DRAFT
ENVIRONMENTAL ASSESSMENT
U.S. COAST GUARD STATION SOUTH PADRE ISLAND

CONTRACT #: 70Z05026F43000005

Prepared For:

UNITED STATES COAST GUARD
FACILITIES DESIGN AND CONSTRUCTION CENTER
5505 ROBIN HOOD ROAD, SUITE K
NORFOLK, VIRGINIA 23513-2413

US Army Corps of Engineers ®

UNITED STATES ARMY CORPS OF ENGINEERS
GALVESTON DISTRICT - CORPUS CHRISTI FIELD OFFICE
5151 FLYNN PKWY # 306,
CORPUS CHRISTI, TX 78411

June 2026

DRAFT ENVIRONMENTAL ASSESSMENT
U. S. COAST GUARD STATION SOUTH PADRE ISLAND, TEXAS

USCG has prepared this Draft EA in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321 et seq.); the USCG's implementing procedures for NEPA outlined in Commandant Instruction (COMDTINST) 5090.1; and the USACE Procedures for Implementing NEPA for the Processing of Department of the Army Permits (33 CFR Part 333, effective July 3, 2025). Consistent with E.O. 14154, CEQ has rescinded the NEPA regulations, effective April 11, 2025, and is working with Federal agencies to revise or establish their own NEPA implementing procedures. Per CEQ Guidance, while DHS revisions are ongoing, agencies should continue to follow their existing practices and procedures implementing NEPA. As such, this document has been prepared in accordance with DHS Directive 023-01, Rev 01 and Instruction 023-001-01, Rev 01, Implementation of the National Environmental Policy Act (2017). The United States Army Corps of Engineers serves as a Cooperating Agency for their expertise and jurisdiction by law.

This Draft EA serves as a concise public document to briefly provide sufficient evidence and analysis for determining the need to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). This Draft EA concisely describes the Proposed Action, the need for the Proposed Action, alternatives, and the environmental impacts of the Proposed Action and alternatives. This Draft EA also contains a comparative analysis of the action and alternatives, a statement of the environmental significance of the preferred alternative, and a list of the agencies and persons consulted during the Draft EA preparation. The Draft EA also provides an analysis to meet the requirements under Executive Order 11988, Floodplain Management, due to potential development in a floodplain.

6/25/26 — Date
Michael Jackson — Document Preparer
Planner — SHORE-A/CEU Miami

I reviewed the Draft EA and submitted my written comments to the Proponent.

6/25/26 — Date
Kyle Gispert — Environmental Reviewer
Natural Resources Management Specialist — CEU Miami
Level I — NEPA Warrant Level

I reviewed the Draft EA and submitted my written comments to the Proponent.

6/25/26 — Date
Rachelle Hill — Senior Environmental Reviewer
Environmental Protection Specialist — SHORE-V
Level II — NEPA Warrant Level

In reaching my decision/recommendation for the USCG's Proposed Action, I considered the information contained in this Draft EA and considered the written comments submitted to me from the Environmental Reviewer(s).

6/25/26 — Date
Katie M. Heedum
LCDR Mike Rathbun — Proponent
Project Manager — SHORE- E

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

LIST OF ACRONYMS AND ABBREVIATIONS

Acronym/ Abbreviation	Definition
ACHP	Advisory Council on Historic Preservation
ANT	Aids to Navigation Team
BFE	Base Flood Elevation
BLS	U.S. Bureau of Labor Statistics
BMF	Boat Maintenance Facility
BMP	Best Management Practice
BSF	Boat Storage Facility
CAA	Clean Air Act
CBP	United States Customs and Border Protection
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CGP	Construction General Permit
COMDTINST	Commandant Instruction
CWA	Clean Water Act
dB	Decibel
DHS	Department of Homeland Security
DSF	Deployable Specialized Forces
E2EM	Estuarine Intertidal Emergent
E2EM1P	Estuarine intertidal persistent emergent wetland, irregularly flooded
E2SS	Estuarine Intertidal Scrub-Shrub
E2USM	Estuarine Intertidal Unconsolidated Shore — Mud
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act of 1973, as amended
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FR	Federal Register
GIWW	Gulf Intracoastal Waterway
GLO	Texas General Land Office
GMFMC	Gulf of Mexico Fishery Management Council
GRBO	Gulf of Mexico Regional Biological Opinion
HAPC	Habitat Area of Particular Concern
IPaC	Information for Planning and Consultation (USFWS)
JOC	Joint Operations Center
LAA	May Affect, Likely to Adversely Affect (ESA Section 7 determination)
LDAM	Likely to Destroy or Adversely Modify (ESA Section 7 critical habitat determination)
LEDPA	Least Environmentally Damaging Practicable Alternative
MBTA	Migratory Bird Treaty Act of 1918, as amended
MLLW	Mean Lower Low Water
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969, as amended
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act of 1966, as amended
NLAA	May Affect, Not Likely to Adversely Affect (ESA Section 7 determination)
NLDAM	Not Likely to Destroy or Adversely Modify (ESA Section 7 critical habitat determination)

NMFS	National Marine Fisheries Service (NOAA Fisheries)
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service (USDA)
NRHP	National Register of Historic Places
P&N	Purpose and Need
PWCS	Port and Waterways Security
RHA	Rivers and Harbors Act of 1899
RMS	Root-Mean-Square (sound pressure level)
ROI	Region of Influence
RRS	Regulatory Request System (USACE)
SAR	Search and Rescue
SAV	Submerged Aquatic Vegetation
SELcum	Cumulative Sound Exposure Level (dB re 1 $\mu Pa^2 \cdot s$)
SELss	Single-Event Sound Exposure Level (dB re 1 $\mu Pa^2 \cdot s$)
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Officer
SPI	South Padre Island
SPL	Sound Pressure Level
SWPPP	Stormwater Pollution Prevention Plan
TCEQ	Texas Commission on Environmental Quality
THC	Texas Historical Commission
TPDES	Texas Pollutant Discharge Elimination System
TPWD	Texas Parks and Wildlife Department
TxDOT	Texas Department of Transportation
TWDB	Texas Water Development Board
TNW	Traditional Navigable Water
TTS	Temporary Threshold Shift (hearing)
UPH	Unaccompanied Personnel Housing
U.S.	United States
USACE	United States Army Corps of Engineers
USBP	United States Border Patrol
U.S.C.	United States Code
USCG	United States Coast Guard
USCG STA SPI	US Coast Guard Station South Padre Island; “The Station”
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States (alternative abbreviation used in EA body)
WWTP	Wastewater Treatment Plant

1 INTRODUCTION

The United States Coast Guard (USCG) proposes to construct, rebuild, and operate the USCG Station South Padre Island (US or "the Station") located in South Padre Island, Cameron County, Texas. The site is home to an existing and operable Station, and the project will rebuild and construct new facilities and waterfront infrastructure on the existing site to support future operations of the USCG based at USCG STA SPI. The proposed construction and operation of USCG STA SPI is referred to throughout this EA as the 'Proposed Action' in regulatory and environmental analysis contexts.

This Environmental Assessment (EA) has been prepared to evaluate the potential environmental effects of the Proposed Action and its alternatives, considering both construction and operational phases. This EA provides the basis for a Finding of No Significant Impact (FONSI), if warranted, or a determination that an EIS is required. The process also provides opportunity for public review and comment on the Proposed Action and its alternatives, ensuring that agency decision-makers and the public are fully informed of potential environmental consequences prior to a final decision.

1.1 Mission

Sector Corpus Christi is a multi-mission unit of the USCG responsible for executing a broad range of operations, including search and rescue, maritime law enforcement, ports and waterways security, marine safety, drug and migrant interdiction, and marine environmental protection.

USCG STA SPI, located near the United States (U.S.)–Mexico maritime border on South Padre Island, Texas, is one of the larger small boat Stations within Sector Corpus Christi. The Station's primary missions are search and rescue and maritime law enforcement, while also supporting marine safety and environmental protection efforts within its area of responsibility.

The Station is co-located with the Aids to Navigation Team (ANT) South Padre Island, which is responsible for the maintenance and reliability of federal aids to navigation, ensuring the safe and efficient movement of commercial and recreational vessel traffic throughout the region's waterways. The Station also supports Coast Guard cutter and interagency operations as required to carry out its multi-mission responsibilities.

1.2 Project Background

USCG STA SPI operates under Sector Corpus Christi, which is part of USCG Heartland District. The Station is one of three multi-mission stations under Sector Corpus Christi, supporting Coast Guard missions across a geographically significant area at the southernmost extent of the Texas coast, where maritime activity includes commercial shipping, recreational boating, and cross-border vessel traffic.

In April 2025, a fire significantly damaged critical infrastructure at the Station, including the boathouse and portions of operational and support facilities. The fire caused substantial impacts to mission-essential waterfront infrastructure. After the fire, some facilities needed to be demolished since they could not be used and staff continue to work in temporary spaces. The incident highlighted vulnerabilities in the Station's aging facilities and infrastructure.

The Station is vulnerable to the harsh coastal environment of the lower Rio Grande Valley. South Padre Island experiences significant tropical weather activity on average every 3.76 years, and the

facility has experienced ten major hurricanes since the current structures were built in 1974 (National Weather Service 2024). Chronic saltwater exposure accelerates corrosion of structural components and mechanical and electrical systems and compounds the effects of deferred maintenance on facilities not designed to current coastal resiliency standards. Although incremental improvements have been made over time, most to all the Station facilities no longer fully meet current operational, safety, and resiliency standards. In combination with the April 2025 fire damage, these conditions support the need to recapitalize the Station rather than continue incremental repairs to infrastructure that has exceeded its functional design life and no longer fully supports current mission requirements.

Mission requirements in the region continue to increase, particularly in the areas of maritime law enforcement and border security operations. The Station's proximity to the U.S.-Mexico maritime border places it in a critical position to support national security objectives, and current facility capacity is insufficient to meet growing operational tempo and personnel requirements. There is also a growing need to work with partner agencies, including U.S. Customs and Border Protection (CBP), at facilities and infrastructure that can adequately support joint operations, communication, and command and control functions.

1.3 Purpose and Need of the Proposed Action

1.3.1 USCG Purpose and Need

The Coast Guard's purpose and need for the Proposed Action is to build and operate modern, secure facilities at USCG STA SPI to protect the U.S. maritime border and fully support current and future Coast Guard missions (14 USC §102). USCG STA SPI is no longer adequate due to fire damage, aging buildings, and a growing need for search and rescue capabilities and border security. The Coast Guard must rebuild the USCG STA SPI to improve response times, protect U.S. waters, meet safety standards, conduct joint operations with partner agencies, and adapt to increased mission demands.

The rebuilt facility must provide a fully operational, mission-capable shore installation sufficient to support all assigned personnel and the full range of search and rescue, maritime law enforcement, border security, aids to navigation, and joint agency operations conducted by the station and it’s co-located tenant commands at this location. The need for the Proposed Action is driven by four major factors:

- Fire damaged infrastructure and loss of operational capacity: mission-essential infrastructure has been damaged or already demolished due to fire damage.
- Aging and substandard infrastructure: antiquated infrastructure is deteriorating due to saltwater exposure and repeated tropical storm impact and is need of modernization and repairs/replacement
- Increased mission demands: maritime law enforcement and border security demands necessitate additional support infrastructure and personnel capacity.
- Partnering agency requirements: co-located facilities need to support USCG missions and also support growing mission requirements of a Joint Operations Center (JOC), CBP and ANT.

The Proposed Action is therefore needed to (1) replace and upgrade fire-damaged infrastructure, (2) modernize outdated facilities to current USCG standards, (3) expand operational and support capacity to meet current and future mission demands, and (4) enhance partnering agency and

mission effectiveness. Implementation will improve operational readiness, increase resiliency, and ensure the USCG's sustained ability to meet mission requirements in the South Texas maritime border region.

1.3.2 USACE Purpose and Need

The U.S. Army Corps of Engineers (USACE) Galveston District is a cooperating agency for this EA pursuant to National Environmental Policy Act (NEPA) of 1969, as amended and applicable federal agency implementing procedures governing interagency cooperation and environmental review, based on its jurisdiction by law over Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899. The Proposed Action requires a CWA Section 404/Section 10 permit from the USACE for the discharge of fill material and work in Waters of the United States (WOTUS), including jurisdictional wetlands and navigable waters of the lower Laguna Madre. Therefore, the USACE will utilize this EA, including the alternatives analysis and Least Environmentally Damaging Practicable Alternative (LEDPA) determination presented below in Section 2, to satisfy its independent NEPA obligations in connection with the required individual permit decision. The conclusions of this EA, including a FONSI if it is issued by the USCG, will inform, but do not substitute for, the USACE's independent public interest review and permit decision under 33 CFR Parts 320–330 and the Section 404(b)(1) Guidelines (40 CFR Part 230).

To frame this independent review, the USACE has established the following foundational determinations required by Section 404(b)(1) Guidelines:

- Basic project purpose: Construction of a USCG Station facility to construct a modernized and secure USCG facility within the existing USCG STA SPI area of responsibility to protect the U.S. maritime border and fulfill mission requirements
- Water dependency determination: The basic project purpose does not require access or proximity to, or siting within, a special aquatic site to be fulfilled. Therefore, the activity is not water-dependent, and pursuant to 40 CFR 230.10(a)(3), it is presumed that practicable alternatives that do not involve special aquatic sites are available.

Using these USACE determinations alongside the USCG's stated purpose and need, the alternatives analysis presented below in Section 2.5 evaluates alternatives to identify the Least Environmentally Damaging Practicable Alternative (LEDPA) consistent with the Section 404(b)(1) Guidelines.

1.4 Location and Site Description

USCG STA SPI is located at 1 Wallace L Reed Road, South Padre Island, Texas 78597. The Station is situated at the southern end of South Padre Island, a barrier island located in Cameron County, Texas, along the Gulf Coast of the U.S. The station is located approximately six miles north of the U.S.–Mexico border, placing it as the southernmost operational USCG installation in the State of Texas. The station is located on the bay side of the island, adjacent to the Lower Laguna Madre (Figure 1-1, 1-2).

The Station currently consists of a waterfront infrastructure on the Laguna Madre including piers and covered mooring structure that house various service vessels; a Station building constructed in 1974; associated 6.2-acres fenced secure facility grounds containing parking, various recreational amenities for Station personnel, boat and equipment storage areas, utilities, fuel storage, and auxiliary support buildings; and 1.2 acres of additional grounds including radio tower

and recovered craft storage yards. The marine infrastructure is accessible from the Brazos Santiago Pass channel via an approximately 2,400-ft long, 100-ft wide maintained boat channel that terminates at the 1-acre Station basin. The existing marine channel is authorized under USACE Permit #13631 (1979). The Station basin and channel are maintained to a depth of -11 ft (mean lower low water [MLLW]) with 1 ft allowable over depth to maximum depth of -12 ft MLLW.

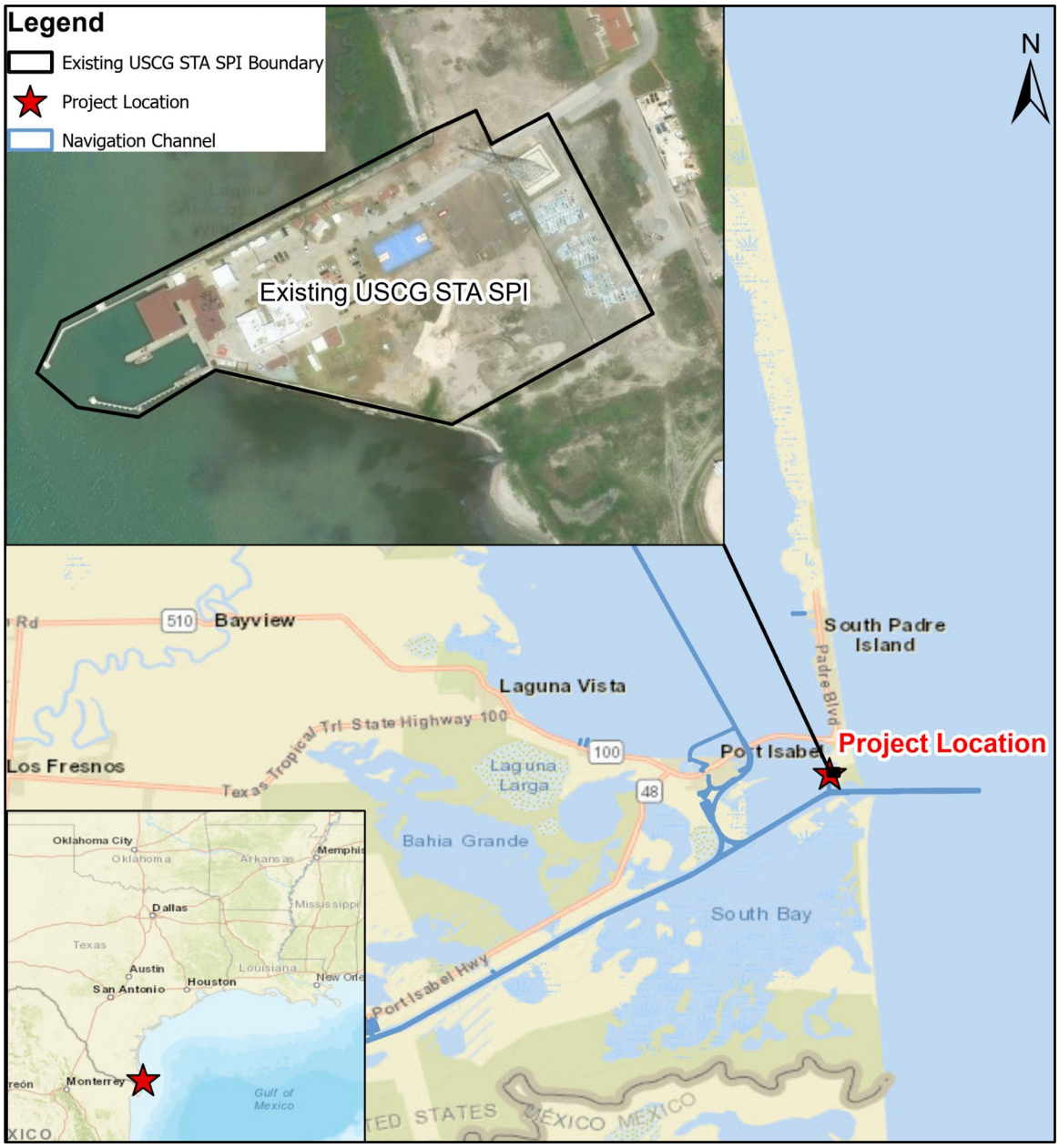


Figure 1-1: Project Location Map

Figure 1-2: Existing USCG STA SPI (photo taken prior to fire, facing NE)

1.5 Regulatory Framework

USCG has prepared this Draft EA in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321 et seq.); the USCG's implementing procedures for NEPA outlined in Commandant Instruction (COMDTINST) 5090.1; and the USACE Procedures for Implementing NEPA for the Processing of Department of the Army Permits (33 CFR Part 333, effective July 3, 2025). Consistent with E.O. 14154, CEQ has rescinded the NEPA regulations, effective April 11, 2025, and is working with Federal agencies to revise or establish their own NEPA implementing procedures. Per CEQ Guidance, while DHS revisions are ongoing, agencies should continue to follow their existing practices and procedures implementing NEPA. As such, this document has been prepared in accordance with DHS Directive 023-01, Rev 01 and Instruction 023-001-01, Rev 01, Implementation of the National Environmental Policy Act (2017).

Because the Proposed Action requires permits and authorizations from federal, state, and local agencies, this EA also addresses topics relevant to compliance with those requirements as applicable. These federal regulations establish both the administrative process and the substantive scope of the environmental impact evaluation, which is designed to ensure that deciding authorities have a proper understanding of the potential environmental consequences of a contemplated course of action. In addition to NEPA and USCG NEPA regulations, this EA considers all applicable laws, regulations, and executive orders including the following:

- Clean Air Act
- Clean Water Act (Sections 404 and 401)
- Rivers and Harbors Act of 1899 (Section 10 and 408)
- Coastal Zone Management Act
- Endangered Species Act
- Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.)
- Magnuson-Stevens Fishery Conservation and Management Act
- Migratory Bird Treaty Act

- Bald and Golden Eagle Protection Act
- Marine Mammal Protection Act
- National Historic Preservation Act
- Resource Conservation and Recovery Act
- Comprehensive Environmental Response, Compensation, and Liability Act
- Toxic Substances Control Act
- EO 11988, Floodplain Management
- EO 11990, Protection of Wetlands

1.6 Public and Agency Involvement

The USACE Galveston District has been designated as a cooperating agency for this EA pursuant to NEPA and applicable federal agency implementing procedures governing interagency cooperation and environmental review, based on its jurisdiction by law over Section 404 of the CWA and Section 10 of the RHA. The USACE will use this EA to inform its public interest review and LEDPA determination for the required Section 10/Section 404 individual permit.

The USCG has prepared this Draft EA to solicit comments from federal, state, and local agencies and the public in order to consider and evaluate the potential impacts of the Proposed Action. A public Notice of Availability (NOA) of the Draft EA is published on the USCG Office of Environmental Management's Environmental Planning Website (http://www.dcms.uscg.mil/nepa).

The USCG will publish a Notice of Availability (NOA) of the Draft EA in the legal notices section of the Port Isabel-South Padre Press and The Brownsville Herald for a 30-day public review and comment period.

Concurrent with the USCG's 30-day public comment period, the USACE Galveston District, as cooperating agency, has published a 15-day public notice for the associated Department of the Army Individual Permit application under Section 404 of the CWA and Section 10 of the RHA. The USACE public notice is available through the USACE Regulatory Request System (RRS) with permit number SWG-2025-00641. The concurrent public notice periods are designed to align public and agency comment on both the NEPA environmental review and the USACE permit application, allowing interested parties a single opportunity to submit comments relevant to either or both processes. Comments received by either agency during the respective comment periods will be considered in the final environmental review and permit decision.

A list of agencies consulted during the preparation of this EA is presented in Table 1-1 below. Copies of agency consultation letters and correspondence with interested parties received to date are provided in Appendix G. Conservation recommendations and requirements from agency coordination have been included in the BMPs for the project (Appendix F). Additional requirements arising from continued coordination and consultations will be incorporated into the BMPs list as they are finalized.

Table 1-1: Federal and State Agencies Correspondence and Consultations

Agency	Responsibilities	Regulatory Authority	Coordination or Consultation Status
Cooperating Agency: United States Army Corps of Engineers (USACE)	Individual permit for discharge of fill material and work in navigable waters; LEDPA determination; public interest review; joint NEPA review as cooperating agency with jurisdiction by law	Clean Water Act Section 404; Rivers and Harbors Act Section 10;	Public Notice for USACE Permit SWG-2025-00641
U.S. Fish and Wildlife Service (USFWS), Texas Coastal and Central Plains Ecological Services Field Office, Corpus Christi Sub-Office	ESA Section 7 informal consultation for terrestrial and freshwater listed species and critical habitat; MBTA coordination; USFWS concurrence letter issued April 10, 2026 (Tracking No. 2026-0014118)	Endangered Species Act Section 7; Migratory Bird Treaty Act	Draft concurrence received April 10, 2026 Final concurrence pending
NOAA National Marine Fisheries Service (NMFS), Southeast Regional Office, Galveston Field Office	ESA Section 7 consultation for marine and estuarine listed species including sea turtles; Essential Fish Habitat (EFH) Consultation	Endangered Species Act Section 7; Magnuson-Stevens Fishery Conservation and Management Act	Informal consultation initiated
U.S. Environmental Protection Agency (EPA), Region 6	Section 404(b)(1) guidelines review; water quality oversight	Clean Water Act Sections 404(b)(1) and 404(c)	Review concurrent with USACE Permit SWG-2025-00641
Texas Historical Commission (THC) — State Historic Preservation Officer (SHPO)	Section 106 review for effects on NRHP-listed and eligible properties; submerged cultural resources coordination for State Tract 748; No Adverse Effect determination issued 2026	National Historic Preservation Act Section 106; Texas Antiquities Code	Concurrence received. Tracking number 202603569, January 29, 2026
Federally Recognized Tribes	Section 106 coordination: ◦ Comanche Nation ◦ Kickapoo Traditional Tribe of Texas ◦ Kickapoo Tribe of Oklahoma ◦ Ysleta del Sur Pueblo ◦ Tonkawa Tribe of Indians of Oklahoma ◦ Wichita and Affiliated Tribes	National Historic Preservation Act Section 106	Consultation letters transmitted to the Tribal Historic Preservation Office (THPO) or designated tribal representative June 26, 2026
Texas Commission on Environmental Quality (TCEQ)	Section 401 Water Quality Certification; TPDES Construction General Permit (CGP) for stormwater; oversight of impaired water body segment 2491	Clean Water Act Section 401; Texas Water Code	Certification requested
Texas General Land Office (GLO)	Coastal Zone Management Act consistency determination; coordination on State Tract 748 submerged	Coastal Zone Management Act Section 307; Texas Natural Resources Code	Concurrence on consistency determination requested

Agency	Responsibilities	Regulatory Authority	Coordination or Consultation Status
Texas Parks and Wildlife Department (TPWD)	Review of impacts to state-listed species, coastal fisheries resources, and seagrass habitat in the lower Laguna Madre; coordination on Chapter 86 seagrass mitigation requirements	Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.); Texas Parks and Wildlife Code Chapters 66 and 86	Coordination initiated

Other outstanding permits and authorizations applicable to the Proposed Action are listed below and will be obtained prior to or concurrent with initiation of construction activities:

- TPDES Construction General Permit (CGP): Stormwater discharge from construction activities; TCEQ; required prior to land disturbance
- TPDES Industrial Stormwater Authorization: Operational stormwater discharges from reconstructed Station facilities; TCEQ; required prior to operation
- SPCC Plan Update: Spill Prevention Control and Countermeasure Plan update under 40 CFR Part 112; EPA Region 6; required prior to fuel storage operations
- Air Quality: New Source Review or Registration: Review required for any stationary emissions sources at the rebuilt Station including emergency generators; TCEQ; Cameron County is currently designated attainment for all NAAQS criteria pollutants under 40 CFR Part 50; no conformity determination required; confirm with TCEQ whether any new stationary sources trigger permit or registration requirements under Texas Administrative Code Title 30 Chapter 116
- TxDOT Oversize/Overweight Load Permits: Required for delivery of oversized structural elements on Park Road 100 and the Queen Isabella Memorial Causeway; Texas Department of Transportation; required prior to oversized deliveries
- Cameron County Public Works Department Right-of-Way Permit: Required for sewer connection within County right-of-way; Cameron County PWD; required prior to utility installation
- Cameron County Department of Transportation Utility Connection Permit: Required for electrical utility connection; Cameron County DOT; required prior to electrical work
- Cameron County Fire Marshal Construction Review: Fire safety review and approval for new construction; Cameron County Fire Marshal; required prior to construction commencement

Consistent with USCG EPIP, the USCG has initiated but not yet completed compliance with certain related environmental laws and regulations applicable to this action as identified in Table 1-1. The USCG has contacted each applicable regulatory agency and initiated the applicable compliance processes. Based on the analysis presented in this EA, the USCG does not anticipate significant impacts to resources protected under these statutes, for the reasons described in Section 3 of this EA and based on mitigation commitments identified in Appendix F.

If unforeseen significant impacts, or the potential for significant impacts, are identified once the USCG completes compliance with related environmental or historic and cultural resource laws and regulations, the USCG commits to supplementing, amending, or preparing a new higher-level environmental planning document as appropriate prior to implementation of the Proposed Action. No construction activities that could have an adverse effect on resources protected under these

statutes shall commence until all required consultations have been completed and any required concurrences, permits, certifications, or authorizations have been received.

Following the close of the public comment period, the USCG will prepare a Response to Comments document addressing substantive comments received on the Draft EA. If no significant impacts are identified following consideration of public and agency comments, the USCG Responsible Official will issue a FONSI. If a final decision is made, the decision and the Final EA will be made available on the USCG Environmental Planning Website and notice of availability will be transmitted to all agencies and parties that submitted comments.

2 PROPOSED ACTION AND ALTERNATIVES

Pursuant to NEPA, government decision-makers must consider a range of reasonable and practicable alternatives to a proposed action that has the potential for significant impacts on the quality of the human environment. A reasonable alternative is defined by the below criteria:

- Satisfy the Project Purpose and Need, and objectives, as defined in Section 1.3 – Project Purpose and Need;
- Technically and economically feasible;
- Would result in the least environmental impact among practicable alternatives consistent with the Section 404(b)(1) Guidelines (40 CFR Part 230).

The alternatives analysis has been developed in coordination with the USACE Galveston District as a cooperating agency, and is intended to inform the USACE's determination of the LEDPA in accordance with the Section 404(b)(1) Guidelines (40 CFR Part 230) as part of the Clean Water Act Section 404/10 permitting process. The USACE basic project purpose to construct a USCG Station governs the USACE LEDPA determination through the Section 2 Alternatives Analysis.

2.1 Alternatives Screening Criteria

Project requirements have been defined by USCG. During the strategic planning process, the Coast Guard developed screening criteria to define possible development concepts for planning consideration. These screening criteria also provide a basis for developing and/or validating the range of reasonable alternatives to evaluate in the EA. Table 2-1 defines the minimum project requirements that must be satisfied to meet the Purpose and Need of the Proposed Action and establishes measurable screening criteria for each requirement. These criteria were applied during the alternatives development process to determine which alternatives can fulfill the USCG's operational obligations. Only alternatives meeting the minimum project requirements in Table 2-1 were considered reasonable.

Table 2-1: Project Requirements and Screening Criteria

Requirement Category	Project Requirement (Minimum Threshold)	Screening Criterion
Waterfront / Berthing	Minimum 13 mooring slips within the breakwall; at least 50% covered; boat ramp sized for vessels up to 45 ft; covered moorings for all ANT and Station assigned vessels	Alternative must provide ≥13 slips; ≥50% covered; ramp width and depth sufficient for 45 ft vessel launch and recovery.

Requirement Category	Project Requirement (Minimum Threshold)	Screening Criterion
Boat Maintenance & Storage	Boat Maintenance Facility (BMF) with segregated bays for Station, ANT, and DSF units; Boat Storage Facility (BSF) for assigned vessels; secured outdoor storage for seized vessels	Alternative must include enclosed, segregated maintenance bays and secure outdoor storage area within the Station footprint. Temporary facility area must maintain secure storage areas.
Personnel Readiness and Quality of Life	Accommodate max capacity (estimated 210 personnel) of CG employees, supportive agencies, and contractors using the base; unaccompanied personnel housing (UPH), duty berthing, galley, sickbay, and gym in compliance with applicable USCG facility standards	Alternative must provide CG SHORE-compliant housing, berthing, and personnel support facility configuration sufficient for all assigned personnel.
Operations & Command	Joint Operations Center (JOC) watchfloor; office space for Station, ANT, Sector, DSF, and CBP personnel; other secure facilities armory and magazine meeting current USCG PWCS designation requirements	Alternative must include dedicated JOC watchfloor space and all other required facilities to support all CG missions.
Site Infrastructure	Security fencing around full land boundary; parking for assigned personnel, government vehicles, prime movers, and trailers; adequate storage and space for hazardous materials storage	Alternative must demonstrate legal access to new or expanded area; must be large enough to encompass facility and infrastructure, provide required security perimeter and parking capacity, and provide required spacing for hazardous material storage
Operational Continuity	USCG search and rescue and law enforcement capability must be maintained throughout construction; minimum pier and mooring operability preserved; continued use and access to aerostat surveillance pad and associated facilities.	Alternative construction sequence must allow continuous mission operations; phased marine construction plan required and approved by USCG prior to construction. Temporary facility area must be provided. Access to aerostat must be maintained.
Waterfront Access	Direct vessel access to lower Laguna Madre and Brazos Santiago Pass required for all CG missions; all waterfront facilities must allow access to the navigational channel to ensure safe passage with depth of -12 ft MLLW. Maintain response times to service area.	Alternative must be located on or with direct unobstructed access to the lower Laguna Madre bayshore adjacent to Brazos Santiago Pass with access to the existing navigation channel with minimum depth of -12 ft MLLW. Alternative would not require significant dredging or increase vessel response times for missions.
Operational Readiness	Provide laydown, permanent facilities, and space to allow for operational flexibility as necessary to ensure that the CG can adapt to mission readiness requirements quickly.	Alternative must provide adequate space and flexibility to accommodate existing fleet of USCG small boats, future vessel size up to USCG medium size craft, and accommodate future joint mission requirements.
Infrastructure Resilience	Provide infrastructure that is resistant to effects from storms and tropical weather to reduce construction-related and long-term environmental hazards to the surrounding coastal environment.	Alternative must include storm resilient infrastructure design and include replacement of vulnerable shore protections as necessary.

Requirement Category	Project Requirement (Minimum Threshold)	Screening Criterion
Security	Provide the required setbacks and lighting to ensure secure facilities and allow for patrol as necessary.	Alternative must include required setbacks and maintenance of cleared easements around fencelines, gated access, and secure storage areas as required.
Economic Considerations	Ensure construction timeline meets the project delivery schedule. Minimize long-term costs for facility construction, maintenance and repair, and operations. Reduce construction and maintenance costs by centralizing and sharing facilities.	Alternative must provide meaningful and efficient improvements with the overall intent of the Proposed Action in mind to meet the operational demands of the USCG Station. Alternative will meet the delivery schedule.
Use of Existing Infrastructure:	Maximize use of the existing developed site footprint and serviceable infrastructure, avoiding unnecessary expansion into undeveloped areas or land not Federally owned, while delivering the facilities needed to support mission operations.	Alternative will provide minimum necessary footprint to provide Project Requirements on Federally owned land.
Environmental Impacts	Avoid, minimize, or mitigate potentially significant impacts to the environment to the greatest extent practicable.	Alternative avoids, minimizes, and mitigates impacts to sensitive coastal and marine resources including seagrass beds, oyster reef habitat, wetlands, and nearshore waters to the greatest extent practicable.

Note: Requirements derived from USCG Shore Standards and Commandant Instruction 11011.16C. Acronyms: ANT = Aids to Navigation Team; BMF = Boat Maintenance Facility; BSF = Boat Storage Facility; CBP = U.S. Customs and Border Protection; DSF = Deployable Specialized Forces; E2EM = Estuarine Intertidal Emergent; JOC = Joint Operations Center; t; PWCS = Port and Waterways Security; SAV = Submerged Aquatic Vegetation; UPH = Unaccompanied Personnel Housing; USACE = U.S. Army Corps of Engineers; USCG = U.S. Coast Guard

2.2 Alternative 1: Rebuild USCG STA SPI and Minimally Expand Footprint (Proposed Action)

The Proposed Action would occur within the boundaries of the existing federally owned property at the location of the existing USCG Station at 1 Wallace L. Reed Road, South Padre Island, Cameron County, Texas. Under Alternative 1 (Proposed Action), the Coast Guard would demolish damaged and outdated facilities and construct new, modernized infrastructure at USCG STA SPI. The Proposed Action would occur within an approximate 9-acre area consisting of developed or vacant land areas and approximately 1.5 acres of marine footprint including moorings, piers, and boat ramp with associated navigation area. The project consists of both land and in-water construction activities.

This alternative would provide a fully modernized, self-sufficient Coast Guard Station capable of supporting all assigned personnel and all associated operational missions. The rebuilt facility will include waterfront infrastructure to accommodate the full complement of assigned and jointly operated vessels, including covered mooring slips, a boat ramp sized for vessels up to 45 feet, and dedicated boat maintenance and storage facilities. Shore-side facilities will include operational and administrative space for Station, ANT, Sector Corpus Christi, Deployable Specialized Forces (DSF), and co-located CBP partner agency personnel, a JOC, personnel housing and all ancillary

required facilities, and supporting site infrastructure including security fencing, vehicle parking, and maintained access to the collocated aerostat surveillance pad as detailed by the Project Requirements in Table 2-1.

Multiple boat ramp configurations were evaluated during project design, including parallel and angled alignments at varying inshore and offshore positions along the northern and southern property breakwater walls. Seagrass and oyster resources survey results (2026a; 2026c) were used to inform ramp siting and orientation, with the selected configuration strategically located to avoid direct impacts to mapped seagrass and oyster habitat while providing adequate water depth for vessel launch and recovery and sufficient upland turning radius for truck and trailer maneuvering.

2.2.1 Construction

The Proposed Action will be constructed in multiple phases. Construction is estimated to take approximately 2.5 years. Upland facility demolition and land preparation will be initiated and construction of various facilities including building construction, paving of roadways, ancillary facility construction, and earthworks will continue a rolling schedule simultaneously with marine construction. The construction schedule will be optimized to ensure continuous operations of the Station are maintained. Marine construction is phased to maintain continuous station operability throughout the construction period without the need for construction of temporary mooring or berthing infrastructure. The scope of the Proposed Action includes the following components:

2.2.1.1 Landside Project Components

- Demolition of obsolete station facilities;
- Construction of new landside station operational and administrative facilities;
- Construction of landside Unaccompanied Personnel Housing (UPH) and expanded berthing;
- Development of a landside joint operations center and support space for U.S. Customs and Border Protection;
- Construction of landside auxiliary support buildings and facilities such as boat storage, amenities, etc.;
- Construction of a landside harbor operations center;
- Approximately 5.9 acres of Additional Temporary Workspaces for temporary facilities, temporary parking, laydown, construction staging, utility installation, and other uses are included in areas identified in Figure 2-1. Temporary construction workspaces identified in Figure 2-1 may extend onto or immediately adjacent to Cameron County-owned Isla Blanca Park property. Appropriate real estate agreements will be sought prior to initiation of any construction activities on or adjacent to County-owned land. If such agreements cannot be reached, all construction staging and temporary facilities will be confined to federally owned land within the established project boundary.

2.2.1.2 In-Water Project Components

- Construction of a boat ramp on the north side of the property for launching and recovery of vessels up to 45-ft length (boat ramp is approximately 3,750 sq feet of footprint)
- Mechanical dredging of approximately 2,750 cubic yards of material within an approximate 0.4-acre dredge footprint to provide depths of -12 ft. mean lower low water (MLLW) for the safe navigation of vessels to and from the constructed boat ramp to existing maintained channel. Dredged material will be placed in a confined barge and

transported to a federal approved placement area (PA 2) or will be transferred to an upland disposal or placement facility with trucks;
- Repair of existing waterfront pier infrastructure, breakwall, and boathouse facilities;
- Construction of new waterfront pier infrastructure including the installation of support piles;
- Construction of two stormwater outfalls; and,
- Minor repair of existing shoreline stabilization riprap.
- Approximately 2.0 acres of Additional Temporary Workspaces are shown in Figure 2-X and include all necessary space for navigation and operation of construction equipment and marine construction vessels.

2.2.1.3 Methods

Construction methods have been developed to minimize turbidity impacts by planning for the boat ramp to be excavated and concrete panels placed on the bay floor using a temporary sheet pile cofferdam and de-watered workspace, reducing open-water excavation in the immediate vicinity of sensitive estuarine resources. Indirect effects from required dredging would be minimized through minimization of required dredged area, strategic placement of deep navigation corridors away from sensitive resources and use of turbidity curtains during dredging. Refer to Appendix F for other BMPs specific to construction methodology that will be implemented for the Proposed Action.

2.2.2 Operations

Operations of the Station will be consistent with current operations following completion of construction. Phased construction will allow full operability using existing marine infrastructure without the need for temporary berthing during construction. Operational activities will include routine launching and recovery of vessels for all CG missions such as search and rescue, maritime law enforcement, CBP enforcement, aids to navigation, and border security operations. The Station operates on a 24-hour, 365-day basis and maintains a continuous duty watch capability.

Vessel types operated from the Station will be consistent with what is currently operating and may include additional vessels of similar sizes including but not limited to CG Small Boat class vessels (under 65-ft length). Vessels are launched and recovered via the Station boat ramp and mooring slips, with routine transits through the Station basin to the lower Laguna Madre and Brazos Santiago Pass. The Station's waterfront infrastructure is designed to support this vessel class envelope regardless of specific hull designations, which may change over time as USCG and partner agency fleets evolve.

The rebuilt Station will provide additional mooring slips within the breakwall and a boat ramp designed to accommodate any vessel up to 45 feet in length meeting the operational parameters of the Station mission. This expanded capacity accommodates not only currently assigned USCG vessels but also partner agency vessels operating under joint operations agreements, and future vessel classes that meet the facility's design parameters. The facility is designed to be operationally flexible rather than optimized for specific vessel operation designations.

Day-to-day operational activities that represent potential impact-causing factors for the surrounding coastal and estuarine environment include the following:

- Vessel Operations: Routine small boat launches and recoveries via the Station boat ramp and mooring slips, with transits through the Station basin to the lower Laguna Madre and Brazos Santiago Pass. Existing operations involve recovering vessels via an off-site boat ramp; the construction of an on-site boat ramp relocates these operations onsite but does not increase the frequency of recoveries from Laguan Madre.
- Fueling and Maintenance: Vessel fueling, engine maintenance, and hull cleaning activities conducted within the Station BMF and designated maintenance areas in accordance with the Station's SPCC Plan. In-water hull husbandry activities conducted at the Station are subject to the Uniform National Discharge Standards (UNDS) established under CWA Section 312(n) and the associated programmatic ESA Section 7 consultation completed by EPA and DoD with USFWS and NMFS. The Proposed Action does not substantially change the nature or frequency of in-water hull maintenance activities relative to existing Station operations; the existing UNDS programmatic coverage therefore applies to ongoing vessel maintenance activities.
- Stormwater Runoff: Stormwater discharge from impervious surfaces within the Station footprint to the adjacent lower Laguna Madre, managed through Station stormwater infrastructure consistent with TPDES permit requirements.
- Exterior Lighting: Continuous nighttime security and operational lighting within the Station footprint.
- Wastewater and Sanitary Discharge: Discharge of treated effluent from Station wastewater treatment infrastructure to the adjacent lower Laguna Madre.
- Personnel and Vehicle Activity: The Proposed Action will result in an increase in routine personnel movements, vehicle traffic, and equipment operations within the Station footprint. The permanent personnel complement will increase from approximately 85 to an estimated 150 persons, with a maximum capacity of approximately 210 persons during surge operations. Parking facilities will be expanded accordingly to accommodate at least 80 percent of the increased personnel complement plus government vehicles, prime movers, and trailers consistent with the Station's operational requirements. The increase in personnel and associated vehicle activity represents a change from existing conditions.

Environmental consequences of operational activities are addressed by resource area throughout Section 3 of this EA. Figure 2-1 shows the Alternative 1 (Proposed Action) site plan.

Figure 2-1: Alternative 1 (Proposed Action) Site Plan

2.3 Alternative 2: Rebuild USCG STA SPI and Substantially Expand Footprint

Under Alternative 2, the Coast Guard would implement a more extensive redevelopment of USCG STA SPI, involving a larger construction footprint than Alternative 1. This alternative would include all components of the Proposed Action, such as replacement of fire-damaged infrastructure, modernization of operational and administrative facilities, and expansion of mission support capabilities; however, but would extend the developed Station footprint from approximately 9 acres to approximately 13.5 acres by expanding southward into undeveloped land within the USCG-owned parcel adjacent to tidal flat and estuarine wetland habitat and an

approximately 2-acre marine footprint including moorings, piers, and boat ramp with associated dredged navigation area.

This expanded footprint would allow for increased separation of functional areas and may also provide greater flexibility for future mission growth.. It would require the conversion of undeveloped or lightly developed land, potentially including shoreline and nearshore environments. The boat ramp configuration would require additional land space to accommodate the turning radius and subsequently displaced infrastructure compared to Alternative 1.

The boat ramp under Alternative 2 would be oriented parallel to the Station access road and existing rock breakwater rather than perpendicular as in Alternative 1. This orientation requires less extension of the boat ramp structure into open water but requires additional upland space to accommodate the turning radius for towing vehicles and the associated displacement of landside infrastructure. The parallel ramp alignment also requires a larger dredge footprint to achieve the required navigable depth contour along the ramp approach, as the ramp terminus is positioned further from the existing maintained channel.

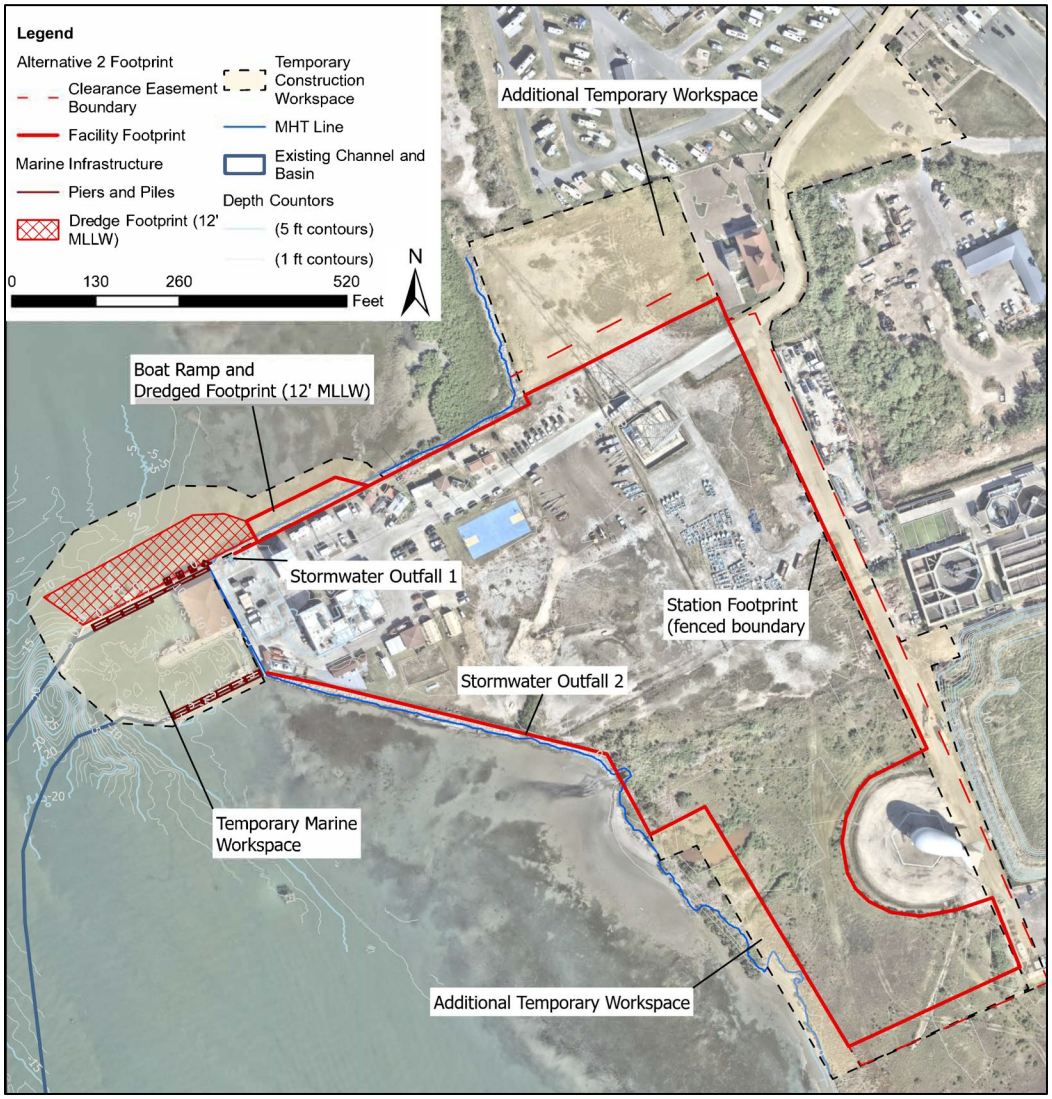


Figure 2-2: Alternative 2

2.3.1 Construction

Alternative 2 will be constructed in multiple phases over an estimated 2.5-year construction period, consistent with Alternative 1. The scope of Alternative 2 includes all components of Alternative 1 plus the following additional elements:

2.3.1.1 Additional Landside Components:

- Clearing and grading of approximately 4.5 acres of additional undeveloped land within the southern portion of the federally owned parcel to accommodate expanded facility footprint and reconfigured landside infrastructure displaced by the parallel boat ramp alignment
- Construction of expanded security fencing perimeter along the extended southern boundary
- Additional Temporary Workspaces include those identified in Alternative 1 and an additional 1.07 acres of temporary construction workspace.

2.3.1.2 Additional In-Water and Shoreline Components:

- Construction of a boat ramp on the north side of the property oriented parallel to the access road, sized for launching and recovery of vessels up to 45 feet in length
- Mechanical dredging of 3,500 cubic yards from a 0.47 acre area to -12 ft MLLW to achieve required navigable depth along the parallel ramp approach corridor; dredged material will be placed in a confined barge and transported to an approved placement area (PA 2) or transferred to an upland facility by truck
- Installation of approximately 470 linear feet of riprap shoreline stabilization along the previously undeveloped southern shoreline of the expanded Station footprint adjacent to tidal flat habitat
- Additional temporary workspace associated with 470 feet of riprap shoreline

2.3.1.3 Construction Methods:

Construction methods for marine and waterfront components are consistent with Alternative 1. The expanded dredge footprint under Alternative 2 increases the area subject to turbidity controls relative to Alternative 1 and extends the duration of active dredging operations. Riprap installation along the 470-foot southern shoreline would be conducted from the landside according to BMPs and includes temporary workspaces that extend into tidal areas. Refer to Appendix F for construction BMPs applicable to the Proposed Action that would also apply to Alternative 2. Additional BMPs required for Alternative 2 are specified within the specific resources' sections of the EA.

2.3.2 Operations

Operations under Alternative 2 would be consistent with those described for Alternative 1 (Proposed Action) in Section 2.2.1.2. The expanded facility footprint provides additional separation of functional areas and increased flexibility for future mission growth but does not change the fundamental character of Station operations relative to Alternative 1. Day-to-day operational impact-causing factors for Alternative 2 are consistent with those identified for the Alternative 1 (Proposed Action). Where they differ, environmental consequences of operational activities under Alternative 2 are addressed by resource area in Section 3 of this EA.

2.4 No Action Alternative

Under the No Action Alternative, the Coast Guard would not implement a comprehensive rebuild or expansion of USCG STA SPI. Limited repairs necessary to maintain minimum operational

capability may occur; however, damaged facilities and aging infrastructure would not be fully replaced or modernized. Operational limitations associated with damaged and outdated infrastructure would persist, reducing efficiency and potentially affecting mission readiness. The Station's ability to support increasing mission demands and interagency coordination would remain constrained. While this alternative would avoid the environmental impacts associated with construction, it would not meet the purpose and need and is therefore not selected; however, it is retained as the environmental baseline for comparison as required by NEPA.

2.5 Alternatives Considered but Eliminated from Further Assessment

Based on the screening criteria developed during the strategic planning process, shown in Table 2-1, a range of configurations for waterfront and shore-based infrastructure were developed. The Coast Guard eliminated alternatives that did not meet the screening criteria or fulfill the purpose and need for the Proposed Action from consideration in the EA.

2.5.1 Offsite Alternatives

Based on the screening criteria, there is no practicable off-site alternative location for the Proposed Action. The station's mission requires direct waterfront access to the lower Laguna Madre and Brazos Santiago Pass, the primary maritime gateway between the Gulf of Mexico and the lower Rio Grande Valley coastal zone. Project requirements as noted in Table 2-1 require use of federally-owned land, and maintaining all current mission response times which is not feasible with an offsite alternative. All offsite alternatives considered were eliminated based on screening criteria in Table 2-1. Reconstruction on the existing federally owned footprint at 1 Wallace L. Reed Road is the only practicable means of restoring mission capability to meet the requirements of project and to fulfill both the USCG purpose and need and the USACE overall project purpose of constructing a modernized and secure USCG Station facility.

The USACE has determined that the basic project purpose of constructing a USCG Station facility is not water-dependent under 40 CFR 230.10(a)(3), and accordingly that practicable alternatives that do not involve filling special aquatic sites are presumed available. USCG has addressed this presumption through design-level avoidance and minimization rather than off-site alternatives analysis.

2.5.2 Rebuild USCG STA SPI within Existing Footprint

A Rebuild of USCG STA SPI within the existing footprint consistent with a "Repair and Replace in Kind" alternative was considered during project planning. Under this alternative, the USCG would have rebuilt only the fire-damaged waterfront infrastructure and restored the Station to its pre-fire condition without comprehensive modernization or expansion. This alternative was eliminated from detailed analysis because it would not fulfill the Purpose and Need of the Proposed Action. The existing Station facilities do not meet current USCG standards for personnel capacity, mission support, or interagency coordination capability, and the Purpose and Need requires modernization and expansion of these capabilities in addition to rebuilding or repairing existing infrastructure. This alternative was eliminated from further consideration and is not carried forward for detailed environmental analysis.

2.6 Alternatives Carried Forward for Detailed Analysis

The alternatives development and screening process identified alternatives that meet the minimum project requirements and measurable screening criteria outlined in Table 2-1. Two alternatives met the screening criteria and are carried forward for detailed analysis – Alternative 1: Rebuild USCG

STA SPI and Minimally Expand Footprint (Proposed Action), and Alternative 2: Rebuild USCG STA SPI and Substantially Expand Footprint. The No Action alternative is retained in this analysis as a baseline for environmental comparison only and is not considered a reasonable alternative for implementation.

3 ENVIRONMENTAL ASSESSMENT

3.1 Scope of the Environmental Assessment

In accordance with NEPA, this section describes the environmental resources that could be affected by the Proposed Action or alternatives. The region of influence (ROI) is generally limited to the project footprint at USCG STA SPI and immediately adjacent areas potentially affected by construction activities and operational changes (Figure 3-1).

The resources assessed in detail in this EA include:

- Biological Resources
- Cultural and Historic Resources
- Water Resources
- Transportation, Navigation, and Access
- Cumulative Effects

The following resources are not present within the project area and are therefore not carried forward for detailed analysis: Agricultural lands, forest resources, tribal lands or tribal trust resources, and mineral resources.

The following resource areas were considered but eliminated from detailed analysis because the Proposed Action would not result in impacts:

- Aesthetics**:** The Proposed Action would be consistent with the existing developed site for the USCG Station and surrounding coastal development. No substantial change to visual character or public viewshed is anticipated. Aesthetics of historical resources are assessed in Section 3.3 Cultural Resources.
- Public Services and Utilities: The project would not substantially increase demand for public services such as police, fire protection, schools, or parks. Utility systems serving the Station would be maintained or upgraded within existing capacity. No significant long-term impacts are anticipated.
- Human Health and Safety / Hazardous Materials and Waste**:** Dredged material will be analyzed according to all requirements and approved by USACE and EPA prior to disposal or placement at an approved site. Hazardous materials encountered during demolition of existing structures, including potential asbestos-containing materials and lead-based paint will be characterized and managed in accordance with applicable state regulations and BMPs prior to demolition. With implementation of the BMPs in Appendix F, no significant impacts to human health and safety from hazardous materials or waste are anticipated.
- Geology, Topography, and Soils: There are no sensitive soils, geology, or topography within or adjacent to the project footprint. Construction activities will result in temporary disturbance of pre-disturbed soil surrounding the project footprint and temporary disturbance of sediments due to dredging; no significant topographic alteration is

anticipated, and temporary erosion will be managed through standard BMPs as listed in Appendix F. No significant impacts to geology, topography, or soils are anticipated.

- Air Quality: All minor sources of air emissions such as construction equipment, operational generators and other equipment will be managed with BMPs as noted in Appendix F and permitted according to all applicable requirements. Cameron County, Texas, is currently designated as attainment for all criteria pollutants under the National Ambient Air Quality Standards (NAAQS) established by the Clean Air Act (CAA) (40 CFR Part 50). No conformity determination under CAA Section 176(c) is required, as Cameron County is not a nonattainment or maintenance area. Operation of the Proposed Action does not involve stationary emissions sources, industrial processes, or operational activities that would generate significant impacts to air quality.
- Noise - Human Receptors: Construction will generate temporary airborne noise consistent with standard coastal federal construction. The nearest sensitive receptors are recreational users and RV residents at Isla Blanca Park, located approximately 500 feet north of the construction zone, where peak construction noise is estimated at approximately 75–80 dB(A) during active pile-driving events. This level temporary exceeds the EPA 24-hour day night average limitation guideline of 55 dB(A) but is within the range of ambient noise typical of an active coastal resort environment, is limited to daytime hours, and is intermittent and temporary (EPA 1974). No significant adverse noise impacts to human receptors are anticipated. Operational noise following construction will be consistent with existing Station operations. Underwater noise effects on aquatic biological resources from pile driving are addressed in Section 3.2 Biological Resources. No significant adverse noise impacts to human receptors are anticipated and this resource is not carried forward for detailed analysis.
- Socioeconomics: The Proposed Action involves reconstruction and expansion of an existing federal facility within the existing Station parcel in Cameron County, Texas (population 423,192). No displacement of residents, businesses, or community resources will occur. The increase in Station personnel from approximately 85 to a permanent complement of approximately 150 persons, with a maximum of 210 during surge operations, represents a minor increase that will not materially alter the economic character of the surrounding community or regional labor market. Construction investment will generate temporary positive economic benefits through construction employment and contractor expenditures in the local economy. The rebuilt Station will continue to support stable federal employment and provide critical public safety services to Cameron County coastal communities consistent with the Station's long-standing presence at this location since 1974. No significant adverse socioeconomic effects are anticipated for either action alternative. Under the No Action Alternative, no construction employment would be generated and continued deterioration of Station infrastructure could reduce the Station's long-term operational viability and economic contribution to the surrounding community.
- Land Use and Zoning: The Station is located on federally owned property not subject to local zoning requirements. The Proposed Action involves reconstruction and expansion of an existing federal facility within the existing Station parcel. No change in land use designation, ownership, or use type is proposed under either action alternative. The surrounding land use will not be altered by the Proposed Action. Alternative 2 would extend the developed Station footprint into approximately 4.5 acres of currently undeveloped land within the USCG parcel; however, this area remains within federally

owned property and no change in ownership, zoning jurisdiction, or land use designation would result. Construction-period visual disturbances to adjacent recreational uses at Isla Blanca Park will be temporary. No significant land use impacts are anticipated for either action alternative.

- Coastal Zone Management Act (CZMA) Consistency: The project area is located within the Texas Coastal Zone as defined under the Texas Coastal Management Program (CMP) administered by the Texas General Land Office (GLO). Federal agency activities affecting the coastal zone must be consistent with the enforceable policies of the Texas CMP to the maximum extent practicable pursuant to CZMA Section 307 (16 U.S.C. 1456). The USCG has determined that the Proposed Action is consistent with the applicable enforceable policies of the Texas CMP to the maximum extent practicable. The Proposed Action involves reconstruction of an existing federal facility on a previously developed federal footprint within the coastal zone and does not introduce incompatible land uses or activities inconsistent with the Texas CMP coastal use policies. A CZMA federal consistency determination has been submitted to the Texas GLO and is pending concurrence as noted in Table 1-1. No significant adverse effects to the coastal zone are anticipated and CZMA consistency is not carried forward for detailed analysis.

3.2 Biological Resources

3.2.1 Affected Environment

The project area is located within an already-developed federal facility footprint and is separated from open estuarine waters of the Lower Laguna Madre by existing shoreline infrastructure, including a rock breakwater system. While the Station itself is not located within undisturbed natural habitat, nearby coastal and estuarine systems support biological resources that are regionally sensitive and ecologically significant. Field investigations were conducted within the project site and adjacent survey areas to characterize habitat types and assess the presence of sensitive resources (USCG 2026a, USCG 2026b, USCG 2026c). Results of those investigations are incorporated throughout this section. Refer to Appendix A Wetland Delineation Report, Appendix B Habitat Assessment Report, and Appendix C Benthic Habitat Assessment Report for further details of the surveys performed and results.

3.2.1.1 Wetlands and Waterbodies

Wetlands and other WOTUS within the project area are subject to the regulatory jurisdiction of the USACE under Section 404 of the CWA and Section 10 of the RHA. A wetland delineation was conducted within the survey area in March 2026. The complete delineation methodology, data forms, and supporting maps are provided in the Wetland Delineation Report (USCG 2026a), included as Appendix A to this EA.

The project site consists primarily of previously developed land associated with existing Coast Guard facilities, including buildings, paved and unpaved surfaces, maintained grounds, and operational waterfront infrastructure. Field investigations conducted on March 18, 2026, within the approximately 22-acre survey area identified two distinct upland vegetation communities within the Station footprint: Sea Ox-eye Daisy flats (*Borrichia frutescens*-dominated) occurring along the developed Station fenceline, and a mixed invasive and native plant community on an anthropogenic berm associated with a wastewater effluent discharge pipe crossing the southern portion of the survey area (USCG 2026a; USCG 2026b). The berm is outside the Proposed Action

construction footprint. Localized unvegetated sand sheet inclusions were observed throughout both upland and transitional areas of the survey area.

The wetland delineation identified a total of 4.95 acres of wetlands within the approximately 22-acre survey area. Open water areas of Laguna Madre were also included in the survey area. Table 3-1 provides a summary of all features identified. All features are considered potentially jurisdictional based on their continuous surface connection to the Laguna Madre, a traditional navigable water subject to USACE jurisdiction under Section 404 of the CWA and Section 10 of the RHA (USCG 2026a; U.S. Environmental Protection Agency [EPA] and USACE 2025).

Table 3-1: Summary of Wetlands and Waterbodies in Project Area

Field ID	Classification[1, 2, 3]	Acreage[4]	Potentially USACE Jurisdiction
WET-01	E2SS Wetland	1.09	Section 404/10
WET-02	E2EM Wetland	0.17	Section 404/10
WET-03	E2SS Wetland	0.04	Section 404/10
WET-04	E2EM Wetland	3.44	Section 404/10
WET-06	E2SS Wetland	0.21	Section 404/10
OW-01	Open Water	2.65	Section 404/10
TOTALS	**E2EM Wetland (2)**	3.61	
	E2SS Wetland (3)	1.34	
	Open Water (1)	2.65	
	TOTALS (6)	7.60	

1 E2EM Estuarine intertidal emergent, regularly flooded
2 E2SS Estuarine intertidal scrub-shrub, irregularly flooded
3 Open Water = Open-water area called Laguna Madre, a traditional navigable water subject to USACE jurisdiction under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act
4 Acreages represent the total acreage identified within the survey area; not all features are within direct construction footprint
Source: USCG 2026a.

Detailed descriptions of each wetland feature including vegetation composition, hydrology indicators, and delineation methodology are provided in the Wetland Delineation Report (Appendix A; USCG 2026a)

3.2.1.2 Aquatic and Estuarine Resources

The project area is located adjacent to the Laguna Madre estuarine system that supports ecologically significant aquatic habitats and resources. The system is divided into upper and lower lagoonal segments and includes dredged navigation channels, including the Gulf Intracoastal Waterway, which alters local hydrodynamics and connectivity between habitats (USGS 2023). The Laguna Madre is characterized by very shallow bathymetry, generally averaging approximately one meter or approximately 3.3 feet in depth in natural areas, limited freshwater inflow, and restricted exchange with the Gulf of Mexico, resulting in elevated salinity conditions relative to typical coastal estuaries (TWDB 2025; USGS 2023). Water quality, hydrological, and tidal characteristics of the Laguna Madre are described in Section 3.4 Water Resources.

A Benthic Habitat Assessment was conducted in April 2026; complete findings are provided in Appendix C (USCG 2026c). Survey findings are incorporated into the affected environment description below.

Figure 3-1 shows the compiled results of wetland, benthic, and habitat surveys.

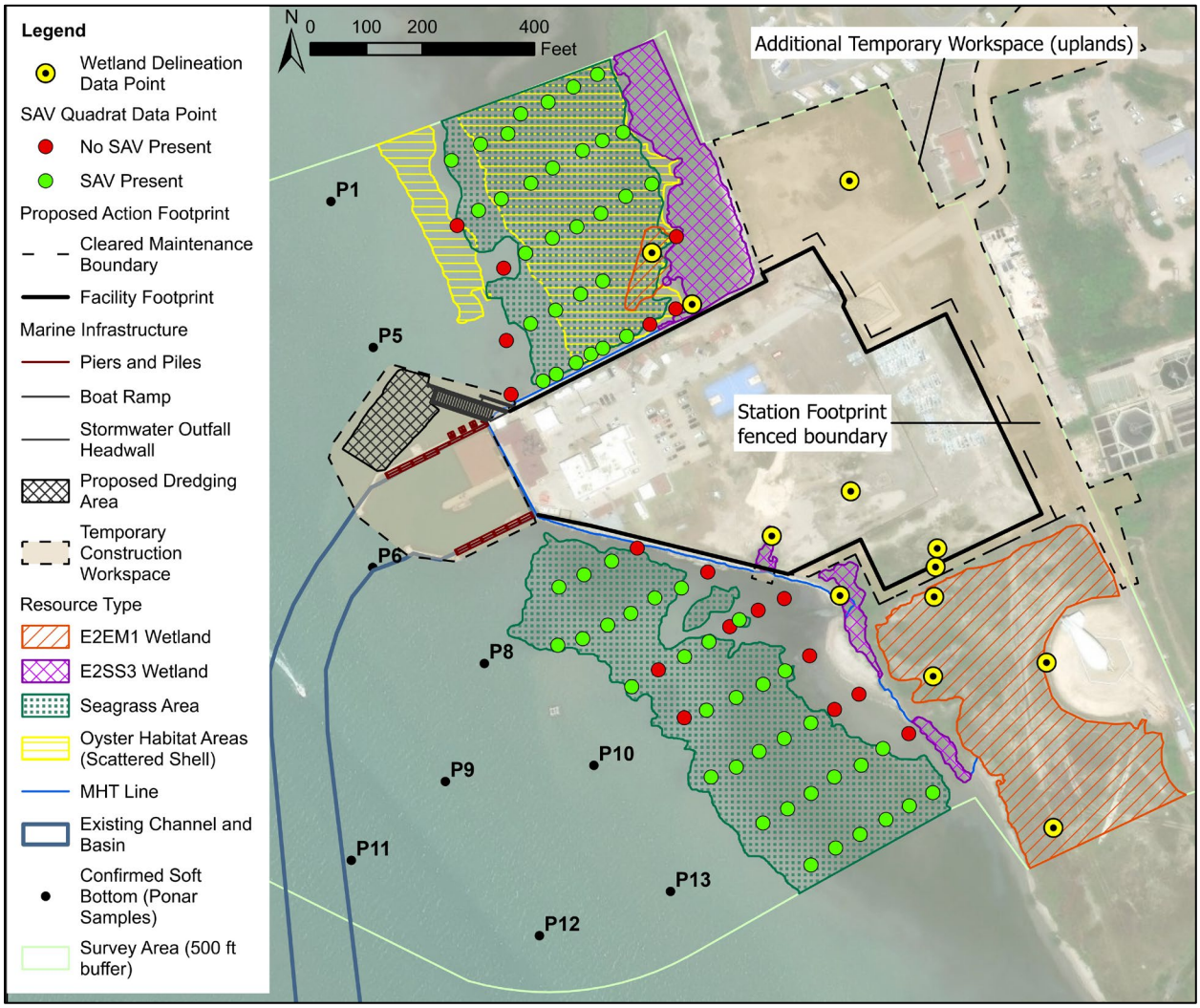


Figure 3-1: Wetland and Habitat Survey Results

Seagrass Habitat

Seagrass is a dominant and ecologically defining feature of the Laguna Madre and is extensively documented throughout the lower Laguna Madre adjacent to South Padre Island. These habitats provide nursery habitat for fish and shellfish, foraging areas for migratory and resident birds, and stabilization of shallow sediments that supports water clarity throughout the system (Onuf 1996a; TPWD 2025).

USGS studies in the lower Laguna Madre indicate seagrass density is generally reduced adjacent to channel edges and deeper dredged areas, while higher-density beds occur in more stable, shallow subtidal flats farther from active navigation disturbance (USGS 2023). Four distinct seagrass habitat areas totaling approximately 10.71 acres were documented within the survey area (USCG 2026c). Manatee grass (*Syringodium filiforme*) was the most prevalent species observed; turtle grass (*Thalassia testudinum*) was also present.

Oyster Habitat
Two areas consisting of scattered oyster shells and shell clusters totaling approximately 3.36 acres were located within the survey area on the north side of the existing Station as documented within the Benthic Habitat Assessment (USCG 2026c). Additional characterization of shellfish resources within the nearshore and subtidal portions of the project area is provided in the Benthic Habitat Assessment (Appendix C).

Benthic and Submerged Habitat
Submerged bottom habitats within the Laguna Madre include soft unconsolidated sediments, and areas adjacent to dredged navigation channels. Benthic invertebrate communities including amphipods, mollusks, and polychaetes are abundant in undisturbed areas and serve as a foundational component of the estuarine food web (USGS 2023). Approximately 26.8 acres of sub-tidal unconsolidated soft-bottom substrate consisting of predominantly fine sand and silty sand were identified in areas not classified as seagrass or oyster habitat. Complete benthic habitat characterization is provided in Appendix C.

Open Water
Water column as a habitat for fish and aquatic species is further addressed in Section 3.2.1.4 Essential Fish Habitat (EFH). Additional water quality characterization relevant to the project area, including current conditions and applicable Texas Surface Water Quality Standards, is addressed in Section 3.6 Water Resources.

3.2.1.3 Essential Fish Habitat
Essential Fish Habitat (EFH) is defined under Section 303(a)(7) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.) as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act require federal agencies to consult with NMFS when their actions may adversely affect EFH.

EFH designations for Gulf of Mexico species were established through Generic Amendment Number 3 to the Fishery Management Plans of the Gulf of Mexico (Gulf of Mexico Fishery Management Council [GMFMC] 2005). EFH for Atlantic Highly Migratory Species, including several shark species, was established through NMFS (2017). A complete EFH Assessment prepared in accordance with Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act is provided as Appendix D to this EA.

EFH habitat types present in the project area include:

- Seagrass
- Estuarine water column
- Soft-bottom substrate
- Tidal flat
- Estuarine intertidal emergent and mangrove shrub wetlands
- Scattered oyster reef

EFH has been identified for multiple federally managed species with potential to occur in the project area. No Habitat Areas of Particular Concern (HAPC) were identified within the lower Laguna Madre or immediately adjacent Gulf of Mexico waters based on GMFMC (2005) HAPC

designations. The complete EFH Assessment, including species-specific EFH maps and the full impact and mitigation analysis, is provided in Appendix D.

3.2.1.4 Threatened and Endangered Species and Critical Habitat

Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.), requires federal agencies to consult with the USFWS and the NMFS to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any federally listed species or result in the destruction or adverse modification of designated critical habitat.

An official species list for the project area was obtained from the USFWS Information for Planning and Consultation (IPaC) system for the project vicinity in Cameron County, Texas (USFWS 2026b). Species under the jurisdiction of NMFS, including sea turtles in marine environments, were identified through coordination with the NMFS Gulf of Mexico Regional Office.

The project site consists primarily of previously developed land associated with existing Coast Guard facilities, including buildings, paved and unpaved surfaces, maintained grounds, and operational waterfront infrastructure. Field investigations conducted within the survey area identified developed areas, upland habitats, two distinct upland vegetation communities and multiple wetland habitats. Figure 3-1 depicts the habitat onsite. Federally protected species potentially present in the project area and relevant to the Proposed Action are summarized below and further described in Appendix E. Refer to Appendix E for the full Federally Protected Species Assessment for the project. Refer to Appendix B for the Habitat Assessment and Appendix C for the Benthic Habitat Assessment conducted for the project that supports the Federally Protected Species Assessment and proposed determinations for each species.

Sea Turtles

Sea turtles are protected under the ESA and are co-managed by NMFS (marine and estuarine life stages) and USFWS (terrestrial and nesting beach life stages). NMFS is the lead agency for sea turtles in the waters of the project action area. Based on habitat conditions within the defined action area and available occurrence data, three species have potential to occur: the Kemp's ridley sea turtle (*Lepidochelys kempii*, Endangered), the green sea turtle North Atlantic DPS (*Chelonia mydas*, Threatened), and the loggerhead sea turtle Northwest Atlantic Ocean DPS (*Caretta caretta*, Threatened). Kemp's ridleys are known to forage in shallow seagrass habitats of the type present in the lower Laguna Madre and use Brazos Santiago Pass for ingress and egress between the lagoon and Gulf of Mexico (NMFS 2026). Green sea turtles forage on seagrass beds seasonally and are likely to occur in the lower Laguna Madre during warm months (Jones et al. 2018). Loggerheads may occur in the deeper navigation channel and entrance area at Brazos Santiago Pass seasonally (Gordon et al. 2015). The leatherback sea turtle (*Dermochelys coriacea*, Endangered) and hawksbill sea turtle (*Eretmochelys imbricata*, Endangered) are not expected to occur within the defined action area; leatherbacks are pelagic and associated with deeper offshore waters and hawksbills require coral reef and hard-bottom habitat, neither of which are present in the lower Laguna Madre. No nesting beach habitat exists within the project area; therefore USFWS jurisdiction over sea turtles is not applicable to this project.

West Indian Manatee

The West Indian manatee (*Trichechus manatus*), listed as Threatened under the ESA, may occasionally occur in the coastal and estuarine waters of south Texas during warm-water months.

Manatees are known to range along the Texas Gulf Coast and into protected bay systems, including the Lower Laguna Madre, during summer and early fall. The species is managed by USFWS.

Piping Plover
The piping plover (*Charadrius melodus*) is listed as Threatened under the ESA along the Atlantic Coast and Northern Great Plains populations and uses the Texas Gulf Coast as a primary wintering area. The piping plover forages on polychaete worms and other small invertebrates in protected bays and tidal flats along the Texas coastal zone (USFWS 2025) Tidal flat habitat within the project vicinity may provide foraging and roosting habitat for wintering piping plovers. The species is managed by USFWS, and critical habitat for the wintering population has been designated along the Texas Gulf Coast (USFWS 2001).

Red Knot
The rufa red knot (*Calidris canutus rufa*) is listed as Threatened under the ESA and uses the Texas Gulf Coast as a stopover and wintering area during migration. The species utilizes intertidal flats and shoreline habitats for foraging. Tidal flat habitats within the project vicinity may provide suitable foraging habitat during migration periods (USFWS 2026b).

Critical Habitat
Designated critical habitat for the piping plover (wintering) occurs along the Texas Gulf Coast in the vicinity of South Padre Island (USFWS 2001). The project area is 0.41 miles south of the nearest critical habitat area but does not overlap with designated critical habitat for piping plovers.

Proposed critical habitat for the green sea turtle under NMFS jurisdiction includes nearshore coastal and estuarine waters of the Gulf of Mexico and lower Laguna Madre in the South Texas region (63 FR 46693; 88 FR 46572). The lower Laguna Madre adjacent to the Station is within Proposed green sea turtle critical habitat.

Migratory Birds, Shorebirds, and Raptors
Migratory birds occurring in and adjacent to the project area are protected under the Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703-712), which prohibits the take, possession, import, export, transport, sale, purchase, barter, or offer for sale of migratory birds, their eggs, feathers, or nests without a valid federal permit.

South Padre Island is located along the Central Flyway, one of the major migratory corridors in North America, and serves as a critical stopover for migratory shorebirds, wading birds, waterfowl, and neotropical songbirds traveling between North and South America (TPWD 2025). The tidal flat, emergent marsh, and mangrove shrubland habitats documented within the survey area provide foraging, roosting, and transitional cover for a range of resident and migratory species (USCG 2026a). Refer to Appendix E Federally Protected Species Assessment for a detailed list of migratory birds potentially found near the Project area.

3.2.1.5 Underwater Noise
Underwater noise is assessed in this section for its potential effects to protected species including marine mammals, sea turtles, and fish (Essential Fish Habitat). Primary sources of existing ambient underwater sound include wind-driven surface agitation, tidal flow, and vessel traffic associated with recreational boating, commercial fishing, and USCG operational vessel movements through the Station basin and Brazos Santiago Pass. Background noise levels in shallow estuarine environments of this type are generally lower than open coastal or offshore environments due to

reduced wave energy and vessel traffic intensity. No measurements of existing ambient underwater sound levels have been conducted at the Station site; baseline hydroacoustic data are not available for the lower Laguna Madre in the immediate project vicinity. Refer to Appendix E for a full review of underwater noise thresholds for protected species in the project area.

3.2.2 Environmental Consequences

This section evaluates the potential direct and indirect effects of the Proposed Action and the No Action Alternative on the biological resources described in Section 3.2.1. Effects are assessed based on field investigations, available literature, and professional judgment. The ROI for biological resources is generally limited to the project footprint at USCG STA SPI and the immediately adjacent intertidal, estuarine, and upland areas potentially affected by construction activities and operational changes. Effects are evaluated for the construction phase, which involves demolition, grading, and new construction activities, and the operational phase following project completion as described in Section 3.1.

Where applicable, avoidance, minimization, and mitigation measures have been incorporated into the project design or are proposed as construction requirements to reduce the significance of potential effects. The significance of effects on biological resources is evaluated based on the magnitude, geographic extent, duration, reversibility, and context of potential impacts. A comprehensive summary of all BMPs and mitigation measures proposed for the project is presented in Appendix F.

3.2.2.1 Wetlands and Waters of the United States

Wetlands and other WOTUS are regulated under Section 404 of the CWA and Section 10 of the RHA, which together require USACE authorization for the discharge of dredged or fill material into jurisdictional waters and for work or structures in navigable waters. Executive Order 11990 (Protection of Wetlands) requires federal agencies to avoid adverse impacts to wetlands wherever practicable and to minimize wetland destruction when avoidance is not possible. All wetland features identified within the survey area are considered jurisdictional WOTUS based on their continuous surface connection to the Laguna Madre, a traditional navigable water subject to USACE jurisdiction (USCG 2026a). USACE will issue a Section 10/404 individual permit for the Proposed Action prior to initiation of construction activities that affect jurisdictional wetlands or waters.

Proposed Action - Construction Phase

The majority of construction activity associated with the Proposed Action will occur within the existing developed Station footprint, which consists primarily of buildings, paved and unpaved surfaces, maintained grounds, and operational infrastructure; some clearing and paving will occur outside the current footprint as shown by Temporary Construction Workspaces in Figure 2-1. This area does not support ecologically sensitive upland habitat. Direct impacts to upland vegetation within and adjacent to the developed footprint as a result of demolition, grading, and new construction are anticipated to be minor.

Recovery of disturbed upland and transitional areas is expected through natural recolonization and site restoration with native vegetation following construction. The anthropogenic upland berm associated with the wastewater treatment effluent discharge pipe crossing the southern portion of the survey area is outside of the Proposed Action footprint and temporary workspaces. The City of South Padre Island and Laguna Madre Water District are planning additional effluent discharge pipes to be installed in this easement corridor that would disturb the berm area temporarily. The

construction of additional effluent pipes will not occur within the Proposed Action footprint. Refer to Appendix F for a comprehensive list of all BMPs proposed for the Proposed Action including revegetation methods for disturbed upland areas due to temporary construction workspaces.

Approximately 2.30 acres of estuarine intertidal scrub-shrub wetland (E2SS) dominated by black mangrove were identified within the survey area across four delineated features (Refer to Appendix A for the Wetland Delineation Report). The project will result in the permanent loss of 0.036 acres of mangrove wetlands. Pursuant to 33 CFR 325.1(d)(7) and the mitigation guidelines outlined in 33 CFR 332, the USCG is not proposing compensatory mitigation for these impacts because the permanent impacts fall below the 0.1-acre threshold that generally necessitates compensatory mitigation under standard USACE practice. The minimal footprint of the impact is not anticipated to result in a significant degradation of the aquatic environment or a substantial loss of wetland functions and services within the local watershed. Impacts to WOTUS have been minimized to the maximum extent practicable; therefore, no further compensatory mitigation is proposed for this project.

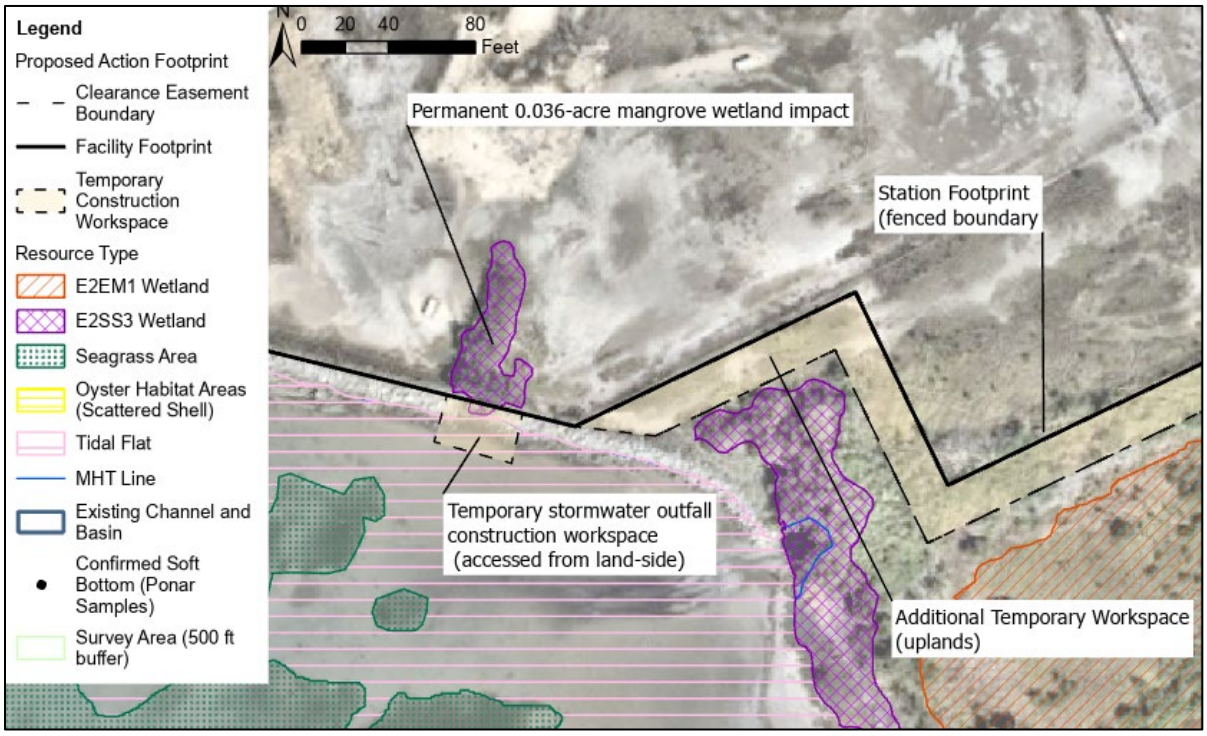


Figure 3-2: Area of WOTUS Impacts (Proposed Action)

The Proposed Action has been designed to avoid and minimize impacts to WOTUS. The project will not directly impact any area of intertidal emergent wetland. There are no temporary workspaces located in emergent wetland area. Indirect effects to intertidal emergent wetlands may include temporary alteration of tidal hydrology, sedimentation, and increased turbidity during active construction and dredging of the boat ramp area, which could affect the productivity and condition of adjacent marsh communities. BMPs such as the marking of all wetland features for avoidance and the use of turbidity curtains as listed in Appendix F will minimize temporary

impacts. These effects are expected to be temporary and to diminish following completion of construction activities.

Proposed Action - Operational Phase
Following construction, the reconstructed shoreline protection system is expected to reduce the uncontrolled tidal intrusion that has occurred through the deteriorated existing breakwater, stabilizing the wetland-upland boundary and reducing the ongoing passive conversion of upland areas to intertidal habitat observed under current conditions.

Stormwater outfalls will be located away from WOTUS and discharge directly into unconsolidated bottom area of Laguna Madre. Rip rap placed at the outfalls will provide sediment stabilization and reduce risk of scour or turbidity impacts following rain events. Long-term stormwater management from the reconstructed Station facilities will be subject to applicable National Pollutant Discharge Elimination System (NPDES) permit requirements. Modern stormwater design with BMPs and stormwater treatment devices incorporated into new construction is anticipated to reduce diffuse runoff and pollutant loading to adjacent wetlands relative to the aging existing infrastructure, representing a long-term operational improvement in water quality and hydrology conditions for adjacent wetland communities.

Alternative 2
Alternative 2 would result in substantially greater direct impacts to jurisdictional wetlands than Alternative 1. Direct impacts include permanent fill of approximately 3.34 acres of estuarine intertidal emergent wetland (E2EM) within the expanded southern footprint, permanent fill of 0.14 acres of estuarine intertidal scrub-shrub wetland (E2SS) associated with the expanded footprint and temporary workspace clearing and riprap installation, and the same 0.036 acres of E2SS mangrove wetland impact as Alternative 1, for a combined total of approximately 3.53 acres of direct permanent jurisdictional wetland impact (Figure 3-3). This level of impact is substantially greater than the 0.036 acres of direct wetland impact associated with Alternative 1. The 3.34-acre E2EM impact represents permanent conversion of established high tidal marsh and requires USACE Section 404/Section 10 authorization and compensatory mitigation in accordance with the USACE 2008 Mitigation Rule. The expanded footprint also requires placement of fill material to raise site elevation above mean high tide, resulting in permanent alteration of the hydrological conditions across the expanded area. Indirect effects to adjacent wetland communities from turbidity, sedimentation, and altered tidal hydrology during construction will be greater in extent and duration than those associated with Alternative 1 due to the proximity of construction activities to E2EM communities. The installation of 470 linear feet of riprap along the southern shoreline will permanently harden a previously natural estuarine shoreline, eliminating the potential for future intertidal habitat development along this shoreline segment.

Under Alternative 2, construction activities will extend into approximately 4.5 acres of currently undeveloped land within the southern portion of the federally owned parcel, requiring clearing and grading of upland and transitional habitat not disturbed under Alternative 1 and additional impacts to wetlands areas described in the following section. Recovery of disturbed upland areas is expected through natural recolonization and site restoration with native vegetation following construction. The installation of 470 linear feet of riprap along the previously undeveloped southern shoreline will permanently alter the shoreline character of this area and preclude natural shoreline vegetation recovery in the stabilized zone while converting the developed site to uplands.

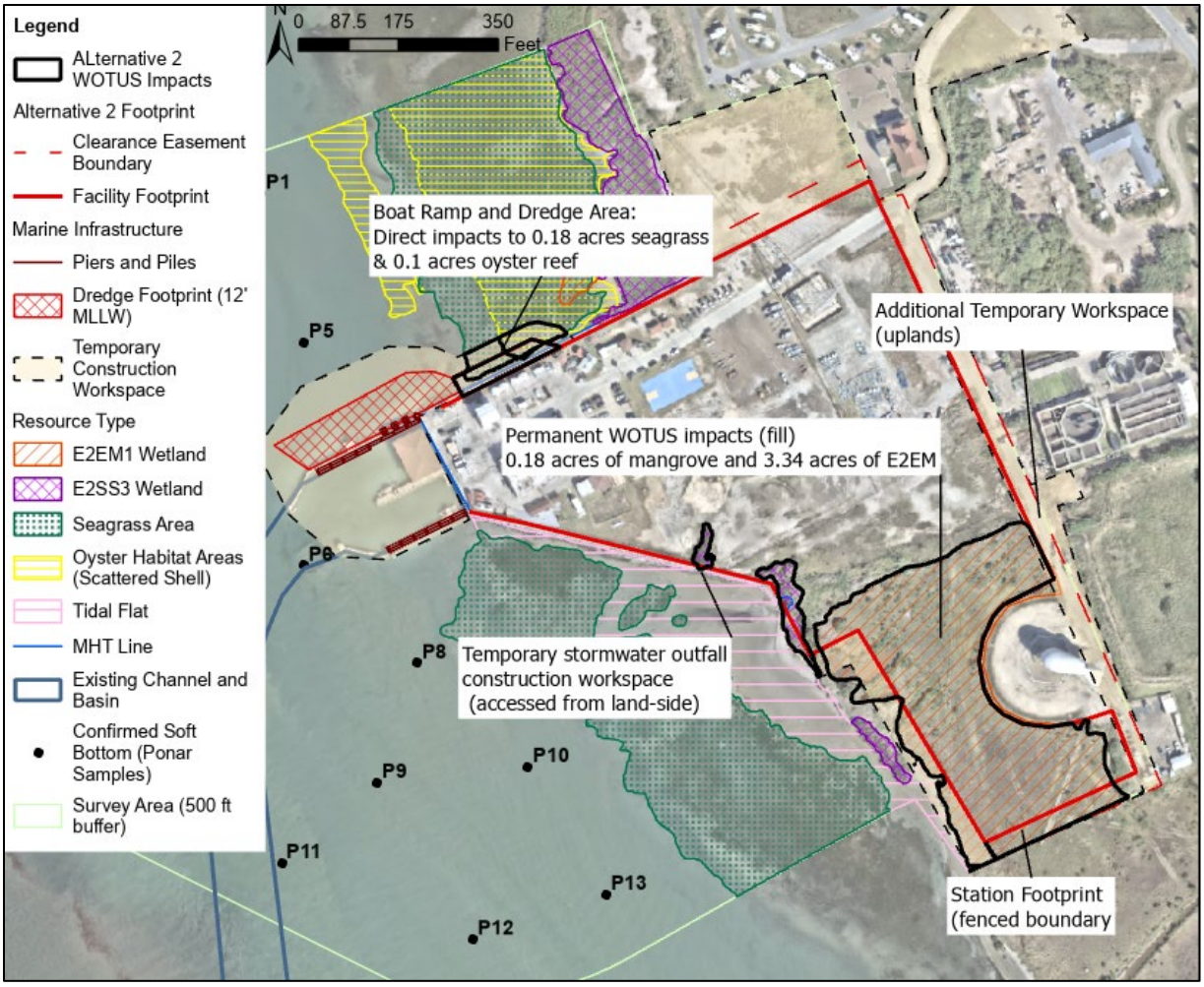


Figure 3-3: Areas of WOTUS Impacts (Alternative 2)

No Action Alternative

Under the No Action Alternative, no construction-related direct impacts to jurisdictional wetlands or WOTUS would occur and no USACE permits would be required. Wetland features identified within the survey area would not be subject to fill, clearing, grading, or in-water disturbance. However, continued deterioration of the existing rock breakwater under the No Action Alternative would allow progressive uncontrolled tidal inundation of transitional areas along the Station's developed edge. As documented in the Habitat Assessment (Appendix B), the partial collapse of the breakwater has already facilitated black mangrove colonization of a formerly upland area, and continued degradation would be expected to expand this pattern over time. Upland and transitional vegetation communities would remain in their current condition in the near term.

3.2.2.2 Aquatic and Estuarine Resources

Aquatic and estuarine resources in the project area include the open estuarine waters of the lower Laguna Madre, subtidal and intertidal soft-bottom and tidal flat habitats, seagrass and submerged aquatic vegetation (SAV), and patchy intertidal oyster reef communities. These resources support the ecological functions of the lower Laguna Madre estuarine system and constitute EFH for multiple federally managed species under the MSA, as described in Section 3.2.1.4. They are also

subject to the jurisdiction of the USACE under Section 404 of the CWA and Section 10 of the RHA as WOTUS, and to the regulatory oversight of NMFS under the EFH consultation provisions of the Magnuson-Stevens Act. A complete EFH Assessment is provided as Appendix D to this EA.

Proposed Action - Construction Phase

In-water construction activities have the potential to directly and indirectly affect aquatic and estuarine resources within and adjacent to the project area. The following discussion addresses each aquatic resource type.

Seagrass Habitat

The Proposed Action has been designed to avoid and minimize impacts seagrass resources. There are no direct impacts anticipated from the footprint of the project. Indirect impacts to seagrass are expected from turbidity and sediment resuspension during in-water construction activities including dredging of 0.4 acres construction of 590 sq ft of boat ramp. Research in the Laguna Madre has documented that shoal grass requires approximately 15 to 18 percent of surface irradiance to maintain positive photosynthetic growth (Dunton 1996), and that dredging-related turbidity can increase light attenuation for up to 15 months following disturbance, with effects measurable at the margins of adjacent seagrass meadows (Onuf 1994). Dredging is not proposed directly adjacent to seagrass beds and will be conducted via mechanical methods and with turbidity curtains deployed to minimize turbidity migration from the active dredged area as much as possible. There are no proposed structures over seagrass areas that would cause shading impacts. Shading from the boat ramp walls would not affect seagrass as there is no seagrass directly adjacent to the boat ramp structure.

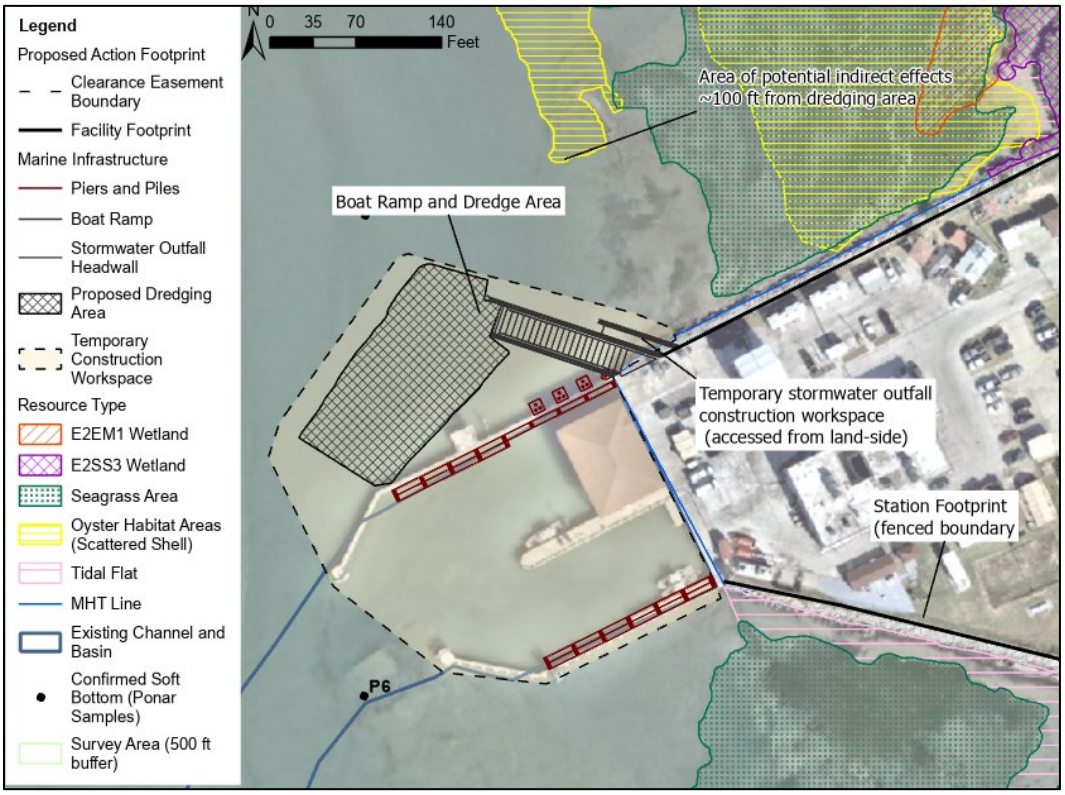


Figure 3-4: Areas of indirect impacts (Proposed Action)

Oyster Habitat

Patchy clusters of eastern oyster (*Crassostrea virginica*) were documented in the northern intertidal zone of the survey area, occurring as a mosaic with low tidal marsh and tidal flat habitats (USCG 2026a, USCG 2026c). The Proposed Action has been designed to avoid and minimize impacts to oyster resources. There are no direct impacts to oysters anticipated from the footprint of the project. Given the patchy and scattered nature of oyster resources documented in the survey area, impacts to oyster habitat are anticipated to be limited in extent. Indirect effects from turbidity and sedimentation during construction could temporarily affect oyster filtration capacity in areas adjacent to active work zones. As discussed in Section 3.1.2, construction has been phased and designed to minimize disturbance to aquatic resources including planning to dewater the boat ramp prior to excavation and using BMPs during dredging. The nearest area of scattered oyster shell was found approximately 100 feet from the proposed dredge footprint. Dredging of 0.4 acres may cause temporary and minor impacts to oyster reefs with use of BMPs as described in Appendix F such as turbidity curtains.

