. The Bank will be constructed on the 1,212.58 acres identified as Tract 1 therein.

[2] Although this memorandum provides analysis of the existing and expected property interests concerning the Bank, and notwithstanding any other statement or information provided in this memorandum, it is not intended to serve as, and should not be considered or construed as, a legal opinion by Williams Mullen as to title in or to real property interests held by or to be held by any party that may be relied upon by any party.

I. REAL PROPERTY AND BANK SITE BACKGROUND INFORMATION

A. Real Property Ownership.

The current owner of the Property is the Sponsor. The Property consists of three tracts, including the land identified as Tract 1 in the Current Title Commitment ("Tract 1"). The approximately 1,050 acres of real property proposed for the Bank are located within Tract 1. Lower Texas Coastal Mitigation, LLC conveyed the Property to the Sponsor by special warranty deed dated July 16, 2025, (the "Property Deed-In").[3]

B. Bank Site Description.

The approximately 1,050-acre site for the Bank (the "Site") is located northwest of the City of Starbase and adjacent to the southern border of South Bay in Cameron County, Texas, with a centroid at 26.0002997°N, -97.193139°W and within UTM Zone 14. Again, the Site is contained within Tract 1, a 1,212.58-acre tract of land composed of two separate property parcels (Cameron County PINs: 171646 & 171648). Tract 1 is bordered by residential and commercial development to the southeast and wind-tidal flats and open water on the remaining three sides

II. EXISTING THIRD-PARTY PROPERTY INTERESTS RELEVANT TO BANK SITE

Schedule B addresses exceptions to the coverage of title insurance that would apply under a final title policy for the Property. Some of these are generic in nature and are typical title insurance exceptions associated with potential liens associated with unpaid real estate taxes,[4] matters not of record, and waterfront property and riparian rights.

There are several existing reservations of mineral interests affecting the Property that are held by parties other than the Sponsor. Schedule B lists the relevant instruments of record as exceptions to title for the Property (as that is the underlying real property interest on which the Bank will be developed.) These interests should not present a restriction on the Bank or Bank activities and generation of wetland mitigation credits in connection with the Bank. In addition, it is important to note that, in Texas: (1) the holders of mineral interests in property may not exercise those interests in a negligent manner; (2) the holder of a mineral interest must exercise due regard towards existing surface uses and may not use

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[3] This Property Deed-In was recorded on July 17, 2025 as Instrument No. 2025-24884. A copy will be included in the Prospectus.

[4] Payment of real property taxes for the Property is current.

more of the land surface than reasonably necessary to exercise its interest; and (3) the owner of the surface interest in property is not prohibited from an activity simply because it would reduce the value of the mineral interest.

Other than the aforementioned reservations of mineral interests, no other easements or other property interests for access or use that are of record extend across the Bank, and Sponsor is unaware of any unrecorded easements or rights of access or use that extend into it.

III. CONCLUSION

This property assessment entailed locating those existing interests listed in Schedule B from the Current Title Commitment and providing a narrative evaluation of the existing interests' potential to create conflicts with the Bank's objectives and/or likelihood of success. In short, and as explained further in Appendix Q hereto, the exceptions identified in Schedule B should not interfere with the Bank's objectives and likelihood of success or are otherwise irrelevant to the Bank and related access thereto.

A "Remoteness Opinion-Mineral Management Plan- Surface Use Agreement" that specifically addresses the severed mineral interests will be prepared for submission with the Rockhands Mitigation Banking Instrument ("MBI") as required by Galveston District guidance. The report and other necessary information will be attached as appendices to the MBI.

COMMITMENT FOR TITLE INSURANCE (T-7)

Issued By:

Fidelity National Title Insurance Company

Commitment Number:

FAH25004083

THE FOLLOWING COMMITMENT FOR TITLE INSURANCE IS NOT VALID UNLESS YOUR NAME AND THE POLICY AMOUNT ARE SHOWN IN **SCHEDULE A**, AND OUR AUTHORIZED REPRESENTATIVE HAS COUNTERSIGNED BELOW.

We (Fidelity National Title Insurance Company, a Florida corporation) will issue our title insurance policy or policies (the Policy) to You (the proposed insured) upon payment of the premium and other charges due, and compliance with the requirements in Schedule C. Our Policy will be in the form approved by the Texas Department of Insurance at the date of issuance, and will insure your interest in the land described in Schedule A. The estimated premium for our Policy and applicable endorsements is shown on Schedule D. There may be additional charges such as recording fees, and expedited delivery expenses.

This Commitment ends ninety (90) days from the effective date, unless the Policy is issued sooner, or failure to issue the Policy is our fault. Our liability and obligations to you are under the express terms of this Commitment and end when this Commitment expires.

Issued By:

Fidelity National Title Agency, Inc.

Fidelity National Title Insurance Company

By:

Michael J. Nolan, President

Attest:

Ann Johnson

Marjorie Nemzura, Secretary

CONDITIONS AND STIPULATIONS

1. If you have actual knowledge of any matter which may affect the title or mortgage covered by this Commitment that is not shown in Schedule B you must notify us in writing. If you do not notify us in writing, our liability to you is ended or reduced to the extent that your failure to notify us affects our liability. If you do notify us, or we learn of such matter, we may amend Schedule B, but we will not be relieved of liability already incurred.
2. Our liability is only to you, and others who are included in the definition of Insured in the Policy to be issued. Our liability is only for actual loss incurred in your reliance on this Commitment to comply with its requirements, or to acquire the interest in the land. Our liability is limited to the amount shown in Schedule A of this Commitment and will be subject to the following terms of the Policy: Insuring Provisions, Conditions and Stipulations, and Exclusions.

SCHEDULE A

Effective Date: June 27, 2025 at 8:00 AM
Commitment No.: FAH25004083

GF No.: FTH-18-FAH25004083AJ
Issued: July 16, 2025 at 8:00 AM

1. The policy or policies to be issued are:

   a. OWNER'S POLICY OF TITLE INSURANCE (Form T-1)
   (Not applicable for improved one-to-four family residential real estate)

   Policy Amount: $4,000,000.00
   PROPOSED INSURED: Space Exploration Technologies Corp., a Texas corporation

   b. TEXAS RESIDENTIAL OWNER'S POLICY OF TITLE INSURANCE
   ONE-TO-FOUR FAMILY RESIDENCES (Form T-1R)

   Policy Amount:
   PROPOSED INSURED:

   c. LOAN POLICY OF TITLE INSURANCE (Form T-2)

   Policy Amount:
   PROPOSED INSURED:
   Proposed Borrower:

   d. TEXAS SHORT FORM RESIDENTIAL LOAN POLICY OF TITLE INSURANCE (Form T-2R)

   Policy Amount:
   PROPOSED INSURED:
   Proposed Borrower:

   e. LOAN TITLE POLICY BINDER ON INTERIM CONSTRUCTION LOAN (Form T-13)

   Policy Amount:
   PROPOSED INSURED:
   Proposed Borrower:

   f. OTHER

   Policy Amount:
   PROPOSED INSURED:

2. The interest in the land covered by this Commitment is:

   Fee Simple

3. Record title to the land on the Effective Date appears to be vested in:

   LOWER TEXAS COASTAL MITIGATION LLC, A TEXAS LIMITED LIABILITY COMPANY

   TITLE VIA:

   Special Warranty Deed dated February 25, 2016, executed by Rampart Properties, LLC, a Nevada limited liability company, ultimate successor by merger to IGBAF, L.L.C.,a Texas limited liability Company, successor by conversion to IGBAF, INC, a Texas corporation to Lower Texas Coastal Mitigation LLC, a Texas limited liability company, recorded in Volume 21593, Page 87, being Document No. 00006495, Official Records, Cameron County, Texas.

   Special Warranty Deed dated October 3, 2024, executed by Newport Fund, L.L.C., an Oklahoma limited liability company to Lower Texas Coastal Mitigation LLC, a Texas limited liability company, recorded under Document No. 35969, Official Records, Cameron County, Texas.

SCHEDULE A
(continued)

SCHEDULE A
(continued)

4. Legal description of land:

TRACT I:
BEING A 1,212.58 (52,831,751.68 SQ. FT.) ACRE TRACT OF LAND MORE OR LESS, OUT OF SHARE I AND SHARE II OF THE SAN MARTIN GRANT A-6 AND THE H.M.SKELTON VACANCY AWARD, A-269, CAMERON COUNTY, TEXAS, COMPRISED OF A 912.64 (39,754,463.05 SQ. FT.) ACRE TRACT OF LAND CONVEYED FROM RAMPART PROPERTIES LLC TO LOWER TEXAS COASTAL MITIGATION LLC, AS RECORDED IN INSTRUMENT NUMBER 2016-00006495, CAMERON COUNTY DEED RECORDS, CAMERON COUNTY, TEXAS, AND A 300.20 (13,076,788.69 SQ. FT.) ACRE TRACT OF LAND CONVEYED TO LOWER TEXAS COASTAL MITIGATION LLC, AS RECORDED IN INSTRUMENT NUMBER 2024-35969, CAMERON COUNTY DEED RECORDS, CAMERON COUNTY, TEXAS, AND BEING MORE PARTICULARTY DESCRIBED BY METES AND BOUNDS AS FOLLOWS;

COMMENCING; AT THE NORTHWEST BOUNDARY LINE OF THE LAGUNA MADRE BEACH SUBDIVISION AS RECORDED IN VOLUME 20, PAGE 13, CAMERON COUNTY MAP RECORDS, CAMERON COUNTY, TEXAS, SAID COMMENCING POINT BEING NORTH 77°27’46” EAST, A DISTANCE OF 8,615.32 FEET FROM NGS MONUMENT DEL MAR AZ NGS PID AB0090, FOR THE SOUTHMOST CORNER AND **POINT OF BEGINNING**, OF THIS HEREIN DESCRIBED TRACT OF LAND, HAVING A GRID COORDINATE OF N= 16524117.4948; E= 1413752.8296;

THENCE; NORTH 83°26’59” WEST ALONG THE NORTH LINE OF A TRACT OF LAND CONVEYED TO THE UNITED STATES OF AMERICA, OUT OF ABSTRACT 6 J Y TREVINO, A DISTANCE OF 1800.99 FEET TO A FOUND UNITED STATES FISH & WILDLIFE SERVICE MONUMENT, A TOTAL DISTANCE OF 3,800.81 FEET, TO A CALCULATED POINT, FOR THE SOUTHWEST CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; NORTH 00°37’41” WEST ALONG THE WEST LINE OF THE SAID NEWPORT FUND, LLC TRACT AND THE EAST LINE OF A TRACT OF LAND CONVEYED TO THE BROWNSVILLE NAVIGATION DISTRICT, OUT OF ABSTRACT 6 J Y TREVINO, AT A DISTANCE OF 2,413.10 FEET, PAST THE COMMON LINE OF THE SAID NEWPORT LLC TRACT AND THE SAID LOWER TEXAS COASTAL MITIGATION, LLC TRACT, AT 3,940.89 FEET PASSING A FOUND SURVEY DISK, AT A DISTANCE OF 6,965.05 FEET MORE OR LESS PASSING THE SOUTHERLY SIDE OF AN INLET OF LAGUNA MADRE SOUTH BAY, AT A DISTANCE OF 8,119.92 FEET MORE OR LESS PASSING THE NORTHERLY SIDE OF SAID INLET, AND CONTINUING A TOTAL DISTANCE OF 9,513.13 FEET TO THE SHORE LINE OF LAGUNA MADRE SOUTH BAY AS SURVEYED ON JULY 03, 2025 BY COASTAL SURVEYING OF TEXAS, INC.

