

DEPARTMENT OF THE ARMY PERMIT

Permittee Jefferson County Engineering Department

Permit No. SWG-2015-00444

Issuing Office Galveston District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**Project Description:** The applicant requests authorization to increase the fill density of 40 cubic yards of material per running foot to 50 cubic yards of material per linear foot; expand the permitted borrow area from 245 acres to 660 acres; add two new borrow areas (approximately 40 and 70 acres, respectively); place unsuitable clay into the Area of Potential Effects (APE) outside of recognized avoidance areas; add three additional staging areas; update conservation measures to use and occupy the entire project area until construction has been completed; remove the previously approved archeological monitoring plan and include modified, limited archeological surveys as a part of previously authorized Special Condition 3; and modify previously authorized Special Condition 5 to include annual bathymetric surveys of all utilized borrow areas up to 5 years after the completion of construction. The project will be conducted in accordance with the attached plans, in 7 sheets.

**Previously Authorized Project Description:** The previously authorized work involves hydraulically dredging 4.1 million cubic yards of sand from an approximately 241-acre borrow site located approximately 1.5 miles offshore of the project area and placing the material on the shoreline to reestablish 104,150 linear feet of beach/dune complex. The dredged material would arrive at the beach as a slurry of sea water and sand. Machinery on the beach would distribute the dredged material and manage the pipe location and extensions. Heavy equipment would be used to create containment dikes which would channelize the flow exiting the dredge pipe. As this flow runs along the beach, sediment would settle out within the project area and effluent would return to the ocean. As the sediment builds up in front of the pipe, heavy equipment would grade the sediment to meet the project template. The dune height would be constructed to an elevation of +8-foot North American Vertical Datum of 1988 (NAVD88). The final fill volume will average approximately 40 cubic yards per running foot of shoreline. The work includes hydraulic displacement (side casting) of a silt/clay layer (overburden) that covers a portion of the sand at the borrow site into two areas (Area A is 354.30 acres and Area B is 248.16 acres) adjacent to the borrow site.

**Project Location:** The project site includes approximately 20 miles of beach along the McFaddin National Wildlife Refuge (MNWR), a 1,021-acre strip of marsh located seaward of an existing berm, and an approximately 660-acre borrow site located approximately 1.5 miles offshore from the MNWR, in Chambers and Jefferson Counties, Texas.

**Permit Conditions:**

**General Conditions:**

1. The time limit for completing the work authorized ends on 31 December 2024. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Superseding Special Conditions:

