DRAFT PERMITTEE-RESPONSIBLE COMPENSATORY MITIGATION PLAN

Proposed Port O'Connor Marina USACE Permit SWG-2023-00238 CALHOUN COUNTY, TEXAS







Victoria, Texas 77901



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TABLE OF CONTENTS

1.0	Int	roduction	1
	1.1	Mitigation Property Location(s)	2
	1.2	Property Ownership and Responsible Party Qualifications	2
	1.3	Description of the Propert(ies)	2
	1.4	Recorded Liens, Encumbrances, Easements, Servitudes or Restrictions	2
2.0	Go	al and Objective	3
	2.1	Aquatic Resource Type and Functions Restored	3
	2.2	Watershed and Ecological Contributions	3
3.0	Sit	e Selection	4
4.0	Sit	e Protection Instrument	5
5.0	Mi	tigation Area Baseline Information	5
	5.1	Land Use	5
	5.1	.1 Historical Land Use	5
	5.1	.2 Current Land Use	6
	5.2	Soils	6
	5.3	Hydrology	6
	5.4	Vegetation	6
6.0	De	termination of Compensatory Mitigation Requirement	6
7.0	Mi	tigation Work Plan	7
	7.1	Hydrology Restoration	7
	7.2	Restoration of Plant Community	7
8.0	Ma	aintenance Plan	7
9.0	Pe	rformance Standards	8
	9.1	Initial Success Criteria (Year 1)	8
	9.1	.1 Hydrology	8
	9.1	.2 Vegetation	8
	9.2	Interim Success Criteria (Year 3 and Year 5)	8
	9.2	2.1 Hydrology	8
	9.2	2.2 Vegetation	8
	9.3	Long-term Success Criteria (Year 15)	9
10.0) Mo	onitoring and Reporting Protocols	9
	10.1	Monitoring	9
	10.2	As-built Report	9
	10.3	Initial and Interim Success Criteria Reporting	9
11.0) Lo	ng-term Management Plan1	0
12.0) Ad	laptive Management Plan1	0
13.0) Fir	nancial Assurances1	1
14.0) Re	ferences12	2

LIST OF TABLES

Table 1. Wetland Impacts by Acreage and Function

LIST OF ATTACHMENTS

Attachment A. Maps and Figures Attachment B: Baseline iHGM Scores

1.0 Introduction

On behalf of the West Side Calhoun County Navigation District (WSCCND; WSCCND) and Urban Engineering, Inc. (Urban; project engineer), Compass Environmental Solutions, LLC (COMPASS) respectfully submits this DRAFT Permittee-Responsible Compensatory Mitigation Plan (PRMCMP) for the compensation of permanent unavoidable impacts to approximately 13.73 acres of estuarine intertidal emergent wetland (high marsh) within the U.S. Army Corps of Engineers (USACE) Galveston District (CESWG). WSCCND is currently seeking a Standard Individual Permit (SIP) under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act (RHA) for the proposed construction of a public marina and boat ramp (Project) near the intersection of Scurlock Drive and State Highway (SH) 185 in Port O'Connor Calhoun County, Texas.

WSCCND is proposing construct a marina along with associated amenities and other necessary activities, including but not limited to facility structures, parking lots, utility lines, storm-water drainage system, and two breakwaters to protect the marina channel. The purpose of the proposed activity is to alleviate boating safety and increase launching opportunities to meet the growing need for ingress and egress from coastal waterbodies in and around Port O'Connor. The parcel for this project will be developed to meet the specific needs of the WSCCND and project.

The Project's wetland impacts are located in the Lower San Antonio Subbasin (Hydrologic Unit Code [HUC] 12100303) in Calhoun County, Texas. More specifically, the Project is located at center point latitude 28.430325° North and longitude 96.443543° West (North American Datum [NAD83]).