THENCE; FOLLOWING THE MEANDERS OF THE SAID SHORE LINE OF LAGUNA MADRE SOUTH BAY AS SURVEYED ON MAY 10, 2017, BY COASTAL SURVEYING OF TEXAS, INC., THE MEANDERS OF SAID LINE AS FOLLOWS;

1. **THENCE;** NORTH 77°59’00” EAST A DISTANCE OF 121.07 FEET;

2. **THENCE;** SOUTH 36°16’01” EAST A DISTANCE OF 481.41 FEET;

3. **THENCE;** SOUTH 07°33’09” WEST A DISTANCE OF 447.67 FEET;

4. **THENCE;** SOUTH 54°16’28” EAST A DISTANCE OF 163.04 FEET;

5. **THENCE;** NORTH 37°34’12” EAST A DISTANCE OF 401.24 FEET;

6. **THENCE;** NORTH 86°26’04” EAST A DISTANCE OF 63.19 FEET;

SCHEDULE A
(continued)

7. **THENCE;** SOUTH 16°04'36" EAST A DISTANCE OF 698.35 FEET;

8. **THENCE;** SOUTH 10°14'06" WEST A DISTANCE OF 390.52 FEET; MORE OF LESS TO THE NORTHERLY SIDE OF SAID INLET;

9. **THENCE;** CROSSING SAID INLET, SOUTH 18°16'51" EAST A DISTANCE OF 250.00 FEET, MORE OR LESS, PASSING SAID SOUTHERLY LINE OF SAID INLET, CONTINUING FOR A TOTAL DISTANCE OF 631.80 FEET;

10. **THENCE;** SOUTH 25°33'40" EAST A DISTANCE OF 127.47 FEET;

11. **THENCE;** NORTH 86°05'10" EAST A DISTANCE OF 46.56 FEET;

12. **THENCE;** NORTH 06°05'02" WEST A DISTANCE OF 268.47 FEET;

13. **THENCE;** NORTH 76°29'25" EAST A DISTANCE OF 179.98 FEET;

14. **THENCE;** SOUTH 77°59'02" EAST A DISTANCE OF 475.73 FEET;

15. **THENCE;** NORTH 52°38'08" EAST A DISTANCE OF 691.82 FEET;

16. **THENCE;** SOUTH 85°19'32" EAST A DISTANCE OF 1,352.33 FEET;

17. **THENCE;** SOUTH 52°01'20" EAST A DISTANCE OF 572.53 FEET;

18. **THENCE;** SOUTH 72°33'17" EAST A DISTANCE OF 414.74 FEET;

19. **THENCE;** NORTH 54°06'38" EAST A DISTANCE OF 601.30 FEET;

20. **THENCE;** NORTH 19°02'40" WEST A DISTANCE OF 797.72 FEET;

21. **THENCE;** NORTH 03°29'05" EAST A DISTANCE OF 480.79 FEET;

22. **THENCE;** NORTH 15°03'56" EAST A DISTANCE OF 300.36 FEET;

23. **THENCE;** NORTH 57°44'09" EAST A DISTANCE OF 589.23 FEET;

24. **THENCE;** SOUTH 70°53'17" EAST A DISTANCE OF 1,607.55 FEET;

THENCE; SOUTH, ALONG THE WEST LINE OF A TRACT OF LAND CONVEYED TO HELCAMP MINERAL PARTNERSHIP AS RECORDED IN VOLUME 13279, PAGE 83, OFFICIAL RECORDS OF CAMERON COUNTY, CAMERON COUNTY, TEXAS, AT A DISTANCE OF 3,472.28 FEET TO A CALCULATED POINT, BEING AN INTERIOR CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; EAST, ALONG SOUTH LINE OF SAID TRACT CONVEYED TO HELCAMP MINERAL PARTNERSHIP, A DISTANCE OF 1,168.14 FEET, TO THE WEST LINE OF RIO GRANDE BEACH SUBDIVISION UNIT THREE, ACCORDING TO MAP RECORDED IN VOLUME 22, PAGE 4 OF THE MAP RECORDS OF CAMERON COUNTY, CAMERON COUNTY, TEXAS, BEING THE MOST EASTERN CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 37°26'23" WEST ALONG THE WEST LINE OF SAID RIO GRANDE BEACH

SCHEDULE A
(continued)

SUBDIVISOIN UNIT THREE, A DISTANCE OF 1,732.86 FEET TO THE WEST CORNER OF SAID RIO GRANDE BEACH SUBDIVISION UNIT THREE, BEING THE NORTHMOST CORNER OF LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR, ACCORDING TO MAP RECORDS IN VOLUME 22 PAGE 21 OF MAP RECORDS OF CAMERON COUNTY, CAMERON COUNTY, TEXAS, FOR A POINT OF DEFLECTION OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 53°36'14" WEST ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR A DISTANCE OF 447.50 FEET, FOR A POINT OF DEFLECTION OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 40°36'54" WEST ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR A DISTANCE OF 300.00 FEET, FOR A POINT OF DEFLECTION OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 15°04'54" WEST ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR A DISTANCE OF 611.69 FEET, FOR A POINT OF DEFLECTION OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 34°21'54" WEST ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR A DISTANCE OF 200.00 FEET, FOR A POINT OF DEFLECTION OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 55°38'06" EAST ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR A DISTANCE OF 16.89 FEET, TO A POINT BEING ON THE WESTERLY LINE OF LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR, AS RECORDED IN VOL 22 PAGE 21 CAMERON COUNTY MAP RECORDS, CAMERON COUNTY, TEXAS, FOR AN INTERIOR CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 34°24'05" WEST, ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR, A DISTANCE OF 1,725.01 FEET, TO AN INTERIOR CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; NORTH 55°35'55" WEST, ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR, A DISTANCE OF 120.00 FEET, TO A POINT OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 34°24'05" WEST, ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR, A DISTANCE 2,235.58 FEET TO THE **POINT OF BEGINNING**, AND CONTAINING A CALCULATED 1,212.85 (52,831,751.74 SQ. FT.) ACRES TRACT OF LAND, MORE OR LESS.

NOTE: The Company is prohibited from insuring the area or quantity of the land described herein. Any statement in the above legal description of the area or quantity of land is not a representation that such area or quantity is correct, but is made only for informational and/or identification purposes and does not override Item 2 of Schedule B hereof. "This company does not represent that the above described acreage or square footage is true and correct."

TRACT II:
BEING A 21.160 (921,736.56 SQ. FT.) ACRE TRACT OF LAND OUT OF A 70.33 (3,063,574.8 SQ. FT.) ACRES TRACT OF LAND, RIO GRANDE BEACH SUBDIVISION, UNIT NO. FOUR, AS RECORDED IN VOLUME 22 PAGE 21, MAP RECORDS CAMERON COUNTY, TEXAS AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS;

SCHEDULE A
(continued)

COMMENCING; AT A FOUND 1 /2 INCH IRON ROD AT THE NORTHEAST CORNER OF LOT 5, BLOCK, 26, RIO GRANDE BEACH SUBDIVISION UNIT NO. FOUR, AS RECORDED IN VOLUME 22, PAGE 21, CAMERON COUNTY MAP RECORDS, CAMERON COUNTY, TEXAS, THENCE; SOUTH 49°21'50" EAST ALONG THE WEST RIGHT OF WAY LINE OF GENRELA AVENUE, A DISTANCE OF 145.36 FEET,

THENCE; NORTH 40’36'54" EAST A DISTANCE OF 180.00 FEET TO A POINT ON THE SOUTHEAST CORNER OF LOT 62, BLOCK 26 OF SAID RIO GRANDE BEACH SUBDIVISION UNIT NO. FOUR, FOR THE SOUTHWEST CORNER AND POINT OF BEGINNING, OF THIS HEREIN DESCRIBED TRACT OF LAND, HAVING A GRID COORDINATE OF N: 16526751.1621'; E: 1418361.1940';

THENCE; NORTH 49°23'01" WEST ALONG THE SOUTH LINE OF LOT 62 - LOT 34 OF SAID RIO GRANDE BEACH SUBDIVISION UNIT NO. FOUR, A DISTANCE 2,395.36 FEET TO A CALCULATED POINT, BEING THE NORTH BOUNDARY LINE OF SAID RIO GRANDE BEACH SUBDIVISION UNIT NO FOUR, FOR THE NORTHWEST CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; NORTH 53°36'14" EAST ALONG THE WESTERLY LINE OF SAID RIO GRANDE BEACH SUBDIVISION, UNIT NO. FOUR A DISTANCE OF 447.50 FEET, TO A CALCULATED POINT, BEING THE NORTHEAST CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 47°11'26" EAST A DISTANCE OF 2,296.46 FEET, ALONG THE WESTLINE OF LOT 1, BLOCK 8, LOT 28 - LOT 1, BLOCK 9, OF LAGUNA MADRE BEACH SUBDIVISION UNIT NO. TWO, AS RECORDED IN VOLUME 20, PAGE 42, CAMERON COUNTY MAP RECORDS, CAMERON COUNTY, TEXAS, TO A CALCULATED POINT, BEING THE SOUTHEAST CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 40°36'54" WEST A DISTANCE OF 348.17 FEET, TO THE POINT OF BEGINNING, AND CONTAINING A CALCULATED 21.160 (921,736.56 SQ. FT.) ACRES TRACT OF LAND, MORE OR LESS.