Open Water

The estuarine open water of the lower Laguna Madre adjacent to the Station, including the existing boat basin, is subject to USACE jurisdiction under Section 10 of the RHA as a traditional navigable water. In-water construction activities, including pile installation, boat ramp construction and associated navigation corridor dredging will directly affect the estuarine water column and benthic substrate within the construction footprint. The total area of direct impact to benthic substrates anticipated from boat ramp structure, stormwater outfall protection, and pile footings is approximately 4,500 sq feet (0.1 ac). The area to be dredged is approximately 0.4 acres. Pile installation and other in water works on the marine infrastructure would be conducted from floating work barges or man floats that will not use anchors or spuds to minimize disturbance to the substrate. Temporary turbidity from pile driving and vessel movement may minorly impact water column within the area of temporary workspace. Open water will return to pre-construction conditions immediately following construction. Benthic communities disturbed by the dredge footprint are expected to recover within estimated 9 months following construction (Wilber and Clarke 2007). Dredge impacts are considered temporary.

Proposed Action - Operational Phase

Following construction, the reconstructed waterfront facilities will result in limited permanent change to the nearshore aquatic environment within the project area. New piling, dock structures, and the boat ramp will introduce hard substrate into the intertidal and shallow subtidal zone, which over time may be colonized by sessile invertebrates including oysters and barnacles, providing localized structural habitat complexity that does not currently exist at the existing waterfront.

Propeller scarring from vessel transits in shallow water is the primary long-term operational concern for seagrass habitat in the lower Laguna Madre adjacent to the Station. Propeller disturbance to unconsolidated sediment and direct physical damage to seagrass blades and rhizomes can result in persistent loss of seagrass cover along repeated transit corridors (TPWD 2025; Onuf 1994). The dredged navigation area associated with the boat ramp will be used exclusively for USCG mission requirements and will prevent vessels from transiting through adjacent shallow waters where impacts to sensitive resources may occur. Vessel operators will be briefed on the location and limits of the navigation corridor and the importance of maintaining designated transit route to and from the boat ramp as part of standard Station operational protocols. Vessels will not be permitted to thrust engines in any manner that would create turbidity plumes

or scour within the boat ramp access channel area. Refer to Appendix F for comprehensive list of all management practices that will minimize impacts to aquatic resources.

Long-term stormwater management from the reconstructed Station is expected to reduce diffuse runoff and pollutant loading to adjacent estuarine waters relative to the aging existing infrastructure. Improved stormwater design incorporated into new construction will reduce the potential for nutrient enrichment, hydrocarbon contamination, and elevated turbidity events in adjacent seagrass and aquatic habitats.

Alternative 2
Under Alternative 2, in-water construction activities result in greater direct and indirect impacts to aquatic and estuarine resources than Alternative 1. The boat ramp under Alternative 2 results in approximately 0.14 acres of direct permanent benthic impact — nearly double the 0.08 acres associated with Alternative 1. The parallel ramp orientation requires a larger dredge footprint of approximately 0.5 acres, compared to 0.4 acres under Alternative 1, to achieve the required navigable depth contour along the ramp approach. The larger dredge footprint and the proximity of the Alternative 2 dredge area to adjacent seagrass beds results in greater indirect turbidity effects on seagrass habitat than Alternative 1. Alternative 2 results in approximately 0.18 acres of direct seagrass impact from the boat ramp footprint and associated construction workspace, and indirect seagrass impacts from elevated turbidity within the dredge action area are expected to be greater in extent than those of Alternative 1. Approximately 0.1 acres of scattered oyster reef habitat would be directly impacted by construction workspace associated with the Alternative 2 boat ramp configuration (see Figure 3-3). Installation of riprap along 470 linear feet of previously undeveloped tidal flat shoreline will permanently convert natural soft-bottom estuarine shoreline to hardened substrate, eliminating this shoreline segment as productive intertidal habitat. Benthic recovery timelines following dredging are consistent with Alternative 1 but the larger dredge footprint results in a proportionally greater temporary commitment of benthic habitat resources.

No Action Alternative
Under the No Action Alternative, no construction-related direct impacts to tidal flat, seagrass, oyster reef, or estuarine open water habitats would occur in the near term. In-water construction activities, pile installation, and potential dredging would not take place, and their associated turbidity, sedimentation, and physical disturbance effects would be avoided.

The continued use of aging and deteriorated waterfront infrastructure under the No Action Alternative presents ongoing risks to adjacent aquatic resources. The reduced operational capacity of the Station under the No Action Alternative may also affect the Station's ability to respond to maritime incidents involving petroleum, chemical, or other material releases in the lower Laguna Madre, indirectly increasing the risk of water quality impacts to adjacent aquatic and estuarine resources from such incidents.

3.2.2.3 Essential Fish Habitat

Proposed Action - Construction Phase
Potential Effects to Larval Invertebrates and Fishes: Short-term impacts to zooplankton, including planktonic larvae of federally managed invertebrates and fishes, resulting from construction may include mortality due to entrainment in the sediment plume and interference with filter-feeding caused by a temporary increase in suspended sediments from construction. Pelagic eggs of fish

can be smothered by suspended sediments. These impacts are expected to be short-term and localized and are not expected to significantly affect planktonic conditions in the region.

Potential Effects to Pelagic Fishes: Only a localized area will be affected by construction activities, and fish populations are not geographically limited to the area of the project; therefore, the presence of such species within the affected area during construction is expected to be minimal. Pile driving associated with new pier construction will generate underwater noise and vibration within the estuarine water column, potentially causing temporary displacement of fish and invertebrates from the immediate work area. Highly mobile species are generally capable of avoiding areas of active pile driving, and impacts to fish and invertebrate populations from pile installation are expected to be temporary and localized.

Pelagic fishes traveling through the immediate area may modify their route during construction. Effects on adults and larger juveniles living within the water column are not expected to be significant given their ability to quickly avoid the localized area of construction activities.

Potential Impacts to Demersal Fishes and Shrimp: The immediate local effect of construction would be the burial of taxa such as penaeid shrimp, sea robins (*Prionotus spp.*), and sand flounders (*Paralichthyidae*), as well as their epifaunal and infaunal prey. After construction disturbs bottom sediments, turbidity can cause stress in fishes in part due to the reduction of oxygen exchange capacity in the gills due to clogging and physical abrasion (EPA 1995, Suedel 2011). Larger juveniles and adults can avoid the suspended material by moving out of the area, but smaller juveniles are more vulnerable and susceptible to stress.

Potential Impacts to Oyster Reefs and Seagrass: The Proposed Action has been designed to avoid and minimize impacts to oyster and seagrass resources. There are no direct impacts anticipated from the footprint of the project. Impacts are limited to indirect and temporary exposure to turbidity from construction activities. Construction of sections of hard structure on portions of the exterior wall of the boat ramp would provide for future oyster colonization habitat.

Proposed Action - Operational Phase

Operational activities at the Station are not likely to result in significant adverse effects to EFH beyond those associated with existing Station operations. The rebuilt facility's modern containment infrastructure, stormwater management systems, and operational protocols represent an improvement over existing conditions and are expected to reduce likelihood of chronic water quality impacts to adjacent seagrass and estuarine habitats relative to the aging current facility.

The most significant ongoing operational EFH concern is propeller scarring of seagrass beds during vessel transit in shallow water. Implementation of designated navigation route to and from the added boat ramp, informed by the seagrass mapping (Appendix C), is the primary operational mitigation measure recommended to reduce this impact.

Artificial light at night can affect estuarine and coastal species in several ways relevant to EFH, including disruption of foraging behavior in nocturnal and crepuscular fish species, alteration of zooplankton vertical migration patterns in the estuarine water column, and potential attraction of migratory birds toward structures during nighttime migration. Lighting design for the reconstructed facility will incorporate dark-sky-compatible fixtures, shielding to minimize light spillage toward the adjacent estuarine environment, and use of amber or long-wavelength light sources in areas where light reaches the water, consistent with USFWS and NMFS sea turtle lighting guidelines and BMPs listed in Appendix F.

NMFS EFH Conservation Recommendations received through the EFH consultation process have been incorporated into final Station operational procedures and construction specifications and reflected in Appendix F.

Alternative 2
Alternative 2 results in greater adverse effects to EFH than Alternative 1 due to direct seagrass impacts, a larger dredge footprint with greater proximity to seagrass beds, and permanent hardening of intertidal shoreline EFH. Construction effects on pelagic, demersal, and larval EFH species are consistent with Alternative 1 but are greater in spatial extent due to the larger construction footprint. Operational EFH effects including lighting effects are consistent with Alternative 1.

No Action Alternative
Under the No Action Alternative, construction-related disturbance to EFH would be avoided. Operational impacts of the Station would not materially change with regard to EFH.

3.2.2.4 Federally Listed Species and Critical Habitat
Section 7(a)(2) of the ESA(16 U.S.C. 1531 et seq.), requires federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any federally listed species or result in the destruction or adverse modification of designated critical habitat. An official species list was obtained from the USFWS IPaC system for Cameron County, Texas (USFWS 2026a) and species under NMFS jurisdiction were identified through the NMFS SERO Section 7 Mapper (NMFS 2025).

Proposed Action
A complete Federally Protected Species Assessment including species occurrence information, habitat quality evaluations, action area definitions, routes of effects, effects analyses, and avoidance and minimization measures is provided in Appendix E. Effects determinations for all species evaluated are summarized in Table 3-2 below.

Table 3-2: Summary of Federally Protected Species Assessment and Determinations

Common Name	ESA Status	Jurisdiction	Occurs in Action Area	Effects Determination	Critical Habitat Determination
Monarch butterfly (*Danaus plexippus*)	Proposed Threatened	USFWS	Possible	Not likely to jeopardize	No proposed critical habitat in action area
Giant manta ray (*Manta birostris*)	Threatened	NMFS	Possible	NLAA	No critical habitat designated
Green sea turtle (*Chelonia mydas*) North Atlantic DPS	Threatened	NMFS (aquatic life stages) / USFWS (terrestrial and nesting beach life stages)	Likely	NLAA — NMFS jurisdiction / No Effect — USFWS jurisdiction	NLAA — proposed critical habitat unit TX01 (Essential Feature 3: benthic foraging habitat only; temporary turbidity during construction)

Common Name	ESA Status	Jurisdiction	Occurs in Action Area	Effects Determination	Critical Habitat Determination
Hawksbill sea turtle (*Eretmochelys imbricata*)	Endangered	NMFS (aquatic life stages) / USFWS (terrestrial and nesting beach life stages)	No	No Effect — both jurisdictions	No Effect
Kemp's ridley sea turtle (*Lepidochelys kempii*)	Endangered	NMFS (aquatic life stages) / USFWS (terrestrial and nesting beach life stages)	Likely	NLAA — NMFS jurisdiction / No Effect — USFWS jurisdiction	No critical habitat finalized
Leatherback sea turtle (*Dermochelys coriacea*)	Endangered	NMFS (aquatic life stages) / USFWS (terrestrial and nesting beach life stages)	No	No Effect — both jurisdictions	No Effect
Loggerhead sea turtle (*Caretta caretta*) Northwest Atlantic Ocean DPS	Threatened	NMFS (aquatic life stages) / USFWS (terrestrial and nesting beach life stages)	Possible	NLAA — NMFS jurisdiction / No Effect — USFWS jurisdiction	No Effect — designated critical habitat unit LOGG-S-02 occurs seaward of 10-meter depth contour; outside action area
Cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*)	Threatened	USFWS	No	No Effect — confirmed via IPaC Texas Statewide DKey	No Effect
Eastern black rail (*Laterallus jamaicensis jamaicensis*)	Threatened	USFWS	Possible	NLAA	No critical habitat designated
Northern aplomado falcon (*Falco femoralis septentrionalis*)	Endangered	USFWS	No	No Effect — confirmed via IPaC Texas Statewide DKey	No critical habitat designated
Piping plover (*Charadrius melodus*)	Threatened	USFWS	Possible	NLAA	No Effect — designated wintering critical habitat units occur outside action area
Rufa red knot (*Calidris canutus rufa*)	Threatened	USFWS	Possible	NLAA	No Effect — proposed critical habitat occurs outside action area
Salina mucket (*Potamilus metnecktayi*)	Proposed Endangered	USFWS	No	Not likely to jeopardize	No Effect

Common Name	ESA Status	Jurisdiction	Occurs in Action Area	Effects Determination	Critical Habitat Determination
Gulf Coast jaguarundi (*Herpailurus yagouaroundi cacomitli*)	Endangered	USFWS	No	No Effect	No critical habitat designated
Ocelot (*Leopardus pardalis*)	Endangered	USFWS	No	No Effect	No critical habitat designated
Tricolored bat (*Perimyotis subflavus*)	Proposed Endangered	USFWS	No	Not likely to jeopardize	No critical habitat finalized
West Indian manatee (*Trichechus manatus latirostris*)	Threatened	USFWS / MMPA	Possible	NLAA	No Effect — no critical habitat designated in Texas
South Texas ambrosia (*Ambrosia cheiranthifolia*)	Endangered	USFWS	No	No Effect — confirmed via IPaC Texas Statewide DKey	No critical habitat designated
Texas ayenia (*Ayenia limitaris*)	Endangered	USFWS	No	No Effect — confirmed via IPaC Texas Statewide DKey	No critical habitat designated

All measures designed to avoid or minimize impacts to federally protected species and migratory birds are included in the Best Management Practices described in Appendix E and Appendix F of this EA. Refer to Appendix G for records of agency consultations and concurrences with USFWS and NMFS, including full list of recommended avoidance and minimization measures.

Alternative 2

Alternative 2 results in greater potential adverse effects to ESA-listed species over the Proposed Action for two species groups: Eastern black rail and piping plover, due to direct and indirect impacts to their respective habitats. All other species' effects are consistent with the Proposed Action.

Eastern black rail may be directly affected by the permanent conversion of approximately 3.34 acres of E2EM high tidal marsh within the expanded southern footprint. This level of direct habitat loss significantly exceeds the indirect temporary disturbance to adjacent marsh communities under Alternative 1. Eastern black rail are marsh-obligate and highly secretive, and permanent loss of herbaceous high tidal marsh habitat at this scale is a substantive adverse change to the habitat conditions supporting potential black rail occurrence in the project vicinity. Effects to Eastern black rail under Alternative 2 are therefore potentially greater than NLAA and warrant additional coordination with USFWS prior to any decision to implement this alternative. Implementation of species presence surveys and inclusion of species specific protective BMPs with project construction and operations would likely be required.

Piping plover may be indirectly affected by the installation of 470 linear feet of riprap and associated workspace immediately adjacent to tidal flat habitat above mean high tide. While no

direct impact to tidal flat habitat is proposed, the placement of fill material to raise site elevation and the installation of riprap along this shoreline segment would occur directly adjacent to tidal flat foraging and roosting habitat used by wintering piping plovers. The physical disturbance associated with fill placement and riprap installation during construction constitutes a temporary adverse effect to piping plover foraging habitat in this area. Permanent riprap hardening of the adjacent shoreline modifies the natural shoreline character immediately landward of tidal flat habitat. Effects to piping plover under Alternative 2 are greater than those of Alternative 1 and require coordination with USFWS regarding revised protective measures and effects determination. Effects determinations for all other listed species under Alternative 2 are consistent with those described for Alternative 1.

No Action
The No Action alternative would not affect any Federally listed species or critical habitat as no action outside of the existing station would occur and construction-related disturbance to nesting and foraging migratory birds would be avoided.

3.2.2.5 Underwater Noise

Proposed Action Construction
In-water pile driving associated with waterfront reconstruction will generate temporary underwater noise with the potential to cause physiological injury or behavioral disturbance to fish, sea turtles, and marine mammals within the action area. Predicted noise isopleths for all pile types were calculated using the NMFS Multi-Species Pile Driving Calculator (NMFS 2025) and are summarized in Appendix E, Table 3-2. Peak SPL injury distances for all pile types are negligible: single-strike physiological injury would require direct contact with the pile face. Behavioral disturbance isopleths extend to a maximum of 4,459 feet from the governing 42-inch impact pile for fish and 3,280 feet from the governing vibratory sheet panel for marine mammals. The majority of 18-inch pile installation will occur within the enclosed Station basin, where seawall geometry substantially attenuates noise transmission to the open lower Laguna Madre relative to the conservative open-water assumptions applied in the NMFS calculator.

With implementation of soft-start procedures, a 50-foot biological observer exclusion zone, and preference for vibratory installation where feasible, effects of pile driving noise on ESA-listed sea turtles, EFH fish species, and West Indian manatee are temporary, localized, and insignificant. A complete underwater noise analysis including calculator inputs, isopleth results, and species-specific effects determinations is provided in Appendix E.

Overall Finding

With implementation of the avoidance and minimization measures described in Appendix E and Appendix F, the Proposed Action is not likely to adversely affect ESA-listed sea turtles or manta rays from underwater pile driving noise. Temporary behavioral disturbance of EFH fish species and marine mammals during active pile installation is anticipated but is short-term and localized.

Proposed Action Operation
No significant long-term noise impacts are anticipated following construction completion; operational noise from the rebuilt Station will be consistent with existing Station operations and include vessel activity and general wind-driven and tidal wave action. Airborne operation noise

will not result in long-term changes to the ambient noise environment at the Station or adjacent community.

Alternative 2
Underwater noise effects under Alternative 2 are consistent with those described for Alternative 1. The pile types, driving methods, and marine works program under Alternative 2 are the same as Alternative 1.

No Action Alternative
Under the No Action Alternative, no construction noise would be generated and no temporary underwater noise impacts to fish or protected species would occur from pile driving or demolition. Long-term operational noise levels would remain unchanged from existing conditions.

3.3 Cultural and Historical Resources

Cultural resources, including historic properties, archaeological sites, and traditional cultural properties, are protected under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470 et seq.), and implementing regulations at 36 CFR Part 800. Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties and to give the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. Historic properties are defined as those districts, sites, buildings, structures, and objects included in, or eligible for inclusion in, the National Register of Historic Places (NRHP).

3.3.1 Affected Environment

The Area of Potential Effect (APE) for the Proposed Action encompasses the approximately 9-acre project footprint at USCG STA SPI and a one-mile buffer extending beyond the direct project footprint to capture potential indirect visual and contextual effects on nearby historic properties and districts.

The 1923 Point Isabel Coast Guard Building is located within the project area approximately 260 feet from the Station fenceline boundary. The structure is one of the most historically significant resources associated with the Station and represents over a century of continuous federal maritime presence at this location. The federal government has operated a coastal installation at Point Isabel since 1852, and the 1923 building is the third permanent structure erected on the site. It was constructed as part of a network of nine Coast Guard Stations along the Gulf of Mexico from Florida to the Texas-Mexico border and originally consisted of a main floor, attic, and a lookout tower, all elevated on wood and concrete pilings. The building served as the barracks and operational headquarters for the Coast Guard unit responsible for coastal patrol and maritime rescue in the lower Laguna Madre and Brazos Santiago Pass area for approximately 50 years, until the current Station facilities were constructed in 1974 (Texas Historical Commission [THC] 1988). The structure is recognized by Texas Historical Marker No. 00032, designated in 1988.

The nearest listed site from the NRHP is the Point [Port] Isabel Lighthouse, located on the mainland in Port Isabel, over 2.5 miles west of the Station, across the Laguna Madre. The new Station building, constructed in 1974, is not eligible for listing in the NRHP however the old Station building constructed in 1923, also known as the Point Isabel Coast Guard Building, was previously determined eligible for listing in the NRHP (Figure 3-5).

Figure 3-5: Map of 1-mile buffer APE, showing image and location of 1923 Port Isabel CG Building

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action

No direct impacts to cultural resources are expected as no evidence of any such resources has been identified within the direct construction footprint of the Proposed Action, including submerged archaeological resources that may be present in the footprint of the proposed boat ramp and navigation corridor. THC noted that the project area falls within State Tract 748, which has high potential for submerged cultural resources; however, given the site's history of continuous federal operations and the relatively small scale of the proposed boat ramp dredge area, the THC did not require a submerged survey.

The Port Isabel Lighthouse, as the nearest NRHP-listed property, is located approximately 2.5 miles west of the Station across the Laguna Madre. At this distance and separated by the open water of the lagoon, the Proposed Action will have no direct physical effect on the lighthouse. Indirect visual effects from new construction within the Station footprint are not anticipated to affect the setting, character, or integrity of the lighthouse. No adverse effect to the Port Isabel Lighthouse is anticipated.

The Proposed Action does not involve direct physical disturbance, demolition, alteration, or modification of the 1923 Point Isabel Coast Guard Building. No ground-disturbing activities are

proposed within the building's immediate environs. Temporary workspaces are located adjacent to the building and parking areas. The THC Division of Architecture has determined this project will have no adverse effect to above ground historic properties on the condition that no work will impact the 1923 Point Isabel Coast Guard Building, which has a preservation easement on it.

The THC noted high potential for undiscovered submerged cultural resources within State Tract 748 but did not require a survey given the relatively small scale of proposed dredging (Tracking number 202603569, January 29, 2026). If any cultural material is inadvertently encountered during ground-disturbing or in-water construction activities, all work in the affected area shall cease immediately and the THC shall be contacted before work resumes. An inadvertent discovery clause will be incorporated into construction specifications. Refer to Appendix G for the record of SHPO consultation and concurrence.

Government-to-government consultation with federally recognized tribes is ongoing and will continue throughout the NEPA and Section 106 review processes, as appropriate. Tribal consultation provides an opportunity for tribes to identify concerns regarding archaeological resources, traditional cultural properties, and resources of religious or cultural significance that may be affected by implementation of the Proposed Action. Refer to Appendix G for record of coordination with tribes. The following federally recognized Tribes, and other Tribes that may have interest in the Proposed Action were contacted in coordination with this project:

- Comanche Nation
- Kickapoo Traditional Tribe of Texas
- Kickapoo Tribe of Oklahoma
- Tonkawa Tribe of Indians of Oklahoma
- Wichita and Affiliated Tribes
- Ysleta del Sur Pueblo

3.3.2.2 Alternative 2

There are no differences in the impacts to cultural and historical resources with Alternative 2. The same temporary construction workspaces and permanent project footprint exist with proximity to the 1923 Point Isabel Coast Guard Building. No direct or indirect impacts will occur to the building.

3.3.2.3 No Action

Under the No Action Alternative, no ground-disturbing activities would occur and no direct or indirect impacts to cultural resources or historic properties would result.

3.4 Water Resources

3.4.1 Affected Environment

The Laguna Madre is a shallow hypersaline coastal lagoon designated as a TNW under the CWA and classified as Texas water body segment 2491 by the Texas Commission on Environmental Quality (TCEQ). Physical and hydrological characteristics of the Laguna Madre relevant to habitat areas and biological resources are described in Section 3.2 Biological Resources.

3.4.1.1 Tides

The Brazos Santiago Pass and adjacent Lower Laguna Madre form a tidally influenced inlet-estuarine system that connects the Gulf of Mexico to the southern portion of the Laguna Madre

through a deepened and jettied navigation channel. The Pass serves as the primary exchange point for tidal waters entering and exiting the Lower Laguna Madre and the Brownsville Ship Channel system. Although the Laguna Madre is characterized as a microtidal, hypersaline estuary, tidal exchange is locally enhanced near the inlet due to channel constriction and engineered navigation improvements that increase hydraulic connectivity with the Gulf of Mexico.

Tidal influence at the project area is primarily wind-driven rather than astronomically driven, consistent with the microtidal character of the Texas Gulf Coast. NOAA tidal monitoring is conducted at two Stations in the immediate project vicinity: Station 8779748, located on-site at the USCG Station, and Station 8779770, the long-term control Station at Port Isabel (NOAA 2026a; NOAA 2026b). Mean tidal range at Port Isabel is approximately 0.6 feet (0.2 meters), with wind tidal fluctuations routinely exceeding astronomical tidal range during sustained wind events.

3.4.1.2 Surface Water Quality

Hydrologic conditions in the Laguna Madre are influenced by wind-driven circulation, limited tidal exchange, and episodic freshwater inputs from rainfall events and coastal runoff. Water movement is generally weak compared to open estuarine systems, resulting in relatively long residence times and heightened sensitivity to changes in water quality (USGS 2023). Water clarity and salinity are the primary factors controlling seagrass distribution in the lower Laguna Madre, and both are subject to variation driven by hydrological inputs, storm events, and anthropogenic disturbance (TPWD 1999; USGS 2023).

Portions of the lower Laguna Madre do not meet water quality standards for aquatic life use due to low levels of dissolved oxygen, and do not meet standards for primary contact recreation use due to high levels of fecal bacteria (TCEQ 2023). The lower Laguna Madre (segment 2491) is listed on the Texas 2024 Section 303(d) list of impaired water bodies maintained by TCEQ (TCEQ 2024). Primary impairments identified for this segment are low dissolved oxygen concentrations affecting aquatic life use and, in portions of the watershed, excess nutrients and fecal bacteria. The Brownsville Ship Channel and adjacent drainage features contribute industrial and urban stormwater, freshwater, and agricultural runoff to the lower Laguna Madre (TCEQ 2023).

Water quality and sediment chemistry within the project footprint were assessed through dredge material characterization conducted concurrently with project planning (USCG 2026d). No water or elutriate chemistry results exceeded selected screening benchmarks. Two sediment samples exceeded the Effects Range Low (ERL) benchmark for PAHs but did not reach the Effects Range Median (ERM) level. Dioxin and furan concentrations were detected in all sediment samples but remained below the project cleanup level of 53.0 pg/g Total Dioxin TEQ. Dredged material is suitable for placement at the approved disposal facility.

3.4.1.3 Floodplain

The project area is located entirely within a Federal Emergency Management Agency (FEMA)-designated Special Flood Hazard Area (SFHA) subject to the 1-percent annual chance (100-year) flood event as shown on the Flood Insurance Rate Map (FIRM) for Cameron County, Texas (FEMA 2026) (Figure 3-6). South Padre Island is subject to both coastal flooding mechanisms including storm surge, wave run-up, and wind-driven tidal inundation, and to direct Laguna Madre storm flooding inundation from the bayward side during hurricane or tropical storm events.

Federal actions within the floodplain are governed by Executive Order 11988, Floodplain Management (42 FR 26951, May 24, 1977), which requires federal agencies to avoid, to the extent

possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains where there is a practicable alternative.

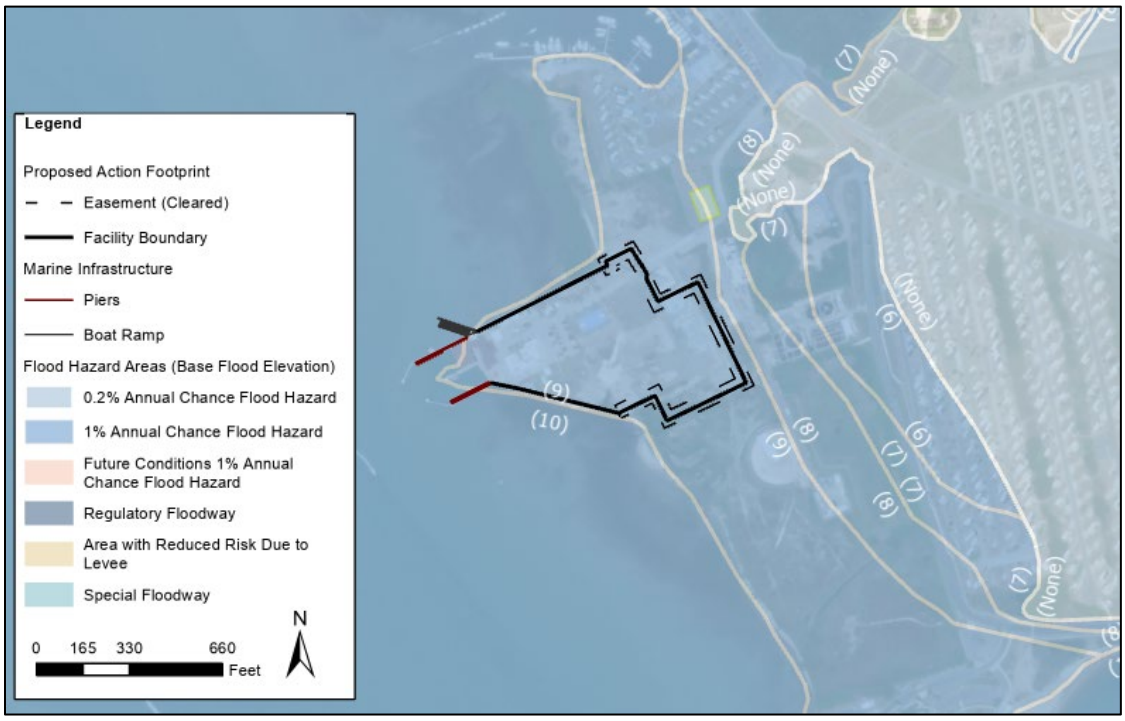


Figure 3-6: FEMA Floodplain Map (National Flood Hazard Layer)

3.4.2 Environmental Consequences

3.4.2.1 Proposed Action

Surface Water Quality

Construction activities will temporarily affect water quality in the adjacent lower Laguna Madre through increased turbidity from in-water and shoreline construction, potential releases of fuel, lubricants, or concrete during construction, and stormwater runoff from disturbed upland areas. These impacts are temporary and will be managed through a Stormwater Pollution Prevention Plan (SWPPP) prepared and implemented pursuant to the TPDES Construction General Permit, administered by TCEQ. The SWPPP will specify erosion and sediment controls, spill prevention and response procedures, and stabilization requirements for all disturbed areas. Turbidity barriers and silt fencing will be deployed at the water's edge prior to initiation of any in-water or shoreline construction activities. Concrete washout will be managed in designated upland containment areas away from the shoreline and wetland margins. Equipment refueling and maintenance will occur in designated upland areas away from the water's edge. Effects of construction turbidity on aquatic biological resources including seagrass and benthic communities are evaluated in Section 3.2.2.

Long-term operational water quality impacts will be reduced relative to existing conditions as a result of replacement of the aging Station wastewater treatment and septic system with a modern system meeting current TPDES permit requirements. The rebuilt Station will include updated stormwater management infrastructure designed to manage runoff quality and quantity consistent with current standards and TPDES permit conditions. New stormwater drainage systems will include oil water separators prior to the discharge points to ensure containment of any

hydrocarbons or other floatable waste from surface runoff. The Proposed Action is expected to result in a net long-term improvement in localized water quality relative to existing conditions by replacing aging discharge infrastructure that has historically contributed to impairment of the adjacent lower Laguna Madre (TCEQ 2024).

Water and sediment quality was assessed in the area of proposed dredging in accordance with USACE requirements for dredged material characterization. Physical and chemical characterization did not indicate presence of any contaminants of concern in the sediment or water column above screening benchmarks. Dredging of the boat basin and other in water construction would not result in negative effects to water quality due to chemical constituents within the material (USCG 2026d).

Floodplain

The USCG has completed the eight-step floodplain management decision-making process required by Executive Order 11988 and 44 CFR Part 9. The project area is located entirely within a FEMA-designated SFHA (FEMA 2026). No practicable alternative location outside the floodplain exists, as the Station's mission requires direct waterfront access to the lower Laguna Madre and Brazos Santiago Pass, and all practicable alternative locations evaluated in Section 2.2 are within the SFHA.

Minor increases in impervious surface beyond the existing developed area are proposed at a scale that would not materially alter floodplain hydraulics or increase flood elevations in the lower Laguna Madre. Waterfront infrastructure reconstruction including the boat ramp, breakwalls, and mooring will be designed to minimize alteration of tidal circulation and will not result in a measurable increase in Base Flood Elevation (BFE). New facilities will be designed and constructed to current flood-resistant construction standards appropriate for the SFHA designation and the coastal storm surge environment of the lower Laguna Madre. Finished floor elevations for occupied structures will be established at or above the BFE shown on the applicable FIRM, consistent with National Flood Insurance Program (NFIP) standards and any additional freeboard required. Critical mechanical, electrical, and communications infrastructure will be elevated or flood-proofed to minimize damage from inundation events. Flood-resistant materials will be specified for all below-BFE construction elements. Based on completion of the eight-step process, the USCG has determined that no practicable alternative location outside the floodplain exists, and the Proposed Action will be implemented with flood-resilient design measures to minimize adverse effects associated with floodplain occupancy consistent with EO 11988

3.4.2.2 Alternative 2

Under Alternative 2, construction activities will result in greater temporary water quality impacts than Alternative 1 due to the larger construction footprint and expanded dredge area. The same SWPPP and turbidity control measures described for Alternative 1 will apply to Alternative 2 construction. Long-term operational water quality improvements from replacement of aging wastewater and stormwater infrastructure are the same as described for Alternative 1.

The Alternative 2 footprint encompasses a greater area of impervious surface and fill than Alternative 1, all of which is located within the FEMA-designated SFHA. The expanded southern footprint requires placement of fill material to raise site elevation above mean high tide, resulting in a measurable increase in the volume of fill within the floodplain relative to Alternative 1. This additional fill has the potential to displace a greater volume of floodplain storage than Alternative 1; however, given the low relief of the barrier island setting and the shallow tidal flat character of

the expanded area, the increase in flood elevation resulting from this additional fill is not anticipated to be significant. All occupied structures under Alternative 2 will be designed and constructed to current flood-resistant construction standards consistent with NFIP requirements and at or above the applicable BFE. The EO 11988 eight-step findings described for Alternative 1 apply equally to Alternative 2, as both action alternatives are located within the same SFHA and no practicable alternative location outside the floodplain exists for either alternative.

3.4.2.3 No Action Alternative

Under the No Action Alternative, no new construction would occur and no construction-phase impacts to surface water quality would result. However, continued deterioration of the existing Station stormwater and wastewater infrastructure could allow ongoing chronic discharge of inadequately treated effluent to the adjacent lower Laguna Madre. The No Action Alternative also leaves the Station's critical infrastructure vulnerable within the SFHA without the flood-resilient design improvements that would reduce long-term vulnerability to storm surge damage. The No Action Alternative avoids short-term construction-phase water quality impacts but perpetuates existing contributions to the segment 2491 impairments identified under CWA Section 303(d) (TCEQ 2024).

3.5 Transportation, Navigation, Access

3.5.1 Affected Environment

South Padre Island is accessible via the Queen Isabella Memorial Causeway, a 2.37-mile concrete and steel bridge connecting the island to Port Isabel on the mainland. Built in 1974, it carries State Highway 100 and Park Road 100 and is the island's sole access and evacuation route. The September 2001 collapse of two spans after a barge strike, which killed eight people and closed the crossing for two months, remains the defining illustration of the island's transportation vulnerability (Texas Department of Transportation [TxDOT] 2025). TxDOT is currently studying the proposed State Highway 104, an eight-mile bridge roughly three to four miles north of the existing causeway, to provide a secondary access route. The Station sits at the southern end of the island accessible via Park Road 100, the main north-south road. There are no grade, intersection, or bridge constraints on the approach that would prevent delivery of large construction equipment or materials.

On the water side, the Station occupies the north bank of Brazos Santiago Pass, the natural inlet connecting the lower Laguna Madre to the Gulf of Mexico. The Pass is approximately 40 feet at the inlet, well-marked, and navigable. It also connects to the GIWW and the Brownsville Ship Channel. Commercial barges, fishing vessels, and recreational boats transit the Pass daily. The Station sits at a strategic convergence of these navigation channels.

3.5.2 Environmental Consequences

3.5.2.1 Proposed Action

Land Transportation

Construction of the Proposed Action will generate temporary increases in heavy vehicle traffic on the Queen Isabella Memorial Causeway and Park Road 100 during the construction period. Construction-related vehicle trips will include delivery of building materials, concrete, structural steel, equipment mobilization and demobilization, and periodic supply runs. At peak construction activity, daily construction trips are estimated at approximately 500 vehicles, representing

approximately a 2.5 percent increase over the existing Park Road 100 Annual Average Daily Traffic of 19,754 vehicles per day (TxDOT 2023, Station ID 31H36). Park Road 100 currently operates at Level of Service B based on existing traffic volumes. The estimated construction trip generation is insufficient to degrade the existing Level of Service on Park Road 100 or the Queen Isabella Memorial Causeway. These trips will be distributed over the approximately 2.5-year construction period and will not result in sustained adverse effects on causeway or roadway operations. No significant impacts to the road network are anticipated.

Oversized load permits may be required from TxDOT for delivery of large structural elements. The contractor will coordinate with TxDOT and the City of South Padre Island regarding any oversize or overweight load movements on Park Road 100 and the causeway prior to construction. Construction traffic management will be addressed in the contractor's construction logistics plan and will specify designated haul routes, delivery windows, and coordination requirements to minimize disruption to island residents and commercial traffic.

No permanent changes to the island road network or to causeway access are proposed. Station vehicular access configuration post-construction will be consistent with or improved relative to existing conditions. No long-term adverse effects to land transportation are anticipated.

The Proposed Action will result in a permanent increase in personnel at the Station from approximately 85 to an estimated 150 persons, with a maximum capacity of approximately 210 persons during surge operations. This increase in assigned personnel will generate a corresponding long-term increase in daily vehicle trips on Park Road 100 and the Queen Isabella Memorial Causeway relative to existing conditions. At full operational capacity, the personnel increase represents an estimated doubling of the daily commuter vehicle trip generation associated with Station operations. Based on the existing Park Road 100 Annual Average Daily Traffic of 19,754 vehicles per day (TxDOT 2023, Station ID 31H36) and the current Level of Service B on the causeway, the permanent increase in Station-generated vehicle trips from expanded personnel is not expected to degrade the existing Level of Service on Park Road 100 or the Queen Isabella Memorial Causeway. The Station's parking facilities will be expanded to accommodate at least 80 percent of the increased personnel complement plus government vehicles, prime movers, and trailers, reducing the potential for spillover parking impacts to adjacent public areas.

Maritime Navigation

In-water construction activities including demolition, repairs, pile driving, and boat ramp construction/dredging will require temporary occupation of portions of the Station basin and adjacent nearshore waters. A limited area of the lower Laguna Madre immediately adjacent to the construction zone will be temporarily restricted during active in-water work for safety purposes. These restrictions will be confined to the Station's existing operational waterfront footprint and will not obstruct navigation on the GIWW, Brazos Santiago Pass, or the lower Laguna Madre navigation channels used by commercial, recreational, and government vessel traffic.

USCG operational continuity during construction has been addressed through coordination between the USCG and the contractor during project planning. Marine construction activities have been phased and approved by the USCG to ensure continuous operability of the minimum necessary piers and moorings required to support active search and rescue vessels and other necessary vessel engagements throughout the construction period. At no point during construction will the Station's waterfront capability be reduced below the minimum threshold necessary to maintain the Station's operational mission. This phased approach eliminates the need for

alternative staging arrangements and ensures uninterrupted maritime emergency response capability from USCG STA SPI during the full construction period. Temporary navigation hazard lights will be mounted on the piers and decks as necessary when construction is occurring. No temporary buoys or aids to navigation are anticipated to be needed.

Following construction, the rebuilt waterfront facilities will enhance the Station's operational navigation capacity. No long-term adverse effects to maritime navigation are anticipated. The Proposed Action does not alter the authorized channel dimensions, controlling depths, or navigational characteristics of USACE-maintained channels, Brazos Santiago Pass or the GIWW.

3.5.2.2 Alternative 2

Transportation and navigation impacts under Alternative 2 are consistent with those described for Alternative 1. The construction timeline, personnel complement, access routes, and vehicle trip generation are unchanged. No additional impacts to land transportation or maritime navigation are anticipated from Alternative 2 relative to Alternative 1.

3.5.2.3 No Action Alternative

Under the No Action Alternative, no construction-related traffic impacts to land transportation or temporary navigation restrictions would occur. Continued reduction is operational capability at the Station from inferior infrastructure would likely require more frequent response from more distant Stations, potentially increasing response times for maritime emergencies and border security issues in the lower Laguna Madre, Brazos Santiago Pass, and the adjacent Gulf of Mexico coastal area.

3.6 Cumulative Effects

3.6.1 Scope of Analysis

Cumulative impacts are the combined effects of the Proposed Action when added to the effects of other past, present, and reasonably foreseeable future actions in the project vicinity. Consistent with current CEQ guidance (CEQ 2025), this analysis is limited to actions that share geographic proximity, temporal overlap, and resource overlap with the Proposed Action. Actions that are geographically remote, outside USCG regulatory authority, or separated in time from the construction and operational periods of this project are not carried forward for detailed analysis.

The geographic scope of this cumulative analysis is the lower Laguna Madre and South Padre Island southern shoreline. The temporal scope encompasses the construction period (2026–2029) and the long-term operational period of the rebuilt Station for the foreseeable future. Multiple federal, state, and local databases and websites were used to identify relevant past, present, and reasonably foreseeable future projects. Table 3-3 presents project considered in the cumulative effects analysis.

Table 3-3: Past, Present, and Reasonably Foreseeable Actions Considered

Project	Lead Agency / Proponent	Location	Status	Resource Overlap
Isla Blanca Park Shoreline Restoration	Cameron County / USACE (SWG-2023-00264)	immediately north of Station	Permit issued November 2025	Water quality, seagrass EFH, estuarine marsh, listed species, tidal flat

Project	Lead Agency / Proponent	Location	Status	Resource Overlap
South Padre Island Wind and Watersports Venue	City of SPI / USACE (SWG-2018-00232)	Laguna Madre bayshore, South Padre Island	Updated public notice March 2025; permit pending	Estuarine habitat, water quality
USACE GIWW and Brazos Santiago Pass maintenance dredging	USACE Galveston District	Brazos Santiago Pass and GIWW	Recurring federal action; ongoing	EFH, water quality, turbidity, listed species, noise
TxDOT South Padre Island Second Access Causeway (SH-104)	TxDOT	Laguna Madre, approximately 3–4 miles north of Station	Environmental clearance underway; construction not imminent	EFH, listed species, noise, navigation

Resources considered in the cumulative effects analysis include, but are not limited to, biological resources (including seagrass and federally managed species), water quality, aquatic habitat, and land use. The cumulative effects analysis focuses on whether the Proposed Action would contribute incrementally to resource stressors such as habitat disturbance, turbidity, vessel activity, and shoreline modification within an already developed and actively managed coastal environment. Where applicable, mitigation measures and best management practices incorporated into the Proposed Action are also considered in evaluating the degree to which cumulative effects may be reduced or avoided. Table 3-4 summarizes the foreseeable cumulative effects by resources.

Table 3-4: Cumulative Effects by Resource

Resource	Proposed Action Contribution	Alternative 2 Contribution	Other Actions	Cumulative Effect	Significance
Estuarine water quality and turbidity	Temporary turbidity from in-water construction; long-term improvement from wastewater infrastructure replacement	Similar to Alternative 1 (Proposed Action)	USACE maintenance dredging generates recurring turbidity in Brazos Santiago Pass;	Short-term additive turbidity effects possible if USACE maintenance dredging occurs concurrently with Station in-water construction; long-term Station improvements contribute net benefit to segment 2491 impaired water body	Not significant — localized and temporary; cumulative long-term effect is beneficial

Resource	Proposed Action Contribution	Alternative 2 Contribution	Other Actions	Cumulative Effect	Significance
Essential Fish Habitat (EFH)	Temporary disturbance to tidal flat, seagrass, and intertidal habitat during construction; pile driving noise causing temporary displacement of EFH species	Direct seagrass loss (0.18 ac), direct oyster impact (0.1 ac), larger dredge footprint with greater proximity to seagrass; greater additive contribution to EFH disturbance	USACE maintenance dredging causes recurring turbidity and benthic disturbance in Brazos Santiago Pass and GIWW; SH-104 causeway construction would involve large-scale pile driving and dredging in the Laguna Madre if and when constructed	Alt 1 adds temporary localized increment to existing EFH baseline; Alt 2 adds permanent direct seagrass and oyster loss which combines with recurring GIWW dredging disturbance to produce greater cumulative	Alt 1: Not significant. Alt 2: Potentially significant — direct permanent EFH loss combined with existing baseline stressors warrants additional analysis
Wetlands and Special Aquatic Site	Direct impact 0.036 acres of jurisdictional wetlands	Direct: 3.53 ac total wetland impact including 3.34 ac E2EM permanent fil	No other projects proposing direct impacts to same wetland features	Alt 1 cumulative wetland impact limited to 0.036 ac; Alt 2 permanent E2EM fill of 3.34 ac constitutes substantial loss of high tidal marsh in a system where this habitat type is already degraded by mangrove encroachment and breakwater deterioration	Alt 1: Not significant. Alt 2: Potentially significant — permanent loss of 3.34 ac high tidal marsh in combination with existing habitat degradation trends requires compensatory mitigation
Federally listed species	NLAA determination for aquatic sea turtles, eastern black rail, piping plover, rufa red knot, and West Indian manatee; No Effect for remaining species	Greater potential adverse effects to Eastern black rail from 3.34 ac E2EM direct impact; greater piping plover disturbance from riprap and fill adjacent to tidal flat	USACE maintenance dredging addresses sea turtle interactions through existing Gulf of Mexico Regional Biological Opinion (GRBO)(NMFS 2007)	Alt 1 cumulative NLAA determination remains valid; Alt 2 direct permanent loss of black rail habitat combined with existing encroachment and degradation trends elevates cumulative concern for this species	Alt 1: Not significant. Alt 2: Requires additional USFWS coordination: E2EM permanent impact may not support NLAA for Eastern black rail

Resource	Proposed Action Contribution	Alternative 2 Contribution	Other Actions	Cumulative Effect	Significance
Underwater noise	Temporary pile driving noise during waterfront construction	Similar to Alternative 1 (Proposed Action)	USACE maintenance dredging generates recurring underwater noise in Brazos Santiago Pass;	No temporal overlap with SH-104 anticipated; USACE dredging noise occurs in navigation channel away from estuarine habitat used by listed species	Not significant — no concurrent pile driving from multiple projects anticipated; SH-104 construction remains distant and non-imminent
Cultural resources	No adverse effect determination — Section 106 consultation concluded	Similar to Alternative 1 (Proposed Action)	No other projects in the immediate project area are known to involve ground disturbance in areas of overlapping cultural resource sensitivity	No cumulative adverse effects to cultural resources identified	Not significant

3.6.2 Cumulative Effects Summary

Under Alternative 1, the Proposed Action does not make a cumulatively significant contribution to adverse effects on any resource. The dominant cumulative stressors on lower Laguna Madre estuarine resources are recurring GIWW maintenance dredging and chronic water quality impairment documented under TCEQ Section 303(d), existing baseline conditions to which Alternative 1 adds only a temporary, localized, and minor increment during construction. Operational vessel activity under Alternative 1 is consistent with existing waterway uses and does not represent a net increase in the vessel activity baseline for the lower Laguna Madre. The long-term operational improvements to Station wastewater and stormwater infrastructure represent a net beneficial cumulative contribution to the impaired lower Laguna Madre system.

Under Alternative 2, cumulative effects to EFH and federally listed species, specifically Eastern black rail, are potentially significant when the direct permanent loss of 3.34 acres of high tidal marsh and 0.18 acres of seagrass is considered in combination with existing habitat degradation trends in the lower Laguna Madre. The permanent conversion of nearly all E2EM wetland within the survey area under Alternative 2, combined with ongoing mangrove encroachment and breakwater deterioration documented under existing conditions, represents a cumulative impact to high tidal marsh habitat of a magnitude that may not be fully offset by compensatory mitigation. This cumulative finding is a contributing factor to the identification of Alternative 1 as the LEDPA.

4 EVALUATION OF ALTERNATIVES

The alternatives identified in Sections 2 were evaluated against the project-specific selection criteria established in Section 2.0 to determine which alternatives are reasonable and practicable and capable of meeting the purpose and need of the Proposed Action.

Table 4-1 provides a side-by-side comparison of alternatives evaluated against the practicability criteria established in Section 2.0 and the environmental impact factors evaluated in Section 3 of the EA where alternatives differ substantially enough to note. Evaluation factors where effects would be equivalent to each other are not included (such as cultural resources, construction noise, floodplain impacts, and water quality discharges).

Table 4-1: Alternatives Comparison Matrix — Practicability and Environmental Factors

Evaluation Criterion / Factor	No Action Alternative	Alternative 1 (Proposed Action)	Alternative 2
Wetlands Direct Impact	0 acres — no construction	Direct: 0.036 acres E2SS wetland impacts	Direct: 0.036 ac E2SS (same as Alt 1) + 0.14 ac E2SS (expanded footprint and riprap) + 3.34 ac E2EM (southern footprint expansion) = 3.53 ac total direct permanent wetland impact Indirect: temporary alteration of tidal hydrology and sedimentation to adjacent E2EM and E2SS communities beyond construction footprint
Wetlands Minimization Measures	No impact; no minimization required	Construction footprint designed to avoid E2EM1P high marsh	Expanded footprint requires conversion of nearly all E2EM within survey area; avoidance of E2EM not achievable given southern expansion; riprap hardening permanently eliminates natural shoreline along 470 LF; compensatory mitigation required per USACE 2008 Mitigation Rule; fill required to raise site elevation above MHT across expanded area
SAV Direct and Indirect Impact	0 acres direct impact	Indirect (turbidity zone): approximately 0.02 ac of seagrass within 100 feet of construction zone	Direct: 0.18 ac seagrass Indirect: approximately 0.5 ac of seagrass within 100 feet of construction zone
SAV Minimization Measures	N/A	Boat ramp and navigation corridor designed to avoid all direct SAV impact; turbidity barriers during in-water work; turbidity monitoring;	Boat ramp parallel alignment requires direct impact to SAV and longer dredge footprint through Laguna Madre; seagrass avoidance less achievable; greater residual SAV impact anticipated
Oyster Reef Direct Impact	0 acres direct impact	0 direct or indirect (within 100 feet of construction impacts to scattered oyster reef area	Direct: 0.1 ac scattered oyster reef area Indirect: approximately 0.3 ac of oyster area within 100 feet of construction zone

Evaluation Criterion / Factor	No Action Alternative	Alternative 1 (Proposed Action)	Alternative 2
Oyster Reef Minimization	N/A	Boat ramp and navigation corridor configuration evaluated to avoid mapped oyster features; structure footprint minimized	Boat ramp parallel alignment requires direct impact to oysters and greater indirect effects from turbidity due to proximity to oyster areas
ESA Listed Species	No construction impacts	NLAA: E. black rail, piping plover, red knot, manatee, sea turtles	Eastern black rail: potentially greater than NLAA — permanent direct loss of 3.34 ac E2EM high tidal marsh exceeds threshold for NLAA determination; additional USFWS coordination required before effects determination can be confirmed Piping plover: greater indirect effects from fill placement and riprap installation directly adjacent to tidal flat foraging habitat; temporary disturbance during construction Sea turtles: greater indirect effects from larger dredge footprint and proximity to estuarine habitat; NLAA determination consistent with Alt 1 with same BMPs Manatee, red knot: consistent with Alt 1
Indirect Impacts	Continued chronic effluent and stormwater discharge; progressive breakwall deterioration increasing tidal inundation of E2EM habitat; passive black mangrove encroachment	Turbidity from in-water construction (temporary) construction noise and lighting effects on migratory birds; pile driving noise effects to fish and sea turtles	Greater turbidity extent and duration from expanded dredging; greater indirect impacts to black rail habitat with proximity of fenceline and maintained corridors
Cumulative Impacts	No construction contribution: passive degradation potentially adds to existing water quality impairment	Overall cumulative effect not significant; long-term net benefit from wastewater improvements	potentially significant cumulative effect to Eastern black rail habitat
LEDPA Determination	Not LEDPA — does not meet Purpose and Need	LEDPA — PREFERRED ALTERNATIVE Fully meets P&N with least environmental impact among action alternatives	Not LEDPA — does not minimize effects; disproportionate environmental impact

4.1 Identification of LEDPA

Based on the evaluation of alternatives presented in Section 2.6, Alternative 1 is identified as the preferred alternative and Proposed Action. This alternative best satisfies the project-specific selection criteria, fully meets the purpose and need, and represents the LEDPA among the action alternatives considered. This LEDPA determination is made consistent with the Section 404(b)(1) Guidelines (40 CFR Part 230) and is intended to support the USACE Galveston District's independent public interest review and individual permit decision under Section 404 of the CWA and Section 10 of the RHA.

The Proposed Action involves the irreversible and irretrievable commitment of material, energy, and labor resources necessary to construct a modernized federal shore installation, including structural concrete, steel, aggregate, and fossil fuels consumed during the approximately 2.5-year construction period. Permanent aquatic resource commitments are limited to direct fill of 0.036 acres of recently established estuarine intertidal scrub-shrub wetland (E2SS) and conversion of approximately 4,500 sq feet of estuarine benthic substrate to hardened structure including boat ramp, rip rap, or pile foundations. All remaining construction impacts to aquatic resources including the 0.4-acre dredge footprint and temporary turbidity effects to adjacent seagrass habitat are temporary and reversible within timeframes consistent with natural recovery rates documented for lower Laguna Madre estuarine habitats. The long-term operational life of the rebuilt Station, estimated at 50 or more years, represents a proportionate return on these material and resource commitments consistent with the federal obligation to maintain mission-capable shore infrastructure. These irreversible and irretrievable commitments are not of sufficient magnitude to constitute significant degradation of the aquatic ecosystem within the meaning of 40 CFR 230.10(c) or to require preparation of an Environmental Impact Statement under NEPA (42 U.S.C. 4332(C)(v)).

5 LIST OF PREPARERS

This EA was prepared for, and under the direction of the Coast Guard, by Lloyd Engineering, Inc. under Contract No. 70Z05026F43000005 to The Haskell Company. Contributors and their roles are listed below:

U.S. Coast Guard

Kyle Gispert
Natural Resources Management Specialist
CEU Miami

Rachelle Hill
Environmental Protection Specialist
CG-47, Office of Environmental Management

U.S. Army Corps of Engineers

Kristie Wood
Chief - Corpus Christi Regulatory Field Office
Galveston District - Regulatory Division

Kara Vick Clark
Team Lead
Galveston District - Compliance Branch-Regulatory Division

Ashley Bogrand
Project Manager
Galveston District - Regulatory Division

Lloyd Engineering Inc. and Contractors

Courtney Gerken -LEI
NEPA and Regulatory
Environmental Project Manager
11 years of experience

Justin Wiedeman - LEI
USACE Permitting
Environmental Manager
13 years of experience

Brett Selesnky - LEI
Field Survey Technical Lead
8 years of experience

Tyler Koehn -LEI
Aquatic Resources Field Survey
8 years of experience

Christine Magers, CWB, CEP
Ecology Program Lead, Principal
Balcones Field Services, LLC
20+ years of experience

Sherry D. Sultenfuss, Ph.D.
Senior Environmental Scientist
Balcones Field Services, LLC
30+ years of experience

REFERENCES

Advisory Council on Historic Preservation (ACHP). 2004. Section 106 Archaeology Guidance. Advisory Council on Historic Preservation, Washington, D.C. Available at: https://www.achp.gov/sites/default/files/guidance/2017-02/ACHP%20Archaeology%20Guidance.pdf

Armitage, A.R., W.E. Highfield, S.D. Brody, and P. Louchouarn. 2015. The Contribution of Mangrove Expansion to Salt Marsh Loss on the Texas Gulf Coast. PLOS ONE 10(5): e0125404. doi:10.1371/journal.pone.0125404. Available at: available at:

Armitage, A.R., C.A. Weaver, A.A. Whitt, and S.C. Pennings. 2021. Effects of Mangrove Encroachment on Tidal Wetland Plant, Nekton, and Bird Communities in the Western Gulf of Mexico. Estuarine, Coastal and Shelf Science 248:106767. doi:10.1016/j.ecss.2020.106767.

U.S. Bureau of Labor Statistics (BLS). 2025. County Employment and Wages in Texas — First Quarter 2025. U.S. Department of Labor, Washington, D.C. Released September 2025. Available at: https://www.bls.gov/regions/southwest/news-release/countyemploymentandwages_texas.htm

City of South Padre Island. 2024. Official Zoning Map. City of South Padre Island Planning Department, South Padre Island, Texas. Accessed April 2026. Available at: https://experience.arcgis.com/experience/1d378b68374c4beda9e82567ad301402

Council on Environmental Quality (CEQ). 2025. Implementation of the National Environmental Policy Act. Memorandum to Heads of Federal Departments and Agencies. Council on Environmental Quality, Executive Office of the President. September 29, 2025.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. FWS/OBS-79/31. Available at: https://www.fws.gov/program/national-wetlands-inventory/classification-wetlands-and-deepwater-habitats-united-states

Dunton, K.H. 1996. Seasonal Growth and Biomass of the Subtropical Seagrass *Halodule wrightii* in Relation to Continuous Measurements of Underwater Irradiance. Marine Biology 127(3):489-500. doi:10.1007/BF00680223.

U.S. Environmental Protection Agency (EPA). 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. EPA/ONAC 550/9-74-004. Office of Noise Abatement and Control, Washington, D.C. Available at: https://www.epa.gov/sites/default/files/2015-09/documents/levels-pub.pdf

EPA. 1995. Ecological Effects of Dredging and Dredge Spoil. EPA/600-R-95/116. Washington, D.C.

EPA and USACE. 2025. Memorandum to the Field Concerning Proper Implementation of "Continuous Surface Connection" Under the Definition of "Waters of the United States." Joint Guidance Memorandum. March 12, 2025.

Federal Emergency Management Agency (FEMA). 2026. National Flood Hazard Layer (NFHL), Cameron County, Texas. Accessed April 2026.

Gulf of Mexico Fishery Management Council (GMFMC). 2004. Final Environmental Impact Statement for the Generic Amendment to the Shrimp Fishery Management Plan. Gulf of Mexico Fishery Management Council, Tampa, Florida.

GMFMC. 2005. Generic Amendment Number 3 for Addressing Essential Fish Habitat Requirements, Habitat Areas of Particular Concern, and Adverse Effects of Fishing in the Fishery Management Plans of the Gulf of Mexico. Gulf of Mexico Fishery Management Council, Tampa, Florida.

GMFMC and NMFS. 2016. Final Report, 5-Year Review of Essential Fish Habitat Requirements, Including Review of Habitat Areas of Particular Concern and Adverse Effects of Fishing and Non-Fishing in the Fishery Management Plans of the Gulf of Mexico. Gulf of Mexico Fishery Management Council, Tampa, Florida. Available at: https://gulfcouncil.org/wp-content/uploads/EFH-5-Year-Revew-plus-App-A-and-B_Final_12-2016.pdf

Mapcarta. 2025. Beach Park at Isla Blanca, South Padre Island, Texas. Accessed April 2026. Available at: https://mapcarta.com

NMFS. 2007. Gulf of Mexico Regional Biological Opinion on the Effects of the U.S. Army Corps of Engineers Hopper Dredging Program on Sea Turtles in the Gulf of Mexico. NMFS Southeast Regional Office, St. Petersburg, Florida. (Revision 2 of 2003 original.)

NMFS. 2017. Fisheries Management Plan for Atlantic Highly Migratory Species: Final Environmental Impact Statement, Including a Final Regulatory Flexibility Analysis for Amendment 7 to the Consolidated HMS Fishery Management Plan. NOAA National Marine Fisheries Service, Office of Sustainable Fisheries, Silver Spring, Maryland.

NMFS. 2022. Pile Driving Sound Measurement Thresholds for ESA-Listed Species in the Southeast Region. NOAA National Marine Fisheries Service, Southeast Regional Office. December 2021, revised May 2022. Available at: Pile Driving Sound Measurement Thresholds PDF

NMFS. 2023. ESA Acoustic Thresholds Summary: Protected Fish and Sea Turtles. NOAA National Marine Fisheries Service, Office of Protected Resources. February 2023. Available at: ESA Species Threshold Summary PDF

NMFS. 2024. 2024 Revision to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing. NOAA Technical Memorandum NMFS-OPR. NOAA National Marine Fisheries Service, Office of Protected Resources. Available at: https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance-other-acoustic-tools

NMFS. 2025. Southeast Region ESA Section 7 Mapper. NOAA National Marine Fisheries Service, Southeast Regional Office. Geodatabase last updated February 2025. Accessed June 7, 2026. Available at: https://www.fisheries.noaa.gov/resource/map/southeast-region-esa-section-7-mapper

NMFS. 2025a. Multi-Species Pile Driving Calculator (updated with revised sea turtle criteria). NOAA National Marine Fisheries Service, Office of Protected Resources. September 2025. Available at: https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance-other-acoustic-tools

NMFS. 2025b. Summary of Recommended Endangered Species Act Acoustic Thresholds (Marine Mammals, Fishes, and Sea Turtles). NOAA National Marine Fisheries Service, Office of Protected Resources. September 2025. Available at: https://www.fisheries.noaa.gov/s3/2025-09/ESA-AllSpeciesThresholdSummary-2025-508-OPR1-9.16.25-.pdf

NMFS. 2026. Sea Turtle Species Profiles and Habitat Use in the Gulf of Mexico. Accessed April 2026. Available at: https://www.fisheries.noaa.gov/

National Oceanic and Atmospheric Administration (NOAA). 2026a. Tides and Currents Data, Station 8779748 — South Padre Island Coast Guard Station, TX. Accessed April 2026.

NOAA. 2026b. Tides and Currents Data, Station 8779770 — Port Isabel, TX. Accessed April 2026.

NOAA Fisheries. 2020. Oyster Reef Habitat Restoration and Ecosystem Services. Accessed April 2026. Available at: https://oceanservice.noaa.gov/ecosystems/oysters/

NOAA Fisheries. 2025. NOAA Fisheries Inland Essential Fish Habitat Mapper. Accessed April 2026. Available at: https://efhtools.github.io/InlandEFH/Mapper.html

Natural Resources Conservation Service (NRCS). 2023. Web Soil Survey: Custom Soil Resource Report for Cameron County, Texas. United States Department of Agriculture. Accessed April 2026. Available at: https://websoilsurvey.nrcs.usda.gov

National Weather Service Brownsville/Rio Grande Valley. 2024. Hurricane Preparedness — Rio Grande Valley Hurricane History. NOAA National Weather Service, Brownsville, Texas. Accessed April 2026. Available at: https://www.weather.gov/bro/hurrprep_history

Onuf, C.P. 1994. Seagrasses, Dredging and Light in Laguna Madre, Texas, U.S.A. Estuarine, Coastal and Shelf Science 39(1):75-91. doi:10.1006/ecss.1994.1050.

Onuf, C.P. 1996. Biomass Patterns in Seagrass Meadows of the Laguna Madre, Texas. Bulletin of Marine Science, 58(2), 404–420. Accessed April 2026. Available at: https://www.usgs.gov/publications/biomass-patterns-seagrass-meadows-laguna-madre-texas

Popper, A.N., A.D. Hawkins, R.R. Fay, D.A. Mann, S. Bartol, T.J. Carlson, S. Coombs, W.T. Ellison, R. Gentry, M.B. Halvorsen, S. Løkkeborg, P.H. Rogers, B.L. Southall, D.G. Zeddies, and W.N. Tavolga. 2014. Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report prepared by ANSI-Accredited Standards Committee S3/SC1 and registered with ANSI. ASA S3/SC1.4 TR-2014. Springer, New York, New York. DOI: 10.1007/978-3-319-06659-2

Suedel, B.C. 2011. Fate and Effects of Material Placed in Aquatic Disposal Facilities. ERDC/EL SR-11-2. U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.

Texas Commission on Environmental Quality (TCEQ). 2023. Lower Laguna Madre (South) and Brownsville Ship Channel Watershed Protection Plan. Austin, Texas.

TCEQ. 2024. Texas 2024 Integrated Report — Section 303(d) List of Impaired Water Bodies. Austin, Texas.

Texas Department of Transportation (TxDOT). 2025. South Padre Island Second Access Project (SH-104). TxDOT Pharr District. Accessed April 2026.

TXDOT. 2023. Annual Average Daily Traffic Count, Station ID 31H36, Park Road 100, Cameron County, Texas. TxDOT Transportation Planning and Programming Division, Traffic Count Database System. Accessed June 5, 2026. Available at: https://www.txdot.gov/data-maps/roadway-inventory.html

Texas Historical Commission (THC). 1988. Texas Historical Marker No. 00032 — 1923 Point Isabel Coast Guard Building. Marker text on file, Texas Historical Commission, Austin, Texas.

THC. 2026. Section 106 Review Determination: Rebuild USCG Station South Padre Island, Cameron County, Texas. Determination of No Adverse Effect. Review by Amy Borgens, Caitlin Brashear, Patrick Bassett, and Tracy Lovingood, History Programs Division. Texas Historical Commission, Austin, Texas. Tracking No. 202603569. January 29, 2026.

Texas Parks and Wildlife Department (TPWD). 1999. Seagrass Conservation Plan for Texas. Austin, Texas. Accessed April 2026. Available at: https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_r0400_0041.pdf

TPWD. 2016. Descriptions of Systems, Mapping Subsystems, and Vegetation Types: Ecological Mapping Systems of Texas. Austin, Texas. Accessed April 2026. Available at: https://tpwd.texas.gov/landwater/land/programs/landscapeecology/ems/emst/texasecologicalsystemsdescriptions_2016.pdf

TPWD. 2020. State Threatened and Endangered Species List. Austin, Texas. Accessed April 2026. Available at: https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/nongame/listed-species/

TPWD. 2025. Coastal Bay Habitats and Seagrass Ecosystems of the Laguna Madre. Accessed April 2026. Available at: https://tpwd.texas.gov/landwater/water/habitats/seagrass

Texas Water Development Board (TWDB). 2025. Laguna Madre Estuary Overview. Accessed April 2026. Available at: https://www.twdb.texas.gov/surfacewater/bays/major_estuaries/laguna_madre/

U.S. Census Bureau. 2023. American Community Survey 5-Year Estimates, Cameron County, Texas. Accessed April 2026. Available at: https://data.census.gov

U.S. Coast Guard (USCG). 2026a. Wetland Delineation Report: Rebuild USCG Station South Padre Island, Cameron County, Texas. Contract No. 70Z05026F43000005. Prepared for United States Coast Guard. April 2026. On file with U.S. Coast Guard, Office of Environmental Management, Norfolk, Virginia.

USCG. 2026b. Habitat Assessment Report: Rebuild USCG Station South Padre Island, Cameron County, Texas. Contract No. 70Z05026F43000005. Prepared for United States Coast Guard. April 2026. On file with U.S. Coast Guard, Office of Environmental Management, Norfolk, Virginia.

USCG. 2026c. Benthic Habitat Assessment Report: Rebuild USCG Station South Padre Island, Cameron County, Texas. Contract No. 70Z05026F43000005. Prepared for United States Coast Guard. May 2026. On file with U.S. Coast Guard, Office of Environmental Management, Norfolk, Virginia.

USCG. 2026d. Dredge Material Characterization Report: Rebuild USCG Station South Padre Island, Cameron County, Texas. Contract No. 70Z05026F43000005. Prepared for United States Coast Guard by Lloyd Engineering, Inc. June 2026. On file with U.S. Coast Guard, Office of Environmental Management, Norfolk, Virginia.

U.S. Fish and Wildlife Service (USFWS). 2001. Final Determination of Critical Habitat for Wintering Piping Plovers. Federal Register 66(132):36038-36143.

USFWS. 2016. Ocelot (Leopardus pardalis) Recovery Plan, First Revision. U.S. Fish and Wildlife Service, Southwest Region, Albuquerque, New Mexico. Available at: Ocelot Recovery Plan PDF

USFWS. 2021. Seagrass Ecosystem Services and Habitat Importance. Accessed April 2026. Available at: https://www.fws.gov/story/seagrass

USFWS. 2025. Piping Plover (Charadrius melodus) Species Profile. Accessed April 2026. Available at: https://www.fws.gov/species/piping-plover-charadrius-melodus

USFWS. 2026a. Letter from Catrina Martin, Assistant Field Supervisor, Texas Coastal and Central Plains Ecological Services Field Office, to LCDR Michael Rathbun, USCG SHORE-A. Consultation Tracking No. 2026-0014118. April 10, 2026.

USFWS. 2026b. Information for Planning and Consultation (IPaC): Official Species List, USCG Station South Padre Island, Cameron County, Texas. Accessed April 2026. Available at: https://ipac.ecosphere.fws.gov

U.S. Geological Survey (USGS). 2023. Bathymetric, Hydrodynamic, Biological, and Water-Quality Characteristics of a Nearshore Area of the Laguna Madre near South Padre Island, Texas. Scientific Investigations Report 2023–5111. Accessed April 2026. Available at: https://pubs.usgs.gov/publication/sir20235111

Wilber, D.H. and D.G. Clarke. 2007. Defining and Assessing Benthic Recovery Following Dredging. Integrated Environmental Assessment and Management 3(4):477–491.

Appendix A

Wetland Delineation Report

LLOYD ENGINEERING, INC.

WETLAND DELINEATION REPORT
REBUILD USCG STATION SOUTH PADRE ISLAND
SOUTH PADRE ISLAND
CAMERON COUNTY TEXAS

CONTRACT #: 70Z05026F43000005

Prepared for:

United States Coast Guard
5505 Robin Hood Road, Suite K
Norfolk, Virgina 23513-2413

Prepared by:

Lloyd Engineering, Inc.
4828 Loop Central, Suite 800
Houston, Texas 77081

March 2026

Table of Contents

Acronyms and Abbreviations

CFR	Code of Federal Regulations
CWA	Clean Water Act
DP	data point
EPA	U.S. Environmental Protection Agency
E2EM	estuarine intertidal emergent
E2US	estuarine intertidal unconsolidated sandy shore
E2SS	estuarine intertidal scrub-shrub
FEMA	Federal Emergency Management Agency
GNSS	global navigation satellite system
LEI	Lloyd Engineering, Inc.
LF	linear feet
LiDAR	Light Detection and Ranging
1987 Manual	1987 Corps of Engineers Wetlands Delineation Manual
MHT	mean high tide
NCSS	National Cooperative Soil Survey
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
NWPL	National Wetland Plant List
Project	Rebuild USCG Station South Padre Island
Regional Supplement	Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)
RHA	Rivers and Harbors Act
TNW	traditional navigable water
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
WOTUS	water(s) of the United States

1.0 Introduction

This report presents the results of a wetland delineation conducted on behalf of United States Coast Guard (USCG) for the proposed Rebuild USCG Station South Padre Island Project (Project). The proposed Project is situated in Cameron County, Port Isable, Texas, at the USCG Station located at 1 Wallace L Reed Rd, South Padre Island, TX 78597. Lloyd Engineering, Inc. (LEI) conducted environmental investigations on March 18, 2026, within the approximately 22-acre survey area. The proposed Project is positioned within the U.S. Army Corps of Engineers (USACE) Galveston District and is located on the U. S. Geological Survey (USGS) Port Isabel, Texas, 7.5-minute series topographic quadrangle map (USGS 2025). Refer to the site vicinity map provided as Figure 1 in Appendix A for a depiction of the project location.

The purpose of the investigation was to determine the location and extent of any potential waters of the United States (WOTUS), including wetlands, within the survey area, as defined by Section 404 of the Clean Water Act (CWA) and/or Section 10 of the Rivers and Harbors Act (RHA) subject to the jurisdiction of the USACE Galveston District and U.S. Environmental Protection Agency (EPA). This information was obtained through both desktop and field investigations.

2.0 Methods

Impact assessments of potential jurisdictional areas (including wetlands), as defined by code of federal regulations (CFR) 328, were conducted within all portions of the approximate 22-acre survey area. Aerial photography (Google Earth 2023) (Appendix A, Figure 2), National Wetlands Inventory (NWI) data (Appendix A, Figure 2), topographic maps (Appendix A, Figure 3), light detection and ranging (LiDAR) elevation data (Appendix A, Figure 4), National Resources Conservation Service (NRCS) soil survey data, and Federal Emergency Management Agency (FEMA) National Flood Hazard Layer data were reviewed prior to field investigations. As required by existing regulations, potential wetlands, as defined by the USACE 1987 Wetlands Delineation Manual ("1987 Manual") (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0) ("Regional Supplement") (USACE, 2010), were evaluated based on the presence of hydrophytic vegetation, wetland hydrology, and hydric soils. This evaluation included assessments of any streams; navigable and non-navigable waterways; wetlands; and other special aquatic sites (1987 Manual).

The field effort and approach follow guidelines provided by the 1987 Manual and as specified by the USACE Galveston District Compliance Section for properties greater than five acres in size. The guidelines for sites greater than five acres with baselines less than one mile specify a minimum three transect lines. Wetland determination data forms were recorded at several transect data points (DP) at each of the three transect lines in order to understand changes in vegetative communities, topography, and/or hydrology across the Project study area.

Vegetation, hydrology, and soils were evaluated and recorded in the field at each DP. Plant species were recorded at each DP by visually estimating the percent areal cover of each species using nested sampling plots by strata, in accordance with the Regional Supplement. The 2022 National Wetland Plant List (NWPL) website, Version 3.6 (USACE 2022) was used to determine the indicator status of plant species. Taxonomy

of plant species follows Lichvar, et al. (2014) and the NRCS PLANTS Database (U.S. Department of Agriculture [USDA] NRCS, 2024). Field indicators of hydrology and hydric soils were evaluated and recorded at each DP. A shallow soil pit measuring approximately 6 inches wide, 6 inches long, and 18 inches deep was dug at each DP, to document soil characteristics and to examine subsurface hydrology. The soil pit was left open for at least 10 minutes, to allow any free water in the soil to stabilize, before recording the depth to free water in the pit and the depth to saturated soil. Meanwhile, soil characteristics were recorded and included, but were not limited to, soil color(s), texture/structure, and presence of redoximorphic features, nodules, or concretions, and hydric soil indicators. The soil texture/structure was determined using field hand-texturing (ribbon) method. The moist matrix color, and when present, moist mottle color of soils, were determined by soil horizon/strata utilizing the Munsell Soil Color Charts (Kollmorgen Instruments Corporation, 2000). The percentage of soil redox (reduction-oxidation), when present, was estimated. Soil profiles characteristics were observed for comparison against hydric soil criteria. At DP locations where the wetland vegetation, soil, and hydrology criteria were met, the site was identified as a wetland and categorized following the classification system of Cowardin et al. (1979). At the time of the assessment, the DP locations, wetland boundaries, and ordinary high-water mark (OHWM) limits of WOTUS within the survey area were delineated at the wetland/upland edge according to field data and was digitally georeferenced/mapped using a Trimble Geo 7X global navigation satellite system (GNSS) with sub-meter accuracy. The extent of each wetland or WOTUS feature was delineated along its boundary or the survey area boundary in situations where the boundary continued outside of the survey area.

Throughout the field investigations, vegetation communities identified within the survey area were classified according to the Cowardin, et al. (1979) system. The wetland indicator status for each plant species, as defined in Table 1 was determined using Lichvar et al. (2016). Each indicator status reflects a plant species' fidelity and preference for wetlands or uplands based upon its frequency and abundance in wetlands versus uplands and the availability of wetland habitat across the local to regional landscape (Lichvar and Minkin, 2008). The resulting indicator status categories are used in determining dominance of hydrophytic versus non-hydrophytic vegetation at each DP.

Table 1
Plant Species Wetland Indicator Status Categories

Code	Category	Definition
OBL	Obligate Wetland	Hydrophyte - Almost always occurs in wetlands
FACW	Facultative Wetland	Hydrophyte - Usually occurs in wetlands, but may occur in non-wetlands
FAC	Facultative	Hydrophyte - Occurs in wetlands and non-wetlands
FACU	Facultative Upland	Non-hydrophyte - Usually occurs in non-wetlands, but may occur in wetlands
UPL	Obligate Upland	Non-hydrophyte - Almost never occurs in wetlands

Source: USACE 2022. The National Wetland Plant List. 2022 Wetland Ratings. Phytoneuron: 2022-4-30. Website Version 3.6 available at http://rsgisias.crrel.usace.army.mil/nwpl_static/mapper/mapper.html.

3.0 Results

Field investigations were conducted on March 18, 2026, to identify any wetlands or waterbodies within the survey area potentially subject to USACE jurisdiction under Section 404 of the CWA and/or Section 10 of

the RHA. The vegetation, hydrology, and soil characteristics at each DP were recorded on the wetland determination data forms provided in Appendix B.

3.1 Vegetation

Throughout the field investigations, vegetation communities identified according to the Cowardin, et al. (1979) system included estuarine intertidal emergent (E2EM) and estuarine intertidal scrub-shrub (E2SS) as shown in Table 2. Refer to Appendix C for representative photographs of the habitat types documented within the survey area.

Table 2
Wetland and Estuarine Habitat Type Categories

Symbol	Vegetation Type
E2EM	Estuarine intertidal emergent
E2SS	Estuarine intertidal scrub-shrub

Based on Cowardin, et al. (1979)

3.1.1 Estuarine Intertidal Emergent Wetland (E2EM)

According to Cowardin, et al. (1979), estuarine systems consist of deepwater tidal habitats and adjacent tidal wetlands that are usually semi-enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. Estuarine systems are more strongly influenced by their association with land than are marine systems. Areas described as E2EM within the survey area consisted of intertidal wetlands associated with tidally influenced channels and exhibited a dominance of emergent herbaceous vegetation. These areas are irregularly flooded by tidal action. The vegetation observed within the E2EM wetlands included *Distichlis littoralis*, *Salicornia bigelovii*, *Batis maritima*, *Spartina patens*, *Borrichia frutescens*, and *Sesuvium portulacastrum*. Based on the technical criteria outlined in the 1987 Manual and the Regional Supplement, the vegetation observed within these communities is representative of a hydrophytic plant community. Refer to Appendix A, Figure 5 and 6 for a depiction of the location of E2EM wetlands identified within the survey area.

3.1.2 Estuarine Intertidal Scrub-Shrub Wetland (E2SS)

Scrub-shrub wetlands within estuarine systems are dominated by woody vegetation less than 6 meters (20 feet) in height and occur in areas subject to tidal influence. Areas described as E2SS within the survey area consisted of irregularly flooded intertidal zones supporting salt-tolerant shrub and woody species. These habitats occur at slightly higher elevations within the tidal frame and are less frequently inundated. Vegetation observed within these areas was predominantly black mangrove (*Avicennia germinans)* with occasional herbaceous species such as *Distichlis littoralis* and *Batis maritima*. Within the survey area, these areas were located at or below the mean high tide line. Refer to Appendix A, Figure 5 and 6 for a depiction of the location of E2SS wetlands identified within the survey area.

3.1.3 Uplands

Upland areas identified within the survey area occur outside the influence of tidal or hydrologic inundation and, therefore, do not meet the criteria for wetlands. These areas were situated at higher elevations relative to adjacent estuarine and wetland systems and exhibit no evidence of prolonged saturation or inundation or direct connection to incoming tides or seasonal tidal surges that may flood lower lying areas. Vegetation within the upland habitat consisted of a mix of herbaceous and woody species. Dominant species observed included *Schinus terebinthifolia*, *Prosopis glandulosa*, *Lycium berlandieri*, *Asclepias purpurascens*, *Smilax hispida*, and *Phragmites australis*. The plant community was often indicative of upland or transitional conditions and lacks the prevalence (greater than 50 percent) of hydrophytic vegetation required to meet wetland criteria. Where hydrophytic vegetation was present such as *Distichlis littoralis*, *Salicornia bigelovii* and *Batis maritima,* presence could be attributed to the saline parent soils and migration of seed bank from nearby intertidal areas during fill activities. Additionally, in areas classified as upland where hydrophytic vegetation was present either the necessary soil and/or hydrology wetland criteria was absent.

3.2 Soils

The NRCS's (2023) Web Soil Survey Custom Soil Resource Report for Cameron County, Texas indicates one mapped soil unit within the survey area. Descriptions of the mapped soil unit is provided below. The parenthetical abbreviation following the soil name corresponds to the soil unit symbols shown on the figures in Appendix A.

3.2.1 Mapped Soils

Twinpalms occasionally flooded-Yarborough frequently flooded complex, 0 to 3 percent slopes (USX). The Twinpalms series consists of very deep, somewhat poorly drained, moderately permeable soils that formed in sandy and loamy sediments dredged from submerged areas. These very gently sloping soils are on low mounds on spoil pile areas. These soils are subject to occasional flooding by high storm surge from strong tropical storms.

The Yarborough series consists of very deep, poorly drained soils that formed in sandy and loamy sediments dredged from submerged areas. These nearly level soils are on flats within and along the margins of spoil pile areas. These soils are subject to frequent flooding by high storm surge from strong tropical storms. This soil complex is found on nearly level landscapes (0 to 1 percent slopes mentioned specifically in the official series description, though the complex map unit covers 0 to 3 percent)

Based on the national hydric soils list (NRCS, 2022), this soil complex is considered hydric in Cameron County, Texas.

3.2.2 Observed Soils

Soils observed during field investigations varied slightly between wetland and upland communities. Observed soils in upland and wetland communities typically exhibited textures ranging from sand, sandy loam to some clays with matrix hues of 10YR as determined using Munsell Soil Color Charts (Kollmorgen

Instruments Corporation, 2000). Evaluation of hydric soils was completed based on criteria defined in NRCS (2010) and as outlined in the 1987 Manual and the Regional Supplement.

Soils observed in wetland areas within the proposed survey area typically developed under anaerobic (i.e., inundated/saturated edaphic conditions) or alternating aerobic-anaerobic conditions (i.e., wet/dry hydroperiod). The hydric soil indicators observed within the wetland communities included predominantly S5- Sandy Redox. Hydric soils observed within the wetland communities in the survey area consisted of sandy textures ranging in color from light gray (10YR 6/1) to gray (10YR 5/1) with redox concentrations consisting of bright yellowish brown (10YR 5/8).

Soils observed in upland areas at the site typically were of same or similar source material and soil classifications, but developed under more aerobic soil conditions. Based on the criteria outlined in NRCS (2010), and as outlined in the 1987 Manual and the Regional Supplement, the majority of the soils observed within the upland communities were not considered hydric. The observed upland soils were sandy textures ranging in color from light gray (10YR 6/1) to gray (10YR 5/1) with redox concentrations consisting of bright yellowish brown (10YR 5/8). Refer to the wetland determination data forms provided in Appendix B for detailed descriptions of observed soils at individual wetland and upland locations within the survey area.

3.3 Hydrology

Primary indicators of wetland hydrology observed in wetland communities included surface water, high water table, saturation, aquatic fauna, presence of reduced iron, algal mats or crusts, hydrogen sulfide odor, and inundation visible on aerial imagery (Google Earth 2023). Secondary indicators of wetland hydrology observed in the wetland communities included saturation visible on aerial imagery, drainage patterns, geomorphic position, FAC-neutral, and sparsely vegetated concave surface. Some upland communities exhibited a secondary indicator of wetland hydrology, including a positive FAC-neutral test or crab burrows due to proximity to tidal areas, however did not meet the required criteria for wetland hydrology. Refer to the wetland determination data forms provided in Appendix B for site-specific observations of hydrology identified at each wetland location.

3.4 Wetlands and other Waters of the U.S.

Wetlands and waterbodies identified within the survey area included E2EM and E2SS wetlands and open-water areas. Table 3 provides a summary of all features identified within the survey area. Appendix A contains project maps depicting the location of all wetlands and waterbodies identified within the survey area. Appendices B and C contain the Regional Supplement wetland determination data forms and representative photographs, respectively.

3.4.1 Potentially Jurisdictional Waters of the U.S.

The updated definition of WOTUS (EPA/USACE, 2025) narrow federal jurisdiction by requiring a "continuous surface connection" to a jurisdictional water. Wetlands identified within the survey area were considered potentially jurisdictional WOTUS if they exhibited a surface connection (i.e., they are located on or adjacent to jurisdictional stream tributaries or traditionally navigable waterway) to a waterbody potentially subject to Section 404 of the CWA and/or Section 10 of the RHA (EPA and USACE 2025a,b) or were within

or abutting tidal waters. Wetlands and or waterbodies identified within the survey area that did not exhibit a surface connection to a relatively permanent waterbody were not considered WOUS subject to Section 404 of the CWA and/or Section 10 of the RHA. This project was evaluated according to the March 2025 "WOTUS Notice: The Final Response to SCOTUS" (EPA/USACE, 2025) regarding adjacent wetlands

Table 3
Summary of Wetlands and Waterbodies Identified Within the Survey Area

Field ID	Classification[1, 2, 3]	Acreage[4]	Potentially USACE Jurisdiction
WET-01	E2SS Wetland	1.09	Section 404/10
WET-02	E2EM Wetland	0.17	Section 404/10
WET-03	E2SS Wetland	0.04	Section 404/10
WET-04	E2EM Wetland	3.44	Section 404/10
WET-06	E2SS Wetland	0.21	Section 404/10
OW-01	Open Water	2.65	Section 10
TOTALS	**E2EM Wetland (2)**	3.61	
	E2SS Wetland (3)	1.34	
	Open Water (1)	2.65	
	TOTALS (6)	7.60	

1 E2EM Estuarine intertidal emergent, regularly flooded
2 E2SS Estuarine intertidal scrub-shrub, irregularly flooded
3 Open Water = Open-water area called Laguna Madre, a traditional navigable water subject to USACE jurisdiction under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act
4 Acreages represent the total acreage identified within the survey area

A total of two E2EM wetlands, three E2SS wetlands, and one open water area was identified within the survey area as outlined in Table 3. The two E2EM wetlands are characterized as tidally influenced wetlands positioned adjacent to Laguna Madre (OW-01, a traditionally navigable water (TNW), and influenced by seasonal infrequent surge tide flooding. The three E2SS wetlands were comprised of entirely black mangrove shrubs with very little herbaceous emergent plants on the peripheries. The E2SS wetlands were bounded on the upland side by the MHT line and on the water side by the Laguna Madre.

All wetland identified within the survey area are subject to USACE jurisdiction under Section 404 of the CWA and/or Section 10 of the RHA based on the continuous surface connection to Laguna Madre, a Section 10 water.

4.0 Conclusions

Based on the results of field investigations conducted on March 18, 2026, potential WOTUS, including wetlands, were identified within the survey area of the proposed project. Two E2EM wetlands, three E2SS wetlands and one open water area was identified within the survey area. All features identified within the survey area are considered potential WOTUS subject to USACE jurisdiction under Section 404 of the CWA and/or Section 10 of the RHA. The results and conclusions of jurisdiction of this wetland delineation are subject to USACE determination.

5.0 References

Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, North Dakota: Northern Prairie Wildlife Research Center Online. http://www.npwrc.usgs.gov/resource/wetlands/classwet/index.htm (Version 04DEC1998).

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y 87 1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

EPA & USACE. 2025a. Updated Definition of "Waters of the United States" [Proposed Rule]. *Federal Register*, 90 FR 52498. (2025, November 20)

EPA & USACE. 2025b. *Memorandum to the Field Between the Army Corps of Engineers and the EPA Concerning Proper Implementation of "Continuous Surface Connection" Under the Definition of "WOTUS"* [Joint Guidance Memorandum]. (2025, March 12)

Google Earth. (2023). Aerial photography of South Padre Island, TX. Retrieved March 2026, from https://earth.google.com/web/

Kollmorgen Instruments Corporation. 2000. Munsell Soil Color Charts. Year 2000 Revised Washable Edition. GretagMacbeth, New Windsor, New York.

Lichvar, R. W., M. Butterwick, N. C. Melvin, and W. N. Kirchner. 2016. Lichvar, R. W., D. L. Banks, W. N. Kirchner, and N. C. Melvin. 2016. *The National Wetland Plant List*: 2022 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2022. ISSN 2153 733X. Website Version 3.6 available at http://rsgisias.crrel.usace.army.mil/nwpl_static/mapper/mapper.html. Accessed March 2026.

Lichvar, Robert W., and Paul Minkin. 2008. Concepts and Procedures for Updating the National Wetland Plant List ERDC/CRREL TN-08-3 (http://rsgisias.crrel.usace.army.mil/NWPL_CRREL/docs/ERDC-CRREL_TN 08 3.pdf). U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, New Hampshire.

Natural Resources Conservation Service (NRCS). 2018. Field Indicators of Hydric Soils in the United States. Version 8.2. L. M. Vasilas, G. W. Hurt, and J.F. Berkowitz USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

_____. 2024. Web Soil Survey. Available on-line at http://websoilsurvey.nrcs.usda.gov/. Accessed March 2026.

_____. 2015. "Lists of Hydric Soils: National List, all states (December 2015)." U.S. Department of Agriculture. Available on-line at http://soils.usda.gov/use/hydric/.

U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Atlantic and Gulf Coastal Plain Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR 10 20. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center.

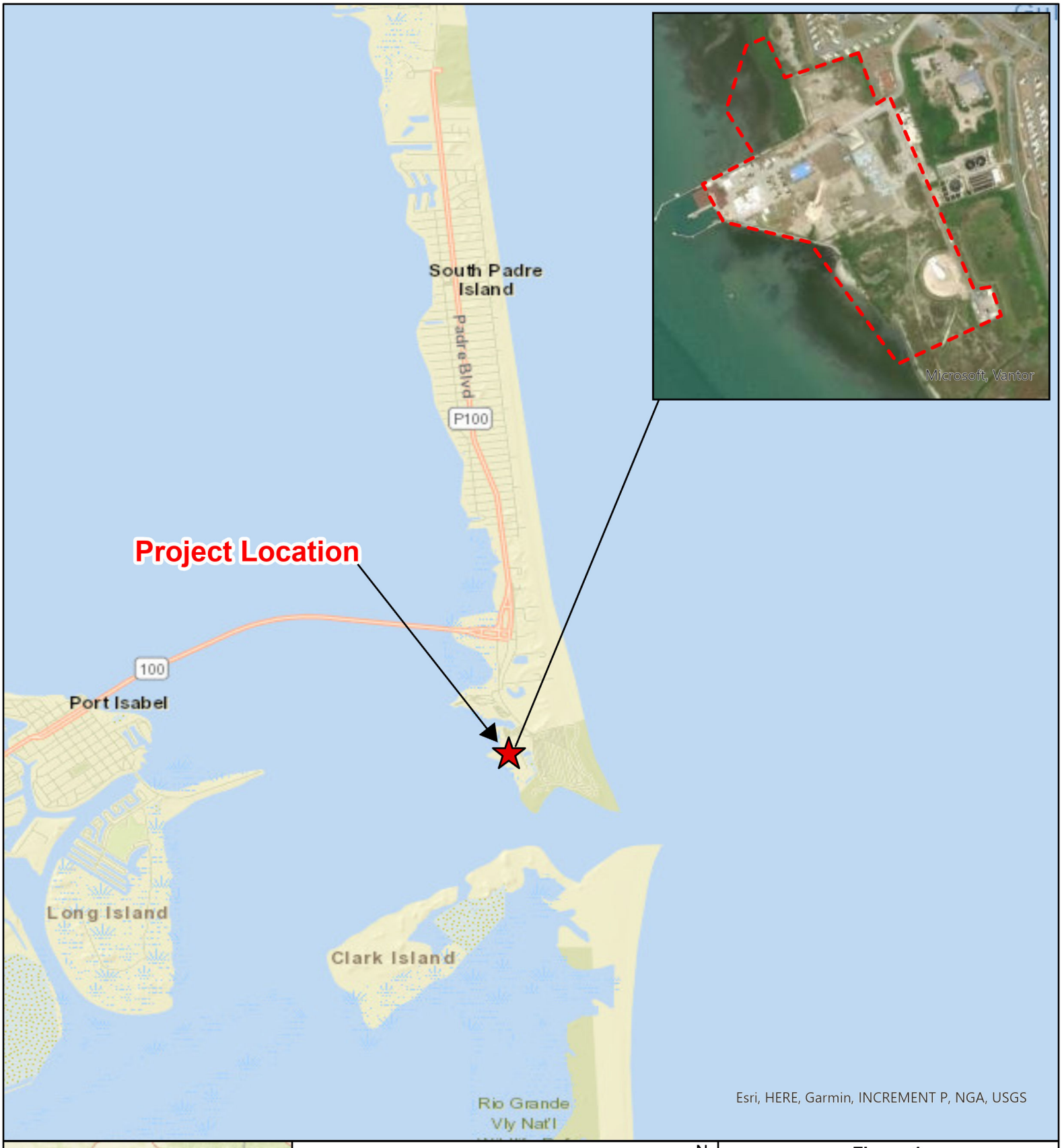
U.S. Army Corps of Engineers and Environmental Protection Agency. U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook. 2007. Available on-line at http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/jd_guidebook_051207final.pdf.

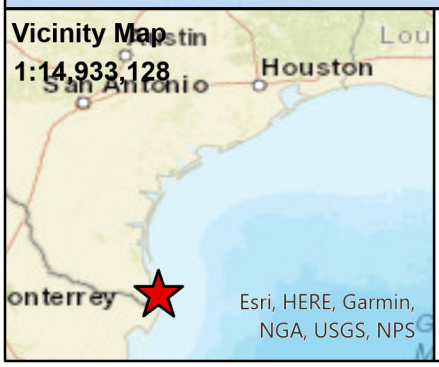
U.S. Department of Agriculture (USDA) National Cooperative Soil Survey (NCSS). 2022. Soil Survey Geographic Database (SSURGO) and State Soil Geographic Database (STATSGO) digital soil survey products. Available online via California Soil Resource Lab SoilWeb streaming interface (download at http://www.gelib.com/soilweb.htm) or via Natural Resources Conservation Service (NRCS) Web Soil Survey at http://websoilsurvey.nrcs.usda.gov/. Accessed March 2026.

U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). 2023. The PLANTS Database (http://plants.usda.gov, 09/28/2023). National Plant Data Team, Greensboro, North Carolina, USA. Accessed March 2026.

U.S. Geological Survey. 2025. Port Isabel, Texas, 7.5-minute Series Topographic Map. http://ngmdb.usgs.gov/ngmdb/ngmdb_home.html. Accessed March 2026.

Appendix A
Project Maps





Legend

- Project Survey Area
- Project Location

N

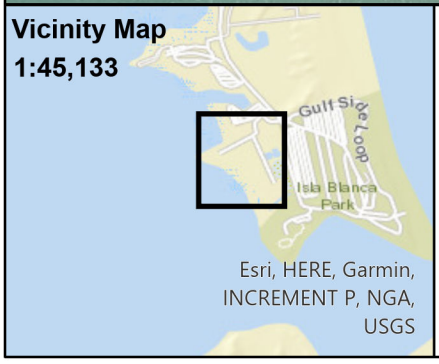
0 0.5 1 2 Miles

Figure 1:
Project Vicinity Map

Wetland Delineation Report
Rebuild USCG STA SPI
Cameron County, TX

Date: Mar 31, 2026	
Prepared By: LEI	
Prepared For: USCG STA SPI	
Project: Rebuild STA SPI	

LOYD ENGINEERING, INC.



Legend

- Project Survey Area
- NRCS Soil Survey Types

NWI Wetlands

- E1AB3L - Estuarine and Marine Deepwater
- E1UBL - Estuarine and Marine Deepwater
- E2EM1P - Estuarine and Marine Wetland
- E2USP - Estuarine and Marine Wetland

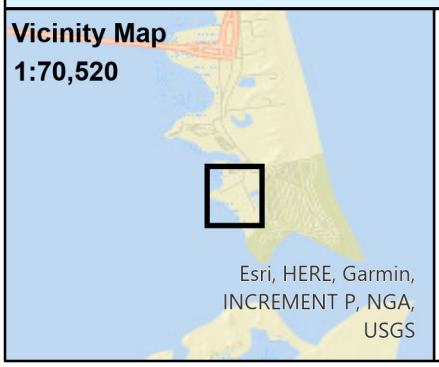
N

Figure 2:
Aerial Overview Map

Wetland Delineation Report
Rebuild USCG STA SPI
Cameron County, TX

Date: Mar 31, 2026	
Prepared By: LEI	
Prepared For: USCG STA SPI	
Project: Rebuild STA SPI	

LOYD ENGINEERING, INC.



Legend

- Project Survey Area
- NRCS Soil Survey Types

NWI Wetlands

- E1AB3L - Estuarine and Marine Deepwater
- E1UBL - Estuarine and Marine Deepwater
- E2EM1P - Estuarine and Marine Wetland
- E2USP - Estuarine and Marine Wetland

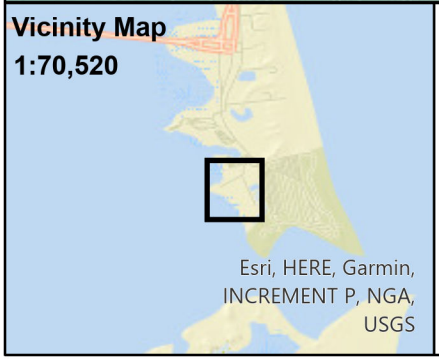
N

Figure 3:
Topographic Overview Map

Wetland Delineation Report
Rebuild USCG STA SPI
Cameron County, TX

Date: Mar 31, 2026	
Prepared By: LEI	
Prepared For: USCG STA SPI	
Project: Rebuild STA SPI	

LOYD ENGINEERING, INC.



