Proposed Mitigation Plan & Exhibits for SWG-2020-00833

### **Attachment A - Mitigation Plan**

1. Mitigation Goals and Objectives

Per details in the enclosed Mitigation Exhibits, according to LAN Construction Drawings, as compensatory mitigation (a total of 1.07 acres/ 46,404 sq.ft.) for proposed impacts to approximately 0.508-acres (22,128.48 sq.ft.) of wetlands by the applicant:

- A. Enhance and restore freshwater (open/emergent) habitat and function to silted in freshwater emergent detention pond via mechanical excavation and reshaping to remove silt, as well as the clearing and removal of *Typha domingensis* inundation:
  - 0.77 acres (33,624 sq.ft./ 1,089 cy) freshwater emergent habitat
- B. Enhancements to the primary outfall ditch and small 62' lateral ditch by mechanically cutting and reshaping to remove silt, as well as placement of weir:
  - .30 acres (12,780 sq.ft./ 1,135 cy) salt marsh, freshwater emergent habitat

The proposed mitigation site is the detention pond, associated weir, and primary outfall ditch, which is located on Mustang Island in Port Aransas within the I.B. Magee Beach Park, between Beach St. and E. Cotter Ave. southeast of the Aransas Pass Channel and approximately 2.5 miles northeast of the impact site at 3107 Eleventh St.

All enhanced areas, including the detention pond, weir, and primary outfall ditch, associated with the proposed mitigation will be protected in perpetuity by a deed restriction, conservation easement, or an equivalent legal instrument.

2. Site Selection Information

The applicant identified several candidate locations for mitigation within the vicinity of the impacted wetlands (see Exhibit A), ultimately selecting the proposed mitigation site located approximately 2.5 miles northeast of the project location as the Nueces County Beach Parks is currently in the process of Phase I of the IB Magee Detention and Pond Restoration and Improvements Project. The applicant is proposing mitigation for restoration and enhancements to the current detention pond which has been silted in over the years and become inundated with *Typha domingensis*. as well as restoration and enhancements of the primary outfall ditch and placement of the weir drainage ditch complex. Additionally, there was a lack of available adjacent lands near the project site for mitigation.

3. Site Protection Instrument

All enhanced areas of approximately 1.07 acres/ 46,404 sq.ft., including the detention pond, weir, and primary outfall ditch, associated with the proposed mitigation will be protected in perpetuity by a deed restriction, conservation easement, or an equivalent legal instrument which will be executed within six (6) months of permit issuance.

#### 4. Baseline Information

#### Impact Site

The approximately 0.508-acre freshwater emergent wetlands consist of 0.372 acres PEMICh mapped wetland and 0.136 unmapped freshwater emergent wetlands within the approximately 1-acre development site, occupying approximately 50% of the property that is proposed to be impacted by fill for the development of a residential development of 6 residential lots with a private access road that will include a firetruck turnaround, as well as associated infrastructure for the remaining lots. The site is located on Mustang Island, Texas in the City of Port Aransas limits (see Exhibit B). The property is bordered by urban development to the north and south, to the west by 11<sup>th</sup> Street, and to the east by an undeveloped tract which contains an excavated, unmapped pond. The wetland onsite was partially mapped by the National Wetlands Inventory as PEMIA (palustrine, emergent, persistent, temporary flooded). Adjacent properties to the north and south have developed around the property and the project site is concave with no drainage.

The project area contains approximately 0.508 acres of wetlands and is mapped by the Ecological Mapping Systems of Texas (EMST) as predominantly Gulf Coast: Salty Prairie, with a small portion parallel to Eleventh St. as Coastal: Tidal Flat, and a small portion in the eastern corner as Coastal: Sea Ox-eye Daisy Flats. Gulf Coast: Salty Prairie which contain gulf cordgrass (Spartina spartinae), little bluestem (Schizachyrium scoparium), bushy bluestem (Andropogon glomeratus), switchgrass (Panicum virgatum), gulf muhly (Muhlenbergia capillaris), or Sporobolus indicus (rat-tail smutgrass). Sites that are lower and wetter may contain marshhay cordgrass (Spartina patens), oldfield threeawn (Aristida oligantha), Hartweg paspalum (Paspalum hartwegianum), seashore dropseed (Sporobolus virginicus), seashore paspalum (Paspalum vaginatum), and saltgrass (Distichlis spicata). Common shrubby species may include shrubby sumpweed (Iva frutescens), honey mesquite (Prosopis glandulosa), huisached (Acacia farnesiana), Carolina wolfberry (Lycium carolinianum), salt cedar (Tamarix spp.), and baccharis (Baccharis halimifolia). Coastal: Tidal Flats are typically unvegetated or sparsely vegetated, while Sea Ox-eye Daisy Flats are dominated by the sea ox-ey daisy (Borrichia frutescens). Other species that may be found within these systems include marshhay cordgrass (Spartina patens), saltgrass (Distichlis spicata), sturdy bulrush (Schoenoplectus robustus), three-square bulrush (Schoenoplectus americanus), seashore dropseed (Sporobolus virginicus), shoregrass (Monanthochloe littoralis), and Gulf cordgrass (Spartina spartinae).