NOTE: The Company is prohibited from insuring the area or quantity of the land described herein. Any statement in the above legal description of the area or quantity of land is not a representation that such area or quantity is correct, but is made only for informational and/or identification purposes and does not override Item 2 of Schedule B hereof. "This company does not represent that the above described acreage or square footage is true and correct."

TRACT III:
BEING A 22.968 (1,000,516.921 SQ. FT.) ACRES TRACT OF LAND OUT OF A 70.33 (3,063,574.8 SQ. FT.) ACRES TRACT OF LAND, RIO GRANDE BEACH SUBDIVISION, UNIT NO. FOUR, AS RECORDED IN VOLUME 22 PAGE 21, MAP RECORDS CAMERON COUNTY, TEXAS AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS;

COMMENCING; AT A FOUND 1 /2 INCH IRON ROD AT THE NORTHEAST CORNER OF LOT 4 BLOCK, 26, OF RIO GRANDE BEACH SUBDIVISION UNIT NO. FOUR, AS RECORDED IN VOLUME 22, PAGE 21, CAMERON COUNTY MAP RECORDS, CAMERON COUNTY, TEXAS, THENCE; SOUTH 49°21'50" EAST ALONG THE WEST RIGHT OF WAY LINE OF GENRELA AVENUE, A DISTANCE OF 145.36 FEET,

THENCE; SOUTH 40’36'54" WEST, A DISTANCE OF 120.00 FEET TO A POINT ON THE SOUTHWEST CORNER OF LOT 3, BLOCK 26 OF SAID RIO GRANDE BEACH SUBDIVISION UNIT NO. FOUR, FOR THHSOUTHEAST CORNER AND POINT OF BEGINNING, OF THIS HEREIN DESCRIBED TRACT OF LAND, HAVING A GRID COORDINATE OF N: 16526523.4319'; E: 1418165.9019';

SCHEDULE A
(continued)

THENCE; SOUTH 40°36'54" WEST A DISTANCE OF 318.49 FEET, TO A CALCULATED POINT, BEING THE SOUTHWEST CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; NORTH 55°38'06" WEST ALONG THE EAST LINE OF LOT 2 - LOT 22 OF SAID RIO GRANDE BEACH SUBDIVISION UNIT NO. FOUR, A DISTANCE 2,144.44 FEET TO A CALCULATED POINT, BEING THE NORTH BOUNDARY LINE OF SAID RIO GRANDE BEACH SUBDIVISION UNIT NO. FOUR, FOR THE NORTHWEST CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; NORTH 15°04'54" EAST ALONG THE WESTERLY LINE OF SAID RIO GRANDE BEACH SUBDIVISION, UNIT NO. FOUR, AT DISTANCE OF 611.69 FEET, TO A CALCULATED POINT, BEING THE NORTHEAST CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 49°23'06" EAST ALONG THE WEST LINE OF LOT 33 - LOT 3 OF SAID RIO GRANDE BEACH SUBDIVISION UNIT NO. FOUR, A DISTANCE OF 2,395.36 FEET, TO THE POINT OF BEGINNING, AND CONTAINING A CALCULATED 22.968 (1,000,516.921 SQ. FT.) TRACT OF LAND, MORE OR LESS.

NOTE: The Company is prohibited from insuring the area or quantity of the land described herein. Any statement in the above legal description of the area or quantity of land is not a representation that such area or quantity is correct, but is made only for informational and/or identification purposes and does not override Item 2 of Schedule B hereof. "This company does not represent that the above described acreage or square footage is true and correct."

END OF SCHEDULE A

SCHEDULE B
EXCEPTIONS FROM COVERAGE

Commitment No.: FAH25004083 GF No.: FTH-18-FAH25004083AJ

In addition to the Exclusions and Conditions and Stipulations, your Policy will not cover loss, costs, attorney's fees, and expenses resulting from:

1. The following restrictive covenants of record itemized below (We must either insert specific recording data or delete this exception):

2. Item 1, Schedule B is hereby deleted.

3. Any discrepancies, conflicts, or shortages in area or boundary lines, or any encroachments or protrusions, or any overlapping of improvements.

4. Homestead or community property or survivorship rights, if any of any spouse of any insured.

   (Applies to the Owner Policy only.)

5. Any title or rights asserted by anyone, including, but not limited to, persons, the public, corporations, governments or other entities,

   a. to tidelands, or lands comprising the shores or beds of navigable or perennial rivers and streams, lakes, bays, gulfs or oceans, or

   b. to lands beyond the line of the harbor or bulkhead lines as established or changed by any government, or

   c. to filled-in lands, or artificial islands, or

   d. to statutory water rights, including riparian rights, or

   e. to the area extending from the line of mean low tide to the line of vegetation, or the rights of access to that area or easement along and across that area.

      (Applies to the Owner Policy only.)

6. Standby fees, taxes and assessments by any taxing authority for the year 2025 and subsequent years; and subsequent taxes and assessments by any taxing authority for prior years due to change in land usage or ownership; but not those taxes or assessments for prior years because of an exemption granted to a previous owner of the property under Section 11.13, Texas Tax Code, or because of improvements not assessed for a previous tax years. (If Texas Short Form Residential Mortgagee Policy of Title Insurance (T-2R) is issued, that policy will substitute "which become due and payable subsequent to Date of Policy" in lieu of "for the year 2025 and subsequent years.")

7. The terms and conditions of the documents creating your interest in the land.

8. Materials furnished or labor performed in connection with planned construction before signing and delivering the lien document described in Schedule A, if the land is part of the homestead of the owner. (Applies to the Mortgagee Title Policy Binder on Interim Construction Loan only, and may be deleted if satisfactory evidence is furnished to us before a binder is issued.)

9. Liens and leases that affect the title to the land, but that are subordinate to the lien of the insured mortgage.

   (Applies to Mortgagee Policy (T-2) only.)

SCHEDULE B
EXCEPTIONS FROM COVERAGE
(continued)

10. The Exceptions from Coverage and Express Insurance in Schedule B of the Texas Short Form Residential Mortgagee Policy of Title Insurance (T-2R). (Applies to Texas Short Form Residential Mortgagee Policy of Title Insurance (T-2R) only. Separate exceptions 1 through 8 of this Schedule B do not apply to the Texas Short Form Residential Mortgagee Policy of Title Insurance (T-2R).

11. The following matters and all terms of the documents creating or offering evidence of the matters (We must insert matters or delete this exception):

    a. Rights of parties in possession. ***(to be deleted upon receipt of acceptable affidavit from Owner)***

    b. The following exception will appear in any policy issued (other than the T-1R Residential Owner Policy of Title Insurance and the T-2R Short-Form Residential Mortgagee Policy) if the Company is not provided a survey of the Land, acceptable to the Company, for review at or prior to closing:

    Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land.

    Note: Upon receipt of a survey acceptable to the Title Company, this exception will be deleted. The Company reserves the right to except additional items and/or make additional requirements after reviewing said survey.

    c. Deleted

    d. Deleted

    e. Subdivision regulations of the County of Cameron and/or ordinances or regulations of the city holding extra-territorial jurisdiction of said property.

    f. Lease for coal, lignite, oil, gas or other minerals, together with rights incident thereto, dated March 21, 1966, by and between Gateway Newberry et al, as Lessor, and Gulf Oil Corporation, as Lessee, recorded in Volume 104, Page 273, Oil and Gas Records of Cameron County, Texas. Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s). ***(to be deleted upon receipt of acceptable affidavit from Owner)***

    g. Lease for coal, lignite, oil, gas or other minerals, together with rights incident thereto, dated April 28, 1966, by and between Gateway Newberry et al, as Lessor, and Gulf Oil Corporation, as Lessee, recorded in Volume 104, Page 250, Oil and Gas Records of Cameron County, Texas. Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s). ***(to be deleted upon receipt of acceptable affidavit from Owner)***

    h. Lease for coal, lignite, oil, gas or other minerals, together with rights incident thereto, dated August 31, 1973, recorded in Volume 112, Page 789, of the Oil and Gas Records of Cameron County, Texas. Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s). ***(to be deleted upon receipt of acceptable affidavit from Owner)***

SCHEDULE B
EXCEPTIONS FROM COVERAGE
(continued)

i. Interest in and to all coal, lignite, oil, gas and other minerals, and all rights incident thereto, contained in instrument dated April 9, 1919, recorded in Volume 83, Page 506 of the Deed Records of Cameron County, Texas, which document contains the following language . Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s).

j. Any rigths of adjoining property owners in and to that part of the herein described property which may constitute accretion or avulsion by virtue of the possible shifting of the bed or shores of the river, stream, or body of water which bounds the subject property.

k. Interest in and to all coal, lignite, oil, gas and other minerals, and all rights incident thereto, contained in instrument dated December 23, 1960, recorded in Volume 710, Page 725, of the Deed Records of Cameron County, Texas, which document contains the following language . Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s).

l. Interest in and to all coal, lignite, oil, gas and other minerals, and all rights incident thereto, contained in instrument dated December 23, 1960, recorded in Volume 710, Page 741, of the Deed Records of Cameron County, Texas, which document contains the following language . Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s).

m. Coal, lignite, oil, gas or other mineral interest(s), together with rights incident thereto, contained in instrument dated May 29, 1961, recorded in Volume 711, Page 10, of the Deed Records of Cameron County, Texas. Reference to which instrument is here made for full particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s).

n. ANY TITLES OR RIGHTS asserted by anyone, including but not limited to persons, corporations, governments or other entities to tidelands, or lands comprising the shores or beds of navigable or perennial rivers and streams, lakes, bays, gulfs, or oceans or to any land extending from the line of mean low tides to the line of vegetation, or to lands beyond the line of the harbor or bulkhead lines as established or changed by any government or to billed lands, or artificial islands, or to riparian rights or the rights of interest of the State of Texas, or the public generally in the area extending from the line of mean low tide to the line of vegetation or their rights of access thereto or fright to easement along and across the same.

o. Any loss or gain of the land from any erosions, accretions or avulsions caused by natural or artificial forces.

p. Interest in and to all coal, lignite, oil, gas and other minerals, and all rights incident thereto, contained in instrument dated May 23, 1960, recorded in Volume 710, Page 721, of the Deed Records of Cameron County, Texas, which document contains the following language . Reference to which instrument is here made for particulars. No further search of title has been made as to the interest(s) evidenced by this instrument, and the Company makes no representation as to the ownership or holder of such interest(s).

q. All leases, grants, exceptions or reservations of coal, lignite, oil, gas and other minerals, together with all rights, privileges, and immunities relating thereto, appearing in the Public Records whether listed in Schedule B or not. There may be leases, grants, exceptions or reservations of mineral interest that are not listed.