Legend

Project Survey Area

Lidar Elevation (meters)

3.93565

-0.59

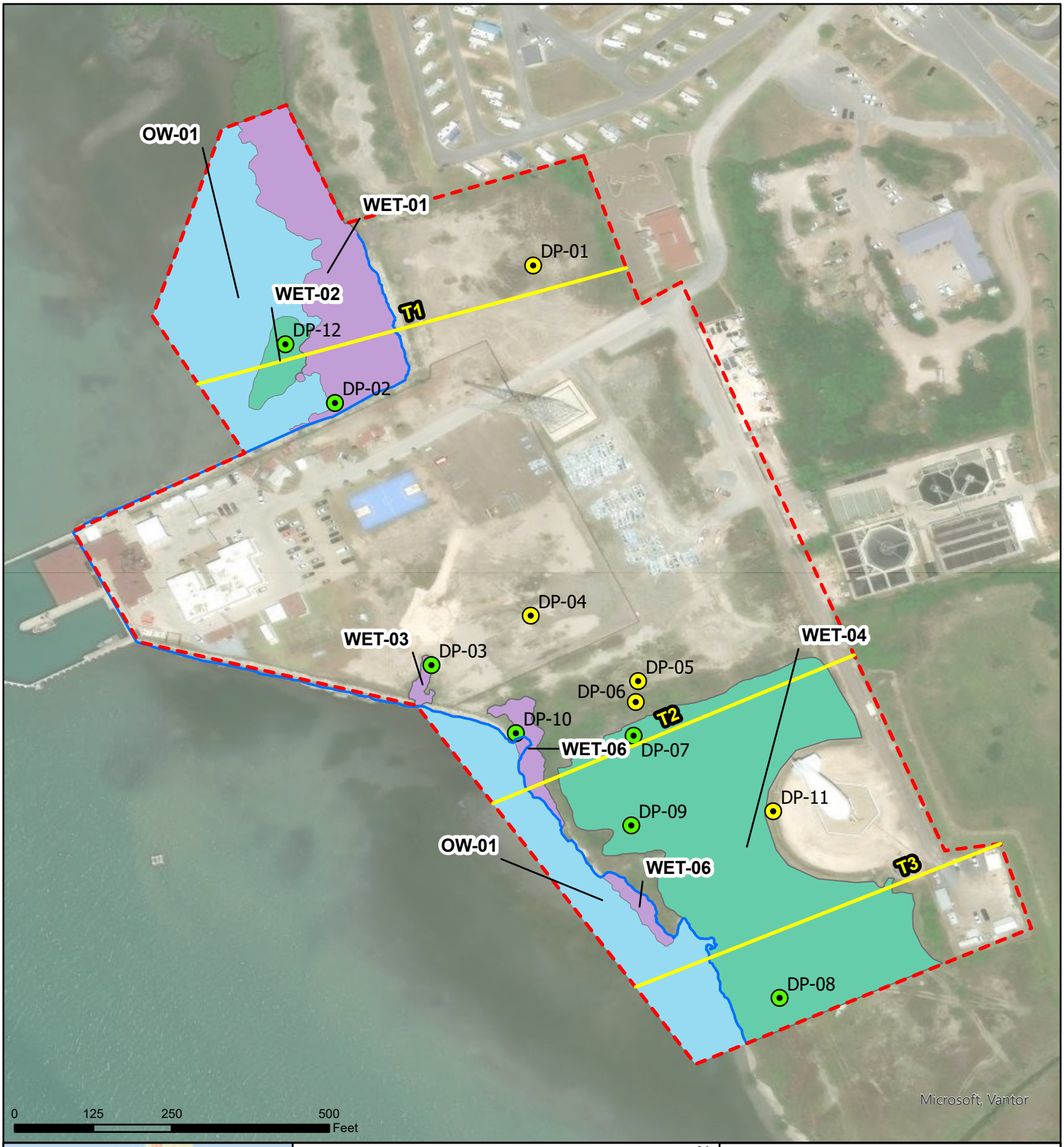
N

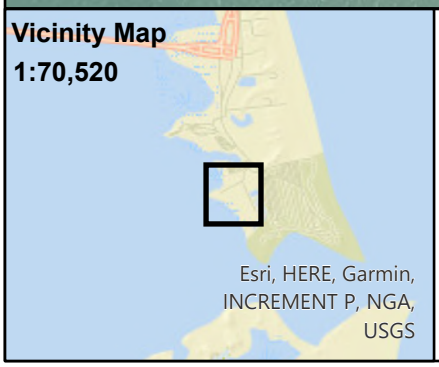
Figure 4:
Lidar Overview Map

Wetland Delineation Report
Rebuild USCG STA SPI
Cameron County, TX

Date: Mar 31, 2026	
Prepared By: LEI	
Prepared For: USCG STA SPI	
Project: Rebuild STA SPI	

LOYD ENGINEERING, INC.





Legend

- Project Survey Area
- Survey Transects

Data Points

- UPLAND
- WETLAND

Wetland/Waterbody Type

- E2EM1
- E2SS3
- Open Water
- MHT Line

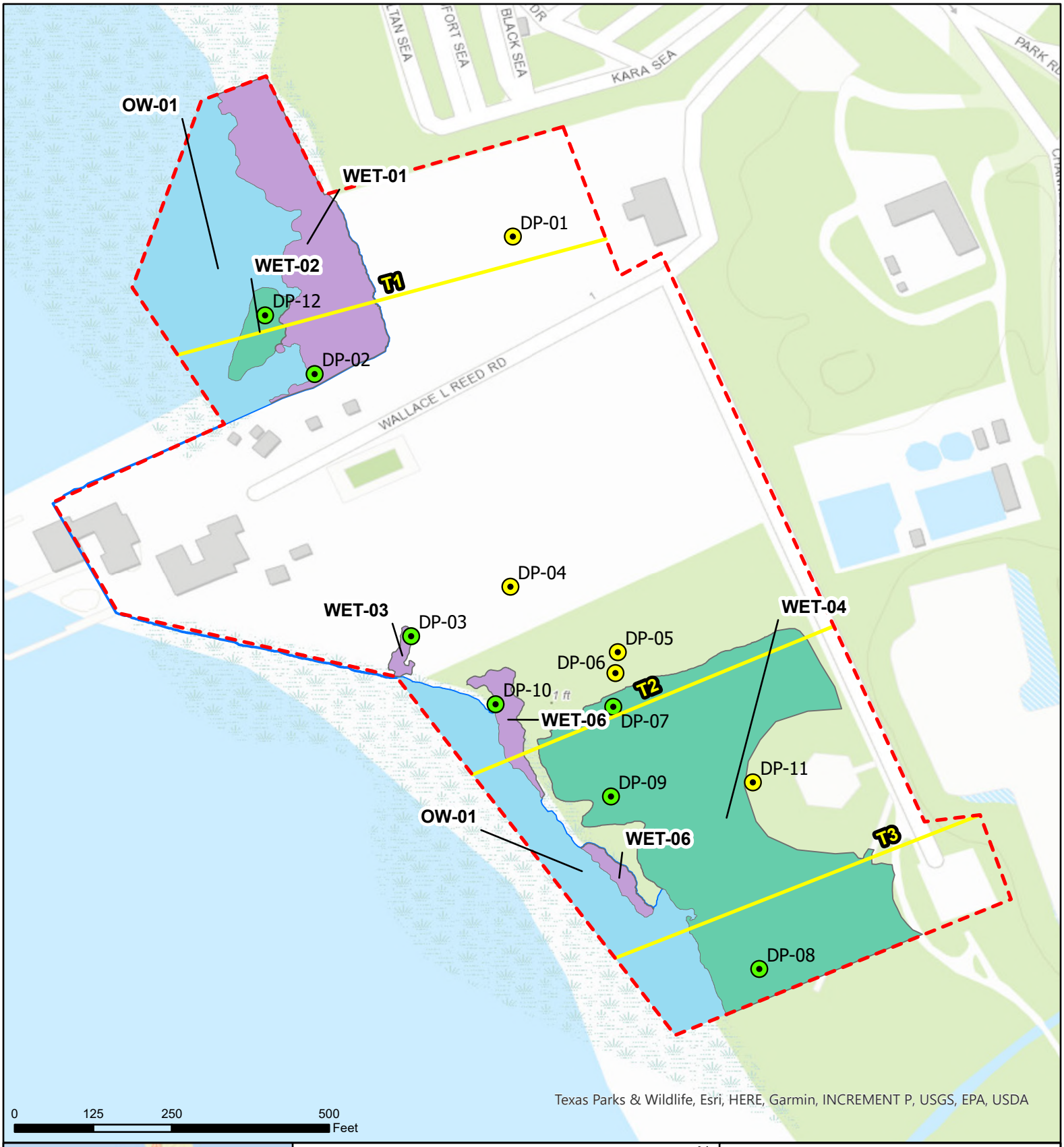
N

Figure 5:
Aerial Delineation Map

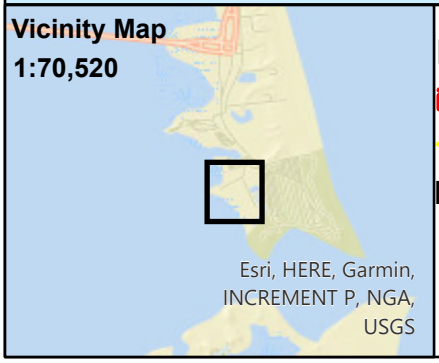
Wetland Delineation Report
Rebuild USCG STA SPI
Cameron County, TX

Date: Apr 16, 2026	
Prepared By: LEI	
Prepared For: USCG STA SPI	
Project: Rebuild STA SPI	

LLOYD ENGINEERING, INC.



Vicinity Map
1:70,520



Legend

- Project Survey Area
- Survey Transects

Data Points

- UPLAND
- WETLAND

Wetland/Waterbody Type

- E2EM1
- E2SS3
- Open Water
- MHT Line

N

Figure 6:
Topographic Delineation Map

Wetland Delineation Report
Rebuild USCG STA SPI
Cameron County, TX

Date: Apr 16, 2026	
Prepared By: LEI	
Prepared For: USCG STA SPI	
Project: Rebuild STA SPI	

LLOYD ENGINEERING, INC.

Appendix B
Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebuild USCG Station South Padre Island County: Cameron Sampling Date: March 18 2026
Applicant/Owner: U.S. Coast Guard State: TX Sample Point: DP-01
Investigator(s): C. Gerken and _____ Section, Township, Range: South Padre Island
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T Lat: 26.074327 Long: -97.164718 Datum: WGS 84
Soil Map Unit Name: USX Twinpalms occasionally flooded Yarborough frequently flooded NWI Classification: E2USP
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No** ,Soil **No** ,or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No _____
Are Vegetation **No** ,Soil **No** ,or Hydrology **No** 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 **X**	No _____			
Hydric Soil Present?	Yes **X**	No _____	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes _____	No **X**	**within a Wetland?**	**Yes** _____	**No X**

Remarks:

The point occurs within an open and sandy salt-pan area that is blocked from hydrological connection by breakwater/berm. The area is part of existingdeveloped site.

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 on 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 **X**	Depth (inches): **N/A**		
Water Table Present?	Yes _____	No **X**	Depth (inches): **>18**		
Saturation Present? (includes capillary fringe)	Yes _____	No **X**	Depth (inches): **>18**	**Wetland Hydrology Present?**	**Yes** _____ **No X**

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

Remarks:

No positive indication of wetland hydrology was observed.

Area is cut off from tidal influence with breakwater and historic aritifical fill

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: **DP-01**

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30 ft.)			
1.		#DIV/0!	#N/A
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 30 ft.)			
1. *Distichlis littoralis*	90	Y	OBL
2. *Salicornia bigelovii*	5	N	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95 = Total Cover		
50% of total cover:	47.5	20% of total cover:	19
Woody Vine Stratum (Plot size: 30 ft.)			
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** (A/B)

Prevalence Index Worksheet:

	Total % Cover of:		Multiply by:
OBL species	**95**	x 1 =	**95**
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:	**95** (A)		**95** (B)

Prevalence Index = B/A = **1.00**

Hydrophytic Vegetation Indicators:

- **X** 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- **X** 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 Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

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

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

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

areas of exposed sand

SOIL

Sampling Point: **DP-01**

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 6/1	100	None	—	—	—	Sand	
1-18	10YR 5/1	95	10YR 5/8	5	RM	M	Sandy Loam	

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

Hydric Soils 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)
- **X** 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 X No _____

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebuild USCG Station South Padre Island County: Cameron Sampling Date: March 18 2026
Applicant/Owner: U.S. Coast Guard State: TX Sample Point: DP-02
Investigator(s): C. Gerken and _____ Section, Township, Range: South Padre Island
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): none Slope (%): -
Subregion (LRR or MLRA): LRR-T Lat: 26.073729 Long: -97.165581 Datum: WGS 84
Soil Map Unit Name: USX Twinpalms occasionally flooded Yarborough frequently flooded NWI Classification: E2USP
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No**, Soil **No**, or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No _____
Are Vegetation **No**, Soil **No**, or Hydrology **No** 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 **x**	No _____			
Hydric Soil Present?	Yes **X**	No _____	**Is the Sampled Area within a Wetland?**	**Yes X**	**No** _____
Wetland Hydrology Present?	Yes **x**	No _____			

Remarks:

The point occurs within thick mangrove area on edge of tidal flat/exposed oyster reef area.

HYDROLOGY

Wetland hydrology Indicators:

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

- **X** Surface Water (A1)
- **X** High Water Table (A2)
- **X** Saturation (A3)
- **X** Water Marks (B1)
- _____ Sediment Deposits (B2)
- _____ Drift Deposits (B3)
- _____ Algal Mat or Crust (B4)
- _____ Iron Deposits (B5)
- **X** Inundation Visible on Aerial Imagery (B7)
- _____ Water-Stained Leaves (B9)
- **X** Aquatic Fauna (B13)
- _____ Marl Deposits (B15) **(LRR U)**
- **X** Hydrogen Sulfide Odor (C1)
- _____ Oxidized Rhizospheres on 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)
- **X** FAC-Neutral Test (D5)
- _____ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes **X**	No _____	Depth (inches): **0**	
Water Table Present?	Yes **X**	No _____	Depth (inches): **0**	
Saturation Present? (includes capillary fringe)	Yes **X**	No _____	Depth (inches): **0**	**Wetland Hydrology Present?** **Yes X** **No** _____

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

Remarks:

A positive indication of wetland hydrology was observed (at least one primary indicator).

Tidal area

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: **DP-02**

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30 ft.)			
1. *Avicennia germinans*	100	Yes	OBL
2.			
3.			
4.			
5.			
6.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Herb Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Woody Vine Stratum (Plot size: 30 ft.)			
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: **1** (A)

Total Number of Dominant Species Across All Strata: **1** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**100**	x 1 =	**100**
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:	**100** (A)		**100** (B)

Prevalence Index = B/A = **1.00**

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is >50%
- **X** 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 Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

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

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: **DP-02**

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 6/1	100	None	—	—	—	Sand	
1-18	5Y 4/1	100	10YR 5/8	4	C	M	Sandy Clay	

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

Hydric Soils 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)
- **X** 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 X No _____

Remarks:

A positive indication of hydric soil was observed.

reduced sandy clay with distinct smell. Mangrove roots prevent full soi plug. Soft intertidal sediments, fully saturated with incoming tide.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebuild USCG Station South Padre Island County: Cameron Sampling Date: March 18 2026
Applicant/Owner: U.S. Coast Guard State: TX Sample Point: DP-03
Investigator(s): C. Gerken and _____ Section, Township, Range: South Padre Island
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR or MLRA): LRR-T Lat: 26.072587 Long: -97.165161 Datum: WGS 84
Soil Map Unit Name: USX Twinpalms occasionally flooded Yarborough frequently flooded NWI Classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No** ,Soil **No** ,or Hydrology **Yes** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No _____
Are Vegetation **No** ,Soil **No** ,or Hydrology **Yes** 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 **x**	No _____			
Hydric Soil Present?	Yes **X**	No _____	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes **x**	No _____	**within a Wetland?**	**Yes X**	**No** _____

Remarks:

The point occurs within a tidal inlet caused by break in breakwater wall and subsidence of previously filled area part of the property development

HYDROLOGY

Wetland hydrology Indicators:

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

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- **X** Saturation (A3)
- **X** 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 on 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)
- **X** Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- **X** FAC-Neutral Test (D5)
- ____ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No **X**	Depth (inches): **N/A**		
Water Table Present?	Yes _____	No **X**	Depth (inches): **>18**		
Saturation Present? (includes capillary fringe)	Yes **X**	No _____	Depth (inches): **6**	**Wetland Hydrology Present?**	**Yes X** **No** _____

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

Remarks:

A positive indication of wetland hydrology was observed (at least one primary indicator).

Crab holes

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: **DP-03**

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30 ft.)			
1. *Avicennia germinans*	100	Yes	OBL
2.			
3.			
4.			
5.			
6.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Herb Stratum (Plot size: 30 ft.)			
1. *Batis maritima*	50	Yes	FALSE
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	50 = Total Cover		
50% of total cover: 25	20% of total cover: 10		
Woody Vine Stratum (Plot size: 30 ft.)			
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: **1** (A)

Total Number of Dominant Species Across All Strata: **1** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**100**	x 1 =	**100**
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:	**100** (A)		**100** (B)

Prevalence Index = B/A = **1.00**

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is >50%
- **X** 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 Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

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

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: **DP-03**

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 5/1	100	None	—	—	—	Sand	
2-18	10YR 4/2	95	10YR 5/8	5	C	M	Sandy Clay	

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

Hydric Soils 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)
- **X** 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 X No _____

Remarks:

A positive indication of hydric soil was observed.

fill material with redox in matrix

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebuild USCG Station South Padre Island County: Cameron Sampling Date: March 18 2026
Applicant/Owner: U.S. Coast Guard State: TX Sample Point: DP-04
Investigator(s): C. Gerken and _____ Section, Township, Range: South Padre Island
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T Lat: 26.072803 Long: -97.164729 Datum: WGS 84
Soil Map Unit Name: USX Twinpalms occasionally flooded Yarborough frequently flooded NWI Classification: E2USP
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No**, Soil **Yes**, or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No _____
Are Vegetation **No**, Soil **No**, or Hydrology **No** 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 **x**	No _____			
Hydric Soil Present?	Yes **X**	No _____	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes _____	No **X**	**within a Wetland?**	**Yes** _____	**No X**

Remarks:

The point occurs within an open and sandy area that is blocked from hydrological connection by breakwater/berm. The area is part of existing developed site.

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 on 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)
- **X** FAC-Neutral Test (D5)
- ____ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No **X**	Depth (inches): **N/A**		
Water Table Present?	Yes _____	No **X**	Depth (inches): **>18**		
Saturation Present? (includes capillary fringe)	Yes _____	No **X**	Depth (inches): **>18**	**Wetland Hydrology Present?**	**Yes** _____ **No X**

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

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: **DP-04**

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30 ft.)			
1. *Batis maritima*	20	Yes	OBL
2. *Distichlis littoralis*	75	Yes	OBL
3. *Avicennia germinans*	5	No	OBL
4.			
5.			
6.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Herb Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Woody Vine Stratum (Plot size: 30 ft.)			
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%** (A/B)

Prevalence Index Worksheet:

	Total % Cover of:		Multiply by:
OBL species	**100**	x 1 =	**100**
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:	**100** (A)		**100** (B)

Prevalence Index = B/A = **1.00**

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is >50%
- **X** 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 Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

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

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: **DP-04**

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 6/1	100	None	—	—	—	Sand	
1-18	10YR 5/1	95	10YR 5/8	5	RM	M	Sandy Loam	

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

Hydric Soils 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)
- **X** 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 X No _____

Remarks:

A positive indication of hydric soil was observed.

The area contains wet sand fill material with clay and redox features from fill material for previous site development

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebuild USCG Station South Padre Island County: Cameron Sampling Date: March 18 2026
Applicant/Owner: U.S. Coast Guard State: TX Sample Point: DP-05
Investigator(s): C. Gerken and _____ Section, Township, Range: South Padre Island
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T Lat: 26.072518 Long: -97.164261 Datum: WGS 84
Soil Map Unit Name: USX Twinpalms occasionally flooded Yarborough frequently flooded NWI Classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No**, Soil **No**, or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No _____
Are Vegetation **No**, Soil **No**, or Hydrology **No** 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 **X**	No _____			
Hydric Soil Present?	Yes **X**	No _____	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes _____	No **X**	**within a Wetland?**	**Yes** _____	**No X**

Remarks:

The point occurs within an open and sandy salt-pan area that is blocked from hydrological connection by breakwater/berm. The area is part of the existing developed site.

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 on 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)
- **X** FAC-Neutral Test (D5)
- ____ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No **X**	Depth (inches): **N/A**		
Water Table Present?	Yes _____	No **X**	Depth (inches): _____		
Saturation Present? (includes capillary fringe)	Yes _____	No **x**	Depth (inches): _____	**Wetland Hydrology Present?**	**Yes** _____ **No X**

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

previous develoment and grading has occurred in this area.

Remarks:

No positive indication of wetland hydrology was observed.

There is no hydrologic connection to the tidal inflow due to presense of berm and breakwater

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: **DP-05**

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		

Sapling Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		

Shrub Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		

Herb Stratum (Plot size: 30 ft.)			
1. *Distichlis littoralis*	50	Y	OBL
2. *Batis maritima*	40	Y	OBL
3. *Avicennia germinans*	10	N	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Woody Vine Stratum (Plot size: 30 ft.)			
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%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**100**	x 1 =	**100**
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:	**100** (A)		**100** (B)

Prevalence Index = B/A = **1.00**

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is >50%
- **X** 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 Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

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

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: **DP-05**

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 6/1	95	10YR 5/8	5	RM	M	Sand	
4-18	10YR 5/1	95	10YR 5/8	5	RM	M	Sand	

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

Hydric Soils 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)
- **X** 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 X No _____

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebuild USCG Station South Padre Island County: Cameron Sampling Date: March 18 2026
Applicant/Owner: U.S. Coast Guard State: TX Sample Point: DP-06
Investigator(s): C. Gerken and Section, Township, Range: South Padre Island
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): convex Slope (%): >5
Subregion (LRR or MLRA): LRR-T Lat: 26.072427 Long: -97.164271 Datum: WGS 84
Soil Map Unit Name: USX Twinpalms occasionally flooded Yarborough frequently flooded NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No**, Soil **Yes**, or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No
Are Vegetation **No**, Soil **No**, or Hydrology **No** 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 **x**	No	**Is the Sampled Area**		
Hydric Soil Present?	Yes	No **x**	**within a Wetland?**	**Yes**	**No X**
Wetland Hydrology Present?	Yes	No **X**			

Remarks:

The point occurs on a filled berm over a water line. The area is higher eleveation from surrounding natural topography and has been previously disturbed

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 on 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 **X**	Depth (inches): **N/A**		
Water Table Present?	Yes	No **X**	Depth (inches): **>18**		
Saturation Present? (includes capillary fringe)	Yes	No **X**	Depth (inches): **>18**	**Wetland Hydrology Present?**	**Yes** **No X**

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

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: **DP-06**

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30 ft.)			
1. *Schinus terebinthifolia*	5	Yes	FAC
2. *Prosopis glandulosa*	10	Yes	UPL
3.			
4.			
5.			
6.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Herb Stratum (Plot size: 30 ft.)			
1. *Spartina patens*	90	Y	FACW
2. *Borrichia frutescens*	5	N	OBL
3. *Asclepias purpurascens*	5	N	FACU
4. *Phragmites australis*	10	N	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	110 = Total Cover		
50% of total cover: 55	20% of total cover: 22		
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Smilax hispida*	2	Y	FAC
2.			
3.			
4.			
5.			
	2 = Total Cover		
50% of total cover: 1	20% of total cover: 0.4		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: **1** (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: **50%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**5**	x 1 =	**5**
FACW species	**100**	x 2 =	**200**
FAC species	**7**	x 3 =	**21**
FACU species	**5**	x 4 =	**20**
UPL species	**10**	x 5 =	**50**
Column Totals:	**127** (A)		**296** (B)

Prevalence Index = B/A = **2.33**

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

X 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 Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

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

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

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: **DP-06**

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/3	100	None	—	—	—	Sandy Loam	

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

Hydric Soils 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** **X**

Remarks:

No positive indication of hydric soils was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebuild USCG Station South Padre Island County: Cameron Sampling Date: March 18 2026
Applicant/Owner: U.S. Coast Guard State: TX Sample Point: DP-07
Investigator(s): C. Gerken and _____ Section, Township, Range: South Padre Island
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T Lat: 26.072280 Long: -97.164281 Datum: WGS 84
Soil Map Unit Name: USX Twinpalms occasionally flooded Yarborough frequently flooded NWI Classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No** ,Soil **No** ,or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No _____
Are Vegetation **No** ,Soil **No** ,or Hydrology **No** 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 **X**	No _____			
Hydric Soil Present?	Yes **X**	No _____	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes **X**	No _____	**within a Wetland?**	**Yes X**	**No** _____

Remarks:

base of berm area with surface connection to seasonal tidal or overland rainfall flow inundation

HYDROLOGY

Wetland hydrology Indicators:

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

____ Surface Water (A1)	**X** Aquatic Fauna (B13)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Marl Deposits (B15) **(LRR U)**	____ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	____ Hydrogen Sulfide Odor (C1)	____ Drainage Patterns (B10)
____ Water Marks (B1)	____ Oxidized Rhizospheres on Living Roots(C3)	____ Moss Trim Lines (B16)
____ Sediment Deposits (B2)	**X** Presence of Reduced Iron (C4)	____ Dry-Season Water Table (C2)
____ Drift Deposits (B3)	____ Recent Iron Reduction in Tilled Soils (C6)	**X** Crayfish Burrows (C8)
____ Algal Mat or Crust (B4)	____ Thin Muck Surface (C7)	____ Saturation Visible on Aerial Imagery (C9)
____ Iron Deposits (B5)	____ Other (Explain in Remarks)	**X** Geomorphic Position (D2)
X Inundation Visible on Aerial Imagery (B7)		____ Shallow Aquitard (D3)
____ Water-Stained Leaves (B9)		**X** FAC-Neutral Test (D5)
		____ Sphagnum moss (D8) **(LRR T, U)**

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	Yes _____	No **X**	Depth (inches): **N/A**	
Water Table Present?	Yes _____	No **X**	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes **X**	No _____	Depth (inches): **5"**	**Wetland Hydrology Present?** **Yes X** **No** _____

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

Remarks:

A positive indication of wetland hydrology was observed (at least one primary indicator).

Crab holes

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: **DP-07**

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30 ft.)			
1. *Avicennia germinans*	50	Yes	OBL
2.			
3.			
4.			
5.			
6.			
	50 = Total Cover		
50% of total cover:	25	20% of total cover:	10
Herb Stratum (Plot size: 30 ft.)			
1. *Avicennia germinans*	10	Y	OBL
2. *Spartina patens*	10	Y	FACW
3. *Batis maritima*	20	Y	OBL
4. *Borrichia frutescens*	10	Y	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	50 = Total Cover		
50% of total cover:	25	20% of total cover:	10
Woody Vine Stratum (Plot size: 30 ft.)			
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: **5** (A)

Total Number of Dominant Species Across All Strata: **5** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**90**	x 1 =	**90**
FACW species	**10**	x 2 =	**20**
FAC species	**0**	x 3 =	**0**
FACU species	**0**	x 4 =	**0**
UPL species	**0**	x 5 =	**0**
Column Totals:	**100** (A)		**110** (B)

Prevalence Index = B/A = **1.10**

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is >50%
- **X** 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 Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

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

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: **DP-07**

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/1	90	10YR 5/6	10	RM	M	Sand	

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

Hydric Soils 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)
- **X** 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 X No _____

Remarks:

A positive indication of hydric soil was observed.

reduced matrix color with orange redox concentrations throughout

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebuild USCG Station South Padre Island County: Cameron Sampling Date: March 18 2026
Applicant/Owner: U.S. Coast Guard State: TX Sample Point: DP-08
Investigator(s): C. Gerken and _____ Section, Township, Range: South Padre Island
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T Lat: 26.071139 Long: -97.163645 Datum: WGS 84
Soil Map Unit Name: USX Twinpalms occasionally flooded Yarborough frequently flooded NWI Classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No**, Soil **No**, or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No _____
Are Vegetation **No**, Soil **No**, or Hydrology **No** 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 **X**	No _____		
Hydric Soil Present?	Yes **X**	No _____	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes **X**	No _____	**within a Wetland?**	**Yes X** **No** _____

Remarks:

The point occurs within an open and sandy salt-pan area that is blocked from hydrological connection by breakwater/berm. The area is part of existingdeveloped site.

HYDROLOGY

Wetland hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)	**X** Sparsely Vegetated Concave Surface (B8)
X 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)	**X** FAC-Neutral Test (D5)
___ Sphagnum moss (D8) **(LRR T, U)**	

Field Observations:

Surface Water Present?	Yes _____	No **X**	Depth (inches): **N/A**	
Water Table Present?	Yes _____	No **X**	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes **X**	No _____	Depth (inches): **>12**	**Wetland Hydrology Present?** **Yes X** **No** _____

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

Remarks:

A positive indication of wetland hydrology was observed (at least one primary indicator).

A positive indication of wetland hydrology was observed (at least two secondary indicators).

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: **DP-08**

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30 ft.)			
1. *Avicennia germinans*	10	Y	OBL
2.			
3.			
4.			
5.			
6.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Herb Stratum (Plot size: 30 ft.)			
1. *Avicennia germinans*	10	N	OBL
2. *Batis maritima*	20	Y	OBL
3. *Distichlis littoralis*	10	N	OBL
4. *Salicornia bigelovii*	5	N	OBL
5. *Sesuvium portulacastrum*	5	N	OBL
6. *Lycium berlandieri*	5	N	OBL
7. *Spartina patens*	30	Y	FACW
8.			
9.			
10.			
11.			
	85 = Total Cover		
50% of total cover: 42.5	20% of total cover: 17		
Woody Vine Stratum (Plot size: 30 ft.)			
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: **3** (A)

Total Number of Dominant Species Across All Strata: **3** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**65**	x 1 =	**65**
FACW species	**30**	x 2 =	**60**
FAC species	**0**	x 3 =	**0**
FACU species	**0**	x 4 =	**0**
UPL species	**0**	x 5 =	**0**
Column Totals:	**95** (A)		**125** (B)

Prevalence Index = B/A = **1.32**

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is >50%
- **X** 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 Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

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

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: **DP-08**

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/2	90	10YR 5/6	10	RM	M	Loamy Sand	
6-18	10YR 4/1	100						

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

Hydric Soils 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)
- **X** 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 X No _____

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebuild USCG Station South Padre Island County: Cameron Sampling Date: March 18 2026
Applicant/Owner: U.S. Coast Guard State: TX Sample Point: DP-09
Investigator(s): C. Gerken and _____ Section, Township, Range: South Padre Island
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T Lat: 26.071889 Long: -97.164291 Datum: WGS 84
Soil Map Unit Name: USX Twinpalms occasionally flooded Yarborough frequently flooded NWI Classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No**, Soil **No**, or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No _____
Are Vegetation **No**, Soil **No**, or Hydrology **No** 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 **X**	No _____	**Is the Sampled Area within a Wetland?**	**Yes X**	**No** _____
Hydric Soil Present?	Yes **X**	No _____			
Wetland Hydrology Present?	Yes **X**	No _____			

Remarks:

base of berm area with surface connection to seasonal tidal or overland rainfall flow inundation

HYDROLOGY

Wetland hydrology Indicators:

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

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- **X** 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 on Living Roots(C3)
- **X** 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)
- **X** Sparsely Vegetated Concave Surface (B8)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- **X** Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- **X** FAC-Neutral Test (D5)
- ____ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No **X**	Depth (inches): **N/A**	
Water Table Present?	Yes _____	No **X**	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes **X**	No _____	Depth (inches): **>12**	**Wetland Hydrology Present?** **Yes X** **No** _____

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

Remarks:

A positive indication of wetland hydrology was observed (at least one primary indicator).

Crab holes

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: **DP-09**

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30 ft.)			
1. *Avicennia germinans*	10	Yes	OBL
2.			
3.			
4.			
5.			
6.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Herb Stratum (Plot size: 30 ft.)			
1. *Avicennia germinans*	2	Y	OBL
2. *Spartina patens*	2	Y	FACW
3. *Batis maritima*	2	Y	OBL
4. *Borrichia frutescens*	2	Y	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	8 = Total Cover		
50% of total cover: 4	20% of total cover: 1.5		
Woody Vine Stratum (Plot size: 30 ft.)			
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: **5** (A)

Total Number of Dominant Species Across All Strata: **5** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

	Total % Cover of:		Multiply by:	
OBL species	**90**	x 1 =	**90**	
FACW species	**10**	x 2 =	**20**	
FAC species	**0**	x 3 =	**0**	
FACU species	**0**	x 4 =	**0**	
UPL species	**0**	x 5 =	**0**	
Column Totals:	**100**	(A)	**110**	(B)

Prevalence Index = B/A = **1.10**

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is >50%
- **X** 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 Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

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

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: **DP-09**

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/1	90	10YR 5/6	10	RM	M	Sand	

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

Hydric Soils 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)
- **X** 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 X No _____

Remarks:

A positive indication of hydric soil was observed.

reduced matrix color with orange redox concentrations throughout

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebuild USCG Station South Padre Island County: Cameron Sampling Date: March 18 2026
Applicant/Owner: U.S. Coast Guard State: TX Sample Point: DP-10
Investigator(s): C. Gerken and _____ Section, Township, Range: South Padre Island
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): none Slope (%): -
Subregion (LRR or MLRA): LRR-T Lat: 26.072291 Long: -97.164793 Datum: WGS 84
Soil Map Unit Name: USX Twinpalms occasionally flooded Yarborough frequently flooded NWI Classification: E2USP
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No**, Soil **No**, or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No _____
Are Vegetation **No**, Soil **No**, or Hydrology **No** 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 **x**	No _____			
Hydric Soil Present?	Yes **X**	No _____	**Is the Sampled Area within a Wetland?**	**Yes X**	**No** _____
Wetland Hydrology Present?	Yes **x**	No _____			

Remarks:

The point occurs within thick mangrove area on edge of tidal flat

HYDROLOGY

Wetland hydrology Indicators:

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

- **X** Surface Water (A1)
- **X** High Water Table (A2)
- **X** Saturation (A3)
- **X** Water Marks (B1)
- _____ Sediment Deposits (B2)
- _____ Drift Deposits (B3)
- _____ Algal Mat or Crust (B4)
- _____ Iron Deposits (B5)
- **X** Inundation Visible on Aerial Imagery (B7)
- _____ Water-Stained Leaves (B9)
- **X** Aquatic Fauna (B13)
- _____ Marl Deposits (B15) **(LRR U)**
- **X** Hydrogen Sulfide Odor (C1)
- _____ Oxidized Rhizospheres on 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)
- **X** FAC-Neutral Test (D5)
- _____ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes **X**	No _____	Depth (inches): **0**		
Water Table Present?	Yes **X**	No _____	Depth (inches): **0**		
Saturation Present? (includes capillary fringe)	Yes **X**	No _____	Depth (inches): **0**	**Wetland Hydrology Present?**	**Yes X** **No** _____

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

Remarks:

A positive indication of wetland hydrology was observed (at least one primary indicator).

Tidal area

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: **DP-10**

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30 ft.)			
1. *Avicennia germinans*	100	Yes	OBL
2.			
3.			
4.			
5.			
6.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Herb Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Woody Vine Stratum (Plot size: 30 ft.)			
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: **1** (A)

Total Number of Dominant Species Across All Strata: **1** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**100**	x 1 =	**100**
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:	**100** (A)		**100** (B)

Prevalence Index = B/A = **1.00**

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is >50%
- **X** 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 Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

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

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: **DP-10**

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 6/1	100	None	—	—	—	Sand	
1-18	5Y 4/1	100	10 YR 5/6	5	C	M	Sand	

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

Hydric Soils 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)
- **X** 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 X No _____

Remarks:

A positive indication of hydric soil was observed.

reduced sandy clay with distinct smell. Mangrove roots prevent full soi plug. Soft intertidal sediments, fully saturated with incoming tide.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebuild USCG Station South Padre Island County: Cameron Sampling Date: March 18 2026
Applicant/Owner: U.S. Coast Guard State: TX Sample Point: DP-11
Investigator(s): C. Gerken and _____ Section, Township, Range: South Padre Island
Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR-T Lat: 26.071850 Long: -97.163602 Datum: WGS 84
Soil Map Unit Name: USX Twinpalms occasionally flooded Yarborough frequently flooded NWI Classification: E2USP
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No**, Soil **No**, or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No _____
Are Vegetation **No**, Soil **No**, or Hydrology **No** 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 **X**	No _____			
Hydric Soil Present?	Yes **X**	No _____	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes _____	No **X**	**within a Wetland?**	**Yes** _____	**No X**

Remarks:

The point occurs within an open and sandy salt-pan area that is blocked from hydrological connection by breakwater/berm. The area is part of existing developed site.

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 on 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 **X**	Depth (inches): **N/A**		
Water Table Present?	Yes _____	No **X**	Depth (inches): **>18**		
Saturation Present? (includes capillary fringe)	Yes _____	No **X**	Depth (inches): **>18**	**Wetland Hydrology Present?**	**Yes** _____ **No X**

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

Remarks:

No positive indication of wetland hydrology was observed.

Area is cut off from tidal influence with breakwater and historic aritifical fill

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: **DP-11**

	Absolute	Dominant	Indicator
Tree Stratum (Plot size: 30 ft.)	% cover	Species?	Status
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30 ft.)			
1.		#DIV/0!	#N/A
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 30 ft.)			
1. *Distichlis littoralis*	90	Y	OBL
2. *Salicornia bigelovii*	5	N	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95 = Total Cover		
50% of total cover:	47.5	20% of total cover:	19
Woody Vine Stratum (Plot size: 30 ft.)			
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** (A/B)

Prevalence Index Worksheet:

	Total % Cover of:		Multiply by:
OBL species	**95**	x 1 =	**95**
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:	**95** (A)		**95** (B)

Prevalence Index = B/A = **1.00**

Hydrophytic Vegetation Indicators:

- **X** 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- **X** 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 Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

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

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

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

areas of exposed sand

SOIL

Sampling Point: **DP-11**

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 6/1	100	None	—	—	—	Sand	
1-18	10YR 5/1	95	10YR 5/8	5	RM	M	Sandy Loam	

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

Hydric Soils 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)
- **X** 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 X No _____

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Rebuild USCG Station South Padre Island County: Cameron Sampling Date: March 18 2026
Applicant/Owner: US Coast Guard State: TX Sample Point: DP-12
Investigator(s): C. Gerken and Section, Township, Range: South Padre Island
Landform (hillslope, terrace, etc.): water Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR or MLRA): LRR-T Lat: 26.073868 Long: -97.165839 Datum: WGS 84
Soil Map Unit Name: USX Twinpalms occasionally flooded Yarborough frequently flooded NWI Classification: E2USP
Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) Yes (if no, explain in Remarks.)
Are Vegetation **No**, Soil **No**, or Hydrology **No** significantly disturbed? Are "Normal Circumstances" present? Yes **X** No
Are Vegetation **No**, Soil **No**, or Hydrology **No** 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 **x**	No	**Is the Sampled Area**		
Hydric Soil Present?	Yes **X**	No	**within a Wetland?**	**Yes X**	**No**
Wetland Hydrology Present?	Yes **x**	No			

Remarks:

The point occurs within Spartina tidal flat/exposed oyster reef area.

HYDROLOGY

Wetland hydrology Indicators:

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

- **X** Surface Water (A1)
- **X** High Water Table (A2)
- **X** Saturation (A3)
- **X** Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- **X** Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- **X** Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- **X** Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on 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)
- **X** FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes **X**	No	Depth (inches): **1**		
Water Table Present?	Yes **X**	No	Depth (inches): **0**		
Saturation Present? (includes capillary fringe)	Yes **X**	No	Depth (inches): **0**	**Wetland Hydrology Present?**	**Yes X** **No**

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

Remarks:

A positive indication of wetland hydrology was observed (at least one primary indicator).

Tidal area

VEGETATION (Five Strata) - Use scientific names of plants.

Sampling Point: **DP-02**

	Absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 30 ft.)			
1. *Spartina alterniflora*	100	Yes	OBL
2.			
3.			
4.			
5.			
6.			
	30 = Total Cover		
50% of total cover: 15	20% of total cover: 6		
Herb Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Woody Vine Stratum (Plot size: 30 ft.)			
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: **1** (A)

Total Number of Dominant Species Across All Strata: **1** (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**30**	x 1 =	**30**
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:	**30** (A)		**30** (B)

Prevalence Index = B/A = **1.00**

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is >50%
- **X** 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 Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

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

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

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: **DP-02**

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 6/1	100	None	—	—	—	Sand	
1-18	5Y 4/1	100	10YR 5/6	5	C	M	Sandy Clay	

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

Hydric Soils 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)
- **X** 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 X No _____

Remarks:

A positive indication of hydric soil was observed.

reduced sandy clay with distinct smell. Soft intertidal sediments, fully saturated with incoming tide.

Appendix C
Representative Photographs

Rebuild USCG Station South Padre Island
Wetland Delineation Report
Representative Photographs

Photo 1: Representative photo of upland area (DP-01) within the survey area. Facing North.

Photo 2: Representative photo of E2SS wetland area (WET-01, DP-02) with intertidal flat and oyster reefs visible in foreground.

Photo 3: Representative photo of E2SS WET-03 area located within the project area (facing southwest toward site fenceline)

Photo 4: Representative photo of upland area located within the site fenceline (DP-04)

Photo 5: Representative photo of upland area (DP-06) on the elevated berm that borders WET-04. Facing east.

Photo 6: Representative photo of E2EM soil (WET-05, DP-06) showing reduced sandy matrix with redox concentrations.

Photo 8: Representative photo of E2EM vegetation within WET-04, facing west

Photo 9: Representative photo of E2USP area (DP-09, WET-04) facing east. Note shallow unvegetated area with prominent crab burrows.

Photo 10: Representative photo of E2EM area (WET-04) facing west towards shoreline.

Photo 11: Representative photo of E2SS area (WET-06).

Photo 12: Photo of treated water outfall located within WET-06, near DP-10.

Photo 13: Photo of WET-06 tidal edge facing north.

Photo 14: Representative photo of upland area located east of WET-06, WET-04 visible in background.

Photo 17: Photo of stormwater ditch and upland berm at northern/eastern edge of WET-04 where the developed site is located (DP-11).

Photo 18: Photo of WET-02, an E2EM wetland within the survey area, facing southwest.

Appendix B

Habitat Assessment Report

LLOYD
ENGINEERING, INC.

HABITAT ASSESSMENT REPORT
REBUILD USCG STATION SOUTH PADRE ISLAND
SOUTH PADRE ISLAND
CAMERON COUNTY TEXAS

CONTRACT #: 70Z05026F43000005

Prepared for:

United States Coast Guard
5505 Robin Hood Road, Suite K
Norfolk, Virgina 23513-2413

Prepared by:

Lloyd Engineering, Inc.
6565 West Loop Street, Suite 708
Bellaire, Texas 77401

April 2026

Table of Contents

Acronyms and Abbreviations

E2EM1N	estuarine intertidal emergent, regularly flooded
E2EM1P	estuarine intertidal emergent, irregularly flooded
E2SS3N	estuarine intertidal scrub-shrub broad-leaved evergreen, regularly flooded
E2RF2	estuarine intertidal reef, regularly flooded
E2USM	estuarine intertidal unconsolidated shore, regularly flooded
E2USP	estuarine intertidal unconsolidated shore, irregularly flooded
EMS	Ecological Mapping System
LEI	Lloyd Engineering, Inc.
Project	Rebuild USCG Station South Padre Island
TEAM	Texas Ecosystem Analytical Mapper
TPWD	Texas Parks and Wildlife Department
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 Introduction

This report presents the results of a Habitat Assessment conducted on behalf of United States Coast Guard (USCG) for the proposed Rebuild USCG Station South Padre Island Project (Project). The proposed Project is situated in Cameron County, Port Isabel, Texas, at the USCG Station located at 1 Wallace L Reed Rd, South Padre Island, TX 78597. Lloyd Engineering, Inc. (LEI) conducted environmental investigations on March 18, 2026, within the approximately 22-acre survey area. The site is located within U.S. Fish and Wildlife Service (USFWS) Region 2, the Southwest Region, which covers Arizona, New Mexico, Oklahoma, and Texas. Cameron County and the South Padre Island area is located within the Texas Coastal and Central Plains Ecological Services Field Office coverage area. The project site is located on the U. S. Geological Survey (USGS) Port Isabel, Texas, 7.5-minute series topographic quadrangle map (USGS 2025). Refer to the site vicinity map provided as Figure 1 in Appendix A for a depiction of the project location.

The purpose of this assessment is to characterize habitat types within the project area. This evaluation provides the basis for determining potential project-related impacts to biological resources and support effect determinations (e.g., no effect, may affect, not likely to adversely affect) and coordination with the USFWS and other regulatory agencies, as appropriate. Habitat conditions were assessed through a combination of desktop review of available data sources and field reconnaissance. Key factors considered in the evaluation include vegetation composition and structure, hydrologic conditions, land use, and landscape context within and adjacent to the Project area.

2.0 Methods

Habitat conditions within the Project area were evaluated using a combination of desktop review and field reconnaissance, with consideration of ecological characteristics typical of the Texas Gulf Coast region. The Project area occurs within a coastal landscape that may include a mosaic of habitat types such as coastal prairie, emergent estuarine marsh, tidal flats, estuarine systems, and associated upland transitional zones. These habitats are influenced by low relief topography, variable salinity gradients, and periodic inundation from tidal or precipitation-driven hydrology.

Desktop review included analysis of aerial imagery obtained from the USGS National Agriculture Imagery Program (NAIP) and ESRI basemap sources and LiDAR topographic elevation data obtained from the USGS 3D Elevation Program (3DEP) for Cameron County, Texas (USGS 2025). Vegetation and land cover data from the TPWD Ecological Mapping Systems (EMS) as depicted in the Texas Ecosystem Analytical Mapper (TEAM) (TPWD 2016) and wetland mapping from the USFWS National Wetlands Inventory (NWI) Wetlands Mapper (USFWS 2026) was utilized as a basis for establishing habitat classifications and verification of field observations. Additional geospatial sources used in the desktop reconnaissance included NRCS Web Soil Survey for Cameron County (NRCS 2023), FEMA National Flood Hazard Layer (FEMA 2026), NOAA Tides and Currents Station 8779748 (South Padre Island Coast Guard Station) and control Station 8779770 (Port Isabel), which together establish mean high tide and tidal datum references for the project area (NOAA 2026), and hydrographic data from the USGS National Hydrography Dataset (USGS 2026b). These desktop resources were collectively used to characterize existing habitat types, identify potential sensitive resources, and guide field survey planning prior to on-site investigations conducted on March 18, 2026.

Field assessments focused on documenting vegetation communities, including dominant species composition, vegetation structure, and density, as well as observed hydrologic conditions such as soil saturation, surface water presence, and evidence of tidal influence. Additional factors considered included land use, disturbance regimes (e.g., grazing, mowing, or development), and the connectivity of habitats within the surrounding landscape. These site-specific observations were used in conjunction with available mapping resources and the wetland delineation (conducted by Lloyd Engineering during the same field site visit) to determine spatial extents of habitats observed.

3.0 Regional Ecological Setting and Habitat Background

The Project is located along the Texas Gulf Coast within the Gulf Prairies and Marshes ecological region as defined by the Texas Parks and Wildlife Department (TPWD). This region is characterized by low-relief coastal plains, extensive estuarine systems, and strong tidal influence, resulting in a complex mosaic of coastal habitats structured by elevation, salinity gradients, and inundation frequency. TPWD classifies this portion of the coast into a series of ecological systems that closely correspond to the habitat types observed within the survey area, including coastal marshes, tidal flats, mangrove shrublands, and coastal prairie/upland systems. Habitats and vegetation classifications are further detailed by the TPWD Ecological Mapping Systems (EMS) and depicted in the Texas Ecosystems Analytical Mapper (TEAM). Refer to Appendix A, Figure 4 for a map of the EMS data via the TEAM.

Overall, the area reflects a continuum of TPWD-defined coastal ecological systems, ranging from regularly flooded estuarine marshes and tidal flats to mangrove shrublands and upland sandy habitats. The distribution of these systems is primarily controlled by subtle changes in elevation and hydrology, which influence salinity, flooding frequency, and soil development. This ecological gradient results in the distinct but interconnected habitat types documented during the field investigation and described in the Cowardin classification system. Each habitat type and extent are further detailed in the following sections.

4.0 Results: Habitat Classifications

Field investigations were conducted on March 18, 2026, to identify habitat types present in the approximately 22-acre survey area. Maps of the habitats identified, and their spatial extents are in Appendix A. Representative photographs are provided in Appendix B.

Throughout the field investigations, several distinct estuarine intertidal habitat types were identified within the survey area. These communities are classified using vegetation community and hydrology regime according to the Cowardin, et al. (1979) system and include estuarine intertidal emergent wetlands, reef habitats, scrub-shrub wetlands, and unconsolidated shore environments under varying tidal regimes. The classifications correspond to specific Cowardin codes observed on site and documented in the Wetland Delineation Report (LEI 2026) for the Project, including estuarine intertidal emergent, irregularly flooded (E2EM1P), estuarine intertidal emergent, regularly flooded (E2EM1N), estuarine intertidal scrub-shrub broad-leaved evergreen, regularly flooded (E2SS3N), estuarine intertidal unconsolidated shore, irregularly flooded (E2USP), estuarine intertidal unconsolidated shore, regularly flooded (E2USM), estuarine intertidal reef, regularly flooded (E2USM), and estuarine intertidal reef, regularly flooded (E2RF2). Each habitat

classification is further detailed using TPWD EMS data and descriptions based on field observations. Refer to Appendix B for representative photographs of the habitat types documented within the survey area.

Table 1:
Habitat Type Categories

Symbol[1]	Vegetation Type	Hydrology	Habitat Type[2]	Vegetation Observed	Structure
E2EM1P	Estuarine intertidal emergent, persistent	irregularly flooded	Salt and Brackish High Tidal Marsh	*Spartina patens*, *Distichlis littoralis*, *Salicornia bigelovii*, *Batis maritima*, *Borrichia frutescens*	Sparse to dense herbaceous cover, 10 to 30cm in height.
E2EM1N	Estuarine intertidal emergent, persistent	regularly flooded	Salt and Brackish Low Tidal Marsh	Sparse *Spartina alterniflora*	Sparsely vegetated with scattered oyster clusters
E2SS3N	Estuarine intertidal scrub-shrub,	regularly flooded	Mangrove scrub/shrub wetland	Dense, monotypic stand of black mangrove shrub (*Avicennia germinans)*	Shrub-dominated, high stem density, limited understory
E2USP	Estuarine intertidal unconsolidated shore,	irregularly flooded	Tidal panne	Notable lack of vegetation	No structure, shallow muddy/ sandy depression
E2RF2	Estuarine intertidal reef	regularly flooded	Oyster reef (patchy/scattered)	Adjacent sparse *Spartina alterniflora,* black mangrove shrub (*Avicennia germinans)*	Scattered oyster clusters with sparse emergent vegetation, bounded by rock breakwater and mangrove shrub stand
E2USM	Estuarine intertidal unconsolidated shore	regularly flooded	Tidal flat	Bare mud/sand substrate	No structure, occasional oyster clusters present

1 Based on Cowardin, et al. (1979)
2 Based on TPWD (2016)

4.1 Estuarine Intertidal Emergent Wetland (E2EM1P), Irregularly Flooded - Salt and Brackish High Tidal Marsh

According to Cowardin, et al. (1979), estuarine systems consist of deepwater tidal habitats and adjacent tidal wetlands that are usually semi-enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. Estuarine systems are more strongly influenced by their association with land than are marine systems. Areas described as E2EM1P within the survey area consisted of intertidal wetlands associated with tidally influenced channels and exhibited a dominance of emergent herbaceous vegetation. These areas are irregularly flooded by tidal action. This code is consistent with what TPWD EMS describes as Coastal: Salt and Brackish High Tidal Marsh. These habitats occupy the intertidal zone and are regularly or irregularly flooded by saline or brackish waters. Higher marsh zones experience less frequent flooding and support more diverse or transitional plant assemblages. Vegetation in these systems is typically dominated by halophytic herbaceous species adapted to varying salinity and inundation regimes, forming distinct zonation patterns across the marsh surface (TPWD 2016).

The vegetation observed within the E2EM1P wetlands varied across the landscape with the subtle shift from lower “high marsh” having more homogenous coverage of *Spartina patens* with some *Distichlis littoralis*, *Salicornia bigelovii*, *Batis maritima*, *Borrichia frutescens*, and *Sesuvium portulacastrum*. The periphery of the high marsh area contained higher densities of invasive encroachment of black mangrove (*Avicennia germinans*) and had predominantly *Distichlis littoralis*, *Salicornia bigelovii*, *Batis maritima*, and *Borrichia frutescens* subspecies with a notable lack of high density and high coverage grasses such as *Spartina patens.*

4.2 Estuarine Intertidal Emergent Wetland (E2EM1N), Regularly Flooded - Salt and Brackish Low Tidal Marsh

A second E2EM1 community was identified was observed within the survey area, however with a regularly flooded modifier code making this habitat type E2EM1N. This habitat type aligns with the Salt and Brackish Low Tidal Marsh description. Lower elevations are more frequently inundated and support species tolerant of prolonged saturation. The vegetation observed within the E2EM1N wetlands included sparse coverage (<50% absolute coverage) of *Spartina alterniflora* and scattered oyster clusters in an inundated intertidal zone. This area functioned as a mosaic of E2EM1N, E2RF2, and E2USM habitats which are discussed in the following sections. This mosaic of intertidal emergent vegetation, oyster reef, and unconsolidated tidal flat habitats represents a highly productive estuarine habitat complex.

4.3 Estuarine Intertidal Scrub-Shrub Wetland (E2SS3) – Mangrove Shrubland

Scrub-shrub wetlands within estuarine systems are dominated by woody vegetation less than 6 meters (20 feet) in height and occur in areas subject to tidal influence. Areas described as E2SS3 within the survey area consisted of regularly flooded intertidal zones supporting salt-tolerant shrub and woody species. This code is consistent with what TPWD classifies as Coastal: Mangrove Shrubland. This habitat is characterized by the presence of woody, salt-tolerant species such as black mangrove (*Avicennia germinans*), which occur in areas with reduced wave energy and fine sediment accumulation. Mangrove

shrublands represent a transitional system between open marsh and upland environments and are increasingly common along the Texas coast due to reduced freeze frequency and changing climatic conditions. These systems provide important shoreline stabilization and habitat complexity within the estuarine landscape.

Vegetation observed within these areas was predominantly black mangrove (*Avicennia germinans)* with occasional herbaceous species such as *Distichlis littoralis* and *Batis maritima* at the transitional edge. Within the survey area, these areas were located at or below the mean high tide line with the transitional upland edge influenced by the presence of rock breakwater and fill berms protecting the filled/developed uplands. One observed mangrove area has established where the rock breakwater had collapsed, resulting in increased tidal inundation and subsequent colonization by black mangrove (*Avicennia germinans*) within an area that was previously characterized as upland sand sheet.

4.4 Estuarine Intertidal Unconsolidated Shore (E2USP) – Tidal Pannes

The areas identified as E2USP within the survey area consisted of higher elevation intertidal zones composed of sand or mud substrates that are inundated less frequently than regularly flooded areas. These areas were located within the E2EM1P high marsh zone and were characterized as isolated, unvegetated depressions with observed algal mats and crust. These environments may support limited or patchy vegetation, particularly transitional or facultative species adapted to occasional tidal influence. This area corresponds to an interior, depressional tidal flat feature consistent with inclusions of the Texas Coast Salt and Brackish Tidal Flat system within adjacent high tidal marsh (TPWD 2016). These features, referred to as tidal pannes or salt pannes, occur as unvegetated or sparsely vegetated mud or sand depressions that are irregularly flooded and are not restricted to shoreline positions.

Within the survey area, these areas were identified as shallow unvegetated depressions with bordering species including black mangrove, *Distichlis littoralis* and *Batis maritima.* These depressions are primarily influenced by infrequent tidal surge and localized impoundment from anthropogenic berming (described in following section). The areas appear to remain inundated for long periods of time as they were observed to provide habitat for aquatic fauna including crabs and snails and support foraging for bird species as evidenced by footprints. At the time of the survey, these areas were not saturated with water but did show signatures of frequent inundation on aerial imagery.

4.5 Estuarine Intertidal Reef (E2RF2) – Oyster Reef (patchy/scattered)

Areas described as E2RF2 within the survey area consisted of reef habitats that are regularly flooded by tidal waters and provide structural complexity within the estuarine environment. These habitats are typically dominated by sessile invertebrates rather than vegetation and may support attached algae or sparse halophytic plant species in adjacent areas. Due to the dominance of non-vegetated substrates, these areas are not characterized by hydrophytic vegetation but still function as important ecological features within the estuarine system. Within the survey area, this classification corresponded to patchy clusters of Eastern oyster (*Crassostrea virginica*). As previously mentioned, these areas were observed as mosaic with

combination of the E2EM1N sparsely vegetated low marsh habitat and E2USM (tidal flat) areas discussed in the following sections.

4.6 Estuarine Intertidal Unconsolidated Shore (E2USM) – Tidal Flat

According to Cowardin, et al. (1979), unconsolidated shore habitats within estuarine systems are characterized by substrates such as sand, silt, or mud with little to no persistent vegetation cover. Areas described as E2USM within the survey area consisted of regularly flooded intertidal flats composed primarily of unconsolidated sediments and are consistent with TPWD Coastal Tidal Flat systems. These areas are subject to daily tidal inundation and exposure, which limits the establishment of rooted vegetation. As a result, vegetation is typically sparse or absent, although algal mats of *Lyngbya spp.* (blue-green algae) or transient plant species may occasionally be present. Higher flats may be too dry to support the algae, and at lower elevation, flats may remain inundated for extended periods. These habitats are not considered to support vegetation but are important for sediment transport and as foraging areas for wildlife. Within the survey area, this habitat type was observed along the northern and southern shorelines on the tidal edge of the breakwaters and varied in width following natural bathymetry. A significant area of exposed tidal flat was observed near the wastewater treatment effluent discharge pipe (Appendix B).

4.7 Vegetated Uplands

Areas identified as Vegetated Uplands were situated at higher elevations relative to adjacent estuarine and wetland systems and exhibit no evidence of prolonged saturation or inundation or direct connection to incoming tides or seasonal tidal surges that may flood lower lying areas. These habitats typically occur on slightly elevated, well-drained sandy substrates and support a mix of grasses, forbs, and woody species. Historically, these areas were dominated by coastal prairie vegetation, though many have been altered by grazing, development, or encroachment of woody species. These uplands form an important ecotone between fully terrestrial systems and tidally influenced wetlands, often supporting species adapted to drought, salinity spray, and shifting substrates.

There were two distinct vegetation communities observed within the Vegetated Upland areas. One area was distinguished by a drastic elevation difference (>1m) and suggested anthropogenic origin of a filled berm created by the installation of a wastewater treatment effluent discharge pipe bisecting the survey area. There were also areas of high elevation fill material located adjacent to the rock breakwater on the tidal-edge of the site. These areas are visible in Figure 3 and 5 – LiDAR Elevation Map. Vegetation within the upland berm habitat consisted of a mix of herbaceous and woody species, some invasive. Dominant species observed included *Schinus terebinthifolia*, *Prosopis glandulosa*, *Lycium berlandieri*, *Asclepias purpurascens*, *Smilax hispida*, and *Phragmites australis*. The plant community within the elevated berm included invasive species and remnant natives such as *Spartina patens* and coastal prairie species such as native milkweed and *Aster sp.*, which likely survived within the native seed bank when the material was disturbed and left as a berm pile.

Portions of the upland and transitional areas not associated with the berm exhibited characteristics of what TPWD defines as Sea Ox-eye Daisy Flats, including the presence of *Borrichia frutescens* and other halophytic species on relatively flat, saline-influenced substrates. These areas were primarily within the

developed site fenceline and surrounding areas used for site activity that experience frequent disturbance from mowing or vehicles.

4.8 Unvegetated Sand Sheets

Localized unvegetated sandy inclusions were observed throughout the survey area. These features occur as small patches of exposed substrate within both wetland and upland habitats and are likely the result of a combination of tidal influence, soil salinity, and physical disturbance. In lower elevation areas, these features may function similarly to interior tidal flats or panne features with reduced inundation durations and appear to be subject to anthropogenic effects because of vehicle tracks and rutting. In upland zones, they are consistent with bare ground or sand sheet inclusions. Within the developed and actively used area of the site, these areas are used for laydown of equipment, parking, boat storage, or other site uses.

5.0 Conclusions

The survey area consists of estuarine and upland habitat types characterized by subtle variations in elevation, hydrology, and salinity. Wetland communities identified within the site include estuarine intertidal emergent marsh (E2EM1), scrub-shrub mangrove wetlands (E2SS3), unconsolidated shore features such as tidal flats (E2USM) and tidal pannes (E2USP), and intertidal oyster reef (E2RF2). These habitats generally correspond with Texas Parks and Wildlife Department (TPWD) ecological systems, including Coastal: Salt and Brackish High and Low Tidal Marsh, Coastal: Mangrove Shrubland, and Coastal Tidal Flats. The distribution of these communities reflects a dynamic estuarine environment influenced by tidal inundation, sediment deposition, and localized hydrologic modifications.

Field observations indicate that several habitat types occur as a mosaic, particularly within lower elevation areas where emergent marsh, oyster reef, and tidal flat systems are interspersed. Interior tidal pannes and unvegetated sand features further contribute to habitat heterogeneity and provide foraging opportunities for estuarine-dependent species. Upland areas within the survey area are primarily associated with elevated sandy substrates, including anthropogenically influenced berms and developed areas, and do not exhibit indicators of wetland hydrology. However, transitional zones between uplands and wetlands exhibit characteristics of saline-influenced systems. Additionally, localized hydrologic alterations, such as the collapse of the rock breakwater, have facilitated mangrove establishment in previously upland areas, illustrating the dynamic nature of the site. Overall, the survey area represents a functionally interconnected coastal system where small changes in elevation and hydrology drive the distribution of distinct but interrelated habitat types.

6.0 References

Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, North Dakota: Northern Prairie Wildlife Research Center Online. http://www.npwrc.usgs.gov/resource/wetlands/classwet/index.htm (Version 04DEC1998).

Federal Emergency Management Agency (FEMA). 2026. National Flood Hazard Layer (NFHL), Cameron County, Texas. Accessed March 2026. Available at: https://msc.fema.gov/portal/home

National Oceanic and Atmospheric Administration (NOAA). 2026. Tides and Currents Data, Station 8779748 — South Padre Island Coast Guard Station, TX. Accessed March 2026. Available at: https://tidesandcurrents.noaa.gov/stationhome.html?id=8779748

National Oceanic and Atmospheric Administration (NOAA). 2026. Tides and Currents Data, Station 8779770 — Port Isabel, TX. Accessed March 2026. Available at: https://tidesandcurrents.noaa.gov/stationhome.html?id=8779770

Natural Resources Conservation Service (NRCS). 2023. Web Soil Survey: Custom Soil Resource Report for Cameron County, Texas. United States Department of Agriculture. Accessed March 2026. Available at: https://websoilsurvey.nrcs.usda.gov

Texas Parks and Wildlife Department (TPWD). 2016. *Descriptions of Systems, Mapping Subsystems, and Vegetation Types: Ecological Mapping Systems of Texas.* Available at: https://tpwd.texas.gov/landwater/land/programs/landscape-ecology/ems/emst/texasecologicalsystemsdescriptions_2016.pdf

TPWD. 2016. Descriptions of Systems, Mapping Subsystems, and Vegetation Types: Ecological Mapping Systems of Texas. Texas Ecosystem Analytical Mapper (TEAM). Accessed March 2026. Available at: https://tpwd.texas.gov/landwater/land/programs/landscapeecology/ems/

TPWD. 2026. *Texas Coast Salt and Brackish Tidal Marsh.* Available at: https://tpwd.texas.gov/landwater/land/programs/landscape-ecology/ems/emst/herbaceous-wetlands/texas-coast-salt-and-brackish-tidal-marsh

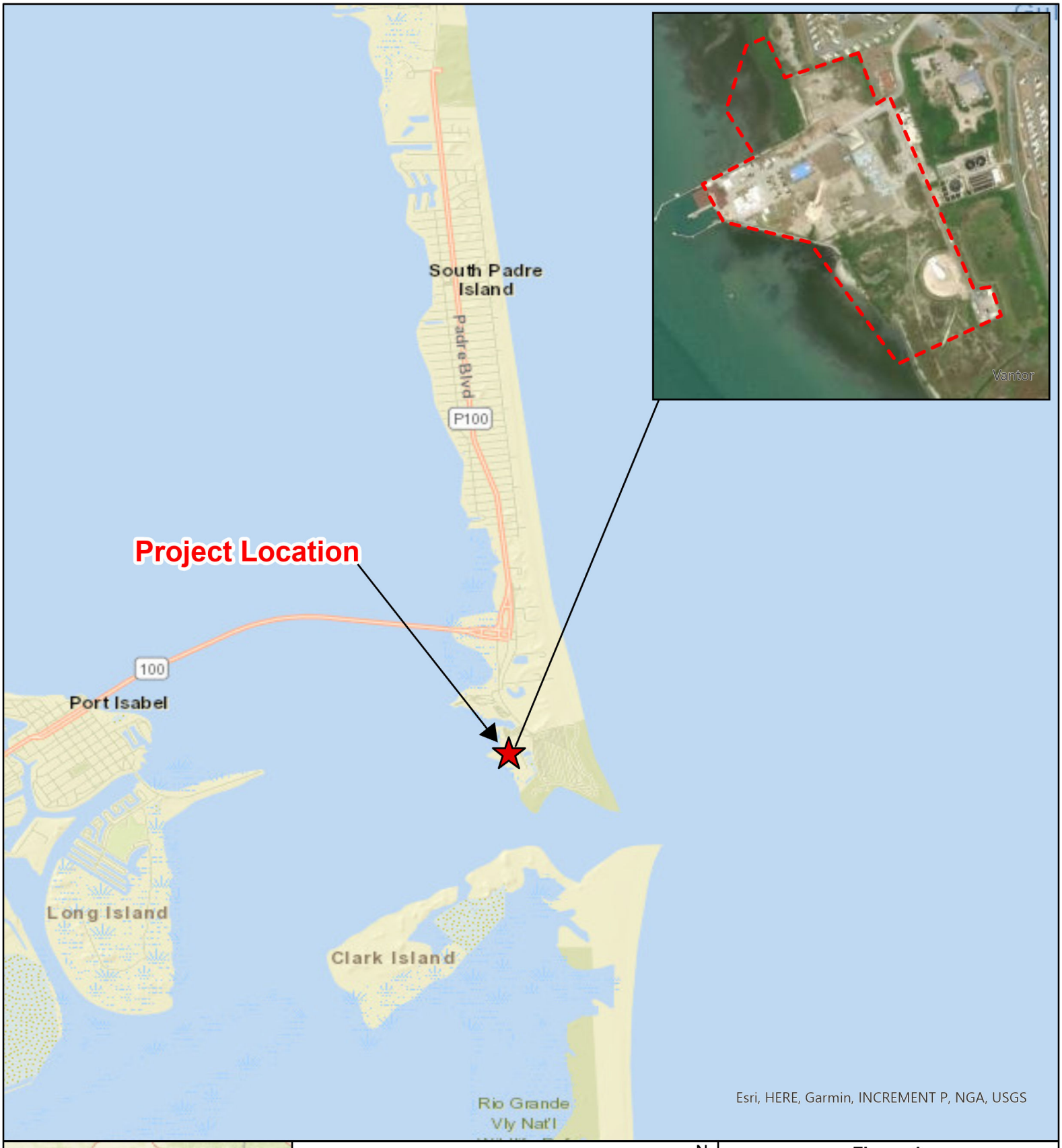
U.S. Fish and Wildlife Service (USFWS). 2026. National Wetlands Inventory Wetlands Mapper. Accessed March 2026. Available at: https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper

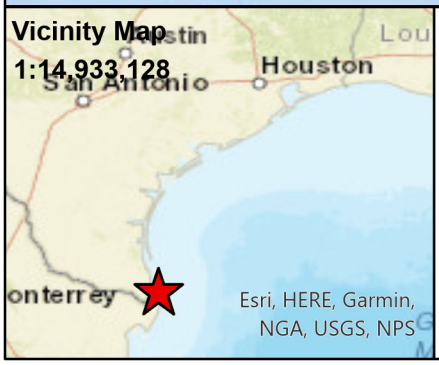
U.S. Geological Survey (USGS). 2025. Port Isabel, Texas 7.5-Minute Series Topographic Quadrangle and LiDAR Elevation Data. National Geologic Map Database. Accessed March 2026. Available at: https://ngmdb.usgs.gov

USGS. 2026a. National Agriculture Imagery Program (NAIP) Aerial Imagery, Cameron County, Texas. Accessed March 2026. Available at: https://earthexplorer.usgs.gov

USGS. 2026b. National Hydrography Dataset (NHD), Texas. Accessed March 2026. Available at: https://www.usgs.gov/national-hydrography/national-hydrography-dataset

Appendix A
Project Maps





Legend

- Project Survey Area
- Project Location

N

0 0.5 1 2 Miles

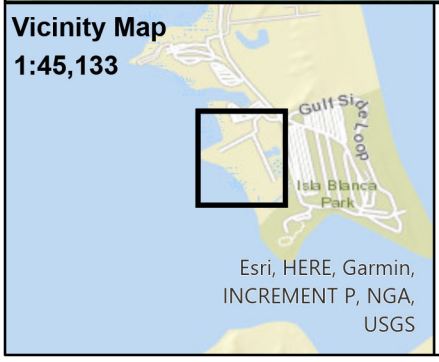
Figure 1:
Project Vicinity Map

Habitat Assessment
Rebuild USCG STA SPI
Cameron County, TX

Date: Apr 01, 2026	
Prepared By: LEI	
Prepared For: USCG STA SPI	
Project: Rebuild STA SPI	

LOYD ENGINEERING, INC.

Vicinity Map
1:45,133



Legend

Project Survey Area

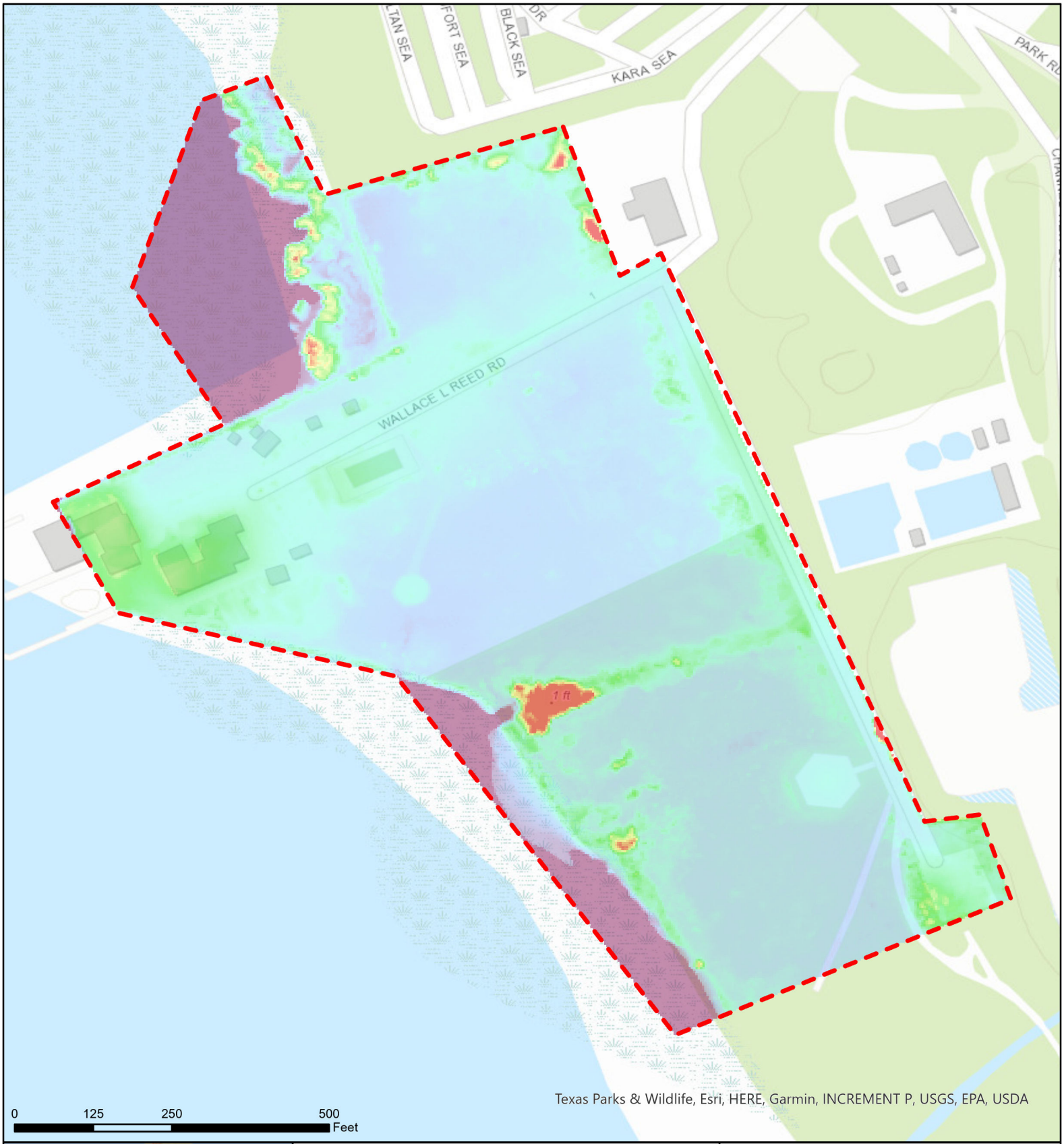
N

Figure 2:
Aerial Overview Map

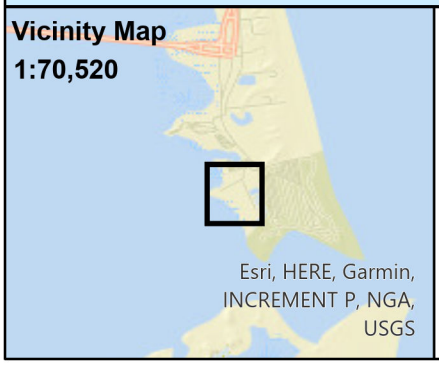
Habitat Assessment
Rebuild USCG STA SPI
Cameron County, TX

Date: Apr 01, 2026	
Prepared By: LEI	
Prepared For: USCG STA SPI	
Project: Rebuild STA SPI	

LOYD ENGINEERING, INC.



Vicinity Map
1:70,520



Legend

Project Survey Area

Lidar Elevation (meters)

3.93565

-0.59

N

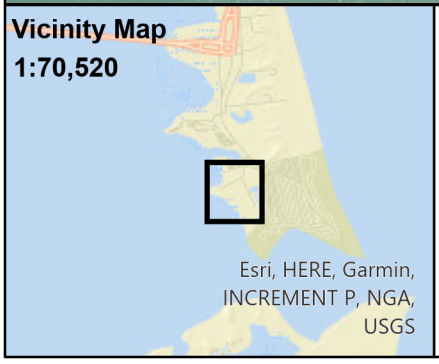
Figure 3:
Topographic & Lidar Overview Map

Habitat Assessment
Rebuild USCG STA SPI
Cameron County, TX

Date: Apr 01, 2026	
Prepared By: LEI	
Prepared For: USCG STA SPI	
Project: Rebuild STA SPI	

LOYD ENGINEERING, INC.

Vicinity Map
1:70,520



Legend

Project Survey Area

Habitat Areas

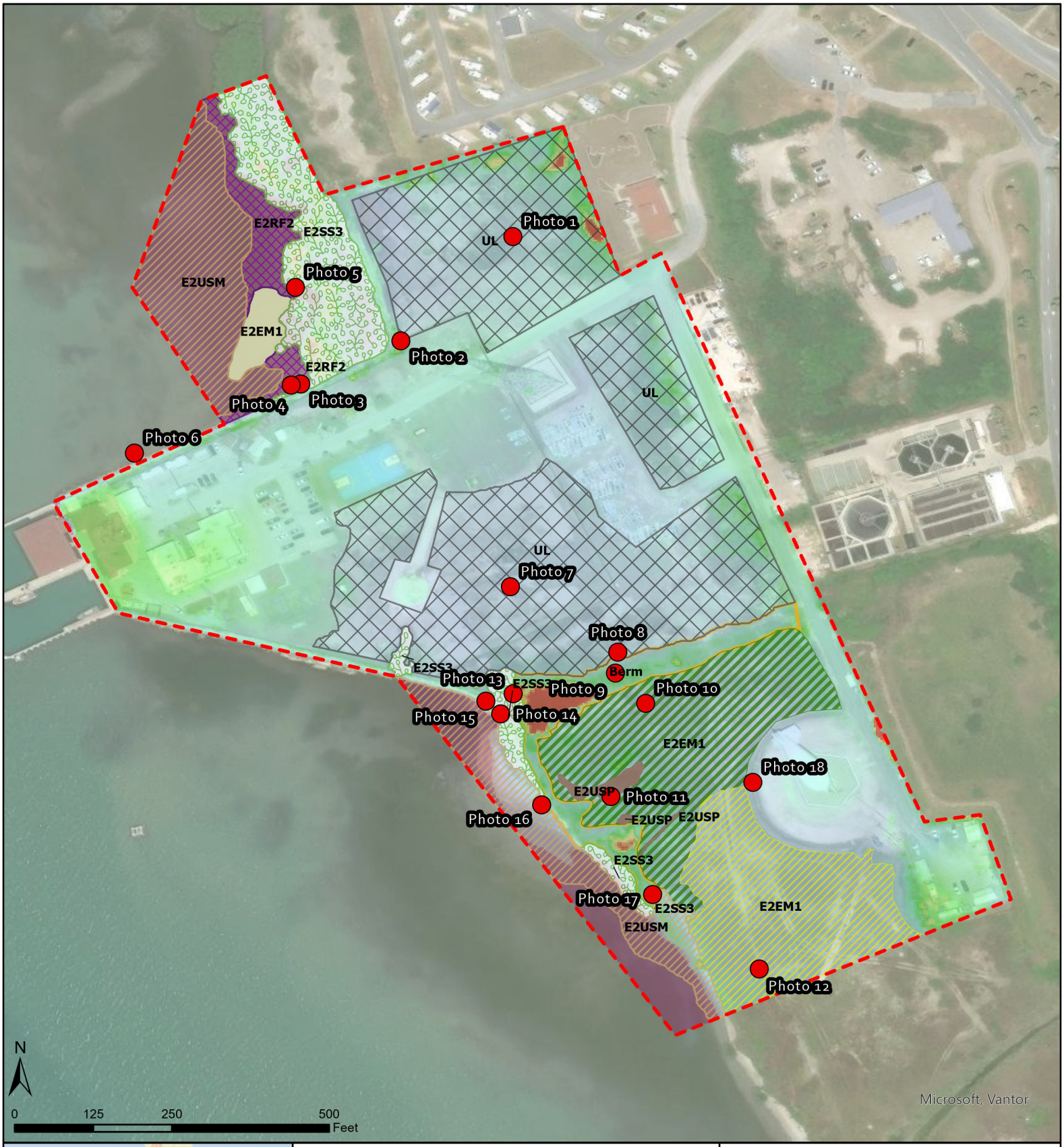
- Upland Berm
- E2EM1N, Low Tidal Marsh
- E2EM1, High Tidal Marsh with Mangrove
- E2EM1P, High Tidal Marsh
- E2RF2N Oyster Reef (scattered)
- E2SS3N, Mangrove
- E2USM, Tidal Flat
- E2USP, Tidal Panne
- Uplands, Sand Sheet

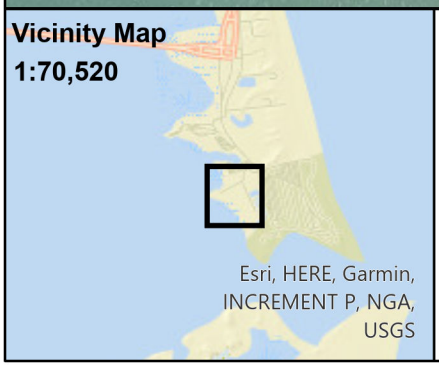
Figure 4: Habitat Map

Habitat Assessment
Rebuild USCG STA SPI
Cameron County, TX

Date: Apr 01, 2026	
Prepared By: LEI	
Prepared For: USCG STA SPI	
Project: Rebuild STA SPI	

LOYD ENGINEERING, INC.





Legend

- Project Survey Area
- Photo Points

Habitat Areas

- Upland Berm
- E2EM1N, Low Tidal Marsh
- E2EM1, High Tidal Marsh with Mangrove
- E2EM1P, High Tidal Marsh
- E2RF2N Oyster Reef (scattered)
- E2SS3N, Mangrove
- E2USM, Tidal Flat
- E2USP, Tidal Panne
- Uplands, Sand Sheet

Lidar Elevation (meters)

3.93565

-0.59

Figure 5:
Habitat Map with LiDAR

Habitat Assessment
Rebuild USCG STA SPI
Cameron County, TX

Date: Apr 01, 2026	
Prepared By: LEI	
Prepared For: USCG STA SPI	
Project: Rebuild STA SPI	

LOYD ENGINEERING, INC.

Appendix B
Representative Photographs

Rebuild USCG Station South Padre Island
Habitat Assessment
Representative Photographs

Photo 1: Representative photo of upland Sea Oxeye Daisy flat area with sand inclusions

Photo 2: Photo west towards upland edge of E2SS3 Mangrove Shrubland. Rock breakwater acts as tidal barrier.

Photo 3: Representative photo of mosaic tidal flat, oyster reef, mangrove shrubland facing east.

Photo 4: Representative photo of mosaic tidal flat, oyster reef, mangrove shrubland facing west.

Photo 5: Photo of mosaic intertidal habitat with emergent herbaceous *Spartina.*

Photo 6: Photo showing rock breakwater wall with subtidal area.

Photo 7: Representative photo of upland sand sheet with unvegetated sand inclusions. Mangrove area visible in background where breakwater has subsided/collapsed.

Photo 8: Representative photo of upland berm area facing south.

Photo 9: photo of upland woody vegetation (Mesquite) located on berm fill area.

Photo 10: Photo of E2EM1 area with higher density of black mangrove encroachment

Photo 11: Representative photo from within E2USP Tidal Panne.

Photo 12: Representative photo of E2EM area with high density of *Spartina patens.*

Photo 13: Representative photo of E2SS upland edge with adjacent upland vegetation.

Photo 14: Photo of treated water outfall located within mangrove stand.

Photo 15: Photo of tidal flat on southern shoreline area (E2USM), wastewater treatment outfall visible.

Photo 16: Photo of tidal flat on southern shoreline area (E2USM), algae and E2SS3 Mangrove Shrubland visible at high tide line.

Photo 17: Representative photo of upland area located on high berm/fill area.

Photo 18: Representative photo of upland developed area edge of E2EM high marsh.

Appendix C

Benthic Habitat Assessment Report

BENTHIC HABITAT ASSESSMENT

REBUILD USCG STATION SOUTH PADRE ISLAND

SOUTH PADRE ISLAND

CAMERON COUNTY, TEXAS

CONTRACT #: 70Z05026F43000005

Prepared for:

United States Coast Guard
5505 Robin Hood Road, Suite K
Norfolk, Virginia 23513-2413

Prepared by:

Lloyd Engineering, Inc.
4828 Loop Central Dr, Suite 800
Houston, Texas 77081

May 2026

Table of Contents

Appendices

Acronyms and Abbreviations

ºC	degrees Celsius
cm	centimeter
ft	feet
GNSS	global navigation satellite system
GPS	global positioning system
LEI	Lloyd Engineering, Inc.
MLLW	Mean lower low water
M	meter
mm	millimeter
Project	Rebuild USCG Station South Padre Island
RTK	Real-Time Kinematic
SAV	submerged aquatic vegetation
SSS	side-scan sonar
TPWD	Texas Parks and Wildlife Department
U.S.	United States
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service

1.0 Introduction

This report presents the results of a Benthic Habitat Assessment conducted on behalf of the United States (U.S.) Coast Guard (USCG) for the proposed Rebuild USCG Station South Padre Island Project (Project). The proposed Project is situated in Cameron County, Texas at the USCG Station located at 1 Wallace L. Reed Rd, South Padre Island, TX 78597. Lloyd Engineering, Inc. (LEI) conducted environmental investigations on March 31, 2026 and April 14-15, 2026, with an approximately 38-acre survey area around the proposed workspace for the Project. The Project exists within Laguna Madre, a hypersaline lagoon that spans the southern portion of the Texas coast. The Laguna Madre is typically very shallow (<1 meter in most areas) and known for its extensive seagrass meadows. The proposed Project is positioned within the U.S. Army Corps of Engineers (USACE) Galveston District. Refer to the site vicinity map provided as Figure 1 in Appendix A for a depiction of the Project location.

The purpose of this survey is to characterize the benthic habitat that exists throughout the survey area and to identify and delineate any areas within the survey area that contain special aquatic resources (e.g., seagrass, other submerged aquatic vegetation [SAV], and oyster habitat). This survey provides a basis for determining potential Project-related impacts to biological resources and support effect determinations (e.g., no effect, may affect, not likely to adversely affect) and coordination with the U.S. Fish and Wildlife Service (USFWS) and other regulatory agencies, as appropriate. Habitat conditions were assessed through a combination of desktop review of available resources and data collected through thorough field reconnaissance.

American Oyster (*Crassostrea virginica*)

American oysters (*Crassostrea virginica*) are sessile, bivalved mollusks that occur throughout the Gulf of America in shallow bays, mud flats, and offshore sandy bars (Stanley and Sellers, 1986). Oysters grow well on a variety of substrates, ranging from rocky bottoms to some types of mud. The presence and growth of oysters are closely correlated with salinity and other abiotic variables.

Oysters spawn from March through November in the northern Gulf of America (Bulter, 1954); peak spawning season in Texas is between May and early June (Stanley and Sellers, 1986). Spawning is triggered mostly by temperature; normal spawning is triggered above 20 degrees Celsius (ºC) and mass spawning is triggered above 25ºC (Pattillo et al., 1997).

Eggs hatch six hours after fertilization and oyster larvae remain in the water column as meroplankton for two to three weeks after hatching (Pattillo et al., 1997). Hopkins (1931) reported settling or attachment to substrate was first observed in Galveston Bay about two months after spawning when the larvae were approximately 0.2 millimeter (mm) in length.

Upon settling or attachment, the sessile juveniles are referred to as spat. Spatfall on the Gulf Coast typically occurs from March to mid-November (Gunter, 1955; Hopkins, 1931). Juveniles begin to develop once larvae attach. Sexual maturity of oysters may occur in the Gulf of America as soon as four weeks after attachment (Menzel, 1955), but generally maturation occurs at 18 to 24 months of age (Quast et al.,1988).

Growth rates of adult oysters can vary greatly depending on conditions. Some adult oysters have been documented to grow at a rate of 50 mm per year (Bulter, 1954). Gunter (1951) provides growth rates of 60 mm in the first year, 90 mm in the second year, and 115 mm in the third year. Based on these growth rates, it is possible for an oyster to reach harvestable size of 76.2 mm (3 inches) within two years.

Oysters play a critical ecological role within the marine and estuarine ecosystems of the Texas coast. They provide many environmental services such as filtering detritus and other particulates from the water column, providing habitat for a wide range of fish and other marine organisms, and stabilizing sediment to help prevent the erosion of shorelines.

Seagrass

The five species of seagrass occurring along the Texas coast are shoal grass (*Halodule wrightii*), turtle grass (*Thalassia testudinum*), manatee grass (*Syringodium filiforme*), star grass (*Halophila engelmannii*), and widgeon grass (*Ruppia maritima*). Each of these species anchor themselves to the sediment with rhizomes, which are root structures that extend horizontally several centimeters (cm) below the sediment surface. Since the maximum height of seagrasses above the sediment surface is typically around 50 cm, the water depth and clarity must be such that sunlight can penetrate to the sediment surface for the seagrass to thrive. Additionally, the sediment must be stable enough to allow seagrasses to establish their rhizomes. Therefore, seagrass thrives in areas with low wave action and predominantly sandy sediment.

Seagrasses play a critical ecological role within the estuarine ecosystems of the Texas coast. They provide natural erosion control through sediment stabilization as well as food and habitat for a wide range of fish and other marine organisms, including some threatened and endangered species (e.g., sea turtles and manatees).

2.0 Methods

The benthic habitat assessment survey methodology was completed in two phases. Phase 1 involved the use of side-scan sonar (SSS) and single-beam bathymetry surveys, in accordance with Texas Parks and Wildlife Department (TPWD) recommendations. These methods identified anomalies on the bay floor throughout the Project area which could be characterized as potential oyster or seagrass habitat. TPWD protocols also require survey of a 500-foot (ft) buffer zone outside the proposed Project area to account for any seagrass or oyster resources that may be indirectly impacted by increased turbidity and sedimentation during Project construction. Figure 2 (Appendix A) illustrates the total area that was surveyed during Phase 1 of the Project. Following the sonar data acquisition and processing, LEI scientists analyzed the data to identify any anomalies within the survey area which could potentially be considered viable oyster habitat. Viable oyster habitat includes any solid substrate to which oyster spat can anchor themselves and sustain a viable oyster population (e.g., live oysters, dead oyster shell, gravel, or solid mad-made structures).

Phase 2 investigated the anomalies identified during Phase 1 via physical sampling to characterize and classify each anomaly into one of four categories described in the TPWD oyster survey protocols (TPWD 2021). Phase 2 also included visual inspection of the Visual Survey Areas shown in Figure 2 in Appendix A for seagrasses and other SAVs in conjunction with the analysis of recent aerial imagery of the survey area.

Preliminary survey methodology was developed using aerial imagery from Google Earth and Nearmap, and recent on-site observations of seagrass and oyster areas in the nearshore areas as evidence that seagrass and oysters are likely present in the shallow waters of the survey area. On April 8, 2026, a meeting with National Marine Fisheries Services Office of Habitat Conservation was conducted to review the proposed methods and protocols to be implemented during field surveys to demonstrate compliance with Federal requirements. Based on the feedback received, the NMFS determined the field survey approach acceptable

for the purposes of this Project. The following sections describe the methods implemented in Phase 1 and Phase 2 of the oyster resources survey.

2.1 Phase 1

LEI conducted a remote-sensing sonar survey within the Project area and buffer zone during Phase 1 of the benthic resources survey. On March 31, 2026, surveyors used an Edgetech 4125i 900 Hz sonar towfish with Hypack Discovery 2023 data acquisition software to acquire high-resolution, geo-rectified imagery of the bay floor within the survey area. The SSS was towed alongside a survey boat along parallel transects spaced approximately 80 feet apart to ensure 150% coverage of the survey area. The range of the SSS was limited to 10 times the water depth to ensure consistent readings and clear images would be generated at shallower depths. The SSS was collected at a frequency range of 400-500 kilohertz, and the horizontal resolution of the SSS data was sufficient (<1 meter[m]) to precisely distinguish oyster shell from sediment (TPWD, 2021). The survey was conducted only during ideal weather conditions with no rainfall and wave heights less than 1.5 ft. Finally, the survey vessels never exceeded 4.5 knots to maintain the accuracy and integrity of the data being collected. Figure 2 (Appendix A) depicts the Phase 1 survey plan and the transects that were followed.

Although SSS surveys have proven to be extremely effective at remote-sensing oyster shells and reefs, TPWD has determined that SSS is not adequately effective for detecting seagrass habitat. The survey crews were instructed to watch for signs of seagrass habitat throughout the survey area while conducting the SSS survey for the purpose of locating potential oyster habitats. Signs of seagrass habitat include sighting seagrass on the bay floor during favorable conditions, floating mats or pieces of uprooted seagrass, and changes in the color of the bay floor substrate as observed from above the water surface.

A mosaic image of the SSS data was created using SeaView MOSAIC software to form a composite image of the bay floor using acquired field data within the survey area. The mosaic was exported as georeferenced tiff files and provided to LEI for analysis and use for verification and characterization efforts during Phase 2. Figure 3 (Appendix A) depicts the mosaic created using the SSS data along with outlines of the anomalies which were identified as potential hard bottom habitat. The SSS anomalies are identified by having a higher sound return that appears brighter than the surrounding soft areas that appear darker.

Single beam bathymetry data was also collected along the same transects using various single beam sonar transducers with Hypack Discovery 2023 data acquisition software. An .xyz point file was created and imported into ESRI ArcGIS Pro software to create a two-dimensional rendering of the contours on the bay floor. Elevation data was reported in the mean lower low water (MLLW) datum. Figure 4 (Appendix A) depicts the bathymetric contours of the survey area.

Real-Time Kinematic (RTK) Global Positioning System (GPS) software ensured sub-meter positioning of the survey boat and Hypack navigation software running on a laptop computer guided the survey boat along the established transects. A geo-referenced digital drawing of the survey area was provided a real-time moving map display for the navigation software. Raw sonar data was recorded by the Hypack software on a laptop computer.

Physical means of hard-bottom and seagrass identification and delineation were conducted in areas of shallow water depths where sonar systems could not be utilized. This depth was determined to be around 3 ft due to the motor of the boat and the SSS towfish starting to drag along the sediment surface, which could have caused damage to the seagrass beds in the area. These methods included navigating along

transects perpendicular to the shoreline while visually inspecting the bay floor for the presence of oyster and seagrass habitats. Observations of oysters or SAV were recorded as data points using a Trimble Geo7X handheld Global Navigation Satellite System (GNSS) capable of sub-meter accuracy. These data points were imported into ESRI ArcGIS Pro software and merged with the sonar data for analysis. Figure 2 (Appendix A) depicts the shallow water areas that were surveyed visually.

Once the sonar data was collected and processed, it was imported into ESRI ArcGIS Pro software for data analysis. SSS, bathymetry, and physical delineation points were analyzed together to identify anomalous areas which could be considered viable oyster habitat and require further investigation in Phase 2 of the Project.

A drone was proposed for collecting the most up-to-date aerial imagery of the survey area to identify areas of potential seagrass for further investigation during Phase 2 of the survey. However, surveyors were unable to fly the drone at the time of the survey due to extremely high winds. Therefore, the most recent aerial imagery was obtained from Nearmap (Nearmap, 2025), which provided t recent high-quality aerial imagery that is available for this particular area taken in November 2025. This imagery was taken during winter-season low tides and optimal water clarity conditions making seagrass boundaries clearly visible and was therefore considered an appropriate substitute for real-time imagery.

2.2 Phase 2

LEI ecologists conducted benthic habitat assessment and verification from April 14-15, 2026, within the designated survey area under TPWD scientific research permit (SRP-1024-118), as required for sampling oysters within Texas state waters.

To comprehensively characterize the identified anomalies in water depths >5 ft, an oyster dredge was deployed at least once within each hard-bottom habitat to determine whether oysters were present. This dredge is designed to capture large shells and associated reef species. The vessel speed during oyster dredge drags was limited to 2.5 knots, and the dredge was never deployed for longer than 60 seconds. Oyster dredge drag tracks were recorded using a Trimble Geo 7X GNSS unit and the retrieved contents at each location were photo-documented, described, measured, and classified. Figure 5 (Appendix A) depicts the oyster dredge drag tracks.

Oysters collected in the oyster dredge were enumerated and categorized by size: shell pieces (partial shells <25 mm), spat (<25 mm), juvenile (26–50 mm), sub-adult (51–75 mm), or adult (>75 mm). The percentages of live and dead oysters were calculated by separating live oysters from the dead and determining a live-to-dead ratio. Live oysters were fully intact and tightly closed, while dead oysters were fully intact with connected valves but slightly to completely open. Whole single-valve or broken shells were not counted as dead oysters but classified as oyster shells. Any shell or man-made substrate larger than 1.5 by 2.5 inches was considered a potential oyster resource (per TPWD). This data was used to classify each anomaly into one of the following categories: mud; scattered shell on mud (brown habitat); buried shell (black habitat); and viable oyster habitat.