The preparation of this PRMCMP was guided by USACE regulations for compensatory mitigation for losses of aquatic resources, codified in 33 CFR § 332. More specifically, the elements of the PRMCMP were designed to satisfy the requirements of 33 CFR § 332.4(c)(2)-(14). COMPASS, acting as the mitigation provider for the WSCCND under this PRMCMP, will provide environmental oversight and expertise, monitor, and provide long-term monitoring of a Permittee-Responsible Mitigation Area (PRMA) set forth in this Plan as described in 33 CFR § 332.3(l). The assessment of unavoidable impacts and the proposed PRMA utilized the USACE Galveston District (CESWG) Tidal Fringe Interim Hydrogeomorphic Model (iHGM) to determine impacts and predict/forecast mitigation needs, and provide preliminary design criteria to be finalized in a second FINAL PRMCMP to be submitted at a later date.

The WSCCND conducted a mitigation credit availability screening to determine if sufficient mitigation credits were available for purchase within the same watershed to compensate for Project wetland impacts. As part of this screening, all existing mitigation banks and/or in-lieu-fee programs with either a primary or secondary service area encompassing the proposed Project location were contacted to determine mitigation credit availability. The proposed project is not located within the primary or secondary service area of any mitigation bank or in-lieu-fee programs. Therefore, this PRMCMP was prepared of offset impacts to high marsh wetlands under 33 CFR § 332.4(c)(2)-(14).

A 1:1 ratio (i.e., impact function to mitigation function ratio) was utilized to determine the mitigation requirements as the impacts and PRMA are both located in the Lower San Antonio

HUC. The mitigation restoration requirements, as determined by the iHGM is the need to compensate for 38.78 FCUs (Attachment B). By the end of Year 15, 38.78 FCUs of high marsh wetlands will be restored and perpetually protected.

1.1 <u>Mitigation Property Location(s)</u>

As this PRMCMP is considered draft, the three options for the PRMA were evaluated. All three locations are similar to the impact area, within the tidal zones of San Antonio Bay and the Gulf Intracoastal Waterway, and withing the They are all within the Lower San Antonio HUC (see Attachment A, Figure 1). The individual locations are approximately four miles south of Seadrift, and 5.3 miles and 6.5 miles west of Port O'Connor respectively.

1.2 <u>Property Ownership and Responsible Party Qualifications</u>

Per 33 CFR § 332.8(d)(2)(vi.), this section describes COMPASS's qualifications to successfully complete the proposed PRMA. Option 1 and Option 2 are located on Calhoun County Parcel IDs 86371 and 86034, and are both privately owned. Option 3 is located on Calhoun County Parcel ID and 59242, and is also privately owned. As this is still a DRAFT PRMCMP, COMPASS and Urban are currently negotiating with each landowner to determine the over feasibility of each site related to mitigation. Whichever site is selected, WSCCND will acquire Responsible Party rights to the mitigation area and will be responsible of its creation and protection in perpetuity, until such time as the site's management and maintenance is transferred to a third-party via conservation easement or other real property protection contract.

1.3 <u>Description of the Propert(ies)</u>

There are three possible locations for the PRMA are regularly farmed/ranched land tracts that are located within the tidal zone of San Antonio Bay and Gulf Intracoastal Waterway. The center points of the three potential PRMAs are (in NAD83):

- Option 1: 28.390360°, -96.539500°
- Option 2: 28.397756°, -96.521813°
- Option 3: 28.350859°, -96.685731°.

Attachment A includes figures and maps of the three potential options.

1.4 <u>Recorded Liens, Encumbrances, Easements, Servitudes or Restrictions</u>

None of the three PRMA options are encumbered by easements or rights-of-ways (ROW). There are no other recorded liens, encumbrances, easements, servitudes or other surface restrictions applicable to any of the PRMA, and the owners of the PRMAs do not own the mineral rights.