1. The Permittee must implement and adhere to the conservation measures listed in the attached "Intra-Service Section 7 Biological Evaluation Form" dated May 5, 2019 in 18 pages (Attachment 1).
2. The permittee shall establish the Avoidance Buffers identified in figures 94, 95, 96, 97, and 98 in the technical report titled "McFaddin Beach Restoration Offshore Material Borrow Area, Cultural Resource Remote-Sensing Survey, Jefferson County, Texas, prepared by Tidewater Atlantic Research, Inc. and dated August 2015" (Attachment 2). No project work shall be allowed within Avoidance Buffers.
3. Should the Corps determine archeological monitoring is needed, they will notify the permittee in writing indicating the type of monitoring needed – limited to 1) excavation and monitoring of dredge probes, 2) monitoring of dredged material, 3) post construction cycle beach investigations, and 4) bathymetric surveys. The monitoring shall adhere to the terms and conditions described in "McFaddin Beach Restoration Project – Archeological Monitoring Plan dated October 6, 2016" (Attachment 3). The permittee shall continue the monitoring until notified in writing by the Corps that they may stop. In the event a previously unidentified cultural resource is identified, additional consultation to identify methods to avoid, minimize, or mitigate adverse effect to the site must be completed prior to continuing with the project.
4. All reports and/or notifications associated with this permit must be in writing (hard copy) and provided to the Galveston District, Regulatory Division, Compliance Branch Chief (Corps). This includes a notification being provided at least 2 weeks (but not longer than 4 weeks) before the start of dredging for each phase of the project. All elevations and depths should use NADV 88 as a reference and Mean Sea Level.
5. The permittee must conduct a bathymetric survey of the borrow sites after each phase of dredging is complete and subsequently on an annual basis for 5 years following construction completion. The permittee is required to survey the borrow site within one month of the completion of dredging for each dredging phase. The permittee is required to conduct a minimum of one bathymetric survey every 12 months for 5 years. The survey area must be large enough to capture the full footprint of all areas dredged by the current and previous phases and must be large enough to capture any sloughing that may occur around the perimeter of the borrow sites. Within 2 months of taking the data, the permittee must submit the results of each bathymetric survey to the Corps in a report that compares the newly acquired data to all previous surveys. The permittee must use the pre-project survey that was submitted with Permit application in the report, as the baseline. After a minimum of 24 months (with at least 2 bathymetric surveys conducted) from the final dredge phase at the borrow site, the applicant may request for the Corps to consider extending the requirement for bathymetric surveys to once every 24 months for 5 years. The Corps will respond to writing to the permittee's request to increase the requirement from a 12-month interval to a 24-month interval.
6. The permittee must sample the borrow sites and a nearby reference site (similarly situated to the borrow site, within 2 miles of the borrow site, must be far enough away from the borrow site to not be directly affected by the dredge plume), recording, at a minimum, 1) the location of the sample site (GPS coordinates in accordance with the Corps' SOP), 2) the overall water depth at the sample site, 3) the depth at which the sample was taken, 4) the temperature of the water, 5) the dissolved oxygen content, and 6) the salinity of the water at sample site and depth. The sampling at each location must include measurements of the variables measured at 2-meter intervals from the surface to the bottom, to include a sample within 1-meter of the surface and one sample within 1-meter of the bottom. This sampling must occur within 2 weeks prior to the start of each dredge phase and subsequently on a biannual basis until the borrow site is determined by the Corps to have returned to pre-construction contours. One of the biannual samples must be taken each year in August or September and the other in February or March. For the post-dredging, biannual surveys, the permittee must sample the deepest portion of the borrow area. The results of this sampling must be submitted to the Corps in annual report which must be received by the 1<sup>st</sup> of November each year, and must include the August/September data for that year. The Corps may require additional sampling if the Corps determines it to be necessary. If problems with the sampling variables are identified and the Corps attributes them to the permittee's work, the permittee will be required to submit a plan to the Corps, for approval, to address and/or resolve the problems. After a minimum of two years of biannual sampling data has been collected, beyond the final phase of dredging at the borrow site, the permittee may request for the Corps to consider removing this sampling requirement from the permit. The Corps will respond in writing to the permittee's request to remove this sampling requirement.

7. The permittee must conduct surveys of the beach area, each phase of dredging must contain a pre-dredge survey (no more than a month before the start of the dredge phase), an immediate post-dredge survey, a survey after the beach profile has stabilized and lost its fines, and a subsequent annual survey. The profiles shall include uninterrupted data points from the dune vegetation line, seaward to -3 m MSL. The annual survey should be done at the same time of year as the annual bathymetric survey described in Special Condition 6. The results of the beach must be sent to the Corps with the bathymetric survey reports required in Special Condition 6. At a minimum, all of the surveys must capture the extent of the shoreline at McFaddin Beach, shown in the project plans. The Corps may require additional surveys if the Corps determines it to be necessary. If the Corps or permittee identifies erosional hotspots that are attributed to the project, the permittee will be required to submit a plan to the Corps, for approval, to address and/or resolve these problems. After a minimum of 24 months (with at least 2 beach surveys conducted) from the final dredge phase at the borrow site, the applicant may request for the Corps to consider removing the requirement for beach surveys. The Corps will respond in writing to the permittee's request to remove the beach survey requirement.

8. The permittee understands and agrees that if future operations by the United States require the removal, relocation or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate or alter the structural work or obstructions caused thereby without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

Section 404 of the Clean Water Act (33 U.S.C. 1344).

Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.