In addition to ground-truthing anomalies identified by the SSS, randomly placed control points were established throughout the survey area in locations where no hard-bottom SSS signature was detected. The frequency and distribution of the control points was designed so that one control point was placed for approximately every 2 acres of area that was surveyed via SSS. A Ponar surface sediment sampler was

deployed at these control points to confirm the absence of hard bottom habitat. This random sampling approach established a baseline to confirm that most of the survey area that was not visually observable did not have a hard-bottom signature. It provided important comparison data that supported the accuracy of the SSS findings, helping to confirm the SSS could reliably distinguish between areas with and without hard bottom features.

The substrate and oyster resources verification survey confirmed the composition of anomalies identified by the SSS data and verified the absence of hard-bottom habitat in areas lacking hard-bottom SSS signatures. This information helped characterize the bay floor's composition within the Project survey area, assess potential impacts, and aid in minimizing and avoiding those impacts where possible.

SAVs transects were placed perpendicular to the shoreline with 100-ft spacing. A sample location was placed every 50 ft along each transect, at which a 0.25 m^2 gridded quadrat was placed on the bay floor. Quadrats were also placed along the transects where unique SAV habitats were observed that would have been missed otherwise. The location of each quadrat was recorded in the field using a Trimble Geo7X handheld GNSS device capable of sub-meter accuracy. Photos were then taken of the quadrat and key characterization factors were recorded including the species of seagrass present, the percent cover of each species present, and the canopy height of the seagrass from the substrate surface. LEI scientists recorded observations for the substrate type and any other species present within the quadrat (e.g. microalgae, crabs, etc.). These data points were used to delineate and characterize any SAV habitat identified within the survey area.

3.0 Results

The following sections describe the results and findings from Phase 1 and Phase 2 of the oyster resources survey conducted within the Project area.

3.1 Phase 1

Results of the Phase 1 data acquisition identified five substrate anomaly signatures characteristic of scattered live oysters and/or consolidated oyster reefs totaling up to approximately 0.91 acre of potential oyster resources. SSS signatures indicated that substrate within the survey boundaries consists mostly of sandy silt, silty sand, or hard-packed sand substrates. Figure 3 (Appendix A) depicts the SSS mosaic over the entire survey area.

Bathymetry survey data shows that water depths ranged from 0 to -24 ft MLLW within the survey area, with the vast majority of seagrass and oyster habitat occurring in water depths ranging from 0 to -5 ft MLLW. This is likely due to low sunlight penetration in deeper areas, along with a steep increase in water depth as you get closer to the maintained navigational channel. Figure 4 (Appendix A) illustrates the bathymetric contours over the entire survey area. Figures 3, 4, and 5 (Appendix A) depict the boundaries of each potential oyster resource area identified during Phase 1.

LEI surveyors were unable to complete drone surveys of the area due to high winds that made drone flight unsafe. Therefore, recent aerial imagery was obtained from Nearmap and used to determine what areas would most likely contain seagrass habitat that would need to be further investigated for Phase 2. These areas are shown in Figure 2 (Appendix A).

3.2 Phase 2

Results of the Phase 2 habitat verification survey revealed that out of the five potential habitat areas identified during Phase 1, two areas contained oysters. One area covered approximately 0.51 acre and the other covered approximately 2.85 acres in the shallow-water area. The boundaries for these areas were established through a comprehensive analysis process that included the input of SSS data, aerial imagery, oyster dredge tows, and visual observations made by LEI scientists during Phase 2 of the survey. Both areas were characterized as scattered shell and shell clusters across mostly silty-sand substrates. No consolidated oyster reefs were observed within the Project survey area. The majority of the oysters observed during the survey were dead, however some of the oyster shell clusters contained live organisms. All oyster shells collected during dredge tows had characteristics that suggested the shells had been dead/buried for a significant period. No soft tissues were present, and the shells showed signs of dark staining and decay from being buried. None of the oyster shells observed from the dredge tows were intact or showed signs of being recently alive. Oyster shell clusters observed in the shallow water area did contain some live organisms. Most of the shells and live oysters observed during the survey were in the sub-adult to adult size range. This is likely due to the hyper-saline nature of the Laguna Madre ecosystem, which is not conducive to the survival and growth of oysters. Most associated reef organisms observed during the surveys were competitors or obligatory species. Crabs of various species and stiff pen shells (*Atrina rigida*) were the most observed reef-associated species, with very few hooked mussels or barnacles observed on the shells that were sampled or observed. Field ecologists also observed very few oyster predators (e.g. boring sponges) in the samples and no oyster drills were observed. However, several shells were observed with bore holes, indicating that there could have been predators present historically.

Figure 5 (Appendix A) shows the precise location of each oyster dredge track, ponar sample location, photo location, and the locations and boundaries of each habitat area investigated during Phase 2. Figure 6 (Appendix A) shows the final habitats that were delineated and defined as oyster habitat. Table 1 (Appendix B) describes the results of each oyster dredge tow completed during Phase 2 of the survey. Refer to Appendix C for a photo log showing the contents of each patent tong and ponar sample. Refer to Appendix D for the field data sheets containing field descriptions of each patent tong and ponar sample, along with the shell counts for each patent tong sample. Table 1 summarizes the oyster habitats that were found and characterized during Phase 2 of the survey.

Phase 2 of the survey identified four areas of seagrass habitat, which encompass the majority of the survey area with 5 feet or less water depth totaling approximately 10.71 acres. Out of 83 quadrat locations observed across 12 transects within the survey area, seagrass was observed at 65 locations with at least three seagrass-positive quadrats on each transect. Figure 7 (Appendix A) shows the survey transects that were utilized and the precise location of each survey quadrat. The two species of seagrass observed in these areas were manatee grass and turtle grass. Manatee grass was the most frequent and widespread throughout the site but was generally found to be less dense by percent cover (22.5% average across all quadrats) than the turtle grass (29.78% average covered across all quadrats) per quadrat. Similarly, the quadrats dominated by manatee grass were generally found to have shorter canopy heights (<4 inches) than quadrats dominated by turtle grass (up to 8 inches). Additionally, a piece of star grass was observed floating on the surface of the water near quadrat location T9-02, which suggests the presence of this species within the survey area, although it was not observed in any of the quadrats. There were no signs of disease, unhealthy levels, predation, or parasitism observed at any point during the survey. Most quadrats also contained microalgae on top of the seagrass, as well as other species of floating seaweed (e.g., *Sargassum*

sp.) that became tangled with the seagrass. Several seagrass predators were observed during Phase 2 of the survey: green sea turtles (*Chelonia mydas*), mottled sea hare (*Aplysia fasciata*), and sheepshead (*Archosargus probatocephalus*). Figure 8 (Appendix A) shows the final habitats that were delineated and defined as SAV habitat. These areas were drawn after careful analysis of the survey data, in combination with the most recent and clear aerial imagery available (Nearmap 2025). Visible boundaries seen in aerial imagery used (November 2025) were observed to match the boundaries observed during the on-site survey. Due to the timing of the aerial imagery and the survey being conducted during seagrass dormancy, It should be noted that the 10.7 acres likely represents a seasonal lowpoint in the extent of seagrass coverage and density that may increase during the late summer months during the height of the growth cycle. However, seagrass is known to grow via rhizome elongation and therefore would not be expected to appear in previously uncolonized areas of bare substrate that are not immediately adjacent to existing seagrass beds (Kaldy et al. 2004). Table 2 (Appendix B) describes the data collected from each quadrat location. A photo log containing photos from each quadrat can be found in Appendix C.

Table 1: Summary of Special Aquatic Resources within the Project Survey Area

Habitat I.D.	Classification	Acreage
Oyster Habitat		
HB-01	Scattered Shell on Mud (Brown Habitat)	2.85
HB-02	Scattered Shell on Mud (Brown Habitat)	0.51
	Total Oyser Area:	3.36
Seagrass Habitat		
SAV-1	Seagrass Bed	0.08
SAV-2	Seagrass Bed	0.01
SAV-3	Seagrass Bed	4.2
SAV-4	Seagrass Bed	6.42
	Total Seagrass Area:	10.71

4.0 Conclusions

The survey area contains several habitats that are classified as special aquatic resources (i.e., oyster habitat and seagrass beds), totaling approximately 14.07 acres. Two areas consisting of scattered oyster shells and shell clusters totaling approximately 3.36 acres were located on the north side of the existing USCG South Padre Island Station. No consolidated oyster reefs were observed within the Project survey area. The majority of the shells observed in the survey area were dead organisms in the sub-adult to adult size range, however some of the scattered oyster clusters did contain live organisms of similar size. Several reef-associated species were also observed including various species of crabs and stiff pen shells. There were very few signs of oyster predators or parasites observed, however there was evidence to suggest that they may have been present historically.

The survey area also contains four areas of seagrass habitat totaling approximately 10.71 acres. Manatee grass and turtle grass were observed within the survey area; manatee grass was the most prevalent throughout the site. Canopy heights ranged from 2-8 inches throughout the site, with the majority of the habitat having a canopy height of 3 inches. Associated species included microalgae species, floating seaweed species, green sea turtles, mottled sea hares, and sheepshead.

Any area that was not classified as oyster or seagrass habitat was considered unconsolidated bottom consisting of predominantly fine sand and silty sand substrates. These areas accounted for approximately 26.8 acres within the survey area and include areas between the mangroves, oyster, and seagrass habitats shown in Figures 6 and 8, respectively, as well as areas extending into the maintained channel to the west of the oyster and seagrass habitat areas.

5.0 References

Bulter, P.A. 1954. Summary of Our Knowledge of the Oyster in the Gulf of Mexico. U.S. Fish & Wildlife Service. Fish. Bull. 55(89):479-489.

Gunter, G. 1951. The West Indian Tree Oyster on the Louisiana Coast and Notes on Growth of the Three Gulf Coast Oysters. Science 113:516-517.

———. 1955. Mortality of Oysters and Abundance of Certain Associates as Related to Salinity. Ecology 36(4):601-605.

Hopkins, A.E. 1931. Factors Influencing the Spawning and Setting of Oysters in Galveston Bay, Texas. Bulletin of Bur. Fish 47:57-83.

Kaldy, J.E., K.H. Dunton, J.L. Kowalski, and K.S. Lee. 2004. Factors controlling seagrass revegetation onto dredged material deposits: a case study in lower Laguna Madre, Texas. *Journal of Coastal Research* 20(2):590–602.

Menzel, R.W. 1955. Some Phases of the Biology of *Ostrea equestris* Say and a Comparison with *Crassostrea virginica* (Gmelin). Institute of Marine Science. The University of Texas 4:70-153.

Nearmap. 2025. High-Resolution Aerial Imagery, South *Padre* Island, Cameron County, Texas. Nearmap US, Inc., Barangaroo, New South Wales, Australia. Imagery Date: November 5, 2025. Accessed April 2026.

Pattillo, M.E., T.E. Czapla, D.M. Nelson, and M.E. Monaco. 1997. Distribution and Abundance of Fishes and Invertebrates in Gulf of Mexico Estuaries, Volume II: Data Summaries. ELMR Rep. No. 11. NOAA/NOS Strategic Environmental Assessments Division, Rockville, MD. 377 pp.

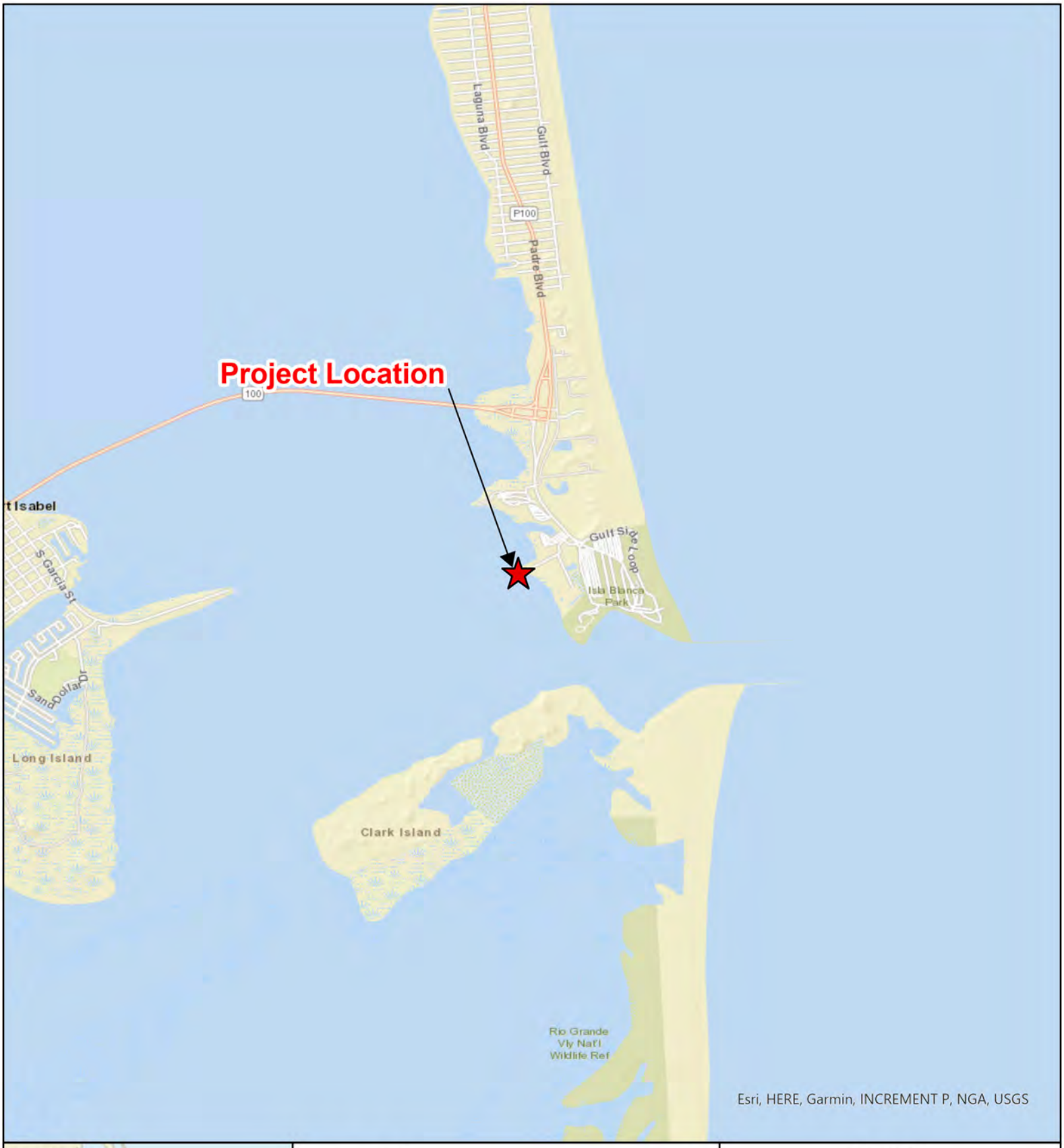
Quast, W.D., M.A. Johns, D.E. Pitts, Jr., and G.C. Clark. 1988. Texas Oyster Fishery Management Plan. Texas Parks and Wildlife Department, Austin, Texas.

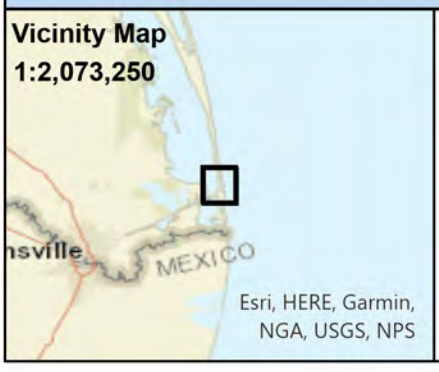
Stanley, J.G., and M.A. Sellers. 1986. Species Profile: Life Histories and Environmental Requirements of Coastal Fishes and Invertebrates (Gulf of Mexico) – American Oyster. U.S. Fish & Wildlife Service Biological Report 82(11.64). U.S. Army Corps of Engineers, TR EL-82-4. 25 pp.

Texas Parks and Wildlife Department. *Recommended Survey Protocols for Oyster Habitat: For Linear Projects*. Working document, Apr. 2021. PDF.

Appendix A

Project Figures





Legend

Project Location

N

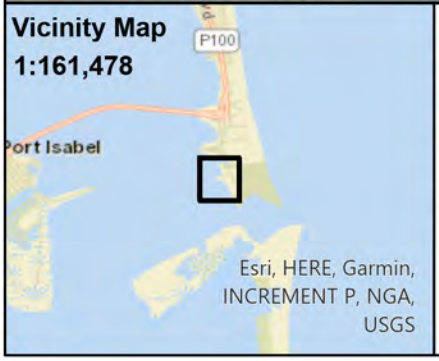
0 0.25 0.5 1 Miles

Figure 1:
Project Vicinity Map

Rebuild USCG Station South Padre Island Project
Benthic Habitat Assessment
Cameron County, Texas

Date: Apr 30, 2026	
Prepared By: LEI	
Prepared For: USCG	
Project: USCG SPI	

LLOYD ENGINEERING, INC.



Legend

- Project Survey Area
- Side Scan Sonar Survey Transects
- Visual Survey Areas (<3' of Water)

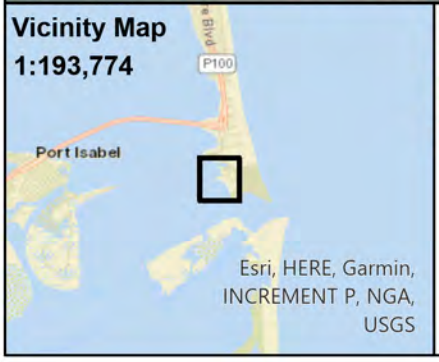
N

Figure 2:
Phase I Survey Plan

Rebuild USCG Station South
Padre Island Project
Benthic Habitat Assessment
Cameron County, Texas

Date: Apr 30, 2026	
Prepared By: LEI	
Prepared For: USCG	
Project: USCG SPI	

LLOYD ENGINEERING, INC.



Legend

- Project Survey Area
- Potential Oyster Habitat (Based on SSS Data)

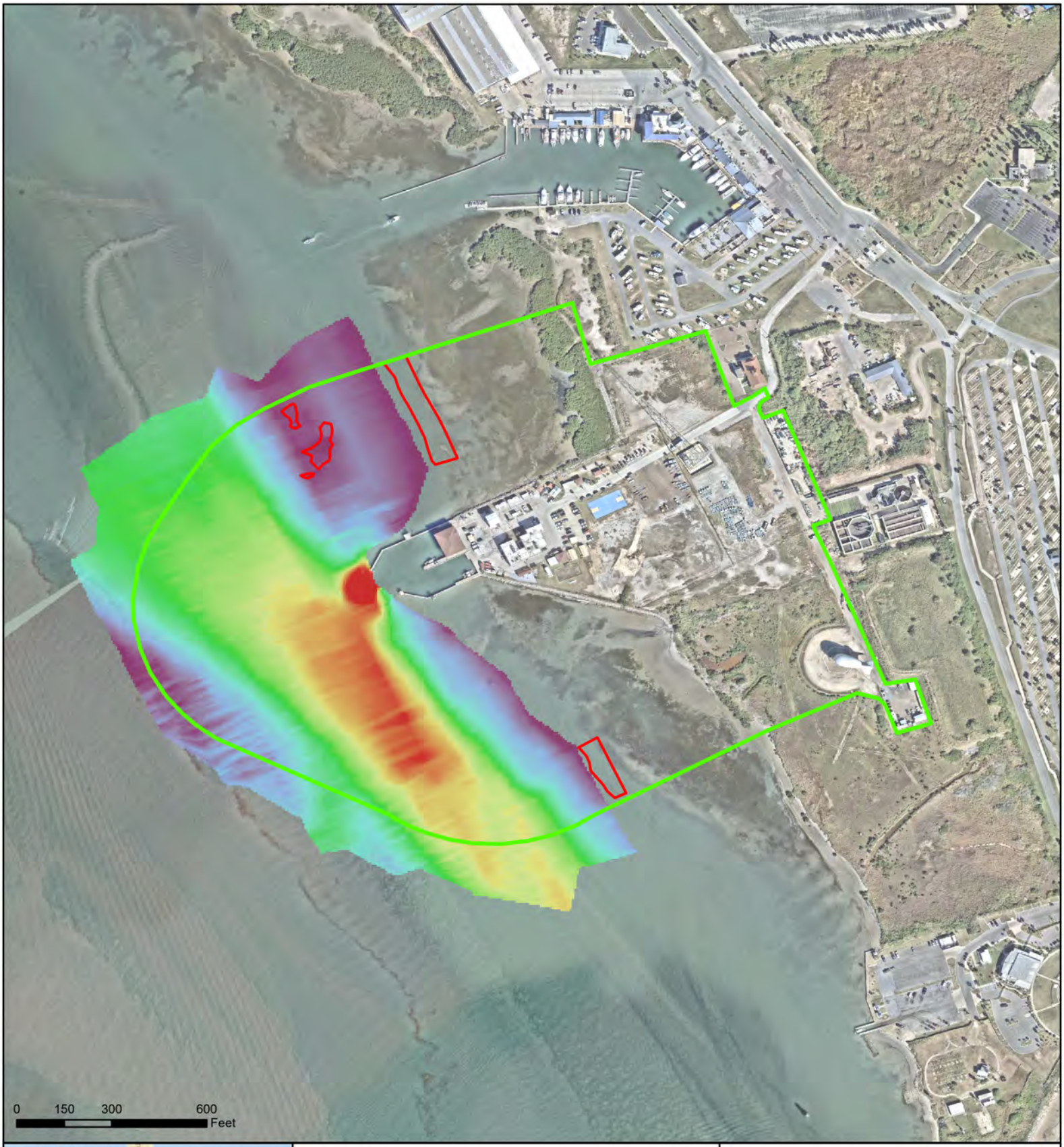
N

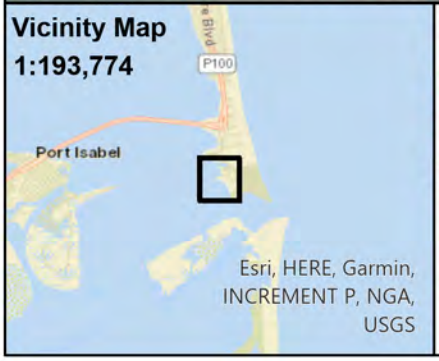
Figure 3:
Side Scan Sonar Data

Rebuild USCG Station South
Padre Island Project
Benthic Habitat Assessment
Cameron County, Texas

Date: Apr 30, 2026	
Prepared By: LEI	
Prepared For: USCG	
Project: USCG SPI	

LLOYD ENGINEERING, INC.





Legend

- Project Survey Area
- Potential Oyster Habitat (Based on SSS Data)

Sediment Elevation (ft. MLLW)

-3.58958

-28.9435

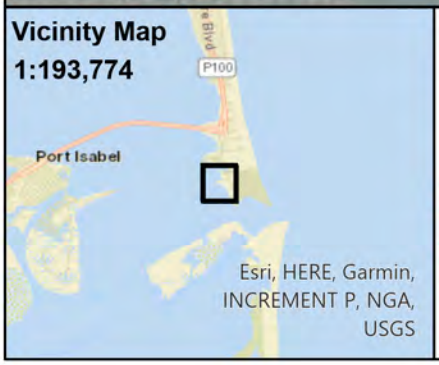
N

Figure 4:
Bathymetry Data

Rebuild USCG Station South
Padre Island Project
Benthic Habitat Assessment
Cameron County, Texas

Date: Apr 30, 2026	
Prepared By: LEI	
Prepared For: USCG	
Project: USCG SPI	

LLOYD ENGINEERING, INC.



Legend

- Photo Locations
- Ponar Sample Locations
- Oyster Dredge Tracks
- Potential Oyster Habitat (Based on SSS Data)
- Project Survey Area

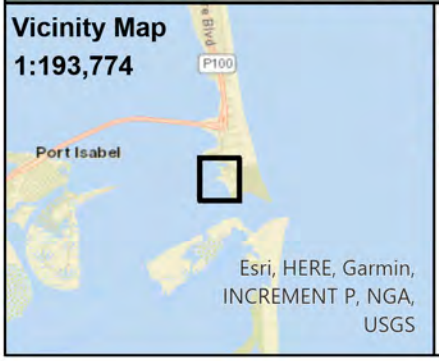
N

Figure 5:
Phase 2 Oyster Survey Map

Rebuild USCG Station South
Padre Island Project
Benthic Habitat Assessment
Cameron County, Texas

Date: Apr 30, 2026	
Prepared By: LEI	
Prepared For: USCG	
Project: USCG SPI	

LLOYD ENGINEERING, INC.



Legend

- Project Survey Area
- Final Oyster Habitat Areas (Scattered Shell)

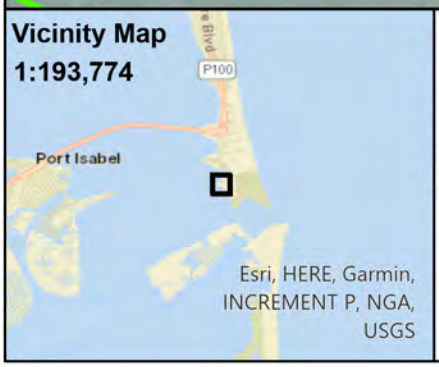
N

Figure 6:
Final Oyster Delineation Map

Rebuild USCG Station South
Padre Island Project
Benthic Habitat Assessment
Cameron County, Texas

Date: Apr 30, 2026	
Prepared By: LEI	
Prepared For: USCG	
Project: USCG SPI	

LLOYD ENGINEERING, INC.



Legend

- Project Survey Area
- Survey Transects

SAV Quadrats

- No SAV Present
- SAV Present

N

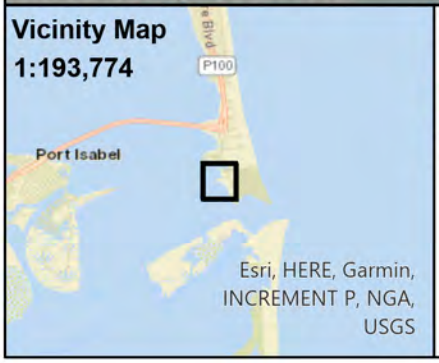
Figure 7:
SAV Survey Map

Rebuild USCG Station South
Padre Island Project
Benthic Habitat Assessment
Cameron County, Texas

Date: Apr 30, 2026	
Prepared By: LEI	
Prepared For: USCG	
Project: USCG SPI	

LLOYD ENGINEERING, INC.

Vicinity Map
1:193,774



Legend

- Project Survey Area
- Final Seagrass Habitats

N

Figure 8:
Final SAV Habitat Map

Rebuild USCG Station South
Padre Island Project
Benthic Habitat Assessment
Cameron County, Texas

Date: Apr 30, 2026	
Prepared By: LEI	
Prepared For: USCG	
Project: USCG SPI	

LLOYD ENGINEERING, INC.

Appendix B

Benthic Habitat Result Tables

Table 1: Oyster Dredge Tow Results

Dredge Tow ID	Time	Water Depth (ft)	Photo ID	Tow Count	Substrate Composition/Notes	Oyster Composition							
						Number of Live Oysters by Size				Total Dead Oysters	Total Live Oysters	% Live Oysters	% Dead Oysters
						Spat (<25mm) (<0.98")	Juvenile (26-50mm) (0.99-1.06")	Sub-Adult (51-75mm) (1.07-2.95")	Adult (>76mm) (>2.96")				
D1	16:10	5.0	1028	1	Fine gray sand	0	0	0	1	1	0	0	100
D2	16:15	5.0	N/A	1	Fine grayish-brown sand	0	0	0	0	0	0	N/A	N/A
D3	16:25	5.0	N/A	1	Fine grayish-brown sand	0	0	0	0	0	0	N/A	N/A
D4	16:30	5.0	N/A	1	Fine grayish brown sand	0	0	0	0	0	0	N/A	N/A
D5	16:36	4.0	N/A	1	Fine grayish brown sand	0	0	0	0	0	0	N/A	N/A
D6	16:42	3.0	1029-1030	1	Fine grayish-brown sand, 2 large stiff pen-shells, 1 sand crab, 2 atlantic rangia shells, seagrass and seaweed also observed.	0	0	3	4	7	0	N/A	100
D7	16:50	4.0	N/A	1	Fine grayish-brown sand	0	0	0	0	0	0	N/A	N/A
Overall Totals						Total Spat	Total Juvenile	Total Sub-Adult	Total Adult	Total Dead Oysters	Total Live Oysters	Avg. % Live Oysters	Avg. % Dead Oysters
						0	0	3	5	8	0	0	100

Table 2:
Submerged Aquatic Vegetation Survey Quadrat Result Table

Quadrat ID	Transect ID	Habitat ID	Time	Water Depth (ft)	Substrate Composition/Notes	Percent Cover by Species					Total SAV Percent Cover	Bed Density Classification	Canopy Height (in)
						H. wrightii (shoal grass)	*T. testudinum* (turtle grass)	*S. filiforme* (manatee grass)	*H. engelmannii* (star grass)	*R. maritima* (widgeon grass)			
T1-01	T1	SAV-4	9:08:00 AM	1.0	Dark gray sand with shell hash. Sea hare observed.	-	15	15	-	-	30	Moderate	3
T1-02	T1	SAV-4	9:21:00 AM	0.9	Dark gray sand	-	-	50	-	-	50	Moderate	4
T1-03	T1	SAV-4	9:24:00 AM	1.1	Dark gray sand	-	100	-	-	-	100	Dense	6
T1-04	T1	SAV-4	9:29:00 AM	1.2	Gray silty sand. Microalgae present.	-	100	-	-	-	100	Dense	8
T1-05	T1	SAV-4	9:33:00 AM	1.1	Gray silty sand. Microalgae present.	-	-	5	-	-	5	Sparse	3
T1-06	T1	SAV-4	9:35:00 AM	1.1	Gray silty sand. Microalgae present.	-	-	5	-	-	5	Sparse	3
T1-07	T1	SAV-4	9:37:00 AM	1	Gray silty sand with oyster shell. Microalgae present.	-	-	50	-	-	50	Moderate	3
T2-01	T2	SAV-4	9:41:00 AM	0.8	Gray silty sand. Microalgae present.	-	-	30	-	-	30	Moderate	3
T2-02	T2	SAV-4	9:46:00 AM	0.8	Gray silty sand with shell hash and oyster clusters	-	-	5	-	-	5	Sparse	3
T2-03	T2	SAV-4	9:48:00 AM	0.8	Gray silty sand with shell hash and oyster clusters	-	-	7	-	-	7	Sparse	3
T2-04	T2	SAV-4	9:50:00 AM	0.9	Gray silty sand with shell hash and oyster clusters	-	-	15	-	-	15	Low	3
T2-05	T2	SAV-4	9:53:00 AM	1	Dark gray silty sand with mircoalgae present	-	10	10	-	-	20	Low	3
T2-06	T2	SAV-4	10:12:00 AM	0.6	Dark gray silty sand with shell hash	-	-	10	-	-	10	Sparse	3
T2-07	T2	SAV-4	10:14:00 AM	1	Dark gray silty sand with shell hash and mircoalgae	-	-	30	-	-	30	Moderate	3
T2-08	T2	-	10:16:00 AM	2.0	Algae and seaweed present, no SAV present.	-	-	-	-	-	-	Sparse	-
T3-01	T3	-	10:22:00 AM	2.5	Dark gray sand with shell hash. No SAV present	-	-	-	-	-	-	Sparse	-
T3-02	T3	SAV-4	10:25:00 AM	1.5	Gray silty sand with shell hash. Microalgae present.	-	5	-	-	-	5	Sparse	5
T3-03	T3	SAV-4	10:28:00 AM	1	Dark gray sand with shell pieces. Microalgae present.	-	10	-	-	-	10	Low	3
T3-04	T3	SAV-4	10:34:00 AM	1	Dark gray sand with shell hash	-	-	5	-	-	5	Sparse	2
T3-05	T3	SAV-4	10:36:00 AM	1	Dark gray sand with shell hash	-	-	10	-	-	10	Low	3
T3-06	T3	SAV-4	10:38:00 AM	0.8	Dark gray sand with shell has. Microalgae present.	-	-	20	-	-	20	Low	3
T3-07	T3	SAV-4	10:41:00 AM	0.8	Dark gray silty sand.	-	-	5	-	-	5	Sparse	3
T4-01	T4	-	10:44:00 AM	0.5	Brown silt with *Spartina* and oyster clusters. No SAV present.	-	-	-	-	-	-	Sparse	-
T4-02	T4	SAV-4	10:47:00 AM	0.5	Gray silty sand with shell pieces and oyster clusters	-	-	15	-	-	15	Low	3
T4-03	T4	SAV-4	10:51:00 AM	0.5	Gray sand with shell hash and oyster clusters	-	-	5	-	-	5	Sparse	3
T4-04	T4	SAV-4	10:54:00 AM	0.5	Gray sand with shell hash	-	-	10	-	-	10	Low	3
T4-05	T4	SAV-4	10:57:00 AM	0.8	Gray sand with shell hash	-	-	5	-	-	5	Sparse	3
T4-06	T4	SAV-4	10:59:00 AM	1.75	Gray sand with shell hash	-	5	5	-	-	10	Low	2

Table 2:
Submerged Aquatic Vegetation Survey Quadrat Result Table

Quadrat ID	Transect ID	Habitat ID	Time	Water Depth (ft)	Substrate Composition/Notes	Percent Cover by Species					Total SAV Percent Cover	Bed Density Classification	Canopy Height (in)
						H. wrightii (shoal grass)	*T. testudinum* (turtle grass)	*S. filiforme* (manatee grass)	*H. engelmannii* (star grass)	*R. maritima* (widgeon grass)			
T4-07	T4	-	11:03:00 AM	2.0	Gray sand with shell hash. No SAV present.	-	-	-	-	-	-	Sparse	-
T5-01	T5	SAV-4	11:08:00 AM	1.0	Gray sand with shell hash. No SAV present.	-	-	-	-	-	-	Sparse	-
T5-02	T5	SAV-4	11:09:00 AM	1	Gray sand with shell hash.	-	-	100	-	-	100	Dense	5
T5-03	T5	SAV-4	11:12:00 AM	0.75	Coarse gray sand with heavy shell hash.	-	-	20	-	-	20	Low	3
T5-04	T5	SAV-4	11:17:00 AM	1	Dark gray sand with shell and oyster clusters	-	-	5	-	-	5	Sparse	2
T5-05	T5	SAV-4	11:19:00 AM	1	Dark gray sand with shell and oyster clusters	-	-	90	-	-	90	Dense	3
T5-06	T5	SAV-4	11:21:00 AM	1	Dark gray sand with shell and oyster clusters	-	-	60	-	-	60	Moderate	3
T5-07	T5	SAV-4	11:23:00 AM	1.0	Dark gray sand with shell and oyster clusters	-	-	40	-	-	40	Moderate	3
T5-08	T5	-	11:25:00 AM	1.0	Gray silt and oyster clusters. No SAV present.	-	-	-	-	-	-	Sparse	-
T5-09	T5	-	11:27:00 AM	0.5	Gray silt and oyster clusters. No SAV present.	-	-	-	-	-	-	Sparse	-
T6-01	T6	SAV-3	12:32:00 PM	2	Dark gray sand with shell hash. Green sea turtle observed in the area	-	-	80	-	-	80	Dense	4
T6-02	T6	SAV-3	12:36:00 PM	1.75	Dark gray sand with shell hash. Green sea turtle observed in the area	-	-	80	-	-	80	Dense	4
T6-03	T6	SAV-3	12:40:00 PM	2	Dark gray sand wth shell hash. Green sea turtle observed in the area.	-	10	60	-	-	70	Dense	4
T6-04	T6	-	12:45:00 PM	2	Dark gray and brown sand. No SAV present.	-	-	-	-	-	-	Sparse	-
T7-01	T7	-	12:46:00 PM	1.5	Dark gray and brown sand. No SAV present.	-	-	-	-	-	-	Sparse	-
T7-02	T7	SAV-3	12:52:00 PM	2.0	Dark gray sand with microalgae present.	-	-	40	-	-	40	Moderate	3
T7-03	T7	SAV-3	12:55:00 PM	2.25	Dark gray sand with shell hash. Microalgae present.	-	-	20	-	-	20	Low	3
T7-04	T7	SAV-3	1:02:00 PM	2.25	Dark gray sand with shell hash. Microalgae present.	-	10	30	-	-	40	Moderate	3
T7-05	T7	SAV-3	1:04:00 PM	2.5	Dark gray sand with shell hash. Microalgae present.	-	-	30	-	-	30	Moderate	3
T7-06	T7	SAV-3	1:11:00 PM	3	Gray sand with shell hash. Seaweed present.	-	-	5	-	-	5	Sparse	3
T7-07	T7	SAV-3	1:19:00 PM	3.5	Dark gray sand	-	-	10	-	-	10	Low	3
T8-01	T8	SAV-3	1:25:00 PM	3.0	Dark gray sand with shell hash	-	-	15	-	-	15	Low	4
T8-02	T8	SAV-3	1:28:00 PM	3.0	Dark gray sand. Green sea turtle observed in the area. No SAV present.	-	-	-	-	-	-	Sparse	-
T8-03	T8	SAV-3	1:31:00 PM	2.5	Dark gray sand with shell hash.	-	5	5	-	-	10	Low	3
T8-04	T8	SAV-4	1:33:00 PM	2	Dark gray sand with shell hash.	-	10	80	-	-	90	Dense	3
T8-05	T8	-	1:36:00 PM	1.5	Grayish-brown fine sand. No SAV present.	-	-	-	-	-	-	Sparse	-
T8-06	T8	SAV-2	1:38:00 PM	1.25	Grayish-brown fine sand	-	15	60	-	-	75	Dense	4

Table 2:
Submerged Aquatic Vegetation Survey Quadrat Result Table

Quadrat ID	Transect ID	Habitat ID	Time	Water Depth (ft)	Substrate Composition/Notes	Percent Cover by Species					Total SAV Percent Cover	Bed Density Classification	Canopy Height (in)
						H. wrightii (shoal grass)	*T. testudinum* (turtle grass)	*S. filiforme* (manatee grass)	*H. engelmannii* (star grass)	*R. maritima* (widgeon grass)			
T8-07	T8	-	1:40:00 PM	1	Grayish-brown fine sand. No SAV present.	-	-	-	-	-	-	Sparse	-
T8-08	T8	-	1:45:00 PM	1.0	Dark gray sand with shell hash. No SAV present	-	-	-	-	-	-	Sparse	-
T9-01	T9	-	1:48:00 PM	0.5	Dark gray sand with shell hash. No SAV present	-	-	-	-	-	-	Sparse	-
T9-02	T9	SAV-3	1:50:00 PM	1	Dark gray sand with shell hash.	-	5	5	-	-	10	Low	3
T9-03	T9	SAV-3	1:52:00 PM	2	Dark gray sand with shell hash. Floating star grass observed in the area.	-	20	50	-	-	70	Dense	4
T9-04	T9	SAV-3	1:55:00 PM	2.5	Dark gray sand with shell and oyster clusters. Stiff pen shell observed.	-	5	20	-	-	25	Low	5
T9-05	T9	SAV-3	2:03:00 PM	3	Dark gray sand with shell and seaweed clumps	-	-	5	-	-	5	Sparse	3
T9-06	T9	SAV-3	2:06:00 PM	4.0	Dark gray sand with shell and seaweed clumps. No SAV present.	-	-	-	-	-	-	Sparse	-
T10-01	T10	SAV-3	2:11:00 PM	3.5	Dark gray sand with shell and seaweed clumps on top of SAV.	-	-	5	-	-	5	Sparse	3
T10-02	T10	SAV-3	2:17:00 PM	2.5	Dark gray sand with shell hash and seaweed clumps.	-	-	5	-	-	5	Sparse	6
T10-03	T10	SAV-3	2:19:00 PM	2.5	Dark gray sand with shell pieces. Sea turtle observed in the area.	-	70	-	-	-	70	Dense	5
T10-04	T10	SAV-3	2:22:00 PM	2	Dark gray sand with shell pieces.	-	5	20	-	-	25	Low	5
T10-05	T10	SAV-3	2:25:00 PM	2	Dark gray sand with shell pieces.	-	-	30	-	-	30	Moderate	3
T10-06	T10	-	2:28:00 PM	1	Dark gray sand with shell pieces. No SAV present.	-	-	-	-	-	-	Sparse	-
T10-07	T10	-	2:29:00 PM	0.25	Dark gray sand with shell pieces. No SAV present.	-	-	-	-	-	-	Sparse	-
T11-01	T11	-	2:31:00 PM	2.5	Dark gray sand with shell pieces. No SAV present.	-	-	-	-	-	-	Sparse	-
T11-02	T11	SAV-3	2:33:00 PM	1	Dark gray sand with shell pieces.	-	5	5	-	-	10	Low	3
T11-03	T11	SAV-3	2:37:00 PM	1.25	Dark gray sand with shell	-	-	80	-	-	80	Dense	3
T11-04	T11	SAV-3	2:39:00 PM	2	Dark gray sand with shell	-	-	25	-	-	25	Low	3
T11-05	T11	SAV-3	2:42:00 PM	2.25	Dark gray sand with shell	-	-	25	-	-	25	Low	3
T11-06	T11	SAV-3	2:44:00 PM	2.25	Dark gray sand with shell	-	-	40	-	-	40	Moderate	3
T11-07	T11	SAV-3	2:46:00 PM	2.5	Dark gray sand with shell	-	10	10	-	-	20	Low	6
T12-01	T12	SAV-3	3:34:00 PM	2.5	Dark gray sand with shell. Stiff pen shell observed in the quadrat.	-	30	20	-	-	50	Moderate	5
T12-02	T12	SAV-3	3:38:00 PM	2	Dark gray sand with shell	-	30	30	-	-	60	Moderate	5
T12-03	T12	SAV-3	3:40:00 PM	2	Dark gray sand with shell	-	20	60	-	-	80	Dense	5
T12-04	T12	SAV-3	3:43:00 PM	1.5	Dark gray sand with shell	-	-	30	-	-	30	Moderate	4
T12-05	T12	SAV-3	3:46:00 PM	1.5	Dark gray sand with shell	-	-	90	-	-	90	Dense	4
T12-06	T12	SAV-3	3:48:00 PM	1.5	Dark gray sand with shell	-	-	90	-	-	90	Dense	4
					Maximum coverage:	-	100	100	-	-	100	-	8
					Minimum coverage:	-	5	5	-	-	5	-	2
					Average Coverage:	-	22.50	29.78	-	-	35.11	-	3.57

Appendix C

Photo Log

Benthic Habitat Assessment
Rebuild USCG Station South Padre Island Project
Survey Photographs

Photo 1: Contents of Oyster Dredge 1 (D1), species shown in eastern oyster (*C. virginica*).

Photo 2: Contents of Oyster Dredge 6 (D6), species shown include eastern oyster (*C. virginica*) and stiff pen shells (*A. rigida*).

LLOYD ENGINEERING, INC.

Photo 3: Contents of ponar grab 1 (P1).

Photo 4: Contents of ponar grab 2 (P2).

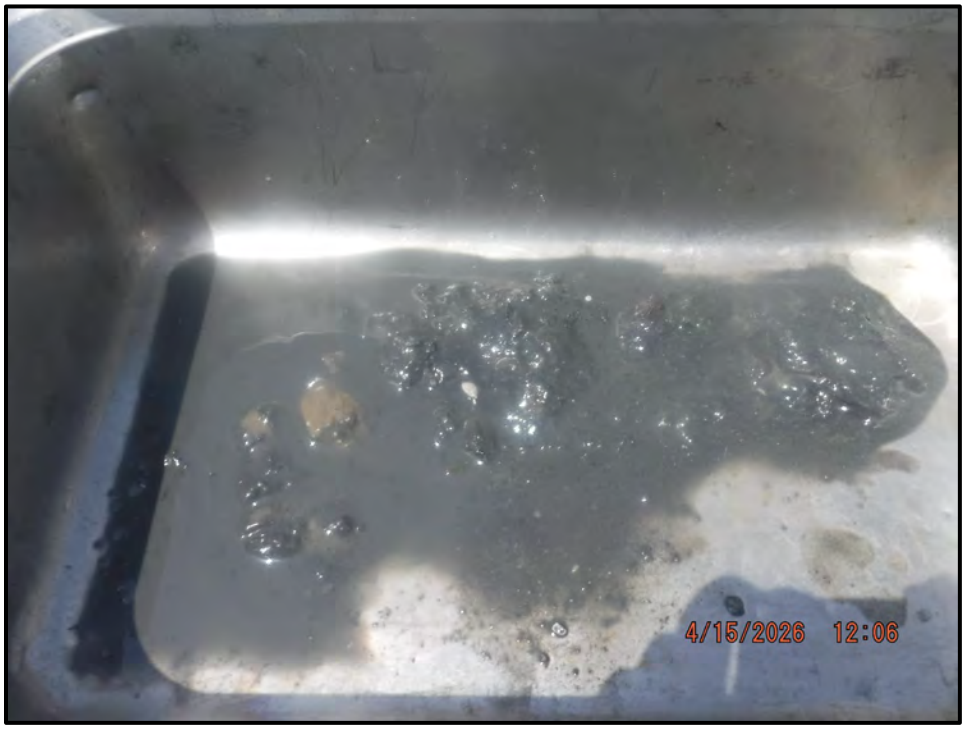


Photo 5: Contents of ponar grab 3 (P3).

Photo 6: Contents of ponar grab 4 (P4).

Photo 7: Contents on ponar grab 5 (P5).

Photo 8: Contents of ponar grab 6 (PL6).

Photo 9: Contents of ponar grab 7 (P7).

Photo 10: Contents of ponar grab 8 (P8).

Photo 11: Contents of ponar grab 9 (P9).

Photo 12: Contents of ponar grab 10 (P10).

Photo 13: Contents of ponar grab 11 (P11).

Photo 14: Contents of ponar grab 12 (P12).

Photo 15: Contents of ponar grab 13 (P13).

Photo 16: View of smooth cordgrass (*S. spartinae*) and eastern oyster cluster (*C. virginica*) at Photo Location 1 (PL1).

Photo 17: View of eastern oyster clusters (*C. virginica*) from from Photo Location 1 (PL1).

Photo 18: View from Photo Location 1 (PL1), facing south.

Photo 19: View of eastern oyster clusters (*C. virginica*) from Photo Location 2 (PL2), facing east.

Photo 20: View of eastern oyster cluster (*C. virginica*) from Photo Location 2 (PL2).

Photo 21: View of smooth cordgrass (*S.* spartinae) and eastern oyster clusters (*C.* virginica) from Photo Location 3 (PL3), facing south.

Photo 22: View of smooth cordgrass (*S.* spartinae) and eastern oyster clusters (*C.* virginica) from Photo Location 3 (PL3).

Photo 23: View of smooth cordgrass (*S.* spartinae) and eastern oyster clusters (*C.* virginica) from Photo Location 4 (PL4).

Photo 24: View of smooth cordgrass (*S.* spartinae) and eastern oyster clusters (*C.* virginica) from Photo Location 4 (PL4).

Photo 25: View of eastern oyster clusters (*C.* virginica) from Photo Location 5 (PL5), facing east.

Photo 26: View of eastern oyster clusters (*C. virginica*) from Photo Location 5 (PL5), facing southeast.

Photo 27: View of eastern oyster clusters (*C.* virginica) from Photo Location 6 (PL6), facing south.

Photo 28: View of eastern oyster clusters (*C. virginica*) from Photo Location 6 (PL6), facing southwest.

Photo 29: View of eastern oyster clusters (*C. virginica*) from Photo Location 7 (PL7), facing east.

Photo 30: View of eastern oyster clusters (*C. virginica*) on rip-rap from Photo Location 7 (PL7), facing east.

Photo 31: Turtle grass (*T. testudinum*) and (*S. filiforme*) at quadrat T1-01.

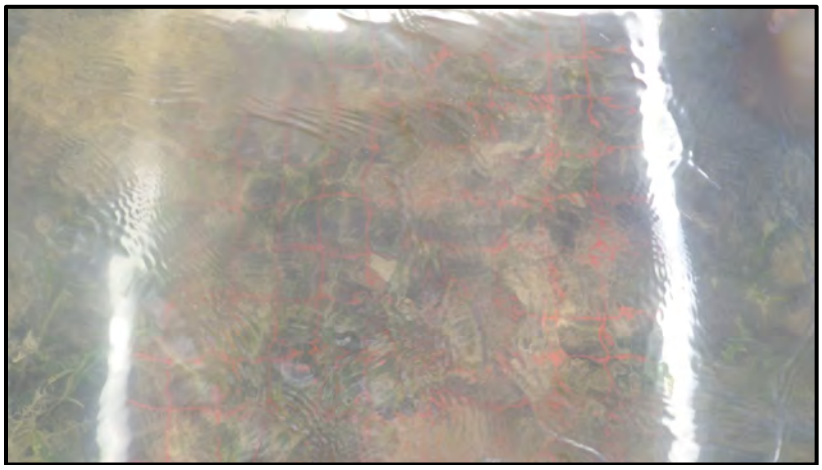


Photo 32: View of quadrat T1-03, which contained turtle grass (*T. testudinum*).

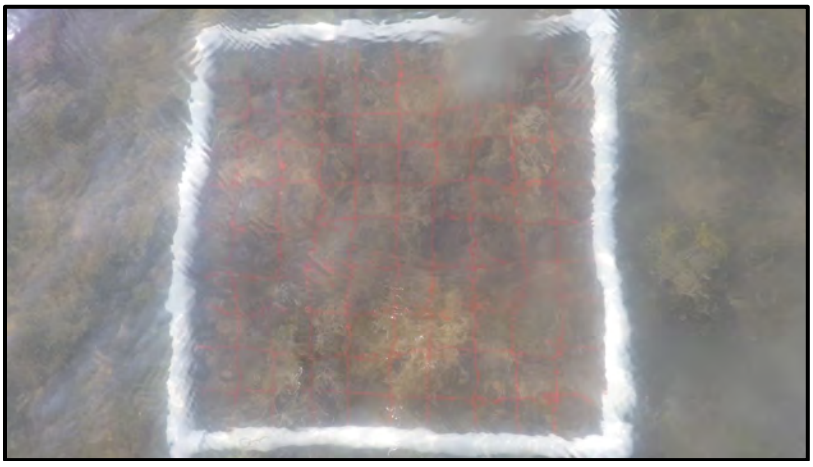


Photo 33: View of quadrat T1-05, which contained manatee grass (*S. filiforme*)

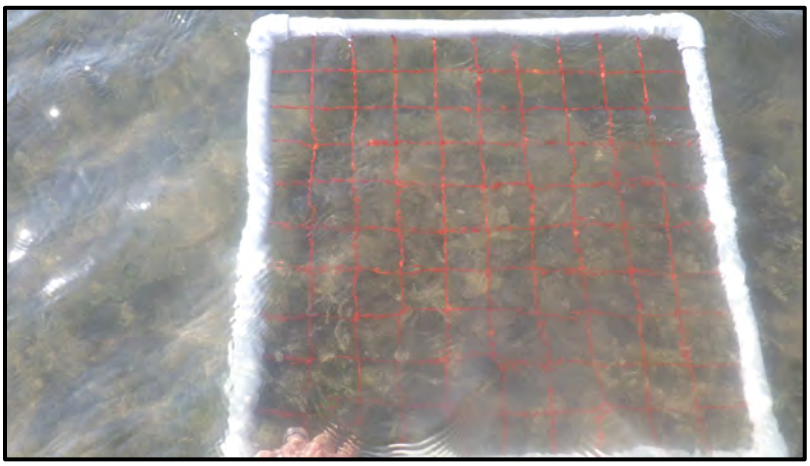


Photo 34: View of quadrat T2-01, which contained manatee grass (*S. filiforme*).

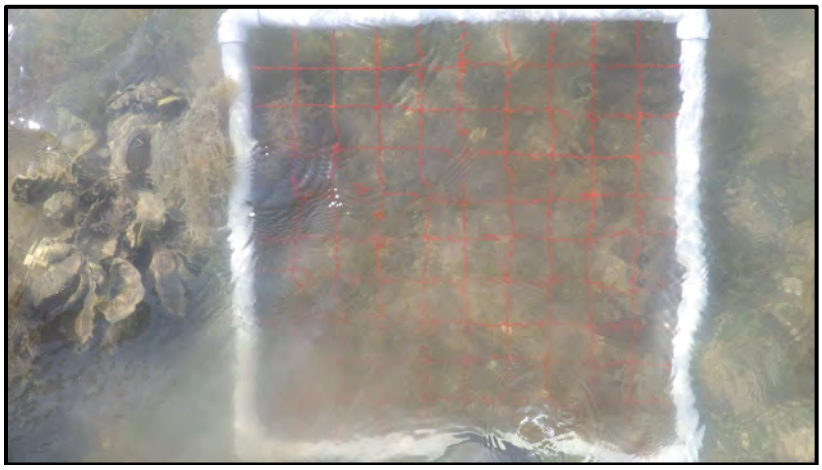


Photo 35: View of quadrat T2-02, which contained manatee grass (*S. filiforme*), and eastern oyster clusters (*C. virginica*).

Photo 36: View of quadrat T2-07, which contained manatee grass (*S. filiforme*).

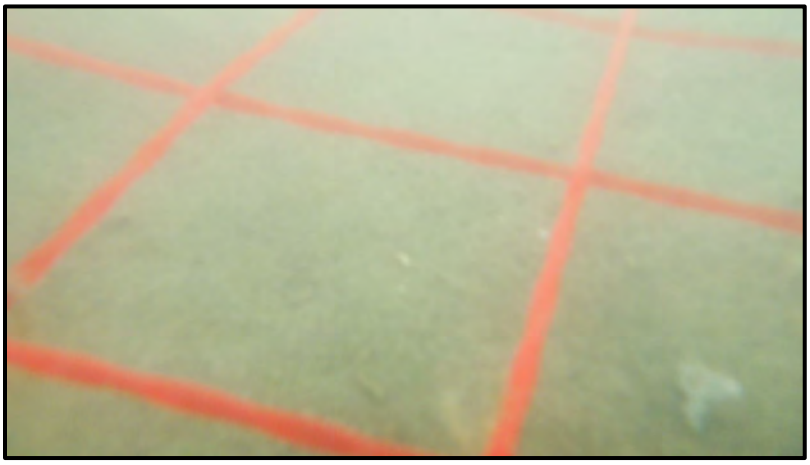


Photo 37: View of quadrat T3-01 (no SAV observed).

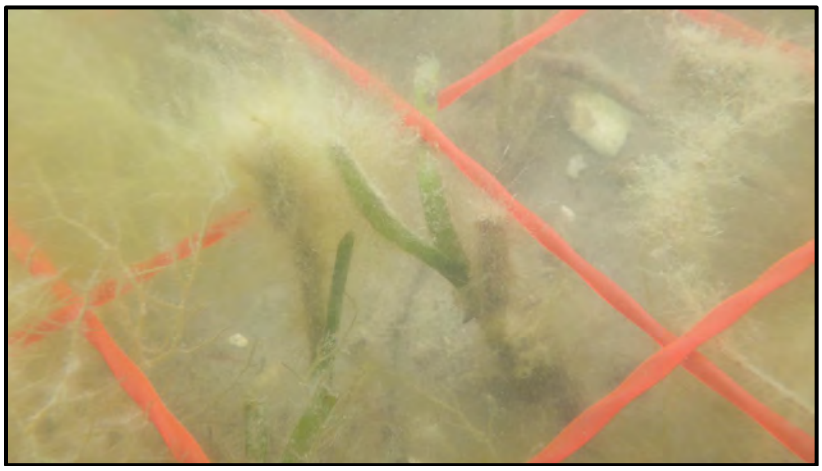


Photo 38: View of turtle grass (*T. testudinum*) at T3-02.

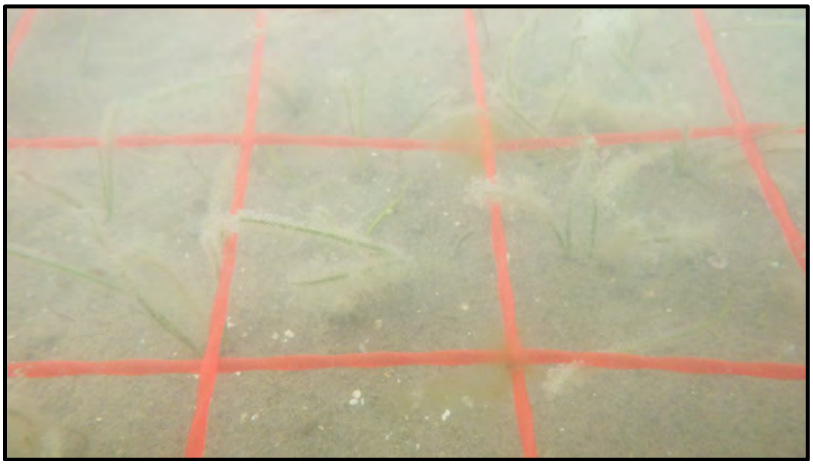


Photo 39: View of manatee grass (*S. filiforme*) at T3-04.

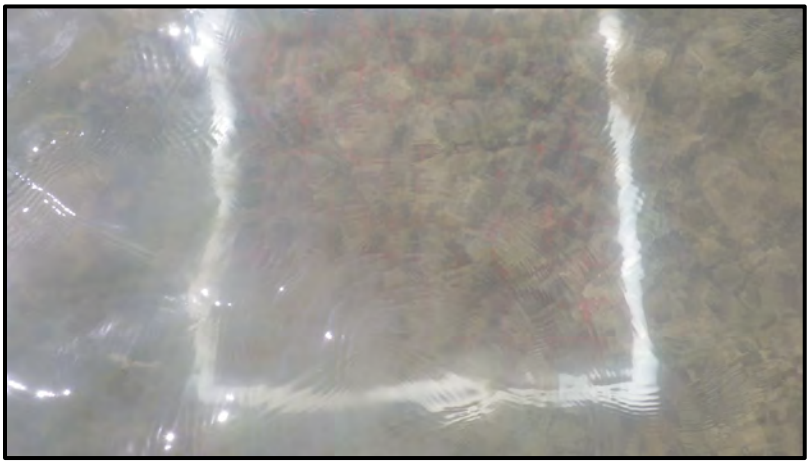


Photo 40: View of quadrat T4-02, which contained manatee grass (*S. filiforme*).

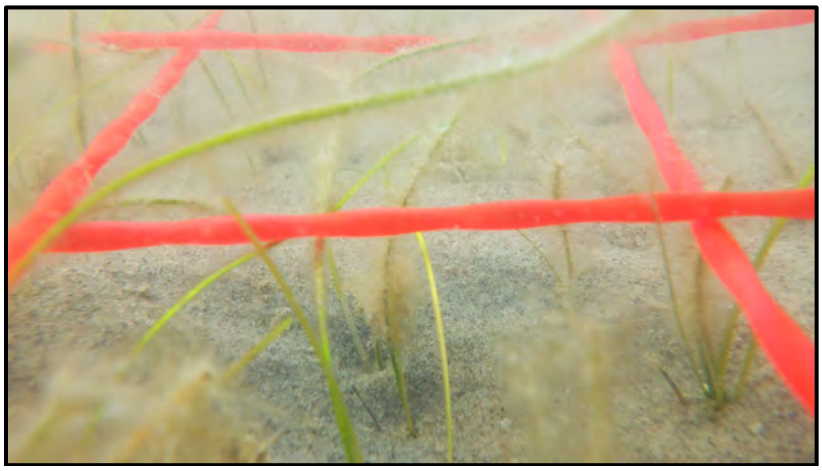


Photo 41: View of manatee grass (*S. filiforme*) at T4-05.

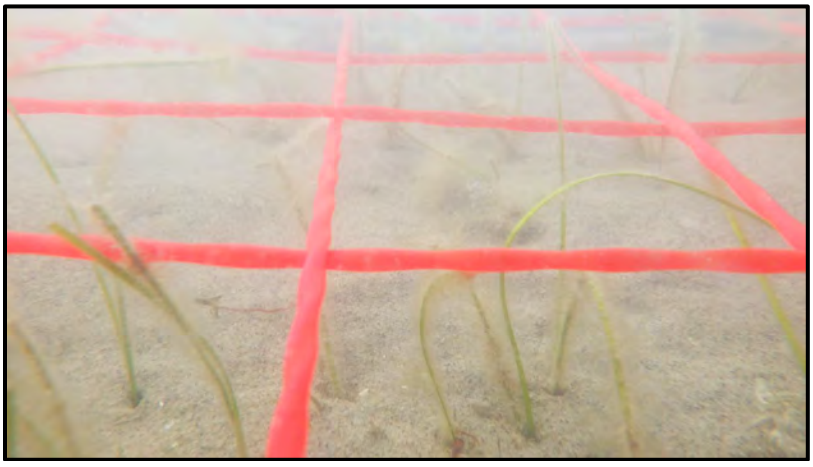


Photo 42: View of manatee grass (*S. filiforme*) and turtle grass (*T. testudinum*) at T4-06.

Photo 46: View of quadrat T5-01 (no SAV observed).

Photo 47: View of manatee grass (*S. filiforme*) at T5-02.

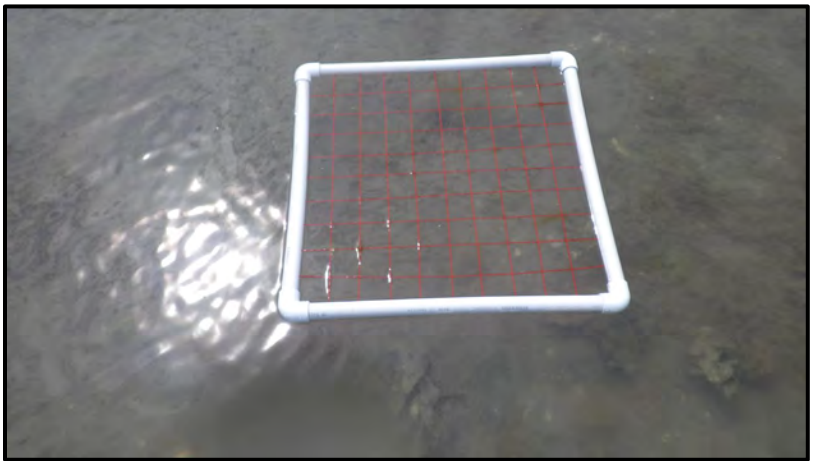


Photo 48: View of quadrat T5-09 (no SAV observed).

Photo 49: View of manatee grass (*S. filiforme*) at T6-01.

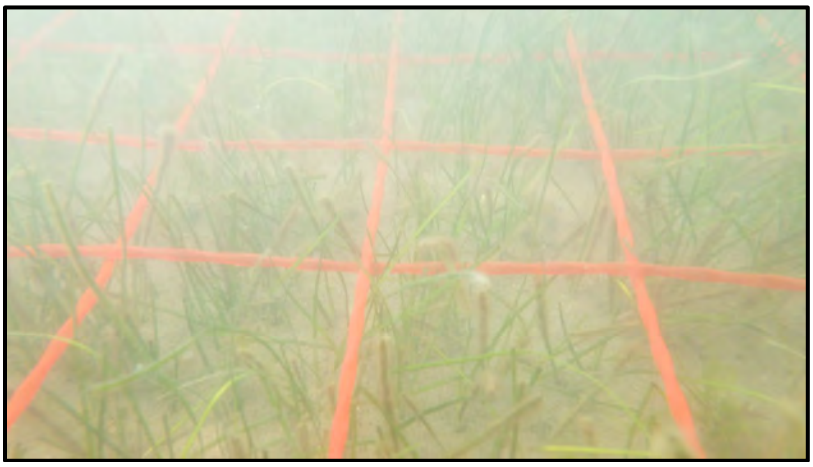


Photo 50: View of turtle grass (*T. testudinum*) and manatee grass (*S. filiforme*) at quadrat T6-03.

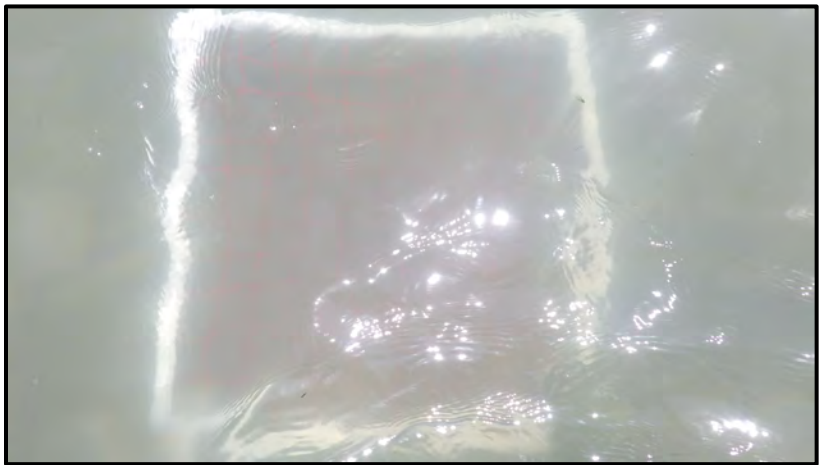


Photo 51: View of quadrat T6-04 (no SAV observed).

Photo 52: View of manatee grass (*S. filiforme*) at T6-01.

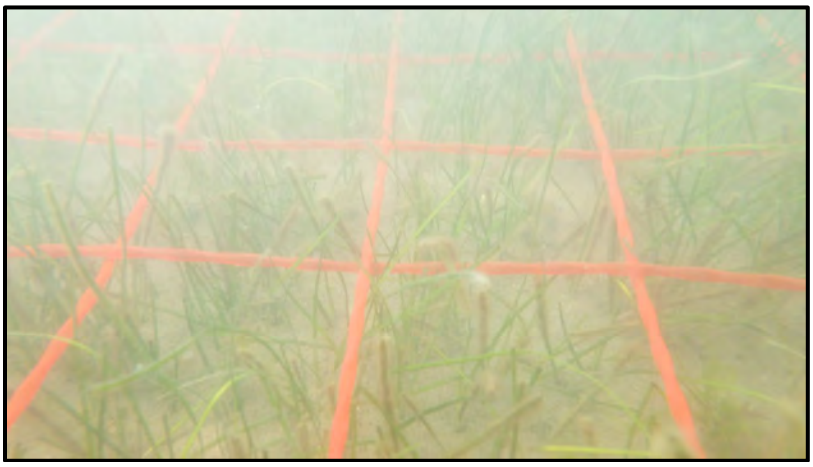


Photo 53: View of turtle grass (*T. testudinum*) and (*S. filiforme*) at quadrat T6-03.

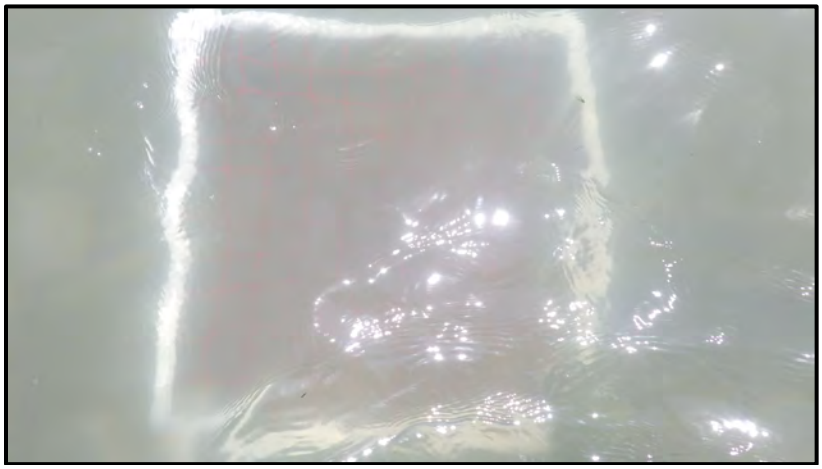


Photo 54: View of quadrat T6-04 (no SAV observed).

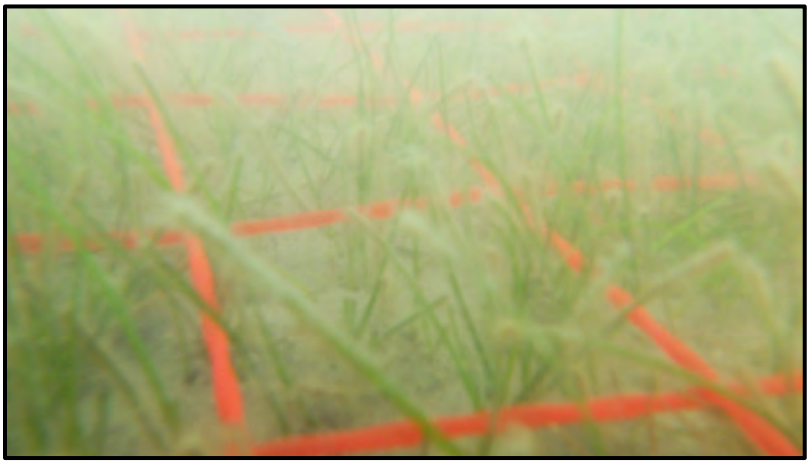


Photo 55: View of manatee grass (*S. filiforme*) at T7-02.

Photo 56: View of turtle grass (*T. testudinum*) and manatee grass (*S. filiforme*) at quadrat T7-04.

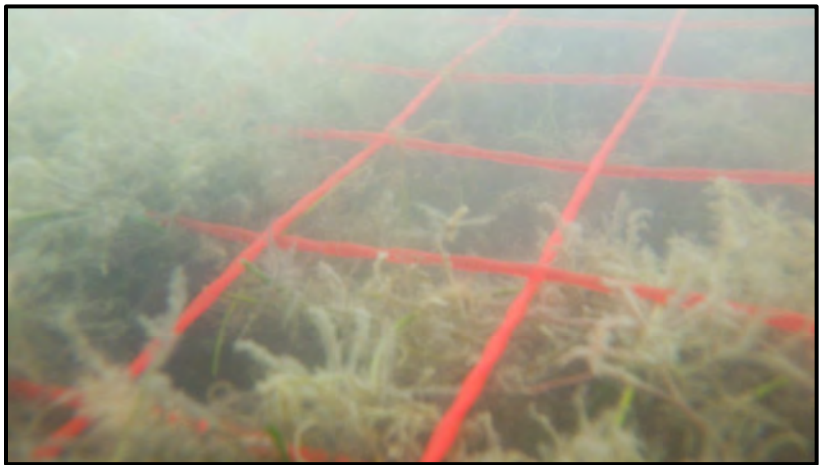


Photo 57: View of manatee grass (*S. filiforme*) and seaweed sp. at quadrat T7-07.

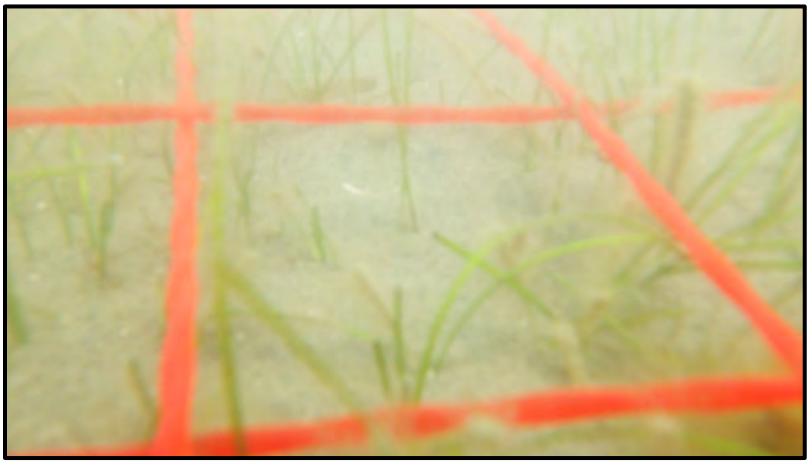


Photo 58: View of turtle grass (*T. testudinum*) and manatee grass (*S. filiforme*) at T8-03.

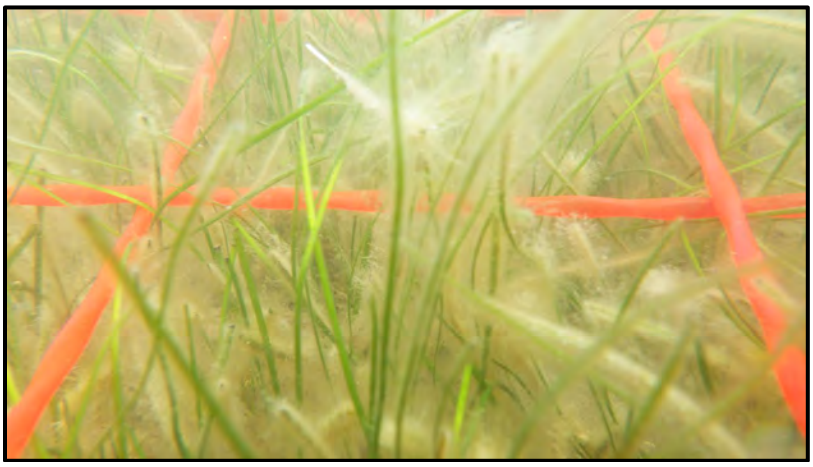


Photo 59: View of turtle grass (*T. testudinum*) and manatee grass (*S. filiforme*) at quadrat T8-04.

Photo 60: View of turtle grass (*T. testudinum*) and manatee grass (*S. filiforme*) at quadrat T8-06.

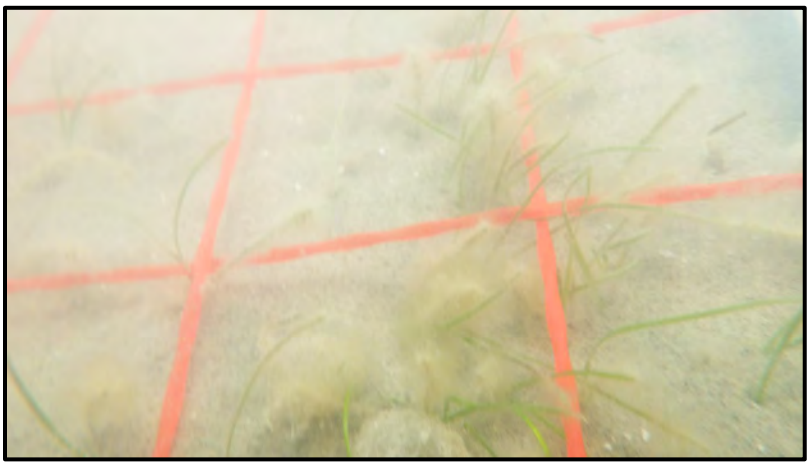


Photo 61: View of turtle grass (*T. testudinum*) and manatee grass (*S. filiforme*) at quadrat T9-02.

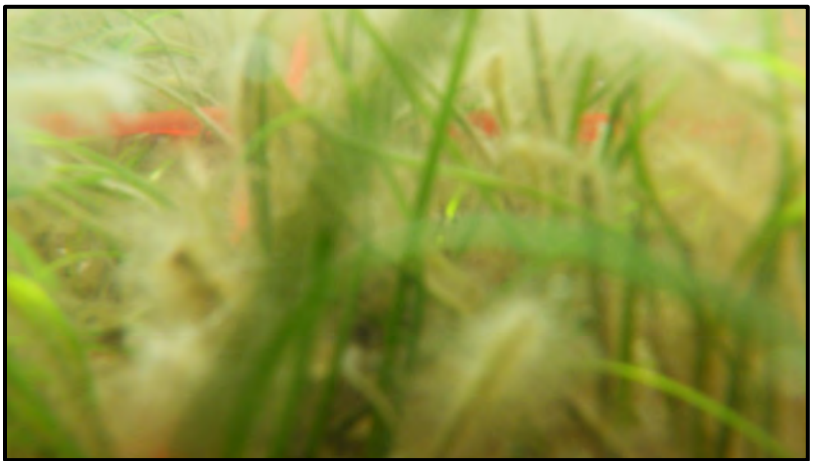


Photo 62: View of turtle grass (*T. testudinum*) and manatee grass (*S. filiforme*) at quadrat T9-03.

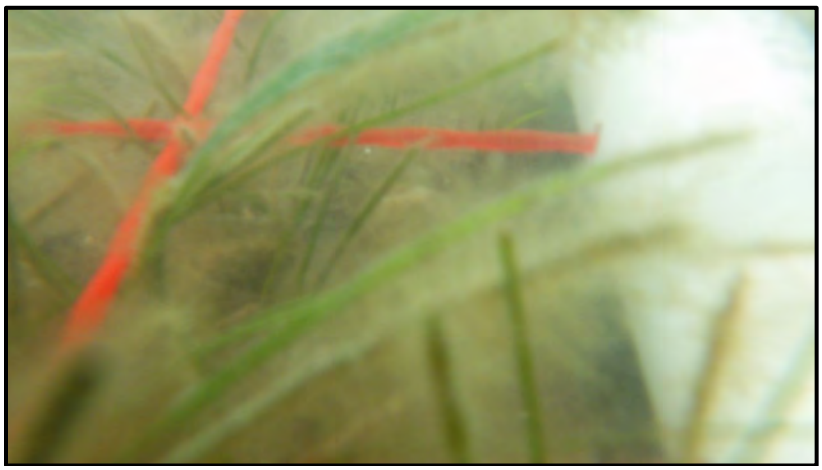


Photo 63: View of turtle grass (*T. testudinum*) and manatee grass (*S. filiforme*) at quadrat T9-04.

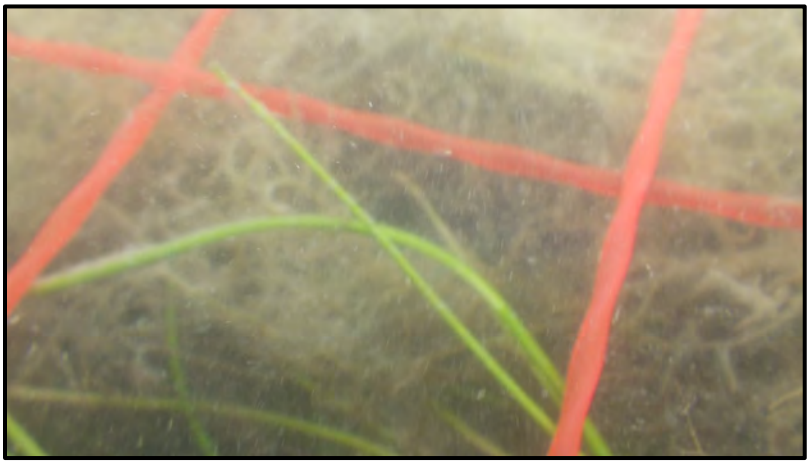


Photo 64: View of seaweed sp. and manatee grass (*S. filiforme*) at T10-02.

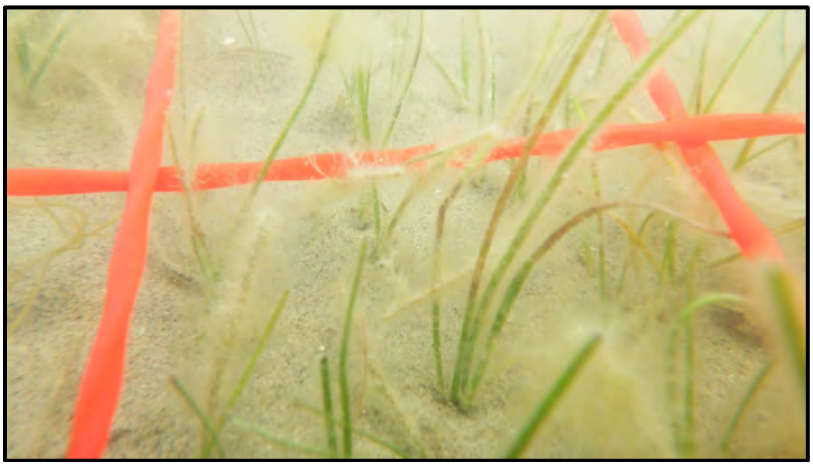


Photo 65: View of turtle grass (*T. testudinum*) and manatee grass (*S. filiforme*) at quadrat T10-04.

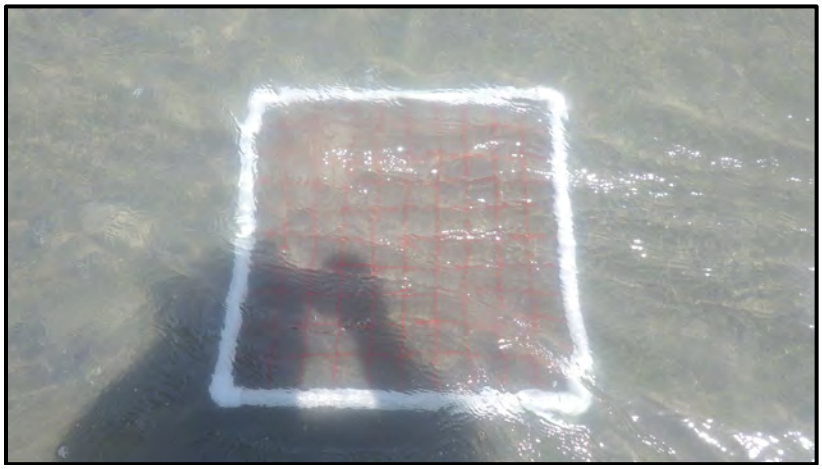


Photo 66: View of quadrat T10-07 (no SAV observed).

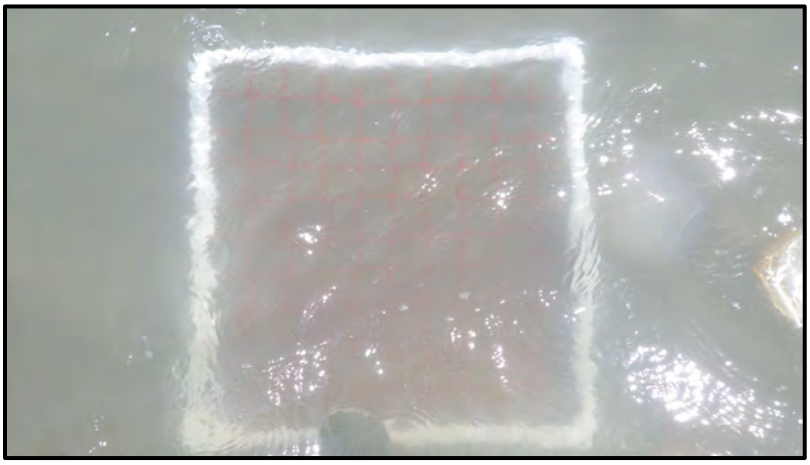


Photo 67: View of quadrat T11-01 (no SAV observed).

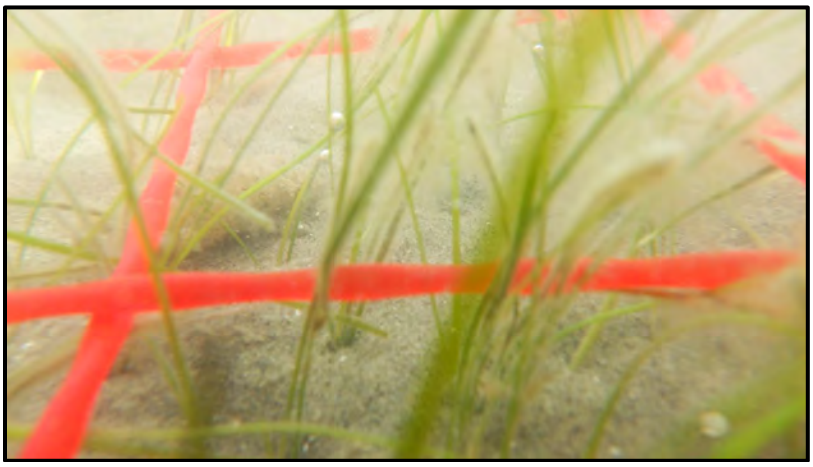


Photo 68: View of turtle grass (*T. testudinum*) and manatee grass (*S. filiforme*) at quadrat T11-02.

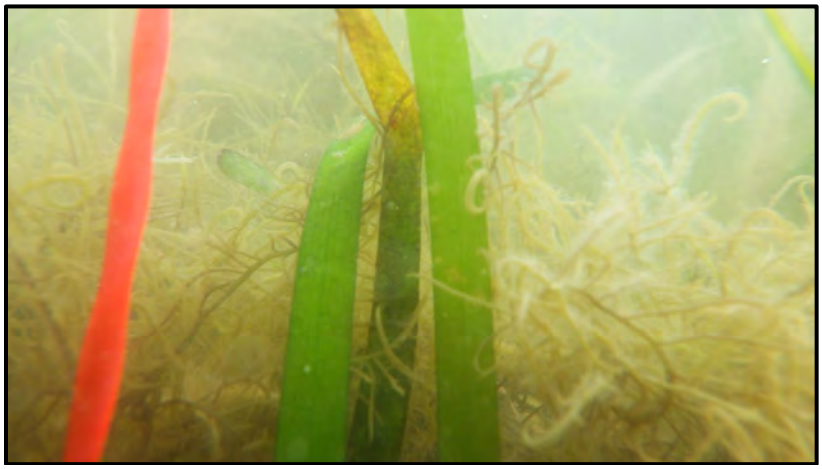


Photo 69: View of turtle grass (*T. testudinum*) and seaweed sp. at quadrat T11-07.

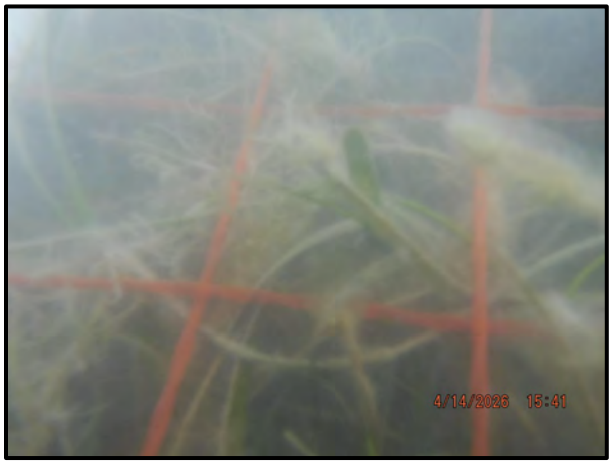


Photo 70: View of turtle grass (*T. testudinum*), manatee grass (*S. filiforme*) and seaweed species at quadrat at T12-01.

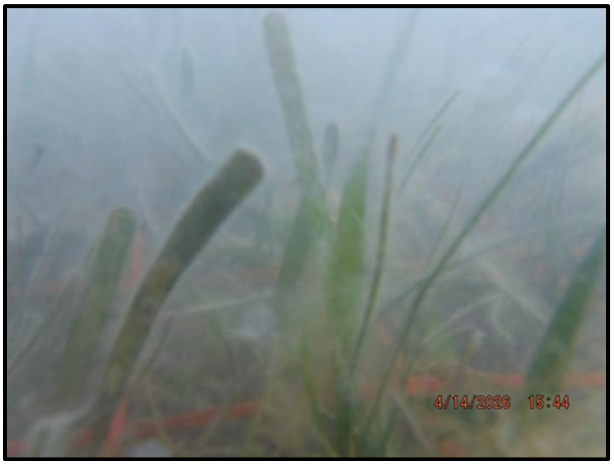


Photo 71: View of turtle grass (*T. testudinum*) and manatee grass (*S. filiforme*) at quadrat T12-02.

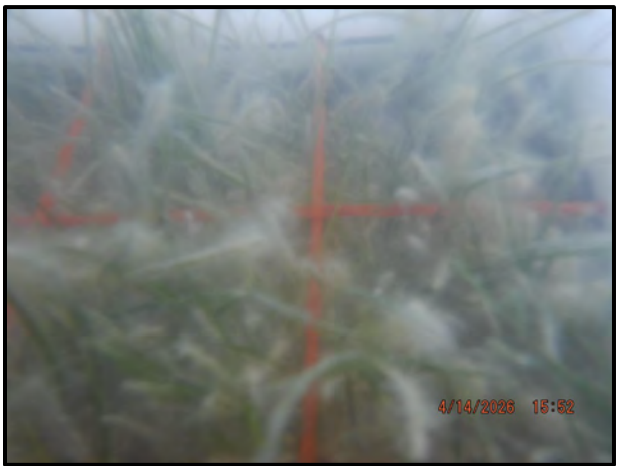


Photo 72: View of manatee grass (*S. filiforme*) at quadrat T12-05.

Photo 73: Mottled sea hare (*Aplysia fasciata*) observed near T1-01.

Photo 74: Piece of floating star grass (*Halophila engelmannii*) observed near quadrat T9-02.

Photo 75: Stiff pen shell (*Atrina rigida*) observed near quadrat T9-04.

Appendix D

Field Data Sheets

LLOYD ENGINEERING, INC.

Oyster Tong Survey Data Form

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date:	Wind Conditions:

Station ID	Time	Water Depth (ft)	Photo ID	Drop Count	Substrate Composition	Oyster Composition							
						Number of Live Oysters by Size				Total Dead Oysters	Total Live Oysters	% Live Oysters	% Dead Oysters
						Spat (<25mm) (<0.98")	Juvenile (26-50mm) (0.99-1.06")	Sub-Adult (51-75mm) (1.07-2.95")	Adult (>76mm) (>2.96")				
D1	16:10	5.0	1028	1	gray sand	0	0	0	1	1		0	100
D2	16:17	5.0	N/A	1	gray/brown sand	0	0	0	0	0	0	0	0
D3	16:25	5.0	N/A	1	11	0	0	0	0	0	0	0	
D4	16:33	5.0	N/A	1	11	0	0	0	0	0	0	0	0
D5	16:36	4.0	N/A	1	11	0	0	0	0	0	0	0	0
D6	16:42	3.0		1	11 2 large clams? 1 crab, 2 hc, 2 other clam	0	0	3	4	7	0	0	100
D7	16:50	4.0	N/A	1	11	0	0	0	0	0	0	0	0
Overall Totals						Total Spat	Total Juvenile	Total Sub-Adult	Total Adult	Total Dead Oysters	Total Live Oysters	Avg. % Live Oysters	Avg. % Dead Oysters

LLOYD ENGINEERING, INC.

Oyster Tong Survey Data Form

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date: 4/15/26	Wind Conditions:

Station ID	Time	Water Depth (ft)	Photo ID	~~Drop Count~~ Hard Bottom	Substrate Composition	Oyster Composition							
						Number of Live Oysters by Size				Total Dead Oysters	Total Live Oysters	% Live Oysters	% Dead Oysters
						Spat (<25mm) (<0.98")	Juvenile (26-50mm) (0.99-1.06")	Sub-Adult (51-75mm) (1.07-2.95")	Adult (>76mm) (>2.96")				
~~PL1~~	0906	0.5	1032-1037	PL1	gray sand w/ shell ~~mostly dead~~								
~~PL2~~	0911	0.5	1031-1036	PL1	mostly dead oysters w/ algal growth								
~~PL3~~ PL4	0915	0.75	1037-1040		scattered oyster clusters mostly dead/algae covered								
PL2	0925	1.0	1041-42 45		Scattered 11 w/o spart								
PL3	0928	1.0	44,45 46		~~Sca~~ Scattered oyster clusters w/ spartina, ~~a~~ gray silty sand								
~~PL4~~ PL4	0931	1.0	47-52 53	PL2	11								
PL5	0940	0.5	54-56		scattered oyster shells/clusters hermit crabs								
PL6	0945	0.5	57-62		scattered oyster clusters w/ seagrass								
Overall Totals						Total Spat	Total Juvenile	Total Sub-Adult	Total Adult	Total Dead Oysters	Total Live Oysters	Avg. % Live Oysters	Avg. % Dead Oysters

LLOYD ENGINEERING, INC.

Oyster Tong Survey Data Form

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date: 4/12/22	Wind Conditions:

Station ID	Time	Water Depth (ft)	Photo ID	Drop Count	Substrate Composition	Oyster Composition							
						Number of Live Oysters by Size				Total Dead Oysters	Total Live Oysters	% Live Oysters	% Dead Oysters
						Spat (<25mm) (<0.98")	Juvenile (26-50mm) (0.99-1.06")	Sub-Adult (51-75mm) (1.07-2.95")	Adult (>76mm) (>2.96")				
PL7 ~~PL9~~	0950	0.5	63-65		gray silty sand w/ shell hash								
Poner 1	11:52	5.7	66		gray & brown silty sand w/ shell hash, no oyster								
Poner 2	11:56	11.5	67		brown & gray silt w/ shell hash								
poner 3	11:59	15	68		dark gray coarse silty sand w/ shell hash								
poner 4	12:03	16.5	69		~~dead~~ Shell pieces w/ dark gray s.t								
poner 5	12:08	6.0	70		dark gry sand w/ shell hash								
poner 6	12:11	19.3	71		channel, shell pieces								
poner 7	12:15	15.3	72		dark gray medium sand								
Overall Totals						Total Spat	Total Juvenile	Total Sub-Adult	Total Adult	Total Dead Oysters	Total Live Oysters	Avg. % Live Oysters	Avg. % Dead Oysters

LLOYD ENGINEERING, INC.

Oyster Tong Survey Data Form

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date:	Wind Conditions:

Station ID	Time	Water Depth (ft)	Photo ID	Drop Count	Substrate Composition	Oyster Composition							
						Number of Live Oysters by Size				Total Dead Oysters	Total Live Oysters	% Live Oysters	% Dead Oysters
						Spat (<25mm) (<0.98")	Juvenile (26-50mm) (0.99-1.06")	Sub-Adult (51-75mm) (1.07-2.95")	Adult (>76mm) (>2.96")				
pump 8	12:23	7.2	73	1	brown & dark grey sand								
pump 9	12:26	18.9	74	1	gray into brown - dark gray silty sand								
10	12:29	6.6	75	1	S/A 8								
11	12:32	15.3	76	1	S/A 8								
12	12:36	17.4	78										
13	12:40	8.2	79		dark gray & brown sandy silt w/ shell pieces								
Overall Totals						Total Spat	Total Juvenile	Total Sub-Adult	Total Adult	Total Dead Oysters	Total Live Oysters	Avg. % Live Oysters	Avg. % Dead Oysters

LLOYD ENGINEERING, INC.

Project: Haskell
Location:
Names: BS, TK
Date: 04/14/26

Weather Conditions: 75° Partly Cloudy
Water Conditions: 75°
Tide Conditions
Wind Conditions: 5-10 SE

Quadrat ID	Transect ID	Time	Water Depth (ft)	Photo ID	Substrate Composition/Notes	Percent Cover by Species					Canopy Height (in)
						H. beaudettei (shoal grass)	*T. testudinum* (turtle grass)	*C. filiformis* (manatee grass)	*H. engelmanni* (star grass)	*R. maritima* (widgeon grass)	
T1-Q1-01	01	09:08	1.0	29	Dark gray sand w/ shell hash Sea lace		15	15			3
T1-Q-02	01	09:21	.9	38	Dark gray sand		[illegible]	50			4
T1-Q-03	[illegible] 01	09:24	1.1	40	Dark gray sand		100				6
T1-Q-04	[illegible] 01	09:29	1.2	41	Gray silty sand Algae?		100				8
T1-Q-05	01	09:38	1.1	43	Gray silty Sand Algae?			5			3
T1-Q-06	01	09:35	1.1	44	Gray silty Sand Algae?			5			3
T1-Q07	01	09:37	1	45	Gray silty sand w/ shell Algae			50			3
T2-Q-01	02	09:41	.8	46	Gray silty sand microalgae			30			3

LLOYD ENGINEERING, INC.

Project: Haskell | Weather Conditions: Sunny 75°
Location: | Water Conditions:
Names: BS TK | Tide Conditions
Date: 04/14/26 | Wind Conditions:

Quadrat ID	Transect ID	Time	Water Depth (ft)	Photo ID	Substrate Composition/Notes	Percent Cover by Species					Canopy Height (in)
						H. beaudettei (shoal grass)	*T. testudinum* (turtle grass)	*C. filiformis* (manatee grass)	*H. engelmanni* (star grass)	*R. maritima* (widgeon grass)	
T2-Q-02	02	09:46	.8	47	Gray silty sand w/ shell hash and oyster clusters			5			3
T2-Q-03	02	09:48	.8	48	" "			7			3
T2-Q-04	02	09:50	.9	49	" "			15			3
T2-Q-05	02	09:53	1.0	50	Dark gray silty sand algae		10	10			3
T2-Q-06	02	10:12	0.6	51	Dark gray silty sand w/ shell hash			10			3
T2-Q-07	02	10:14	1.0	52	Dark gray silty sand w/ shell hash & macroalgae			30			3
T2-Q-08	02	10:16	2.0	53-54	Only algae / clear plant	—	—	—	—	—	—
T3-Q-01	03	10:22	2.5	55	Sand & shell hash	—	—	—	—	/	/

LLOYD ENGINEERING, INC.