2.0 Goal and Objective

The goal of this PRMCMP is to restore¹ and rehabilitate² approximately 38.78 FCUs of high marsh wetlands in the Lower San Antonio Watershed. To meet the goals of this PRMCMP restoration, the primary objectives will consist of the following:

- permanent cessation of agricultural practices and mowing,
- removal and control of pasture grasses (e.g., Bermuda grass [*Cynodon dactylon*]) and invasive species (e.g., Chinese tallowtree [*Triadica sebifera*]³),
- hydrology restoration consisting of reduce soil compaction, plugging of agricultural ditches, and filling drainage laterals
- planting 25 acres with native grass species,
- construct, establish, and provide long-term maintenance by establishing the appropriate financial escrow accounts, and
- protect the PRMA under a perpetual conservation easement.

Secondary and tertiary objectives will be defined as the project progresses and at a later date under the Adaptative Management Plan referenced below. Rehabilitating and restoring the tidal high marshes wetland within the PRMA will enhance the wetland functions discussed in Section 2.1.

2.1 Aquatic Resource Type and Functions Restored

Implementation of the proposed PRMA will rehabilitate 25 acres at one of three possible locations within the tidal zones of the Gulf Intracoastal Waterway and San Antonio Bay. The final PRMA will be restored to historic high marsh wetland conditions to offset impacts to aquatic resources associated with the permit described in Section 1.0. Parameters used in this evaluation will include:

- 1. Physical Temporary Storage and Detention of Surface Water (TSSW) the restored wetlands will provide temporary water storage during rainfall events.
- 2. Biological Maintenance of Plant and Animal Communities (MPAC) the restored wetlands will serve as habitat for native wildlife and Nearctic-Neotropical migratory species.
- 3. Chemical Removal and Sequestration of Elements and Compounds (RSEC) the restored wetlands will remove sediments from surface water during periods of rainfall and runoff.

2.2 <u>Watershed and Ecological Contributions</u>

The PRMA and impacts are located within the ecologically important Lower San Antonio watershed, which lies in the Coastal Plain physiographic province in the subtropical climate zone. The watershed in which the impacts and the PRMA are situated has experienced tremendous growth in the vacation rental and waterfront recreational space due to the low population density of Calhoun County and the desirable fishing, boating and recreational opportunities of the

¹ Restoration is defined in 33 CFR 332.2 as the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

² Rehabilitate is defined in 33 CFR §332.2 as *the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource.* Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

³ The aforementioned and subsequent plant scientific nomenclature is from Lichvar et al. (2016).

multitude of bays and open water along this stretch of the Texas Coast coupled with its proximity to major metropolitan areas.

The existing conditions at each of the potential PRMA areas are degraded due to historic grazing and the spread of nuisance and exotic plant species. After planting, the restored PRMA will rehabilitate the early successional functions of an estuarine tidally influenced ecosystem within the Lower San Antonio Subbasin to a primary successional level resulting in "lift" of existing iHGM scores and compensatory mitigation for impacts to the project site. The restored wetlands will increase onsite stormwater / floodwater storage by increasing the frequency and duration of inundation, and this increase will allow sediments to settle in the plant community and slow the flow of stormwater entering the Gulf Intracoastal Waterway or San Antonio Bay. Additionally, since all three potential sites have been used for long-term cattle grazing, this has resulted in overgrazing, soil compaction, mineral fertilization, and excessive fecal bacteria (Escherichia coli [E. coli]). The cessation of cattle grazing and hydrologic restoration on the chosen PRMA will increase the waterbodies water clarity, decrease nitrogen and phosphorous pollution, and reduce E. coli levels. Furthermore, soil compaction reduces plant community productivity by limiting / weakening root functions, leading to poor infiltration rates and increase non-point source runoff into the waterbodies. Grubbing, grading, planting, and raking activities undertaken during proposed wetland restoration and enhancement will break and aerate the soil up and increase infiltration rates. The potential PRMA will also increase the quality of wildlife habitat via the restoration of a native structure (aquatic ecosystem), which does not exist under the current land use (i.e., overgrazing) at each of the three sites.