SCHEDULE B
EXCEPTIONS FROM COVERAGE
(continued)

r. Deleted

s. Deleted. .

SCHEDULE C

Commitment No.: FAH25004083 GF No.: FTH-18-FAH25004083AJ

Your Policy will not cover loss, costs, attorneys' fees, and expenses resulting from the following requirements that will appear as Exceptions in Schedule B of the Policy, unless you dispose of these matters to our satisfaction, before the date the Policy is issued:

1. Documents creating your title or interest must be approved by us and must be signed, notarized and filed for record.

2. Satisfactory evidence must be provided that:

   a. no person occupying the land claims any interest in that land against the persons named in paragraph 3 of Schedule A,

   b. all standby fees, taxes, assessments and charges against the property have been paid,

   c. all improvements or repairs to the property are completed and accepted by the owner, and that all contractors, sub-contractors, laborers and suppliers have been fully paid, and that no mechanic's, laborer's or materialmen's liens have attached to the property,

   d. there is legal right of access to and from the land,

   e. (on a Mortgagee Policy only) restrictions have not been and will not be violated that affect the validity and priority of the insured mortgage.

3. You must pay the seller or borrower the agreed amount for your property or interest.

4. Any defect, lien or other matter that may affect title to the land or interest insured, that arises or is filed after the effective date of this Commitment.

5. Deleted

6. Deleted.

7. The metes and bounds to Tracts I and Tracts II provided by surveying company are incorrect. Company will require corrections be made.

8. Deleted

9. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance by the corporation named below:

   Name of Corporation: SPACE EXPLORATION TECHNOLOGIES CORP., a Texas corporation

   a) A Copy of the corporation By-laws and Articles of Incorporation

   b) An original or certified copy of a resolution authorizing the transaction contemplated herein

   c) If the Articles and/or By-laws require approval by a ‘parent’ organization, a copy of the Articles and By-laws of the parent

   d) A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created

   The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

SCHEDULE C
(continued)

10. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below.

    Limited Liability Company: LOWER TEXAS COASTAL MITIGATION LLC

    a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.

    b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendment thereto with the appropriate filing stamps.

    c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.

    d. A current dated certificate of good standing from the proper governmental authority of the state in which the entity was created

    e. If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

    The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

11. Deleted

12. The Company will require, for its review, an insurable legal description for the Land the subject of this transaction. If a survey is being furnished, the survey must be prepared by a licensed State of Texas registered land surveyor.

    The Company reserves the right to add additional items or make further requirements after review of the requested documentation. (required)

13. Note –Important Notice

    You have the right to have your funds deposited in an interest-bearing account.

    If you choose to establish an interest-bearing account for your deposit, notify your escrow officer immediately. Thereafter you will be provided with a Notice of Election form which you should complete in writing by completing and returning the form, along with your taxpayer identification information, not later than five (5) days before the scheduled closing. If you choose to establish an interest-bearing account for your deposit, an additional charge of $50.00 will be required. This charge may exceed the amount of interest to be earned on the deposit, depending on the amount, applicable interest rate, and the duration of the deposit.

    As an example, the amount of interest you can earn on a deposit of $1000.00 for a thirty-day period at an interest rate of 4% is $3.33. Interest earned is dependent on the amount of deposit, time of deposit and the applicable interest rate.

    If you do not choose to establish an interest-bearing account for your deposit, your funds will be deposited with other escrow funds in your escrow agent's general escrow account with an authorized financial institution and may be transferred to another general escrow account or accounts. By reason of the banking relationship between our Company and the financial institution, the Company may receive an array of bank services, accommodations or other benefits. The escrow funds will not be affected by such services, accommodations or other benefits.

    Failure to notify your escrow officer and complete the additional required investment authorization form shall constitute waiver of any intention of establishing an interest-bearing account for your deposit(s).

SCHEDULE C
(continued)

14. As to any document creating your title or interest that will be executed or recorded electronically, or notarized pursuant to an online notarization, the following requirements apply:

• Confirmation prior to closing that the County Clerk of Cameron County, Texas has approved and authorized electronic recording of electronically signed and notarized instruments in the form and format that is being used.

• Electronic recordation of the instruments to be insured in the Official Public Records of Cameron County, Texas.

• Execution of the instruments to be insured pursuant to the requirements of the Texas Uniform Electronic Transactions Act, Chapter 322 of the Business and Commerce Code.

• Acknowledgement of the instruments to be insured by a notary properly commissioned as an online notary public by the Texas Secretary of State with the ability to perform electronic and online notarial acts under 1 TAC Chapter 87.

SCHEDULE D

Commitment No.: FAH25004083 GF No.: FTH-18-FAH25004083AJ

Pursuant to the requirements of Procedural Rule P-21 in the Basic Manual of Rules, Rates and Forms for the Writing of Title Insurance in the State of Texas, the following disclosures are made:

1. The issuing Title Insurance Company, **Fidelity National Title Insurance Company**, is a corporation whose shareholders owning or controlling, directly or indirectly, 10% or more of said corporation, directors, and officers are listed below:

   Shareholders: Fidelity National Title Group, Inc., which is owned 100% by FNTG Holdings, LLC, which is owned 100% by Fidelity National Financial, Inc., a publicly held company.

   Directors: Steven G. Day, Roger S. Jewkes, Marjorie Nemzura, Michael J. Nolan, Anthony J. Park

   Officers: Michael J. Nolan (President, Chief Executive Officer, and Chairman of the Board), Anthony J. Park (Treasurer, Chief Financial Officer, and Executive Vice President), Marjorie Nemzura (Corporate Secretary and Vice President)

2. The following disclosures are made by the Title Insurance Agent issuing this Commitment:

   Fidelity National Title Agency, Inc.

   (a) A listing of each shareholder, owner, partner, or other person having, owning or controlling one percent (1%) or more of the Title Insurance Agent that will receive a portion of the premium.

   Owners: FNTS Holdings, LLC owns 100% of **Fidelity National Title Agency, Inc.**

   (b) A listing of each shareholder, owner, partner, or other person having, owning or controlling 10 percent (10%) or more of an entity that has, owns or controls one percent (1%) or more of the Title Insurance Agent that will receive a portion of the premium.

   Owners: FNTG Holdings, LLC owns 100% of FNTS Holdings, LLC

   (c) If the Agent is a corporation: (i) the name of each director of the Title Insurance Agent, and (ii) the names of the President, the Executive or Senior Vice-President, the Secretary and the Treasurer of the Title Insurance Agent.

   Directors: Michael J. Nolan, Anthony John Park

   Officers: Laurie H. Ford (President), Paula D. Hester (President), Todd B. Rasco (President), Anthony John Park (Chief Financial Officer and Executive Vice President), Marjorie Nemzura (Secretary), Joseph William Grealish (Executive Vice President), John Ernst (Executive Vice President)

   (d) The name of any person who is not a full-time employee of the Title Insurance Agent and who receives any portion of the title insurance premium for services performed on behalf of the Title Insurance Agent in connection with the issuance of a title insurance form; and, the amount of premium that any such person shall receive. NONE.

   (e) For purposes of this paragraph 2, "having, owning or controlling" includes the right to receipt of a percentage of net income, gross income, or cash flow of the Agent or entity in the percentage stated in subparagraphs (a) or (b).

3. You are entitled to receive advance disclosure of settlement charges in connection with the proposed transaction to which this Commitment relates. Upon your request, such disclosure will be made to you. Additionally, the name of any person, firm or corporation receiving a portion of the premium from the settlement of this transaction will be disclosed on the closing or settlement statement.

   You are further advised that the estimated title premium* is:

Owner's Policy		**$**	**18,565.00**
	Total	**$**	**18,565.00**

   Of this total amount: 15% will be paid to the policy issuing Title Insurance Company; 85% will be retained by the issuing Title Insurance Agent; and the remainder of the estimated premium will be paid to other parties as follows:

Percent/Amount	To Whom	For Services

   *The estimated premium is based upon information furnished to us as of the date of this Commitment for Title Insurance. Final determination of the amount of the premium will be made at closing in accordance with the Rules and Regulations adopted by the Commissioner of Insurance.

TEXAS TITLE INSURANCE INFORMATION

Title insurance insures you against loss resulting from certain risks to your title.

The commitment for Title Insurance is the title insurance company's promise to issue the title insurance policy. The commitment is a legal document. You should review it carefully to completely understand it before your closing date.

El seguro de título le asegura en relación a perdidas resultantes de ciertos riesgos que pueden afectar el título de su propriedad.

El Compromiso para Seguro de Título es la promesa de la compañía aseguradora de títulos de emitir la póliza de seguro de título. El Compromiso es un documento legal. Usted debe leerlo cuidadosamente y endenterlo complemente antes de la fecha para finalizar su transacción.

Your Commitment for Title insurance is a legal contract between you and us. The Commitment is not an opinion or report of your title. It is a contract to issue you a policy subject to the Commitment's terms and requirements.

Before issuing a Commitment for Title Insurance (the Commitment) or a Title Insurance Policy (the Policy), the Title Insurance Company (the Company) determines whether the title is insurable. This determination has already been made. Part of that determination involves the Company's decision to insure the title except for certain risks that will not be covered by the Policy. Some of these risks are listed in Schedule B of the attached Commitment as Exceptions. Other risks are stated in the Policy as Exclusions. These risks will not be covered by the Policy. The Policy is not an abstract of title nor does a Company have an obligation to determine the ownership of any mineral interest.