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date:	Wind Conditions:

Quadrat ID	Transect ID	Time	Water Depth (ft)	Photo ID	Substrate Composition/Notes	Percent Cover by Species					Canopy Height (in)
						H. beaudettei (shoal grass)	*T. testudinum* (turtle grass)	*C. filiformis* (manatee grass)	*H. engelmanni* (star grass)	*R. maritima* (widgeon grass)	
T3-Q-02	T3	10:35	1.5	57	Silty sand w/ shell hash Microalgae		5				5
T3-Q-03	T3	10:38	1.0	~~65~~ 59	~~Silty Sand w/ grey~~ Dark grey sand w/ shell pieces & microalgae		10				3
T3-Q-04	T3	10:34	1.0	60	Dark grey sand w/ shell hash			5			2
T3-Q-05	T3	10:32	1.0	61	11			10			3
T3-Q-06	T3	10:30	~~1.0~~ 0.5	62	11			20			3
T3-Q-07	T3	10:41	0.5	63	Dark gray silty ~~sand~~			5			3
~~T4~~ T2-Q-01	T2	10:44	0.5	64	Blown silt w/ spartina & Oyster clusters	–	✓	✓	–	✓	–
T4-Q-02	T4	10:47	0.5	65	~~Brown~~ gray silty sand w/ shell pieces & oyster clusters			15			3

LLOYD
ENGINEERING, INC.

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date:	Wind Conditions:

Quadrat ID	Transect ID	Time	Water Depth (ft)	Photo ID	Substrate Composition/Notes	Percent Cover by Species					Canopy Height (in)
						H. beaudettei (shoal grass)	*T. testudinum* (turtle grass)	*C. filiformis* (manatee grass)	*H. engelmanni* (star grass)	*R. maritima* (widgeon grass)	
T4-0.03	T4	10:51	0.5	64	gray sand w/ shell hash & oyster clusters			5			3
T4-04	T4	10:53	0.5	68	gray sand w/ shell hash			10			3
T4-05	T4	10:57	0.5	69	gray sand w/ shell hash			5			3
T4-06	T4	10:59	1.75	71	"	~~1~~ BS	5	5			2 (3)
T4-07	T4	11:03	2.0	~~72~~	"	–	–	–	–	–	–
T5-01	T5	11:08	1.0	72	"	–	–	–	–	–	–
T5-02	T5	11:09	1.0	73-74	"			100			5
T5-03	T5	11:12	0.75	75-76	heavy shell concentration			20			3

LLOYD ENGINEERING, INC.

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date:	Wind Conditions:

Quadrat ID	Transect ID	Time	Water Depth (ft)	Photo ID	Substrate Composition/Notes	Percent Cover by Species					Canopy Height (in)
						H. beaudettoi (shoal grass)	*T. testudinum* (turtle grass)	*C. filiformis* (manatee grass)	*H. engelmanni* (star grass)	*R. maritima* (widgeon grass)	
TS-04	TS	11:17	1.0	77	Dark gray sand w/ shell and oyster clusters			5			2
TS-05	TS	11:19	1.0	80	11			90			3
TS-06	TS	11:21	1.0	81	11			60			3
TS-07	TS	11:23	1.0	82	11			40			3
TS-08	TS	11:25	1.0	—	gray s.d w/ oyster clusters	—	—	—	—	—	—
TS-09	TS	11:27	0.5	83	11	—	—	—	—	—	—
T6-01	T6	12:32	2.0	86	sea turtle observed in the vicinity / dark gray sand w/ shell hash			80			4
T6-02	T6	12:36	1.75	87	11			80			11

LLOYD ENGINEERING, INC.

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date:	Wind Conditions:

Quadrat ID	Transect ID	Time	Water Depth (ft)	Photo ID	Substrate Composition/Notes	Percent Cover by Species					Canopy Height (in)
						H. beaudettei (shoal grass)	*T. testudinum* (turtle grass)	*C. filiformis* (manatee grass)	*H. engelmanni* (star grass)	*R. maritima* (widgeon grass)	
T6-03	T6	12:40	2.0	90	11		10	60			4
T6-04	T6	12:45	1.5	93	Dark grey / brown sand (no shell hash)	-	—	—	—	—	—
T7-01	T7	12:46	2.0	94	11	-	-	-	-	-	-
T7.02	T7	12:52	2.0	96	Dark grey sand w/ M. coarse			40			3
T7-03	T7	12:55	2.25	98	11 w/ shell hash			20			3
T7-04	T7	13:02	2.25	100	11		10	30			3
T7-05	T7	13:04	2.5	105	11			30			3
T7-06	T7	13:11	3.0	107	pondweed species? grey sand w/ shell hash			5			3

LLOYD
ENGINEERING, INC.

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date:	Wind Conditions:

Quadrat ID	Transect ID	Time	Water Depth (ft)	Photo ID	Substrate Composition/Notes	Percent Cover by Species					Canopy Height (in)
						H. beaudettei (shoal grass)	*T. testudinum* (turtle grass)	*C. filiformis* (manatee grass)	*H. engelmanni* (star grass)	*R. maritima* (widgeon grass)	
T7-01	T7	13:19	3.5	109	Dark gray sand			10			2
T8-01	T8	13:25	3.0	113	Dark gray sand w/ shell hash			15			4
T8-02	T8	13:28	3.0	—	sea turtle in vicinity dark gray sand	—	—	—	—	—	—
T8-03	T8	13:31	2.5	116	dark gray sand w/ shell hash		5	5			3
T8-04	T8	13:33	2.0	119	11		10	~~50~~			3
T8-05	T8	13:36	1.5	—	gray-brown fine sand	—	—	—	—	—	—
T8-06	T8	13:39	1.25	~~121~~	11		15 ~~5~~	~~90~~ 60			4
T8-07	T8	13:40	1.0	—	11	—	—	—	—	—	—

LLOYD ENGINEERING, INC.

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date:	Wind Conditions:

Quadrat ID	Transect ID	Time	Water Depth (ft)	Photo ID	Substrate Composition/Notes	Percent Cover by Species					Canopy Height (in)
						H. beaudettei (shoal grass)	*T. testudinum* (turtle grass)	*C. filiformis* (manatee grass)	*H. engelmanni* (star grass)	*R. maritima* (widgeon grass)	
T8-05	T8	13:45	1.0	–	dark gray sand w/ shell hash no sav present	–	–	–	–	–	–
T9-01	T9	13:48	0.5	–	dark gray sand w/ shell hash no sav present	–	–	–	–	–	–
T9 02	T9	13:50	1.0	123	dark gray sand w/ shell hash		5	5			3
T9 -03	T9	13:52	2.0	128	floating star grass observed dark gray sand w/ shell		20	50			4
T9-04	T9	13:55	2.5	132	dark gray sand w/ shell & oyster clusters w/ live oyster		5	20			5
T9-05	T9	14:03	3.0		dark gray sand w/ shell & seaweed clumps			5			3
T9-06	T9	14:06	4.0		11	–	–	–	–	–	–
T10-01	T10	14:11	3.5		11 sav covered in algae clumps			5			3

LLOYD ENGINEERING, INC.

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date:	Wind Conditions:

Quadrat ID	Transect ID	Time	Water Depth (ft)	Photo ID	Substrate Composition/Notes	Percent Cover by Species					Canopy Height (in)
						H. beaudottei (shoal grass)	*T. testudinum* (turtle grass)	*C. filiformis* (manatee grass)	*H. engelmanni* (star grass)	*R. maritima* (widgeon grass)	
T10-02	T10	14:17	2.5	134	dark gray sand w/ shell hash & seaweed debris			5			6
T10-03	T10	14:19	2.5	138	seaweed in vicinity dark gray sand w/ shell		10				5
T10-04	T10	14:22	2.0	142	dark gray sand w/ shell		5	20			5
T10-05	T10	14:25	~~2.0~~ 2.0	147	11			30			2-3
T10-06	T10	14:28	1.0		11	–	–	–	–	–	–
T10-07	T10	14:29	0.25	149	11	–	–	–	–	–	–
T11-01	T11	14:31	2.5	150	11	–	–	–	–	–	–
T11-02	T11	14:33	1.0	151	11		5	5			3

LLOYD ENGINEERING, INC.

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date:	Wind Conditions:

Quadrat ID	Transect ID	Time	Water Depth (ft)	Photo ID	Substrate Composition/Notes	Percent Cover by Species					Canopy Height (in)
						H. beaudettei (shoal grass)	*T. testudinum* (turtle grass)	*C. filiformis* (manatee grass)	*H. engelmanni* (star grass)	*R. maritima* (widgeon grass)	
T11-03	T11	14:37	1.25	157	dark gray sand w/shell			80			3
T11-04	T11	14:39	2.0	161	"			25			3
T11-05	T11	14:42	2.25	163	"			25			3
T11-06	T11	14:44	2.25	167	"			40			3
T11-07	T11	14:46	2.5	169 ?			10	10			6
T12-01	T12	15:34	2.5	1007	large oyster/clam shell dark gray sand w/shell		30	20			5
T12-02	T12	15:38	2.0	1011	dark gray sand w/shell		30	30			5
T12-03	T12	15:40	2.0	1013	"		20	60			5

LLOYD
ENGINEERING, INC.

Project:	Weather Conditions:
Location:	Water Conditions:
Names:	Tide Conditions
Date:	Wind Conditions:

Quadrat ID	Transect ID	Time	Water Depth (ft)	Photo ID	Substrate Composition/Notes	Percent Cover by Species					Canopy Height (in)
						H. beaudettei (shoal grass)	*T. testudinum* (turtle grass)	*C. filiformis* (manatee grass)	*H. engelmanni* (star grass)	*R. maritima* (widgeon grass)	
T12-04	T12	15:43	1.5	1015	dark gray sand w/ shell	–	–	30	–	–	4
T12-05	T12	15:46	1.5	1019	"	–	–	90	–	–	4
T12-06	T12	15:48	1.5	1025	"	–	–	90	–	–	4

Appendix D

Essential Fish Habitat Assessment Report

LLOYD ENGINEERING, INC.

ESSENTIAL FISH HABITAT ASSESSMENT

REBUILD USCG STATION SOUTH PADRE ISLAND

SOUTH PADRE ISLAND

CAMERON COUNTY, TEXAS

CONTRACT #: 70Z05026F43000005

Prepared for:

United States Coast Guard
5505 Robin Hood Road, Suite K
Norfolk, Virginia 23513-2413

Prepared by:

Lloyd Engineering, Inc.
4828 Loop Central Dr, Suite 800
Houston, Texas 77081

June 2026

Table of Contents

List of Figures

Page

Acronyms and Abbreviations

BMP	best management practice
CFR	Code of Federal Regulations
COMDTINST	Commandant Instruction
CWA	Clean Water Act
E2EM	estuarine intertidal emergent wetland
E2EM1N	estuarine intertidal persistent emergent wetland, regularly flooded
E2RF2	estuarine intertidal reef
E2SS	estuarine intertidal scrub-shrub mangrove wetland
E2USM	estuarine intertidal unconsolidated shore
EA	Environmental Assessment
EFH	essential fish habitat
GMFMC	Gulf of Mexico Fishery Management Council
HAPC	Habitat Areas of Particular Concern
MLLW	mean lower low water
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
Project	Rebuild USCG Station South Padre Island Project
SAFMC	South Atlantic Fishery Management Council
STA SPI	Coast Guard Station South Padre Island
TPWD	Texas Parks & Wildlife Department
TWDB	Texas Water Development Board
UPH	Unaccompanied Personnel Housing
U.S.	United States
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USEPA	United States Environmental Protection Agency
WOTUS	Waters of the United States

1.0 INTRODUCTION

1.1 Background

The United States (U.S.) Coast Guard (USCG) has prepared an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA), Public Law 91-190, implementing regulations at 40 Code of Federal Regulations (CFR) 1500-1508, Department of Homeland Security Management Directive 5100.1, and the USCG NEPA implementing procedures in Commandant Instruction (COMDTINST) 5090.1. The EA has been prepared to evaluate the potential environmental effects of the Proposed Action to construct, rebuild, and operate the USCG Station South Padre Island (STA SPI or "the Station") located in South Padre Island, Cameron County, Texas.\, and its alternatives, considering both construction and operational phases. This Essential Fish Habitat (EFH) Assessment has been prepared in accordance with Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA; 16 U.S.C. 1801 et seq.) to evaluate potential effects of the Proposed Action on EFH and to support consultation with the National Marine Fisheries Service (NMFS).

USCG STA SPI operates under Sector Corpus Christi, which is part of USCG Heartland District. The Station is one of three multi-mission stations under Sector Corpus Christi, supporting Coast Guard missions across a geographically significant area at the southernmost extent of the Texas coast, where maritime activity includes commercial shipping, recreational boating, and cross-border vessel traffic.

In April 2025, a fire significantly damaged critical infrastructure at the Station, including the boathouse and portions of operational and support facilities. The fire caused substantial impacts to mission-essential waterfront infrastructure. After the fire, some facilities needed to be demolished since they could not be used and staff continue to work in temporary spaces. The incident highlighted vulnerabilities in the Station's aging facilities and infrastructure.

The Station is vulnerable to the harsh coastal environment of the lower Rio Grande Valley. South Padre Island experiences significant tropical weather activity on average every 3.76 years, and the facility has experienced ten major hurricanes since the current structures were built in 1974 (National Weather Service 2024). Chronic saltwater exposure accelerates corrosion of structural components and mechanical and electrical systems and compounds the effects of deferred maintenance on facilities not designed to current coastal resiliency standards. Although incremental improvements have been made over time, most to all the Station facilities no longer fully meet current operational, safety, and resiliency standards. In combination with the April 2025 fire damage, these conditions support the need to recapitalize the Station rather than continue incremental repairs to infrastructure that has exceeded its functional design life and no longer fully supports current mission requirements.

Mission requirements in the region continue to increase, particularly in the areas of maritime law enforcement and border security operations. The Station's proximity to the U.S.-Mexico maritime border places it in a critical position to support national security objectives, and current facility capacity is insufficient to meet growing operational tempo and personnel requirements. There is also a growing need to work with partner agencies, including U.S. Customs and Border Protection (CBP), at facilities and infrastructure that can adequately support joint operations, communication, and command and control functions.

1.2 Proposed Action and Project Area

This proposed project will rebuild and construct new facilities and waterfront infrastructure on the existing site to support future operations of the USCG based at the STA SPI. We expect work to commence in Q3 2026, dependent on issuance of the required authorizations and contract executions. In water work is anticipated to take approximately 7 months. All work will occur within the temporary workspace boundaries. The USCG is assuming that the entire area within temporary workspace could be affected. Industry standard measures will be used when completing the work. The work is needed to rebuild from a fire and to meet current and future mission needs. The following sections discuss the key components of work that will be required.

1.2.1 Construction

The Proposed Action will be constructed in multiple phases. Construction is estimated to take approximately 2.5 years. Upland facility demolition and land preparation will be initiated and construction of various facilities including building construction, paving of roadways, ancillary facility construction, and earthworks will continue a rolling schedule simultaneously with marine construction. The construction schedule will be optimized to ensure continuous operations of the Station are maintained. Marine construction is phased to maintain continuous station operability throughout the construction period without the need for construction of temporary mooring or berthing infrastructure. The scope of the Proposed Action includes the following components:

1.2.1.1 Landside Project Components

- Demolition of obsolete station facilities;
- Construction of new landside station operational and administrative facilities;
- Construction of landside Unaccompanied Personnel Housing (UPH) and expanded berthing;
- Development of a landside joint operations center and support space for U.S. Customs and Border Protection;
- Construction of landside auxiliary support buildings and facilities such as boat storage, amenities, etc.;
- Construction of a landside harbor operations center;
- Approximately 5.9 acres of Additional Temporary Workspaces for temporary facilities, temporary parking, laydown, construction staging, utility installation, and other uses are included in areas identified in Figure 1-1. Temporary construction workspaces identified in Figure 1-1 may extend onto or immediately adjacent to Cameron County-owned Isla Blanca Park property. The USCG will coordinate with Cameron County Parks and seek appropriate real estate or temporary use agreements prior to initiation of any construction activities on or adjacent to County-owned land. If such agreements cannot be reached, all construction staging and temporary facilities will be confined to federally owned land within the established project boundary.

1.2.1.2 In-Water Project Components

- Construction of a boat ramp on the north side of the property for launching and recovery of vessels up to 45-ft length (boat ramp is approximately 3,750 sq feet of footprint)
- Mechanical dredging of approximately 2,750 cubic yards of material within an approximate 0.4-acre dredge footprint to provide depths of -12 ft. mean lower low water (MLLW) for the safe navigation of vessels to and from the constructed boat ramp to existing maintained channel.

Dredged material will be placed in a confined barge and transported to a federal approved placement area (PA 2) or will be transferred to an upland disposal or placement facility with trucks;
- Repair of existing waterfront pier infrastructure, breakwall, and boathouse facilities (see Table 1-1 through 1-4 below)
- Construction of new waterfront pier infrastructure including the installation of support piles (see Table 1-1 through 1-4 below);
- Construction of two stormwater outfalls consisting of outfall culvert and rock rip rap outfall at the mean high water line and,
- Minor repair of existing shoreline stabilization riprap by replacing in kind concrete rip rap to existing elevations and dimensions.
- Approximately 2.0 acres of Additional Temporary Workspaces are shown in Figure 1-1 and include all necessary space for navigation and operation of construction equipment and marine construction vessels.

1.2.1.3 Methods

Construction methods have been developed to minimize turbidity impacts by planning for the boat ramp to be excavated and concrete panels placed on the bay floor using a temporary sheet pile cofferdam and de-watered workspace, reducing open-water excavation in the immediate vicinity of sensitive estuarine resources. Indirect effects from required dredging would be minimized through minimization of required dredged area, strategic placement of deep navigation corridors away from sensitive resources and use of turbidity curtains during dredging. Refer to Appendix F for other BMPs specific to construction methodology that will be implemented for the Proposed Action.

1.2.2 Operations

Operations of the Station will be consistent with current operations following completion of construction. Phased construction will allow full operability using existing marine infrastructure without the need for temporary berthing during construction. Operational activities will include routine launching and recovery of vessels for all CG missions such as search and rescue, maritime law enforcement, CBP enforcement, aids to navigation, and border security operations. The Station operates on a 24-hour, 365-day basis and maintains a continuous duty watch capability.

Vessel types operated from the Station will be consistent with what is currently operating and may include additional vessels of similar sizes including but not limited to CG Small Boat class vessels (under 65-ft. length). Vessels are launched and recovered via the Station boat ramp and mooring slips, with routine transits through the Station basin to the lower Laguna Madre and Brazos Santiago Pass. The Station's waterfront infrastructure is designed to support this vessel class envelope regardless of specific hull designations, which may change over time as USCG and partner agency fleets evolve.

The rebuilt Station will provide additional mooring slips within the breakwall and a boat ramp designed to accommodate any vessel up to 45 feet in length meeting the operational parameters of the Station mission. This expanded capacity accommodates not only currently assigned USCG vessels but also partner agency vessels operating under joint operations agreements, and future vessel classes that meet the facility's design parameters. The facility is designed to be operationally flexible rather than optimized for specific vessel operation designations.

Day-to-day operational activities that represent potential impact-causing factors for the surrounding coastal and estuarine environment include the following:

- Vessel Operations: Routine small boat launches and recoveries via the Station boat ramp and mooring slips, with transits through the Station basin to the lower Laguna Madre and Brazos Santiago Pass. Existing operations involve recovering vessels via an off-site boat ramp; the construction of an on-site boat ramp relocates these operations onsite but does not increase the frequency of recoveries from Laguan Madre.
- Fueling and Maintenance: Vessel fueling, engine maintenance, and hull cleaning activities conducted within the Station BMF and designated maintenance areas in accordance with the Station's SPCC Plan. In-water hull husbandry activities conducted at the Station are subject to the Uniform National Discharge Standards (UNDS) established under CWA Section 312(n) and the associated programmatic ESA Section 7 consultation completed by EPA and DoD with USFWS and NMFS. The Proposed Action does not substantially change the nature or frequency of in-water hull maintenance activities relative to existing Station operations; the existing UNDS programmatic coverage therefore applies to ongoing vessel maintenance activities.
- Stormwater Runoff: Stormwater discharge from impervious surfaces within the Station footprint to the adjacent lower Laguna Madre, managed through Station stormwater infrastructure consistent with TPDES permit requirements.
- Exterior Lighting: Continuous nighttime security and operational lighting within the Station footprint.
- Wastewater and Sanitary Discharge: Discharge of treated effluent from Station wastewater treatment infrastructure to the adjacent lower Laguna Madre.
- Personnel and Vehicle Activity: The Proposed Action will result in an increase in routine personnel movements, vehicle traffic, and equipment operations within the Station footprint. The permanent personnel complement will increase from approximately 85 to an estimated 150 persons, with a maximum capacity of approximately 210 persons during surge operations. Parking facilities will be expanded accordingly to accommodate at least 80 percent of the increased personnel complement plus government vehicles, prime movers, and trailers consistent with the Station's operational requirements. The increase in personnel and associated vehicle activity represents a change from existing conditions.

Table 1-1: Pile Installation Details

Pile Type and Material	***18" Concrete Pile, Square*** *Piers and Covered Mooring Structure*	***42" Concrete Pile, Round*** *Boat Ramp*	***12" Concrete Panel*** *Boat Ramp and Outfall wall*
Pile Diameter (inches) or Sheet Pile Dimensions (inches x inches)	18"	42"	12"
Number of Piles Total	44	1	62
Installation Method (Impact, Vibratory, Jetting)	Impact	Impact	Vibratory
Number of Strikes per Pile (if using impact hammer) or Number of Seconds of Vibration per Pile (if using vibratory hammer) (NA if Jetting)	400 strikes	300 strikes	300 seconds

Number of Piles Installed per Day (if using impact or vibratory hammer) (NA if Jetting)	12	1	20
Duration of pile driving activity (days)	4	1	4
Substrate and water depth (ft) in pile installation area	Sand and unconsolidated clay Varies - max depth to be dredged to -12.0 MLLW	Sand and unconsolidated clay Varies- max depth to be dredged to -12.0 MLLW	Sand and unconsolidated clay Varies- max depth to be dredged to -12.0 MLLW
Confined Space or Open Water?	Open Water/Confined Space	Open Water	Open Water
Noise abatement used	Cushion Block	Cushion Block	None

Table 1-2: In-Water Construction-Piles

Structure	Size	No. of Piles
Boat Ramp	42” PSC Pile	1
Pier 1	18” SQ. PSC Pile	14
Pier 2	18” SQ. PSC Pile	14
Covered Mooring Foundations	18” SQ. PSC Pile	16
TOTALS	**42” PSC Pile**	**1**
	18” SQ. PSC Pile	**44**

Table 1-3: In-Water Construction-Structures

Structure	***Peir 2***	***Pier 1***	***Covered Mooring***	***Pier A***	***Pier B***	***Pier C***	***Boat Ramp***	***Existing Seawall***	***New Seawall***	***Rip-Rap Shoreline Repair***	***Stormwater Outfall Rip-Rap***
Location of Structure	Boat Basin	Boat Basin	Boat Basin and North of Basin (foundations)	Boat Basin	Boat Basin	Boat Basin	North of Boat Basin	Boat Basin	North of Boat Basin	South of Boat Basin/Stormwater Outfall	North of Boat Basin
Rebuild or New	New	New	Rebuild/New	Rebuild	Rebuild	Rebuild/New	New	Repair	New	Repair/New	New
Maximum Width (ft)	10	10	10	10	10	10	25	N/A	12	10	8
Maximum Length (ft)	202	152	10	70	70	70	150	N/A	325	56	68
Approximate Area Over Water (sq ft)	2,020	1,520	100 (each) – 5 foundations required (500 sq ft total) Total area of covered mooring: 8,000 sq ft.	No additional area over water added.	No additional area over water added.	No additional area over water added.	N/A	No additional area over water added.	N/A	N/A	N/A
Approximate Area in Water (sq ft)	31.5 = 14; 18” SQ Piles	31.5 = 14; 18” SQ Piles	36 = 16; 18” SQ Piles	No additional in water area added	No additional in water area added	No additional in water area added	3,750	No additional in water area added	324	560	432
Elevation: pier decks extend from 0.5 ft MLLW to 5 ft MLLW											
Benthic Resources	Unvegetated unconsolidated bottom; No impacts to submerged aquatic vegetation required.										

Table 1-4: Dredging/Fill

Activity	Volume (Cubic Yards)	Area (Square Foot)
Ramp Dry Excavation	375	2,250
Ramp Fill	100	590
Dredge to El. -11.0' MLLW	2,300	17,500
1' Overdredge	450	12,000
Wetland Fill	60	1,570
Rip Rap Fill	10	1,020
TOTAL DREDGE	**2,750**	**17,500**
TOTAL EXCAVATION	**375**	**2,250**
TOTAL FILL	**170**	**3,180**

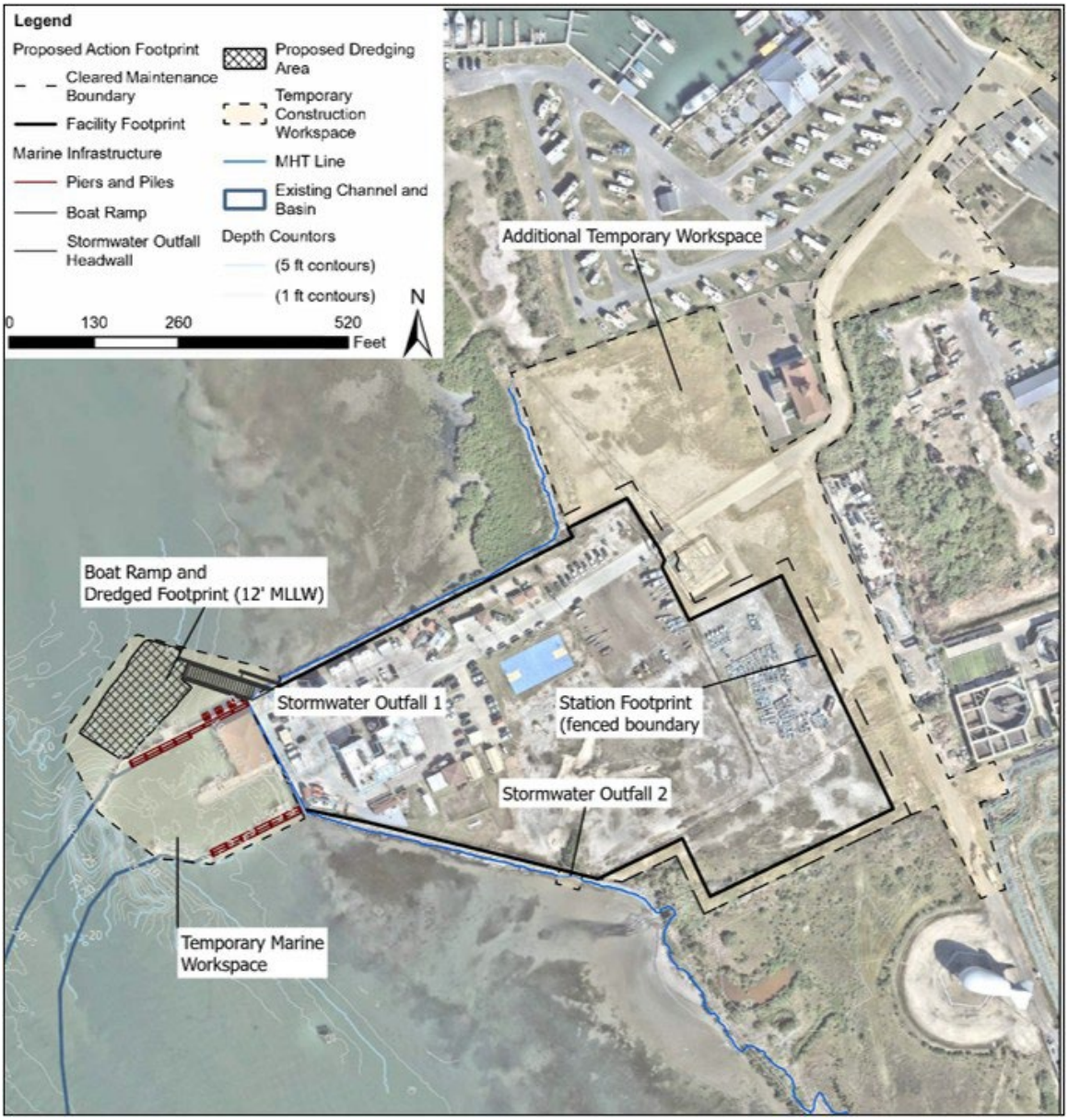


Figure 1-1 Proposed Action Details

1.3 Analysis of Alternatives

Within the EA, Alternative 2 was assessed as a practicable alternative for consideration. Alternative 2 describes how permanent impacts to the sensitive Laguna Madre ecosystem were actively minimized during the project planning phase

Under Alternative 2, the Coast Guard would implement a more extensive redevelopment of STA SPI, involving a larger construction footprint than Alternative 1. This alternative would include all components of the Proposed Action, such as replacement of fire-damaged infrastructure, modernization of operational and administrative facilities, and expansion of mission support capabilities; however, but would extend the developed Station footprint from approximately 9 acres to approximately 13.5 acres by expanding southward into undeveloped land within the USCG-owned parcel adjacent to tidal flat and estuarine wetland habitat and an approximately 2-acre marine footprint including moorings, piers, and boat ramp with associated dredged navigation area.

This expanded footprint would allow for increased separation of functional areas and may also provide greater flexibility for future mission growth. It would require the conversion of undeveloped or lightly developed land, potentially including shoreline and nearshore environments. The boat ramp configuration would require additional land space to accommodate the turning radius and subsequently displaced infrastructure compared to Alternative 1.

The boat ramp under Alternative 2 would be oriented parallel to the Station access road and existing rock breakwater rather than perpendicular as in Alternative 1. This orientation requires less extension of the boat ramp structure into open water but requires additional upland space to accommodate the turning radius for towing vehicles and the associated displacement of landside infrastructure. The parallel ramp alignment also requires a larger dredge footprint to achieve the required navigable depth contour along the ramp approach, as the ramp terminus is positioned further from the existing maintained channel.

Figure 1-2: Alternative 2

1.3.1 Construction

Alternative 2 will be constructed in multiple phases over an estimated 2.5-year construction period, consistent with Alternative 1. The scope of Alternative 2 includes all components of Alternative 1 plus the following additional elements:

1.3.1.1 Additional Landside Components:

- Clearing and grading of approximately 4.5 acres of additional undeveloped land within the southern portion of the federally owned parcel to accommodate expanded facility footprint and reconfigured landside infrastructure displaced by the parallel boat ramp alignment.

- Construction of expanded security fencing perimeter along the extended southern boundary.
- Additional Temporary Workspaces include those identified in Alternative 1 and an additional 1.07 acres of temporary construction workspace.

1.3.1.2 Additional In-Water and Shoreline Components:

- Construction of a boat ramp on the north side of the property oriented parallel to the access road, sized for launching and recovery of vessels up to 45 feet in length.
- Mechanical dredging of 3,500 cubic yards from a 0.47-acre area to -12 ft MLLW to achieve required navigable depth along the parallel ramp approach corridor; dredged material will be placed in a confined barge and transported to an approved placement area (PA 2) or transferred to an upland facility by truck.
- Installation of approximately 470 linear feet of riprap shoreline stabilization along the previously undeveloped southern shoreline of the expanded Station footprint adjacent to tidal flat habitat.
- Additional temporary workspace associated with 470 feet of riprap shoreline.

1.3.1.3 Construction Methods:

Construction methods for marine and waterfront components are consistent with Alternative 1. The expanded dredge footprint under Alternative 2 increases the area subject to turbidity controls relative to Alternative 1 and extends the duration of active dredging operations. Riprap installation along the 470-foot southern shoreline would be conducted from the landside according to BMPs and include temporary workspaces that extend into tidal areas. Refer to Appendix F of the EA for construction BMPs applicable to the Proposed Action that would also apply to Alternative 2. Additional BMPs required for Alternative 2 are specified within the specific resources' sections of the EA.

1.3.2 Operations

Operations under Alternative 2 would be consistent with those described for Alternative 1 (Proposed Action) in Section 2.2.1.2. The expanded facility footprint provides additional separation of functional areas and increased flexibility for future mission growth but does not change the fundamental character of Station operations relative to Alternative 1. Day-to-day operational impact-causing factors for Alternative 2 are consistent with those identified for Alternative 1 (Proposed Action). Where they differ, environmental consequences of operational activities under Alternative 2 are addressed by resource area in Section 3 of the EA.

1.4 Analysis

Under Alternative 2, in-water construction activities result in greater direct and indirect impacts to aquatic and estuarine resources than Alternative 1. The boat ramp under Alternative 2 results in approximately 0.14 acres of direct permanent benthic impact — nearly double the 0.08 acres associated with Alternative 1. The parallel ramp orientation requires a larger dredge footprint of approximately 0.5 acres, compared to 0.37 acres under Alternative 1, to achieve the required navigable depth contour along the ramp approach. The larger dredge footprint and the proximity of the Alternative 2 dredge area to adjacent seagrass beds results in greater indirect turbidity effects on seagrass habitat than Alternative 1. Alternative 2 results in approximately 0.18 acres of direct seagrass impact from the boat ramp footprint and associated construction workspace, and indirect seagrass impacts from elevated turbidity within the dredge action area are expected to be greater in extent than those of Alternative 1. Approximately 0.1 acres of scattered oyster

reef habitat would be directly impacted by construction workspace associated with the Alternative 2 boat ramp configuration (see Figure 1-2). The selected perpendicular configuration strategically positioned to avoid direct impacts to all mapped seagrass and oyster habitat while providing adequate water depth for vessel operations. Installation of riprap along 470 linear feet of previously undeveloped tidal flat shoreline will permanently convert natural soft-bottom estuarine shoreline to hardened substrate, eliminating this shoreline segment as productive intertidal habitat. Benthic recovery timelines following dredging are consistent with Alternative 1 but the larger dredge footprint results in a proportionally greater temporary commitment of benthic habitat resources.

2.0 ESSENTIAL FISH HABITAT

In accordance with the MSA (16 U.S.C. 1855(b)), including the Sustainable Fisheries Act amendment of 1996, projects with potential impacts to EFH must be analyzed. EFH is defined as 'those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity' (MSA Section 3(10); 50 CFR Section 600.10).

The Gulf of Mexico Fishery Management Council (GMFMC) implements fisheries regulations through NMFS for species in its management region, covering waters from the Texas coast eastward through the Gulf states and extending from state waters to the outer boundary of the exclusive economic zone (GMFMC 2017). EFH designations for Gulf of Mexico species were most recently established and updated through Generic Amendment Number 3 to the Fishery Management Plans of the Gulf of Mexico (GMFMC 2005), covering seven fishery management plans: the Shrimp Fishery, Red Drum Fishery, Reef Fish Fishery, Coastal Migratory Pelagic Resources, Stone Crab Fishery, Spiny Lobster Fishery, and Coral and Coral Reefs Fishery. The NMFS Highly Migratory Species Management Division manages additional groups including sharks, tunas, and billfishes (National Oceanic and Atmospheric Administration [NOAA] 2009). The NOAA Fisheries Inland EFH Mapper (NOAA Fisheries 2025) was used to identify species-specific EFH applicable to the Project area.

The action area for this assessment encompasses all areas to be directly or indirectly affected by implementation of the Proposed Action and is not limited to the immediate project footprint. Because the Proposed Action involves multiple construction activities with distinct effect mechanisms and spatial extents, separate action area boundaries have been defined for each primary impact pathway. These action areas are depicted in Figure 2-1 and summarized in Table 2-1 below.

Table 2-1: Action Area Summary

Action Area	Impact Mechanism	Approximate Extent
Land Based AA	Physical disturbance, fill, vegetation clearing, lighting	Direct project footprint and temporary construction workspaces, all adjacent habitat area identified in survey area
Turbidity AA	Elevated suspended sediments from dredging and in-water construction	100-foot buffer around all in-water construction activities, including dredging area and temporary workspaces
Aquatic AA: Underwater Noise Fish and Sea Turtles	RMS behavioral disturbance from impact pile driving	1,359 m (4,459 ft) from Pile 2 installation location: Fish RMS 150 dB behavioral threshold governs
Aquatic AA: Underwater Noise Marine Mammals	RMS Level B behavioral harassment from vibratory pile driving	1,000 m (3,280 ft) from Pile 3 installation location (not shown because fish RMS is maximum isopleth)
Stormwater AA	Stormwater runoff and discharge to lower Laguna Madre	100-foot buffer around outfall locations. Outfall 1 is within Turbidity AA.

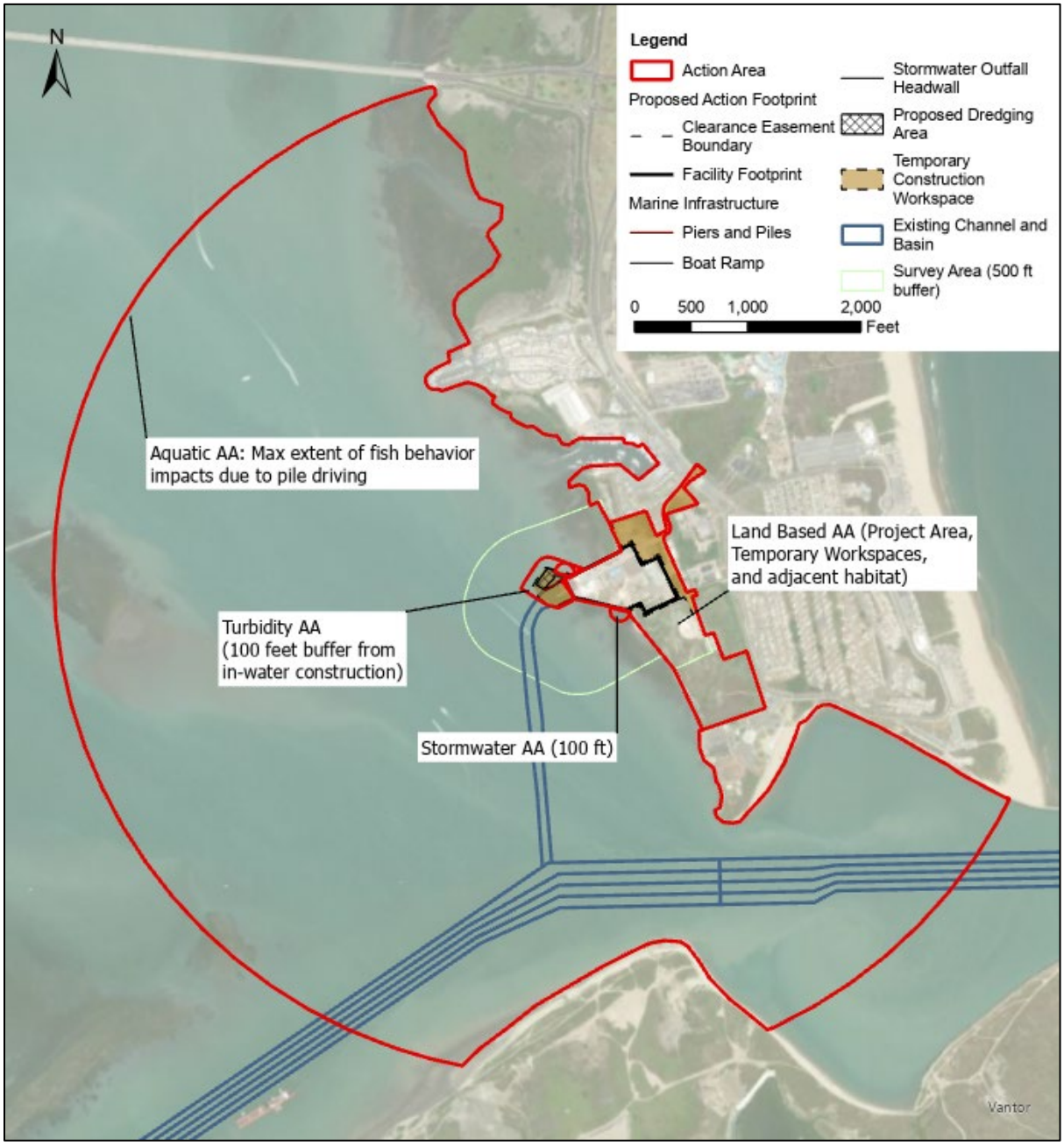


Figure 2-1 Action Areas

2.1 Existing Estuarine Habitat Types

The Project area is located within the lower Laguna Madre estuarine system, which falls within Eco-region 4 (eastern Texas to western Louisiana) as identified by the GMFMC (2004 and 2005). The Action Area for this EFH Assessment encompasses the waters, substrate, and adjacent coastal habitats that may be directly or indirectly affected by construction of the Proposed Action. The Action Area was delineated by applying a 500-foot buffer around all proposed in-water and shoreline construction footprints, including the

north pier, south pier, boat ramp, navigation corridor dredge footprint, and seawall repair areas. This buffer distance is consistent with the conservative approach recommended for EFH assessments to capture the full extent of potential indirect effects, including turbidity plumes, underwater noise propagation, and construction vessel wake, that may extend beyond the immediate construction footprint into adjacent estuarine habitat.

The Action Area encompasses lower Laguna Madre estuarine waters and adjacent intertidal habitat, including the seagrass, oyster reef, tidal flat, and estuarine water column habitats below the Mean High Tide (MHT) line characterized in the sections below. All EFH habitat types and managed species discussed in this assessment are evaluated within the context of this defined Action Area and surveyed area.

Field investigations of wetlands conducted on March 18, 2026 identified a total of 4.95 acres of wetlands within the approximately 22-acre survey area documented the following EFH habitat categories present in and adjacent to the Project area: seagrass and submerged aquatic vegetation, estuarine water column, estuarine intertidal and subtidal soft-bottom habitat, estuarine emergent wetland and intertidal marsh, mangrove shrubland, and patchy intertidal oyster reef (USCG 2026b). Each is described below. A benthic habitat survey was conducted on March 31, 2026 and April 14-15, 2026 with an approximately 38-acre survey area around the proposed workspace for the Project. The results, methodology, and findings of that survey are provided in the Benthic Habitat Assessment (USCG 2026c), included as an appendix to the EA. These habitats collectively provide nursery, foraging, and refuge functions for commercially and recreationally important fishery species and are designated as EFH for multiple federally managed species under the applicable fishery management plans. Figure 2-2 identifies all identified habitats within the survey area.

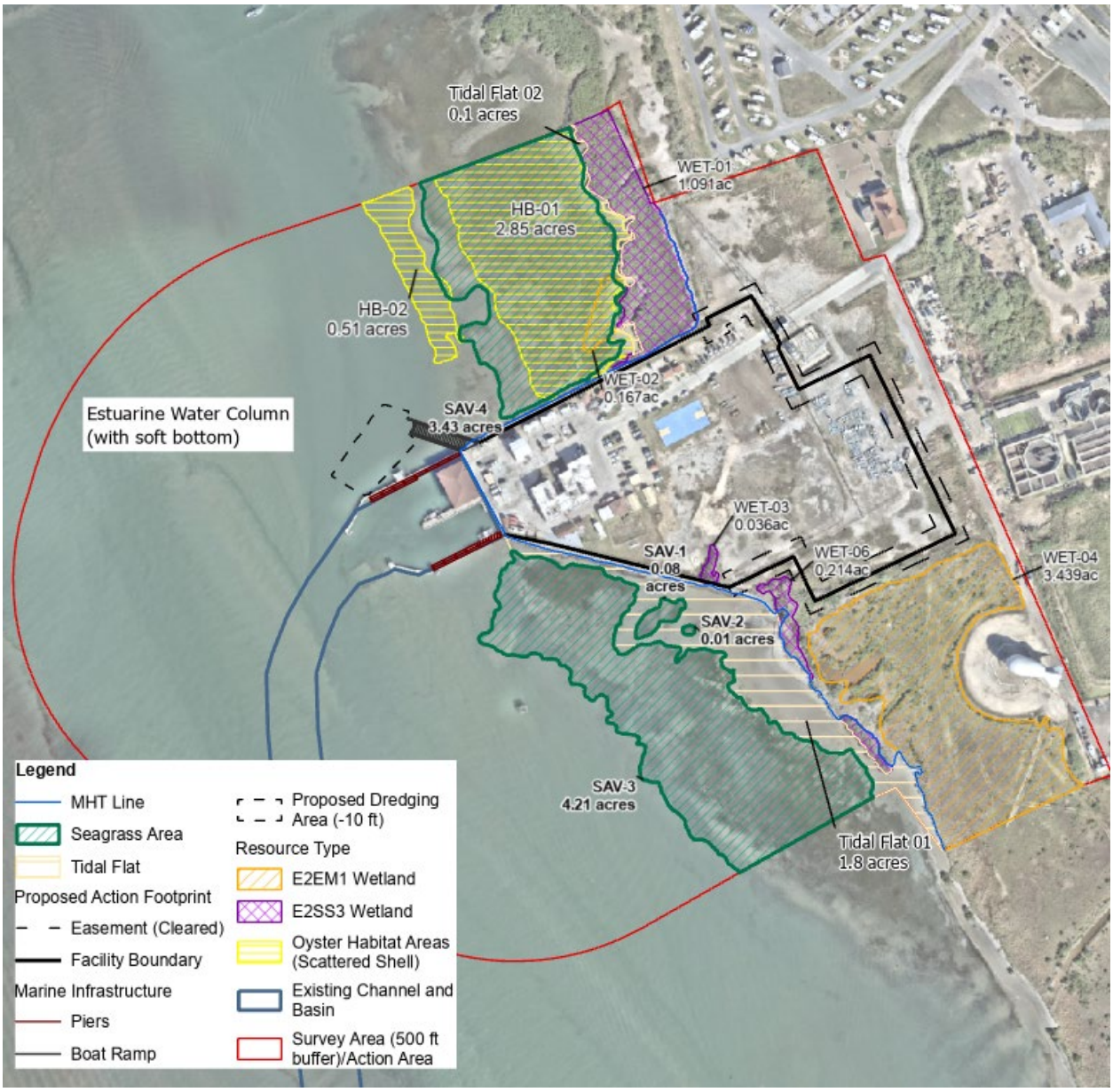


Figure 2-2 Proposed Action Area and Essential Fish Habitat Types

2.1.1 Seagrass and Submerged Aquatic Vegetation

Existing Conditions

Seagrass beds are the dominant and ecologically defining feature of the lower Laguna Madre adjacent to the Project area and represent the most sensitive EFH present in the vicinity of the Proposed Action. The lower Laguna Madre supports some of the most extensive seagrass meadows in the United States, with approximately 70 to 80 percent of Texas seagrass habitat occurring within the Laguna Madre system (Texas Parks & Wildlife Department [TPWD] 2025 and USGS 2023). Dominant seagrass species include shoal grass (*Halodule wrightii*), turtle grass (*Thalassia testudinum*), and manatee grass (*Syringodium*

filiforme), which occur in variable assemblages depending on depth, salinity, and sediment conditions (TPWD 2025 and USGS 2023).

Near South Padre Island, seagrass distribution is closely associated with shallow bathymetry and proximity to navigational features. USGS nearshore studies in the lower Laguna Madre indicate that seagrass density is generally reduced adjacent to maintained channel edges and dredged basins, while higher-density beds occur in shallow subtidal flats at greater distance from active navigation disturbance (USGS 2023). Areas immediately adjacent to the station's existing dredged boat basin and the Brazos Santiago Pass jettied inlet are characterized by disturbed or unvegetated substrates due to periodic dredging, propeller scarring, and elevated turbidity. Nearby shallow subtidal flats within the broader Laguna Madre system support patchy to continuous seagrass beds depending on local light availability and sediment stability (USGS 2023).

Summary of Benthic Habitat Survey

The specific distribution and condition of seagrass within and immediately adjacent to the Project area is characterized in the Benthic Habitat Assessment (USCG 2026c). The survey area was observed to contain four distinct areas of seagrass habitat totaling approximately 10.71 acres (USCG 2026c). Any area that was not classified as oyster or seagrass habitat in the Benthic Habitat Assessment was considered unconsolidated bottom consisting of predominantly fine sand and silty sand substrates. These areas accounted for approximately 26.8 acres within the survey area and include areas in deeper waters and exposed between the mangroves, oyster, and seagrass habitats.

Seagrass in the Laguna Madre is highly sensitive to physical disturbance. Research within the Laguna Madre has documented that shoal grass requires approximately 15 to 18 percent of surface irradiance to maintain positive photosynthetic growth (Dunton 1996). Studies have shown that dredging-related turbidity can increase light attenuation for up to 15 months after active dredging ceases, with effects detectable at the outer margins of adjacent seagrass meadows (Onuf 1994). Seagrass is also sensitive to physical burial, propeller scarring, and shading from overwater structures such as piers, docks, and floating platforms.

2.1.2 Estuarine Water Column and Soft Bottom Benthic Habitat

Existing Conditions

The water column within and adjacent to the Project area is shallow and estuarine, consistent with the lower Laguna Madre system. The Laguna Madre is a microtidal, hypersaline estuary with very shallow bathymetry averaging approximately one meter (approximately 3.3 feet) in natural areas, though water depths in the vicinity of the station's existing boat basin and adjacent navigation channels are deeper due to historical dredging activities (Texas Water Development Board [TWDB] 2025 and USGS 2023). The system is characterized by limited freshwater inflow, restricted tidal exchange, and relatively long water residence times, which heighten sensitivity to localized water quality changes (USGS 2023).

Water quality conditions in the lower Laguna Madre are generally favorable, with clear, well-oxygenated water supporting dense seagrass communities. Tidal exchange with the Gulf of Mexico occurs primarily through Brazos Santiago Pass, located adjacent to the southern end of the station. This tidal exchange locally enhances water circulation near the Project area relative to portions of the lagoon farther from the pass. All areas not otherwise identified as a specific habitat type are considered sub-tidal Estuarine Water Column with soft bottom (Figure 2-2).

Benthic substrate located below the water column habitat that was identified to not consist of seagrass or scattered oyster shell was confirmed to be soft bottom mud and sand. Sediment sampling conducted within the project footprint (USACE 2026d) was confirmed to be predominately sand (>80%), some silt and very low percentages of clay.

2.1.3 Estuarine Soft-Bottom Substrate (Tidal Flat)

Existing Conditions

Estuarine intertidal unconsolidated shore (tidal flat; E2USM) habitat was documented along both the northern and southern shorelines of the station, occurring at the tidal edge of the existing rock breakwater system, below the MHT line (USCG 2026a). These regularly flooded flats are composed primarily of bare mud and sand substrates with little to no persistent vegetation cover, though algal mats were observed at the high tide line. These areas are bounded by the seagrass beds which generally represent the persistent subtidal water column edge. A notable area of exposed tidal flat (Tidal Flat 01) was observed in the vicinity of the existing wastewater treatment effluent discharge pipe outfall along the southern shoreline (USCG 2026a). Tidal Flat 01 (south) and Tidal Flat 02 (north) are identified in Figure 2-2 and total 1.9 acres of area.

Tidal flat habitats support benthic invertebrate communities including polychaetes, amphipods, mollusks, and other infaunal organisms that serve as important prey for demersal fishes, shrimp, and foraging shorebirds. These habitats are designated EFH for multiple managed species under the applicable fishery management plans.

2.1.4 Estuarine Intertidal Emergent Wetland and Mangrove Shrubland

Existing Conditions

Field investigations documented approximately 3.6 acres of estuarine intertidal emergent wetland (E2EM) and approximately 2.30 acres of estuarine intertidal scrub-shrub mangrove wetland (E2SS) within the approximately 22-acre survey area (USCG 2026b). Emergent marsh communities are dominated by halophytic herbaceous species including saltmeadow cordgrass (*Spartina patens*), smooth cordgrass (*Spartina alterniflora*), shore key grass (*Distichlis littoralis*), and saltwort (*Batis maritima*). Mangrove shrubland communities are dominated by black mangrove (*Avicennia germinans*). These habitats collectively function as EFH, providing nursery areas, foraging habitat, and refuge for penaeid shrimp and other estuarine-dependent species during juvenile life stages (GMFMC 2005 and South Atlantic Fishery Management Council [SAFMC] 1998).

2.1.5 Estuarine Intertidal Oyster Reef (Patchy)

Existing Conditions

Patchy clusters of Eastern oyster (*Crassostrea virginica*) were documented within the survey area, occurring as a mosaic with estuarine intertidal persistent emergent wetland, regularly flooded (E2EM1N) and tidal flat (E2USM) habitats along the station's northern shoreline (USCG 2026a). This habitat is classified as Estuarine Intertidal Reef (E2RF2) in the Cowardin classification system. Oyster clusters were observed in association with sparse smooth cordgrass and black mangrove on the reef margins, bounded by the existing rock breakwater. The distribution of oyster reef habitat in the Project area is patchy and scattered rather than forming continuous reef structures. Figure 2-2 shows the location of general areas containing patchy and scattered oyster clusters. Appendix C of the EA details oyster resources surveyed.

Oyster reef habitat fits the definition of EFH under MSA Section 3(10) and is recognized as such by GMFMC (2004 and 2005). These habitats provide structural complexity, water filtration functions, and benthic invertebrate productivity that support estuarine food webs and federally managed species.

2.2 Federally Managed Fish and Invertebrate Species

This section identifies EFH and Habitat Areas of Particular Concern (HAPC) for managed species based on GMFMC (1998, 2004, 2005), GMFMC and NMFS (2016), NOAA (2009), and NOAA Fisheries (2025). The following federally managed species have EFH designated within the lower Laguna Madre and adjacent Gulf of America waters in the vicinity of the Project area. EFH designations were identified using the NOAA Fisheries Inland EFH Mapper (accessed June 6 2026) and confirmed against the applicable fishery management plans. The management plans consulted for this assessment are:

- Shrimp Fishery Management Plan (GMFMC) — covers brown shrimp (Farfantepenaeus aztecus), pink shrimp (Farfantepenaeus duorarum), royal red shrimp (*Pleoticus robustus*) and white shrimp (Litopenaeus setiferus)
- Reef Fish Fishery Management Plan (GMFMC) — covers 43 species: gray triggerfish; greater amberjack, lesser amberjack, almaco jack, banded rudderfish; hogfish; queen snapper, mutton snapper, schoolmaster, blackfin snapper, red snapper, cubera snapper, gray snapper, dog snapper, mahogany snapper, lane snapper, silk snapper, yellowtail snapper, wenchman, vermilion snapper; goldface tilefish, blackline tilefish, anchor tilefish, blueline tilefish, golden tilefish; dwarf sand perch, sand perch, rock hind, speckled hind, yellowedge grouper, red hind, goliath grouper, red grouper, misty grouper, warsaw grouper, snowy grouper, nassau grouper, marbled grouper, black grouper, yellowmouth grouper, gag, scamp, yellowfin grouper
- Coastal Migratory Pelagics Fishery Management Plan (GMFMC) — covers Spanish mackerel (*Scomberomorus maculatus*), king mackerel (*Scomberomorus cavalla*), and cobia (*Rachycentron canadum*)
- Atlantic Highly Migratory Species Fishery Management Plan (NMFS Highly Migratory Species Management Division, Amendment 10, 2017) — blacktip shark (*Carcharhinus limbatus*, neonate); bull shark (Carcharhinus leucas, neonate and juvenile/adult); lemon shark (*Negaprion brevirostris*, neonate); bonnethead (Sphyrna tiburo, neonate, juvenile, and adult); scalloped hammerhead (Sphyrna lewini, neonate).
    - EFH for additional HMS species, including Atlantic sharpnose shark (*Rhizoprionodon terraenovae,* Gulf of America stock) and Atlantic sailfish (*Istiophorus platypterus*), is designated in adjacent Gulf of America coastal waters in the vicinity of the project area. While the NOAA Fisheries EFH Mapper (accessed April 20, 2026) does not place EFH for these species directly at the project coordinates, the adjacent coastal waters accessible through Brazos Santiago Pass represent the nearshore extent of their designated EFH, and potential project-related effects on those adjacent waters are addressed in the impacts analysis in Section 3.0.

No HAPC were identified within the lower Laguna Madre or immediately adjacent Gulf of Mexico waters based on the GMFMC (2005) HAPC designations. The specific species with EFH applicable to the Project area based on the NOAA Fisheries Inland EFH Mapper are identified in the following subsections.

2.2.1 Shrimp

EFH for brown, pink, royal red and white shrimp includes estuarine nursery areas and connecting waterways for spawning and growth to maturity (GMFMC 2005 and SAFMC 1998). The lower Laguna Madre and adjacent coastal waters, including the Project area, are designated EFH for post-larval, juvenile, subadult, and adult life stages of all species (GMFMC 2004, 2005; NOAA Fisheries 2025). Nursery areas constituting EFH include coastal wetlands, estuaries, nearshore flats, and seagrass beds — all of which are present in the vicinity of the Project area.

Penaeid shrimp are highly dependent on estuarine nursery habitats during juvenile life stages. Tidal marshes and seagrass beds adjacent to the station provide critically important feeding and refuge habitat for post-larval and juvenile shrimp. Soft sediment substrates within tidal flats and shallow estuarine flats are also used by juvenile shrimp. These species are ecologically and economically important in the lower Laguna Madre and adjacent Gulf of Mexico waters. Royal red shrimp are primarily associated with deeper offshore Gulf of America waters and soft mud substrates on the continental slope, and are not expected to directly utilize lower Laguna Madre estuarine habitats; however, their EFH is designated at this location based on the broad geographic extent of the Shrimp FMP EFH designation. Refer to Figure 2-3 below for a map of EFH habitat specific to all shrimp. Other EFH habitat is represented by orange shading.

Figure 2-3 EFH for Shrimp, Project Location Denoted with Star

Source: NOAA Fisheries Inland EFH Mapper

2.2.2 Red Drum

Red drum eggs, larvae, post-larvae, juvenile, and adult EFH includes the lower Laguna Madre and adjacent coastal waters of south Texas (GMFMC and NMFS 2016, NOAA Fisheries 2025). Juveniles are most often found in estuaries, with the species being particularly abundant in seagrass beds and intertidal zones. Adult red drum migrate from estuaries to offshore waters in summer and spawn offshore in waters just outside barrier islands in fall. The lower Laguna Madre adjacent to South Padre Island represents critical juvenile and adult habitat for this economically important species. Refer to Figure 2-4 below for a map of EFH habitat specific to all red drum. Other EFH habitat is represented by orange shading.

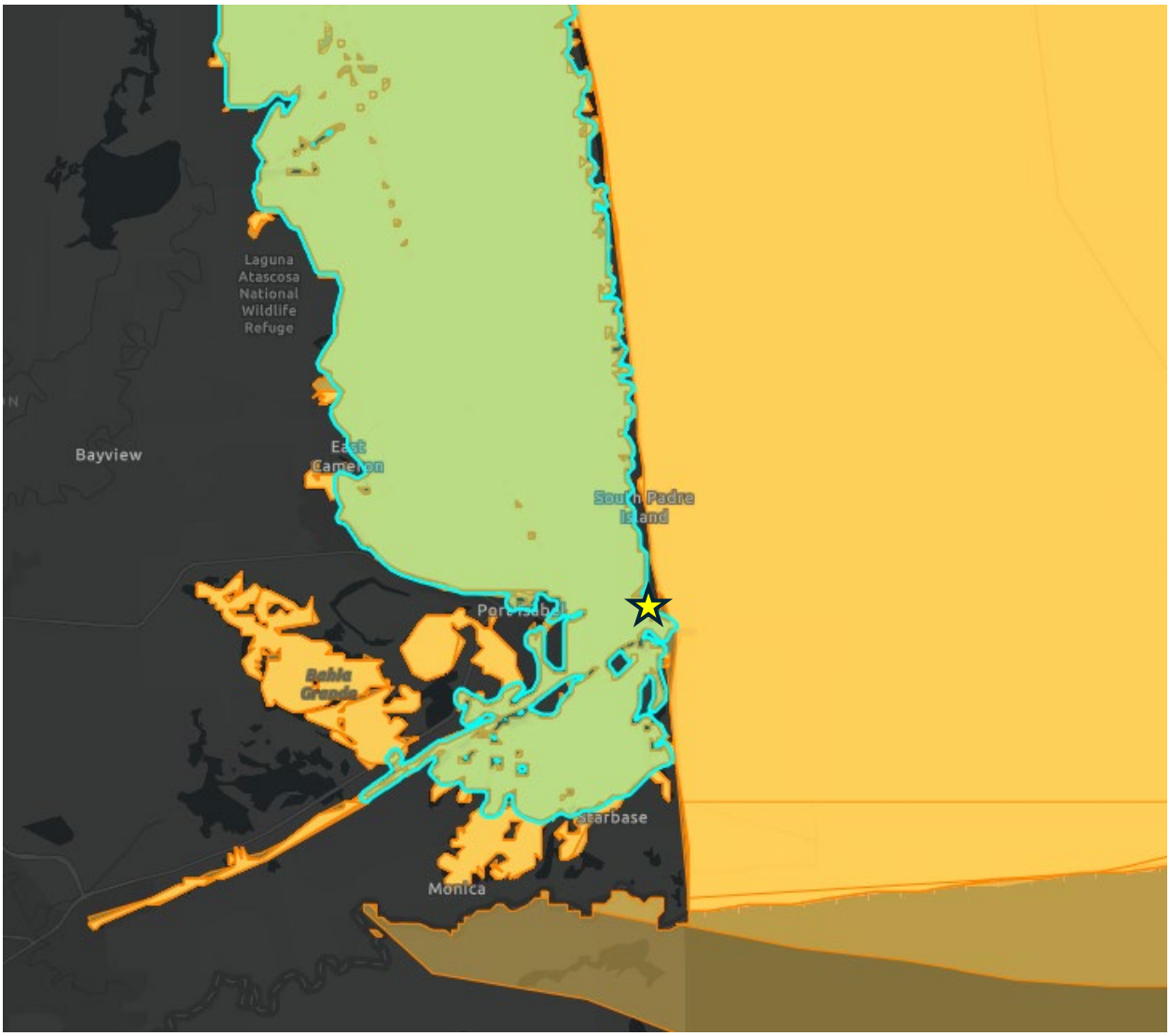


Figure 2-4 EFH for Red Drum, Project Location Denoted with Star

Source: NOAA Fisheries Inland EFH Mapper

2.2.3 Gray and Lane Snapper

EFH for gray snapper and lane snapper includes the lower Laguna Madre and adjacent coastal waters (GMFMC and NMFS 2016, NOAA Fisheries 2025). Juveniles of both species inhabit inshore and estuarine habitats including seagrass beds, mangroves, lagoons, and bays — all of which are present in the vicinity of the Project area. Adults are generally more associated with structured benthic habitats offshore. The seagrass beds and mangrove communities within the Project vicinity are particularly relevant as juvenile habitat. Refer to Figure 2-5 below for a map of EFH habitat specific to all Reef Fish. Other EFH habitat is represented by orange shading

Figure 2-5 EFH for Reef Fish, Project Location Denoted with Star

Source: NOAA Fisheries Inland EFH Mapper

2.2.4 Red Grouper

EFH for early juvenile red grouper includes the lower Laguna Madre vicinity based on the NOAA Fisheries Inland EFH Mapper (NOAA Fisheries 2025). Early juvenile life stages are associated with seagrass beds, making the seagrass habitats adjacent to the Project area potentially relevant to this species. Adult red grouper are more typically associated with structured offshore habitats.

2.2.5 Reef Fish

EFH for federally managed reef fish species is designated under the Reef Fish Fishery Management Plan (GMFMC). Based on the NOAA Fisheries EFH Mapper (accessed April 20, 2026), EFH for all life stages of 43 reef fish species is designated at the project location. These species are listed below by family group. While EFH is designated for all 43 species at this location, the estuarine habitats of the lower Laguna Madre are most directly relevant as nursery and foraging habitat for the juvenile life stages of inshore-associated species, particularly gray snapper, lane snapper, red grouper, and gag. Deeper-water grouper, tilefish, and offshore snapper species are primarily associated with hard-bottom and reef habitats on the continental shelf and slope and are less likely to directly utilize lower Laguna Madre estuarine waters; however, their

EFH designation at this location reflects the broad geographic extent of the Gulf of America Reef Fish FMP EFH designation. Refer to Figure 2-6 for a map of EFH for reef fish species.

Triggerfishes (Balistidae):

- Gray triggerfish (*Balistes capriscus*)

Jacks (Carangidae):

- Greater amberjack (*Seriola dumerili*)
- Lesser amberjack (*Seriola fasciata*)
- Almaco jack (*Seriola rivoliana*)
- Banded rudderfish (*Seriola zonata*)

Wrasses (Labridae):

- Hogfish (Lachnolaimus maximus)

Snappers (Lutjanidae):

- Queen snapper (*Etelis oculatus*)
- Mutton snapper (*Lutjanus analis*)
- Schoolmaster (*Lutjanus apodus*)
- Blackfin snapper (*Lutjanus buccanella*)
- Red snapper (*Lutjanus campechanus*)
- Cubera snapper (*Lutjanus cyanopterus*)
- Gray (mangrove) snapper (*Lutjanus griseus*)
- Dog snapper (*Lutjanus jocu*)
- Mahogany snapper (*Lutjanus mahogoni*)
- Lane snapper (*Lutjanus synagris*)
- Silk snapper (*Lutjanus vivanus*)
- Yellowtail snapper (*Ocyurus chrysurus*)
- Wenchman (*Pristipomoides aquilonaris*)
- Vermilion snapper (*Rhomboplites aurorubens*)

Tilefishes (Malacanthidae):

- Goldface tilefish (*Caulolatilus chrysops*)
- Blackline tilefish (*Caulolatilus cyanops*)
- Anchor tilefish (*Caulolatilus intermedius*)
- Blueline tilefish (*Caulolatilus microps*)
- Golden tilefish (*Lopholatilus chamaeleonticeps*)

Groupers and Sea Basses (Serranidae):

- Dwarf sand perch (*Diplectrum bivittatum*)
- Sand perch (*Diplectrum formosum*)
- Rock hind (*Epinephelus adscensionis*)
- Speckled hind (*Epinephelus drummondhayi*)
- Yellowedge grouper (*Epinephelus flavolimbatus*)
- Red hind (*Epinephelus guttatus*)
- Goliath grouper (*Epinephelus itajara*)
- Red grouper (*Epinephelus morio*)
- Misty grouper (*Epinephelus mystacinus*)
- Warsaw grouper (*Epinephelus nigritus*)
- Snowy grouper (*Epinephelus niveatus*)
- Nassau grouper (*Epinephelus striatus*)

- Marbled grouper (*Epinephelus inermis*)
- Black grouper (*Mycteroperca bonaci*)
- Yellowmouth grouper (*Mycteroperca interstitialis*)
- Gag (*Mycteroperca microlepis*)
- Scamp (*Mycteroperca phenax*)
- Yellowfin grouper (*Mycteroperca venenosa*)

Of the 43 reef fish species with EFH designated at the project location, gray snapper, lane snapper, red grouper, and gag are most likely to utilize lower Laguna Madre estuarine habitats during juvenile life stages. Gray and lane snapper juveniles use seagrass beds, mangroves, and shallow estuarine habitats within the project vicinity as nursery and foraging habitat. Early juvenile red grouper and gag are associated with seagrass habitats, making the seagrass beds adjacent to the project area potentially relevant to these species prior to their recruitment to offshore reef habitats as adults. The remaining snapper, grouper, tilefish, jack, hogfish, and triggerfish species in the reef fish complex are primarily associated with offshore hard-bottom, reef, and deep-water habitats and are not expected to directly utilize lower Laguna Madre estuarine waters, though the adjacent Gulf of America coastal waters represent the nearshore extent of their designated EFH.

2.2.5.1 Snappers

EFH for multiple snapper species includes the lower Laguna Madre and adjacent coastal waters (GMFMC and NMFS 2016, NOAA Fisheries 2025). Gray snapper (*Lutjanus griseus*) and lane snapper (*Lutjanus synagris*) are the snapper species most closely associated with estuarine and nearshore habitats in the project vicinity. Juveniles of both species use inshore and estuarine habitats including seagrass beds, mangroves, lagoons, and bays — all of which are present in the vicinity of the Project area. Adult gray and lane snapper are generally more associated with structured benthic habitats offshore. Additional snapper species with EFH in the broader south Texas coastal waters include red snapper (*Lutjanus campechanus*), vermilion snapper (*Rhomboplites aurorubens*), and yellowtail snapper (*Ocyurus chrysurus*), which are primarily associated with offshore reef and hard-bottom habitats and are less likely to directly utilize lower Laguna Madre estuarine waters. The seagrass beds and mangrove communities within the Project vicinity are particularly relevant as juvenile habitat for gray and lane snapper.

2.2.5.2 Groupers

EFH for grouper species managed under the Reef Fish FMP includes the lower Laguna Madre vicinity for early juvenile life stages (NOAA Fisheries 2025). Red grouper (*Epinephelus morio*) early juvenile life stages are associated with seagrass beds, making the seagrass habitats adjacent to the Project area potentially relevant to this species. Gag (*Mycteroperca microlepis*) juveniles similarly use estuarine and nearshore seagrass habitats as nursery areas before recruiting to offshore reef habitat as adults. Other grouper species managed under the Reef Fish FMP, including black grouper (*Mycteroperca bonaci*), scamp (*Mycteroperca phenax*), and deeper-water species such as yellowedge grouper (*Hyporthodus flavolimbatus*) and snowy grouper (*Hyporthodus niveatus*), are primarily associated with offshore reef and hard-bottom habitats and are not expected to directly utilize lower Laguna Madre estuarine waters.

2.2.5.3 Jacks, Hogfish, and Triggerfish

Greater amberjack (*Seriola dumerili*) and lesser amberjack (*Seriola fasciata*) have EFH designated in Gulf of America coastal waters adjacent to the Project area. Juvenile amberjacks are associated with floating

sargassum and nearshore pelagic habitats before recruiting to reef and structure habitats as adults. Hogfish (*Lachnolaimus maximus*) and gray triggerfish (*Balistes capriscus*) are managed under the Reef Fish FMP and have EFH in Gulf of America coastal waters; both species are primarily associated with hard-bottom and reef habitats offshore and are not expected to directly utilize lower Laguna Madre estuarine waters.

2.2.6 Spanish Mackerel and King Mackerel

Spanish mackerel (Scomberomorus maculatus) and king mackerel (Scomberomorus cavalla) are both designated as coastal migratory pelagics under the Gulf of Mexico Fishery Management Plan with EFH including the lower Laguna Madre and adjacent Gulf of Mexico coastal waters (GMFMC and NMFS 2016; NOAA Fisheries 2025). However, these species exhibit distinct seasonal migration patterns and do not necessarily occupy the same estuarine or nearshore habitats at the same time.

Spanish mackerel are a smaller, more coastal species that regularly utilize estuarine and nearshore environments along the south Texas coast. Juveniles use shallow coastal and estuarine habitats including the lower Laguna Madre as nursery areas during warmer months, making them more likely to be present in the project action area than king mackerel. Spanish mackerel are recreationally important along the south Texas coast and spawn in nearshore Gulf of Mexico waters from spring through summer.

King mackerel are a larger, more pelagic species that primarily occupy offshore and deeper nearshore Gulf of Mexico waters and are less commonly encountered in shallow estuarine environments such as the lower Laguna Madre. Juveniles may occasionally use nearshore coastal areas during summer months but are not considered regular inhabitants of the shallow lagoon system. King mackerel undertake longer seasonal migrations than Spanish mackerel, moving northward along the Gulf coast in spring and returning southward in fall, with south Texas waters used primarily as a wintering area for some individuals (GMFMC and NMFS 2016).

Given these differences, Spanish mackerel represent the higher-risk species for EFH effects from this project due to their greater use of estuarine nursery habitats within the action area. King mackerel EFH effects are primarily relevant to the Gulf of Mexico coastal waters rather than the Laguna Madre estuarine environment.

2.2.7 Cobia

EFH for all life stages of cobia includes the lower Laguna Madre and adjacent coastal waters (GMFMC and NMFS 2016, NOAA Fisheries 2025). Cobia migrate seasonally along the Texas coast and are found in nearshore and estuarine waters, particularly in association with structured habitat. High salinity bays, estuaries, and seagrass habitats are specifically designated EFH for cobia. Refer to Figure 2-4 below for a map of EFH habitat specific to all coastal migratory pelagic species. Other EFH habitat is represented by orange shading

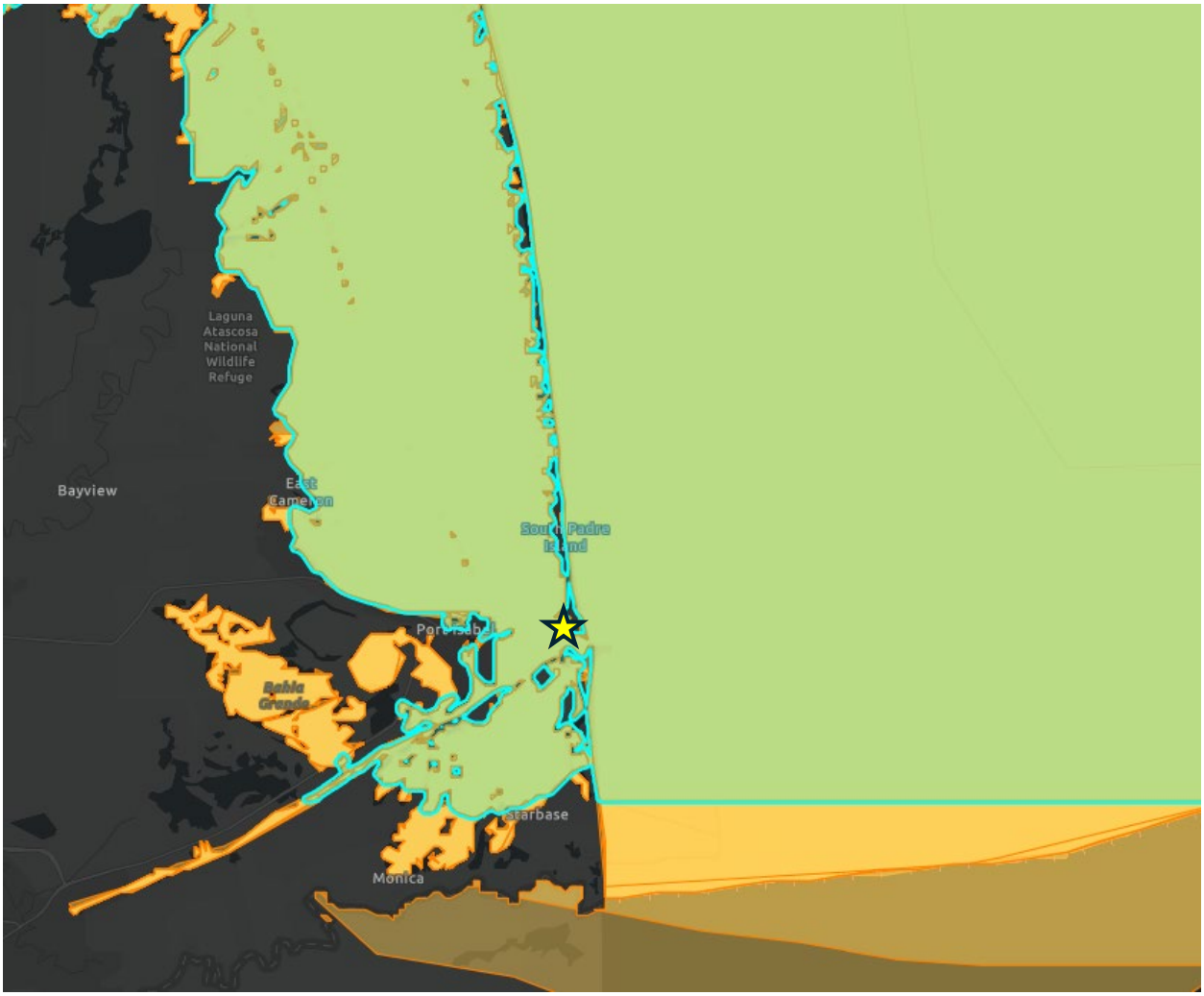


Figure 2-6 EFH for Coastal Migratory Pelagics, Project Location Denoted with Star

Source: NOAA Fisheries Inland EFH Mapper

2.2.8 Atlantic Highly Migratory Species

The lower Laguna Madre and adjacent coastal waters of south Texas are designated EFH for neonate and young-of-year blacktip shark, neonate through adult bull shark, neonate through adult lemon shark, and neonate and young-of-year bonnethead (NOAA Fisheries 2025 and NMFS 2017). The shallow, protected estuarine waters of the lower Laguna Madre provide nursery habitat for juvenile sharks. Bull sharks in particular are known to use low-salinity estuarine habitats as nursery areas and have been documented in Texas bay systems including those of south Texas. These species are managed by the NMFS Highly Migratory Species Management Division under the Atlantic Highly Migratory Species Fishery Management Plan (Amendment 10, 2017). Refer to Figures 2-7 and 2-8 for maps of EFH habitat specific to neonate bull shark and lemon shark. Other EFH habitat is represented by orange shading.

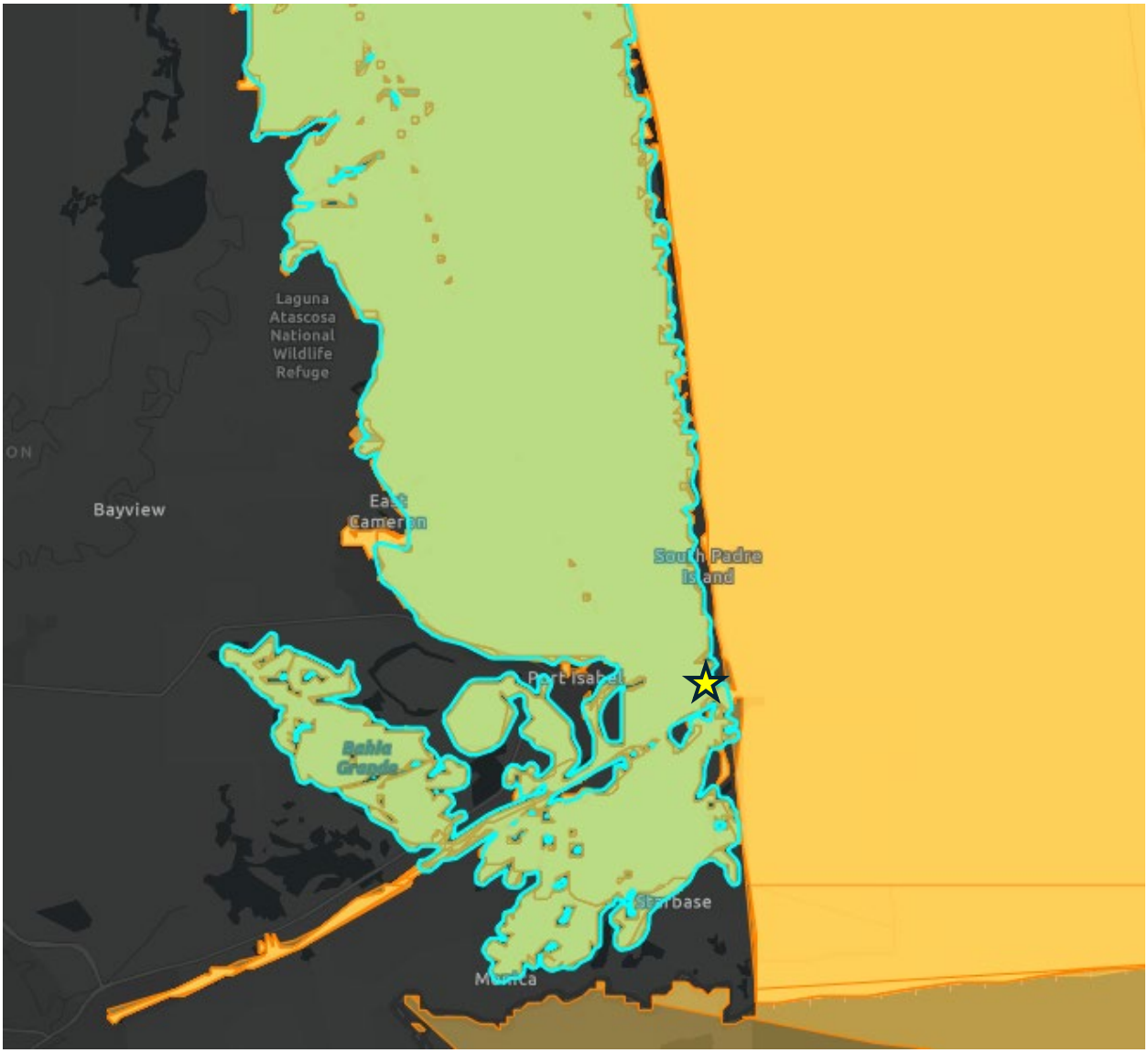


Figure 2-7 EFH for Neonate Bullshark (Atlantic Highly Migratory Species), Project Location Denoted with Star

Source: NOAA Fisheries Inland EFH Mapper

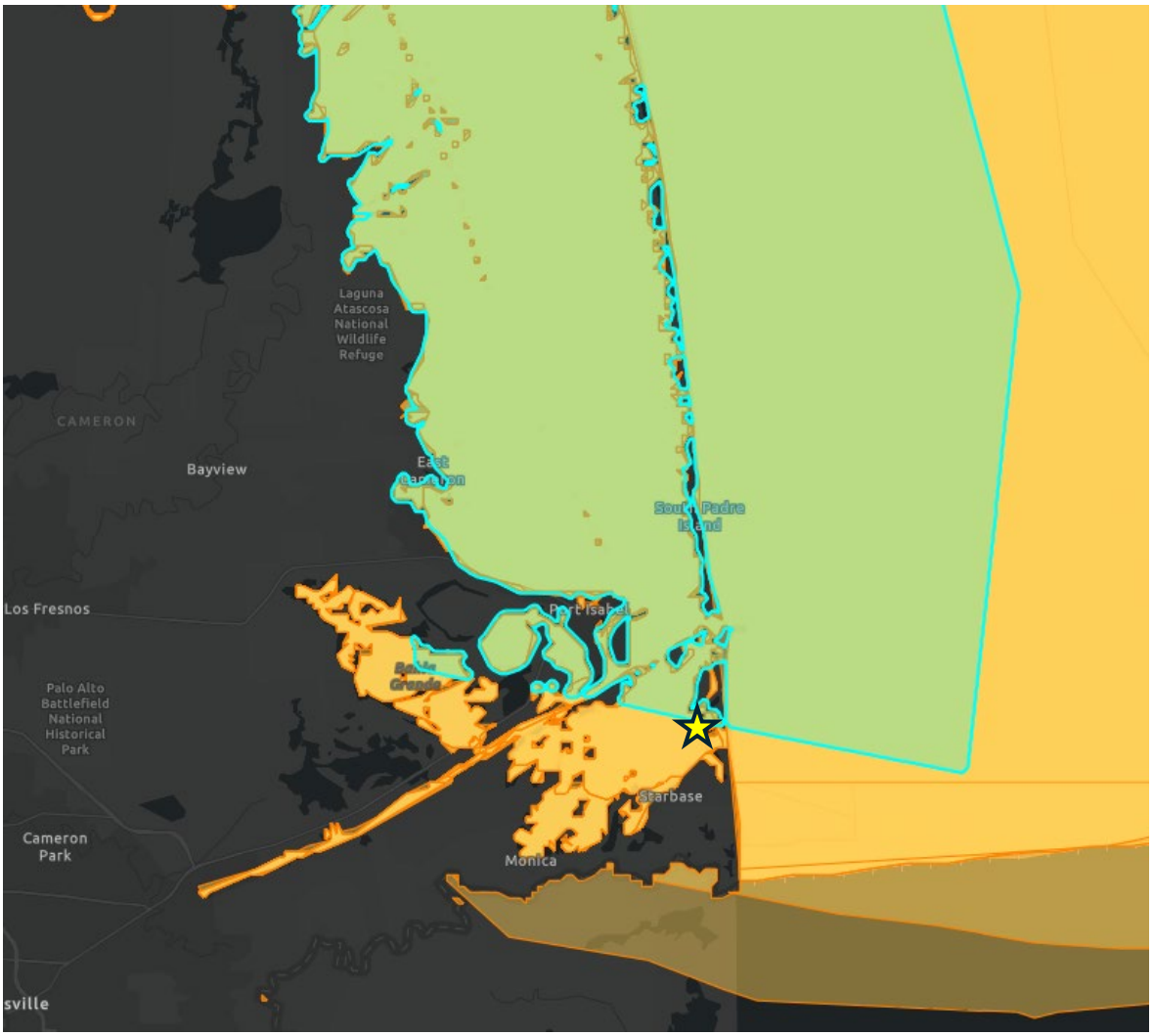


Figure 2-8 EFH for Neonate Lemon Shark (Atlantic Highly Migratory Species), Project Location Denoted with Star

Source: NOAA Fisheries Inland EFH Mapper

2.2.8.1 Scalloped Hammerhead Shark

EFH for juvenile and adult scalloped hammerhead shark (*Sphyrna lewini*) includes the lower Laguna Madre and adjacent coastal waters of south Texas based on the NOAA Fisheries Inland EFH Mapper (NOAA Fisheries 2025) and Amendment 10 to the 2006 Consolidated Atlantic HMS FMP (NMFS 2017). Scalloped hammerheads are a large coastal shark species managed under the Atlantic HMS FMP. Juvenile scalloped hammerheads use shallow coastal and estuarine waters as nursery habitat, and the lower Laguna Madre represents potential nursery and foraging habitat for this species. Adult scalloped hammerheads are more commonly associated with offshore and pelagic environments but are known to transit nearshore and estuarine waters seasonally along the south Texas coast.

Figure 2-9 EFH for Neonate Scalloped Hammerhead (Atlantic Highly Migratory Species), Project Location Denoted with Star

Source: NOAA Fisheries Inland EFH Mapper

2.2.8.2 Atlantic Sharpnose Shark

EFH for juvenile and adult Atlantic sharpnose shark (*Rhizoprionodon terraenovae*, Gulf of America stock) includes the lower Laguna Madre and adjacent coastal waters based on the NOAA Fisheries Inland EFH Mapper (NOAA Fisheries 2025) and Amendment 10 to the 2006 Consolidated Atlantic HMS FMP (NMFS 2017). Atlantic sharpnose sharks are a small coastal shark species and among the most common shark species in nearshore Gulf of America waters. They are highly tolerant of estuarine conditions and are frequently documented in shallow bay systems and coastal waters along the Texas coast, including the lower Laguna Madre. Juveniles use shallow estuarine and nearshore habitats extensively, and the seagrass beds and estuarine waters of the lower Laguna Madre represent foraging and nursery habitat for this species.

Figure 2-10 EFH for Juvenile/Adult Atlantic Sharpnose Shark (Atlantic Highly Migratory Species), Project Location Denoted with Star

Source: NOAA Fisheries Inland EFH Mapper

2.2.8.3 Atlantic Sailfish

EFH for juvenile and adult Atlantic sailfish (*Istiophorus platypterus*) is designated in adjacent Gulf of America coastal waters in the vicinity of the Project area based on the NOAA Fisheries Inland EFH Mapper (NOAA Fisheries 2025) and Amendment 10 to the 2006 Consolidated Atlantic HMS FMP (NMFS 2017). Sailfish are a large pelagic billfish species managed under the Atlantic HMS FMP. Juvenile and adult sailfish primarily occupy open coastal and offshore pelagic waters and are associated with the nearshore Gulf of America waters adjacent to South Padre Island seasonally. The estuarine waters of the lower Laguna Madre are at the inshore extent of designated EFH for this species. Direct use of the lower Laguna Madre by sailfish is limited given their pelagic life history; however, the adjacent Gulf of America coastal waters through Brazos Santiago Pass represent the nearshore edge of designated EFH for juvenile and adult life stages.

Figure 2-11 EFH for Juvenile Sailfish (Atlantic Highly Migratory Species), Project Location Denoted with Star

Source: NOAA Fisheries Inland EFH Mapper

2.3 Recreational and Commercial Fisheries

The lower Laguna Madre adjacent to South Padre Island supports regionally significant recreational and commercial fisheries. The lagoon and adjacent coastal waters are important fishing grounds for species including spotted seatrout (*Cynoscion nebulosus*), red drum, flounder, black drum (*Pogonias cromis*), sheepshead (*Archosargus probatocephalus*), various species of shrimp, and blue crab (*Callinectes sapidus*). The Texas commercial shrimp fishery is one of the most valuable in the Gulf of Mexico, and the lower Laguna Madre serves as an important nursery for this fishery. These recreational and commercial fisheries resources directly support the regional economy of the lower Rio Grande Valley and the coastal communities of South Padre Island and Port Isabel.

3.0 ASSESSMENT OF IMPACTS TO ESSENTIAL FISH HABITAT

Construction activities associated with the Proposed Action could potentially produce the following adverse environmental effects relevant to EFH:

- Temporary increases in water column turbidity and suspended sediment concentrations from in-water construction activities;
- Direct physical disturbance or removal of benthic substrate and associated communities within the construction footprint;
- Potential disturbance or shading of seagrass beds from construction activities and new overwater structures;
- Temporary reduction in dissolved oxygen levels associated with sediment disturbance;
- Physical disturbance to intertidal wetland, tidal flat, and oyster reef habitats within the construction footprint; and
- Underwater noise and vibration from pile driving activities, which may temporarily displace fish and invertebrates from the immediate Project area.

Turbidity and sedimentation, and the associated effects on seagrass light availability, are considered the primary mechanisms of EFH impact for this Project and are addressed in detail below.

3.1 Turbidity and Water Quality

The behavior of suspended material during in-water construction can be separated into three main phases. Convective descent occurs when disturbed sediment falls under gravity. Dynamic collapse occurs when descending material reaches the bottom or a level of neutral buoyancy and spreads horizontally. Passive transport-dispersion commences when material transport is governed by ambient currents and turbulence rather than the initial disturbance dynamics. In the shallow, low-energy environment of the lower Laguna Madre, wind-driven resuspension following initial disturbance can propagate turbidity beyond the immediate construction zone.

3.1.1 Minimization of Water Quality Impacts Through Regulatory Compliance

In-water construction activities will be subject to the requirements of Section 404 of the Clean Water Act (CWA) and applicable water quality standards under Section 401 of the CWA. Construction plans and specifications will require implementation of BMPs for erosion and sediment control, including turbidity curtains, work area isolation where feasible, and sediment containment measures. Water quality and sediment chemistry within the project footprint were assessed through dredge material characterization conducted concurrently with project planning (USCG 2026d). No water or elutriate chemistry results exceeded selected screening benchmarks. Two sediment samples exceeded the Effects Range Low (ERL) benchmark for PAHs but did not reach the Effects Range Median (ERM) level. Dioxin and furan concentrations were detected in all sediment samples but remained below the project cleanup level of 53.0 pg/g Total Dioxin TEQ. Dredged material is suitable for placement at the approved disposal facility. The rebuilt Station will include updated stormwater management infrastructure designed to manage runoff quality and quantity consistent with current standards and TPDES permit conditions. New stormwater

drainage systems will include oil water separators prior to the discharge points to ensure containment of any hydrocarbons or other floatable waste from surface runoff.

3.1.2 Potential Impacts to Seagrass

Seagrass is the highest-sensitivity EFH feature in the Project area and is particularly vulnerable to turbidity-related light reduction. Research in the Laguna Madre has demonstrated that shoal grass requires approximately 15 to 18 percent of surface irradiance to maintain positive photosynthetic growth (Dunton 1996). Light attenuation from dredging-related turbidity in the Laguna Madre has been shown to persist for up to 15 months following disturbance, with effects measurable at the margins of adjacent seagrass meadows (Onuf 1994). A sustained brown tide bloom in the Laguna Madre from 1990 onward caused significant reductions in seagrass leaf elongation rates and a nearly 50 percent decline in below-ground biomass of shoal grass, demonstrating the sensitivity of this system to reduced light conditions (Dunton 1996).

In-water construction at the station has the potential to temporarily increase turbidity in the lower Laguna Madre adjacent to the Project area. The extent of turbidity effects on adjacent seagrass beds depends on construction methods, proximity of seagrass beds to in-water work zones, ambient current and wind conditions, and duration of construction activities. Overwater structures associated with the dock facilities could shade underlying and adjacent seagrass beds (if present); shading effects from overwater structures are long-term and represent a potentially permanent form of EFH impact if seagrass beds occur directly beneath or adjacent to new structures. The Project footprint does not intersect any seagrass areas; there will not be any shade causing structures placed in seagrass areas; and there will not be any navigation corridors used by boats within seagrass areas.

Construction activities for the Proposed Action have been designed to avoid and minimize impacts to adjacent environmental resources. Multiple boat ramp configurations were evaluated during Project design, including parallel and angled alignments at varying inshore and offshore positions along the northern and southern property breakwater walls. Seagrass and oyster resources documented (USCG 2026a and USCG 2026c) were used to inform ramp siting and orientation, with the selected configuration strategically located to avoid direct impacts to mapped seagrass and oyster habitat while providing adequate water depth for vessel launch and recovery and sufficient upland turning radius for truck and trailer maneuvering. Construction methods were further refined to minimize turbidity impacts by planning for the boat ramp to be excavated and concrete panels placed on the bay floor in dry conditions using a temporary sheet pile cofferdam, eliminating open-water excavation in the immediate vicinity of sensitive estuarine resources. Turbidity-related effects may extend beyond the immediate construction area through wind-driven resuspension and tidal transport. The cofferdam methodology substantially reduces the lateral extent of turbidity generation during boat ramp excavation compared to open-water dredging methods; however, turbidity effects within the immediate construction area remain an adverse effect of the proposed action. Minor dredging will be done by mechanical means from a floating barge with mounted long-arm mechanical dredge bucket. Dredged material will be placed in a confined barge and transported to a federal approved placement area (PA 2) or will be transferred to an upland disposal or placement facility with trucks.

Operational impacts to turbidity are not expected. The boat ramp is oriented away from the adjacent seagrass directing any wash away from the area of concern. Prop wash would not affect turbidity or water quality because when a vessel is launched, the vessel is walked off the trailer, slowly backs out and away from the boat ramp, turns in the direction of the channel or waterway and then doesn't engage their motors

fully until near the waterbody (creating a no wake zone near the boat ramp). When retrieving a vessel the vessel does not have the motors fully engaged, just enough to get on the trailer and allow the vessel to be winched on. Additionally, there is a rock toe at the end of the boat ramp to further prevent any scour that might occur due to trailerable vessels. Neither of these cases present prop wash concerns for turbidity. The basin and boat ramp approach are adequately designed to maintain sufficient under keel clearance for maximum 45-ft vessels that would be navigating these areas.

Overwater structures, including pile-supported pier decking and the covered mooring structure, reduce light penetration to the substrate below and immediately adjacent to the structure footprint. In the lower Laguna Madre, where shoal grass requires approximately 15 to 18 percent of surface irradiance to maintain positive photosynthetic growth (Dunton 1996), shading from overwater structures represents a potentially permanent form of EFH impact where seagrass beds occur beneath or adjacent to new construction. Based on the benthic habitat survey conducted in March and April 2026, no seagrass was documented within the footprint of proposed overwater structures or within the immediate adjacent area (USCG 2026c). The nearest mapped seagrass area is located approximately 130 feet from the proposed pier structures. Accordingly, direct shading impacts to seagrass EFH from proposed overwater structures are not anticipated.

Direct impacts to seagrass are not expected with the Proposed Action. Approximately 0.02 acre of seagrass area is located in the immediate vicinity of the proposed boat ramp construction zone and may be subject to indirect turbidity effects during cofferdam installation and removal. Research in the Laguna Madre has documented that dredging-related turbidity propagates to adjacent seagrass meadow margins through wind-driven resuspension (Onuf 1994), and the nearest seagrass beds represent the primary receptor for indirect turbidity effects from boat ramp construction. Refer to Figure 3-1 for a depiction of the proposed action and seagrass areas in the vicinity of the Project area.