3.0 Site Selection

Since no approved bank with available in-kind credits or an approved in-lieu fee program exists that services the project site and impact footprint, the WSCCND is proceeding with a strategy of pursuing an offsite, in-kind PRM under and in accordance with 33 CFR § 332.3(b). An onsite PRM is not feasible due to the lack of available land following construction of the project.

The nature and location of all three of the potential PRMAs within the overall landscape of the Calhoun Peninsula provide a high degree of confidence for successful restoration. Each of three PRMAs is highly suitable and restorable as functional high marsh habitat. The rehabilitation of any one of the potential PRMA sites provides an existing degraded wetland area that can be restored. Although, the potential PRMA sites exhibit positive wetland indicators for both wetland hydrology and hydric soils, all three lack suitable primary successional wetland vegetation due to pasture grass management and cattle grazing. Through the same activities conducted on the rehabilitation portion of whichever PRMA is selected. The sustainability of the restored PRMA will be driven by rainfall and localized watershed runoff (re-established sheet flow from the northeast). Therefore, hydrologic rehabilitation will utilize natural processes (passive water flow) and will not rely on active water management (i.e., pumping, diversion, impoundment or removal of water through artificial means from a river, stream or reservoir).

4.0 Site Protection Instrument

WSCCND, as a public entity, will own the potential PRMA in perpetuity and place a perpetual conservation easement covering the PRMA to a Conservation Easement Holder (Holder) in accordance with Chapter 183, Subchapter A of the Texas Natural Resources Code. Pursuant to 33 CFR § 332.7(a)(5), the Owner, acting through the WSCCND, will seek CESWG approval of the conservation easement either in advance of or concurrently with the commencement of the permitted activity. Furthermore, in accordance with 33 CFR § 332.7(a)(3), the conservation easement will contain a provision requiring 60-day advance notification to the CESWG district engineer before any action is taken to void or modify the easement, including the transfer of title to another party.

Several potential holders for the conservation easement have been identified, including Texas Land Conservancy, and an appropriate entity will be provided at a later date. The selected entity will provide the expertise to finalize the easement agreement with WSCCND and the land owner, and will conduct annual inspections to verify that there are no activities occurring on the PRMA which are inconsistent with the purpose of preserving the conservation values of the restored area.

After recordation in the real property records of Calhoun County, a copy of the recorded conservation easement, clearly showing the book, page, and date of filing, will be provided to the CESWG. In addition to the regular reporting, compliance with the terms and conditions of the easement will be verified by the Holder annually by field monitoring and reporting. Upon execution of the conservation easement previously described, the Holder will hold and enforce the conservation easement placed on the selected PRMA, protecting the site in perpetuity as a conservation site. The WSCCND will also be responsible for protecting lands contained in the PRMA in perpetuity in accordance with the terms of the conservation easement and PRMCMP, unless the lands are transferred or sold to a state or federal resource agency or non-profit conservation organization pursuant to 33 CFR § 332.7(d)(1).

5.0 Mitigation Area Baseline Information

Each of the three potential PRMAs currently consists of grazing pasture and active cattle operations. Following the guidelines of the U. S. Army Corps of Engineers 1987 Wetland Delineation Manual (USACE 1987) and U.S. Army Corps of Engineers Regional Supplement for the Atlantic and Gulf Coastal Plain (AGCP Regional Supplement; USACE 2010), COMPASS will collect wetland delineation data from the chosen PRMA prior to finalizing the Compensatory Mitigation. COMPASS will also conduct iHGM modeling of the chosen site, and request a jurisdictional determination from the CESWG following the delineation to establish jurisdictionality and functional, ecological scores.

5.1 Land Use

5.1.1 Historical Land Use

All three PRMA options have been in agricultural production (cattle grazing) for decades.