--MINERALS AND MINERAL RIGHTS may not be covered by the Policy. The Company may be unwilling to insure title unless there is an exclusion or an exception as to Minerals and Mineral Rights in the Policy. Optional endorsements insuring certain risks involving minerals, and the use of improvements (excluding lawns, shrubbery and trees) and permanent buildings may be available for purchase. If the title insurer issues the title policy with an exclusion or exception to the minerals and mineral rights, neither this Policy, nor the optional endorsements, insure that the purchaser has title to the mineral rights related to the surface estate.

Another part of the determination involves whether the promise to insure is conditioned upon certain requirements being met. Schedule C of the Commitment lists these requirements that must be satisfied or the Company will refuse to cover them. You may want to discuss any matters shown in Schedules B and C of the Commitment with an attorney. These matters will affect your title and your use of the land.

When your Policy is issued, the coverage will be limited by the Policy's Exceptions, Exclusions and Conditions, defined below.

---EXCEPTIONS are title risks that a Policy generally covers but does not cover in a particular instance. Exceptions are shown on Schedule B or discussed in Schedule C of the Commitment. They can also be added if you do not comply with the Conditions section of the Commitment. When the Policy is issued, all Exceptions will be on Schedule B of the Policy.

---EXCLUSIONS are title risks that a Policy generally does not cover. Exclusions are contained in the Policy but not shown or discussed in the Commitment.

---CONDITIONS are additional provisions that qualify or limit your coverage. Conditions include your responsibilities and those of the Company. They are contained in the Policy but not shown or discussed in the Commitment. The Policy Conditions are not the same as the Commitment Conditions.

TEXAS TITLE INSURANCE INFORMATION
(Continued)

You can get a copy of the policy form approved by the Texas Department of Insurance by calling the Title Insurance Company at 1-800-442-7067 or by calling the title insurance agent that issued the Commitment. The Texas Department of Insurance may revise the policy form from time to time.

You can also get a brochure that explains the policy from the Texas Department of Insurance by calling 1-800-252-3439.

Before the Policy is issued, you may request changes in the policy. Some of the changes to consider are:

---Request amendment of the "area and boundary" exception (Schedule B, paragraph 2). To get this amendment, you must furnish a survey and comply with other requirements of the Company. On the Owner's Policy, you must pay an additional premium for the amendment. If the survey is acceptable to the Company and if the Company's other requirements are met, your Policy will insure you against loss because of discrepancies or conflicts in boundary lines, encroachments or protrusions, or overlapping of improvements. The Company may then decide not to insure against specific boundary or survey problems by making special exceptions in the Policy. Whether or not you request amendment of the "area and boundary" exception, you should determine whether you want to purchase and review a survey if a survey is not being provided to you.

---Allow the Company to add an exception to "rights of parties in possession." If you refuse this exception, the Company or the title insurance agent may inspect the property. The Company may except to and not insure you against the rights of specific persons, such as renters, adverse owners or easement holders who occupy the land. The Company may charge you for the inspection. If you want to make your own inspection, you must sign a Waiver of Inspection form and allow the Company to add this exception to your Policy.

The entire premium for a Policy must be paid when the Policy is issued. You will not owe any additional premiums unless you want to increase your coverage at a later date and the Company agrees to add an Increased Value Endorsement.

DELETION OF ARBITRATION PROVISION

(Not applicable to the Texas Residential Owner's Policy)

ARBITRATION is a common form of alternative dispute resolution. It can be a quicker and cheaper means to settle a dispute with your Title Insurance Company. However, if you agree to arbitrate, you give up your right to take the Title Insurance Company to court and your rights to discovery of evidence may be limited in the arbitration process. In addition, you cannot usually appeal an arbitrator's award.

Your policy contains an arbitration provision (shown below). It allows you or the Company to require arbitration if the amount of insurance is $2,000,000 or less. If you want to retain your right to sue the Company in case of a dispute over a claim, you must request deletion of the arbitration provision before the policy is issued. You can do this by signing this form and returning it to the Company at or before the closing of your real estate transaction or by writing to the Company.

The arbitration provision in the Policy is as follows:

> "Either the Company or the Insured may demand that the claim or controversy shall be submitted to arbitration pursuant to the Title Insurance Arbitration Rules of the American Land Title Association ("Rules"). Except as provided in the Rules, there shall be no joinder or consolidation with claims or controversies of other persons. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the Insured arising out of or relating to this policy, any service in connection with its issuance or the breach of a policy provision, or to any other controversy or claim arising out of the transaction giving rise to this policy. All arbitrable matters when the Amount of Insurance is $2,000,000 or less shall be arbitrated at the option of either the Company or the Insured, unless the Insured is an individual person (as distinguished from an Entity). All arbitrable matters when the Amount of Insurance is in excess of $2,000,000 shall be arbitrated only when agreed to by both the Company and the Insured. Arbitration pursuant to this policy and under the Rules shall be binding upon the parties. Judgment upon the award rendered by the Arbitrator(s) may be entered in any court of competent jurisdiction."

_____ _____

Signature Date

FIDELITY NATIONAL FINANCIAL
PRIVACY NOTICE

Effective January 1, 2025

Fidelity National Financial, Inc. and its majority-owned subsidiary companies (collectively, "FNF," "our," or "we") respect and are committed to protecting your privacy. This Privacy Notice explains how we collect, use, and protect personal information, when and to whom we disclose such information, and the choices you have about the use and disclosure of that information.

A limited number of FNF subsidiaries have their own privacy notices. If a subsidiary has its own privacy notice, the privacy notice will be available on the subsidiary's website and this Privacy Notice does not apply.

Collection of Personal Information

FNF may collect the following categories of Personal Information:

- contact information (*e.g.*, name, address, phone number, email address);
- demographic information (*e.g.*, date of birth, gender, marital status);
- identity information (*e.g.,* Social Security Number, driver's license, passport, or other government ID number);
- financial account information (*e.g.,* loan or bank account information);
- biometric data (e.g., fingerprints, retina or iris scans, voiceprints, or other unique biological characteristics; and
- other personal information necessary to provide products or services to you.

We may collect Personal Information about you from:

- information we receive from you or your agent;
- information about your transactions with FNF, our affiliates, or others; and
- information we receive from consumer reporting agencies and/or governmental entities, either directly from these entities or through others.

Collection of Browsing Information

FNF automatically collects the following types of Browsing Information when you access an FNF website, online service, or application (each an "FNF Website") from your Internet browser, computer, and/or device:

- Internet Protocol (IP) address and operating system;
- browser version, language, and type;
- domain name system requests; and
- browsing history on the FNF Website, such as date and time of your visit to the FNF Website and visits to the pages within the FNF Website.

Like most websites, our servers automatically log each visitor to the FNF Website and may collect the Browsing Information described above. We use Browsing Information for system administration, troubleshooting, fraud investigation, and to improve our websites. Browsing Information generally does not reveal anything personal about you, though if you have created a user account for an FNF Website and are logged into that account, the FNF Website may be able to link certain browsing activity to your user account.

Other Online Specifics

Cookies. When you visit an FNF Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. Information gathered using cookies helps us improve your user experience. For example, a cookie can help the website load properly or can customize the display page based on your browser type and user preferences. You can choose whether or not to accept cookies by changing your Internet browser settings. Be aware that doing so may impair or limit some functionality of the FNF Website.

Web Beacons. We use web beacons to determine when and how many times a page has been viewed. This information is used to improve our websites.

Do Not Track. Currently our FNF Websites do not respond to "Do Not Track" features enabled through your browser.

Links to Other Sites. FNF Websites may contain links to unaffiliated third-party websites. FNF is not responsible for the privacy practices or content of those websites. We recommend that you read the privacy policy of every website you visit.

Use of Personal Information

FNF uses Personal Information for these main purposes:

- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.
- To prevent and detect fraud;
- To maintain the security of our systems, tools, accounts, and applications;
- To verify and authenticate identities and credentials;
- To communicate with you about our, our affiliates', and others' products and services, jointly or independently.
- To provide reviews and testimonials about our services, with your consent.

When Information Is Disclosed

We may disclose your Personal Information and Browsing Information in the following circumstances:

- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to affiliated or nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;
- to affiliated or nonaffiliated third parties with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;
- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or
- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of bankruptcy, reorganization, insolvency, receivership, or an assignment for the benefit of creditors. By submitting Personal Information and/or Browsing Information to FNF, you expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings.

Security of Your Information

We maintain physical, electronic, and procedural safeguards to protect your Personal Information.

Choices With Your Information

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you.

State-Specific Consumer Privacy Information:

For additional information about your state-specific consumer privacy rights, to make a consumer privacy request, or to appeal a previous privacy request, please follow the link Privacy Request, or email privacy@fnf.com or call (888) 714-2710.

Certain state privacy laws require that FNF disclose the categories of third parties to which FNF may disclose the Personal Information and Browsing Information listed above. Those categories are:

- FNF affiliates and subsidiaries;
- Non-affiliated third parties, with your consent;
- Business in connection with the sale or other disposition of all or part of the FNF business and/or assets;
- Service providers;
- Law endorsement or authorities in connection with an investigation, or in response to a subpoena or court order.

For California Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties, except as permitted by California law. For additional information about your California privacy rights, please visit the "California Privacy" link on our website (fnf.com/california-privacy) or call (888) 413-1748.

For Nevada Residents: We are providing this notice pursuant to state law. You may be placed on our internal Do Not Call List by calling FNF Privacy at (888) 714-2710 or by contacting us via the information set forth at the end of this Privacy Notice. For further information concerning Nevada's telephone solicitation law, you may contact: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: aginquiries@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes. For additional information about your Oregon consumer privacy rights, or to make a consumer privacy request, or appeal a previous privacy request, please email privacy@fnf.com or call (888) 714-2710

FNF is the controller of the following businesses registered with the Secretary of State in Oregon:
Chicago Title Company of Oregon, Fidelity National Title Company of Oregon, Lawyers Title of Oregon, LoanCare, Ticor, Title Company of Oregon, Western Title & Escrow Company, Chicago Title Company, Chicago Title Insurance Company, Commonwealth Land Title Insurance Company, Fidelity National Title Insurance Company, Liberty Title & Escrow, Novare National Settlement Service, Ticor Title Company of California, Exos Valuations, Fidelity & Guaranty Life, Insurance Agency, Fidelity National Home Warranty Company, Fidelity National Management Services, Fidelity Residential Solutions, FNF Insurance Services, FNTG National Record Centers, IPEX, Mission Servicing Residential, National Residential Nominee Services, National Safe Harbor Exchanges, National Title Insurance of New York, NationalLink Valuations, NexAce Corp., ServiceLink Auction, ServiceLink Management Company, ServiceLink Services, ServiceLink Title Company of Oregon, ServiceLink Valuation Solutions, Western Title & Escrow Company

For Vermont Residents: We will not disclose information about your creditworthiness to our affiliates and will not disclose your personal information, financial information, credit report, or health information to nonaffiliated third parties to market to you, other than as permitted by Vermont law, unless you authorize us to make those disclosures.