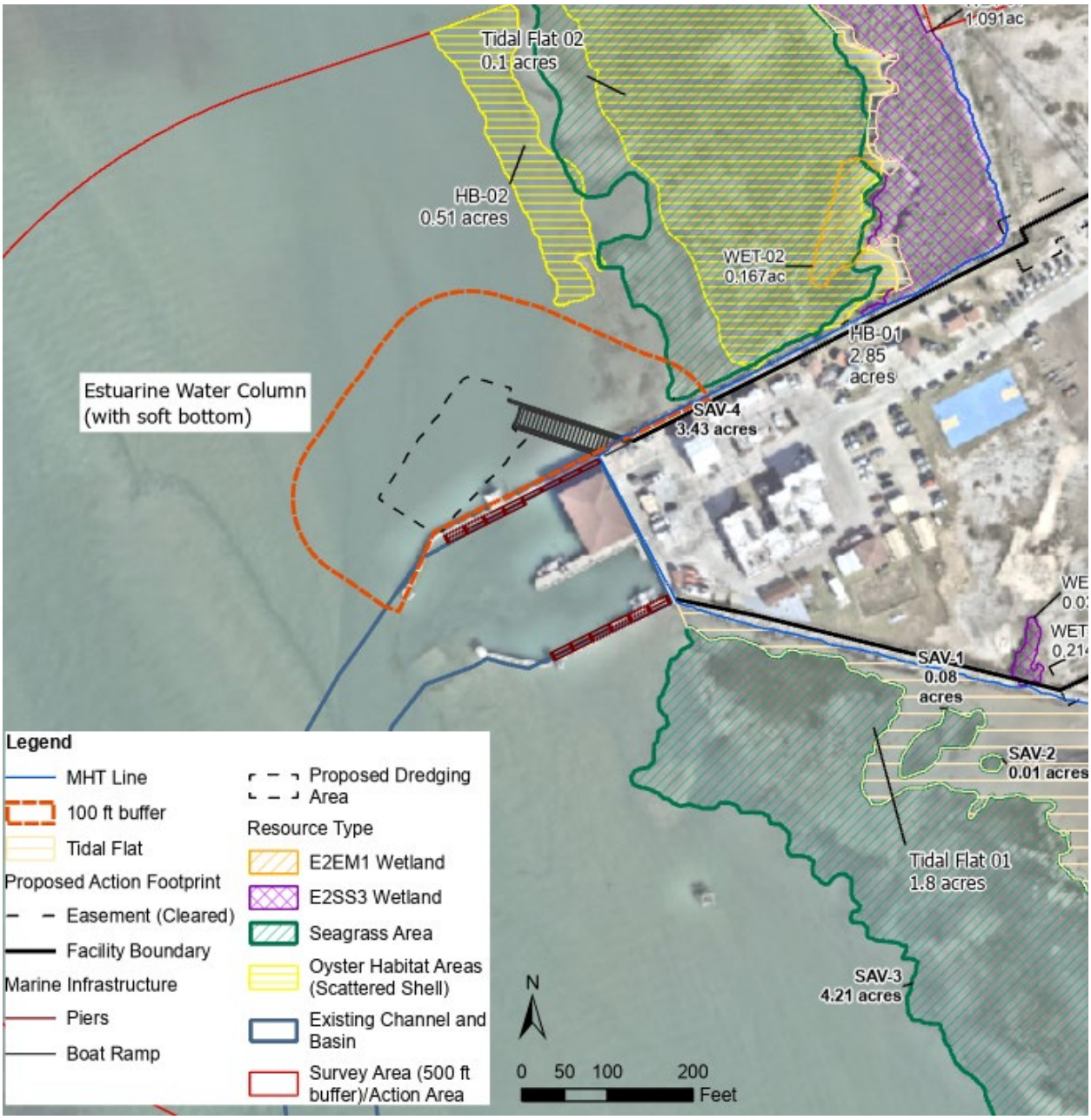


Figure 3-1 Proposed Action Details

3.1.3 Potential Impacts to Estuarine Water Column and Soft Bottom Benthic Habitat

Construction activities, including pile driving, demolition of existing waterfront structures, and boat ramp construction including minor dredging, are expected to temporarily increase turbidity and suspended sediment concentrations within the estuarine water column in the immediate vicinity of the Project area. Dissolved oxygen levels may locally decrease during active in-water construction. These water quality perturbations will occur within the estuarine water column during active construction phases. The duration of individual disturbance events will vary by activity, with turbidity from pile driving and demolition expected to dissipate within hours to days, while dredging-related turbidity may persist for longer durations depending

on ambient current and wind conditions. Given the shallow, well-mixed nature of the water column in this area, turbidity plumes may be transported by wind-driven currents and tidal flow beyond the immediate construction zone, potentially affecting adjacent seagrass beds.

In-water construction activities, including pile installation, boat ramp construction and associated navigation corridor dredging will directly affect the estuarine water column and benthic substrate within the construction footprint. The total area of direct permanent impact (loss) to soft bottom benthic substrates anticipated from boat ramp structure, stormwater outfall protection, and pile footings is approximately 4,500 sq feet (0.1 ac).

3.1.4 Potential Impacts to Estuarine Intertidal Oyster Reef (Patchy)

Oyster reef habitat within the Project area may be subject to increased turbidity from construction, and potential impacts to water quality from sediment resuspension. Turbidity-related indirect effects on oyster resources within the survey area are possible during active in-water construction. Elevated suspended sediment concentrations may reduce filter-feeding efficiency and increase siltation on oyster surfaces within the action area. These indirect effects will occur during the construction period and are expected to be temporary in duration.

Two areas consisting of scattered oyster shells and shell clusters totaling approximately 3.36 acres were located on the north side of the existing USCG Station as documented within the Benthic Habitat (USCG 2026c). Any area that was not classified as oyster or seagrass habitat in the Benthic Habitat Assessment was considered unconsolidated bottom consisting of predominantly fine sand and silty sand substrates. These areas accounted for approximately 26.8 acres within the survey area and include areas in deeper waters and exposed between the mangroves, oyster, and seagrass habitats.

There are no proposed direct impacts to oyster areas from the proposed Project. Indirect effects to oyster areas located in the vicinity of the marine boat ramp construction, including minor dredging, will be minimized by best management practices (BMPs) and confined excavation construction methods.

3.1.5 Potential Impacts to Larval and Juvenile Fish and Invertebrates

Dredging, pile driving, and other in-water construction activities generate turbidity plumes that elevate suspended sediment concentrations above ambient background levels in the lower Laguna Madre. Anthropogenic turbidity of this nature differs from natural episodic turbidity events in particulate composition, intensity, and duration. Suspended sediment from mechanical dredging and pile driving may include fine silts, clays, and disturbed organic material that increase light attenuation, reduce dissolved oxygen through microbial decomposition of resuspended organic matter, and physically abrade gill filaments and respiratory structures of larval and juvenile fish and invertebrates within the affected water column. Resuspended sediment has the potential to smother pelagic eggs and reduce filter-feeding efficiency of zooplankton and benthic invertebrates that form the prey base for managed species within the action area. These physical and biological alterations to water column EFH quality will occur within the action area during active in-water construction. Implementation of BMPs described in Section 3.3, including turbidity curtains and confined excavation methods, is intended to reduce the lateral extent and duration of turbidity plumes; however, some degree of elevated turbidity within the construction footprint and immediate surrounding area is an unavoidable adverse effect of the proposed in-water construction activities.

3.1.6 Potential Impacts to Pelagic and Demersal Fishes

In-water construction activities will reduce the quality and quantity of estuarine water column EFH within the project footprint during the construction period. Elevated turbidity and suspended sediment concentrations will reduce light penetration and dissolved oxygen levels within the affected water column, degrading habitat conditions for pelagic and demersal fish species that occupy the action area. Suspended particulate matter will reduce the oxygen exchange capacity of gill filaments in fish exposed to construction-related turbidity plumes, representing a direct physiological stressor to fish within the affected area. Demersal fish species occupying the immediate project footprint will experience direct displacement from their established foraging and refuge habitat during active in-water construction. Benthic prey communities within the construction footprint will be physically disturbed or removed, reducing prey availability for demersal species utilizing the action area. These alterations represent a temporary reduction in water column and benthic EFH quality within the project footprint for the duration of in-water construction activities.

New pile-supported overwater structures will permanently alter local hydrodynamics and reduce light penetration to the substrate beneath the 0.26-acre structure footprint. These physical changes represent a permanent alteration of benthic and water column EFH conditions within the structural footprint. As described in Section 3.1.2, no seagrass was documented within the footprint of proposed overwater structures; direct shading impacts to seagrass EFH are therefore not anticipated.

3.2 Sedimentation and Physical Disturbance

In-water construction activities will result in localized disturbance of benthic substrate and associated infaunal and epifaunal communities within the construction footprint. Benthic organisms within directly disturbed areas (e.g., polychaetes, amphipods, mollusks, and other invertebrates that form the base of the estuarine food web) will be displaced or killed due to physical disturbance, burial, or removal. These organisms are the primary prey of demersal fishes and juvenile penaeid shrimp that constitute EFH for multiple managed species.

Recovery of benthic infaunal communities following physical disturbance in temperate estuarine environments typically occurs within 1 to 12 months, with an average recovery time of approximately 9.8 months based on a review of worldwide studies (Wilber and Clarke 2007).. Permanent loss of benthic EFH functions will only occur in areas where existing substrate is replaced by permanent hard structures such as pile footings and dock decking.

3.2.1 Pile Driving and Underwater Noise

Pile installation activities associated with construction will generate underwater noise and vibration. The NMFS Multi-species Pile Driving Tool (dated September 2025) was used to calculate the radii of physical injury and behavioral effects on ESA-listed species that may be located in the action area based on the NMFS-accepted pile driving sound measurement thresholds for species in the NMFS Southeast Region reference above (Table 7). The action agency proposes to carry out impact pile driving of:

- Forty-four (44) 18-inch concrete square piles (up to five per day / 400 strikes per pile)
- One (1) 42-inch-diameter round concrete pile (one per day / 300 strikes per pile)
- Sixty-two (62) 10-inch concrete panels (20 per day / 300 seconds per panel)
- Pile driving will occur during daylight hours only.

Pile driving activities would only occur during daylight hours and be within open-water environment and a confined space. We define an open-water environment as any area where an animal would be able to move away from the noise source without being forced to pass through the radius of noise effects. We define a confined space as any area that has a solid, vertical structure (e.g., jetty or seawall) or natural shoreline that would effectively serve as a barrier or otherwise prevent an animal from exiting the area. That is, in order for the animal to move away from the noise source, the animal would be forced to pass through the radius of noise effects.

Table 3-1 Predicted Isopleths by Pile Type

Species Group	Threshold Type	Threshold Level	Pile 1: 18-in Concrete (Impact)	Pile 2: 42-in Concrete (Impact)	Pile 3: 12-in Sheet Panel (Vibratory)
Fish	Peak SPL injury	206 dB	0.4 m (1.3 ft)	2.5 m (8.2 ft)	N/A
	SELcum injury	187 dB	45 m (148 ft)	17.8 m (58.5 ft)	N/A
	RMS behavioral	150 dB	215 m (707 ft)	1,359 m (4,459 ft)	10 m (32 ft)

Assumptions: Water depth = 3.05 m (10 ft); Transmission loss coefficient = 15 (default); No attenuation applied; Station waterbody width = 7,520 ft. Source: NMFS Multi-Species Pile Driving Calculator (NMFS 2025a). No formal NMFS injury thresholds exist for non-impulsive (vibratory) sources for fish or sea turtles; RMS behavioral thresholds applied only (NMFS 2025b). Pile 2 is a single pile installation estimated at 300 strikes over approximately 20 minutes. While vibratory installation is not proposed for Pile 2, the vibratory noise calculator output has been included below for reference. N/A = threshold not applicable to non-impulsive sources.

Figure 3-2 Impact Pile Driving reports, generated from NMFS Multi-species Pile Driving Tool (dated September 2025)

Pile 1: 18-Inch Square Concrete Pile (Impact)

IMPACT PILE DRIVING REPORT
VERSION 2.1-Multi-Species: 2025
USCG STA SPI

PRINT IN LANDSCAPE TO CAPTURE ENTIRE SCREEN
(if OTHER INFO or NOTES get cut-off, please include information elsewhere)

PROJECT INFORMATION	PEAK	SELss	RMS
Single strike level (dB)	185	160	170
Distance associated with single strike level (meters)	10	10	10
Transmission loss constant	15		
Number of piles per day	12		
Number of strikes per pile	400		
Number of strikes per day	4800		
Cumulative SEL at measured distance	197		

OTHER INFO: 18 inch concrete piles
NOTES: 0
Attenuation: 0

RESULTANT ISOPLETHS
(Range to Effects)

FISHES

	ONSET OF PHYSICAL INJURY			BEHAVIOR	
	Peak Isopleth	SEL_{cum} Isopleth		RMS Isopleth	
		Fish ≥ 2 g	Fish < 2 g		
ISOPLETHS (meters)	0.4	45.1	46.4	215.4	Fishes present
Isopleth (feet)	1.3	148.0	152.3	706.8	

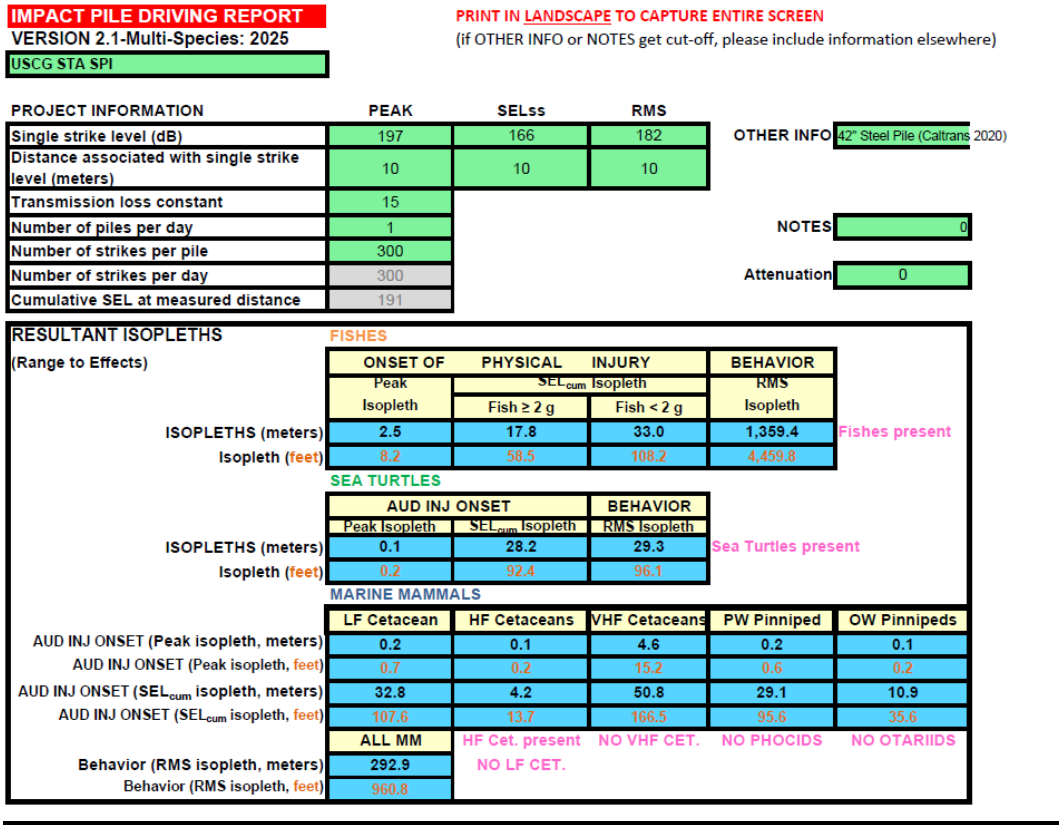
SEA TURTLES

	AUD INJ ONSET		BEHAVIOR	
	Peak Isopleth	SEL_{cum} Isopleth	RMS Isopleth	
ISOPLETHS (meters)	0.0	71.2	4.6	Sea Turtles present
Isopleth (feet)	0.0	233.5	15.2	

MARINE MAMMALS

	LF Cetacean	HF Cetaceans	VHF Cetaceans	PW Pinniped	OW Pinnipeds
AUD INJ ONSET (Peak isopleth, meters)	0.0	0.0	0.7	0.0	0.0
AUD INJ ONSET (Peak isopleth, feet)	0.1	0.0	2.4	0.1	0.0
AUD INJ ONSET (SEL_{cum} isopleth, meters)	82.9	10.6	128.3	73.7	27.5
AUD INJ ONSET (SEL_{cum} isopleth, feet)	272.0	34.7	421.0	241.7	90.1
	ALL MM	HF Cet. present	NO VHF CET.	NO PHOCIDS	NO OTARIIDS
Behavior (RMS isopleth, meters)	46.4	NO LF CET.			
Behavior (RMS isopleth, feet)	152.3				

Pile 2: 42-Inch Concrete Pile (Impact)



IMPACT PILE DRIVING REPORT
VERSION 2.1-Multi-Species: 2025
USCG STA SPI

PRINT IN LANDSCAPE TO CAPTURE ENTIRE SCREEN
(if OTHER INFO or NOTES get cut-off, please include information elsewhere)

PROJECT INFORMATION	PEAK	SELss	RMS
Single strike level (dB)	197	166	182
Distance associated with single strike level (meters)	10	10	10
Transmission loss constant	15		
Number of piles per day	1		
Number of strikes per pile	300		
Number of strikes per day	300		
Cumulative SEL at measured distance	191		

OTHER INFO: 42" Steel Pile (Caltrans 2020)
NOTES: 0
Attenuation: 0

RESULTANT ISOPLETHS
(Range to Effects)

FISHES

	ONSET OF INJURY			BEHAVIOR	
	Peak Isopleth	PHYSICAL SEL_{cum} Isopleth		RMS Isopleth	
		Fish ≥ 2 g	Fish < 2 g		
ISOPLETHS (meters)	2.5	17.8	33.0	1,359.4	Fishes present
Isopleth (feet)	8.2	58.5	108.2	4,459.8	

SEA TURTLES

	AUD INJ ONSET		BEHAVIOR	
	Peak Isopleth	SEL_{cum} Isopleth	RMS Isopleth	
ISOPLETHS (meters)	0.1	28.2	29.3	Sea Turtles present
Isopleth (feet)	0.2	92.4	96.1	

MARINE MAMMALS

	LF Cetacean	HF Cetaceans	VHF Cetaceans	PW Pinniped	OW Pinnipeds
AUD INJ ONSET (Peak isopleth, meters)	0.2	0.1	4.6	0.2	0.1
AUD INJ ONSET (Peak isopleth, feet)	0.7	0.2	15.2	0.6	0.2
AUD INJ ONSET (SEL_{cum} isopleth, meters)	32.8	4.2	50.8	29.1	10.9
AUD INJ ONSET (SEL_{cum} isopleth, feet)	107.6	13.7	166.5	95.6	35.6
	ALL MM	HF Cet. present	NO VHF CET.	NO PHOCIDS	NO OTARIIDS
Behavior (RMS isopleth, meters)	292.9	NO LF CET.			
Behavior (RMS isopleth, feet)	960.8				

Pile 2: 42-Inch Concrete Pile (Vibratory)

*Vibratory installation is not proposed for this pile but calculator is provided as a reference for the potential impacts. This calculation used a 48” steel shell proxy.

VIBRATORY PILE DRIVING REPORT PRINT IN **LANDSCAPE** TO CAPTURE ENTIRE SCREEN
VERSION 2.1-Multi-Species: 2025 (if OTHER INFO or NOTES get cut-off, please include information elsewhere)
STA SPI

PROJECT INFORMATION	RMS
Sound pressure level (dB)	159
Distance associated with sound pressure level (meters)	10
Transmission loss constant	15
Number of piles per day	20
Duration to drive pile (minutes)	5
Duration of sound production in day	6000
Cumulative SEL at measured distance	197

OTHER INFO: 42" steel pipe
NOTES: Proxy: 48" steel shell
Attenuation: 0

RESULTANT ISOPLETHS
(Range to Effects)

	FISHES	SEA TURTLES	
	BEHAVIOR	AUD INJ ONSET	BEHAVIOR
Fishes present / Sea Turtles present	RMS Isopleth	SEL_{cum} Isopleth	RMS Isopleth
ISOPLETHS (meters)	39.8	8.3	0.9
ISOPLETHS (feet)	130.6	27.1	2.8

MARINE MAMMALS

	LF Cetacean	MF Cetaceans	HF Cetaceans	PW Pinniped	OW Pinnipeds
AUD INJ ONSET (SELcum isopleth, meters)	9.5	3.7	7.8	12.3	4.1
AUD INJ ONSET (SELcum isopleth, feet)	31.3	12.0	25.6	40.3	13.6
	ALL MM	HF CET. present	NO VHF CET.	NO PHOCIDS	NO OTARIIDS
Behavior (RMS isopleth, meters)	3,981.1	NO LF CET.			
Behavior (RMS isopleth, feet)	13,061.3				

Pile 3: 12-Inch Concrete Panel (Vibratory)

*Vibratory installation is the only method of installation for concrete panels; therefore impact driving was not assessed for this pile type.

VIBRATORY PILE DRIVING REPORT PRINT IN **LANDSCAPE** TO CAPTURE ENTIRE SCREEN
VERSION 2.1-Multi-Species: 2025 (if OTHER INFO or NOTES get cut-off, please include information elsewhere)
STA SPI

PROJECT INFORMATION	RMS
Sound pressure level (dB)	150
Distance associated with sound pressure level (meters)	10
Transmission loss constant	15
Number of piles per day	20
Duration to drive pile (minutes)	5
Duration of sound production in day	6000
Cumulative SEL at measured distance	188

OTHER INFO: 12 inch concrete panel
NOTES: 12 inch concrete panel
Attenuation: 0

RESULTANT ISOPLETHS
(Range to Effects)

	FISHES	SEA TURTLES	
	BEHAVIOR	AUD INJ ONSET	BEHAVIOR
Fishes present / Sea Turtles present	RMS Isopleth	SEL_{cum} Isopleth	RMS Isopleth
ISOPLETHS (meters)	10.0	2.1	0.2
ISOPLETHS (feet)	32.8	6.8	0.7

MARINE MAMMALS

	LF Cetacean	MF Cetaceans	HF Cetaceans	PW Pinniped	OW Pinnipeds
AUD INJ ONSET (SELcum isopleth, meters)	2.4	0.9	2.0	3.1	1.0
AUD INJ ONSET (SELcum isopleth, feet)	7.9	3.0	6.4	10.1	3.4
	ALL MM	HF CET. present	NO VHF CET.	NO PHOCIDS	NO OTARIIDS
Behavior (RMS isopleth, meters)	1,000.0	NO LF CET.			
Behavior (RMS isopleth, feet)	3,280.8				

Exposure to underwater noise levels of 206 dB peak and 187 dB SELcum can result in injury to fish (NMFS 2025a; Popper et al. 2014). No formal NMFS injury threshold exists for non-impulsive vibratory sources; effects analysis for Pile 3 relies on RMS behavioral thresholds only.

Impact and vibratory pile installation will generate underwater noise and vibration that propagates through the water column and substrate within the project area. Impact hammering of 18-inch and 42-inch concrete piles will produce impulsive underwater noise that can cause temporary threshold shift, permanent threshold shift, or barotrauma in fish within the ensonified area, depending on received sound pressure levels, species, and life stage.

Based on the NMFS Multi-species Pile Driving Tool (September 2025) and NMFS-accepted pile driving sound measurement thresholds for the Southeast Region (U.S. Department of the Navy 2025), the calculated radii of potential acoustic effects from impact pile driving are summarized in Table 3-1. For the 42-inch impact pile, the behavioral disturbance zone extends approximately 1,359 meters (4,459 feet) from the source, encompassing a substantial portion of the lower Laguna Madre action area including seagrass beds and estuarine habitats utilized by juvenile red drum. The physical injury zone for SELcum extends approximately 17.8 meters (58.5 feet) from the 42-inch pile source. Juvenile red drum present within these zones during impact pile installation may experience behavioral disturbance, temporary hearing threshold shift, or in the case of fish within the injury zone, potential barotrauma or permanent hearing damage. Given the presence of juvenile red drum in seagrass and estuarine habitats adjacent to the project area, and their elevated physiological sensitivity to underwater noise, acoustic effects from impact pile driving represent an adverse effect on red drum EFH within the calculated ensonified area. The duration of impact pile driving is limited to approximately five days total across all pile types, which reduces but does not eliminate the temporal extent of acoustic adverse effects on red drum and other fish species present in the action area.

Vibratory installation of 12-inch concrete sheet panels will generate continuous underwater noise at lower received levels than impact driving; however, the extended duration of vibratory installation represents a sustained acoustic stressor within the project area. Noise and vibration from pile installation represent a direct, temporary adverse effect on fish and invertebrate EFH within the ensonified area for the duration of pile driving activities.

3.2.2 Physical Impacts to Wetlands

Emergent wetland and mangrove habitats within the Project area are subject to potential direct impacts from construction activities that encroach on the wetland footprint, as well as indirect effects from alterations to site hydrology and water quality. All wetland features identified within the survey area are considered potentially jurisdictional Waters of the U.S. (WOTUS) and are subject to USACE Section 404 permitting. Avoidance and minimization of wetland impacts will be required as part of the permit process. EFH functions provided by these habitats, particularly nursery and refuge functions for estuarine-dependent species, may be temporarily reduced in areas of direct construction impact. In total, the Project will directly impact 0.036 acre of estuarine intertidal scrub-shrub mangrove wetland (E2SS) wetland and will have no impact on emergent wetland. BMPs and confined excavation construction methods will minimize indirect effects wetlands located in the vicinity of the marine boat ramp construction.

3.2.3 Physical Impacts to Soft Sediments and Tidal Flat

Physical disturbance to soft-bottom benthic habitat from in-water construction must be evaluated separately for temporary disturbance zones and areas of permanent structural conversion, as these represent fundamentally different categories of adverse effect on benthic EFH.

Permanent adverse effects will occur within the 3,750 square foot (0.09 ac) boat ramp footprint, where existing soft-bottom estuarine substrate will be replaced by a concrete structure. This conversion eliminates benthic EFH functions within the ramp footprint permanently. Benthic infaunal communities, including polychaetes, amphipods, mollusks, and other invertebrates that form the prey base for demersal fish and juvenile penaeid shrimp, will be permanently displaced from this area. Recovery of benthic EFH functions within the boat ramp footprint is not anticipated, as the substrate conversion is structural and irreversible. This represents a substantial adverse effect of permanent duration within the ramp footprint.

Temporary adverse effects will occur within the 0.40-acre mechanical dredge footprint and the areas subject to construction vessel activity, cofferdam installation, pile driving, and seawall construction outside the permanent ramp footprint. Within these areas, benthic infaunal communities will be physically disturbed or removed during active construction but the substrate will remain as soft-bottom following completion of work. Recovery of benthic infaunal communities in temporarily disturbed soft-bottom areas in subtropical estuarine environments typically occurs within 1 to 12 months, with an average recovery time of approximately 9.8 months based on a review of worldwide studies (Wilber and Clarke 2007). These represent minimal to moderate adverse effects of temporary duration, with habitat function expected to return to pre-construction conditions following community recovery.

Indirect effects from increased turbidity and sedimentation during construction may also affect tidal flat and soft-bottom habitats beyond the immediate disturbance footprint. These indirect effects are anticipated to be temporary and of lesser intensity than direct physical disturbance within the construction footprint.

3.3 Summary of EFH Impacts

Table 3-2: Total areas of habitat impacted

Habitat Type	Impact Type	Duration	Acreage	Activity / Stressor
Estuarine wetland (E2SS mangrove)	Direct	Permanent	0.036 ac	Wetland fill associated with boat ramp construction.
Submerged aquatic vegetation (SAV / seagrass)	Direct / Indirect	Permanent / Temporary	Direct: 0 ac; Indirect: ~0.02 ac within 100 ft of construction zone	Direct: none — project footprint avoids all mapped seagrass. Indirect: turbidity and light reduction from dredging and in-water construction.
Soft-bottom benthic habitat	Direct / Indirect	Permanent / Temporary	Permanent: 0.09 ac (boat ramp); Temporary: 0.40 ac (dredge footprint); 0.09 ac (seawall installation)	Permanent conversion of soft-bottom substrate to concrete boat ramp structure; temporary physical disturbance and burial of benthic infauna from mechanical dredging and seawall installation.
Overwater structure shading	Direct	Permanent	0.26 ac (Pier 1, Pier 2, and covered mooring deck)	Reduction of light penetration to substrate beneath new pile-supported pier decking and covered mooring structure.
Estuarine water column	Indirect	Temporary	~38 ac action area	Temporary increases in turbidity and suspended sediment from pile driving, dredging, and boat ramp construction; localized reduction in dissolved oxygen during active in-water work.
Fish and invertebrates (water column)	Indirect	Temporary	4,459 ft isopleth	Underwater noise and vibration from impact and vibratory pile driving; temporary displacement and potential physiological stress to fish and invertebrates, including red drum, within the ensonified area.

3.4 Cumulative and Synergistic Impacts

The MSA requires that EFH adverse effects analyses consider individual, cumulative, and synergistic consequences of proposed actions (50 CFR § 600.910). The construction stressors associated with the Proposed Action — including temporary turbidity, underwater noise, physical disturbance of benthic substrate, and permanent conversion of soft-bottom habitat — do not occur in isolation but interact with existing background pressures on the lower Laguna Madre estuarine system.

The lower Laguna Madre has experienced cumulative stressors from ongoing navigation channel maintenance dredging, recreational and commercial vessel traffic, propeller scarring of seagrass beds, and periodic tropical weather events that cause physical disturbance to estuarine habitats. The system also experiences chronic hypersalinity conditions associated with limited freshwater inflow, which already stress seagrass communities and reduces the system's resilience to additional disturbance. Construction-related turbidity from the Proposed Action will occur against this background of existing seagrass stress, and the

combined effect of anthropogenic turbidity with pre-existing light limitation from hypersalinity and wind-driven resuspension may produce a synergistic reduction in seagrass light availability that exceeds the effect of either stressor alone.

Underwater noise from pile driving will occur in a system already subject to vessel traffic noise from commercial shipping through Brazos Santiago Pass and recreational boating within the lower Laguna Madre. While the cumulative acoustic environment has not been formally characterized, the addition of impact pile driving noise represents an acute intensification of acoustic stress above background levels during the pile installation period.

Permanent conversion of 0.09 acres of soft-bottom estuarine substrate to the concrete boat ramp structure contributes incrementally to the cumulative loss of estuarine benthic habitat in the lower Laguna Madre resulting from historical and ongoing shoreline hardening, dredging, and waterfront development associated with navigation infrastructure, residential development, and commercial facilities in the Port Isabel and South Padre Island area.

Climate change represents an additional cumulative stressor that may affect the recovery trajectory of temporarily disturbed EFH following construction. Warming water temperatures, increasing frequency and intensity of tropical weather events, and continued sea level rise may reduce the rate and completeness of seagrass and benthic community recovery relative to historical baselines (NMFS 2022). The recovery timelines cited in this assessment are based on historical literature and may not fully account for future climate conditions in the lower Laguna Madre.

3.5 Proposed Mitigative Measures and Guidelines for Essential Fish Habitat Protection

3.5.1 Avoidance and Minimization of Seagrass Impacts

Given the high ecological sensitivity of seagrass beds in the lower Laguna Madre and their importance as EFH for multiple managed species, the following avoidance and minimization measures are proposed:

- Construction plans shall incorporate seagrass mapping data from USCG 2026c to identify the locations of seagrass beds within and adjacent to the Project footprint and establish work area boundaries that avoid direct disturbance of seagrass beds to the maximum extent practicable.
- Overwater structure designs shall minimize the footprint of deck areas over or adjacent to mapped seagrass beds and shall incorporate design features (e.g., grated decking where overwater structure placement over seagrass beds is unavoidable) to the extent that grated decking is consistent with structural and operational requirements.
- Turbidity curtains or equivalent containment measures shall be used during in-water construction activities to limit the lateral dispersal of turbidity plumes into adjacent seagrass habitat areas.
- In-water construction work shall be conducted during periods of minimum wind and wave activity to the extent feasible to reduce the potential for wind-driven resuspension and transport of turbid water to adjacent seagrass beds.
- Work area isolation measures shall be implemented where feasible to separate active construction areas from adjacent seagrass habitat.

3.5.2 Construction Timing Restrictions

The following seasonal timing recommendations are proposed to reduce the potential for EFH impacts during sensitive biological periods:

- In-water construction activities shall be avoided during the primary penaeid shrimp post-larval migration and estuarine entry period (generally March through May) to the extent practicable, as this period corresponds to peak occupancy of estuarine nursery habitats by early life stages of shrimp.

3.5.3 Erosion and Sediment Control Best Management Practices

The following erosion and sediment control BMPs shall be implemented throughout the construction period:

- Installation and maintenance of turbidity curtains around active in-water work areas, inspected daily and repaired or replaced as necessary;
- Use of upland staging and equipment storage areas to minimize the potential for construction-related runoff to reach estuarine waters;
- Implementation of a construction stormwater pollution prevention plan in compliance with Texas Commission on Environmental Quality permit requirements;
- Containment of concrete washout, fuels, lubricants, and other construction materials to prevent entry into estuarine waters; and

3.5.4 GMFMC Guidelines for Essential Fish Habitat Protection

The GMFMC has developed guidelines that should be incorporated into Project plans to minimize impacts to fisheries and EFH. The following guidelines, developed for construction projects in estuarine environments (GMFMC 2005), shall be considered for incorporation during final design and construction:

- Environmentally critical habitats, including seagrass beds and estuarine wetlands, shall be avoided as much as possible in the design and layout of new facilities;
- Construction equipment and materials shall be staged and managed to avoid encroachment on sensitive habitats; equipment pathways to and from the water shall be established to minimize disturbance to adjacent wetland and estuarine areas;
- Excavated materials, demolition debris, and dredged sediments shall be handled and disposed of in accordance with applicable regulations to prevent re-entry into estuarine waters; and
- Work windows and operational restrictions protective of sensitive species and habitats shall be incorporated into construction specifications in coordination with NMFS and USFWS.

4.0 CONCLUSIONS

EFH for multiple federally managed fish and invertebrate species occurs within and adjacent to the Project area at STA SPI. The habitats of greatest EFH significance in the Project area are seagrass beds in the lower Laguna Madre, which constitute EFH for penaeid shrimp, red drum, reef fish, and other managed species. Seagrass beds are particularly sensitive to turbidity, physical disturbance, and shading effects associated with in-water construction activities.

The Proposed Action involves in-water construction activities, including pile driving, mechanical dredging, boat ramp construction, and construction of new marine infrastructure, that will adversely affect EFH through temporary increases in water column turbidity, underwater noise, and physical disturbance of benthic substrate within the Action Area. Permanent adverse effects include conversion of 0.09 acres of soft-bottom estuarine substrate to the concrete boat ramp structure, permanent reduction of light penetration beneath 0.26 acres of new overwater pier and covered mooring structures, and direct impact to 0.036 acres of estuarine intertidal mangrove wetland. These permanent effects represent an irreversible loss of benthic and wetland EFH functions within the affected footprints.

Project design has avoided direct impacts to mapped seagrass habitat. Indirect effects to seagrass from construction-related turbidity are possible within approximately 0.02 acres of seagrass located in the immediate vicinity of the boat ramp construction zone. The duration and severity of indirect seagrass effects will depend on ambient current and wind conditions during active construction and the effectiveness of turbidity curtains and cofferdam isolation measures implemented under Section 3.5.

Temporary adverse effects to the estuarine water column, soft-bottom benthic communities, and fish and invertebrates within the action area will occur during the construction period. Recovery of temporarily disturbed soft-bottom benthic communities is expected within 1 to 12 months following completion of construction based on published literature for similar subtropical estuarine environments (Wilber and Clarke 2007). Acoustic effects from impact pile driving, including behavioral disturbance within the 1,359-meter isopleth of the 42-inch pile and potential physiological injury within the 17.8-meter SELcum zone, represent temporary adverse effects on fish EFH, including red drum, for the duration of pile installation activities.

Mitigation measures described in herein, including seagrass avoidance in construction planning, use of turbidity curtains, confined excavation methodology, and construction timing restrictions, are proposed to reduce the extent and duration of adverse EFH effects. These measures do not eliminate all adverse effects but are intended to minimize them to the extent practicable.

The USCG will initiate EFH consultation with the NMFS Southeast Regional Office pursuant to Section 305(b)(2) of the Magnuson-Stevens Act. EFH Conservation Recommendations received from NMFS will be incorporated into final Project design and construction specifications to the extent practicable.

5.0 REFERENCES

Note that although several references below include the name 'Gulf of Mexico', this water body has since been re-named the 'Gulf of America' through Executive Order 14172, effective since 20 January 2025, and Secretary's Order 3423, effective since 07 February 2025.

Dunton, K.H. 1996. Seasonal Growth and Biomass of the Subtropical Seagrass *Halodule wrightii* in Relation to Continuous Measurements of Underwater Irradiance. Marine Biology 127(3):489-500.

Gulf of Mexico Fishery Management Council (GMFMC). 1998. Generic Amendment for Addressing Essential Fish Habitat Requirements in the Fishery Management Plans of the Gulf of Mexico. Accessed April 2026. Available at: https://gulfcouncil.org/wp-content/uploads/Oct-1998-FINAL-EFH-Amendment-1-no-appendices.pdf.

GMFMC. 2004. Final Environmental Impact Statement for the Fishery Management Plans of the Gulf of Mexico. Volume 1: Text. Accessed April 2026. Available at: https://gulf-council-media.s3.amazonaws.com/uploads/2025/03/March-2004-Final-EFH-EIS-1.pdf.

GMFMC. 2005. Final Generic Amendment Number 3 for Addressing Essential Fish Habitat Requirements, Habitat Areas of Particular Concern, and Adverse Effects of Fishing in the Fishery Management Plans of the Gulf of Mexico. Gulf of Mexico Fishery Management Council, Tampa, Florida. Accessed April 2026. Available at: https://gulfcouncil.org/wp-content/uploads/March-2005-FINAL3-EFH-Amendment.pdf.

GMFMC. 2017. Species Listed in the Fishery Management Plans of the Gulf of Mexico Fishery Management Council. Accessed April 2026. Available at: https://gulfcouncil.org/docs/Species%20Groupings/Species%20Managed%204_2017.pdf.

GMFMC and National Marine Fisheries Service (NMFS). 2016. Final Report, 5-Year Review of Essential Fish Habitat Requirements, Including Review of Habitat Areas of Particular Concern and Adverse Effects of Fishing and Non-Fishing in the Fishery Management Plans of the Gulf of Mexico. Accessed April 2026. Available at: https://gulfcouncil.org/wp-content/uploads/EFH-5-Year-Revew-plus-App-A-and-B_Final_12-2016.pdf.

NMFS. 2017. Amendment 10 to the 2006 Consolidated Atlantic Highly Migratory Species Fishery Management Plan to Update Essential Fish Habitat Delineations and Life History Descriptions for Atlantic Highly Migratory Species. NMFS, Office of Sustainable Fisheries, Silver Spring, MD. Accessed April 2026. Available at: https://www.habitat.noaa.gov/application/efhinventory/docs/a10_hms_efh.pdf.

National Oceanic and Atmospheric Administration (NOAA). 2009. Final Amendment 1 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan. Essential Fish Habitat, Including a Final Environmental Impact Statement. NOAA, NMFS, Silver Spring, MD.

National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2025. NOAA Fisheries Inland Essential Fish Habitat Mapper. Accessed June 6 2026. Available at: https://efhtools.github.io/InlandEFH/Mapper.html.

Onuf, C.P. 1994. Seagrasses, Dredging and Light in Laguna Madre, Texas, U.S.A. Estuarine, Coastal and Shelf Science 39(1):75-91.

South Atlantic Fishery Management Council (SAFMC). 1998. Final Comprehensive Amendment Addressing Essential Fish Habitat in Fishery Management Plans of the South Atlantic Region. SAFMC, North Charleston, SC.

Suedel, B. 2011. Problem Formulation: Endpoints and Conceptual Models for Assessing and Managing Risks from Resuspension. Dredged Material Assessment and Management Seminar, Jacksonville, FL.

Texas Parks and Wildlife Department (TPWD). 2025. Coastal Bay Habitats and Seagrass Ecosystems of the Laguna Madre. Accessed April 2026. Available at: https://tpwd.texas.gov.

Texas Water Development Board (TWDB). 2025. Laguna Madre Estuary Overview. Accessed April 2026. Available at: https://www.twdb.texas.gov/surfacewater/bays/major_estuaries/laguna_madre/.

USCG. 2026a. Habitat Assessment Report: Rebuild USCG Station South Padre Island, Cameron County, Texas. Contract No. 70Z05026F43000005. Prepared for United States Coast Guard. April 2026. On file with U.S. Coast Guard, Office of Environmental Management, Norfolk, Virginia.

USCG. 2026b. Wetland Delineation Report: Rebuild USCG Station South Padre Island, Cameron County, Texas. Contract No. 70Z05026F43000005. Prepared for United States Coast Guard. March 2026. On file with U.S. Coast Guard, Office of Environmental Management, Norfolk, Virginia.

USCG. 2026c. Benthic Habitat Assessment Report: Rebuild USCG Station South Padre Island, Cameron County, Texas. Contract No. 70Z05026F43000005. Prepared for United States Coast Guard. 2026.

USCG. 2026d. Dredge Material Characterization Report: Rebuild USCG Station South Padre Island, Cameron County, Texas. Contract No. 70Z05026F43000005. Prepared for United States Coast Guard by Lloyd Engineering, Inc. June 2026. On file with U.S. Coast Guard, Office of Environmental Management, Norfolk, Virginia.

United States Environmental Protection Agency (USEPA). 1983. Final Environmental Impact Statement for Jacksonville Harbor, Florida, Ocean Dredged Material Disposal Site Designation. EPA, Criteria and Standards Division, Washington, D.C.

United States Geological Survey (USGS). 2023. Bathymetric, Hydrodynamic, Biological, and Water-Quality Characteristics of a Nearshore Area of the Laguna Madre near South Padre Island, Texas, 2021-22. Scientific Investigations Report 2023-5111. Accessed April 2026. Available at: https://pubs.usgs.gov/publication/sir20235111.

Wilber, D.H. and D.G. Clarke. 2007. Defining and Assessing Benthic Recovery Following Dredging and Dredged Material Disposal. Proceedings of the Eighteenth World Dredging Congress (WODCON XVIII), May 27-June 1, 2007. Lake Buena Vista, FL. 603-618.

Appendix E

Threatened and Endangered Species Assessment

FEDERALLY PROTECTED SPECIES ASSESSMENT

REBUILD USCG STATION SOUTH PADRE ISLAND

SOUTH PADRE ISLAND

CAMERON COUNTY, TEXAS

CONTRACT #: 70Z05026F43000005

Prepared for:

United States Coast Guard
5505 Robin Hood Road, Suite K
Norfolk, Virginia 23513-2413

Prepared by:

Lloyd Engineering, Inc.
4828 Loop Central Dr, Suite 800
Houston, Texas 77081

June 2026

Table of Contents

Page

List of Figures

List of Tables

Attachments

Attachment 1 USFWS IPaC Official Species List

Attachment 2 NMFS Section 7 Mapper

Acronyms and Abbreviations

BCC	Bird of Conservation Concern
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practice
CCB	Center for Conservation Biology
CFR	Code of Federal Regulations
COMDTINST	Commandant Instruction
E2EM1P	estuarine intertidal emergent marsh
E2USM	Estuarine intertidal tidal flat
EA	Environmental Assessment
ECOS	Environmental Conservation Online System
EIS	Environmental Impact Statement
ESA	Endangered Species Act of 1973
FERC	Federal Energy Regulatory Commission
FWCC	Florida Fish and Wildlife Conservation Commission
IPaC	Information for Planning and Consultation
IPM	Integrated Pest Management
LAA	May Affect, Likely to Adversely Affect
LNG	Liquefied Natural Gas
MBTA	Migratory Bird Treaty Act of 1918
MMPA	Marine Mammal Protection Act of 1972
NE	No Effect
NEPA	National Environmental Policy Act of 1969
NLAA	May Affect, Not Likely to Adversely Affect
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
Project	Rebuild USCG Station South Padre Island Project
STA SPI	Coast Guard Station South Padre Island
TPWD	Texas Parks and Wildlife Department
TXMMSN	Texas Marine Mammal Stranding Network
TXNDD	Texas Natural Diversity Database
UPH	Unaccompanied Personnel Housing
U.S.	United States
USACE	United States Army Corps of Engineers

USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 INTRODUCTION

The United States (U.S.) Coast Guard (USCG) has prepared an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). The EA evaluates potential impacts associated with the proposed rebuild and expansion of Coast Guard Station South Padre Island (STA SPI) known as the Rebuild USCG Station South Padre Island Project (Project). This Federally Protected Species Assessment has been prepared as an appendix to the EA to support compliance with applicable federal statutes governing the protection of threatened and endangered species and other federally protected wildlife.

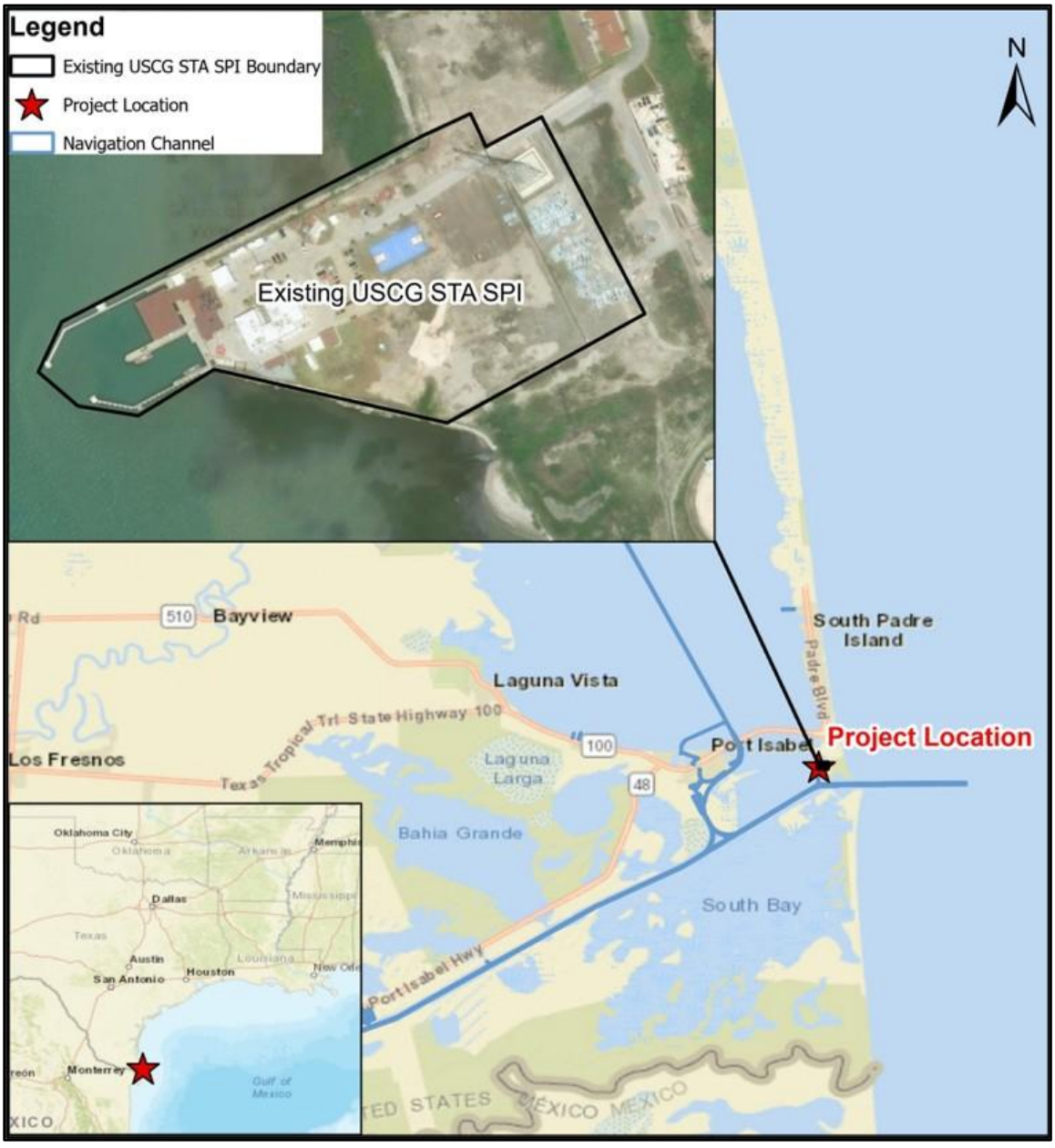


Figure 1-1 Project Vicinity Map

1.1 Proposed Action and Project Area

This proposed project will rebuild and construct new facilities and waterfront infrastructure on the existing site to support future operations of the USCG based at the STA SPI. We expect work to commence in Q3 2026, dependent on issuance of the required authorizations and contract executions. In water work is anticipated to take approximately 7 months. All work will occur within the temporary workspace boundaries. The USCG is assuming that the entire area within temporary workspace could be affected. Industry standard measures will be used when completing the work. The work is needed to rebuild from a fire and to meet current and future mission needs.

The Proposed Action would occur within the boundaries of the existing federally owned property at the location of the existing USCG Station at 1 Wallace L. Reed Road, South Padre Island, Cameron County, Texas. Under Alternative 1 (Proposed Action), the Coast Guard would demolish damaged and outdated facilities and construct new, modernized infrastructure at STA SPI. The Proposed Action would occur within an approximate 9-acre area consisting of developed or vacant land areas and approximately 1.5 acres of marine footprint including moorings, piers, and boat ramp with associated navigation area. The project consists of both land and in-water construction activities.

This alternative would provide a fully modernized, self-sufficient Coast Guard Station capable of supporting all assigned personnel and all associated operational missions. The rebuilt facility will include waterfront infrastructure to accommodate the full complement of assigned and jointly operated vessels, including covered mooring slips, a boat ramp sized for vessels up to 45 feet, and dedicated boat maintenance and storage facilities. Shore-side facilities will include operational and administrative space for Station, ANT, Sector Corpus Christi, Deployable Specialized Forces (DSF), and co-located CBP partner agency personnel, a JOC, personnel housing and all ancillary required facilities, and supporting site infrastructure including security fencing, vehicle parking, and maintained access to the collocated aerostat surveillance pad as detailed by the Project Requirements in Table 2-1.

Multiple boat ramp configurations were evaluated during project design, including parallel and angled alignments at varying inshore and offshore positions along the northern and southern property breakwater walls. Seagrass and oyster resources survey results (2026a; 2026c) were used to inform ramp siting and orientation, with the selected configuration strategically located to avoid direct impacts to mapped seagrass and oyster habitat while providing adequate water depth for vessel launch and recovery and sufficient upland turning radius for truck and trailer maneuvering.

1.1.1 Construction

The Proposed Action will be constructed in multiple phases. Construction is estimated to take approximately 2.5 years. Upland facility demolition and land preparation will be initiated and construction of various facilities including building construction, paving of roadways, ancillary facility construction, and earthworks will continue a rolling schedule simultaneously with marine construction. The construction schedule will be optimized to ensure continuous operations of the Station are maintained. Marine construction is phased to maintain continuous station operability throughout the construction period without the need for construction of temporary mooring or berthing infrastructure. The scope of the Proposed Action includes the following components:

1.1.1.1 Landside Project Components

- Demolition of obsolete station facilities;
- Construction of new landside station operational and administrative facilities;
- Construction of landside Unaccompanied Personnel Housing (UPH) and expanded berthing;
- Development of a landside joint operations center and support space for U.S. Customs and Border Protection;
- Construction of landside auxiliary support buildings and facilities such as boat storage, amenities, etc.;
- Construction of a landside harbor operations center;
- Approximately 5.9 acres of Additional Temporary Workspaces for temporary facilities, temporary parking, laydown, construction staging, utility installation, and other uses are included in areas identified in Figure 1-2. Temporary construction workspaces identified in Figure 1-2 may extend onto or immediately adjacent to Cameron County-owned Isla Blanca Park property. The USCG will coordinate with Cameron County Parks and seek appropriate real estate or temporary use agreements prior to initiation of any construction activities on or adjacent to County-owned land. If such agreements cannot be reached, all construction staging and temporary facilities will be confined to federally owned land within the established project boundary.

1.1.1.2 In-Water Project Components

- Construction of a boat ramp on the north side of the property for launching and recovery of vessels up to 45-ft length (boat ramp is approximately 3,750 sq feet of footprint)
- Mechanical dredging of approximately 2,750 cubic yards of material within an approximate 0.4-acre dredge footprint to provide depths of -12 ft. mean lower low water (MLLW) for the safe navigation of vessels to and from the constructed boat ramp to existing maintained channel. Dredged material will be placed in a confined barge and transported to a federal approved placement area (PA 2) or will be transferred to an upland disposal or placement facility with trucks;
- Repair of existing waterfront pier infrastructure, breakwall, and boathouse facilities;
- Construction of new waterfront pier infrastructure including the installation of support piles;
- Construction of two stormwater outfalls; and,
- Minor repair of existing shoreline stabilization riprap.
- Approximately 2.0 acres of Additional Temporary Workspaces are shown in Figure 1-2 and include all necessary space for navigation and operation of construction equipment and marine construction vessels.

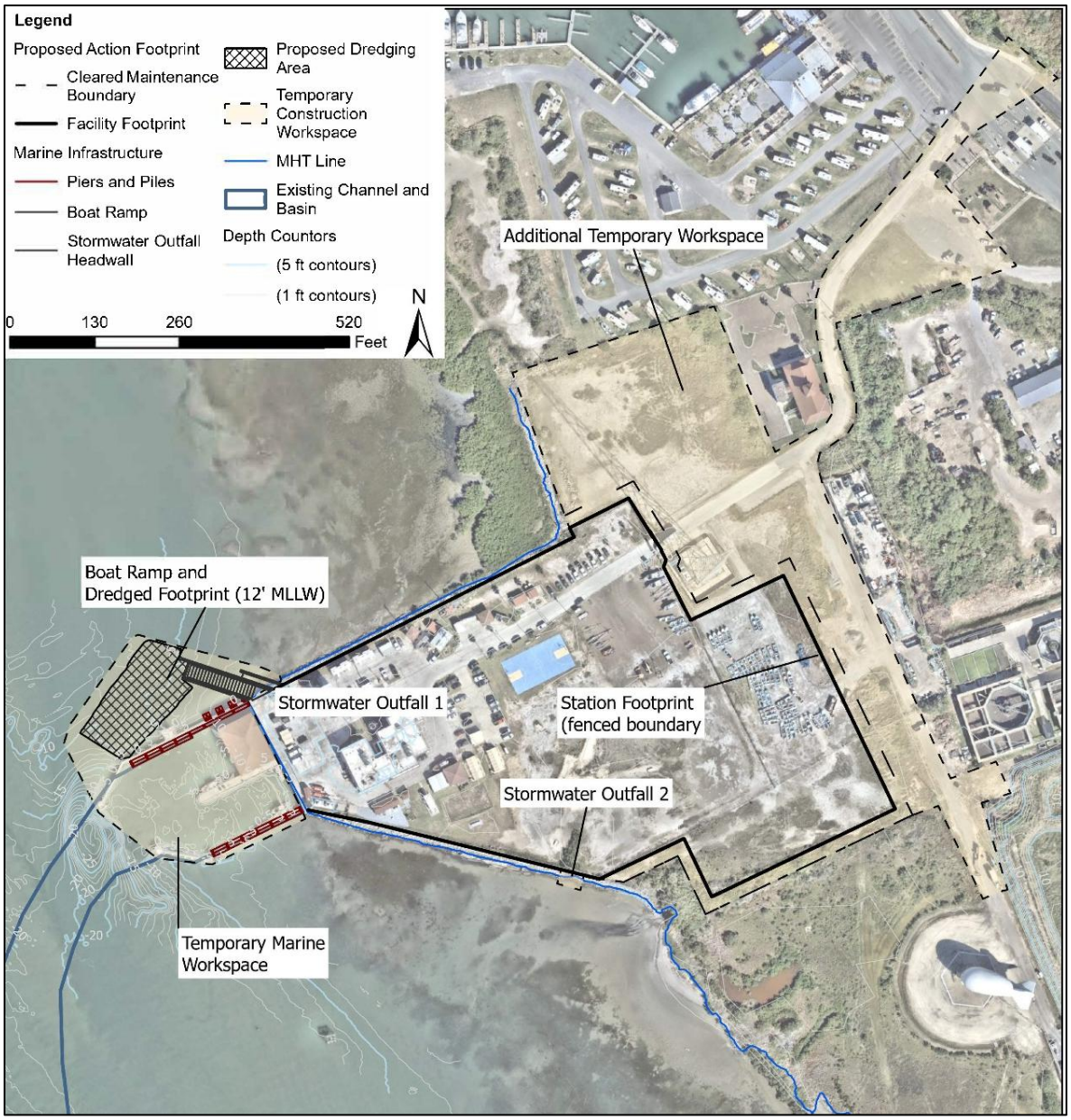


Figure 1-2 Proposed Action Details

1.1.1.3 Methods

Construction methods have been developed to minimize turbidity impacts by planning for the boat ramp to be excavated and concrete panels placed on the bay floor using a temporary sheet pile cofferdam and de-watered workspace, reducing open-water excavation in the immediate vicinity of sensitive estuarine resources. Indirect effects from required dredging would be minimized through minimization of required dredged area, strategic placement of deep navigation corridors away from sensitive resources and use of turbidity curtains during dredging. Refer to Appendix F for other BMPs specific to construction methodology that will be implemented for the Proposed Action.

1.1.2 Operations

Operations of the Station will be consistent with current operations following completion of construction. Phased construction will allow full operability using existing marine infrastructure without the need for temporary berthing during construction. Operational activities will include routine launching and recovery of vessels for all CG missions such as search and rescue, maritime law enforcement, CBP enforcement, aids to navigation, and border security operations. The Station operates on a 24-hour, 365-day basis and maintains a continuous duty watch capability.

Vessel types operated from the Station will be consistent with what is currently operating and may include additional vessels of similar sizes including but not limited to CG Small Boat class vessels (under 65-ft length). Vessels are launched and recovered via the Station boat ramp and mooring slips, with routine transits through the Station basin to the lower Laguna Madre and Brazos Santiago Pass. The Station's waterfront infrastructure is designed to support this vessel class envelope regardless of specific hull designations, which may change over time as USCG and partner agency fleets evolve.

The rebuilt Station will provide additional mooring slips within the breakwall and a boat ramp designed to accommodate any vessel up to 45 feet in length meeting the operational parameters of the Station mission. This expanded capacity accommodates not only currently assigned USCG vessels but also partner agency vessels operating under joint operations agreements, and future vessel classes that meet the facility's design parameters. The facility is designed to be operationally flexible rather than optimized for specific vessel operation designations.

Day-to-day operational activities that represent potential impact-causing factors for the surrounding coastal and estuarine environment include the following:

- Vessel Operations: Routine small boat launches and recoveries via the Station boat ramp and mooring slips, with transits through the Station basin to the lower Laguna Madre and Brazos Santiago Pass. Existing operations involve recovering vessels via an off-site boat ramp; the construction of an on-site boat ramp relocates these operations onsite but does not increase the frequency of recoveries from Laguan Madre.
- Fueling and Maintenance: Vessel fueling, engine maintenance, and hull cleaning activities conducted within the Station BMF and designated maintenance areas in accordance with the Station's SPCC Plan. In-water hull husbandry activities conducted at the Station are subject to the Uniform National Discharge Standards (UNDS) established under CWA Section 312(n) and the associated programmatic ESA Section 7 consultation completed by EPA and DoD with USFWS and NMFS. The Proposed Action does not substantially change the nature or frequency of in-water hull maintenance activities relative to existing Station operations; the existing UNDS programmatic coverage therefore applies to ongoing vessel maintenance activities.
- Stormwater Runoff: Stormwater discharge from impervious surfaces within the Station footprint to the adjacent lower Laguna Madre, managed through Station stormwater infrastructure consistent with TPDES permit requirements.
- Exterior Lighting: Continuous nighttime security and operational lighting within the Station footprint.
- Wastewater and Sanitary Discharge: Discharge of treated effluent from Station wastewater treatment infrastructure to the adjacent lower Laguna Madre.

- Personnel and Vehicle Activity: The Proposed Action will result in an increase in routine personnel movements, vehicle traffic, and equipment operations within the Station footprint. The permanent personnel complement will increase from approximately 85 to an estimated 150 persons, with a maximum capacity of approximately 210 persons during surge operations. Parking facilities will be expanded accordingly to accommodate at least 80 percent of the increased personnel complement plus government vehicles, prime movers, and trailers consistent with the Station's operational requirements. The increase in personnel and associated vehicle activity represents a change from existing conditions.

Additional Project details are provided below for each component of construction proposed:

Dredging

- Dredging will be accomplished by mechanical bucket or clamshell means.
- Approximately 2,750 CY of dredging is anticipated. The material proposed to be dredged is primarily sand.
- Dredging area is estimated to be 17,500 square feet
- Dredging would occur from the new boat ramp to the approximate 12-foot water depth contour.
- Dredge material is planned to be placed onsite or at USACE Placement Area #2 (consistent with recent dredge operations) at Brazos Island and Clark Island. (26° 3'23.73"N, 97°10'6.42"W)
- Periodic maintenance dredging of the areas would be required.
- Entire area would be dredged to -12 ft MLLW
- Dredging would take up to 30 days
- Dredging will comply with the Environmental Conservation measures
- Work would only occur during the daytime
- Material to be removed is primarily sand with some silt
- Current depths are 5 feet to 10 feet (see Enclosure 1)
- Number of roundtrips to disposal location: maximum 5 trips would be required to transport the material via dredge material scow
- Maintenance dredging of the boat ramp access area would occur at a maximum interval of once per year over the next 10 years. Disposal location would be USACE PA #2.
- Dredging will occur during any time of the year without restriction – anticipated time of new work dredging is December-March 2026-27 however may change.

Pile Driving and Removal

- Up to 45 new piles will be installed using an impact hammer or vibratory methods (if geotechnically conducive) (see Table 1 for more information)
- Piles will be forty-four (44) 18” square prestressed concrete piles (SQ PSC) and one (1) 42” concrete pile.
- Existing piles to be replaced will be cut at mudline with saws and removed for disposal offsite at an approved facility.

Covered Moorings/Boathouse Rebuild

- Boat house construction would provide sheltered areas for vessels (see Table 2 for more details)
- The covered mooring structure required installation of 16 18” SQ PSC Piles (included in the previous value of 44 total piles)

Piers

- Demolition of existing wood piers
- Multiple piers will be constructed on site (See Table 2)
- Piers in the Boat Basin will be rebuilt
- One (1) new fixed pier will be built to the North of the Boat Basin
- Piers will provide access to moored vessels – no public or recreational fishing will occur from the structures

New Boat Ramp

- A new boat ramp will be built to allow enough space for a 45' vessel to be launched/retrieved
- The boat ramp will measure approximately 2,250 sq ft and will be constructed with vibratory driven precast concrete panel walls and a cast-in-place concrete topping.
- The base of the boat ramp will be excavated in-the-dry behind a temporary cofferdam wall and laid with prefabricated concrete slabs.
- The total excavation volume for the boat ramp conducted behind the dewatered structure is approximately 375 cubic yards.
- Approximately 100 cubic yards of concrete will be placed on the bay bed and then the cofferdam wall will be removed to flood the boat ramp area to the MHT line.

Rip-Rap/Breakwalls

- Approximately 5 cubic yards of rip-rap would be placed within a 558 square foot section of eroded shoreline at the site. Rip rap will extend approximately 20 feet from the MHT line (to match existing grade).
- Approximately 5 cubic yards of rip-rap would be placed within a 462 square foot area for erosion protection for a proposed stormwater outfall. Rip rap will extend approximately 45 feet from the MHT line (to match existing grade).
- Rip-rap composition would match the existing. It is currently comprised of concrete rubble and mixed coral stones ranging in size from 6 inches to 3 feet in diameter.
- Installation of approximately 69 feet of 12-inch-thick concrete sheet pile breakwall for the proposed stormwater outfall.
- Installation of two 12-inch-thick concrete sheet pile breakwalls for the proposed boat ramp (approximately 150 feet and 107 feet).

Vessel Traffic- Construction

- Construction traffic will be limited to flat bottom barges. Given the depth of the area, it is not anticipated that there will be a lot of construction traffic in-water.
- Number of vessels: Up to 5 work barges will be used during construction in a phased manner.
- Number of trips: Work barges will mobilize to the site and remain on site for an estimated 7-month period.
- Time window of vessel operations: Vessel operations may occur 24 hours a day. Operational barges and work areas will be lit to the minimum necessary for safety and use low lumen downcast lighting.
- Amount of time each vessel will be underway: Each vessel will arrive via the GIWW or the Brazos ship channel and navigate using the existing channel to the USCG basin – Anticipated to take approximately 12 hours to navigate from contractor location in Corpus Christi to the project site.

- Presence of lookout: All construction personnel will be responsible for observing water-related activities to detect the presence of Threatened and/or Endangered Species.

Vessel Traffic- Operation

- Vessels that would be used at South Padre will remain consistent with the types of vessels at the site. Coast Guard currently uses Response Boat-Medium (RB-Ms) and trailerable Aids to Navigation Boat (TANBs) at the site.
- Coast Guard vessels operate consistent with existing operations.

Land Based Construction

- The landside work would occur primarily within the maximum extent of ground disturbance.
- All Temporary Construction Workspaces have been included in the maximum extent of ground disturbance.
- Multiple structures may be constructed. Some facilities will be co-located. These include but are not limited small arms range, new station building, amenities, material storage, etc.
- Additional impervious surfaces will be constructed on site for transportation and parking.
- New stormwater infrastructure and detention will be provided.
- All construction would comply with the applicable State and Federal Standards. The USCG is obtaining any necessary permits for land-based construction.

Table 1-1: Pile Installation Details

Pile Type and Material	***18" Concrete Pile, Square*** *Piers and Covered Mooring Structure*	***42" Concrete Pile, Round*** *Boat Ramp*	***12" Concrete Panel*** *Boat Ramp and Outfall wall*
Pile Diameter (inches) or Sheet Pile Dimensions (inches x inches)	18"	42"	12"
Number of Piles Total	44	1	62
Installation Method (Impact, Vibratory, Jetting)	Impact	Impact	Vibratory
Number of Strikes per Pile (if using impact hammer) or Number of Seconds of Vibration per Pile (if using vibratory hammer) (NA if Jetting)	400 strikes	300 strikes	300 seconds
Number of Piles Installed per Day (if using impact or vibratory hammer) (NA if Jetting)	12	1	20
Duration of pile driving activity (days)	4	1	4
Substrate and water depth (ft) in pile installation area	Sand and unconsolidated clay Varies - max depth to be dredged to -12.0 MLLW	Sand and unconsolidated clay Varies- max depth to be dredged to -12.0 MLLW	Sand and unconsolidated clay Varies- max depth to be dredged to -12.0 MLLW

Confined Space or Open Water?	Open Water/Confined Space	Open Water	Open Water
Noise abatement used	Cushion Block	Cushion Block	None

Table 1-2: In-Water Construction-Piles

Structure	Size	No. of Piles
Boat Ramp	42" PSC Pile	1
Pier 1	18" SQ. PSC Pile	14
Pier 2	18" SQ. PSC Pile	14
Covered Mooring Foundations	18" SQ. PSC Pile	16
TOTALS	**42" PSC Pile**	**1**
	18" SQ. PSC Pile	**44**

Table 1-3: In-Water Construction-Structures

Structure	***Peir 2***	***Pier 1***	***Covered Mooring***	***Pier A***	***Pier B***	***Pier C***	***Boat Ramp***	***Existing Seawall***	***New Seawall***	***Rip-Rap Shoreline Repair***	***Stormwater Outfall Rip-Rap***
Location of Structure	Boat Basin	Boat Basin	Boat Basin and North of Basin (foundations)	Boat Basin	Boat Basin	Boat Basin	North of Boat Basin	Boat Basin	North of Boat Basin	South of Boat Basin/Stormwater Outfall	North of Boat Basin
Rebuild or New	New	New	Rebuild/New	Rebuild	Rebuild	Rebuild/New	New	Repair	New	Repair/New	New
Maximum Width (ft)	10	10	10	10	10	10	25	N/A	12	10	8
Maximum Length (ft)	202	152	10	70	70	70	150	N/A	325	56	68
Approximate Area Over Water (sq ft)	2,020	1,520	100 (each) – 5 foundations required (500 sq ft total) Total area of covered mooring: 8,000 sq ft.	No additional area over water added.	No additional area over water added.	No additional area over water added.	N/A	No additional area over water added.	N/A	N/A	N/A
Approximate Area in Water (sq ft)	31.5 = 14; 18" SQ Piles	31.5 = 14; 18" SQ Piles	36 = 16; 18" SQ Piles	No additional in water area added	No additional in water area added	No additional in water area added	3,750	No additional in water area added	324	560	432
Benthic Resources	Unvegetated unconsolidated bottom; No impacts to submerged aquatic vegetation required.										

Table 1-4: Dredging/Fill

Activity	**Volume (Cubic Yards)**	**Area (Square Foot)**
Ramp Dry Excavation	375	2,250

Ramp Fill	100	590
Dredge to El. -11.0' MLLW	2,300	17,500
1' Overdredge	450	12,000
Wetland Fill	60	1,570
Rip Rap Fill	10	1,020
TOTAL DREDGE	**2,750**	**17,500**
TOTAL EXCAVATION	**375**	**2,250**
TOTAL FILL	**170**	**3,180**

1.2 Regulatory Framework

1.2.1 Endangered Species Act of 1973

The Endangered Species Act (ESA) was designed to protect imperiled species from extinction due to economic growth and development. ESA Section 7, Interagency Coordination, is of interest to this assessment of federally protected species. It regulates all federal agencies to protect endangered and threatened species and their designated critical habitat.

ESA Section 7(a)(2) states that agencies shall, in consultation with the secretary of the interior or the secretary of commerce (depending on the species in question), ensure that any action is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat unless the agency was granted an exception for the action by the Endangered Species Committee (ESA § 7(h)).

A formal consultation with the secretary is conducted to obtain a written Biological Opinion and a summary of information on which the opinion is based showing how the agency action affects the species or its critical habitat (ESA § 7(b)(3)(a)). If the action is found to put the species in jeopardy or to adversely modify critical habitat, the secretary will suggest reasonable and prudent alternatives, which will not violate ESA § 7(a)(2), to be taken by the agency in implementing the action.

An informal consultation with the secretary is conducted if the agency has reason to believe that an endangered or threatened species or designated critical habitat may be present in the area affected by the Project and that the implementation of the proposed action is likely to affect such species or habitat (ESA §7(a)(3)).

1.2.2 Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. §§ 703–712), protects over 800 species of migratory birds. The MBTA prohibits the take, possession, import, export, transport, sale, purchase, barter, or offer for sale of any migratory bird, their eggs, feathers, or nests without a valid federal permit. Executive Order 13186 (2001) asserts that the protection of migratory birds is the responsibility of federal agencies. The Project area is located along the Central Flyway, one of the four major migratory corridors in North America, and the lower Laguna Madre provides critically important habitat for migratory shorebirds, wading birds, and waterfowl. A complete list of species covered under the MBTA can be found at https://www.govinfo.gov/content/pkg/FR-2023-07-31/pdf/2023-15551.pdf.

1.2.3 Marine Mammal Protection Act of 1972

The Marine Mammal Protection Act of 1972 (MMPA; 16 U.S.C. Chapter 13, §§ 1361–1362, 1371–1389, 1401–1407, 1411–1418, 1421–1421h, and 1423–1423h), and associated amendments and agreements, affords federal protections from anthropogenic actions to all species of marine mammals that occur within U.S. waters. This protection generally addresses incidental and purposeful ‘take’ (to hunt, harass, capture, or kill) (except with a permit) or attempts to take, and prohibits (except with a permit) the import and export of marine mammals and their parts or products (National Oceanic and Atmospheric Administration [NOAA] Fisheries 2025). This act is facilitated by NOAA Fisheries for cetaceans (whales, dolphins, and porpoises) and pinnipeds (seals and sea lions). USFWS facilitates MMPA protections for walrus, manatees, sea otters,

and polar bears. Marine mammals in Alaska are co-managed with native Alaskan tribes. In addition, the Marine Mammal Commission provides science-based oversight of federal policies and actions that may affect marine mammals and the habitats these animals require (NOAA Fisheries 2025).

1.2.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA; 16 U.S.C. 668-668d) prohibits the take, possession, sale, or transport of bald eagles (Haliaeetus leucocephalus) or golden eagles (Aquila chrysaetos), including their parts, nests, or eggs, without a federal permit. While both species may occur as occasional transients in the lower Laguna Madre region, neither is expected to nest within the Project area given the developed character of the station footprint.

1.3 Action Areas

Consistent with 50 CFR 402.02, the action area for this assessment encompasses all areas to be directly or indirectly affected by implementation of the Proposed Action and is not limited to the immediate project footprint. Because the Proposed Action involves multiple construction activities with distinct effect mechanisms and spatial extents, separate action area boundaries have been defined for each primary impact pathway. These action areas are depicted in Figure 1-3 and summarized in Table 1-5 below.

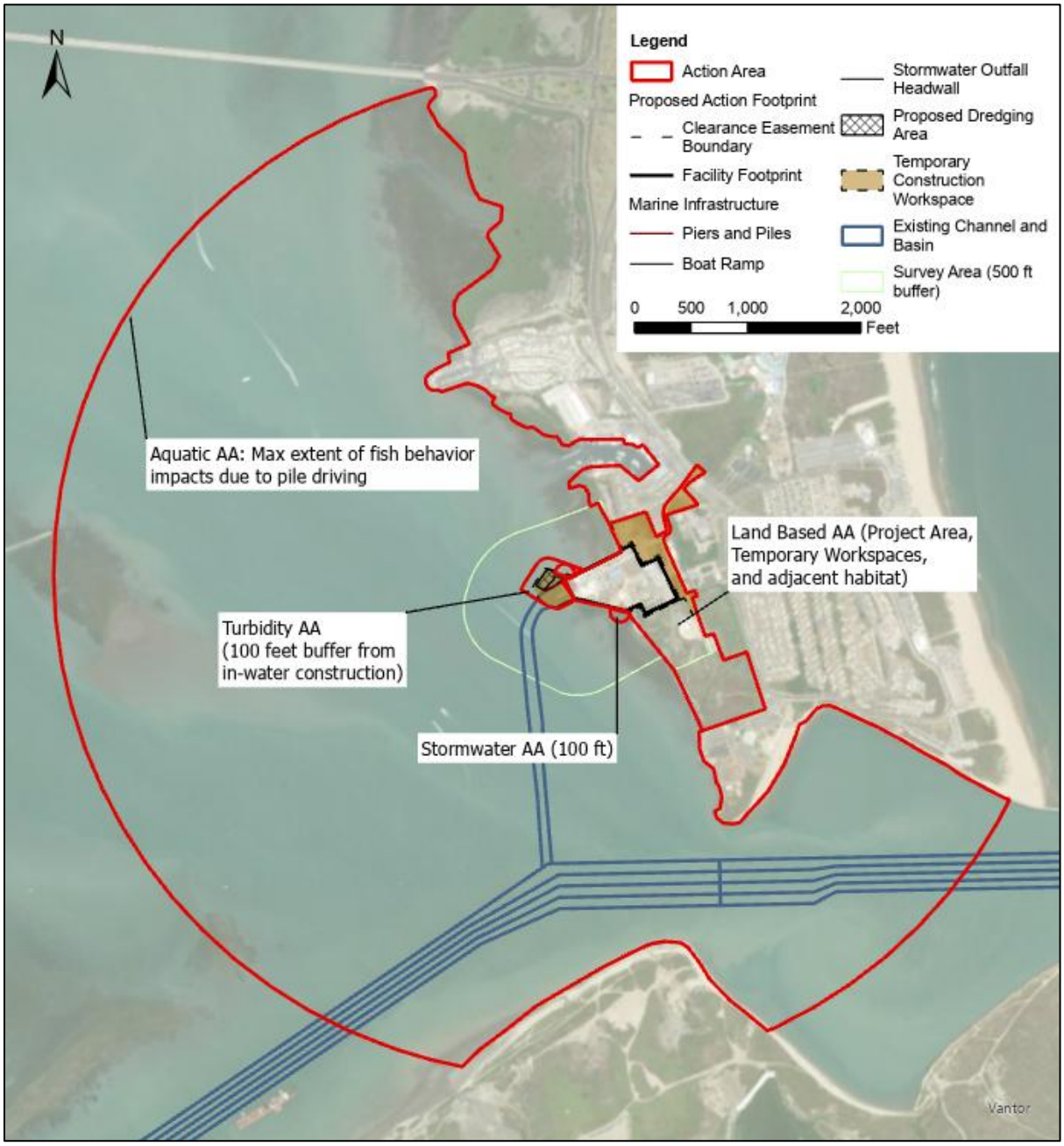


Figure 1-3 Action Area

Table 1-5: Action Area Summary

Action Area	Impact Mechanism	Approximate Extent
Land Based AA	Physical disturbance, fill, vegetation clearing, lighting	Direct project footprint and temporary construction workspaces, all adjacent habitat area identified in survey area
Turbidity AA	Elevated suspended sediments from dredging and in-water construction	100-foot buffer around all in-water construction activities, including dredging area and temporary workspaces
Aquatic AA: Underwater Noise Fish and Sea Turtles	RMS behavioral disturbance from impact pile driving	1,359 m (4,459 ft) from Pile 2 installation location: Fish RMS 150 dB behavioral threshold governs
Aquatic AA: Underwater Noise Marine Mammals	RMS Level B behavioral harassment from vibratory pile driving	1,000 m (3,280 ft) from Pile 3 installation location (not shown because fish RMS is maximum isopleth)
Stormwater AA	Stormwater runoff and discharge to lower Laguna Madre	100-foot buffer around outfall locations. Outfall 1 is within Turbidity AA.

2.0 FEDERALLY PROTECTED SPECIES AND HABITATS IN ACTION AREA

Federally protected species with potential to occur within or adjacent to the Project area include those identified through the USFWS Information for Planning and Consultation (IPaC) official species list for Cameron County, Texas (USFWS 2026a) and the NMFS Southeast Region ESA Section 7 Mapper (NMFS 2025), which provides spatial and temporal occurrence data for listed species and critical habitat within the Southeast Region service area including Texas coastal and estuarine waters.. Refer to Attachment A for a copy of the USFWS IPaC official species list obtained for the Project. Refer to Attachment 2 for a copy of the NMFS Section 7 mapper output obtained for the Project. Table 2-1 summarizes all federally protected species evaluated in this assessment. Species-specific occurrence and habitat discussions follow the table.

Table 2-1: Federally Protected Species Evaluated for USCG Station South Padre Island, Cameron County, Texas

Common Name (*Scientific Name*)	ESA Listing Status	Listing Rule/Date	Occurs in Action Area
Monarch butterfly (*Danaus plexippus*)	Proposed Threatened; Critical habitat proposed in CA only	89 FR 100662 / December 12, 2024	Possible
Giant manta ray (*Manta birostris*)	Threatened; No critical habitat designated	83 FR 2916/ January 22, 2018	Possible
Green sea turtle (*Chelonia mydas*) North Atlantic DPS	Threatened; Critical habitat proposed	81 FR 20057/ April 6, 2016	Likely
Hawksbill sea turtle (*Eretmochelys imbricata*)	Endangered; Critical habitat designated	35 FR 8491 / June 2, 1970	No
Kemp's Ridley sea turtle (*Lepidochelys kempii*)	Endangered; Critical habitat proposed	35 FR 18319/ December 2, 197	Likely
Leatherback sea turtle (*Dermochelys coriacea*)	Endangered; Critical habitat designated	35 FR 18319 / June 2, 1970	No
Loggerhead sea turtle (*Caretta caretta*) Northwest Atlantic Ocean DPS	Threatened; Critical habitat designated	76 FR 58868/ September 22, 2011	Possible
Cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*)	Threatened; Critical habitat designated and proposed	88 FR 46910 / July 20, 2023	No
Eastern black rail (*Laterallus jamaicensis jamaicensis*)	Threatened; No critical habitat designated	85 FR 63764 / October 8, 2020	Possible
Northern aplomado falcon (*Falco femoralis septentrionalis*)	Endangered; No critical habitat designated	51 FR 6686 / February 25, 1986	No
Piping plover (*Charadrius melodus*)	Threatened; Critical habitat designated	50 FR 50726 / December 11, 1985	Possible
Rufa red knot (*Calidris canutus rufa*)	Threatened; Critical habitat proposed	79 FR 73705 / December 11, 2014	Possible
Salina mucket (*Potamilus metnecktayi*)	Proposed Endangered; Critical habitat proposed	88 FR 47952 / July 25, 2023	No
Gulf Coast jaguarundi (Herpailurus [=*Puma*] yagouaroundi cacomitli)	Endangered; No critical habitat designated	41 FR 24062 / June 14, 1976	No

Common Name (*Scientific Name*)	ESA Listing Status	Listing Rule/Date	Occurs in Action Area
Ocelot (*Leopardus pardalis*)	Endangered; No critical habitat designated	47 FR 31670 / July 21, 1982	No
Tricolored bat (*Perimyotis subflavus*)	Proposed Endangered; Critical habitat proposed	87 FR 56381 / September 14, 2022	No
West Indian manatee (*Trichechus manatus latirostris*)	Threatened; Critical habitat designated	82 FR 16668 / April 5, 2017	Possible
South Texas ambrosia (*Ambrosia cheiranthifolia*)	Endangered; No critical habitat designated	59 FR 43648 / August 24, 1994	No
Texas ayenia (*Ayenia limitaris*)	Endangered; No critical habitat designated	59 FR 43648 / August 24, 1994	No

Searches of available literature and online databases were conducted for occurrences of federally protected species within Cameron County, Texas and the lower Laguna Madre region. The following online databases and resources were consulted, as appropriate, for each species or species group:

- USFWS Information for Planning and Consultation (IPaC) system (https://ipac.ecosphere.fws.gov);
- USFWS Environmental Conservation Online System (ECOS) species profiles (https://ecos.fws.gov);
- NOAA NMFS Section 7 Mapper (NMFS 2025)
- NOAA Fisheries Protected Species profiles (https://www.fisheries.noaa.gov/species);
- iNaturalist all-taxa observation database (https://www.inaturalist.org);
- eBird shorebird and waterbird occurrence data for Cameron County, Texas (https://ebird.org)
- Avian Knowledge Network (https://avianknowledge.net/);
- Texas Parks and Wildlife Department (TPWD) Texas Rare, Threatened, and Endangered Species database (https://tpwd.texas.gov/gis/rtest/);
- Texas Natural Diversity Database (TXNDD), accessed through TPWD;
- U.S. Geological Survey (USGS) Nonindigenous Aquatic Species database (https://nas.er.usgs.gov);
- Sea Turtle Stranding and Salvage Network database (NMFS Southeast Regional Office); and
- Field investigation data (USCG 2026a; USCG 2026b, USCG 2026c).

Figure 2-1 below displays the habitat types identified within and adjacent to the project area (within the Action Area). Wetland and Land Based and Benthic Habitat survey reports can be found in Appendix A B and C, respectively, to the EA (USCG 2026a; USCG 2026b, USCG 2026c).

.

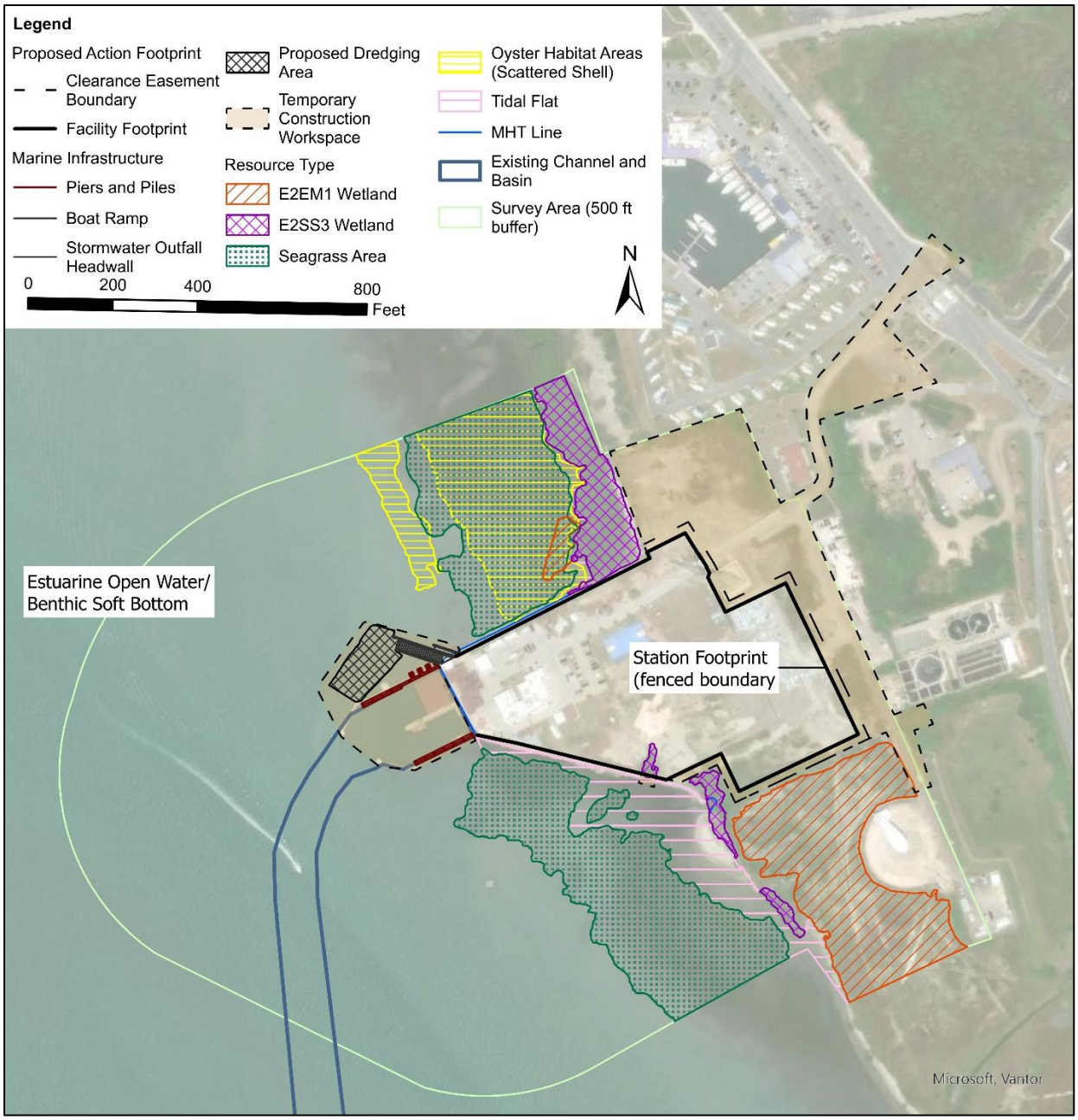


Figure 2-1 Proposed Action Details and Surrounding Habitat Areas

2.1 Monarch Butterfly

The monarch butterfly (*Danaus plexippus*) is a proposed threatened species (89 FR 100662, 12/12/2024) with proposed critical habitat only located in California. It is undergoing its second extended public comment period as of April 2026. South Padre Island lies along the Central Flyway, which serves as an important migratory corridor for monarchs traveling between northern breeding grounds and overwintering habitat in central Mexico (Figure 2-2). Peak fall migration through the Brownsville-South Padre Island area occurs between approximately October 20 and November 1 (Monarch Watch 2025). Spring migration begins in March.

Proposed species are not currently protected under the full take prohibitions of the ESA; however, ESA Section 7(a)(4) requires federal agencies to confer with USFWS if a proposed action may jeopardize the continued existence of a proposed species. See Section 3.1 for effects analysis.

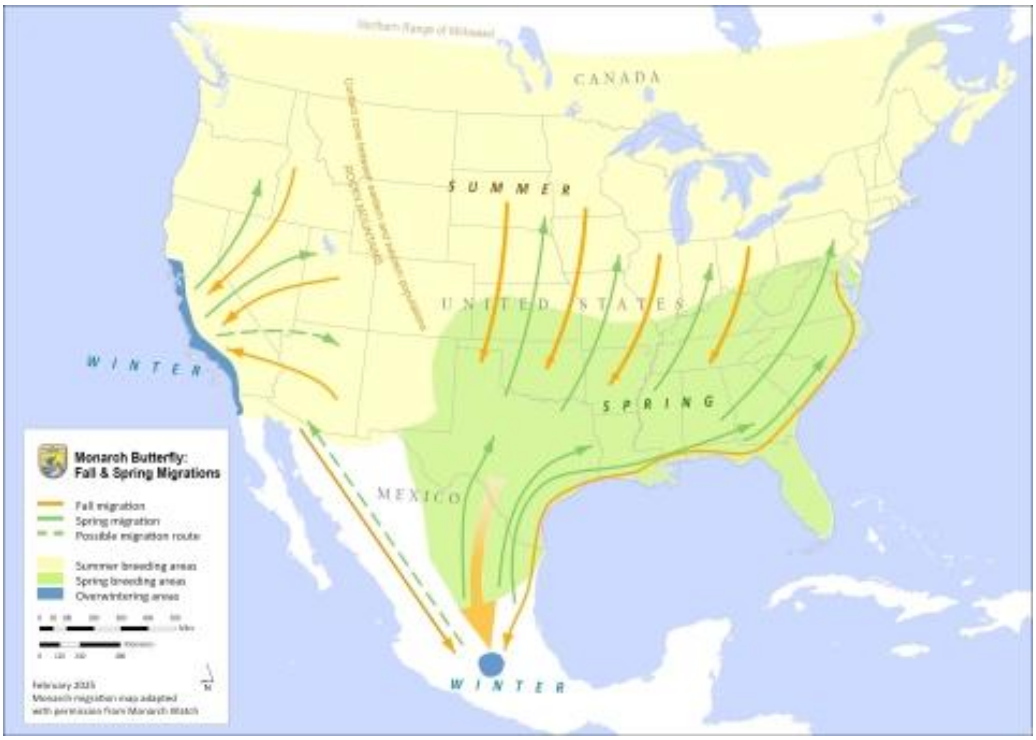


Figure 2-2 Monarch Butterfly Migration Corridor — Central Flyway

Source: USFWS n.d.a

2.2 Giant Manta Ray

The giant manta ray (*Manta birostris*) is listed as Threatened under the ESA (NMFS jurisdiction; 83 FR 2916, 01/22/2018) with no designated critical habitat. Giant manta rays are pelagic, offshore species associated with productive shelf-edge upwelling zones and thermal fronts in the Gulf of Mexico, with highest predicted occurrence around the Mississippi River delta (Farmer et al. 2022). No documented occurrences exist within the lower Laguna Madre. Their range extends throughout the Gulf of Mexico in offshore waters, and they occasionally enter nearshore areas (NMFS 2024). The shallow hypersaline environment of the lower Laguna Madre does not represent typical habitat for giant manta rays; however, they may occur in the Gulf of Mexico coastal waters offshore of South Padre Island. The Project Action Area area does not involve activities in offshore Gulf waters where giant manta rays are likely to occur, however there presence in the Action Area within Laguna Madre is possible.

2.3 Sea Turtles

Five species of sea turtles listed under the ESA have potential to occur in the coastal waters of Texas, adjacent to the Project area. Sea turtles are co-managed by USFWS (nesting and terrestrial life stages) and NMFS (marine and estuarine environments). All five species are also protected under the ESA.

The Green Sea Turtle (*Chelonia mydas*) North Atlantic DPS is listed as Threatened (81 FR 20057 / April 6, 2016). The green sea turtle uses seagrass beds as primary foraging habitat. The lower Laguna Madre

seagrass meadows are among the most extensive in the United States and provide foraging habitat for green sea turtles seasonally (Jones et al. 2018). Occurrence in the waters adjacent to the station within the Action Area for underwater noise impacts is likely during warm months.

The Hawksbill Sea Turtle (*Eretmochelys imbricata*) is listed as Endangered (35 FR 8491, 06/02/1970). The hawksbill sea turtle is primarily associated with coral reef and hard-bottom habitats (Wood et al. 2013), which are absent from the Project area and lower Laguna Madre. Occurrence within the Project area is not expected.

The Kemp's Ridley Sea Turtle (*Lepidochelys kempii*) is listed as Endangered (35 FR 18319, 12/02/1970) and is the sea turtle species of greatest concern for this Project. The south Texas coast, particularly the Padre Island National Sea Shore, is the most important U.S. nesting area for this species and constitutes the bulk of recovery efforts led by Padre Island National Seashore (National Park Service [NPS] 2026a). In 2025, a record 383 Kemp's Ridley nests were documented on the Texas coast (Garret 2025). Kemp's Ridley turtles are known to forage in shallow seagrass habitats of the lower Laguna Madre, using Brazos Santiago Pass for ingress and egress between the lagoon and Gulf of Mexico (NPS 2026b). Occurrence in the waters adjacent to the station within the Action Area for underwater noise impacts is likely during warm months.

The Leatherback Sea Turtle (*Dermochelys coriacea*) is listed as Endangered (35 FR 18319, 12/02/1970). The leatherback is a pelagic species associated with deeper offshore waters (Bureau of Ocean Energy Management 2024). Occurrence within the shallow hypersaline Laguna Madre is not expected; this species may occur in Gulf of Mexico coastal waters offshore.

The Loggerhead Sea Turtle (*Caretta caretta*) is listed as Threatened (43 FR 32800, 07/28/1978). The loggerhead may occur in the nearshore Gulf and entrance channel area at Brazos Santiago Pass seasonally. It is less frequently recorded than green sea turtles and Kemp’s Ridley sea turtles in along the mid-lower Texas Coast (Gordon et al. 2015) but possible in the deeper navigation channel areas within the Action Area for underwater noise impacts.

The USFWS and the NMFS are joint lead Federal agencies responsible for managing sea turtles. The USFWS manages species in inland waters and on land while NMFS manages species in marine waters. No nesting habitat or nesting sea turtles would occur in the Project area as the site does not include gulf beach habitat; therefore, USFWS would not have jurisdiction over sea turtles for this Project. NMFS is the managing agency for all sea turtles in the waters of the Project area.

Critical habitat has been designated for all species except the green and Kemp’s Ridley sea turtles (which have proposed critical habitat). Critical habitat has been proposed in July 2023 for the North Atlantic distinct population segment of green sea turtle for portions of the Texas coastline by USFWS 2023a. Proposed critical habitat unit ‘TX01’ includes the Project area and includes Laguna Madre and out to Gulf waters along the continental slope (NMFS 2023) (Figure 2-3). This critical habitat has not been finalized as of this writing.

Loggerhead sea turtle designated critical habitat ‘LOGG-S-02’ occurs in Texas coastal and offshore waters from the 10-m contour out to the boundary of the U.S. exclusive economic zone (NMFS and NOAA 2014) (Figure 2-4). Similar critical habitat “NA01” is proposed by NMFS (2023a, b) for juvenile green turtles using sargassum habitat. The areas of critical habitat for both these species are dependent on the presence of floating pelagic macroalgae, *Sargassum fluitans* and *S. natans*, commonly referred to simply as

"sargassum". Such habitat does not exist in the Laguna Madre Project area but does occur elsewhere, in portions of the Gulf (Gower and King 2008).