5.1.2 Current Land Use

The majority of the open land in the vicinity of each of the PRMA options is used agricultural production (e.g., livestock, etc.). Each of the PRMAs has been in cattle (grazing) production for decades.

5.2 <u>Soils</u>

The three potential PRMA are underlain by one of the following soil series:

- Portalto-Roemer occasionally ponded complex, 0 to 3 percent slopes (Pr)
- Dianola frequently flooded-Portalto complex (Dp)
- Veston very fine sandy loam, 0 to 1 percent slopes, low, frequently flooded (Vs)
- Veston very fine sandy loam, 0 to 1 percent slopes, frequently flooded.

5.3 <u>Hydrology</u>

The average annual rainfall in Calhoun County is approximately 41 inches, and the primary hydrological influences on each of the PRMA are tidal influence and rainfall. The three possible PRMAs areas are located along Gulf Intracoastal Waterway and San Antonio Bay, and appear to have consistent hydrology supplied by these nearby tidal waterbodies.

5.4 <u>Vegetation</u>

The dominant vegetation of high marsh areas primarily consists of facultative (FAC) or wetter (FACW, OBL) plant species including smooth cordgrass (*Spartina alterniflora*), Virginia glasswort (*Salicornia depressa*), saltgrass (*Distichlis spicata*), and gulf cordgrass (*Spartina spartinae*).

6.0 Determination of Compensatory Mitigation Requirement

The WSCCND and COMPASS will use the hydrogeomorphic (HGM) approach to assess the functions of impacted wetlands versus the functions restored wetlands associated with the Project vs the proposed PRMA area. Specifically, the SWG Tidal Fringe iHGM model was used to calculate the number of lost functions at the impact site and the number of functions proposed to be generated at the selected PRMA. This model uses several variables to assess three main functions that best describe and measure forested wetland health in the region:

- 1. Physical Temporary Storage and Detention of Surface Water
- 2. Biological Maintenance of Plant and Animal Communities
- 3. Chemical Removal and Sequestration of Elements and Compounds

COMPASS provided iHGM summary data for the impact site shown below in Table 1. COMPASS will provide the baseline iHGM data and proposed functional lift for the PRMA once the PRMA site is selected. For the impacted wetland and the restoration portion of the PRMA (38.78 FCUs), the model variables will be scored to determine the functional capacity index (FCI) and functional capacity unit (FCU). The impact site and the three PRMA sites are located within the same watershed; therefore, a 1:1 ratio was applied to the mitigation requirements.

Function	Wetland Impact Acreage	Impact Functional Capacity Units (FCUs)	
high marsh Impacts			
Biota	13.73	9.81	
Botanical	13.73	12.36	
Physical	13.73	7.00	
Chemical	13.73	9.61	

Table 1. Wetland Impacts by Acreage and Function

7.0 Mitigation Work Plan

7.1 <u>Hydrology Restoration</u>

Prior to the commencement of mitigation work, all agricultural activities will cease and cattle and livestock will be fenced off from the restoration and enhancement area. Following the cessation of agricultural activities and removal of any major drainage improvements, the selected PRMA will be disked multiple times to 1) reduce surface compaction, 2) eliminate competition from pasture grasses, and 3) level drainage laterals to remove surface flow obstacles and allow sheet flow. Lastly, due to extreme land leveling practices that have removed all depressions and effectively directed stormwater runoff to the Gulf Intracoastal Waterway, the site no longer ponds water for long durations. Since the site has been manipulated to prevent ponding, this will be remedied through the introduction of microtopography to increase edge habitat and water retention since freshwater sources are the limiting factor for wildlife along this portion of the Texas Coast.

7.2 <u>Restoration of Plant Community</u>

Once hydrology is restored, the selected PRMA's historic high marsh wetland communities will be re-established by planting a mixture of native grasses and salt adapted herbaceous plants. The selection of planting species will be based on species observed within the adjacent tidal wetlands located along the Gulf Intracoastal Waterway or San Antonio Bay and be specific to that PRMA area.