6. Extensions. General Condition I establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

  
 \_\_\_\_\_  
 (PERMITTEE)  
**JEFFERSON COUNTY ENGINEERING DEPARTMENT**

  
 \_\_\_\_\_  
 (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

  
 \_\_\_\_\_  
 (DISTRICT ENGINEER)  
**KRISTI N. MCMILLAN**  
**LEADER, CENTRAL EVALUATION UNIT**  
**FOR COLONEL TIMOTHY R. VAIL**

  
 \_\_\_\_\_  
 (DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

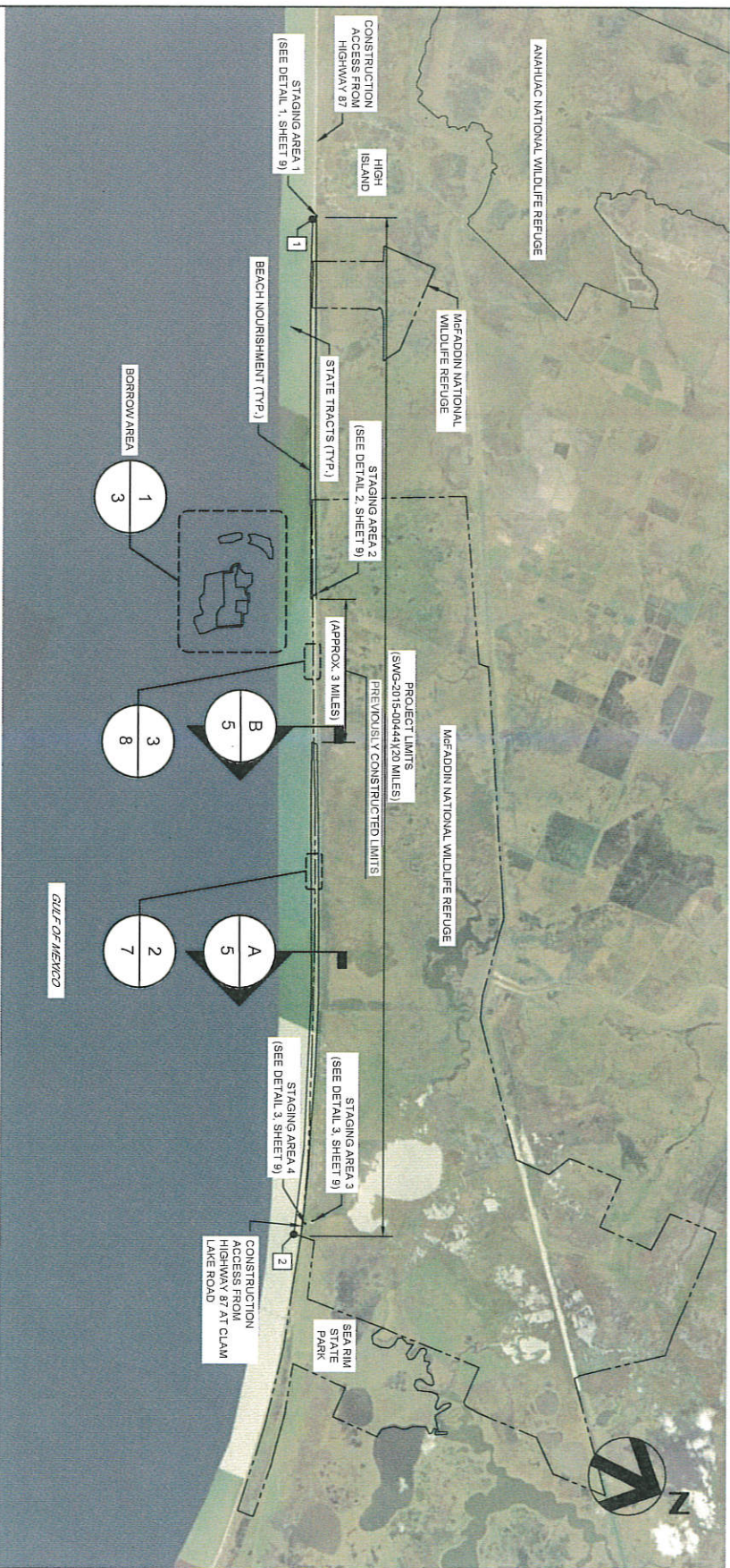
\_\_\_\_\_  
 (TRANSFeree – Typed/Printed Name)