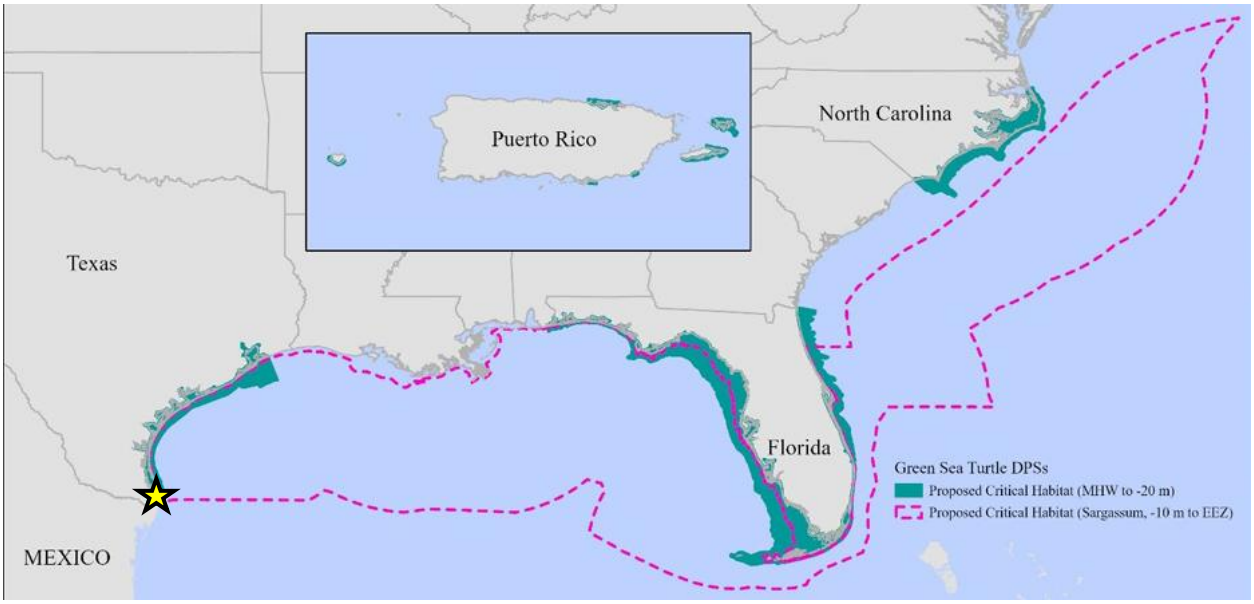


Figure 2-3 Proposed Green Sea Turtle Critical Habitat, Project Location Denoted with Star

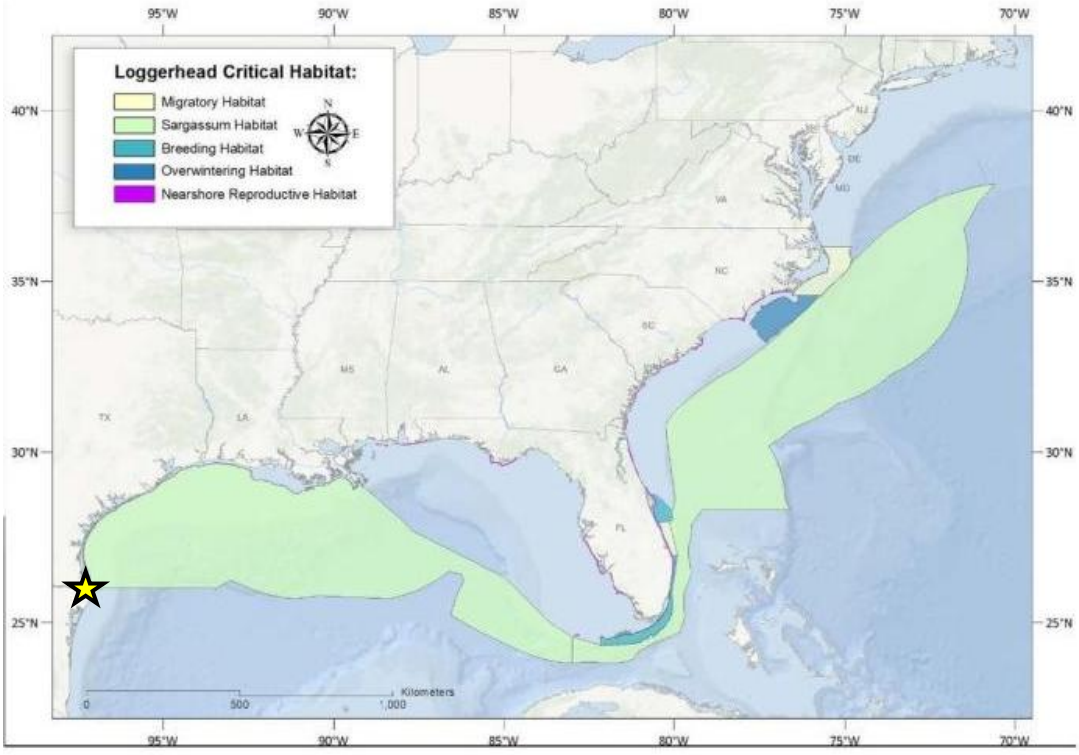


Figure 2-4 Loggerhead Sea Turtle Critical Habitat – Sargassum Habitat, Project Location Denoted with Star

2.4 Cactus Ferruginous Pygmy-Owl

The cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*) was listed as Threatened under the ESA on July 20, 2023 (88 FR 46910) with final designated and proposed critical habitat. The species requires live oak, mesquite woodland, or thornscrub habitat with mature trees providing nesting cavities (USFWS 2023b). Cameron County is within the historical range of the subspecies, as the Texas population historically occurred from Zapata southeast along riparian Rio Grande areas to Baffin Bay and south along the Laguna Madre coast to Brownsville (Oberholser 1974; Proudfoot and Johnson 2000; USFWS 2003). However, the barrier island setting of South Padre Island and the developed station footprint lack the live oak/mesquite woodland or thornscrub habitat and mature tree cavities required by this species. Occurrence within the Land Based Action Area is not expected.

2.5 Eastern Black Rail

The eastern black rail (*Laterallus jamaicensis jamaicensis*) is listed as Threatened under the ESA (85 FR 63764, 10/08/2020) with no designated critical habitat. Texas is currently considered one of two strongholds for the subspecies, along with Florida, following widespread range contraction from the northeastern United States (Figure 2-5). On the Texas coast, eastern black rails are associated with Salt and Brackish High Tidal Marsh habitat, where they select elevated areas of dense herbaceous vegetation with moist soils and avoid areas with excessive shrub encroachment or deep tidal flooding (USFWS 2020). Figure 2-6 provides examples of typical habitats used by the eastern black rail.

Field investigations on March 18, 2026, documented approximately 3.44 acres of estuarine intertidal emergent high marsh (E2EM1P) dominated by saltmeadow cordgrass (*Spartina patens*) within the survey area (USCG 2026a; USCG 2026b). This habitat type is the primary and preferred habitat for eastern black rail on the Texas coast. Research using radio telemetry at San Bernard National Wildlife Refuge confirmed that black rails in coastal Texas select Salt and Brackish High Tidal Marsh and Salty Prairie habitats and avoid salt and brackish low tidal marsh (Tolliver 2017; USFWS 2020). The E2EM1P communities documented within the survey area, particularly feature WET-04 are consistent with preferred black rail habitat. The habitat was assessed for quality for potential black rail suitability and was deemed to be high quality with dense overhead vegetative cover of grasses and gradual sloping and rising topography with access to shallow water pannes and intertidal shoreline (USCG 2026a). Some areas of black mangrove encroachment were noted within the black rail habitat area. While a presence or absence survey was not conducted, it was determined that suitable habitat did exist and black rail presence was possible currently or in the future.

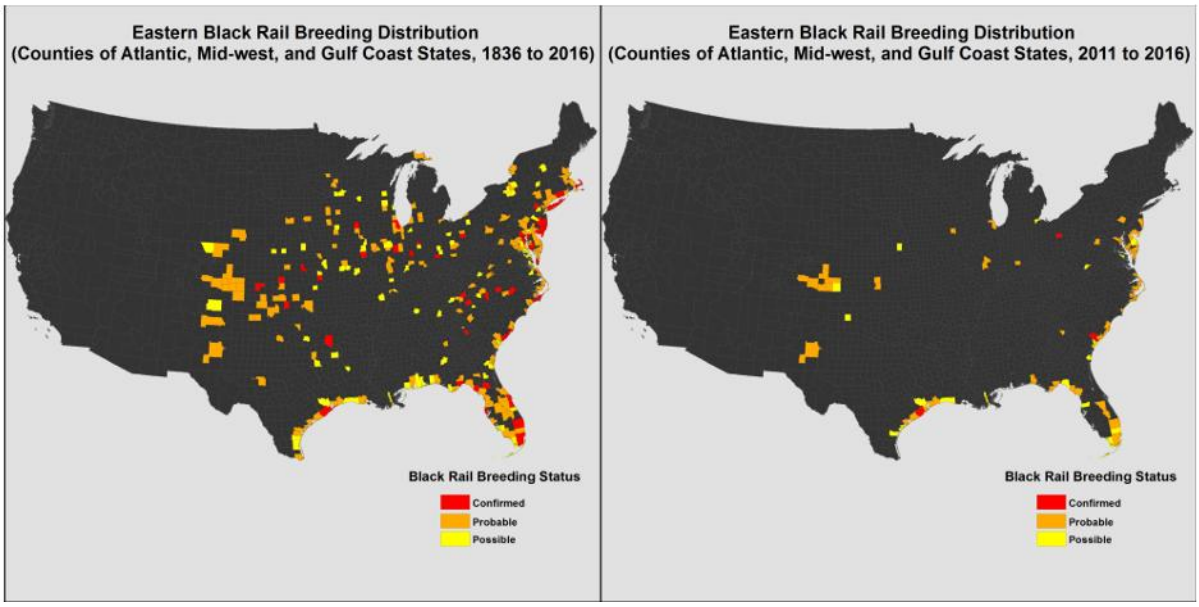


Figure 2-5 Eastern Black Rail Distribution in Texas

A map of counties with confirmed, probable, or possible records of eastern black rail (during the breeding season (1 April through 31 August) in the contiguous United States. Historical and recent (1836-2016) records are shown on the left (Cameron County is “Probable”) and recent records only (2011-2016) are shown on the right (Cameron County is not shown with recorded Breeding Status).
Source Center for Conservation Biology (CCB). 2017.

Figure 2-6 Examples of Habitats Typically Used by the Eastern Black Rail (*Laterallus jamaicensis jamaicensis*)

Notes: Habitat photos were taken in South Carolina (A), Texas (B), Kansas (C), and Honduras (D). Photos taken by C. Hand (A), W. Woodrow (B), R. Laubhan (C), and R. Gallardo and A. Vallely (D).
Source: Modified from Figure 2-5 of USFWS (2019)

2.6 Northern Aplomado Falcon

The northern aplomado falcon (*Falco femoralis septentrionalis*) has been listed as Endangered since February 25, 1986 (51 FR 6686) with no designated critical habitat. An active reintroduction program along the south Texas coast has documented the species in Cameron County coastal prairie areas (Tweit 2008). The Texas Liquefied Natural Gas (LNG) Final Environmental Impact Statement (EIS) for a Project also located in Cameron County on the Brownsville Ship Channel identified cumulative impacts to aplomado falcon from habitat loss as a significant concern (Federal Energy Regulatory Commission [FERC] 2019). Open coastal upland and transitional habitats adjacent to the developed station footprint could provide foraging opportunities for this species. No suitable nesting habitat (open coastal prairie with scattered yuccas or similar structures) is present within the developed station footprint; however, occasional foraging flights over the Project area are possible.

2.7 Piping Plover

The piping plover (*Charadrius melodus*) is listed as Threatened under the ESA for the Atlantic Coast and Northern Great Plains populations (50 FR 50726, 12/11/1985). The Texas Gulf Coast, including South Padre Island, serves as a primary wintering area for piping plovers and is within designated wintering critical habitat (74 FR 23476, 05/19/2009; revised 2009, 74 FR 23476). Wintering piping plovers use tidal flats, sandy mud flats, ephemeral pools, and seasonally emergent seagrass beds as primary foraging habitats, where they consume polychaete worms and other small invertebrates (USFWS 2025).

Estuarine intertidal tidal flat (E2USM) habitat was documented along the northern and southern shorelines of the station within the Action Area (USCG 2026a), representing suitable wintering foraging habitat for piping plovers. Semipalmated plovers, an indicator species for piping plover presence, have been documented using the tidal outfall area adjacent to the station (USFWS 2026b). Several observations of piping plover were uncovered for the south Laguna Madre area (especially the Isla Blanca Park area) from searching the Avian Knowledge Network, eBird, and iNaturalist for the period 2020 through present. Figure 2-7 provides the Project's location within the piping plover's range and Figure 2-8 displays critical habitat located adjacent to South Padre Island and the Project area.

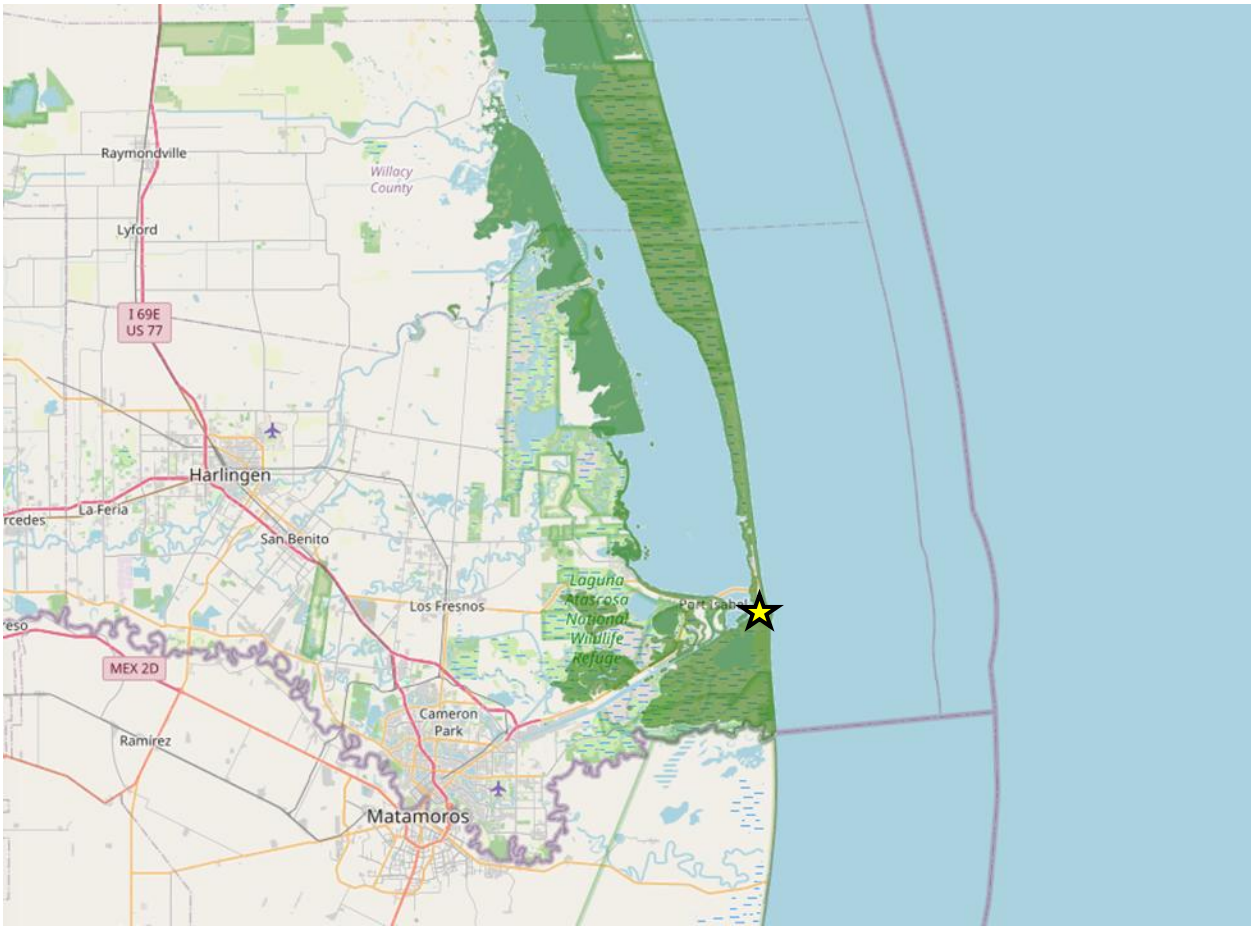


Figure 2-7 Map Showing Range of Piping Plover, Project Location Denoted with Star

Source: USFWS n.d.b.

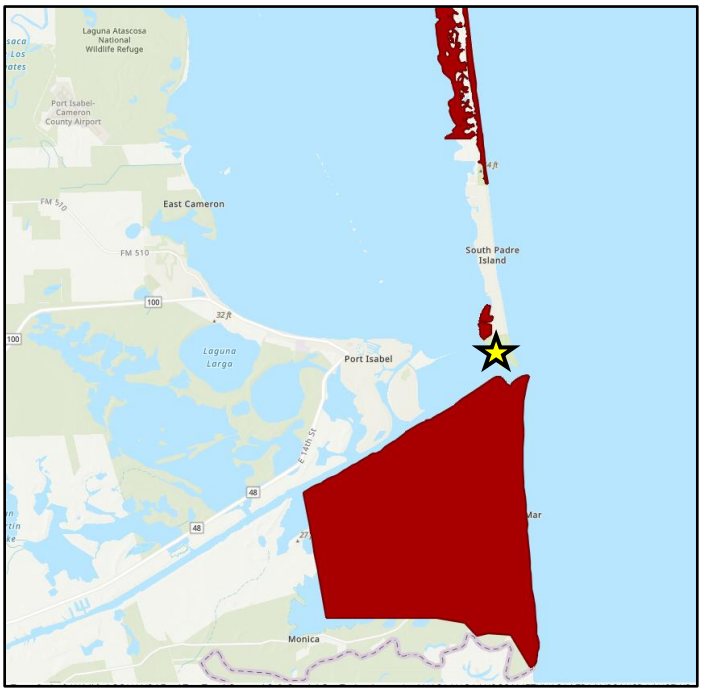


Figure 2-8 Piping Plover Critical Habitat Units Adjacent to South Padre Island and Project Area, Project Location Denoted with Star

Source: USFWS 2024a

The Action Area does not overlap any critical habitat areas. Suitable high quality foraging habitat for piping plover is located within the Land Based Action Area for indirect effects from construction noise and lighting.

2.8 Rufa Red Knot

The rufa red knot (*Calidris canutus rufa*) is listed as Threatened under the ESA (79 FR 73705, 12/11/2014). Texas is included in the revised proposed critical habitat designation (88 FR 22530, 04/13/2023) for this subspecies. The rufa red knot uses tidal flats, bays, sheltered estuaries, and sandy coastal areas during migration and wintering (USFWS 2023c). Preferred wintering and migration habitats include muddy or sandy coastal areas, tidal flats, and unimproved tidal inlets — all consistent with habitats documented at the station (USCG 2026a). Occurrence is probable during migratory periods (March through May; July through November). Critical habitat was proposed in April 2023 (88 FR 22530 22693) and is near the Action Area (See Figure 2-9). Several observations of red knot were uncovered for the south Laguna Madre area (especially the Isla Blanca Park area and across the channel at the Boca Chica Beach-Jetty) from searching the Avian Knowledge Network, eBird, and iNaturalist for the period 2020 through present.

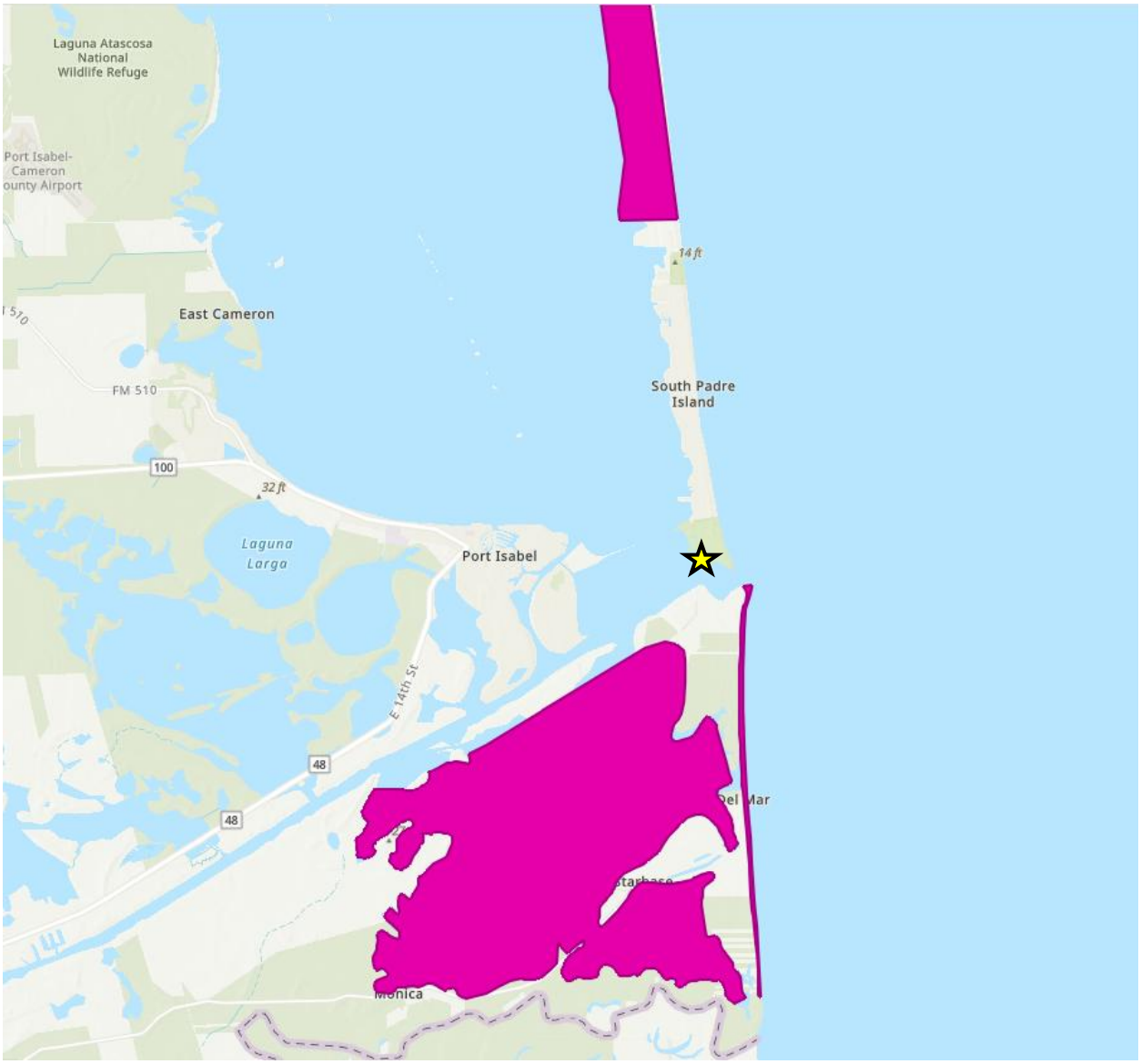


Figure 2-9 Map Showing Proposed Rufa Red Knot Critical Habitat Near Project Area, Project Location Denoted with Star

USFWS 2024a

The high quality tidal flats located to the north and south of the Station within the Action Area are suitable for red knot wintering and foraging habitat.

2.9 Salina Mucket

The salina mucket (*Potamilus metnecktayi*) is a proposed endangered freshwater mussel associated with the Rio Grande drainage system (88 FR 47952, 07/25/2023) with proposed critical habitat. The hypersaline estuarine environment of the lower Laguna Madre is unsuitable for this freshwater mussel species. The species appears on the IPaC list due to the regional geographic range overlap of the Rio Grande drainage with Cameron County but is not expected to occur within the Action Area.

2.10 Gulf Coast Jaguarundi

The Gulf Coast jaguarundi (*Herpailurus* [=*Puma*] *yagouaroundi cacomitli*) has been listed as Endangered since June 14, 1976 (41 FR 24062) with no designated critical habitat. TPWD considers the subspecies extirpated from Texas; the last confirmed U.S. occurrence was a roadkill specimen collected in Cameron County in April 1986 (TPWD 2026). The most recent USFWS 5-Year Review (USFWS 2024b) confirmed there are no verified populations of jaguarundi remaining in the United States. The barrier island setting and developed station footprint lack the dense thornscrub and riparian brushland required by this species. Occurrence at the Action Area is not expected.

2.11 Ocelot

The ocelot (*Leopardus pardalis*) is listed as Endangered under the ESA (47 FR 31670, 07/21/1982) with no designated critical habitat. The remaining U.S. population of fewer than 100 individuals is concentrated in two small groups in Kenedy and Willacy counties, centered on Laguna Atascosa National Wildlife Refuge, approximately 60 miles north of the station (Recover Texas Ocelots Initiative 2026). The species requires dense, contiguous thornscrub habitat absent from the South Padre Island barrier island. The Texas LNG EIS for a Cameron County Project identified cumulative ocelot impacts as significant due to habitat loss and vehicular strike risk on the mainland (FERC 2019), but those concerns related to Tamaulipan thornscrub habitat on the mainland west of the Laguna Madre rather than barrier island settings. Occurrence at the Action Area is unlikely.

2.12 Tricolored Bat

The tricolored bat (*Perimyotis subflavus*) is proposed for listing as Endangered (87 FR 56381, 09/14/2022) primarily due to the catastrophic effects of white-nose syndrome. The species roosts in forested habitats, tree foliage, and occasionally in road culverts and structures during non-hibernation periods, and uses caves, mines, or culverts as hibernacula during winter (USFWS 2022). The South Padre Island barrier island setting and developed station footprint lack suitable forested roosting habitat or underground hibernacula. USFWS confirmed during in-person site evaluation conducted in the spring of 2026 that conferencing on this proposed species is not required for this Project (USFWS 2026b).

2.13 West Indian Manatee

The West Indian manatee (*Trichechus manatus latirostris*) is listed as Threatened under the ESA (82 FR 16668, 04/05/2017) and is also protected under the MMPA. Manatees are very rare in Texas due to cooler winter water temperatures but are known to range along the Texas Gulf Coast seasonally during warm months. Historical sightings in the Laguna Madre date to the turn of the twentieth century, and the Corpus Christi Bay/Laguna Madre area has been identified as a recurrent occurrence location for this species (Fertl et al. 2005). A manatee was rescued from Laguna Madre waters near Corpus Christi in 2007 (Texas Tech Natural Science Research Laboratory 2024), and the Texas Marine Mammal Stranding Network (TXMMSN) documented multiple Texas coastal sightings during summer 2025 (TXMMSN 2025). A news article from December 2021 specifically notes one or more individuals were seen in south Laguna Madre near Laguna Vista (7 miles from the Project; KRGV 2021). Seagrass habitat present in the lower Laguna Madre adjacent to the station provides potential foraging resources that may attract seasonal visitors. Occurrence of manatees in the waters adjacent to the station is possible during warm months (May through October).

Critical habitat has been designated in several coastal and riverine areas of Florida (https://ecos.fws.gov/ecp/species/4469) but no such habitat has been designated in Texas.

2.14 South Texas Ambrosia and Texas Ayenia

South Texas ambrosia (*Ambrosia cheiranthifolia*; 59 FR 43648, 08/24/1994) and Texas ayenia (*Ayenia limitaris*; 59 FR 43648, 08/24/1994) are both listed as Endangered under the ESA. South Texas ambrosia occurs in coastal shortgrass prairie and mesquite shrubland habitat; Texas ayenia occurs in dense Tamaulipan thornscrub and brushland. Both species are historically associated with Cameron County but extant populations are confined to Nueces and Kleberg counties (South Texas ambrosia) (USFWS 2018) and Hidalgo, Cameron, and Willacy counties (Texas ayenia) (USFWS 2016). The barrier island setting and developed station footprint lack the coastal prairie, mesquite, and thornscrub habitat required by either species. No specimens of either species were identified during field investigations (USCG 2026a).

2.15 Migratory Birds

The IPaC report for the Proposed Action indicates the following birds could be present in the Action Area. Breeding seasons are noted for each species where applicable.

Table 2-2 Migratory Birds with Potential to Occur at USCG Station South Padre Island

Common Name	Scientific Name	BCC Status[1]	Breeding Season (if applicable)	Notes
Shorebirds				
American golden-plover	*Pluvialis dominica*	BCC — entire range	Breeds elsewhere	Migratory stopover; spring and fall
American oystercatcher	*Haematopus palliatus*	BCC — entire range	Apr 15 – Aug 31	Nesting possible in Project vicinity
Hudsonian godwit	*Limosa haemastica*	BCC — entire range	Breeds elsewhere	Migratory stopover
Lesser yellowlegs	*Tringa flavipes*	BCC — entire range	Breeds elsewhere	Migratory stopover and wintering
Long-billed curlew	*Numenius americanus*	BCC — selected BCRs	Breeds elsewhere	Wintering
Marbled godwit	*Limosa fedoa*	BCC — entire range	Breeds elsewhere	Migratory stopover and wintering
Pectoral sandpiper	*Calidris melanotos*	BCC — entire range	Breeds elsewhere	Migratory stopover
Red knot	*Calidris canutus roselaari*	BCC — entire range	Breeds elsewhere	Migratory stopover; note: rufa subspecies (C. c. rufa) is federally listed Threatened — see Table 3-2
Ruddy turnstone	*Arenaria interpres morinella*	BCC — selected BCRs	Breeds elsewhere	Migratory stopover
Short-billed dowitcher	*Limnodromus griseus*	BCC — entire range	Breeds elsewhere	Migratory stopover and wintering
Whimbrel	*Numenius phaeopus hudsonicus*	BCC — selected BCRs	Breeds elsewhere	Migratory stopover
Willet	*Tringa semipalmata*	BCC — entire range	Apr 20 – Aug 5	Resident/nesting; tidal flat and marsh forager
Wilson's plover	*Charadrius wilsonia*	BCC — entire range	Apr 1 – Aug 20	Nesting possible in Project vicinity

Common Name	Scientific Name	BCC Status[1]	Breeding Season (if applicable)	Notes
Wading Birds				
Reddish egret	*Egretta rufescens*	BCC — entire range	Mar 1 – Sep 15	Resident; state-listed Species of Greatest Conservation Need; tidal flat forager
Seabirds and Terns				
Audubon's shearwater	*Puffinus lherminieri*	BCC — entire range	Mar 1 – Aug 5	Offshore; unlikely in Laguna Madre
Black skimmer	*Rynchops niger*	BCC — entire range	May 20 – Sep 15	Nesting on sandy beaches/tidal flats; state-listed threatened
Cory's shearwater	*Calonectris diomedea*	BCC — entire range	Breeds elsewhere	Offshore pelagic; unlikely in Laguna Madre
Forster's tern	*Sterna forsteri*	BCC — selected BCRs	Mar 1 – Aug 15	Resident; Laguna Madre forager
Gull-billed tern	*Gelochelidon nilotica*	BCC — entire range	May 1 – Jul 31	Nesting possible in Project vicinity
Least tern	*Sternula antillarum antillarum*	BCC — entire range	Apr 25 – Sep 5	Nesting on open sandy areas; MBTA-protected
Magnificent frigatebird	*Fregata magnificens*	BCC — selected BCRs	Breeds elsewhere	Occasional visitor; offshore/coastal
Royal tern	*Thalasseus maximus*	Not BCC — Eagle Act attention	Apr 15 – Aug 31	Common resident; Laguna Madre forager
Sandwich tern	*Thalasseus sandvicensis*	BCC — selected BCRs	Apr 25 – Aug 31	Resident; Laguna Madre forager
Sooty tern	*Onychoprion fuscatus*	Not BCC — Eagle Act attention	Mar 10 – Jul 31	Offshore pelagic; unlikely in Laguna Madre
Swallow-tailed kite	*Elanoides forficatus*	BCC — entire range	Mar 10 – Jun 30	Rare; migratory
Waterfowl				
Black scoter	*Melanitta nigra*	Not BCC — Eagle Act attention	Breeds elsewhere	Wintering offshore/coastal
Black-legged kittiwake	*Rissa tridactyla*	Not BCC — Eagle Act attention	Breeds elsewhere	Offshore; unlikely in Laguna Madre
Common loon	*Gavia immer*	Not BCC — Eagle Act attention	Breeds elsewhere	Wintering; nearshore coastal
Red-breasted merganser	*Mergus serrator*	Not BCC — Eagle Act attention	Breeds elsewhere	Wintering; Laguna Madre
Surf scoter	*Melanitta perspicillata*	Not BCC — Eagle Act attention	Breeds elsewhere	Wintering offshore/coastal
White-winged scoter	*Melanitta fusca*	Not BCC — Eagle Act attention	Breeds elsewhere	Wintering offshore/coastal
Rails and Marsh Birds				
King rail	*Rallus elegans*	BCC — entire range	May 1 – Sep 5	Marsh habitat; possible in E2EM communities
Landbirds and Raptors				
Brown pelican	*Pelecanus occidentalis*	Not BCC — Eagle Act attention	Jan 15 – Sep 30	Common resident; formerly listed

Common Name	Scientific Name	BCC Status[1]	Breeding Season (if applicable)	Notes
Chimney swift	*Chaetura pelagica*	BCC — entire range	Mar 15 – Aug 25	Migratory; aerial forager
Dickcissel	*Spiza americana*	BCC — selected BCRs	May 5 – Aug 31	Migratory; grassland/upland
Double-crested cormorant	*Phalacrocorax auritus*	Not BCC — Eagle Act attention	Apr 20 – Aug 31	Common resident
Painted bunting	*Passerina ciris*	BCC — selected BCRs	Apr 25 – Aug 15	Migratory; notable Central Flyway species
Pomarine jaeger	*Stercorarius pomarinus*	Not BCC — Eagle Act attention	Breeds elsewhere	Offshore; unlikely in Laguna Madre
Prairie loggerhead shrike	*Lanius ludovicianus excubitorides*	BCC — selected BCRs	Feb 1 – Jul 31	Upland/transitional habitat
Prothonotary warbler	*Protonotaria citrea*	BCC — entire range	Apr 1 – Jul 31	Migratory landbird; cross-Gulf migrant
Red-headed woodpecker	*Melanerpes erythrocephalus*	BCC — entire range	May 10 – Sep 10	Migratory; upland/transitional
Ring-billed gull	*Larus delawarensis*	Not BCC — Eagle Act attention	Breeds elsewhere	Common wintering resident

1 BCC = Bird of Conservation Concern as designated by USFWS.
Source: USFWS 2026c

Species designated as Birds of Conservation Concern (BCC) throughout entire range receive the highest level of MBTA management attention. Species flagged for Eagle Act attention are protected under the MBTA and BGEPA but are not currently designated as BCC in this region. Breeding season dates reflect the period during which nesting surveys and avoidance buffers are required. Federally listed species (piping plover, rufa red knot, eastern black rail) are addressed separately in Table 6-1.

3.0 ROUTES OF EFFECT

The following section describes the causal pathways by which implementation of the Proposed Action could result in effects to federally protected species. Routes of effects are organized by impact mechanism and action area as defined in Section 1.3. Each route describes the construction or operational activity, the physical or biological mechanism by which that activity could affect a species or its habitat, and the potential consequence to individual animals or their supporting habitat. These routes of effects form the basis for the species-specific effects determinations presented in Section 4.0.

3.1 Physical Effects

Physical effects to federally protected species could include direct strikes from construction vessels operating in the Station basin and adjacent lower Laguna Madre, entanglement in underwater cables, lines, or dredging equipment, or flushing of birds from nests or habitats due to vegetation clearing and construction activity. Direct physical impacts to aquatic habitat include permanent conversion of approximately 3,470 square feet (0.08 acres) of estuarine benthic substrate to hardened boat ramp structure and temporary disturbance of approximately 0.37 acres of benthic substrate within the dredge footprint.

Direct physical impacts to intertidal and shoreline habitat include construction equipment and vessel operations in the Station basin and immediately adjacent shoreline areas. Tidal flat (E2USM) habitat along the Station's northern and southern shorelines provides primary wintering foraging substrate for piping plover and rufa red knot. Although no direct impacts to these areas are proposed with the Project, indirect effects due to noise or increased human activity may effect these species. Direct physical impacts to upland and transitional habitat include demolition, grading, and vegetation clearing within the developed Station footprint. No direct impacts to E2EM1P high tidal marsh communities are proposed; however, construction activities immediately adjacent to mapped black rail habitat carry risk of incidental disturbance to marsh-dependent species.

3.2 Turbidity and Water Quality

Turbidity and water quality effects result from sediment resuspension during in-water construction activities and from operational stormwater and wastewater discharge and may affect species within the 100-ft Action Areas surrounding in-water construction areas and stormwater outfalls. In-water construction activities including mechanical dredging, waterfront demolition, pile installation, and cofferdam dewatering suspend fine sediment particles in the water column, increasing turbidity and reducing light penetration. Elevated suspended sediment concentrations also reduce dissolved oxygen exchange in fish gills through physical clogging and abrasion, causing physiological stress particularly in juvenile and larval life stages that cannot easily relocate (EPA 1995; Suedel 2011). Sediment deposition smothers infaunal invertebrate communities and reduces oyster filtration capacity through valve closure.

Given that elevated turbidity is expected to subside at the conclusion of dredging activity, a significant adverse impact on the ecosystem is unlikely to occur. Work under the Corps of Engineers Dredged Material Research Program showed that “high concentrations of suspended sediment, in some cases approaching grams per liter, can be present without adversely affecting the organisms due either to abrasion or organ blockage” (Lee et al., 1999, p. 13). Furthermore, studies by Lee et al. (1978) show that due to the size and magnitude of the turbidity cloud from the release of sediment into water from hydraulic dredging, no water

quality problems are expected. As for dissolved oxygen (DO), the same studies determined that DO depletion would not adversely impact aquatic life (Lee et al., 1999). Any change in turbidity is not expected to appreciably alter water quality parameters to the extent of causing physiological strain or mortality to ESA-listed species (NMFS 2023a). Turbidity would be caused by a short-term discrete projects but it would be controlled by the use of turbidity curtains. Giant manta rays and sea turtles are able to swim through or avoid any temporary increase in turbidity without harm, as they exposed to turbidity and lower water clarity throughout their environments.

Operational stormwater discharges from impervious surfaces may carry sediment that would temporarily increase turbidity in the discharge area. Hydrocarbons, fuels, and other contaminants may also be present in stormwater discharges that can impact water quality and species within the discharge Action Area.

3.3 Temporary Land Based Construction Effects

Temporary construction effects result from airborne noise and artificial lighting associated with construction activities within and adjacent to the Station footprint, affecting species within the Land Based Action Area during the approximately 2.5-year construction period. Land-based and marine construction equipment generates airborne noise estimated at 75 to 80 dB(A) at the E2EM1P marsh boundary approximately 500 feet from the active construction zone (EPA 1974). Sustained elevated airborne noise during the eastern black rail breeding season (March through September) carries risk of behavioral disturbance including altered calling behavior, nest abandonment, and reduced predator and conspecific detection (Knight and Gutzwiller 1995).

Temporary construction lighting directed toward or spilling into adjacent E2EM1P marsh and estuarine habitat during extended construction periods can attract or disorient nocturnally active species. Eastern black rail is nocturnal and crepuscular, making light intrusion during active construction periods a direct disturbance mechanism during peak activity periods. Coastal lighting also attracts migratory landbirds navigating along the South Padre Island shoreline during Central Flyway passage and can cause collision mortality with lit structures.

All temporary construction effects are limited to the construction period and will cease upon construction completion. Permanent exterior lighting for the rebuilt Station will incorporate down-shielding, directional fixtures, and amber or warm-color sources consistent with USFWS recommendations.

3.4 Underwater Noise Effects

Noise created by pile driving activities can physically injure animals or change animal behavior in the affected areas. Animals can be physically injured in 2 ways. First, immediate adverse effects can occur if a single noise event exceeds the threshold for direct physical injury. Second, adverse physical effects can result from prolonged exposure to noise levels that exceed the daily cumulative sound exposure level for the animals. Noise can also interfere with an animal's behavior, such as migrating, feeding, resting, or reproducing and such disturbances could constitute adverse behavioral effects.

When an impact hammer strikes a pile, a pulse is created that propagates through the pile and radiates sound into the water, the ground substrate, and the air. Pulsed sounds underwater are typically high volume events that have the potential to cause hearing injury. In terms of acoustics, the sound pressure wave is described by the peak sound pressure level (PK, which is the greatest value of the sound signal), the root-mean-square pressure level (RMS, which is the average intensity of the sound signal over time), and the

sound exposure level (SEL, which is a measure of the energy that takes into account both received level and duration of exposure). Further, the cumulative sound exposure level (SEL24) is a measure of the energy that takes into account the received sound pressure level over a 24-hour period. Please see the following website for more information related to measuring underwater sound and the NMFS-accepted pile driving sound measurement thresholds for species in the NMFS Southeast Region: https://www.fisheries.noaa.gov/southeast/consultations/section-7-consultation-guidance.

NMFS considers U.S. Navy Phase 4 criteria for all noise thresholds (U.S. Department of the Navy, 2025). Potential effects to ESA-listed species in the Southeast Region may occur when impact or vibratory pile driving produces sounds that exceed the thresholds in the following table. Below, PK (which is the greatest value of the sound signal and typically is a metric only used for impulsive sound sources, such as impact pile driving) and RMS (which is the average intensity of the sound signal over time) are referenced to dB re: 1 µPa, the relative unit used to specify the intensity of sound underwater. Further, SEL (which is a measure of the energy that takes into account both received level and duration of exposure) and SEL24h (which is measure of the energy that takes into account the received sound pressure level over a 24-hour period) are referenced to dB re: 1 µPa2-second. For underwater sounds, a reference pressure of 1 micropascal (µPa) is commonly used to describe sounds in terms of decibels (dB). Thus, 0 dB on the decibel scale would be a measure of sound pressure of 1 µPa.

Table 3-1 Pile Driving Sound Measurement Thresholds for ESA-listed Species in the Southeast Region

Type of Sound Pressure Effect	Type of Pile Driving	Threshold By ESA-Listed Species
Peak Pressure Injury (PK)	Vibratory	● None for all fish species, sea turtles, and cetaceans
	Impact	● 206 dB for all fish species, regardless of size ● 230 dB for sea turtles ● 222 dB for low-frequency cetaceans (i.e., Rice's, North Atlantic Right, Sei, and Fin whales) ● 230 dB for high-frequency cetaceans (i.e., Sperm whales)
Cumulative Exposure Injury (SEL_{24h})	Vibratory	● None for all fish species ● 198 dB for sea turtles ● 197 dB for low-frequency cetaceans (i.e., Rice's, North Atlantic Right, Sei, and Fin whales) ● 201 dB for high-frequency cetaceans (i.e., Sperm whale)
	Impact	● 183 dB for fish species less than 2 grams ● 187 dB for fish species greater than 2 grams ● 184 dB for sea turtles ● 183 dB for low-frequency cetaceans (i.e., Rice's, North Atlantic Right, Sei, and Fin whales) ● 193 dB for high-frequency cetaceans (i.e., Sperm whale)
Behavioral Disturbances (RMS)	Vibratory	● 150 dB RMS for all fish species, regardless of size ● 175 dB RMS for sea turtles ● 120 dB RMS for all cetaceans
	Impact	● 150 dB RMS for all fish species, regardless of size ● 175 dB RMS for all sea turtles ● 160 dB RMS for all cetaceans

We use the NMFS Multi-species Pile Driving Tool (dated September 2025) to calculate the radii of physical injury and behavioral effects on ESA-listed species that may be located in the action area based on the

NMFS-accepted pile driving sound measurement thresholds for species in the NMFS Southeast Region reference above (Table 7). The action agency proposes to carry out impact pile driving of:

- Forty-four (44) 18-inch concrete square piles (up to five per day / 400 strikes per pile)
- One (1) 42-inch-diameter round concrete pile (one per day / 300 strikes per pile)
- Sixty-two (62) 10-inch concrete panels (20 per day / 300 seconds per panel)
- Pile driving will occur during daylight hours only.

Pile driving activities would only occur during daylight hours and be within open-water environment and a confined space. We define an open-water environment as any area where an animal would be able to move away from the noise source without being forced to pass through the radius of noise effects. We define a confined space as any area that has a solid, vertical structure (e.g., jetty or seawall) or natural shoreline that would effectively serve as a barrier or otherwise prevent an animal from exiting the area. That is, in order for the animal to move away from the noise source, the animal would be forced to pass through the radius of noise effects.

Table 3-2 Predicted Isopleths by Pile Type

Species Group	Threshold Type	Threshold Level	Pile 1: 18-in Concrete (Impact)	Pile 2: 42-in Concrete (Impact)	Pile 3: 12-in Sheet Panel (Vibratory)
Fish	Peak SPL injury	206 dB	0.4 m (1.3 ft)	2.5 m (8.2 ft)	N/A
	SELcum injury	187 dB	45 m (148 ft)	17.8 m (58.5 ft)	N/A
	RMS behavioral	150 dB	215 m (707 ft)	1,359 m (4,459 ft)	10 m (32 ft)
Sea Turtle	Peak SPL injury	230 dB	0 m (0 ft)	0.1 m (0.2 ft)	N/A
	SELcum injury	184 dB	71 m (233 ft)	28.2 m (92.4 ft)	2.1 m (6.8 ft)
	RMS behavioral	175 dB	4.6 m (15 ft)	29.3 m (96.1 ft)	0.2 m (0.7 ft)
Marine Mammal	RMS Level B harassment	120 dB	46.4 (152 ft)	292.9 m (960.8 ft)	1,000 m (3,280 ft)

Assumptions: Water depth = 3.05 m (10 ft); Transmission loss coefficient = 15 (default); No attenuation applied; Station waterbody width = 7,520 ft. Source: NMFS Multi-Species Pile Driving Calculator (NMFS 2025a). No formal NMFS injury thresholds exist for non-impulsive (vibratory) sources for fish or sea turtles; RMS behavioral thresholds applied only (NMFS 2025b). Pile 2 is a single pile installation estimated at 300 strikes over approximately 20 minutes. While vibratory installation is not proposed for Pile 2, the vibratory noise calculator output has been included below for reference. N/A = threshold not applicable to non-impulsive sources.

Figure 3-1 Impact Pile Driving reports, generated from NMFS Multi-species Pile Driving Tool (dated September 2025)

Pile 1: 18-Inch Square Concrete Pile (Impact)

IMPACT PILE DRIVING REPORT
VERSION 2.1-Multi-Species: 2025
USCG STA SPI

PRINT IN LANDSCAPE TO CAPTURE ENTIRE SCREEN
(if OTHER INFO or NOTES get cut-off, please include information elsewhere)

PROJECT INFORMATION	PEAK	SELss	RMS
Single strike level (dB)	185	160	170
Distance associated with single strike level (meters)	10	10	10
Transmission loss constant	15		
Number of piles per day	12		
Number of strikes per pile	400		
Number of strikes per day	4800		
Cumulative SEL at measured distance	197		

OTHER INFO: 18 inch concrete piles
NOTES: 0
Attenuation: 0

RESULTANT ISOPLETHS
(Range to Effects)

FISHES

	ONSET OF PHYSICAL INJURY			BEHAVIOR
	Peak Isopleth	SEL_{cum} Isopleth		RMS Isopleth
		Fish ≥ 2 g	Fish < 2 g	
ISOPLETHS (meters)	0.4	45.1	46.4	215.4
Isopleth (feet)	1.3	148.0	152.3	706.8

Fishes present

SEA TURTLES

	AUD INJ ONSET		BEHAVIOR
	Peak Isopleth	SEL_{cum} Isopleth	RMS Isopleth
ISOPLETHS (meters)	0.0	71.2	4.6
Isopleth (feet)	0.0	233.5	15.2

Sea Turtles present

MARINE MAMMALS

	LF Cetacean	HF Cetaceans	VHF Cetaceans	PW Pinniped	OW Pinnipeds
AUD INJ ONSET (Peak isopleth, meters)	0.0	0.0	0.7	0.0	0.0
AUD INJ ONSET (Peak isopleth, feet)	0.1	0.0	2.4	0.1	0.0
AUD INJ ONSET (SEL_{cum} isopleth, meters)	82.9	10.6	128.3	73.7	27.5
AUD INJ ONSET (SEL_{cum} isopleth, feet)	272.0	34.7	421.0	241.7	90.1
	ALL MM	HF Cet. present	NO VHF CET.	NO PHOCIDS	NO OTARIIDS
Behavior (RMS isopleth, meters)	46.4	NO LF CET.			
Behavior (RMS isopleth, feet)	152.3				

Pile 2: 42-Inch Concrete Pile (Impact)

IMPACT PILE DRIVING REPORT
VERSION 2.1-Multi-Species: 2025
USCG STA SPI

PRINT IN LANDSCAPE TO CAPTURE ENTIRE SCREEN
(if OTHER INFO or NOTES get cut-off, please include information elsewhere)

PROJECT INFORMATION	PEAK	SELss	RMS
Single strike level (dB)	197	166	182
Distance associated with single strike level (meters)	10	10	10
Transmission loss constant	15		
Number of piles per day	1		
Number of strikes per pile	300		
Number of strikes per day	300		
Cumulative SEL at measured distance	191		

OTHER INFO: 42" Steel Pile (Caltrans 2020)
NOTES: 0
Attenuation: 0

RESULTANT ISOPLETHS
(Range to Effects)

FISHES

	ONSET OF PHYSICAL INJURY			BEHAVIOR
	Peak Isopleth	SEL_{cum} Isopleth		RMS Isopleth
		Fish ≥ 2 g	Fish < 2 g	
ISOPLETHS (meters)	2.5	17.8	33.0	1,359.4
Isopleth (feet)	8.2	58.5	108.2	4,459.8

Fishes present

SEA TURTLES

	AUD INJ ONSET		BEHAVIOR
	Peak Isopleth	SEL_{cum} Isopleth	RMS Isopleth
ISOPLETHS (meters)	0.1	28.2	29.3
Isopleth (feet)	0.2	92.4	96.1

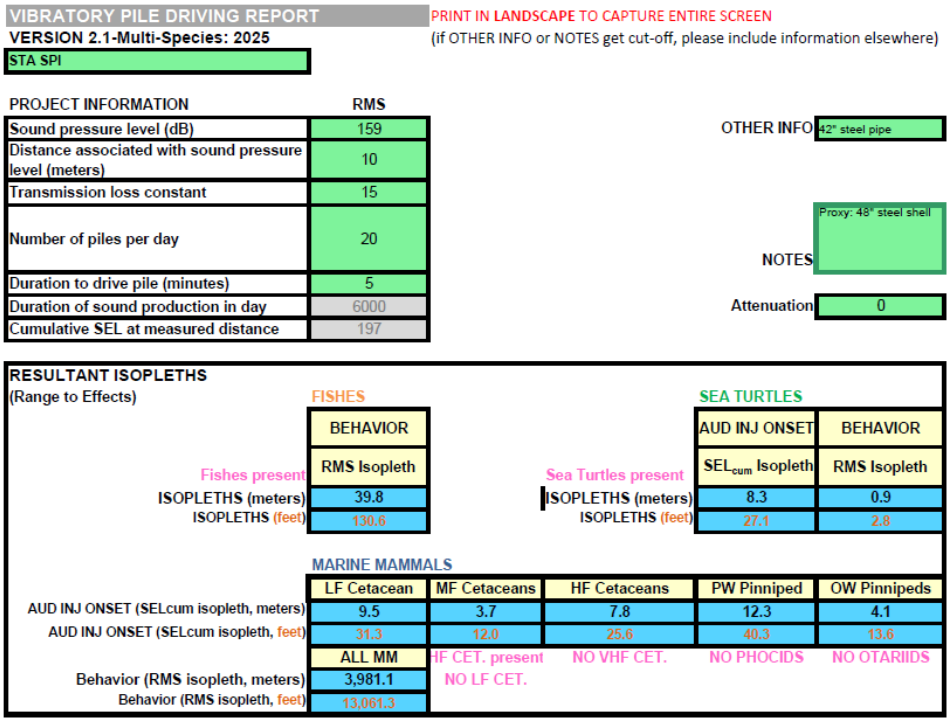
Sea Turtles present

MARINE MAMMALS

	LF Cetacean	HF Cetaceans	VHF Cetaceans	PW Pinniped	OW Pinnipeds
AUD INJ ONSET (Peak isopleth, meters)	0.2	0.1	4.6	0.2	0.1
AUD INJ ONSET (Peak isopleth, feet)	0.7	0.2	15.2	0.6	0.2
AUD INJ ONSET (SEL_{cum} isopleth, meters)	32.8	4.2	50.8	29.1	10.9
AUD INJ ONSET (SEL_{cum} isopleth, feet)	107.6	13.7	166.5	95.6	35.6
	ALL MM	HF Cet. present	NO VHF CET.	NO PHOCIDS	NO OTARIIDS
Behavior (RMS isopleth, meters)	292.9	NO LF CET.			
Behavior (RMS isopleth, feet)	960.8				

Pile 2: 42-Inch Concrete Pile (Vibratory)

*Vibratory installation is not proposed for this pile but calculator is provided as a reference for the potential impacts. This calculation used a 48" steel shell proxy.



VIBRATORY PILE DRIVING REPORT
VERSION 2.1-Multi-Species: 2025
STA SPI

PRINT IN LANDSCAPE TO CAPTURE ENTIRE SCREEN
(if OTHER INFO or NOTES get cut-off, please include information elsewhere)

PROJECT INFORMATION	RMS
Sound pressure level (dB)	159
Distance associated with sound pressure level (meters)	10
Transmission loss constant	15
Number of piles per day	20
Duration to drive pile (minutes)	5
Duration of sound production in day	6000
Cumulative SEL at measured distance	197

OTHER INFO: 42" steel pipe
NOTES: Proxy: 48" steel shell
Attenuation: 0

RESULTANT ISOPLETHS
(Range to Effects)

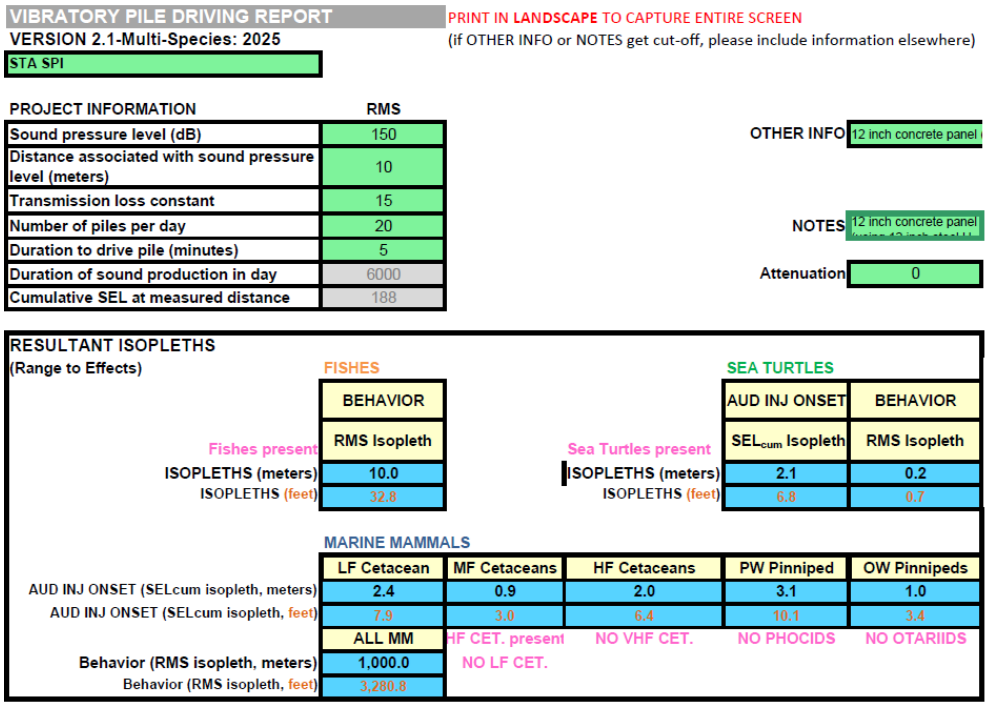
	FISHES	SEA TURTLES	
	BEHAVIOR	AUD INJ ONSET	BEHAVIOR
	RMS Isopleth	SEL_{cum} Isopleth	RMS Isopleth
Fishes present / Sea Turtles present			
ISOPLETHS (meters)	39.8	8.3	0.9
ISOPLETHS (feet)	130.6	27.1	2.8

MARINE MAMMALS

	LF Cetacean	MF Cetaceans	HF Cetaceans	PW Pinniped	OW Pinnipeds
AUD INJ ONSET (SELcum isopleth, meters)	9.5	3.7	7.8	12.3	4.1
AUD INJ ONSET (SELcum isopleth, feet)	31.3	12.0	25.6	40.3	13.6
	ALL MM	HF CET. present	NO VHF CET.	NO PHOCIDS	NO OTARIIDS
Behavior (RMS isopleth, meters)	3,981.1	NO LF CET.			
Behavior (RMS isopleth, feet)	13,061.3				

Pile 3: 12-Inch Concrete Panel (Vibratory)

*Vibratory installation is the only method of installation for concrete panels; therefore impact driving was not assessed for this pile type.



VIBRATORY PILE DRIVING REPORT
VERSION 2.1-Multi-Species: 2025
STA SPI

PRINT IN LANDSCAPE TO CAPTURE ENTIRE SCREEN
(if OTHER INFO or NOTES get cut-off, please include information elsewhere)

PROJECT INFORMATION	RMS
Sound pressure level (dB)	150
Distance associated with sound pressure level (meters)	10
Transmission loss constant	15
Number of piles per day	20
Duration to drive pile (minutes)	5
Duration of sound production in day	6000
Cumulative SEL at measured distance	188

OTHER INFO: 12 inch concrete panel
NOTES: 12 inch concrete panel
Attenuation: 0

RESULTANT ISOPLETHS
(Range to Effects)

	FISHES	SEA TURTLES	
	BEHAVIOR	AUD INJ ONSET	BEHAVIOR
	RMS Isopleth	SEL_{cum} Isopleth	RMS Isopleth
Fishes present / Sea Turtles present			
ISOPLETHS (meters)	10.0	2.1	0.2
ISOPLETHS (feet)	32.8	6.8	0.7

MARINE MAMMALS

	LF Cetacean	MF Cetaceans	HF Cetaceans	PW Pinniped	OW Pinnipeds
AUD INJ ONSET (SELcum isopleth, meters)	2.4	0.9	2.0	3.1	1.0
AUD INJ ONSET (SELcum isopleth, feet)	7.9	3.0	6.4	10.1	3.4
	ALL MM	HF CET. present	NO VHF CET.	NO PHOCIDS	NO OTARIIDS
Behavior (RMS isopleth, meters)	1,000.0	NO LF CET.			
Behavior (RMS isopleth, feet)	3,280.8				

Exposure to underwater noise levels of 206 dB peak and 187 dB SELcum can result in injury to fish, and levels of 230 dB peak and 184 dB SELcum can result in injury to sea turtles (NMFS 2025a; Popper et al. 2014). No formal NMFS injury thresholds exist for non-impulsive vibratory sources; effects analysis for Pile 3 relies on RMS behavioral thresholds only. Predicted isopleths for all pile types are summarized in Table 8.

Laguna Madre is approximately 7,520 feet wide at pile locations, providing extensive available habitat for fish and sea turtles to avoid ensonified areas while continuing normal behaviors. Most 18-inch square precast concrete pile installation activities will be conducted entirely within the enclosed Station basin. The basin is bounded by concrete seawalls. This semi-enclosed geometry substantially reduces the transmission of pile driving noise beyond the basin relative to open-water conditions. The concrete seawall boundaries reflect and attenuate acoustic energy within the basin, and the only significant sound transmission pathway to the open lower Laguna Madre is through the 100-foot opening. Sound energy exiting through this opening diverges rapidly into the open water body, resulting in effective transmission losses substantially greater than the default cylindrical spreading coefficient applied in the NMFS calculator analysis. The conservative NMFS calculator isopleths presented in Table 8 for 18-inch pile installation therefore represent a significant overestimate of actual acoustic conditions in the lower Laguna Madre during these activities. Sea turtles, EFH fish species, and marine mammals in the open lower Laguna Madre are extremely unlikely to be exposed to noise levels approaching any applicable threshold during 18-inch concrete pile installation given the basin confinement and the already negligible isopleths predicted under conservative open-water assumptions.

3.4.1 Underwater Noise Mitigation

The following measures will be implemented to avoid or minimize underwater noise impacts to aquatic species during pile driving and other in-water construction activities:

- Soft Starts: Impact pile driving shall be initiated using soft start procedures, in which the hammer is operated at reduced energy for a minimum of three strikes at 40 percent energy followed by one-minute pause prior to commencing full-energy driving. Soft starts allow mobile species to vacate the immediate work area before peak noise levels are reached.
- Cushioned Hammer Block: a cushion block will be used for all impact pile driving to reduce shock and noise.
- Exclusion Zone Monitoring: A qualified biological observer shall be on-site during all pile driving operations. Impact pile driving shall not commence until the observer has cleared a 50-foot exclusion zone of all sea turtles and manatees. If a sea turtle or manatee enters the exclusion zone during pile driving, operations shall halt immediately and not resume until the animal has departed voluntarily.
- Vibratory Installation Preference: Vibratory pile installation shall be used in lieu of impact driving wherever feasible and consistent with structural requirements, as vibratory methods generally produce lower peak sound levels.

4.0 EFFECTS ANALYSIS OF THE PROPOSED ACTION

The following subsections evaluate the potential effects of the Proposed Action on each federally protected species identified in Section 2. Effects determinations use standard ESA Section 7 terminology: No Effect (NE); May Affect, Not Likely to Adversely Affect (NLAA); and May Affect, Likely to Adversely Affect (LAA). For proposed species, the Section 7(a)(4) jeopardy standard applies rather than the NLAA standard.

4.1 Monarch Butterfly

As a proposed species, ESA Section 7(a)(4) conference requirements apply. Based on in-person site evaluation, USFWS concurred that conferencing is not required for this Project (USFWS 2026b). The Project is **not likely to jeopardize** the continued existence of the monarch butterfly.

4.2 Giant Manta Ray

Giant manta rays are pelagic open-water species not associated with the shallow, hypersaline lower Laguna Madre environment. The Project does not involve in-water construction or vessel operations in offshore Gulf of Mexico waters where giant manta rays are likely to occur. The giant manta is most often found offshore and is not likely to spend time in any one area, given its highly migratory behavioral traits. However, the presence of an individual giant manta ray, specifically a juvenile, within the Action Area cannot be completely discounted.

4.2.1 Underwater Noise Analysis

Peak SPL injury isopleths for impact-driven piles are negligible, meaning physiological injury from a single strike requires a fish to be at the pile face. During the proposed impact hammering of the 18-inch square precast concrete piles within the enclosed Station basin, the maximum distances to applicable thresholds under conservative open-water assumptions are summarized in Table 3-2 and represent a substantial overestimate of actual conditions given the acoustic attenuation provided by the surrounding seawall structure. The SELcum injury isopleth extends 58.5 feet for Pile 2. Fish are expected to vacate these zones in response to the 150 dB RMS behavioral threshold, which extends 4,459 feet for Pile 2 (the maximum extent of the Aquatic Action Area). While the Pile 2 behavioral disturbance radius exceeds the Station basin width, fish detecting noise above 150 dB RMS are expected to relocate voluntarily to the extensive undisturbed lower Laguna Madre habitat beyond the Station. For vibratory piles, behavioral disturbance is limited to 32 feet for Pile 3. These distances are both well within the available habitat area of the Laguna Madre. Given that the time to drive individual piles is short, fish present are transient, and undisturbed lower Laguna Madre habitat is widely available, effects of pile driving noise on EFH fish species and Giant Manta Ray are temporary and insignificant.

4.2.2 Effects Determination

The Proposed Action therefore **may affect, but is not likely to adversely affect**, the giant manta ray. As a Best Management Practice (BMP) Vessel operators are instructed to implement NMFS Vessel Strike Avoidance Measures and Reporting for Mariners (NMFS 2008) for all vessel transits in coastal waters.

4.3 Sea Turtles and Their Critical Habitat

The lower Laguna Madre adjacent to the station supports seagrass habitat used by Kemp's Ridley and green sea turtles for foraging, and Brazos Santiago Pass provides access for sea turtles moving between the lagoon and Gulf of Mexico. In-water construction activities including waterfront demolition, pile driving, pier construction, shoreline work, and boat ramp construction with minor associated dredging have the potential to affect sea turtles present in the estuarine waters adjacent to the Project within the Action Area through elevated turbidity, noise and vibration from pile driving, temporary habitat disturbance, and potential vessel strike risk during material transport and equipment operation.

Sea turtles are highly mobile and are expected to relocate from areas of active in-water construction. Pile driving will generate temporary noise and vibration that may cause short-term displacement of sea turtles from the immediate work area. These effects are temporary and localized relative to the overall availability of seagrass foraging habitat throughout the lower Laguna Madre system. The Proposed Action does not involve offshore dredging or hopper dredge operations in which sea turtle entrainment is the primary concern. Instead, Minor dredging associated with the boat ramp will involve approximately 2,200 cubic yards of dredge material to the maximum -12 ft mean lower low water over an area of approximately 0.37 acre. Dredging will be completed using mechanical means and a turbidity curtain to reduce turbidity impacts in the water column.

4.3.1 Underwater Noise Analysis

In-water pile driving associated with marine construction will generate underwater noise with the potential to cause physiological injury or behavioral disturbance to sea turtles present in the adjacent lower Laguna Madre. The applicable NMFS acoustic injury threshold for sea turtles is 184 dB SELcum and 230 dB peak SPL for impulsive sources (NMFS 2025). The behavioral disturbance threshold is 175 dB RMS. Quantitative exclusion zone distances for the governing pile elements have been determined using the NMFS Multi-Species Pile Driving Calculator.

Peak SPL injury distances are effectively zero for all pile types meaning single-strike physiological injury requires direct contact with the pile face. The SELcum injury isopleths extend 233 feet and 92.4 feet for Piles 1 and 2 respectively. Sea turtles are expected to vacate these zones in response to the 175 dB RMS behavioral threshold, which extends only 15 feet for Pile 1, 96 feet for Pile 2, and 0.7 feet for Pile 3. BMPs for pile installation may include a pre-drive exclusion zone and implementing soft-start procedures to allow any sea turtles present to relocate before full-energy driving begins. Given the small behavioral disturbance zones for all pile types and preference for vibratory installation where feasible, the short duration of individual pile installations, and the extensive undisturbed lower Laguna Madre habitat available beyond the construction zone, effects of pile driving noise on ESA-listed sea turtles are insignificant.

4.3.2 Effects Determination

The Proposed Action **may affect, but is not likely to adversely affect**, the green sea turtle, , Kemp's Ridley sea turtle, and loggerhead sea turtle under NMFS jurisdiction (marine and estuarine life stages). No effect is expected on nesting sea turtles (USFWS-managed), as the Project is located on the bayward shoreline of the island rather than the Gulf-facing nesting beach and **no effect** is expected to hawksbill or leatherback sea turtles under NMFS jurisdiction as the project action area does not include their typical

habitat area. All applicable sea turtle protective measures and construction conditions outlined in NMFS (2021) will be adhered to during construction. See Section 5.2 for avoidance and minimization measures.

Designated critical habitat for the Northwest Atlantic Ocean DPS loggerhead sea turtle (unit LOGG-S-02) occurs in Texas coastal and offshore waters from the 10-meter depth contour seaward to the U.S. Exclusive Economic Zone boundary (79 FR 39856). All project construction activities occur in waters shallower than and landward of this depth contour, and no causal pathway exists by which the Proposed Action could affect the essential features of the designated loggerhead critical habitat unit. **No Effect** is determined for designated loggerhead sea turtle critical habitat..

Proposed critical habitat unit TX01 for the North Atlantic DPS green sea turtle encompasses the lower Laguna Madre and adjacent Gulf of Mexico coastal waters within the project action area (NMFS 2023; 88 FR 46572). This critical habitat has not been finalized as of the date of this assessment. Four essential features were evaluated for potential effects: (1) reproductive habitat (nesting beaches), (2) migratory habitat (coastal and offshore waters), (3) benthic foraging and resting habitat (seagrass beds and shallow coastal substrate), and (4) surface pelagic foraging and resting habitat (sargassum). No Effect is determined for Essential Features 1, 2, and 4; no Gulf-facing nesting beach exists within the project area, the construction footprint does not materially alter the migratory corridor character of Brazos Santiago Pass or the lower Laguna Madre, and sargassum habitat is absent from the Laguna Madre system. For Essential Feature 3, temporary turbidity generated during in-water construction activities has the potential to temporarily reduce light availability to adjacent seagrass beds constituting benthic foraging habitat within the action area. The Proposed Action has been designed to avoid all direct seagrass impacts and turbidity barriers will be deployed during active dredging. Seagrass beds will remain intact throughout and following construction and are expected to recover to pre-construction condition within the timeframes documented for the lower Laguna Madre system (Onuf 1994; Dunton 1996). The Proposed Action **may affect, but is not likely to adversely affect**, proposed green sea turtle critical habitat. The temporary turbidity effects on Essential Feature 3 will not appreciably reduce the value of the critical habitat unit for its intended conservation purpose.

4.4 Cactus Ferruginous Pygmy-Owl

The barrier island and developed station footprint lack the live oak, mesquite woodland, or thornscrub habitat and mature tree nesting cavities required by this species. The Proposed Action was determined to have No Effect on this species based on application of the USFWS Texas Statewide Determination Key completed through the IPaC system (USFWS 2025). **No effect** is expected for the cactus ferruginous pygmy-owl or its future critical habitat.

4.5 Eastern Black Rail

Salt and Brackish High Tidal Marsh dominated by saltmeadow cordgrass, the primary and preferred habitat for eastern black rail on the Texas coast, was documented within the survey area (USCG 2026a; USCG 2026b), comprising approximately 3.44 acres of the E2EM1P intertidal emergent marsh within the surveyed area. There are no confirmed recent nesting records in south Texas or Cameron County specifically (CCB 2017). However, presence of black rail on the Project site are possible given the suitability of habitat observed.

The construction footprint has been designed to avoid direct disturbance of E2EM high tidal marsh wetland features to the maximum extent practicable. No direct clearing, fill, or vegetation removal is proposed within the E2EM1P communities. Indirect effects may include temporary behavioral disturbance from construction noise and human activity adjacent to marsh communities. Any individuals behaviorally displaced during construction are expected to relocate within the broader marsh system adjacent to the Project area.

BMPs proposed to be used during the Project's construction and operation to minimize impacts to Eastern black rail are provided in Section 4.3, consistent with the conditions of the USFWS

With implementation of these measures, and given that the construction footprint has been designed to avoid direct impacts to E2EM1P communities, the Proposed Action **may affect but is not likely to adversely affect** the eastern black rail. No critical habitat has been designated for this species.

4.6 Northern Aplomado Falcon

No suitable nesting habitat for the northern aplomado falcon is present within the Action Area. The Proposed Action was determined to have No Effect on this species based on application of the USFWS Texas Statewide Determination Key completed through the IPaC system (USFWS 2025). **No effect** to the northern aplomado falcon is expected.

4.7 Piping Plover & Rufa Red Knot

Estuarine intertidal tidal flat (E2USM) habitat was documented along the northern and southern shorelines of the station (USCG 2026a), providing primary wintering foraging habitat for piping plovers and rufa red knots. In-water construction activities will not directly disturb tidal flat substrate. All construction will be occurring in deeper subtidal waters. Indirect effects to shore birds may occur from construction noise or increased presence of humans and vehicles. These birds are highly mobile and capable of relocating to the extensive undisturbed tidal flat and shoreline habitats throughout the lower Laguna Madre during construction. Tidal flat habitat is abundant and widely distributed in the region relative to the small footprint of the construction zone.

Designated wintering critical habitat for the piping plover occurs along the south Texas coast in the vicinity of South Padre Island. The Land Based Action Area is not within this critical habitat unit and no disturbance of tidal flat habitat will occur. Proposed critical habitat for the rufa red knot includes Texas coastal areas but no critical habitat is within the Action Areas.

The Proposed Action **may affect, but is not likely to adversely affect** the piping plover and rufa red knot. The Proposed Action has no effect to their applicable critical habitat.

4.8 Salina Mucket

The Project was determined **not likely to jeopardize** the proposed endangered Salina mucket based on the absence of suitable freshwater habitat within the Project area.

4.9 Gulf Coast Jaguarundi and Ocelot

The Project was determined to have **no effect** on both the Gulf Coast jaguarundi and ocelot based on the absence of suitable habitat within the barrier island and developed station Project area.

4.10 Tricolored Bat

The Project area lacks suitable forested roosting habitat, caves, mines, or culvert hibernacula for tricolored bats. USFWS confirmed through in-person site evaluation that conferencing is not required for this proposed species (USFWS 2026b). The Project is **not likely to jeopardize the continued existence** of the proposed endangered tricolored bat.

4.11 West Indian Manatee

Manatees may occur seasonally in the lower Laguna Madre estuarine waters adjacent to the station during warm months. In-water construction activities will generate temporary noise, turbidity, and vessel activity within the estuarine water column. Manatees are highly mobile and are expected to avoid areas of active in-water construction. Temporary indirect effects to seagrass foraging habitat from construction turbidity, including minor dredging, are anticipated to be limited in extent and duration relative to the overall availability of seagrass habitat in the lower Laguna Madre system.

4.11.1 Underwater Noise Analysis

The 120 dB RMS Level B behavioral harassment threshold for marine mammals extends 152 feet for impact-driven Pile 1, 960 feet for impact driven Pile 2, and 3,280 feet for vibratory installation of Pile 3 encompassing essentially the entire lower Laguna Madre for the vibratory scenario. Level B harassment represents temporary behavioral disturbance rather than physiological injury. The West Indian manatee is a rare seasonal visitor to the lower Laguna Madre, and the largest-diameter vibratory installation event is a single pile estimated at 10 to 20 minutes of active operation. The 50-foot equipment exclusion zone required by USFWS (USFWS 2026b) will be maintained by the biological observer throughout all pile installation events. Given the temporary nature of Level B harassment and the single-event character of the governing pile installation, effects on marine mammals are not anticipated to result in any long-term consequence to individual animals or the broader manatee population and are insignificant.

4.11.2 Effects Determination

With implementation of conservation measures recommended by USFWS and in Section 4.4 of this assessment, the Proposed Action **may affect, but is not likely to adversely affect** the West Indian manatee. The project will have No Effect to designated critical habitat.

4.12 Plants

No specimens of South Texas ambrosia or Texas ayenia were identified during field investigations (USCG 2026a). The Project area lacks the coastal shortgrass prairie, mesquite grassland, and Tamaulipan thornscrub required by these species. The Proposed Action was determined to have No Effect on these species based on application of the USFWS Texas Statewide Determination Key completed through the IPaC system (USFWS 2025). **No effect** is expected for South Texas ambrosia or Texas ayenia.

4.13 Migratory Birds

The Proposed Action would cause minor effects to migratory birds from human-caused disturbance and temporary noise increases during demolition and construction activities which may cause birds to experience altered behavior, feeding activity, nest placement, and nest abandonment (Knight and

Gutzwiller 1995). Additional effects include temporary displacement of foraging and roosting shorebirds and wading birds from tidal flat and estuarine habitats near the active construction zone, and the permanent removal of potential nesting habitat from vegetation clearing on the upland berm and small mangrove wetland during construction. Long-term effects from habitat loss are not expected as the lower Laguna Madre and adjacent South Padre Island shoreline provide extensive foraging, roosting, and nesting habitat for migratory birds throughout the Project vicinity, and tidal flat and estuarine habitats are abundant and widely distributed throughout the lower Laguna Madre system well beyond the localized construction footprint (eBird; USFWS 2026c). Birds displaced by construction activity have access to this broader habitat matrix throughout the construction period.

5.0 AVOIDANCE AND MINIMIZATION MEASURES

Avoidance and minimization measures will be implemented during construction and operation of the Proposed Action to avoid or minimize potential adverse effects to federally protected species. These measures are consistent with the USFWS recommendations (USFWS 2026b) and applicable NMFS protective measures. All measures will be incorporated into construction plans, specifications, and operational protocols prior to initiation of construction activities. Refer to Appendix F of the EA for comprehensive list of all BMPs and minimization measures proposed for the project.

6.0 SUMMARY OF EFFECTS

Table 6-1 presents the summary of effects determined for the Proposed Action for all federally protected species with potential occurrence in or near the Project area. Table 6-2 presents the summary of effects determined for the Proposed Action for all critical habitat.

Table 6-1 Summary of Effects to Federally Protected Species — Proposed Action, USCG Station South Padre Island

Common Name (*Scientific Name*)	Federal Protection	IPac Determination Key Status	Effect Determination
Monarch butterfly (*Danaus plexippus*)	PT (USFWS)	No Key available	Not likely to jeopardize
Giant manta ray (*Manta birostris*)	T (NMFS)	Species under NMFS jurisdiction — IPaC keys not applicable; NMFS SERO consultation framework applied	NLAA
Green sea turtle (*Chelonia mydas*) North Atlantic DPS	T (co-managed)	Species under NMFS jurisdiction — IPaC keys not applicable; NMFS SERO consultation framework applied	NLAA[1]
Hawksbill sea turtle (*Eretmochelys imbricata*)	E (co-managed)		NE[2]
Kemp's Ridley sea turtle (*Lepidochelys kempii*)	E (co-managed)		NLAA[1]
Leatherback sea turtle (*Dermochelys coriacea*)	E (co-managed)		NE[2]
Loggerhead sea turtle (*Caretta caretta*) Northwest Atlantic Ocean DPS	T (co-managed)		NLAA[1]
Cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*)	T (USFWS)	No Effect by DKey	NE
Eastern black rail (*Laterallus jamaicensis jamaicensis*)	T (USFWS)	project did not key out	NLAA
Northern aplomado falcon (*Falco femoralis septentrionalis*)	E (USFWS)	No Effect by DKey	NE
Piping plover (*Charadrius melodus*)	T (USFWS)	project did not key out	NLAA
Rufa red knot (*Calidris canutus rufa*)	T (USFWS)	project did not key out	NLAA
Salina mucket (*Potamilus metnecktayi*)	PE (USFWS)	No Key available	Not likely to jeopardize
Gulf Coast jaguarundi (Herpailurus [=*Puma*] yagouaroundi cacomitli)	E (USFWS)	No Key available	NE
Ocelot (*Leopardus pardalis*)	E (USFWS)	No Key available	NE
Tricolored bat (*Perimyotis subflavus*)	PE (USFWS)	No Key available	Not likely to jeopardize
West Indian manatee (*Trichechus manatus latirostris*)	T (USFWS); MMPA	project did not key out	NLAA
South Texas ambrosia (*Ambrosia cheiranthifolia*)	E (USFWS)	No Effect by DKey	NE
Texas ayenia (*Ayenia limitaris*)	E (USFWS)	No Effect by DKey	NE

1 No Effect for this species under USFWS jurisdiction (terrestrial and nesting beach life stages). May Affect, Not Likely to Adversely Affect (NLAA) determination for species under NMFS jurisdiction (marine and estuarine life stages)

2 No Effect was determined for both USFWS and NMFS jurisdictions

Table 6-2 Summary of Effects to Critical Habitat

Species	Critical Habitat in the Action Area	Critical Habitat Rule/Date	Effect Determination (Critical Habitat)
Proposed Designation			
Green Sea Turtle NA DPS	TX01: Texas *(Mexico border to and including Galveston Bay)*	Proposed (88 FR 46572) July 19, 2023	NLAA
Loggerhead sea turtle Northwest Atlantic Ocean DPS	LOGG-S-02*:* Texas (*coastal and offshore waters from 10m contour to EEZ boundary)*	*79 FR 39856 / July 10, 2014*	NE

Based on the effects analysis presented in this assessment, the Proposed Action may affect, but is not likely to adversely affect, the eastern black rail, piping plover, rufa red knot, and West Indian manatee under USFWS jurisdiction, and is not likely to jeopardize the continued existence of the proposed monarch butterfly, proposed salina mucket, and proposed tricolored bat; the Proposed Action has No Effect on the cactus ferruginous pygmy-owl, northern aplomado falcon, Gulf Coast jaguarundi, ocelot, South Texas ambrosia, Texas ayenia, hawksbill sea turtle, and leatherback sea turtle under USFWS jurisdiction.

Under NMFS jurisdiction, the Proposed Action may affect, but is not likely to adversely affect, the giant manta ray, green sea turtle (North Atlantic DPS), Kemp's ridley sea turtle, and loggerhead sea turtle (Northwest Atlantic Ocean DPS) in marine and estuarine environments, and may affect, but is not likely to adversely affect, proposed critical habitat unit TX01 for the green sea turtle North Atlantic DPS due to temporary turbidity effects on Essential Feature 3 during construction; the Proposed Action has No Effect on designated critical habitat unit LOGG-S-02 for the loggerhead sea turtle as all construction activities occur shallower than and landward of the designated critical habitat boundary.

7.0 REFERENCES

Note that although several references below include the name 'Gulf of Mexico', this water body has since been re-named the 'Gulf of America' through Executive Order 14172, effective since 20 January 2025, and Secretary's Order 3423, effective since 07 February 2025.

Adams, D.H. and E. Amesbury. 1998. Occurrence of the manta ray, Manta birostris, in the Indian River Lagoon, Florida. Florida Scientist 61:7–9.

Barnette, M. 2018. Threats and Effects Analysis for Protected Resources on Vessel Traffic Associated with Dock and Marina Construction. NMFS SERO PRD Memorandum. October 31, 2018.

Bureau of Ocean Energy Management. 2024. Leatherback Sea Turtle. Accessed May 2026. Available at: https://www.boem.gov/newsroom/ocean-science-news/leatherback-sea-turtle.

Center for Conservation Biology (CCB). 2017. Eastern Black Rails in Free Fall. Center for Conservation Biology, College of William & Mary, Williamsburg, Virginia. January 4, 2017. Accessed April 2026. Available at: https://ccbbirds.org/2017/01/04/eastern_black_rails_free_fall/.

Culter, J. K., and S. K. Mahadevan. 1982. Long-term effects of beach nourishment on the benthic fauna of Panama City Beach, Florida. Mote Marine Laboratory, Sarasota, FL., Miscellaneous Report No. 82-2, Fort Belvoir, VA.

Farmer, N.A., M.C. Durden, C. Coleman, L. Faircloth, C. Garrison, and R.A. Harms. 2022. The Distribution of Manta Rays in the Western North Atlantic Ocean off the Eastern United States. Scientific Reports 12:6544. doi:10.1038/s41598-022-10482-8.

Federal Energy Regulatory Commission (FERC). 2019. Texas LNG Project Final Environmental Impact Statement, Volume I. Docket No. CP16-116-000, FERC/EIS-0288F. Office of Energy Projects, Washington, D.C. March 2019.

Fertl, D., A.J. Schiro, G.T. Regan, C.A. Beck, N. Adimey, L. Price-May, A. Amos, G.A.J. Worthy, and R. Crossland. 2005. Manatee Occurrence in the Northern Gulf of Mexico, West of Florida. Gulf and Caribbean Research 17(1):69–94.

Garrett. O. 2025. "Inspiration Story": Kemp's Ridley Sea Turtles have Record-Breaking Season. Corpus Christi Caller Times. June 16, 2025. Accessed May 2026. Available at: https://www.caller.com/story/news/local/2025/06/16/padre-island-national-seashore-kemps-ridley-sea-turtle-endangered-hatchling-release-corpus-christi/84163800007/.

Gordon, M.L., T. L. Metz, and G. J. Guillen. Relative Abundance & Distribution of Juvenile Sea Turtles Along the Mid-Lower Texas Coast Based on Directed Capture. Prepared for the 2015 Southeast Regional Sea Turtle Meeting; Jekyll Island, GA; February 4-7, 2015. Accessed May 2026. Available at: https://www.uhcl.edu/environmental-institute/research/publications/documents/gordon-etal-2015-serstm.pdf.

Gower, J. and S. King. 2008. Satellite Images Show the Movement of Floating Sargassum in the Gulf of Mexico and Atlantic Ocean. Nat Prec (2008). https://doi.org/10.1038/npre.2008.1894.1

Howell, L.N. and Shaver, D.J.. 2021. Foraging Habitats of Green Sea Turtles (Chelonia mydas) in the Northwestern Gulf of Mexico. Frontiers in Marine Science. 15 April 2021. https://repository.library.noaa.gov/view/noaa/30742/noaa_30742_DS1.pdf

Jones, K.D., L. Camacho, T. Sinha, O. Al-Qudah, H. DeYoe, A. Sanchez Gonzalez, J. Ho, J. Guerrero. 2018. Laguna Madre Estuary Program Environmental Strategic Plan. GLO Contract 17-184-000-9821. Final Report. Texas A&M University Kingsville and The University of Texas Rio Grande Valley. Accessed April 2026. Available at: https://www.glo.texas.gov/sites/default/files/2025-10/laguna-madre-estuary-final-report.pdf.

Knight, R.L. and K.J. Gutzwiller, eds. 1995. Wildlife and Recreationists: Coexistence Through Management and Research. Island Press, Washington, D.C.

KRGV Channel 5 News. December 6 2021. Rare Manatee Sighting in Laguna Madre. KRGV-TV, Weslaco, Texas. Accessed April 2026. Available at: https://www.krgv.com/news/rare-manatee-sighting-in-laguna-madre/.

Lee, G. F., Jones, R. A., Saleh, F. Y., Mariani, G. M., Homer, D. H., Butler, J. S., and Bandyopadhyay, P. 1978. Evaluation of the Elutriate Test as a Method of Predicting Contaminant Release during Open Water Disposal of Dredged Sediment and Environmental Impact of Open Water Dredged Materials Disposal, Vol. II: Data Report, Technical Report D-78-45, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

Lee, G. F. and Jones, R. A. 1999. Water Quality Aspects of Dredging and Dredged Sediment Disposal. Handbook of Dredging Engineering, pp. 9-23 to 9-59. https://www.gfredlee.com/Sediment/dredging.pdf

Milessi, A.C. and M.C. Oddone. 2003. Primer registro de Manta birostris (Donndorff 1798) (Batoidea: Mobulidae) en el Rio de La Plata, Uruguay. Gayana 67(1):126–129.

Monarch Watch. 2025. Monarch Watch Migration Page. Accessed April 2026. Available at https://www.monarchwatch.org/migration/.

National Marine Fisheries Service (NMFS). 2006. Sea Turtle and Smalltooth Sawfish Construction Conditions. NOAA Fisheries, Southeast Regional Office, Protected Resources Division, St. Petersburg, Florida. Accessed April 2026. Available at: https://www.saj.usace.army.mil/Portals/44/docs/Planning/EnvironmentalBranch/EnviroCompliance/SeaTurtleAndSawfishConstructionConditions23mar2006.pdf.

NMFS 2007a. Green Sea Turtle (Chelonia mydas) 5-Year Review: Summary and Evaluation. National Marine Fisheries Service Office of Protected Resources, United States Fish and Wildlife Service Southeast Region Jacksonville Ecological Services Field Office. https://repository.library.noaa.gov/view/noaa/17044

NMFS 2007b. Loggerhead Sea Turtle (Caretta caretta) 5-Year Review: Summary and Evaluation. National Marine Fisheries Service Office of Protected Resources, United States Fish and Wildlife Service Southeast Region Jacksonville Ecological Services Field Office. https://repository.library.noaa.gov/view/noaa/17039

NMFS. 2008. Vessel Strike Avoidance Measures and Reporting for Mariners. NOAA Fisheries, Southeast Regional Office, Protected Resources Division, St. Petersburg, Florida.

NMFS. 2012. Measures for Reducing Entrapment Risk to Protected Species. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Regional Office, Protected Resources Division, St. Petersburg, Florida. https://media.fisheries.noaa.gov/dam-migration/entrapment_bmps_final.pdf

NMFS. 2020 South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States (2020 SARBO). NOAA Fisheries Service, Southeast Region.

NMFS. 2021. Protected species construction conditions, NOAA Fisheries Southeast Regional Office. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Regional Office, revised May 2021, Saint Petersburg, FL.

NMFS. 2023. Proposed_SeaTurtleGreen_NorthatlanticDPS_20230719. GIS Dataset. Accessed April 2026. Available at: https://noaa.maps.arcgis.com/home/item.html?id=475809f0b637409b8027502fd05dbeb6.

NMFS. 2023a. Section 7 Effects Analysis: Turbidity in the Greater Atlantic Region. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, New England/Mid-Atlantic Region, revised July 2023. https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-effects-analysis-turbidity-greater-atlantic-region

NMFS 2023b. Draft Biological Report for the Designation of Marine Critical Habtiat for Six Different Population Segments of the Green Turtle, Chelonia mydas. National Marine Fisheries Service. June 2023. https://www.fisheries.noaa.gov/s3/2023-07/DraftGreenTurtleCH-BiologicalReport-June2023.pdf

NMFS 2024. Endangered Species Act Recovery Status Review for the Giant Manta Ray (Mobula birostris). National Marine Fisheries Service. National Oceanic and Atmospheric Administration.

NMFS. 2021. Protected Species Construction Conditions, NOAA Fisheries Southeast Regional Office. NOAA Fisheries, Southeast Regional Office, Protected Resources Division, St. Petersburg, Florida. Accessed April 2026. Available at: https://media.fisheries.noaa.gov/2021-06/Protected_Species_Construction_Conditions_1.pdf.

NMFS. 2024. Giant Manta Ray Section 7 Consultation Framework. NOAA National Marine Fisheries Service, Southeast Regional Office. April 2024. Accessed April 2026. Available at: https://www.fisheries.noaa.gov/s3/2024-04/Giant-Manta-Ray-Section-7-Framework-2024-0.pdf.

NMFS. 2025. National Maine Fisheries Service: Summary of Endangered Species Act Recommended Acoustic Thresholds (Marine Mammals, Fishes, and Sea Turtles). Accessed April 2026. Available at: https://www.fisheries.noaa.gov/s3/2025-09/ESA-AllSpeciesThresholdSummary-2025-508-OPR1-9.16.25-.pdf.

NMFS. 2025. Southeast Region ESA Section 7 Mapper. NOAA National Marine Fisheries Service, Southeast Regional Office. Geodatabase last updated February 2025. Accessed June 7 2026.

Available at: https://www.fisheries.noaa.gov/resource/map/southeast-region-esa-section-7-mapper

NMFS and National Oceanic and Atmospheric Administration (NOAA). 2014. Endangered and Threatened Species: Critical Habitat for the Northwest Atlantic Ocean Loggerhead Sea Turtle Distinct Population Segment (DPS) and Determination Regarding Critical Habitat for the North Pacific Ocean Loggerhead DPS. 79 FR 39856 2014-15748.

National Oceanic and Atmospheric Administration (NOAA) Fisheries. 2025. Marine Mammal Protection Act. Accessed March 2026. Available at: https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-protection-act.

National Park Service (NPS). 2026a. Kemp's Ridley Sea Turtle Recovery. Accessed May 2026. Available at: https://www.nps.gov/pais/learn/nature/kemp-s-ridley-sea-turtle-recovery.htm.

NPS. 2026b. Kemp's Ridley Sea Turtles. Accessed May 2026. Available at: https://www.nps.gov/pais/learn/nature/kridley.htm.

Oberholser, H.C. 1974. The Bird Life of Texas (two volumes). University of Texas Press, Austin, Texas.

Pate, J.H. and A.D. Marshall. 2020. Urban manta rays: potential manta ray nursery habitat along a highly developed Florida coastline. Endangered Species Research 43:51–64. https://doi.org/10.3354/esr01054

Proudfoot, G.A. and R.R. Johnson. 2000. Ferruginous Pygmy-Owl *Glaucidium brasilianum*. In The Birds of North America, No. 498 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, Pennsylvania.

Recover Texas Ocelots Initiative. 2026. Ocelot FAQs. Accessed May 2026. Available at: https://recovertexasocelots.org/ocelot-faqs.

Saloman, C. H., S. P. Naughton, and J. L. Taylor. 1982. Benthic community response to dredging borrow pits, Panama City Beach, Florida. National Marine Fisheries Service, Gulf Coastal Fisheries Center, Miscellaneous Report No. 82-3, Panama City, FL.

Texas Marine Mammal Stranding Network (TXMMSN). 2025. West Indian Manatee Sightings — Texas Coast Summer 2025. University of Texas Rio Grande Valley Coastal Studies Lab, South Padre Island, Texas. Accessed April 2026. Available at: https://www.utrgv.edu/coastal-studies-lab/public-service/texas-marine-mammal-stranding-network/index.htm.

Texas Parks and Wildlife Department (TPWD). 2020. State Threatened and Endangered Species List. Austin, Texas. Accessed April 2026. Available at: https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/nongame/listed-species/.

TPWD. 2025. Rare, Threatened, and Endangered Species of Texas by County: Cameron County. Austin, Texas. Accessed May 2026. Available at: https://tpwd.texas.gov/gis/rtest/.

TPWD. 2026. Jaguarundi (*Herpailurus yaguarondi*). Accessed May 2026. Available at: https://tpwd.texas.gov/huntwild/wild/species/jag/.

Texas Tech University Natural Science Research Laboratory. 2024. West Indian Manatee (*Trichechus manatus*) Species Account. Mammals of Texas Online Edition. Lubbock, Texas. Accessed April 2026. Accessed April 2026. Available at: https://www.depts.ttu.edu/nsrl/mammals-of-texas-online-edition/Accounts_Sirenia/Trichechus_manatus.php.

Tolliver, J.D. 2017. Eastern Black Rail (*Laterallus jamaicensis jamaicensis*) Occupancy and Abundance Estimates along the Texas Coast with Implications for Survey Protocols. MS Thesis, Texas State University, San Marcos, Texas.

Tweit, R.C. 2008. Aplomado Falcon. The Texas Breeding Bird Atlas. Texas A&M Agrilife Research. Accessed May 2026. Available at: https://txtbba.tamu.edu/species-accounts/aplomado-falcon/.

USCG. 2026a. Wetland Delineation Report: Rebuild USCG Station South Padre Island, Cameron County, Texas. Contract No. 70Z05026F43000005. Prepared for United States Coast Guard. March 2026. On file with U.S. Coast Guard, Office of Environmental Management, Norfolk, Virginia.

U.S. Coast Guard (USCG). 2026b. Habitat Assessment Report: Rebuild USCG Station South Padre Island, Cameron County, Texas. Contract No. 70Z05026F43000005. Prepared for United States Coast Guard. April 2026. On file with U.S. Coast Guard, Office of Environmental Management, Norfolk, Virginia.

USCG. 2026c. Benthic Habitat Assessment Report: Rebuild USCG Station South Padre Island, Cameron County, Texas. Contract No. 70Z05026F43000005. Prepared for United States Coast Guard. 2026.

U.S. Department of the Navy. 2025. Technical Report: Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase 4). San Diego, California: SSC Pacific.

United States Fish and Wildlife Service (USFWS). n.d.a. Monarch Butterfly Migration Map. U.S. Fish and Wildlife Service, Washington, D.C. Accessed April 2026. Available at: https://www.fws.gov/media/monarch-butterfly-migration-map.

U.S. Fish and Wildlife Service (USFWS)**.** 2025. Texas Statewide Determination Key for Threatened and Endangered Species. Information for Planning and Consultation (IPaC). Accessed June 5 2026. Available at: https://ipac.ecosphere.fws.gov

USFWS. n.d.b. Piping Plover (*Charadrius melodus*) Range Map. U.S. Fish and Wildlife Service, Washington, D.C. Accessed April 2026. Available at: https://www.fws.gov/species/piping-plover-charadrius-melodus/map.

USFWS. 2003. Recovery Outline: Cactus Ferruginous Pygmy-Owl (*Glaucidium brasilianum cactorum*). U.S. Fish and Wildlife Service, Southwest Region, Albuquerque, New Mexico.

USFWS. 2011. Bi-national recovery plan for the Kemp's ridley turtle (Lepidochelys kempii). Corporate Authors(s) : U.S. Fish and Wildlife Service;United States, National Marine Fisheries Service,;Mexico, Secretaría de Medio Ambiente, Recursos Naturales y Pesca,;Procuraduría Federal de Protección al Ambiente (Mexico);IUCN Commission on National Parks and Protected Areas. https://repository.library.noaa.gov/view/noaa/4368

USFWS. 2016. Recovery Plan for the Tamaulipan Kidneypetal (Texas Ayenia) (*Ayenia limitaris*). U.S. Fish and Wildlife Service, Southwest Region, Albuquerque, New Mexico.