8.0 Maintenance Plan

The PRMA will be monitored and maintained by the WSCCND or its agent for a period of five years. The WSCCND will commit to restore the wetland functions and maintain wetland habitats in accordance with the provisions in this PRMCMP, which includes submitting project plans, annual monitoring reports, and adaptive management contingencies as they arise for the PRMA. Upon or after establishment of salt tolerant herbaceous species measures to control the encroachment of exotic/invasive vegetation after operation shall be implemented as needed.

9.0 Performance Standards

The following outlines the performance standards for the rehabilitation mitigation area of the PRMA with a native, facultative or wetter, high marsh communities, and the control of invasive species within the rehabilitation mitigation areas. Performance standards will be modified with the publication of the FINAL Compensatory Mitigation Plan.

9.1 Initial Success Criteria (Year 1)

9.1.1 Hydrology

Ground surface elevations must be conducive to the rehabilitation of high marsh vegetation and the maintenance of hydric soil characteristics. All alterations of the natural topography that have affected the duration and coverage of surface water have been removed or otherwise rendered ineffective as discussed in Section 7.1.

9.1.2 Vegetation

A minimum number of planted seedlings per acre must survive through the end of the second spring following the planting (i.e., year 1) for high marsh rehabilitation. Those surviving seedlings must be representative both in species composition and percentage identified in Section 7.2. This criterion will apply to initial plantings, as well as any subsequent replanting implemented to meet this requirement.

9.2 Interim Success Criteria (Year 3 and Year 5)

9.2.1 Hydrology

By Year 3, or two years following attainment of the one-year performance criteria, site hydrology for high marsh rehabilitation mitigation areas will be restored such that the selected PRMA meets the wetland criterion as described in the 1987 Manual (USACE 1987) and AGCP Regional Supplement (USACE 2010). Data demonstrating the presence of wetland hydrology will be collected and submitted to the CESWG in the monitoring report. In Year 5, the selected PRMA will exhibit positive wetland hydrology criteria.

9.2.2 Vegetation

For high marsh rehabilitation, a minimum number of individuals per acre must be present at the end of the second year (i.e., year three) following successful attainment of the one-year survivorship criteria. Species established through natural recruitment may be included in this tally. Introduced/exotic species may not be included in this tally.

By Year 5, four years following successful attainment of the Year 1 survivorship criteria, the selected PRMA will be virtually free of introduced vegetation (i.e., approximately 5% or less on an acre-byacre basis). Developing plant community must exhibit characteristics and diversity indicative of a viable native high marsh community and exhibit wetland vegetation dominance. Achievement of wetland vegetation dominance is defined as a vegetation community where more than 50% of all dominant species are facultative ("FAC") or wetter as determined by the appropriate test per the AGCP Regional Supplement.

9.3 Long-term Success Criteria (Year 15)

By Year 5, the wetland restoration portion of the mitigation area, vegetation should be approximately 80% and the selected PRMA will be essentially void of introduced species such that introduced species are removed from the site and comprise less than 5% of the selected PRMA on a per acre basis. Furthermore, an active treatment program for invasive species will continue as part of the long-term maintenance program.

10.0 Monitoring and Reporting Protocols

10.1 <u>Monitoring</u>

WSCCND agrees to perform all work necessary to monitor the site to demonstrate compliance with the success criteria established in Section 9.0, unless undertaken by the Conservation Easement Holder. The WSCCND or their agent, will monitor the site for five years during the growing season through achievement of the long-term success criteria using monitoring protocols described in this Section. The WSCCND will collect data on the number and species of planted and naturally occurring species to ensure successful establishment of a hydrophytic plant community and collect data on hydrologic conditions as necessary to document evidence of wetland hydrology in accordance with the performance standards listed in Section 9.0. Documentation will include descriptions of the upper 12 inches of the soil profile sufficient to demonstrate hydric soil properties.