\_\_\_\_\_  
 (DATE)

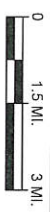
\_\_\_\_\_  
 (TRANSFeree - Signature)

\_\_\_\_\_  
 (Mailing Address)





**PROJECT SITE MAP**



APPROXIMATE PROJECT LIMITS			
POINT NO.	LATITUDE	LONGITUDE	
1	N029.55554746	W094.38965076	
2	N029.66606029	W094.08905734	

NOTE:  
1. AERIAL PHOTOGRAPH WAS OBTAINED FROM DIGITALGLOBE SERVICES VIA ESRI'S ARCGIS ONLINE DATED FEBRUARY 2017.



HJR  
Texas P.E. Firm  
Registration No. F-754

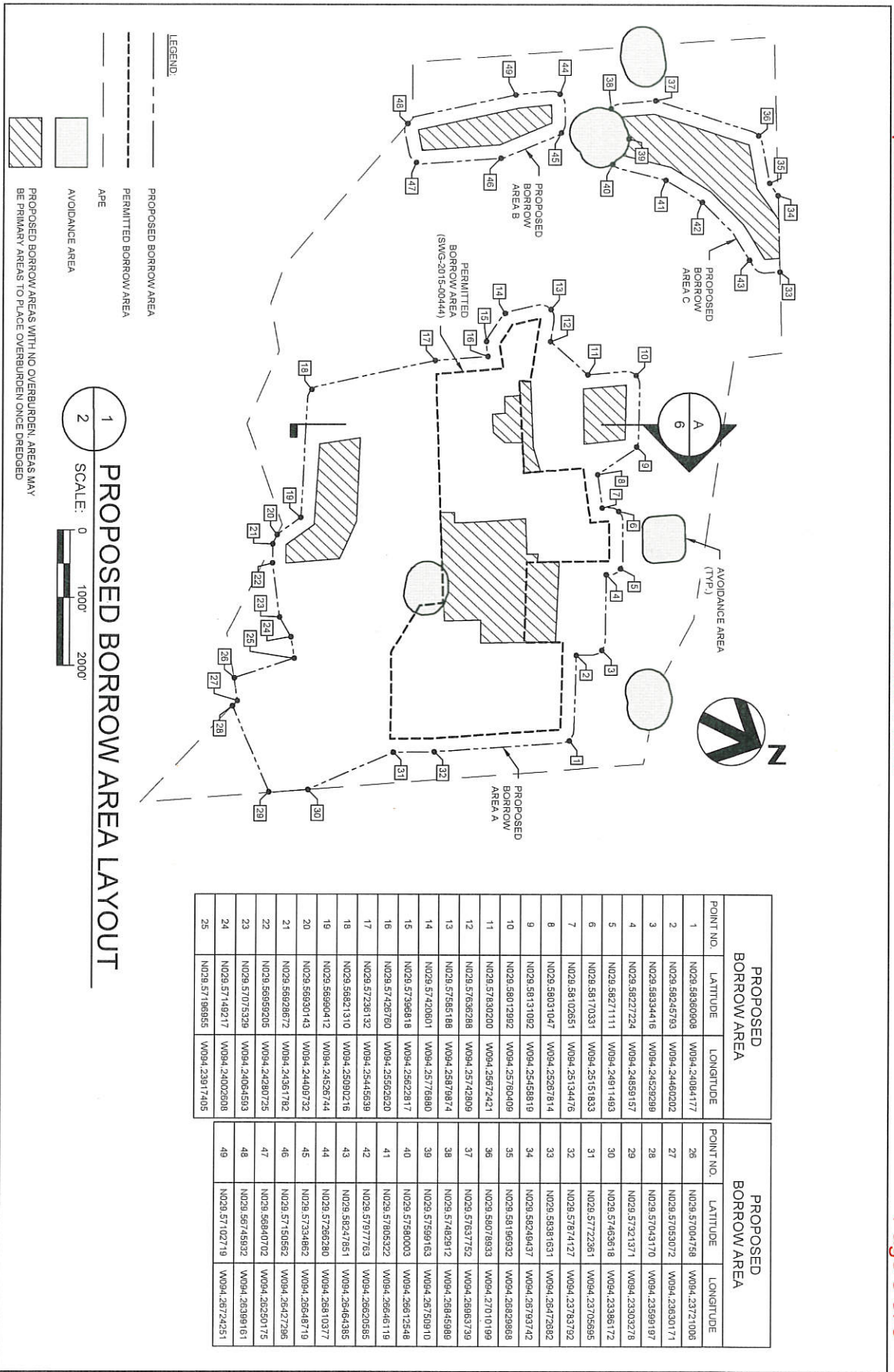
ACTIVITY: McFADDIN BEACH RIDGE RESTORATION & NOURISHMENT - SWG-2015-00444  
 APPLICANT: JEFFERSON COUNTY  
 1149 PEAL STREET, BEAUMONT, TX. 77701  
 DATE: 09/12/2019