Based on the May 18<sup>th</sup>, 2022, site visit, this area is a freshwater emergent wetland with vegetation consisting predominately of glade morning-glory (*Ipomoea sagittate*), salt-meadow cord grass (*Spartina patens*), and southern cattail (*Typha domingensis*). Additional species observed onsite were betonyleaf thoroughwort (*Conoclinium betonicifolium*), bushy seaside-tansy (*Borrichia frutescens*), Santa Maria feverfew (*Parthenium hysterophorus*), and turkey-tangle frog fruit (*Phyla nodiflora*).

#### Mitigation Site

The proposed mitigation site of 1.07 acres/ 46,404 sq.ft. is the detention pond, associated weir, and primary outfall ditch, which is located on Mustang Island in Port Aransas within the I.B. Magee Beach Park, between Beach St. and E. Cotter Ave. southeast of the Aransas Pass Channel and approximately 2.5 miles northeast of the impact site at 3107 Eleventh St (Exhibit C). A site visit was performed on July 20<sup>th</sup> and 21<sup>st</sup>, 2022. The land is managed and maintained by Nueces County Coastal Parks.

The proposed mitigation area will include the current detention pond and the primary outfall ditch extending northwest to E. Cotter Ave. The applicant is proposing mitigation for restoration and enhancements to the detention pond, which has been silted in over the years and become inundated with *Typha domingensis*, as well as restoration and enhancements of the primary outfall ditch and placement of a weir drainage ditch complex (Exhibit D). The enhancement of the pond from its current state will provide open freshwater in a limited area which will encourage waterfowl and wading birds.

The site consists of coastal deep sand grassland and coastal beach ecosystems, with freshwater emergent wetlands. Elevations at the mitigation site range from two to six feet above sea level. The park property is bordered to the northeast by estuarine and marine deep water associated with the Port Aransas Jetty Channel and to the southeast by estuarine and marine wetlands associated with the Gulf of Mexico. The drainage feature drains overflow from the detention pond northeastward to the primary and secondary outfall ditch and ultimately into the channel.

The proposed mitigation site includes the detention pond, weir, and primary outfall ditch. The detention pond is mapped by the National Wetlands Inventory as a 0.54-acre PEM1Cx (Palustrine, Emergent, Persistent, Seasonally Flooded, Excavated) freshwater emergent wetland. The primary outfall ditch is an approximate 0.30-acre freshwater emergent wetland and contains a small portion of a larger 0.36-acre mapped PEM1A (palustrine, emergent, persistent, temporarily flooded) wetland which extends to the northwest and southeast on either side of the northeast end of the ditch. The dominant vegetation consists of bushy seaside-tansy (*Borrichia frutescens*), common threesquare (*Schoenoplectus pungens*), gulfdune paspalum (*Paspalum monostachyum*), largeleaf pennywort (*Hydrocotyle bonariensis*), marshhay cordgrass (*Spartina patens*), southern cattail (*Typha domingensis*), and turkeytangle frogfruit (*Phyla nodiflora*).

The uplands within the proposed mitigation areas consisted of Bermuda grass (*Cynodon dactylon*), betonyleaf mistflower (*Conoclinium betonicifolium*), bushy seaside-tansy (*Borrichia frutescens*), , common threesquare (*Schoenoplectus pungens*), herb of grace (*Bacopa monnieri*), little bluestem (*Schizachyrium scoparium*), and marshhay cordgrass (*Spartina patens*).