Immediately following initial planting of the selected PRMA, the WSCCND or their agent will establish permanent monitoring stations. Each station will have a minimum plot area of 1/10th acre, identified with GPS coordinates. A map depicting the station location and coordinates will be included in the reports.

Station sampling will occur following vegetative plantings to establish baseline data and then Years 1, 3, and 5. If Year 5 monitoring indicates the site is not meeting success criteria, annual monitoring will continue until the Year 5 criteria is met. The survey of the monitoring stations will provide fixed locations to evaluate the survival rate of planted stems.

10.2 <u>As-built Report</u>

An As-built Report will be submitted to the CESWG within 120 days following completion of all the work required to restore the selected PRMA. In detail, the As-built Report will describe the completed hydrologic work within the rehabilitation area and an estimated tally of planted stems by species within the rehabilitation area. No deviation from the mitigation work plan described in Section 7.0 may occur without prior approval from the CESWG, or as deemed necessary by the WSCCND. If deviation does occur, the As-built Report will include a summary of the CESWG coordination and a description of and reasons for any approved deviation.

10.3 Initial and Interim Success Criteria Reporting

Monitoring reports will be submitted to the CESWG by December 15 of the year performance / success criteria monitoring is required (i.e., as-built report, Years 1 through 5). Each monitoring report will include data sufficient for comparison to the performance standards. The WSCCND should also include a discussion of all activities, which took place at the site since the previous monitoring effort. At a minimum, monitoring reports should include the following:

- 1) digital images taken from ground level at the monitoring station to document the overall conditions;
- 2) a description of the general condition of the plant community and a discussion of likely causes for deficiency;
- 3) a description of the generalized degree and distribution of exotic/invasive species;
- 4) identify measures to eradicate exotic/invasive species and document results of these efforts;
- 5) a general discussion of hydrologic conditions at the monitoring stations; and
- 6) a description of wildlife usage at the monitoring stations, including any herbivory problems if applicable.

11.0 Long-term Management Plan

To ensure the long-term sustainability of the resource, the WSCCND or their agent will perform maintenance and long-term management of the site. These activities will be minimal as the project is anticipated to be a self-sustaining wetland with management activities limited primarily to items such as inspections, controlling invasive species (e.g., spot herbicide treatments), and boundary maintenance.

COMPASS will be the Long-term Steward charged with management and maintenance responsibilities once long-term success criteria in Section 9.0 are achieved. If COMPASS requests the option of appointing a different Long-term Steward in accordance with 33 CFR 332.7(d)(1), the appointment of such an entity shall be approved by the CESWG.

To ensure sufficient long-term funding is available for perpetual maintenance and protection of the PRMA, the WSCCND will establish a cash escrow "Long-term Land Management and Maintenance" (LTMM) endowment in the amount necessary to manage the property in perpetuity. WSCCND will choose a qualified entity to manage the LTMM endowment. To structure the LTMM, WSCCND may enter a PRM Endowment Agreement with the CESWG and this third party if deemed appropriate by WSCCND. Accrued interest of the account shall be used for the administration, operation, maintenance, and/or other purposes that directly benefit the PRMA. The principal shall not be used and shall remain as part of the PRMA's assets to ensure that sufficient funds are available should perpetual maintenance responsibilities be assumed by a third party.

12.0 Adaptive Management Plan

An adaptive management plan, contingencies, and remedial responsibilities will be implemented if monitoring reveals certain performance criteria have not been met. In the event of a deficiency, the WSCCND or their agent shall provide a notice to the CESWG. The notice will include an explanation for the deficiency and will outline specific practices and measures that will guide decisions for revising the PRMCMP if needed. If the CESWG determines that the selected PRMA is not in compliance with the terms and intent of this PRMCMP, the CESWG will provide written notice to WSCCND that includes a detailed description of the non-compliance determination. WSCCND shall submit a written adaptive management plan to the CESWG for review and approval within forty-five (45) days of receiving written notice of non-compliance. The adaptive management plan shall identify the cause of the non-compliance, the necessary remedial measures, and a timeline for implementing said measures to bring the selected PRMA into compliance. To the extent practicable, the CESWG shall approve or disapprove the adaptive management plan within forty-five (45) days of receipt, provided sufficient information and acceptable measures are contained in the plan.