Information From Children
The FNF Websites are not intended or designed to attract persons under the age of eighteen (18). We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian.

International Users
FNF's headquarters is located within the United States. If you reside outside the United States and choose to provide Personal Information or Browsing Information to us, please note that we may transfer that information outside of your country of residence. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection, transfer, and use of such information in accordance with this Privacy Notice.

FNF Website Services for Mortgage Loans
Certain FNF companies provide services to mortgage loan servicers, including hosting websites that collect customer information on behalf of mortgage loan servicers (the "Service Websites"). The Service Websites may contain links to both this Privacy Notice and the mortgage loan servicer or lender's privacy notice. The sections of this Privacy Notice titled When Information is Disclosed, Choices with Your Information, and Accessing and Correcting Information do not apply to the Service Websites. The mortgage loan servicer or lender's privacy notice governs use, disclosure, and access to your Personal Information. FNF does not share Personal Information collected through the Service Websites, except as required or authorized by contract with the mortgage loan servicer or lender, or as required by law or in the good-faith belief that such disclosure is necessary: to comply with a legal process or applicable law, to enforce this Privacy Notice, or to protect the rights, property, or safety of FNF or the public.

Your Consent To This Privacy Notice; Notice Changes
By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information in accordance with this Privacy Notice. We may change this Privacy Notice at any time. The Privacy Notice's effective date will show the last date changes were made. If you provide information to us following any change of the Privacy Notice, that signifies your assent to and acceptance of the changes to the Privacy Notice.

Accessing and Correcting Information; Contact Us

If you have questions or would like to correct your Personal Information, visit FNF's Privacy Request website or contact us by phone at (888) 714-2710, by email at privacy@fnf.com, or by mail to:

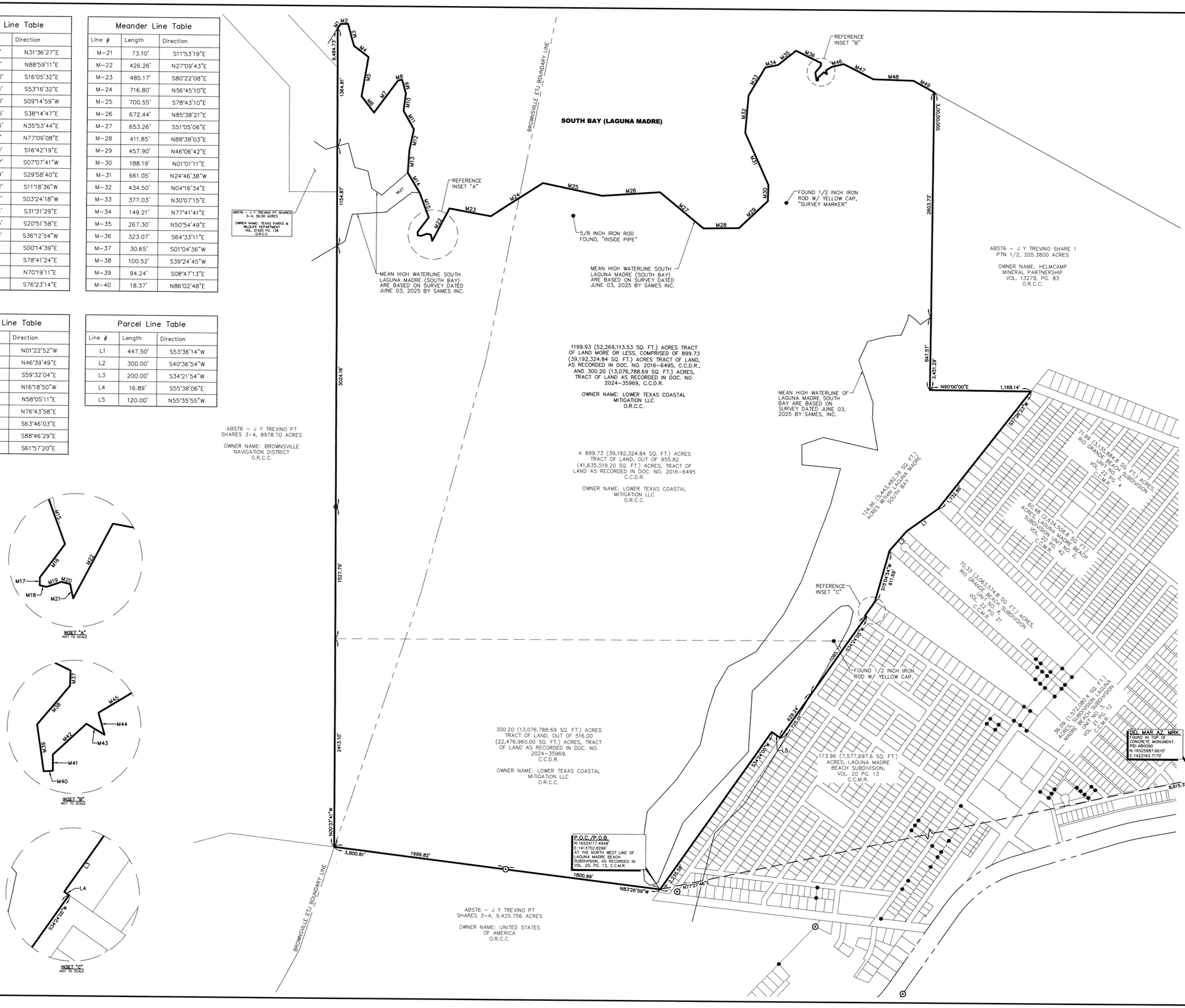
Fidelity National Financial, Inc.
601 Riverside Avenue,
Jacksonville, Florida 32204
Attn: Chief Privacy Officer

Meander Line Table		
Line #	Length	Direction
M-1	61.15'	N31°36'27"E
M-2	86.10'	N88°59'11"E
M-3	264.32'	S16°05'32"E
M-4	211.24'	S53°16'32"E
M-5	461.80'	S09°14'59"W
M-6	237.85'	S38°14'47"E
M-7	464.46'	N35°53'44"E
M-8	47.67'	N77°09'08"E
M-9	166.10'	S16°42'19"E
M-10	202.77'	S07°07'41"W
M-11	246.59'	S29°58'40"E
M-12	246.52'	S11°18'36"W
M-13	261.57'	S03°24'18"W
M-14	271.54'	S31°31'29"E
M-15	302.35'	S20°51'58"E
M-16	210.50'	S36°12'54"W
M-17	39.73'	S00°14'39"E
M-18	35.65'	S78°41'24"E
M-19	78.26'	N70°19'11"E
M-20	45.78'	S76°23'14"E

Meander Line Table		
Line #	Length	Direction
M-21	73.10'	S11°53'19"E
M-22	426.26'	N27°09'43"E
M-23	485.17'	S80°22'08"E
M-24	716.80'	N56°45'10"E
M-25	700.55'	S78°43'10"E
M-26	672.44'	N85°38'21"E
M-27	653.26'	S51°05'06"E
M-28	411.85'	N88°38'03"E
M-29	457.90'	N46°06'42"E
M-30	188.19'	N01°01'11"E
M-31	661.05'	N24°46'38"W
M-32	434.50'	N04°16'34"E
M-33	377.03'	N30°07'15"E
M-34	149.21'	N77°41'41"E
M-35	267.30'	N50°54'49"E
M-36	323.07'	S64°33'11"E
M-37	30.65'	S01°04'36"W
M-38	100.52'	S39°24'45"W
M-39	94.24'	S08°47'13"E
M-40	18.37'	N86°02'48"E

Meander Line Table		
Line #	Length	Direction
M-41	32.33'	N01°22'52"W
M-42	90.70'	N46°39'49"E
M-43	41.97'	S59°32'04"E
M-44	45.46'	N16°18'50"W
M-45	78.54'	N58°05'11"E
M-46	144.52'	N76°43'58"E
M-47	383.63'	S63°46'03"E
M-48	463.04'	S88°46'29"E
M-49	275.72'	S61°57'20"E

Parcel Line Table		
Line #	Length	Direction
L1	447.50'	S53°36'14"W
L2	300.00'	S40°36'54"W
L3	200.00'	S34°21'54"W
L4	16.89'	S55°38'06"E
L5	120.00'	N55°35'55"W



INSET "A"
NOT TO SCALE

INSET "B"
NOT TO SCALE

INSET "C"
NOT TO SCALE

N
W E
S

SCALE: 1" = 500'

LEGEND	
●	– FND. 1/2" IRON ROD
⊙	– FND. USFWS MONUMENT
○	– FND. "SURVEY DISK"
C.C.M.R.	– CAMERON COUNTY MAP RECORDS
C.C.D.R.	– CAMERON COUNTY DEED RECORDS
O.R.C.C.	– OFFICIAL RECORDS OF CAMERON COUNTY
M#	– MEAN HIGH WATERLINE OF THE SHORELINE OF LAGUNA MADRE SOUTH BAY
USFWS	– UNITED STATES FISH & WILDLIFE SERVICE MONUMENT

REVISION NOTES:

REVISION 01 – (07/11/2025)

1. REVISED TO MISSING ANNOTATION FOR "INLET".

GENERAL NOTES:

ADDRESS: HWY 4 BEHIND WEEMS, BROWNSVILLE, TEXAS, 78521
SURVEYED: JUNE 26, 2025
REQUESTED BY: BRANDON CONROY
PROPOSED BORROWER: SPACE EXPLORATION TECHNOLOGIES CORP.

FLOOD ZONE DESIGNATION: "VE" – BASE FLOOD ELEVATIONS DETERMINED.
BFE: 11'

COMMUNITY–PANEL NUMBER: 48061C 0525 F
MAP REVISED: FEBRUARY 16, 2018

SURVEY NOTES:

1. BASIS OF BEARING THE WEST LOT LINE OF ABST6 – J Y TREVINO SHARE 1 PTN 1/2, AS PER THE MAP OR PLAT THEREOF RECORDED IN VOLUME 13279, PAGE 83, MAP RECORDS OF CAMERON COUNTY, TEXAS.