USFWS. 2018. Texas Coastal Bend Shortgrass Prairie Multi-Species Recovery Plan: Including Slender Rush-Pea (*Hoffmannseggia tenella*) and South Texas Ambrosia (*Ambrosia cheiranthifolia*). U.S. Fish and Wildlife Service, Southwest Region, Albuquerque, New Mexico.

USFWS. 2019. Species Status Assessment Report for the Eastern Black Rail (*Laterallus jamaicensis jamaicensis*), Version 1.3. U.S. Fish and Wildlife Service, Southeast Region, Atlanta, Georgia.

USFWS. 2020. Threatened Species Status for Eastern Black Rail with a Section 4(d) Rule. Federal Register 85(195):63532-63578. October 8, 2020.

USFWS. 2022. Proposed Endangered Species Status for Tricolored Bat (*Perimyotis subflavus*). Federal Register 87(177):57123-57176. September 14, 2022.

USFWS. 2023a. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Green Sea Turtle. 88 FR 46376 2023-14225.

USFWS. 2023b. Threatened Species Status with Section 4(d) Rule for Cactus Ferruginous Pygmy-Owl (*Glaucidium brasilianum cactorum*). Federal Register 88(138):46910-46950. July 20, 2023.

USFWS. 2023c. Revised Proposed Designation of Critical Habitat for Rufa Red Knot (*Calidris canutus rufa*). Federal Register 88(71):22530. April 13, 2023.

USFWS. 2024a. Critical Habitat for Threatened and Endangered Species. USFWS Environmental Conservation Online System (ECOS), ArcGIS Online Feature Service. Accessed April 2026. Available at: https://www.arcgis.com/apps/mapviewer/index.html?url=https://services.arcgis.com/QVENGdaPbd4LUkLV/ArcGIS/rest/services/USFWS_Critical_Habitat/FeatureServer&source=sd.

USFWS. 2024b. 5-Year Review: Summary and Evaluation, Gulf Coast Jaguarundi (*Puma yagouaroundi cacomitli*). U.S. Fish and Wildlife Service, Southwest Region. Accessed April 2026. Available at: https://ecos.fws.gov/ecp/species/3545.

USFWS. 2024c. Nationwide Avoidance & Minimization Measures for Birds. U.S. Fish and Wildlife Service, Washington, D.C. Accessed April 2026. Available at: https://www.fws.gov/sites/default/files/documents/2024-07/nationwide_avoidance_minimization_measures_birds_0.pdf.

USFWS. 2025. Piping Plover (*Charadrius melodus*) Species Profile. Accessed April 2026. Available at: https://www.fws.gov/species/piping-plover-charadrius-melodus

USFWS. 2026a. Information for Planning and Consultation (IPaC): Official Species List for USCG Station South Padre Island, Cameron County, Texas. Accessed March 2026. Available at: https://ipac.ecosphere.fws.gov.

USFWS. 2026b. Letter from Catrina Martin, Assistant Field Supervisor, Texas Coastal and Central Plains Ecological Services Field Office, Corpus Christi Sub-Office, to LCDR Michael Rathbun, USCG SHORE-A. Consultation Tracking No. 2026-0014118. April 10, 2026.

USFWS. 2026c. IPaC Migratory Bird Report, Project No. V62DLJ6LSVANXL4AETGV6G5HOY, USCG Station South Padre Island, Cameron County, Texas. Accessed April 2026. Available at: https://ipac.ecosphere.fws.gov.

Wilber, D. H., D. G. Clarke, and S. I. Rees. 2007. Responses of benthic macroinvertebrates to thin-layer disposal of dredged material in Mississippi Sound, USA. Marine Pollution Bulletin 54(1):42-52.

Wood, L.D., R. Hardy, P.A. Meylan, and A.B. Meylan. 2013. Characterization of a Hawksbill Turtle (*Eretmochelys Imbricata*) Foraging Aggregation in a High-Latitude Reef Community in Southeastern Florida, USA. Herpetological Conservation and Biology 8(1):258-275.

Attachment 1

USFWS IPaC Official Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Texas Coastal & Central Plains Esfo
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
Phone: (281) 286-8282 Fax: (281) 488-5882

In Reply Refer To: 05/07/2026 16:19:13 UTC
Project Code: 2026-0086938
Project Name: Rebuild USCG Station South Padre Island

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies threatened, endangered, proposed, and candidate species, as well as designated and proposed critical habitat, that may occur within the boundary of your project area and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Project related correspondence or questions should be directed to the appropriate field office based on the county of occurrence (refer to the map of Texas field office jurisdictions for contact information).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the attached list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether

projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

After evaluating the potential effects of a proposed action on federally listed species, one of the following determinations should be made by the Federal action agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action's anticipated effects to listed species or critical habitat are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a consequence of the proposed action, and the effect is not discountable or insignificant.?This determination requires formal section 7 consultation.

More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook.

Non-Federal entities may coordinate under Sections 9 and 10 of the Act. Section 9 and Federal regulations prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such

conduct. Should the proposed project have the potential to take listed species, the Service recommends that the applicant develop a Habitat Conservation Plan and obtain a section 10(a)(1)(B) permit (see the Habitat Conservation Planning Handbook Toolbox for more information).

Migratory Birds and Eagles:

The attached list also provides information on the potential occurrence of migratory birds and eagles, which are protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. For more information, including contacts for our Migratory Bird Offices, visit the Migratory Bird Program page.

We appreciate your concern for threatened and endangered species. The Service encourages Federal action agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds
- Marine Mammals
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Texas Coastal & Central Plains Esfo
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
(281) 286-8282

PROJECT SUMMARY

Project Code: 2026-0086938
Project Name: Rebuild USCG Station South Padre Island
Project Type: Boatlift/Boathouse/Dock/Pier/Piles - New Construction
Project Description: The United States Coast Guard (USCG) proposes to construct the Rebuild USCG Station South Padre Island Project (Project) located on South Padre Island, Cameron County, Texas. The purpose of the Project is to build and operate modern, secure facilities at Station (STA) South Padre Island (SPI) to protect the U.S. maritime border and fully support current and future USCG missions. The proposed Project would occur within an approximate 9-acre area consisting of developed or vacant land areas associated with existing Coast Guard facilities and waterfront area used for vessel operations positioned adjacent to the Laguna Madre. The proposed Project consists of both land and marine construction activities. Landside construction activities include facility demolition, land preparation, and construction of various facilities including USCG operations and personnel accommodation buildings, paving of roadways and parking areas, and ancillary facilities. Marine construction activities include the construction of a new boat ramp and piers as well as the repair of existing piers, boathouse structures, and seawalls.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@26.07091175,-97.16612250967512,14z

Counties: Cameron County, Texas

ENDANGERED SPECIES ACT SPECIES

There is a total of 12 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. 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.

MAMMALS

NAME	STATUS
West Indian Manatee *Trichechus manatus*	Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements.
Species profile: https://ecos.fws.gov/ecp/species/4469
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/ZPORRPS6SRAOVDIXUUJZAX7CO4/documents/generated/11436.pdf

BIRDS

NAME	STATUS
Cactus Ferruginous Pygmy-owl *Glaucidium brasilianum cactorum*	Threatened

There is **final** critical habitat for this species.
Species profile: https://ecos.fws.gov/ecp/species/1225

Eastern Black Rail *Laterallus jamaicensis jamaicensis*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/10477

Northern Aplomado Falcon *Falco femoralis septentrionalis*	Endangered

Population: Wherever found, except where listed as an experimental population
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/1923

Piping Plover *Charadrius melodus*	Threatened

Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/6039
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/ZPORRPS6SRAOVDIXUUJZAX7CO4/documents/generated/11502.pdf

Rufa Red Knot *Calidris canutus rufa*	Threatened

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/1864
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/ZPORRPS6SRAOVDIXUUJZAX7CO4/documents/generated/11502.pdf

REPTILES

NAME	STATUS
Green Sea Turtle *Chelonia mydas*	Threatened

Population: North Atlantic DPS

NAME	STATUS
There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6199	
Hawksbill Sea Turtle *Eretmochelys imbricata* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3656	Endangered

CLAMS

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

INSECTS

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

FLOWERING PLANTS

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

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

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 habitats, should follow

appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act (MBTA). 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).

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

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 (Service).

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Golden-plover *Pluvialis dominica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10561	Breeds elsewhere
American Oystercatcher *Haematopus palliatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8935	Breeds Apr 15 to Aug 31
Audubon's Shearwater *Puffinus lherminieri* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9635	Breeds Mar 1 to Aug 5
Black Scoter *Melanitta nigra* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/10413	Breeds elsewhere
Black Skimmer *Rynchops niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Black-legged Kittiwake *Rissa tridactyla* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/10459	Breeds elsewhere
Brown Pelican *Pelecanus occidentalis* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/6034	Breeds Jan 15 to Sep 30
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Common Loon *gavia immer* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/4464	Breeds Apr 15 to Oct 31

NAME	BREEDING SEASON
Cory's Shearwater *Calonectris diomedea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10452	Breeds elsewhere
Dickcissel *Spiza americana* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9453	Breeds May 5 to Aug 31
Double-crested Cormorant *phalacrocorax auritus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/3478	Breeds Apr 20 to Aug 31
Forster's Tern *Sterna forsteri* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11953	Breeds Mar 1 to Aug 15
Gull-billed Tern *Gelochelidon nilotica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9501	Breeds May 1 to Jul 31
Hudsonian Godwit *Limosa haemastica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9482	Breeds elsewhere
King Rail *Rallus elegans* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5
Least Tern *Sternula antillarum antillarum* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/11919	Breeds Apr 25 to Sep 5
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Long-billed Curlew *Numenius americanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5511	Breeds elsewhere

NAME	BREEDING SEASON
Magnificent Frigatebird *Fregata magnificens* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9588	Breeds elsewhere
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Painted Bunting *Passerina ciris* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9511	Breeds Apr 25 to Aug 15
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Pomarine Jaeger *Stercorarius pomarinus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/10458	Breeds elsewhere
Prairie Loggerhead Shrike *Lanius ludovicianus excubitorides* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8833	Breeds Feb 1 to Jul 31
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red Knot *Calidris canutus roselaari* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8880	Breeds elsewhere
Red-breasted Merganser *Mergus serrator* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/10693	Breeds elsewhere
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10

NAME	BREEDING SEASON
Reddish Egret *Egretta rufescens* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7617	Breeds Mar 1 to Sep 15
Ring-billed Gull *Larus delawarensis* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/10468	Breeds elsewhere
Royal Tern *Thalasseus maximus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/10471	Breeds Apr 15 to Aug 31
Ruddy Turnstone *Arenaria interpres morinella* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/10633	Breeds elsewhere
Sandwich Tern *Thalasseus sandvicensis* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9731	Breeds Apr 25 to Aug 31
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Sooty Tern *Onychoprion fuscatus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/10695	Breeds Mar 10 to Jul 31
Surf Scoter *Melanitta perspicillata* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/10463	Breeds elsewhere
Swallow-tailed Kite *Elanoides forficatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30

NAME	BREEDING SEASON
Whimbrel *Numenius phaeopus hudsonicus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11991	Breeds elsewhere
White-winged Scoter *Melanitta fusca* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/10462	Breeds elsewhere
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10669	Breeds Apr 20 to Aug 5
Wilson's Plover *Charadrius wilsonia* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9722	Breeds Apr 1 to Aug 20

PROBABILITY OF PRESENCE SUMMARY

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

Probability of Presence (▪)

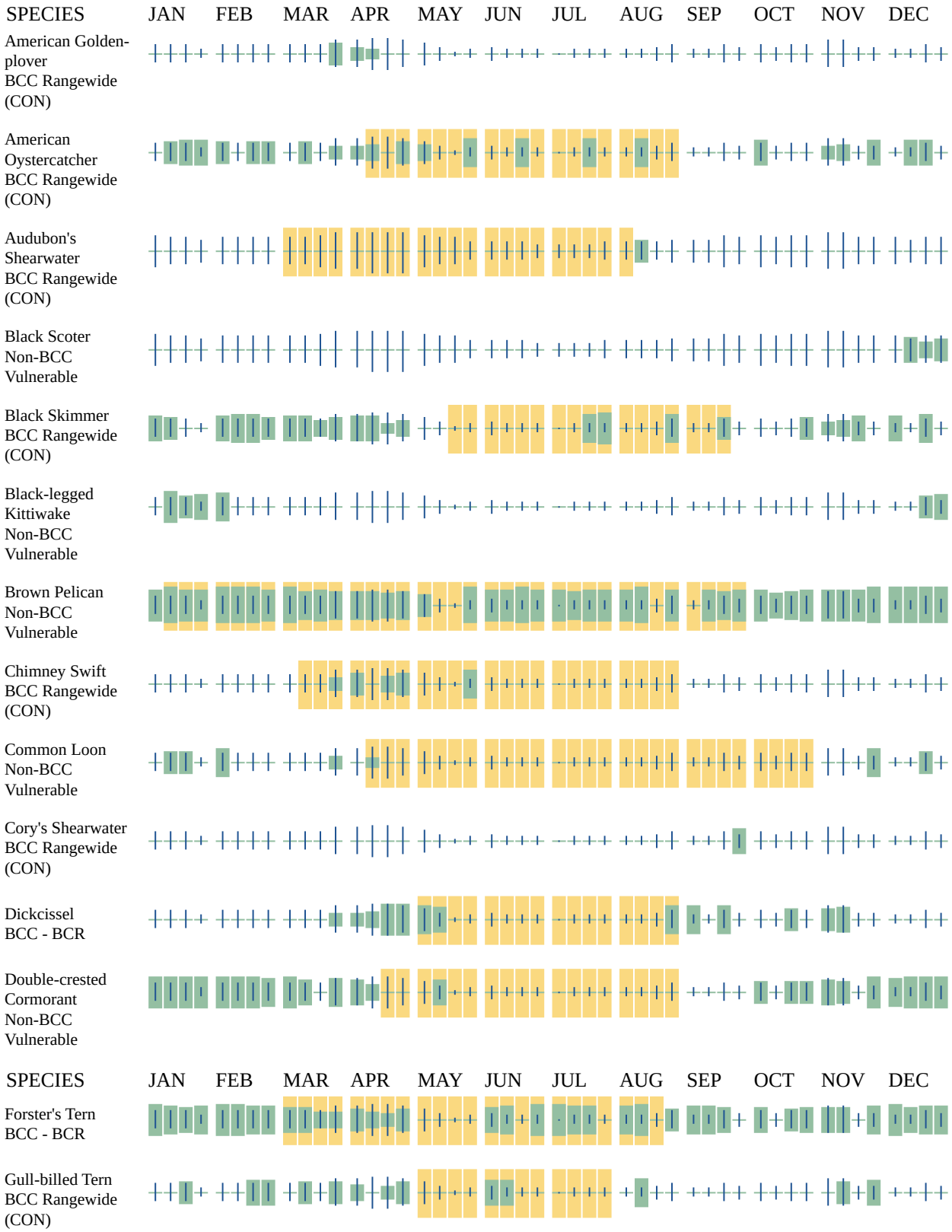
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

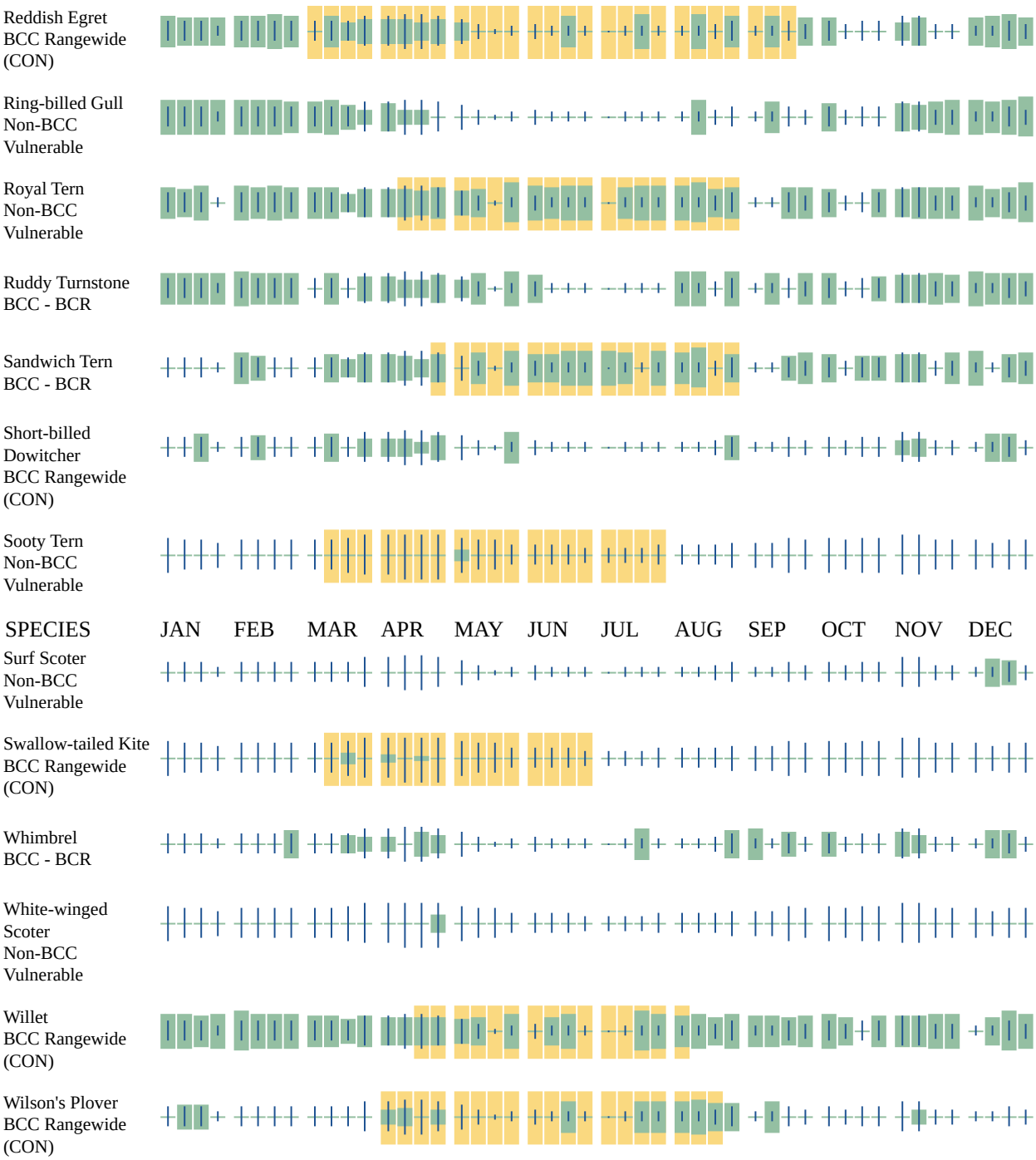
Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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

▪ probability of presence ▪ breeding season | survey effort – no data


SPECIES
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
American Golden-plover BCC Rangewide (CON)
American Oystercatcher BCC Rangewide (CON)
Audubon's Shearwater BCC Rangewide (CON)
Black Scoter Non-BCC Vulnerable
Black Skimmer BCC Rangewide (CON)
Black-legged Kittiwake Non-BCC Vulnerable
Brown Pelican Non-BCC Vulnerable
Chimney Swift BCC Rangewide (CON)
Common Loon Non-BCC Vulnerable
Cory's Shearwater BCC Rangewide (CON)
Dickcissel BCC - BCR
Double-crested Cormorant Non-BCC Vulnerable
SPECIES
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Forster's Tern BCC - BCR
Gull-billed Tern BCC Rangewide (CON)


Hudsonian Godwit
BCC Rangewide
(CON)
King Rail
BCC Rangewide
(CON)
Least Tern
BCC Rangewide
(CON)
Lesser Yellowlegs
BCC Rangewide
(CON)
Long-billed Curlew
BCC - BCR
Magnificent
Frigatebird
BCC - BCR
Marbled Godwit
BCC Rangewide
(CON)
Painted Bunting
BCC - BCR
Pectoral Sandpiper
BCC Rangewide
(CON)
Pomarine Jaeger
Non-BCC
Vulnerable
SPECIES
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Prairie Loggerhead
Shrike
BCC - BCR
Prothonotary
Warbler
BCC Rangewide
(CON)
Red Knot
BCC Rangewide
(CON)
Red-breasted
Merganser
Non-BCC
Vulnerable
Red-headed
Woodpecker
BCC Rangewide
(CON)



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

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.

NAME

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

WETLANDS

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.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: U.S. Coast Guard
Name: Justin Wiedeman
Address: 6565 West Loop S
City: Bellaire
State: TX
Zip: 77401
Email justin@lloydeng.com
Phone: 2149061162

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Texas Coastal & Central Plains Esfo
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
Phone: (281) 286-8282 Fax: (281) 488-5882

In Reply Refer To: 06/07/2026 17:59:56 UTC
Project code: 2026-0077207
Project Name: USCG STA SPI

Subject: Technical Assistance letter for 'USCG STA SPI' for specified federally threatened and endangered species and designated critical habitat that may occur in your proposed project area consistent with the Texas Statewide Determination Key (Texas DKey) for project review and guidance for federally listed species.

Dear Courtney Gerken:

The U.S. Fish and Wildlife Service (Service) received on **June 07, 2026** your effects determination for the 'USCG STA SPI' (the Action) using the Texas DKey for project review and guidance for federally-listed species within the Information for Planning and Consultation (IPaC) system. The Service developed this system in accordance with the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

Based on your answers and the assistance of the Service's Texas DKey, you made the following effect determination(s) for the proposed Action:

Species	**Listing Status**	**Determination**
Cactus Ferruginous Pygmy-owl (*Glaucidium brasilianum cactorum*)	Threatened	No effect
Eastern Black Rail (*Laterallus jamaicensis jamaicensis*)	Threatened	NLAA
Green Sea Turtle (*Chelonia mydas*)	Threatened	NLAA
Hawksbill Sea Turtle (*Eretmochelys imbricata*)	Endangered	NLAA
Northern Aplomado Falcon (*Falco femoralis septentrionalis*)	Endangered	No effect
Piping Plover (*Charadrius melodus*)	Threatened	NLAA
Rufa Red Knot (*Calidris canutus rufa*)	Threatened	NLAA
South Texas Ambrosia (*Ambrosia cheiranthifolia*)	Endangered	No effect
Texas Ayenia (*Ayenia limitaris*)	Endangered	No effect
West Indian Manatee (*Trichechus manatus*)	Threatened	NLAA

Consultation with the Service is not complete. The above effect determination(s) becomes applicable when the lead federal action agency or designated non-federal representative submits them as a request to the Service to rely on the Texas DKey in order to satisfy the agency's consultation requirements for this project.

Please provide this technical assistance letter to the lead Federal action agency or its designated non- federal representative with a request for its review, and as the agency deems appropriate, it should submit the determination for concurrence through the IPaC system by doing the following:

1. Log into IPaC using an agency email account and click on My Projects; click "Search by record locator" to find this Project **192-182483989**. Alternatively, the originator of the project in IPaC can add the agency representative to the project by using the Add Member button on the project home page.
2. Review the answers to the Texas DKey to ensure they are accurate.
3. Click on Review/Finalize to convert the 'not likely to adversely affect' technical assistance letter to a concurrence letter. Download the concurrence letter for your files if needed.

Other Species and Critical Habitat that May be Present in the Action Area

This letter only covers the listed species in the above table. The following species may also occur in the Action area:

- Monarch Butterfly *Danaus plexippus* Proposed Threatened
- Salina Mucket *Potamilus metnecktayi* Proposed Endangered

If you determine your project may affect additional listed or proposed listed species not covered by the Texas DKey, please contact the appropriate Texas Coastal and Central Plains Ecological Services Field Office (ESFO) or your Service point of contact in the ESFO to discuss methods to avoid or minimize potential adverse effects to those species.

The Service recommends that your agency contact the ESFO or re-evaluate the Action in IPaC if: 1) the scope, timing, duration, or location of the Action changes, 2) new information reveals the Action may affect listed species or designated critical habitat, or 3) a new species is listed or critical habitat designated. If any of the above conditions occurs, additional consultation with the Service should take place before project changes are final or resources committed.

Bald and Golden Eagle Protection Act (BGEPA):

The following resources are provided to project proponents and consulting agencies as additional information. Bald and golden eagles are not included in this section 7(a)(2) consultation and this information does not constitute a determination of effects by the Service. The Service developed the National Bald Eagle Management Guidelines to advise landowners, land managers, and others who share public and private lands with bald eagles when and under what circumstances the protective provisions of the BGEPA may apply to their activities. The guidelines should be consulted prior to conducting new or intermittent activity near an eagle nest. This document may

be downloaded from the following site: https://www.fws.gov/media/national-bald-eagle-management-guidelines-0.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

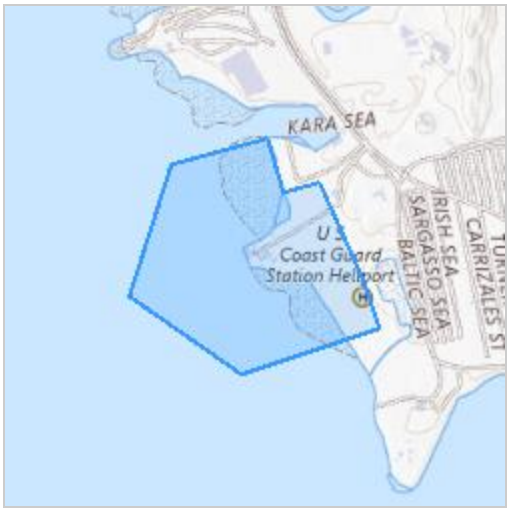
USCG STA SPI

2. Description

The following description was provided for the project 'USCG STA SPI':

> Rebuild USCG Station South Padre Island including new boat ramp, marine infrastructure, and facility construction.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@26.0729597,-97.16649409490296,14z



QUALIFICATION INTERVIEW

1. This determination key is intended to assist the user in evaluating the effects of their actions on federally listed species. It does not cover other prohibited activities under the Endangered Species Act (e.g., for wildlife: import/export, Interstate or foreign commerce, possession of illegally taken wildlife, etc.; for plants: import/export, reduce to possession, malicious destruction on Federal lands, commercial sale, etc.) or other statutes.

   Click **'yes'** to acknowledge that you must consider other prohibitions of the ESA or other statutes outside of this determination key.

   Yes

2. Does the proposed project involve research or other actions that include the collection, capture, handling, or harassment of any individual federally listed threatened, endangered or proposed species?

   No

3. Does the proposed project involve the use of manned or unmanned aircraft (e.g., airplanes, helicopters, drones, balloons)?

   No

4. Is the action authorized, funded, or being carried out by a Federal agency?

   Yes

5. Are you the Federal agency or designated non-federal representative?

   Yes

6. Is the project a communications tower licensed or regulated by the Federal Communications Commission?

   No

7. Is the lead federal agency for the project Housing and Urban Development?

   No

8. Is this a broadband internet project funded by a National Telecommunications and Information Administration grant?

   No

9. Is this project funded through the Texas Water Development Board under the Texas Drinking Water or Texas Clean Water State Revolving Funds?

   No

10. Is the lead federal agency for the Federal Energy Regulatory Commission (FERC)?

    No

11. Is this a wind energy project?

    No

12. Is this a solar energy project?

    No

13. Does the project intersect the piping plover and red knot overwintering population?

    Automatically answered
    Yes

14. Will the proposed project involve human disturbance or ground disturbance (such as foot traffic, vehicles, tracked equipment, excavating, grading, placing fill material, etc.)?

    Yes

15. Does the project intersection the piping plover and red knot overwintering population?

    Automatically answered
    Yes

16. Does the proposed action area contain foraging or roosting habitat for piping plover and red knot?

    Yes

17. Will the proposed project result in impacts to piping plover and red knot foraging and roosting habitat (intertidal beaches, sand, mud, or algal flats, between annual low tide and annual high tide) or roosting habitat (unvegetated or sparsely vegetated beachfront, beach areas up to and including dune systems, sand, mud, or algal flats above high tide)?

    Yes

18. Will the proposed project alter or result in long-term impacts (effects lasting up to 6 months or more) to piping plover and red knot foraging and/or roosting habitat?

    No

19. Will the project avoid disturbing the wrack line during project work or while traveling to and from the project site?

    Yes

20. Will the proposed project be conducted during the piping plover and red knot wintering season (begins July 15 extending through May 15)?

    Yes

21. Will the applicant implement the avoidance and minimization conditions as part of best management practices during construction?

    Yes

22. Does the project intersect the piping plover species list area?

    Automatically answered
    Yes

23. Does the project intersect the red knot species list area?

    Automatically answered
    Yes

24. Does the project intersect the Cactus Ferruginous Pygmy-Owl species list area?

    Automatically answered
    Yes

25. Does the action area contain Cactus Ferruginous Pygmy-Owl preferred habitat?

    No

26. Does the project intersect the Northern Aplomado Falcon (*Falco femoralis septentrionalis*) species list area?

    Automatically answered
    Yes

27. Does the action area contain Northern Aplomado Falcon preferred habitat?

    Note: Northern Aplomado Falcons live in open habitats with some shrubs or trees for nesting. This includes desert grasslands, savannas, and shrub-steppe habitats, and can include open pastures. Within the Chihuahuan Desert, Northern Aplomado Falcons typically occur in open grassland areas with scattered mesquite (*Prosopis spp*.), soap tree yucca (*Yucca elata)* and Torrey's yucca (*Y. torrey*i). Within coastal habitats, Northern Aplomado Falcon prefer native grasslands and tidal flats with prominent scattered woody vegetation, typically a flat open area with low growing vegetation, containing yuccas, trees, or shrubs for nesting.

    No

28. Does the action area intersect the Eastern Black Rail species list area?

    Automatically answered
    Yes

29. Are National Wetland Mapping Codes intersected by the project considered **suitable** habitat for Eastern Black rail?

    Note: The National Wetland Mapping Codes intersected by your project can be found on the 'Resources' page of your project in IPaC.

    Yes

30. Is the project area within 656 feet (200 meters) of a National Wetland Inventory (NWI) in an area described as an upland habitat in the **Suitable Habitat Guidelines**?

    Yes

31. Will the project involve water management practices and/or result in any hydrological changes in or within 656-foot (200-meters) of habitat suitable for the eastern black rail?

    No

32. Will the project result in alterations to the vegetative communities or structure in or within 656 feet (200-meters) of habitat suitable for the eastern black rail?

    Yes

33. Have you completed an in-person on-the-ground vegetation survey to evaluate for potential suitable habitat for Eastern Black rail?

    Yes

34. Will the project result in the permanent loss of 2 or more acres?

    No

35. Will the project involve the temporary loss of 10 or more acres?

    No

36. Will the project take place during the breeding and molting season (March 1 to September 30)?

    Yes

37. Will an attempt be made to prioritize clearing of eastern black rail habitat outside of the breeding period (October- February)?

    Yes

38. Will the biological monitor have the authority to stop work immediately upon discovery of any eastern black rail (alive, injured, or dead).

    Yes

39. Will the Texas Coastal Ecological Service's field office be contacted immediately at 361-533-6765 if an eastern black rail (alive, injured, or dead) is detected?

    Yes

40. Will project activities be limited to daylight hours to the maximum extent possible?

    Yes

41. If nighttime work is required, will lighting be aimed at the work zone and turned off when not needed?

    Yes

42. Will permanent lighting be pointed away from potential eastern black rail habitat, down shielded, and follow the International Dark-Sky Association (https://www.darksky.org/) or Bird City Texas (https://tpwd.texas.gov/wildlife/birding/bird-city-texas) guidelines?

    Yes

43. Will a qualified biological monitor enforce a 5 miles per hour or less speed limit on all equipment moving through potential eastern black rail habitat?

    Note: The speed limit will allow birds to escape ahead of equipment.

    Yes

44. Can project activities avoid clearing vegetation when temperatures are below 40 degrees Fahrenheit?

    Yes

45. **The project intersects at least one listed species of sea turtle**. Will any phase of the project occur during the sea turtle nesting season (March 15-October 1)?

    Yes

46. Is any portion of the project, including staging and access routes, on the beach?

    No

47. Will the project involve temporary or permanent lighting in areas within 200 yards of the beach?

    No

48. Will the project involve ground vibration in areas within 200 yards of the beach?

    No

49. Does the action intersect the Green Sea Turtle Species List Area?

    Automatically answered
    Yes

50. Does the action intersect the Hawksbill Sea Turtle (*Eretmochelys imbricata*) Species List Area?

    Automatically answered
    Yes

51. Does the project intersect the west Indian manatee (*Trichechus manatus*) species list area?

    Automatically answered
    Yes

52. Will the project create or expand a warm-water source that could attract manatees thereby discouraging them from migrating back to Florida for the winter?

    Note: Examples of projects that create or expand a warm-water sources are: new powerplants, existing powerplant operations, and other industrial sources such as pulp mills or other process plants.

    No

53. Will the project have impacts that could affect manatees and/or water accessible to manatees?

    Note: Lakes and other water bodies upstream of structures such as dams, weirs, grated culverts, and fish ladders are normally not considered accessible to manatees. Impacts to manatee accessible waters caused by project effects on nearby uplands should be considered when answering questions in this key.

    Yes

54. Will the Standard Manatee Conditions for in-water Activities be followed as best management practices (https://www.fws.gov/media/west-indian-manatee-water-construction-best-management-practices-texas-coast)?

    Yes

55. **The project intersects the species list area of at least one threatened or endangered plant.**

    Automatically answered
    Yes

56. Will the proposed project include the use of herbicides?

    No

57. Does the action intersect the South Texas Ambrosia (*Ambrosia cheiranthifolia*) species list area?

    Automatically answered
    Yes

58. Does the action area contain the suitable geological substrate, soils, or other habitat features that support South Texas ambrosia?

    No

59. Does the action intersect the Tamaulipan kidney-petal (*Ayenia limitaris*) species list area?

    Automatically answered

    Yes

60. Does the action area contain the suitable geological substrate, soils, or other habitat features that support Tamaulipan kidneypetal (*Texas Ayenia*)?

    No

61. Do you want to evaluate project for bald eagle impacts?

    No

62. Do you have additional supporting documents you would like to upload to support your project review (e.g., Biological Evaluation, Habitat Assessment, Environmental Report, photos, maps, etc.)?

    If Yes, upload document(s)

    No

IPAC USER CONTACT INFORMATION

Agency: U.S. Coast Guard
Name: Courtney Gerken
Address: 6565 West Loop S
City: Bellaire
State: TX
Zip: 77401
Email courtney@lloydeng.com
Phone: 7134137342

Attachment 2

NMFS Section 7 Mapper

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Query Results

Degrees, Minutes, Seconds: Latitude = 26º 4' 20" N, Longitude = 98º 49' 53" W
Decimal Degrees: Latitude = 26.072, Longitude = -97.169

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Blacktip Shark (Gulf of Mexico Stock)	Neonate	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Bonnethead Shark (Gulf of Mexico Stock)	Adult, Juvenile, Neonate	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Bull Shark	Juvenile/Adult, Neonate	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Coastal Migratory Pelagics	ALL	Gulf	Coastal Migratory Pelagic Resources (Mackerels)
		Lemon Shark	Neonate	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Red Drum	ALL	Gulf	Red Drum Fishery
		Reef Fish (43 Species) **Balistidae - Triggerfishes** Gray triggerfish (*Balistes capriscus*) **Carangidae - Jacks** Greater amberjack (*Seriola dumerili*) Lesser amberjack (*Seriola fasciata*) Almaco jack (*Seriola*	ALL	Gulf	Reef Fish Fishery

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		rivoliana) Banded rudderfish (*Seriola zonata*) **Labridae - Wrasses** Hogfish (*Lachnolaimus maximus*) **Lutjanidae - Snappers** Queen snapper (*Etelis oculatus*) Mutton snapper (*Lutjanus analis*) Schoolmaster (*Lutjanus apodus*) Blackfin snapper (*Lutjanus buccanella*) Red snapper (*Lutjanus campechanus*) Cubera snapper (*Lutjanus cyanopterus*) Gray (mangrove) snapper (*Lutjanus griseus*) Dog snapper (*Lutjanus jocu*) Mahogany snapper (*Lutjanus mahogoni*) Lane snapper (*Lutjanus synagris*) Silk snapper (*Lutjanus vivanus*) Yellowtail snapper (*Ocyurus chrysurus*) Wenchman (*Pristipomoides aquilonaris*) Vermilion snapper (*Rhomboplites aurorubens*) **Malacanthidae - Tilefishes** Goldface tilefish (*Caulolatilus chrysops*) Blackline tilefish (*Caulolatilus cyanops*) Anchor tilefish (*Caulolatilus intermedius*) Blueline tilefish (*Caulolatilus microps*) (Golden) Tilefish (*Lopholatilus chamaeleonticeps*) **Serranidae - Groupers** Dwarf sand perch (*Diplectrum bivittatum*) Sand perch (*Diplectrum formosum*) Rock hind (*Epinephelus*			

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		adscensionis) Speckled hind (*Epinephelus drummondhayi*) Yellowedge grouper (*Epinephelus flavolimbatus*) Red hind (*Epinephelus guttatus*) Goliath grouper (*Epinephelus itajara*) Red grouper (*Epinephelus morio*) Misty grouper (*Epinephelus mystacinus*) Warsaw grouper (*Epinephelus nigritus*) Snowy grouper (*Epinephelus niveatus*) Nassau grouper (*Epinephelus striatus*) Marbled grouper (*Epinephelus inermis*) Black grouper (*Mycteroperca bonaci*) Yellowmouth grouper (*Mycteroperca interstitialis*) Gag (*Mycteroperca microlepis*) Scamp (*Mycteroperca phenax*) Yellowfin grouper (*Mycteroperca venenosa*)			
		Scalloped Hammerhead Shark	Neonate	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Shrimp (4 Species) Brown shrimp (*Penaeus aztecus*) White shrimp (*Penaeus setiferus*) Pink shrimp (*Penaeus duorarum*) Royal red shrimp (*Pleoticus robustus*)	ALL	Gulf	Shrimp Fishery

Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

Atlantic Salmon

No Atlantic Salmon were identified at the report location.

HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Appendix F

Proposed BMPs and Mitigations

Appendix F: Proposed Best Management Practices and Mitigation Measures

Rebuild USCG Station South Padre Island | Cameron County, Texas | June 2026

All measures will be incorporated into construction contract specifications and operational protocols prior to initiation of construction. Compliance with the measures identified in this appendix is a condition of this EA and the associated USACE Section 404/Section 10 individual permit. Contractor shall ensure all applicable permits and consultations (e.g., Clean Water Act Sections 404, 402, and 401) are obtained, as necessary and appropriate, prior to the start of construction activities.

Designated Environmental Manager listed in the Environmental Protection Plan (EPP) is responsible for compliance with environmental permits. They will also conduct three site visits during the construction phase of this project (tentatively scheduled for after placement of silt fences prior to any excavation, during footings/concrete work, and following placement of turbidity curtains in the Lower Laguna Madre) and submit a report after each site visit to the Contracting Officer's Representative (COR) documenting environmental compliance, environmental concerns, or noncompliance. The EPP includes the requirements of the PEIS and agency consultations.

Contractor will ensure funds are reserved from the project budget for implementation of environmental compliance management commitments and mitigation.

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
PRE-CONSTRUCTION					
Update Spill Prevention Control and Countermeasure (SPCC) Plan prior to construction to meet state and federal requirements. The SPCC Plan will outline procedures to be followed to minimize the likelihood of an accidental spill of petroleum product and to respond in the event of an accidental spill of petroleum product. The SPCC Plan will provide maintenance and/or operational guidance to include, but not limited to: • Regular inspection of vehicles and equipment • Ensuring that vehicles and equipment are in good physical condition (e.g., no leaks) • Specifications to ensure that refueling will not occur on site or will only occur in designated areas that have been identified to eliminate the potential for accidental spills to migration offsite or into waters. • Contractor shall provide secondary containment systems and leak detection equipment for stand-by and emergency generator fuel tanks in accordance with all applicable regulations, guidelines, and design directives/codes.	Hazardous Materials	Pre-construction	40 CFR Part 112	Texas General Land Office (TXGLO); U.S. Environmental Protection Agency (EPA)	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
The SPCC Plan will identify procedures to ensure that land-based spills will not migrate to groundwater or adjacent surface waters.					
Contractor will verify locations of underground utilities prior to excavation to ensure accidental infrastructure (if any is known in the area) or other utility breakage does not occur. Contact Rio Grande Valley / Brownsville Chapter of the Damage Prevention Council of Texas.	Underground Pipelines	Pre-construction	Texas Utilities Code, Title 5, Chapter 251– Underground Facility Damage Prevention & Safety Act; Railroad Commission of Texas – Title 16, Chapter 18 – Underground Pipeline Damage Prevention regulations	N/A	Contractor
Contractor will coordinate with local utility providers (electric such as AEP, water and sewer through Laguna Madre Water District, and traffic through City of South Padre Island and Texas Department of Transportation [TxDOT]) for project construction activities that may affect traffic changes, traffic lights, or may directly affect a utility easement or infrastructure.	Utility Providers	Pre-construction	N/A	N/A	Contractor
Pre-Construction activities or construction conducted during nesting season (March-August) require nesting surveys to be conducted no more than 3 days prior to initiation of construction by qualified biologist prior to any ground disturbance or clearing. If active nests or breeding behavior are detected: • No vegetation removal activities to be conducted. • If an active nest (defined as a bird building a nest, sitting on a nest, carrying food to young, etc.) is found, then the following buffers may apply: 500 feet for raptors and 300 feet for all other bird species. The buffer will remain around the nest until the biologist determines that young have successfully fledged and are no longer dependent upon the nest. If the nest presents an immediate risk to health and safety, the Coast Guard Environmental Representative shall be notified and will be coordinated with the USFWS MBTA program. In the event of an incidental “take” of a migratory bird species, cease activities and contact local FWS office of Law Enforcement.	Migratory Birds	Pre-construction (seasonal)	Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA)	U.S. Fish and Wildlife Service (USFWS)	Contractor / Biological Monitor
Surveys conducted by qualified biologist prior to nesting season (March-August) may identify areas of potential nesting. Appropriate protection measures may be installed to prevent nesting.	Migratory Birds	Pre-construction (seasonal)	MBTA	USFWS	Contractor / Biological Monitor
Schedule vegetation clearing and ground disturbance outside nesting season to maximum extent practicable; if clearing required during nesting season, conduct surveys within 72 hours prior to clearing	Migratory Birds	Pre-construction (seasonal)	MBTA	USFWS	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
Maintain 50-yard avoidance buffer around active ground nests of black skimmer, least tern, and plover species (nesting season: March–August)	Migratory Birds	Pre-construction (seasonal)	MBTA; Endangered Species Act (ESA)	USFWS	Contractor / Biological Monitor
Obtain U.S. Army Corps of Engineers (USACE) Section 404/Section 10 individual permit (IP) prior to initiation of any in-water construction or fill activities Note: No construction activities may begin until USACE Section 404/Section 10 IP has been obtained.	Regulatory Compliance	Pre-construction	Clean Water Act (CWA) Section 404; Rivers and Harbors Act (RHA) Section 10	USACE	Contractor
Contractor shall obtain Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit and prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to any land disturbance. SWPPP shall be submitted to the Coast Guard Environmental Representative for review a minimum of 21 working days prior to the commencement of work. The Coast Guard Environmental Representative is solely responsible for reviewing, providing comments, and approving SWPPP and Erosion Control Plans and any required or necessary communication with regulatory agencies. The Contractor shall ensure work does not commence until the SWPPP or Erosion Control Plan has been approved by Coast Guard Environmental Representative.	Water Quality / Stormwater	Pre-construction	CWA Section 402 - TPDES CGP (National Pollutant Discharge Elimination System [NPDES])	EPA	Contractor
Pre-demolition hazardous materials survey for asbestos-containing materials and lead-based paint in all pre-1974 era structures	Hazardous Materials	Pre-construction	Toxic Substances Control Act (TSCA); applicable state regulations	N/A	Contractor
Given the potential presence of Polychlorinated biphenyls (PCBs) in building materials, and the need to properly identify, remove, and manage those materials, the Contractor shall identify and remove PCBs in accordance with all applicable regulations, guidelines, and design directives/codes.	Hazardous Materials	Pre-construction	Clean Air Act (CAA); CWA	Texas Commission on Environmental Quality (TCEQ); EPA	Contractor
Marine contractor will avoid seagrass impacts by utilizing designated corridors for site access and for spudding.	Seagrass	Pre-construction / Design	ESA; Marine Mammal Protection Act (MMPA); Magnuson-Stevens Act	National Marine Fisheries Service (NMFS)	Contractor
Implement the National Marine Fisheries Service's Vessel Strike Avoidance Measures by the National Marine Fisheries Service Southeast Regional Office	Protected / Endangered Species	Pre-construction	ESA and MMPA	USFWS; NMFS	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
Implement the National Marine Fisheries Service's Protected Species Construction Conditions by the National Marine Fisheries Service Southeast Regional Office	Protected / Endangered Species	Pre-construction	ESA and MMPA	USFWS; NMFS	Contractor
Post educational materials developed by the National Oceanic and Atmospheric Administration Fisheries' Protected Resources Division (Southeast Region) to provide guidance for personnel on minimizing interactions with protected species and on appropriate reporting contacts. Educational signs will be posted in visible location(s), alerting users of listed species in the area. The most current version of the signs that must be downloaded and sign installation guidance are available at: (https://www.fisheries.noaa.gov/resource/outreach-materials/protected-species-southeast-educational-signs)	Protected / Endangered Species	Pre-construction	ESA and MMPA	USFWS; NMFS	Contractor
Designated monitor listed in EPP will ensure that all project personnel are trained on the potential presence of animal species protected by the Endangered Species Act and Marine Mammal Protection Act including observing water related activities for protected species. Personnel will be advised that civil and criminal penalties apply for harming, harassing, or killing listed species and/or marine mammals. Information on protected species and critical habitat in the transit area is available through the *National Marine Fisheries Service Find A Species tool*, available online at https://www.fisheries.noaa.gov/findspecies	Protected / Endangered Species	Pre-construction	ESA and MMPA	USFWS; NMFS	Contractor
Contractor shall ensure all personnel receive General Environmental Awareness training and all applicable Environmental Standard Operating Procedures training prior to the commencement of any work. A copy of the training attendance roster shall be maintained in the Coast Guard's project files and posted at the work site.	Pre-construction training	Pre-construction	N/A	N/A	Contractor
Use of construction lighting at night shall be minimized, directed toward the construction activity area, and shielded from view outside of the project area to the maximum extent practicable	Protected / Endangered Species	Pre-construction	ESA and MMPA	USFWS; NMFS	Contractor
Vibratory driving will be used preferentially for pile removal and initial installation to minimize underwater noise	Protected / Endangered Species	Pre-construction	ESA and MMPA	USFWS; NMFS	Contractor
Manatee identification training for all personnel; view training video	West Indian Manatee	Pre-construction	ESA and MMPA	USFWS; NMFS	Contractor
Mark construction areas/boundaries prior to starting construction to prevent external impacts. Contractor shall ensure that laydown and staging areas are inside the project boundary and delineated on the grading plans. Contractor shall, to the extent practicable, keep all construction equipment and construction-related vehicles onsite for the duration of independent construction projects.	Safety	Pre-Construction	Occupational Safety and Health Administration (OSHA) Standards (29 CFR 1926)	OSHA	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
Mark construction areas/boundaries prior to starting construction to minimize substrate disturbance outside designated work areas	Water Quality / Stormwater	Pre-construction	CWA Section 402 - TPDES Construction General Permit (CGP) (NPDES)	TCEQ; EPA	Contractor
Prior to ground disturbing activities (e.g., excavation, demolition of facilities), soils would be sampled. If there is contamination present, contractor will coordinate with Coast Guard who will engage with EPA and/or the State of Texas, as appropriate in accordance with all applicable regulations, guidelines, and design directives/codes.	Hazardous Materials	Pre-construction	CAA; CWA	TCEQ; EPA	Contractor
Contractor shall ensure bird-friendly building technologies and materials (e.g., bird-friendly glass) and raptor protection measures are included in the design to eliminate or greatly reduce bird mortality in compliance with the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). These features will be applied to new construction and renovation to the extent possible. Contractor shall consider building materials that could leach pollutants, such as fencing and lighting structures or other structures that contain galvanized materials and zinc sources if not coated. Contractor shall ensure designs comply with all applicable Unified Facilities Criteria (UFC). Contractor shall ensure all paints, coatings, adhesives, and solvents use/applications follow the guidelines in accordance with all applicable regulations, guidelines, and design directives/codes.	Construction Materials	Pre-construction	MBTA; ESA; UFC	USFWS	Contractor
CONSTRUCTION — GENERAL (including SWPPP)					
For any construction that will result in activities and/or substantial generation of traffic outside the project site / Base boundaries, the Contractor shall prepare a Traffic Management Plan to establish clear wayfinding / traffic routing, ensure separation of re-routed traffic and pedestrians, etc. These Traffic Management Plans will be coordinated with TxDOT, City of South Padre Island, and other adjacent property owners as appropriate, prior to implementation. Contractor shall schedule construction-related vehicle travel to and from the Base during non-peak hours to the extent practicable.	Traffic Management	Construction	N/A	TxDOT, City of South Padre Island	Contractor
Mark construction areas/boundaries prior to starting construction to prevent external impacts	Safety	Construction	OSHA 29 CFR 1926 Subpart G	OSHA	Contractor
Prevent the spread of aquatic and terrestrial invasive plants during construction activities. Educate contractors on how to identify common invasive plants and the importance of proper equipment cleaning prior to entering project area, avoid transport of invasive	Invasive Species Control	Construction	Executive Order 13751	USFWS	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
species in or out of project area, and proper disposal of invasive plants in a manner and location that prevents spread when invasive plants are removed during construction.					
Avoid all direct disturbance to E2EM1P (high tidal marsh) wetland features; maintain wetland delineation flags throughout construction. Place the flags/fencing/signs to prevent entry into E2EM1P areas.	Wetlands	Construction	CWA Section 404; RHA Section 10	USFWS	Contractor
Maintain habitat refugia pockets (~10 x 20 ft) during Clearing to preserve dense herbaceous escape corridors into unaffected adjacent areas outside the project area. The biological monitor will work with the construction manager to mark these areas	Wildlife Habitat	Construction	ESA	USFWS	Contractor/Biological Monitor
The base of the boat ramp will be excavated in-the-dry behind a temporary cofferdam wall and laid with prefabricated concrete slabs. Then dewater, excavate, then flood when ramp construction is complete.	Water Quality	Construction	CWA	USACE	Contractor
Deploy silt fencing and turbidity barriers at water's edge prior to any in-water or shoreline construction	Water Quality / Stormwater	Construction	CWA Section 402 - TPDES CGP (NPDES); Energy Independence and Security Act of 2007 (EISA) Section 438	TCEQ; EPA	Contractor
Install silt fence barriers and/or silt fence barriers along the downhill perimeter edge of all disturbed areas	Water Quality / Stormwater	Construction	CWA Section 402 - TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
Install silt fence barriers and/or silt fence barriers surrounding the base of all soil/sediment stockpiles. Cover stockpiled soil.	Water Quality / Stormwater	Construction	CWA Section 402 - TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
Install catch basin inlet protection	Water Quality / Stormwater	Construction	CWA Section 402 - TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
Temporary protection on sides and back slopes as soon as rough grading is completed or sufficient soil is exposed to require erosion protection. Proposed cut slopes shall be determined by soil characteristics. Assess the shear strength characteristics of the particular soil or rock conditions present for safe allowable slope heights.	Water Quality / Stormwater	Construction	CWA Section 402 - TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
Utilize the dry swales as sediment basins during construction	Water Quality / Stormwater	Construction	CWA Section 402 - TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
Minimize the amount of land disturbed simultaneously	Water Quality / Stormwater	Construction	CWA Section 402 - TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
Minimize the accumulation of construction debris	Water Quality / Stormwater	Construction	CWA Section 402 - TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
Use stabilized construction entrances to minimize migration of sediment onto adjacent roadways from construction vehicles	Water Quality / Stormwater	Construction	CWA Section 402 - TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
Excess soil/dirt/fill material generated as part of the project that is not required or suitable to complete on-site work shall not be considered, classified, or defined as an "unrestricted" use material. The construction contractor shall transport and dispose of this material at a location on the property adjacent to (immediately west of) the project site and shall manage, coordinate, and provide all material testing and permit coordination, as necessary, to relocate the material. Contractor shall ensure that, if contaminated soils are encountered, the Coast Guard Environmental Representative is immediately contacted. No work shall proceed until the contamination has been evaluated. Any contamination shall be managed in accordance with all applicable regulations, guidelines, and design directives/codes	Construction Material	Construction	CAA; CWA	TCEQ; EPA	Contractor
All waste materials shall be collected and stored in a metal dumpster. The dumpster will meet all local and state solid waste management regulations. Dumpster will be emptied offsite in accordance with local, state, and federal requirements	Construction Waste	Construction	OSHA 1926.252 - Disposal of waste materials; TPDES CGP (NPDES)	OSHA; TCEQ; EPA	Contractor
Contractor shall complete a Construction and Demolition Plan, as necessary and appropriate, prior to start of work and submit it to Coast Guard Environmental Representative. The plan will capture the Contractor's estimated tonnage of construction and demolition waste that would be recycled or disposed of. Solid wastes will be picked up and placed in containers, which are regularly removed from the project site. The location of containers will be closely coordinated with U.S. Coast Guard (USCG) personnel • Containers will be covered at the end of each workday • Cooking and preparation of food on the project site is prohibited; therefore, no food waste/grease will be generated • Recycling of materials will be implemented to the extent possible and coordinated with a local vendor • The contractor shall empty containers and remove waste and debris from Government property at least weekly, shall not allow containers to become overfilled or to attract wildlife, and will remove wastes without spilling or contaminating the site	Water Quality / Stormwater	Construction	TPDES CGP (NPDES)	TCEQ; EPA	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
• Contractor shall ensure all materials are separated into appropriate containers when applicable to maximize the amount of recycled material • Solid waste disposal will comply with the local, state, and federal requirements including 40 CFR 241, 243, and 258 • No solid waste, whether in solid or liquid form, will be disposed of onsite • Offsite disposal shall be at a licensed landfill and shall comply with all local, state, and federal requirements • Contractor will identify the properly permitted disposal facilities as part of the waste stream management plan prior to project mobilization. The onsite Environmental Compliance Representative will be responsible for tracking and recording waste stream management • Contractor shall use a licensed hauler to have hazardous waste items manifested off-base, as appropriate. The manifesting of hazardous waste shall be coordinated with the Coast Guard Environmental Representative.					
Wastes will be excluded from waterways through methods and means detailed in the SWPPP. In the event hazardous waste is identified or generated, the Contractor must immediately notify the COR.	Water Quality / Stormwater	Construction	TPDES CGP (NPDES)	TCEQ; EPA	Contractor
All sanitary waste will be collected from the temporary portable units as needed to prevent possible spillage. The waste will be collected and disposed of in accordance with state and local waste disposal regulations for sanitary sewer or septic systems. Permanent or temporary relocation of pesticides, herbicides, and other hazardous materials or wastes associated with construction or demolition activities shall comply with Coast Guard guidance for such materials.	Water Quality / Stormwater	Construction	TPDES CGP (NPDES)	TCEQ; EPA	Contractor
Though not anticipated, if this is necessary, Resource Conservation and Recovery Act (RCRA) Hazardous Waste (HW) is generated during construction, it will require the following • Contractor shall incorporate a HW storage area(s) as necessary into the final design documents in accordance with all applicable regulations, guidelines, and design directives/codes. • Periodic inspections of storage areas to identify leakage and initiate corrective action shall be performed and documented • HW shall be collected in corrosion resistant, compatible containers • Collection drums or containers shall be monitored and removed to a staging or storage area when contents are within 6 inches of the top	Water Quality / Stormwater	Construction	TPDES CGP (NPDES); RCRA	TCEQ; EPA	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
• Wastes shall be classified, managed, stored, and disposed of in accordance with Federal, State, and local laws and regulations • If generation of HW onsite is necessary, the Contractor shall limit the generation of hazardous waste at the construction site to the greatest extent practicable • Training requirements for HW generation, accumulation, treatment, storage disposal is required by the EPA under RCRA					
Onsite Environmental Compliance Representative will maintain a copy of the government approved stormwater permit and the SWPPP at the project site including • A log of requirements will be kept at the project site at all times • The Environmental Compliance Representative will make sure that all persons associated with the site are familiar with project site requirements and that permit requirements are maintained • All stormwater control measures will be inspected by the superintendent or their appointed representative at least once per week or following a storm event of 0.25 inches or greater. • An inspection report shall be made after each inspection, and any deficiencies noted are corrected. The reports will be kept on site and be made available to the Owner, Engineer, or Government inspector upon request Contractor shall ensure that any storm water runoff from the construction site is controlled/released to proper storm water channels and clear of any contaminants. Best management practices (BMPs) established in the SWPPP will be followed. USCG and the Contractor shall ensure that no projects are closed that have stormwater requirements or permits without written consent from the Coast Guard Environmental Representative	Water Quality / Stormwater	Construction	TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
Stormwater management on the project site will be designed to comply with EISA Section 438 and requirements of the RFP. Positive drainage will be provided away from the proposed building. Low-impact development (LID) features will be incorporated into the site design to minimize development impacts, maintain watershed timing, and use Integrated Management Practices (IMP's) to the maximum extent feasible. The following LID design shall be included in this project: • Expansive shallow grass depressions will be used as the stormwater management system • Using dry, grassed, depressional areas will promote infiltration and evapotranspiration of post-development stormwater across the site	Water Quality / Stormwater	Construction	TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
• The proposed stormwater management system shall be designed to retain the first ½" of runoff across the site. First flush of pollutants off of the site will be stored in the dry ponds and percolated into the ground for filtration before reaching the groundwater system • proposed stormwater management system shall be designed to limit the post development discharge rate into the adjacent canal, assuming run-off volumes and rates in 95th percentile rainfall in accordance with EISA 438					
Stormwater management infrastructure maintained; oil-water separators on outfalls inspected and maintained per TPDES permit requirements.	Water Quality	Construction	TPDES CGP (NPDES); 40 CFR Part 204 of Noise Control Act 1972	TCEQ; EPA	Contractor
Contractor shall ensure that no water, waste stream, or other materials are discharged into storm channels without written pre-approval from the Coast Guard Environmental Representative.	Water Quality	Construction	TPDES CGP (NPDES); 40 CFR Part 204 of Noise Control Act 1972	TCEQ; EPA	Contractor
Noise pollution will be minimized to the extent practicable and will be in compliance with 40 CFR 204. The Contractor shall make the maximum use of "low-noise-emission products" as certified by EPA and described at 40 CFR 204. No blasting or use of explosives is permitted. The Contractor shall comply with federal, state, and local noise control laws and regulations	Water Quality / Stormwater	Construction	TPDES CGP (NPDES); 40 CFR Part 204 of Noise Control Act 1972	TCEQ; EPA	Contractor
Contractor shall adhere to the emission limits for engines in accordance with all applicable regulations, guidelines, and design directives/codes.	Engines	Construction	CAA	TCEQ; EPA	Contractor
Contractor shall suppress generation of dust at all times, including during non-working hours. Dust abatement measures may include watering, application of a commercial polymer-based soil stabilizer product to the laydown and staging areas, or other measures. Obtain Coast Guard Environmental Representative approval prior to the use or application of commercial polymer-based soil stabilizer products. Designate personnel to monitor the dust control program and to increase dust suppression measures (e.g., watering or application of polymer-based soil stabilizer), as necessary, to minimize the generation of dust. Contractor shall ensure that fugitive dust from any transport, handling, construction, or storage activity does not remain visible in the atmosphere beyond the project or worksite footprint. Take reasonable precautions to minimize fugitive dust emissions from demolition, excavation, grading, clearing of land, and solid waste disposal operations. • Dry power brooming is not permitted; but instead, vacuuming, wet mopping, or wet brooming is required	Water Quality / Stormwater	Construction	TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
• Air blowing is permitted for only cleaning non-particulate debris such as steel reinforcing bars • Contractor shall provide tarp drop cloths and windscreens under and around blasting and painting operations to confine and collect dust, sand, paint, and debris when air blowing and /or sandblasting • Concrete blocks, concrete, and asphalt shall be wet cut. Air blowing and sandblasting are not expected to be required • Dirt and dust control will be monitored throughout the day and will be kept off any adjacent paved roads • Gravel will be placed at entrances and exits to and from the project site as needed to reduce dirt and mud from construction vehicle access • If conditions are dry, a water truck shall be utilized to keep soil damp preventing airborne dust. • Any water released during fugitive dust control will be managed to ensure that no water has the potential to be discharged to the Laguna Madre					
Identify and post signage on project site for washout areas. Concrete washout in designated upland containment areas only; no washout near shoreline or wetland margins	Water Quality / Stormwater	Construction	TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
Engineers and all subcontractors shall exercise due diligence to prevent, contain, and respond to spills of hazardous materials, hazardous substances, hazardous waste, and other materials/ substances regulated by environmental law.	Water Quality / Stormwater	Construction	TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
Hazardous materials and wastes shall be managed under the Hazardous Waste Management Model (Commandant Instruction [COMDTINST] M16478.1B). If previously unknown hazardous materials or wastes are found at the work site, including but not limited to underground storage tanks, burn pits, or any contaminated soils, the Contractor shall immediately stop work and notify the Coast Guard Environmental Representative.	Hazardous Materials / Water Quality	Construction	Hazardous Waste Management Model (COMDTINST M16478.1B)	TXGLO; EPA	Contractor
Dredging contractors will be required to maintain spill control plans and waste management plans for all dredging fleet equipment.	Water Quality / Stormwater	Construction	TxGLO Rules 31 TAC 19.13; 40 CFR Part 112 — Oil Pollution Prevention SPCC Plan 40 CFR 112.3	TXGLO; EPA	Contractor
Multiple dredging activities will not occur simultaneously within 5,000 feet of each other so that turbidity effects are not amplified by multiple events.	Water Quality / Stormwater	Construction	Section 401 CWA	TCEQ; EPA	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
Implement mitigation measures such as in-water work windows, bubble curtains, silt curtains, and other sediment suspension reduction methods identified by USFWS and NMFS.	Water Quality	Construction	Section 404 and 401 CWA	USACE; TCEQ; EPA	Contractor
In the event of any releases of oil or hazardous substances, chemicals, or gases, immediately notify the contracting officer's representative. Additionally: • TCEQ will be notified within 24 hours of the spill if amount is 25 gallons or greater; or spill occurs within 100 feet of any surface water. • To report an incident, the Contractor will contact TCEQ at 1-800-320-0519 (24-hr service). • After-hours, weekends or holidays, reports must be made by phone to (800) 858-0368. • EPA Region IV Spill Response Hotline will also be notified if the spill has reached surface water and/or stormwater	Water Quality / Stormwater	Construction	TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
The contractor is responsible for protecting cultural resources found on the project site. Contractor staff will be trained on inadvertent discoveries and monitor for such discoveries during all project-related ground disturbing activities to avoid or minimize potential impacts to unanticipated discoveries of archaeological resources and/or human remains, funerary objects, sacred objects and cultural patrimony. The training will include a preconstruction tailgate meeting to familiarize all Contractor personnel with the protocols that will be followed in the event of an unanticipated discovery. During ground disturbance activities, the Coast Guard and the Contractor must stop work and immediately notify the Coast Guard Environmental Representative if archaeological resources are discovered. Crews shall not be permitted to resume work until cleared by the Coast Guard Environmental Representative. Subsequent coordination with the Texas Historical Commission (SHPO) and consulting tribes will follow.	Protection/ Preservation of Historical and Archaeological Resources	Construction	National Historic Preservation Act; Archaeological Resources Protection Act of 1979	Texas SHPO; USACE	Contractor
Contractor shall ensure that refrigerant used in air conditioning units is a non-chlorofluorocarbon or hydrochlorofluorocarbon. If refrigerants are released, the Contractor shall immediately notify the Coast Guard Environmental Representative of all refrigerant releases and estimated amount of release.	Refrigerants	Construction	CAA	TCEQ; EPA	Contractor
Contractor shall ensure that all portable toilets are staked or tied down to prevent spillage. Portable toilets may not be placed within 20 feet of any storm channel or natural drainage.	Water Quality / Stormwater	Construction	TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
Contractor shall ensure any irrigation installed uses a water-wise approach	Irrigation	Construction	30 TAC Chapter 344 Rules Pertaining to Landscape Irrigation	TCEQ; EPA	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
Contractor shall ensure any flowing or flushing of fire hydrants is performed with the use of a diffuser to reduce erosion of surrounding soils as may be applicable.	Water Quality / Stormwater	Construction	TPDES CGP (NPDES); EISA Section 438	TCEQ; EPA	Contractor
Contractor shall restore disturbed area to the original condition with native vegetation or the appropriate xeriscape in order to enhance habitat and prevent potential erosion.	Restoration	Construction	TPDES CGP (NPDES); EISA Section 438; ESA	TCEQ; EPA	Contractor
PROTECTED / ENDANGERED SPECIES					
Non-hopper type dredging methods will be utilized for this project (clamshell or hydraulic) that are slower and extremely unlikely to overtake or adversely affect protected species.	Protected / Endangered Species	Construction	ESA and MMPA	NMFS; USFWS	Contractor
Work will be limited to daylight hours to allow for effective visual monitoring.	Protected / Endangered Species	Construction	ESA and MMPA	NMFS; USFWS	Contractor
All work will be completed as efficiently as practicable to reduce the duration of underwater sound exposure.	Protected / Endangered Species	Construction	ESA and MMPA	NMFS; USFWS	Contractor
All work will be completed as efficiently as practicable to reduce the duration of underwater sound exposure.	Protected / Endangered Species	Construction	ESA and MMPA	NMFS; USFWS	Contractor
Manage fuel or chemical use to prevent leaks or spills from entering the aquatic environment.	Protected / Endangered Species	Construction	ESA and MMPA	NMFS; USFWS	Contractor
Maintain spill response readiness by staging booms and ensuring rapid reporting and cleanup procedures to minimize potential impacts to the surrounding environment.	Protected / Endangered Species	Construction	ESA and MMPA	NMFS; USFWS	Contractor
Designated Environmental Manager listed in the EPP shall provide training to contract personnel to ensure they can identify protected species.	Protected / Endangered Species	Construction	ESA and MMPA	NMFS; USFWS	Contractor
Instruct personnel not to feed or water any protected species.	Protected / Endangered Species	Construction	ESA and MMPA	NMFS; USFWS	Contractor
Implement project design measures to avoid entrapment or entanglement of wildlife: • Install turbidity curtains and in-water equipment in a manner that does not trap protected species or block their movement. • Ensure that all in-water lines (e.g., mooring lines, ropes, chains, cables, and turbidity-curtain lines) are stiff, taut, properly secured, and non-looping to minimize entanglement risk. • Enclose flexible lines in plastic or rubber sleeves/tubing to add rigidity and prevent looping or tangling.	Protected / Endangered Species	Construction	ESA and MMPA	NMFS; USFWS	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
Soft-start impact pile driving: minimum 3 strikes at 40% hammer energy followed by 1-minute pause before full-energy driving; apply at start of each pile	Sea Turtles / Fish / Manatee	Construction	ESA and MMPA	NMFS; USFWS	Contractor / Biological Monitor
Pile installation and in-water work conducted from floating barges or man-floats. Therefore, biological observer on-site during all pile driving; qualified to identify sea turtles and manatees; has stop-work authority	Sea Turtles / Manatee	Construction	ESA and MMPA	NMFS; USFWS	Contractor / Biological Monitor
Clear 50-meter exclusion zone of all sea turtles and manatees before commencing impact pile driving; cease operations immediately if animal enters zone	Sea Turtles / Manatee	Construction	ESA and MMPA	NMFS; USFWS	Contractor / Biological Monitor
Prefer vibratory pile installation over impact driving wherever feasible and consistent with structural requirements	Fish / Sea Turtles / Noise	Construction	ESA and MMPA	NMFS; USFWS	Contractor / Designer
If dead, injured, or cold-stunned sea turtles, nests, tracks, or hatchlings encountered: cease activity immediately; contact Texas Sea Turtle Stranding and Salvage Network at 866-887-8535	Sea Turtles	Construction and Operations	ESA and MMPA	NMFS; USFWS	Contractor / Biological Monitor
Report injured birds to Gladys Porter Zoo at 956-546-7187	Migratory Birds	Construction	MBTA	USFWS	Contractor / Biological Monitor
Operate at the minimum safe speed when transiting and maintain a vigilant watch for protected species to avoid striking them. Whenever possible, assign a designated individual to observe protected species and limit vessel operation to only daylight hours	Protected / Endangered Species	Construction	ESA and MMPA	NMFS; USFWS	Contractor
CONSTRUCTION — PIPING PLOVER AND RUFA RED KNOT					
Educate employees on piping plover and rufa red knot identification, habitat, and reporting contacts	Piping Plover / Red Knot	Pre-construction / Construction	ESA	USFWS	Contractor
Confine site access to immediate project needs; operate equipment above wet line on beach and tidal flat areas	Piping Plover / Red Knot / Tidal Flat	Construction	ESA	USFWS	Contractor
Avoid impacts to mud and wind tidal flats outside the project area; these substrates compact under construction vehicle weight and lose foraging value	Piping Plover / Red Knot / Tidal Flat	Construction	ESA	USFWS	Contractor
Implement 80-foot avoidance buffer around any piping plover or rufa red knot observed within or adjacent to active work area; stop work until bird departs voluntarily	Piping Plover / Red Knot	Construction	ESA	USFWS	Contractor / Biological Monitor
CONSTRUCTION — EASTERN BLACK RAIL					
Potential habitat which must be cleared should be completed outside of the breeding period. The Service recommends clearing grassy areas taller than 24 inches between October- February	Eastern Black Rail	Pre-construction / Construction	ESA	USFWS	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
Limit project activity to daylight hours to the extent possible. If nighttime work is required, aim lighting at work zone and turn off when not needed, as possible. All permanent lighting shall be pointed away from potential BLRA habitat, down shielded, and follow the International Dark-Sky Association (https://www.darksky.org/) or Bird City Texas (https://tpwd.texas.gov/wildlife/birding/bird-city-texas) guidelines.	Eastern Black Rail	Pre-construction / Construction	ESA	USFWS	Contractor
Limit project activity to daylight hours to the extent possible. If nighttime work is required, aim lighting at work zone and turn off when not needed, as possible. All permanent lighting must take into consideration station security, but should if at all possible be pointed away from potential BLRA habitat, down shielded, and follow the International Dark-Sky Association (https://www.darksky.org/) or Bird City Texas (https://tpwd.texas.gov/wildlife/birding/bird-city-texas) guidelines. The Service prefers that the light not extend more than 10 feet from the fence and that any lights are warmer colors such as amber to prevent night blindness.	Eastern Black Rail	Pre-construction / Construction	ESA	USFWS	Contractor
CONSTRUCTION — SEA TURTLES					
Immediately report any dead, injured, or cold-stunned sea turtles to Texas Sea Turtle Hotline (1-888-8535 [886-TURTLE5)	Sea Turtles	Construction	ESA	NMFS; USFWS	Contractor
If a sea turtle is sighted within 300 feet of the active work zone or construction vessel movement area: • Do not operate any moving equipment within 150 feet of the turtle • Do not resume work until the turtle has voluntarily left the area or 20 minutes have passed since the last sighting	Sea Turtles	Construction	ESA	NMFS; USFWS	Contractor
Prevent vessel strikes during cold-stunning events, including participating in the Texas Marine Cold Water Response Collaborative • Implement “Go Slow Zones” for vessels entering the channel between January and early March, when low water temperatures may increase the likelihood of cold-stunned sea turtles, as identified by local authorities • Report any cold-stunned turtles, stranded turtles, or bobbing sea turtles immediately to 866-TURTLE5	Sea Turtles	Construction	ESA	NMFS; USFWS	Contractor
Deploy floating surface booms to capture any floating debris generated during construction activities	Sea Turtles	Construction	ESA	NMFS; USFWS	Contractor
Conduct all in-water and over-water work during daylight hours to support visual protected species monitoring	Sea Turtles	Construction	ESA	NMFS; USFWS	Contractor
Collisions with, injury to, or sightings of manatees should be immediately reported to the United States Fish and Wildlife Service’s Texas Coastal and Central Plains Ecological Services Office (281-286-	Protected / Endangered Species	Construction	ESA and MMPA	NMFS	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
8282) and the Texas Marine Mammal Standing Network (1-800-9MAMMAL) (1-800-962-6625). Please provide the nature of the call (e.g., report of an incident, manatee sighting); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible					
For injured or dead protected species reporting, the following phone numbers will be provided and available to the personnel onsite during construction • NOAA Fisheries Southeast Marine Mammal Stranding Hotline -(877) 942-5343 • NOAA Fisheries Southeast Sea Turtle Stranding and Salvage Network Hotline - (866) 887-8535 • Texas Marine Mammal Stranding Network - (800) 962-6625 • Texas Sea Turtle Stranding and Salvage Network - (866) 887-8535 USFWS Texas Coastal and Central Plains Ecological Services Field Office - Corpus Christi - (281) 286-8282	Protected / Endangered Species	Construction	ESA and MMPA	NMFS	Contractor
CONSTRUCTION — WEST INDIAN MANATEE					
Instruct personnel to contact United States Fish and Wildlife Service (361-533-6765) and the Texas Marine Mammal Stranding Network (TMMSN) (800-962-6625) immediately if a transient manatee is observed	West Indian Manatee	Construction	ESA and MMPA	USFWS	Contractor
If manatee(s) within 100 yards of active construction or dredging: implement precautions; operate all moving equipment no closer than 50 feet from manatee	West Indian Manatee	Construction	USFWS Standard Manatee Conditions for In-Water Construction Activities/BMPs	USFWS	Contractor
If a manatee is sighted within 606 feet (184.8 meters) of the active work zone or vessel movement area: • Do not operate any moving equipment within 606 feet of the manatee. • Shut down operation of any equipment closer than 606 feet to the manatee. • Do not resume work until the manatee has voluntarily left the area or 20 minutes have passed since the last sighting.	West Indian Manatee	Construction	ESA and MMPA	NMFS	Contractor
Immediate shutdown of any equipment operating closer than 50 feet to a manatee; do not resume until manatee departs voluntarily	West Indian Manatee	Construction	USFWS Standard Manatee Conditions for In-Water Construction Activities/BMPs	USFWS	Contractor
All in-water lines (rope, chain, cable, turbidity curtain lines) must be stiff, taut, and non-looping; flexible lines enclosed in rigid sleeve; no excess line in water	West Indian Manatee	Construction	ESA and MMPA	NMFS	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
Siltation barriers of non-entanglement material; properly secured and regularly monitored to prevent manatee entrapment	West Indian Manatee	Construction	ESA and MMPA	NMFS	Contractor
Contact USFWS at 361-994-9004 and TMMSN at 800-962-6625 if manatee sighted during project activities	West Indian Manatee	Construction	USFWS Standard Manatee Conditions for In-Water Construction Activities/BMPs	USFWS	Contractor / Biological Monitor
Operate at "Idle/No Wake" speeds in the following circumstances: • While in any project construction areas • While in water depths where the draft of the vessel provides less than four feet of clearance from the bottom, or • In all depths after a protected species has been observed in and has recently departed the area.	Protected / Endangered Species	Construction	ESA and MMPA	NMFS	Contractor
When a protected species is sighted, attempt to maintain a distance of 150 feet or greater between the animal and the vessel. Reduce speed and avoid any abrupt changes in direction until the animal(s) has/have left the area of its own volition	Protected / Endangered Species	Construction	ESA and MMPA	NMFS	Contractor
Temporary signs concerning manatees should be posted before and during all in-water project activities and removed upon completion. Each vessel involved in construction activities should display at the vessel control station or in a prominent location visible to all employees operating the vessel, a temporary sign at least 8.5-inch by 11-inch reading language similar to the following: "CAUTION BOATERS: MANATEE AREA/ IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA AND WHERE THERE IS LESS THAN FOUR-FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT". A second temporary sign measuring 8.5-inch by 11-inch should be posted at a location prominently visible to all personnel engaged in water-related activities and should read language similar to the following: "CAUTION: MANATEE AREA, EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION".	Protected / Endangered Species	Construction	ESA and MMPA	NMFS	Contractor
Collisions with, injury to, or sightings of manatees should be immediately reported to the United States Fish and Wildlife Service's Texas Coastal and Central Plains Ecological Services Office (281-286-8282) and the Texas Marine Mammal Standing Network (1-800-9MAMMAL) (1-800-962-6625). Please provide the nature of the call (e.g., report of an incident, manatee sighting); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible	Protected / Endangered Species	Construction	ESA and MMPA	NMFS	Contractor

BMP / Measure	Category	Applicable Phase	Regulatory Driver	Agency	Responsible Party
CONSTRUCTION — NESTING SHOREBIRDS AND COLONIAL WATERBIRDS					
Maintain 50-yard avoidance buffer around active ground nests of black skimmer, least tern, and plover species (nesting season: March–August)	Migratory Birds / Nesting	Construction (seasonal)	MBTA	USFWS	Contractor / Biological Monitor
Schedule vegetation clearing and ground disturbance outside nesting season to maximum extent practicable; if clearing required during nesting season, conduct surveys within 72 hours prior to clearing	Migratory Birds / Nesting	Construction	MBTA	USFWS	Contractor
OPERATIONS					
The use of insecticides and herbicides within and adjacent to restored upland areas shall be minimized; targeted Integrated Pest Management (IPM) approaches shall be employed when chemical application is necessary. Refer to EPA IPM guidance at https://www.epa.gov/ipm.	All Species	Operations	ESA	USFWS	USCG
Follow deep water routes (e.g., marked channels) whenever possible	Aquatic Species	Operations	ESA and MMPA	NMFS	Contractor
All permanent exterior lighting directed away from E2EM marsh habitat; down-shielded; amber or warm-color preferred; no light beyond 10 feet from fence line toward natural habitat	Eastern Black Rail / Migratory Birds / Sea Turtles	Design/ Operations	ESA; Bird City Texas guidelines	USFWS	Contractor
All Station vessel operators briefed on seagrass navigation corridor; transit designated routes through deeper water to minimize propeller scarring of seagrass beds	Seagrass / EFH	Operations	ESA and MMPA; Magnuson-Stevens Act	NMFS	USCG
Maintain current SPCC Plan; all vessel fueling and maintenance in designated Boat Maintenance Facility (BMF) areas per SPCC Plan requirements	Hazardous Materials / Water Quality	Operations	TxGLO Rules 31 TAC 19.13; 40 CFR Part 112 —– Oil Pollution Prevention SPCC Plan 40 CFR 112.3	TXGLO; EPA	USCG
Stormwater management infrastructure maintained; oil-water separators on outfalls inspected and maintained per TPDES permit requirements	Water Quality	Operations	TPDES (NPDES)	TCEQ; EPA	USCG
All Conservation Recommendations received through consultation process incorporated into final Station operational procedures if not already listed pending final consultations.	All Species	Operations	ESA & Magnuson-Stevens Act	NMFS; USFWS	USCG

Appendix G

Agency Correspondence

Appendix G-1

U.S. Army Corps of Engineers

Gispert, Kyle F CIV USCG CEU MIAMI (USA)

From: Gispert, Kyle F CIV USCG CEU MIAMI (USA)
Sent: Monday, December 15, 2025 11:53 AM
To: CESWG-OD-INT-REV@usace.army.mil
Subject: Cameron County - USCG Rebuild STA South Padre Island
Attachments: Enclosure 2 Proposed Project Information Packet.docx
Signed By: kyle.f.gispert@uscg.mil

Good morning,

Please see attached project information packet regarding the Coast Guard's proposed project to rebuild and expand waterfront and shore facilities at USCG Station South Padre Island required as a result of deteriorated facilities and damages sustained during a recent fire and the need to modernize.

A permit application was already submitted (SWG-2025-00641) with the Regulatory Division, but I am contacting your office to see if Section 408 Permission is required.

Thank you,
Kyle Gispert
Natural Resources Management Specialist
Civil Engineering Unit Miami
U.S. Coast Guard
(206)-815-3470

Appendix G-2

Texas General Land Office

TEXAS GENERAL LAND OFFICE
COMMISSIONER DAWN BUCKINGHAM, M.D.

January 28, 2026

U. S. Coast Guard
Civil Engineering Unit Miami
15608 SW 117th Ave
Miami, FL 33177
Attn: Kyle Gispert

Re: U.S. Coast Guard Station Facility Rebuild and Expansion
U.S. Coast Guard Station, South Padre Island, Cameron County, Texas
Texas CMP#: 26-1042-F2

Dear Mr. Gispert:

The U.S. Coast Guard has submitted a Consistency Determination to rebuild and expand waterfront and shore facilities at U.S. Coast Guard Station South Padre Island due to deteriorated facilities and damages sustained during a recent fire and the need to modernize.

On November 14, 2025, the USACE submitted a consistency determination to the GLO, as required for proposed federal activities in the state's coastal zone. USCG's Consistency Determination asserted that the proposed activities were consistent with the goals and policies of the Texas Coastal Management Program (TCMP) to the maximum extent practicable.

The shore work includes "*but is not limited to"*:

- Demolition and disposal of existing facilities;
- Construction of multiple new facilities which includes, but is not limited to a new Station building, helipad, aerostat support, small arms range, dog kennels, seized property storage, Unaccompanied Personnel Housing (UPH), and etc. New facilities may be co-located or stand-alone (to be determined during design).
- Site development (grading, habitat removal, etc), utilities, roads, infrastructure, and outfitting.
- Use of facilities

After coordination between USCG and GLO staff, GLO can confirm that at this conceptual phase, the proposed measures are generally consistent with the TCMP. Because the project has not reached the design phase at this time and the USCG states "*building configuration, number of buildings, functions of buildings, and other differences in layout will be determined as the project progresses*" and "*while work will most likely occur within the existing footprint it may require some additional lands*", the exact configuration of the structures and their position within the

project footprint has not yet been determined. Also the benthic survey for oyster reefs and seagrass beds was completed in 2015 and as such, the proposed potential effects on coastal resources have not yet been generated for present conditions. As USCG states the shore work is not limited to the activities listed, any additional work with reasonably foreseeable effects on coastal uses or resources may also require a federal consistency review. For the project components that will require USACE authorization, the GLO will conduct a full consistency review when the USACE publishes them for public or interagency comments.

I look forward to continuing a close collaboration between our organizations. If you have any questions please contact me at (512) 463-7497 or at Federal.Consistency@glo.texas.gov.

Sincerely,

Leslie Koza

Leslie Koza
Federal Consistency Coordinator
Texas General Land Office

Appendix G-3

Texas Historical Commission

Gispert, Kyle F CIV USCG CEU MIAMI (USA)

From: noreply@thc.state.tx.us
Sent: Thursday, January 29, 2026 9:25 AM
To: Gispert, Kyle F CIV USCG CEU MIAMI (USA); reviews@thc.state.tx.us
Subject: [Non-DoD Source] USCG Rebuild STA South Padre Island

Follow Up Flag: Follow up
Flag Status: Flagged

TEXAS HISTORICAL COMMISSION
real places telling real stories

Re: Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas
THC Tracking #202603569
Date: 01/29/2026
USCG Rebuild STA South Padre Island
1 Wallace Reed Rd
South Padre Island,TX 78597

Description: Adding information and construction details. Please note that full design details are not yet available.

Dear Kyle Gispert:
Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act and the Antiquities Code of Texas.

The review staff, led by Amy Borgens, Caitlin Brashear, Patrick Bassett and Tracy Lovingood, has completed its review and has made the following determinations based on the information submitted for review:

Above-Ground Resources

- Property/properties are eligible for listing or already listed in the National Register of Historic Places.
- No adverse effects on historic properties.

Archeology Comments

- No identified underwater archeological sites, historic shipwrecks, and/or significant remote-sensing targets present or affected. However, if buried cultural materials are encountered during project activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.
- No historic properties affected. However, if cultural materials are encountered during construction or disturbance activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.

We have the following comments: Regarding above-ground resources, the History Programs Division review staff, led by Caitlin Brashear, concurs that the new station building, constructed in 1974, is Not Eligible for listing in the National Register of Historic Places (NRHP) based on the information provided. Additionally, the old station building constructed in 1923, also known as the Point Isabel Coast Guard Building, was previously determined eligible for listing in the National Register of Historic Places (NRHP). We recommend that it continues to be Eligible for NRHP-listing based on the information provided. The project area is located in state tract (ST) 748 which indicates there is a high potential for undiscovered submerged cultural resources. There is, however, disagreement amongst nineteenth-century navigation charts as to the shoreline at this location and it is unverified if the submerged project area was historical waters during that time. Due to the relatively small scale of the proposed dredging area, the Texas Historical Commission is not requesting survey. If a site is accidentally encountered during the course of work, halt construction activities and contact the THC.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: amy.borgens@thc.texas.gov, caitlin.brashear@thc.texas.gov, patrick.bassett@thc.texas.gov, tracy.lovingood@thc.texas.gov.

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,

for Joseph Bell, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

Appendix G-4

U.S. Fish and Wildlife Service

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Texas Coastal and Central Plains Ecological Services Office
Corpus Christi Sub-Office
4444 Corona Drive, Suite 215
Corpus Christi, Texas 78411
PHONE: 361/994-9004

In Reply Refer To:
2026-0014118

April 10, 2026

LCDR Michael Rathbun
Project Manager
SHORE-A United States Coast Guard
2703 Martin Luther King Jr. Ave. SE
Mail Stop 7800
Washington D.C. 20593-7800

Dear Lieutenant Commander Rathbun:

Thank you for your March 9, 2026 letter requesting consultation pursuant to section 7 of the Endangered Species Act as amended (16 U.S.C. 1531-1544) (Act), regarding U.S. Coast Guard's (USCG) proposed South Padre Island station expansion (Station Expansion) in Cameron County, Texas. The Habitat and Wetlands Assessment included with your request for consultation (version dated April 2026) aided in the determination that the proposed action may affect, but is not likely to adversely affect the piping plover (*Charadrius melodus*), eastern black rail (*Laterallus jamaicensis jamaicensis*), red knot (*Calidris canutus rufa*), and West Indian manatee (*Trichechus manatus latirostris*).

The US Coast Guard will complete a formal Environmental Assessment in addition to the informal consultation with the Service. Some of the terms and conditions in this document are subject to further assessment and agreement. Should the minimization measures need to be adjusted, the US Coast Guard will notify the Service.

The Applicant proposes to rebuild shore and waterfront facilities at USCG Station South Padre Island, TX. Waterfront work includes providing a minimum of 13 total mooring slips within the break wall with at least 50% of moorings covered. Plans on the northside of the property include a boat ramp with enough space for launching and recovery of a ~41ft vessel. Plans also include the creation of new outbuildings to the south of the current developed base area. Though the final configuration is pending, the expansion line has been determined and assessment of risk is based on the permanent removal of this habitat.

The property consists of approximately 22 acres including designated wetlands and existing buildings, many of which were damaged in a recent fire. Approximately .57 acres of previously undeveloped land will be utilized for construction, installation of new auxiliary support buildings, and 4.73 acres for the development of a ship ramp. Based on the wetland delineations

and habitat assessments, once complete, less than 2 acres or black rail habitat will be directly modified. Indirect impacts to the 6 acres of black rail habitat are possible. Impacts to the tidally influenced freshwater outfall used by shorebirds including semipalmated plovers (an indicator species for piping plovers) will be avoided. Total project disturbance is approximately 5.5 acres.

The US Coast Guard has several standard operational practices that may be implemented (see attachments provided to the Service). The following measures are proposed to prevent or minimize potential adverse effects to threatened and endangered species to the extent practicable. As stated above, these are subject to change and potential further evaluation.

Manatee

Contractor and staff education

- Project construction and operations employee should be advised that manatees may approach the proposed project area and can be found in depths of water less than 1m.
- Instruct employees not to feed or water manatees.
- Contact the US Fish and Wildlife Service (Service) and the Texas Marine Mammal Stranding Network (TMMSN) if a manatee is sighted. Contact the Service at 361-994-9005. The TMMSN hotline number is 800-962- 6625 or 800-9MAMMAL.
- Provide materials, such as a poster, to assist in identifying manatees. Biological observers and all personnel shall view training videos made available from the Florida Fish and Wildlife Conservation Commission (FWCC) and implement conservation measures applicable to Texas waters (https://www.youtube.com/watch?v=Xs7zLRtZVOQ) and Marine Animal Watch Information | FWC (myfwc.com).

During construction operations

- If manatee(s) are seen within 100 yards (91 meters) of the active daily construction/dredging operation or vessel movement, all appropriate precautions should be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet (15 meters) to a manatee.
- Operation of any equipment closer than 50 feet of a manatee shall necessitate immediate shutdown of that equipment. Activities shall not resume until the manatee(s) has departed the project areas of its own volition.
- Siltation barriers shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment.

Design considerations

- All in-water lines (rope, chain, and cable, including the lines to secure turbidity curtains) should be stiff, taut, and non-looping. Examples of such lines are heavy metal chains or heavy cables that do not readily loop and tangle. Flexible in-water lines, such as nylon rope or any lines that could loop or tangle, must be enclosed in a plastic or rubber sleeve/tube to add rigidity and prevent the line from looping and tangling. In all instances, no excess line is allowed in the water. Where appropriate, in-water wires and cables shall be fitted with PVC sleeve from the surface to the bottom to prevent any potential scraping of the passing marine mammals.

- Breakwater, pilings, and similar structures must be designed with an exit path to avoid potential wedging and entrapment, including at low tide. Structures that are enclosed at one end must have at least a 5-foot-wide opening to allow manatees enough room to freely navigate and exit the area. Oyster reefs and similar structures shall allow 5-foot openings every 75 feet.

Piping Plover and Red knot

- Employees should be educated in the identification of piping plovers and red knot, their habitat, agreed upon conservation measures, and contact numbers to call in the event either are injured.
- Access to the site should be confined to the immediate needs of the proposed project.
- Equipment shall be driven above the "wet line" on the beach to minimize disturbance.
- Avoid impacts to mud or wind tidal flats. Mud or wind tidal flats compress under the weight of construction vehicles
- If a piping plover or red knot is found in the active work area, work shall be stopped until the birds leave the construction site. An 80-foot avoidance buffer shall be implemented for any piping plover or red knot observed in or around the active work area for the duration of the bird's presence.

Eastern Black rail

- Potential habitat which must be cleared should be completed outside of the breeding period. The Service recommends clearing grassy areas taller than 24 inches between October- February
- Limit project activity to daylight hours to the extent possible. If nighttime work is required, aim lighting at work zone and turn off when not needed, as possible. All permanent lighting shall be pointed away from potential BLRA habitat, down shielded, and follow the International Dark-Sky Association (https://www.darksky.org/) or Bird City Texas (https://tpwd.texas.gov/wildlife/birding/bird-city-texas) guidelines.
- Limit project activity to daylight hours to the extent possible. If nighttime work is required, aim lighting at work zone and turn off when not needed, as possible. All permanent lighting must take into consideration station security, but should if at all possible be pointed away from potential BLRA habitat, down shielded, and follow the International Dark-Sky Association (https://www.darksky.org/) or Bird City Texas (https://tpwd.texas.gov/wildlife/birding/bird-city-texas) guidelines. The Service prefers that the light not extend more than 10 feet from the fence and that any lights are warmer colors such as amber to prevent night blindness.

Sea Turtles

- If dead, injured, or cold-stunned sea turtles are encountered in the project area, or if nests, tracks, or hatchlings are observed, beach activity shall cease immediately and report them to the Texas Sea Turtle Stranding and Salvage Network at 866-887-8535 (866-TURTLE-5).

Monarch

- The Service recommends conservation of native grasslands and other pollinator habitats by seeding and replanting existing rights-of-way or disturbed sites with native grasses, milkweeds, and nectar plants that are native to the area. We recommend organic gardening that avoids the use of insecticides and herbicides whenever possible to avoid harming monarchs and milkweeds, and employ a targeted approach to pesticide applications when their use is warranted (also see Integrated Pest Management); https://www.epa.gov/ipm/introduction-integrated-pest-management).
- Brownsville– Spring migration begins in March. Current peak fall migration is October 20- November 1. Note that this is when nectar secreting flowers need to be available; therefore, mowing should be moderated before this time to allow plants to grow. Moderate mowing, therefore, September 20- November 5. https://www.monarchwatch.org/tagmig/peak.html

Migratory birds

- Use of bird deterrent film on windows to prevent collisions
- If an injured bird is encountered during project operations, please report the injured bird to the Gladys Porter Zoo at 956-546-7187.
- Several species of migratory shorebirds nest in open sandy areas Black Skimmers, Least Terns, and Plovers on the Texas Gulf coast in the summer March–August. Crews should be aware of the possibility of eggs on the ground in areas where adults are roosting at night. The Service recommend crew maintain a 50-yard distance from nests.

The Service agrees that with the implementation of the conservation, avoidance and minimization measures noted above, the likelihood of an impact occurring to piping plover (*Charadrius melodus*), eastern black rail (*Laterallus jamaicensis jamaicensis*)**,** red knot (*Calidris canutus rufa*), and West Indian manatee (*Trichechus manatus latirostris*) is insignificant and discountable. The Service, therefore, concurs with your determination that the project may affect, but is not likely to adversely affect these four species.

Proposed

The proposed endangered tricolored bat (*Perimyotis subflavus*) and proposed threatened monarch butterfly (*Danaus plexippus*) and Salina mucket clam (*Potamilus metnecktayi*) are known to occur in the general project area. Proposed species are not currently protected under the Act; however, conferencing may be required if a Federal action is determined to be likely to jeopardize the continued existence of a proposed species. Based on the in-person site evaluations, the Service concurs that conferencing on proposed listed species is not necessary.

You have made a "no effect" determination for the following species due to lack of habitat: northern aplomado falcon (*Falco femoralis*), Kemp's ridley sea turtle (*Lepidochelys kempii*), green sea turtle (*Chelonia mydas*), hawksbill (*Eretmochelys imbricate*), leatherback sea turtle (*Dermochelys coriacea*), loggerhead sea turtle (*Caretta caretta*), gulf coast jaguarundi (*Yagouaroundi cacomitli*), ocelot (*Leopardus pardalis*), cactus ferruginous pygmy owl *(Glaucidium brasilianum cactorum)*, Texas Ayenia (*Ayenia limitaris*), and South Texas Ambrosia (*Ambrosia cheiranthifolia*). The Service does not provide concurrences for *"no effect"* determinations on species. Therefore, no further section 7 consultation will be required unless: 1)

the identified action is subsequently modified in a manner that causes an effect on a listed species or designated critical habitat; 2) new information reveals the identified action may affect federally listed species or designated critical habitat in a manner or to an extent not previously considered; or 3) a new species is listed or a critical habitat is designated under the Act that may be affected by the identified action. If new effects are identified in the future, section 7 consultation may need to be reinitiated.

Section 7a.1.a offers opportunities for voluntary contributions toward sea turtle recovery efforts. The Service recommends further consideration is given to these activities. For collection and release operations for injured and cold stunned turtles, large ocean vessels are often of great help in returning turtles to the wild in the warmer Gulf waters after a large-scale event. Also, extra eyes are always welcome in the initial stages of these recovery efforts. Training is available each fall (remotely) free of charge through the National Park Service and the Texas Sea Turtle Stranding Network. Also, Service recommends the voluntary mitigation of sea grass losses at a 3 to 1 ratio when possible.

The Service recommends that the USCG recognize the potential for sea turtles to be present in the water and to contact the National Marine Fisheries Service for best management practices and/or consultation if needed.

Please note this guidance does not authorize bird mortality for species that are protected under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. sec. 703-712). If you believe migratory birds will be affected by this activity, we recommend you contact our Migratory Bird Permit Office by email at migratorybirdpermits@fws.gov or call (505) 248-7882.

Please note that the City of South Parde Island (City) has an ongoing project adjacent to the station. Extensive studies have been completed to map the currents in the area, predict sediment fallout, and minimize impacts to ecology. It is likely that the expansion will negate the foundational studies completed by the City. The Service suggests coordination with the City on mapping currents and sedimentation in the area. We believe that it will benefit USCG operational dredging and maintenance in the long term.

Thank you for the opportunity to review and provide information on the proposed project, as well as your efforts to conserve America's fish and wildlife resources. If you have any questions, please contact Mary "Sandra" Lee at mary_lee@fws.gov.

Sincerely,

Catrina Martin
Assistant Field Supervisor