13.0 Financial Assurances

The total financial exposure for construction and establishment is \$450,250.07 as of the date of this mitigation plan; final costs are yet to be determined and will be dependent on the selected PRMA. The construction and establishment financial assurances will be provided by a cash escrow or casualty insurance policy. The construction cost estimate with 5% contingency adjustment at Year 0 is \$256,202.53 (subject to change based on which PRMA is selected). The high marsh establishment cost estimate for Year 1 through Year 5 is \$194,047.54 with an annual 2.45% inflationary cost adjustment. To provide financial assurance protection during construction (Year 0) and establishment (Year 1 through Year 5) and per 33 CFR 332.3(n), the mitigation provider shall establish a cash escrow or purchase a casualty insurance policy to protect the selected PRMA's mitigation assets in the event of non-compliance or PRMA failure and to ensure that sufficient funds are available to a third party. The cost of the cash escrow account of casualty insurance policy will be subject to the selected PRMA, final design criteria, and final construction cost estimate.

If a casualty insurance policy is purchased, a certificate of insurance coverage will be submitted to the CESWG. The casualty policy will provide the operative language that the insurance company will pay necessary funds to a third party to complete the compensatory mitigation obligation. The third party(s) and any solution will be subject to approval by the CESWG. For coverage under the policy, a claim must be made by the CESWG during the policy period.

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Permittee-Responsible Compensatory Mitigation Plan USACE Permit SWG-2023-00238 Port O'Connor, Calhoun County, Texas September 2023

Attachment A

Maps and Figures

Permittee-Responsible Compensatory Mitigation Plan USACE Permit SWG-2023-00238 Port O'Connor, Calhoun County, Texas September 2023

Attachment B

Baseline iHGM Scores

Permittee-Responsible Compensatory Mitigation Plan Port O'Connor September 2023

Attachment A

Maps and Figures















Permittee-Responsible Compensatory Mitigation Plan Port O'Connor September 2023

Attachment B

Baseline iHGM Scores

Interim Tidal Fringe Hydrogeomorphic Analysis Worksheet Project Tract WAA 1

Natural Conditions

Acreage =

13.73

Variable	Sub-Index	Notes:
V _{edge}	0.40	Marsh lack both tidal creeks & isolated ponds & depressions, shoreline is linear or smoothMa
V _{hydro}	0.60	Moderate hydrologic restriction
V _{nhc}	0.50	3 habitat types
V _{typical}	0.90	80% cover
V _{slope}	0.10	Less than 150 ft
V _{width}	0.85	301-375 ft
V _{rough}	0.80	0.08
V _{soil}	0.20	Sandy

Functional Capacity Index (FCI)

Biota	0.71
Botanical	0.90
Physical	0.51
Chemical	0.70

Functional Capacity Units (FCU)

Biota	9.81
Botanical	12.36
Physical	7.00
Chemical	9.61

Data Collection

Date: 9/27/2021

Investigator(s): EM

Vegetation (Plant)	Stratum	Indicator Status	Percentage
Distichilis spicata	Herb	OBL	60
Distichilis littoralis	Herb	OBL	10
Suaeda linearis	Herb	OBL	5
Limonium carlinianum	Herb	OBL	2

Hydrology Indicators	Notes:
Algal Mat or Crust	
Sparsely Veg. Concave Surface	

Hydric Soil Indicators	Notes:
Hydrogen Sulfide	
Redox Dark Surface	
Depleted Dark Surface	