2. BEARINGS SHOWN ARE BASED ON SURVEY OF THAT CERTAIN 955.82 ACRE TRACT OR PARCEL (CALLED MORE OR LESS) OUT OF SHARE 1 AND II, OF SAN MARTIN GRANT, A–6 AND THE H.M. SKELTON VACANCY AWARD, A–269, AS PER THE MAP OR PLAT THEREOF RECORDED IN VOLUME 2193, PAGE 87, INSTRUMENT NUMBER 2016–00006495, MAP RECORDS OF CAMERON COUNTY, TEXAS.

3. ALL HORIZONTAL CONTROL ON THIS PROJECT WAS ESTABLISHED UTILIZING RTK GPS METHODS.

4. THE SURVEYOR DID NOT PREPARE AN ABSTRACT OF TITLE. TITLE WORK WAS FURNISHED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, UNDER GF NO. FTH–18–FAH2500408JAJ, AND TITLE COMMITMENT DATED EFFECTIVE APRIL 11, 2025. SURVEYOR ASSUMES NO LIABILITY FOR THE ACCURACY OF THE TITLE WORK FURNISHED.

THE FOLLOWING MATTERS AND ALL TERMS OF THE DOCUMENTS CREATING OR OFFERING EVIDENCE OF THE MATTERS:

5. SUBJECT TO THE SUBDIVISION RULES AND REGULATIONS OF THE COUNTY OF CAMERON AND ORDINANCES OR GOVERNMENTAL REGULATIONS OF THE CITY IN WHICH THE PROPERTY MAY BE LOCATED OR HOLDING EXTRA TERRITORIAL JURISDICTION OF SAID PROPERTY.

6. SCHEDULE "B" ITEMS FROM REFERENCED TITLE.

11C. RIGHTS OR CLAIMS BY LAGUNA MADRE WATER DISTRICT TO ANY PORTION OF PROPERTY LYING WITHIN CANAL AND/OR DRAIN DITCH EASEMENTS AND/OR RIGHTS OF WAY LOCATED ON THE PROPERTY.

11D. STATUTORY RIGHTS, RULES, REGULATIONS, EASEMENTS AND LIENS IN FAVOR OF LAGUNA MADRE WATER DISTRICT, PURSUANT TO APPLICABLE SECTIONS OF THE TEXAS WATER CODE. (BLANKET)

11N. ANY TITLES OR RIGHTS ASSERTED BY ANYONE, INCLUDING BUT NOT LIMITED TO PERSONS, CORPORATIONS, GOVERNMENTS OR OTHER ENTITIES TO TIDELANDS, OR LANDS COMPRISING THE SHORES OR BEDS OF NAVIGABLE OR PERENNIAL RIVERS AND STREAMS, LAKES, BAYS, GULFS, OR OCEANS OR TO ANY LAND EXTENDING FROM THE LINE OF MEAN LOW TIDES TO THE LINE OF VEGETATION, OR TO LANDS BEYOND THE LINE OF THE HARBOR OR BULKHEAD LINES AS ESTABLISHED OR CHANGED BY ANY GOVERNMENT OR TO BILLED LANDS, OR ARTIFICIAL ISLANDS, OR TO RIPARIAN RIGHTS OR THE RIGHTS OF INTEREST OF THE STATE OF TEXAS, OR THE PUBLIC GENERALLY IN THE AREA EXTENDING FROM THE LINE OF MEAN LOW TIDE TO THE LINE OF VEGETATION OR THEIR RIGHTS OF ACCESS THERETO OR FRIGHT TO EASEMENT ALONG AND ACROSS THE SAME.

PLAT SHOWING

BEING A 1,199.93 (52,269,113.53 SQ. FT.) ACRES TRACT OF LAND COMPRISED OF 899.73 (39,192,324.84 SQ. FT.) ACRES TRACT OF LAND, AS RECORDED IN DOCUMENT NUMBER 2016–6496, CAMERON COUNTY DEED RECORDS, AND 300.20 (13,076,788.69 SQ. FT.) ACRES, TRACT OF LAND AS RECORDED IN DOCUMENT NUMBER 2024–35969, CAMERON COUNTY DEED RECORDS, BOTH CONVEYED TO LOWER TEXAS COASTAL MITIGATION LLC, OFFICIAL RECORDS CAMERON COUNTY.

I, SAMUEL D. MALDONADO, CERTIFY THAT THIS PLAT REPRESENTS THE FACTS FOUND ON THE GROUND AT THE TIME OF SURVEY AND THAT THERE ARE NO VISIBLE OR APPARENT EASEMENTS, DISCREPANCIES, CONFLICTS, OR SHORTAGES IN AREA OR BOUNDARY LINES, OR ANY ENCROACHMENTS, OR OVERLAPPING OF IMPROVEMENTS OR VISIBLE EASEMENTS EXCEPT AS SHOWN ON THIS PLAT. NO SUBSURFACE UTILITIES OR SERVICE CONNECTIONS ARE SHOWN. © COPYRIGHT 2018 SAM ENGINEERING & SURVEYING. THIS SURVEY WAS PROVIDED IN MULTIPLE ORIGINALS SOLELY FOR THE BORROWER NAMED HEREON, IN CONJUNCTION WITH THE ORIGINAL TRANSACTION WHICH SHALL TAKE PLACE WITHIN 6 MONTHS AFTER THE SURVEY WAS PROVIDED. NO LICENSE HAS BEEN CREATED OR IMPLIED COPY THIS SURVEY. SURVEY VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE.

7.11.2025
SAMUEL D. MALDONADO — DATE
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 2448

SEAL
STATE OF TEXAS REGISTERED SAMUEL D. MALDONADO 6027 PROFESSIONAL LAND SURVEYOR

Rev1

SAMES
200 S. 10TH ST, SUITE 1500
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JOB NUMBER	DRAWN BY	CHKD. BY	DATE
SUR 25.007	L.C.	S.D.M.	07/11/2025

SHEET 01 OF 06

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METES AND BOUNDS DESCRIPTION

1,199.93 (52,269,113.53 SQ. FT.) ACRE TRACT OF LAND MORE OR LESS, COMPRISED OF 899.73 (39,192,324.84 SQ. FT.) ACRE TRACT OF LAND, AS RECORDED IN DOCUMENT NUMBER 2016-6495, DEED RECORDS OF CAMERON COUNTY, TEXAS AND 300.20 (13,076,788.69 SQ. FT.) ACRE TRACT OF LAND, AS RECORDED IN DOCUMENT NUMBER 2024-35969, DEED RECORDS OF CAMERON COUNTY, TEXAS.

BEING A 1,199.93 (52,269,113.53 SQ. FT.) ACRE TRACT OF LAND MORE OR LESS, OUT OF SHARE I AND SHARE II OF THE SAN MARTIN GRANT A-6 AND THE H.M.SKELTON VACANCY AWARD, A-269, CAMERON COUNTY, TEXAS, COMPRISED OF A 899.73 (39,192,324.84 SQ. FT.) ACRE TRACT OF LAND CONVEYED FROM RAMPART PROPERTIES LLC TO LOWER TEXAS COASTAL MITIGATION LLC, AS RECORDED IN INSTRUMENT NUMBER 2016-00006495, CAMERON COUNTY DEED RECORDS, CAMERON COUNTY, TEXAS, AND A 300.20 (13,076,788.69 SQ. FT.) ACRE TRACT OF LAND CONVEYED FROM ROBERT B ELLIS TO NEWPORT FUND LLC, AS RECORDED IN INSTRUMENT NUMBER 2024-35969, CAMERON COUNTY DEED RECORDS, CAMERON COUNTY, TEXAS, AND BEING MORE PARTICULARTY DESCRIBED BY METES AND BOUNDS AS FOLLOWS;

COMMENCING; AT THE NORTHWEST BOUNDARY LINE OF THE LAGUNA MADRE BEACH SUBDIVISION AS RECORDED IN VOLUME 20, PAGE 13, CAMERON COUNTY MAP RECORDS, CAMERON COUNTY, TEXAS, SAID COMMENCING POINT BEING NORTH 77°27'46" EAST, A DISTANCE OF 8,615.32 FEET FROM NGS MONUMENT DEL MAR AZ NGS PID AB0090, FOR THE SOUTHMOST CORNER AND **POINT OF BEGINNING**, OF THIS HEREIN DESCRIBED TRACT OF LAND, HAVING A GRID COORDINATE OF N= 16524117.4948; E= 1413752.8296;

THENCE; NORTH 83°26'59" WEST ALONG THE NORTH LINE OF A TRACT OF LAND CONVEYED TO THE UNITED STATES OF AMERICA, OUT OF ABSTRACT 6 J Y TREVINO, A DISTANCE OF 1800.99 FEET TO A FOUND UNITED STATES FISH & WILDLIFE SERVICE MONUMENT, A TOTAL DISTANCE OF 3,800.81 FEET, TO A CALCULATED POINT, FOR THE SOUTHWEST CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; NORTH 00°37'41" WEST ALONG THE WEST LINE OF THE SAID NEWPORT FUND, LLC TRACT AND THE EAST LINE OF A TRACT OF LAND CONVEYED TO THE BROWNSVILLE NAVIGATION DISTRICT, OUT OF ABSTRACT 6 J Y TREVINO, AT A DISTANCE OF 2,413.10 FEET, PAST THE COMMON LINE OF THE SAID NEWPORT LLC TRACT AND THE SAID LOWER TEXAS COASTAL MITIGATION, LLC TRACT, AT 3,940.89 FEET PASSING A FOUND SURVEY DISK, AT A DISTANCE OF 6,965.05 FEET MORE OR LESS PASSING THE SOUTHERLY SIDE OF AN INLET OF LAGUNA MADRE SOUTH BAY, AT A DISTANCE OF 8,119.92 FEET MORE OR LESS PASSING THE NORTHERLY SIDE OF SAID INLET, AND CONTINUING A TOTAL DISTANCE OF 9,484.73 FEET TO THE SHORE LINE OF LAGUNA MADRE SOUTH BAY AS SURVEYED ON JULY 03, 2025 BY COASTAL SURVEYING OF TEXAS, INC.