- 5. Number of Credits to be provided the applicant proposes to:
  - A. Enhance and restore freshwater (open/emergent) habitat and function to silted in freshwater emergent detention pond via mechanical excavation and reshaping to remove silt, as well as the clearing and removal of *Typha domingensis* inundation:
    - 0.77 acres (33,624 sq.ft./ 1,089 cy) freshwater emergent habitat
  - B. Enhancements to the primary outfall ditch and small 62' lateral ditch by mechanically cutting and reshaping to remove silt, as well as placement of weir:
    - .30 acres (12,780 sq.ft./ 1,135 cy) salt marsh, freshwater emergent habitat
- 6. Mitigation Work Plan

Construction of the mitigation will be completed within twelve (12) months of construction commencement. The applicant will be responsible for mitigation construction. The applicant will excavate the mitigation area to elevations consistent with engineering drawings provided in Exhibit D (elevations have been identified by LAN Engineering). Excavated material will be stored and dewatered onsite in an upland area designated by Nueces County Coastal Parks (Exhibit E). Revegetation of the area will be via natural propagation and is expected to be maintained by the county once vegetation performance standards are met.

7. Maintenance Plan

Maintenance of the mitigation site will be the sole responsibility of the Nueces County Coastal Parks.

8. Monitoring Requirements

The applicant, in conjunction with Nueces County Coastal Parks, will conduct a post-construction survey of the mitigation area (excavated pond, primary outfall ditch and associated weir) within 60 days of completion of construction and will submit a report to the USACE that conforms to the USACE Regulatory Guidance Letter 08-03, including monitoring methodology and photographs documenting site conditions.

The applicant will also monitor annually for a period of five years or until the USACE has determined that performance standards have been achieved. After each monitoring event, the applicant will submit to the USACE a report that conforms to the USACE Regulatory Guidance Letter 08-03, including a description of monitoring methodology, results, and photographic documentation of site conditions.

9. Ecological Performance Standards

For the areas to be scraped/reshaped:

- 60 90-day post-shaping:  $\geq 15\%$  vegetative aerial coverage via natural propagation; otherwise, the USACE will determine if planting of the mitigation site is required.
- $1^{st} 2^{nd}$  year monitoring:  $\geq 30\%$  vegetative aerial coverage via natural propagation; otherwise, the USACE will determine if planting of the mitigation site is required.

- $3^{rd} 4^{th}$  year monitoring:  $\ge 70\%$  vegetative aerial coverage via natural propagation; otherwise, the USACE will determine if planting of the mitigation site is required.
- $5^{\text{th}}$  year monitoring:  $\geq 70\%$  vegetative aerial coverage via natural propagation; otherwise, the USACE will determine if planting of the mitigation site is required.

Written monitoring reports will be submitted within 45 days of either the monitoring event or the replanting effort if deemed necessary. If mitigation monitoring reports describe any difficulties of performance standards not being met, Nueces County Parks and the USACE will identify potential remedial actions including a timetable. The mitigation site will be considered to have met performance standards if there are at least two consecutive monitoring events that document 70% vegetative cover within the site.

10. Long-Term Management Plan

As stated above, enhancements will be protected in perpetuity by a deed restriction, conservation easement, or equivalent legal instrument. Long-term management of the site will be carried out by Nueces County Coastal Parks.

11. Adaptive Management Plan

If results of the enhancements made by the applicant indicate that the mitigation is not successful, the applicant will coordinate with USACE and Nueces County Coastal Parks to agree upon the appropriate course of action.

12. Financial Assurances

The applicant, Mr. Greg Moore of Moore Harkin CUD, will provide financial assurances to Nueces County Coastal Parks if necessary to ensure that sufficient funds are available for performance of the mitigation project and to provide a source of funding if mitigation is unsuccessful. To accomplish these goals, Mr. Moore will provide a Performance Bond to be attached to the USACE permit approval for the Project and made a part hereof, to provide financial assurance for the performance of all obligations, covenants, terms, conditions, and agreements required of the Permittee.

In addition, the conditions set forth in the agreement between Mr. Greg Moore of Moore Harkin CUD and the landowner, Nueces County Coastal Parks, include financial assurances that the project will be both successful and protected for the length of time decreed by the USACE.





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# Exhibit E

## **Dewater Placement Area**