THENCE; FOLLOWING THE MEANDERS OF THE SAID SHORE LINE OF LAGUNA MADRE SOUTH BAY AS SURVEYED ON JULY 03, 2025, BY SAMES, INC., THE MEANDERS OF SAID LINE AS FOLLOWS;

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M-1. **THENCE;** NORTH 31°36'27" EAST A DISTANCE OF 61.15 FEET;

M-2. **THENCE;** NORTH 88°59'11" EAST A DISTANCE OF 86.10 FEET;

M-3. **THENCE;** SOUTH 16°05'32" EAST A DISTANCE OF 264.32 FEET;

M-4. **THENCE;** SOUTH 53°16'32" EAST A DISTANCE OF 211.24 FEET;

M-5. **THENCE;** SOUTH 09°14'59" WEST A DISTANCE OF 461.80 FEET;

M-6. **THENCE;** SOUTH 38°14'47" EAST A DISTANCE OF 237.85 FEET;

M-7. **THENCE;** NORTH 35°53'44" EAST A DISTANCE OF 464.46 FEET;

M-8. **THENCE;** NORTH 77°09'08" EAST A DISTANCE OF 47.67 FEET;

M-9. **THENCE;** SOUTH 16°42'19" EAST A DISTANCE OF 166.10 FEET;

M-10. **THENCE;** SOUTH 07°07'41" WEST A DISTANCE OF 202.77 FEET;

M-11. **THENCE;** SOUTH 29°58'40" EAST A DISTANCE OF 246.59 FEET;

M-12. **THENCE;** SOUTH 11°18'36" WEST A DISTANCE OF 246.52 FEET;

M-13. **THENCE;** SOUTH 03°24'18" WEST A DISTANCE OF 261.57 FEET; MORE OR LESS TO THE NORTHERLY SIDE OF SAID INLET;

M-14. **THENCE;** CROSSING SAID INLET, SOUTH 31°31'29" EAST AT A DISTANCE OF 271.54 FEET, MORE OR LESS, PASSING SAID SOUTHERLY LINE OF SAID INLET;

M-15. **THENCE;** SOUTH 20°51'58" EAST A DISTANCE OF 302.35 FEET;

M-16. **THENCE;** SOUTH 36°12'54" WEST A DISTANCE OF 210.50 FEET;

M-17. **THENCE;** SOUTH 00°14'39" EAST A DISTANCE OF 39.73 FEET;

M-18. **THENCE;** SOUTH 78°41'24" EAST A DISTANCE OF 35.65 FEET;

M-19. **THENCE;** NORTH 70°19'11" EAST A DISTANCE OF 78.26 FEET;

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M-20. **THENCE;** SOUTH 76°23'14" EAST A DISTANCE OF 45.78 FEET;

M-21. **THENCE;** SOUTH 11°53'19" EAST A DISTANCE OF 73.10 FEET;

M-22. **THENCE;** NORTH 27°09'43" EAST A DISTANCE OF 426.26 FEET;

M-23. **THENCE;** SOUTH 80°22'08" EAST A DISTANCE OF 485.17 FEET;

M-24. **THENCE;** NORTH 56°45'10" EAST A DISTANCE OF 716.80 FEET;

M-25. **THENCE;** SOUTH 78°43'10" EAST A DISTANCE OF 700.55 FEET;

M-26. **THENCE;** NORTH 85°38'21" EST A DISTANCE OF 672.44 FEET;

M-27. **THENCE;** SOUTH 51°05'06" EAST A DISTANCE OF 653.26 FEET;

M-28. **THENCE;** NORTH 88°38'03" EAST A DISTANCE OF 411.85 FEET;

M-29. **THENCE;** NORTH 46°06'42" EAST A DISTANCE OF 457.90 FEET;

M-30. **THENCE;** NORTH 01°01'11" EAST, A DISTANCE OF 188.19 FEET;

M-31. **THENCE;** NORTH 24°46'38" WEST, A DISTANCE OF 661.05 FEET;

M-32. **THENCE;** NORTH 04°16'34" EAST, A DISTANCE OF 434.50 FEET;

M-33. **THENCE;** NORTH 30°07'15" EAST, A DISTANCE OF 377.03 FEET;

M-34. **THENCE;** NORTH 77°41'41" EAST, A DISTANCE OF 149.21 FEET;

M-35. **THENCE;** NORTH 50°54'49" EAST, A DISTANCE OF 267.30 FEET;

M-36. **THENCE;** SOUTH 64°33'11" EAST, A DISTANCE OF 323.07 FEET;

M-37. **THENCE;** SOUTH 01°04'36" WEST, A DISTANCE OF 30.65 FEET;

M-38. **THENCE;** SOUTH 39°24'45" WEST, A DISTANCE OF 100.52 FEET;

M-39. **THENCE;** SOUTH 08°47'13" EAST, A DISTANCE OF 94.24 FEET;

M-40. **THENCE;** NORTH 86°02'48" EAST A DISTANCE OF 18.37 FEET;

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M-41. **THENCE;** NORTH 01°22'52" WEST, A DISTANCE OF 32.33 FEET;

M-42. **THENCE;** NORTH 46°39'49" EAST, A DISTANCE OF 90.70 FEET;

M-43. **THENCE;** SOUTH 59°32'04" EAST, A DISTANCE OF 41.97 FEET;

M-44. **THENCE;** NORTH 16°18'50" WEST, A DISTANCE OF 45.46 FEET;

M-45. **THENCE;** NORTH 58°05'11" EAST, A DISTANCE OF 78.54 FEET;

M-46. **THENCE;** NORTH 76°43'58" EAST, A DISTANCE OF 144.52 FEET;

M-47. **THENCE;** SOUTH 63°46'03" EAST, A DISTANCE OF 383.63 FEET;

M-48. **THENCE;** SOUTH 88°46'29" EAST, A DISTANCE OF 463.04 FEET;

M-49. **THENCE;** SOUTH 61°57'20" EAST, A DISTANCE OF 275.72 FEET;

THENCE; SOUTH, ALONG THE WEST LINE OF A TRACT OF LAND CONVEYED TO HELCAMP MINERAL PARTNERSHIP AS RECORDED IN VOLUME 13279, PAGE 83, OFFICIAL RECORDS OF CAMERON COUNTY, CAMERON COUNTY, TEXAS, AT A DISTANCE OF 2,603.73 FEET, MORE OR LESS, PASSING THE NORTHEAST MEAN HIGH WATERLINE OF LAGUNA MADRE SOUTH BAY, AT A TOTAL DISTANCE OF 3,451.29 FEET TO A CALCULATED POINT, BEING AN INTERIOR CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; EAST, ALONG SOUTH LINE OF SAID TRACT CONVEYED TO HELCAMP MINERAL PARTNERSHIP, A DISTANCE OF 1,168.14 FEET, TO THE WEST LINE OF RIO GRANDE BEACH SUBDIVISION UNIT THREE, ACCORDING TO MAP RECORDED IN VOLUME 22, PAGE 4 OF THE MAP RECORDS OF CAMERON COUNTY, CAMERON COUNTY, TEXAS, BEING THE MOST EASTERN CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 37°26'23" WEST ALONG THE WEST LINE OF SAID RIO GRANDE BEACH SUBDIVISOIN UNIT THREE, A DISTANCE OF 1,732.86 FEET TO THE WEST CORNER OF SAID RIO GRANDE BEACH SUBDIVISION UNIT THREE, BEING THE NORTHMOST CORNER OF LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR, ACCORDING TO MAP RECORDS IN VOLUME 22 PAGE 21 OF MAP RECORDS OF CAMERON COUNTY, CAMERON COUNTY, TEXAS, FOR A POINT OF DEFLECTION OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 53°36'14" WEST ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR A DISTANCE OF 447.50 FEET, FOR A POINT OF DEFLECTION OF THIS HEREIN DESCRIBED TRACT OF LAND;

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THENCE; SOUTH 40°36'54" WEST ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR A DISTANCE OF 300.00 FEET, FOR A POINT OF DEFLECTION OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 15°04'54" WEST ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR A DISTANCE OF 611.69 FEET, FOR A POINT OF DEFLECTION OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 34°21'54" WEST ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR A DISTANCE OF 200.00 FEET, FOR A POINT OF DEFLECTION OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 55°38'06" EAST ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR A DISTANCE OF 16.89 FEET, TO A POINT BEING ON THE WESTERLY LINE OF LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR, AS RECORDED IN VOL 22 PAGE 21 CAMERON COUNTY MAP RECORDS, CAMERON COUNTY, TEXAS, FOR AN INTERIOR CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 34°24'05" WEST, ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR, AT A DISTANCE OF 1,095.77 FEET, MORE OR LESS, PASSING THE SOUTHEAST MEAN HIGH WATERLINE OF LAGUNA MADRE SOUTH BAY, TO A TOTAL DISTANCE OF 1,725.01 FEET, TO AN INTERIOR CORNER OF THIS HEREIN DESCRIBED TRACT OF LAND;

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THENCE; NORTH 55°35'55" WEST, ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR, A DISTANCE OF 120.00 FEET, TO A POINT OF THIS HEREIN DESCRIBED TRACT OF LAND;

THENCE; SOUTH 34°24'05" WEST, ALONG THE WESTERLY LINE OF SAID LAGUNA MADRE BEACH SUBDIVISION UNIT FOUR, A DISTANCE 2,235.58 FEET TO THE **POINT OF BEGINNING**, AND CONTAINING A CALCULATED 1,199.93 (52,269,113.53 SQ. FT.) ACRES TRACT OF LAND, MORE OR LESS.

ALL BEARINGS AND DISTANCES ARE BASED ON THE TEXAS COORDINATE SYSTEM (NAD 83), TEXAS STATE PLANES, SOUTH ZONE, U.S. SURVEY FEET, GRID. BEARINGS AND DISTANCES IN PARENTHESIS ARE BASED ON RECORDED PLAT OR DOCUMENT.

I, SAMUEL D MALDONADO., R.P.L.S. CERTIFY THAT THE ABOVE METES AND BOUNDS ARE TRUE AND IS THE RESULT OF AN ACTUAL SURVEY PERFORMED UNDER MY DIRECTION.

7.9.2015

SAMUEL D MALDONADO, R.P.L.S. DATE
REGISTERED PROFESSIONAL LAND SURVEYOR No. 6027