HDR PROJECT NO: 10100488  
 DATUM: NAD 83  
 REV. DATE:  
 SHEET 2 OF 9

FOR GOE USE ONLY  
 PERMIT APPLICATION NO.:

APPLICANT NAME: \_\_\_\_\_  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_

THIS DOCUMENT IS RELEASED ONLY FOR THE PURPOSE OF PERMITTING UNDER THE AUTHORITY OF PHILIP J. BLACKMAR, P.E., LICENCE NO. 126679 ON 09/12/2019. IT IS NOT TO BE USED FOR CONSTRUCTION OR BIDDING PURPOSES.



PROPOSED BORROW AREA			PROPOSED BORROW AREA		
POINT NO.	LATITUDE	LONGITUDE	POINT NO.	LATITUDE	LONGITUDE
1	N029.56960008	W094.24094177	26	N029.57004758	W094.23721006
2	N029.56245793	W094.24460202	27	N029.57003072	W094.23630171
3	N029.56934416	W094.24462999	28	N029.57043170	W094.23669197
4	N029.56927224	W094.244659157	29	N029.57321371	W094.23303278
5	N029.56271111	W094.24611493	30	N029.57463018	W094.23365172
6	N029.56170331	W094.25151833	31	N029.57722351	W094.23705695
7	N029.56102651	W094.25134476	32	N029.57874127	W094.23783792
8	N029.56031047	W094.25456819	33	N029.58381631	W094.26472662
9	N029.56131002	W094.25456819	34	N029.58249437	W094.26793742
10	N029.56012982	W094.25760409	35	N029.58196632	W094.26829668
11	N029.57892020	W094.25872421	36	N029.58078633	W094.27010199
12	N029.57636298	W094.25742809	37	N029.57637752	W094.26965729
13	N029.57565188	W094.25679874	38	N029.57462912	W094.26846589
14	N029.57420801	W094.25776880	39	N029.57569163	W094.26759910
15	N029.57396818	W094.25622817	40	N029.57560003	W094.26912548
16	N029.57426760	W094.25502620	41	N029.57805322	W094.26646119
17	N029.57236132	W094.25445639	42	N029.57977763	W094.26262055
18	N029.56821310	W094.25090216	43	N029.58247851	W094.26164385
19	N029.56890412	W094.24628744	44	N029.57260280	W094.26310377
20	N029.56693043	W094.24409732	45	N029.57334982	W094.26548719
21	N029.56928672	W094.24361782	46	N029.57150662	W094.26427286
22	N029.56959205	W094.24280725	47	N029.56840702	W094.26290175
23	N029.57075329	W094.24064593	48	N029.56745932	W094.26398161
24	N029.57149217	W094.24002608	49	N029.57102719	W094.26724251
25	N029.57198665	W094.23817405			

PROPOSED BORROW AREA LAYOUT

SCALE: 0 1000' 2000'

- PROPOSED BORROW AREA
- PERMITTED BORROW AREA
- AOE
- AVOIDANCE AREA

PROPOSED BORROW AREAS WITH NO OVERBURDEN, AREAS MAY BE PRIMARY AREAS TO PLACE OVERBURDEN ONCE DREDGED



Texas P. E. Firm  
Registration No. F-754

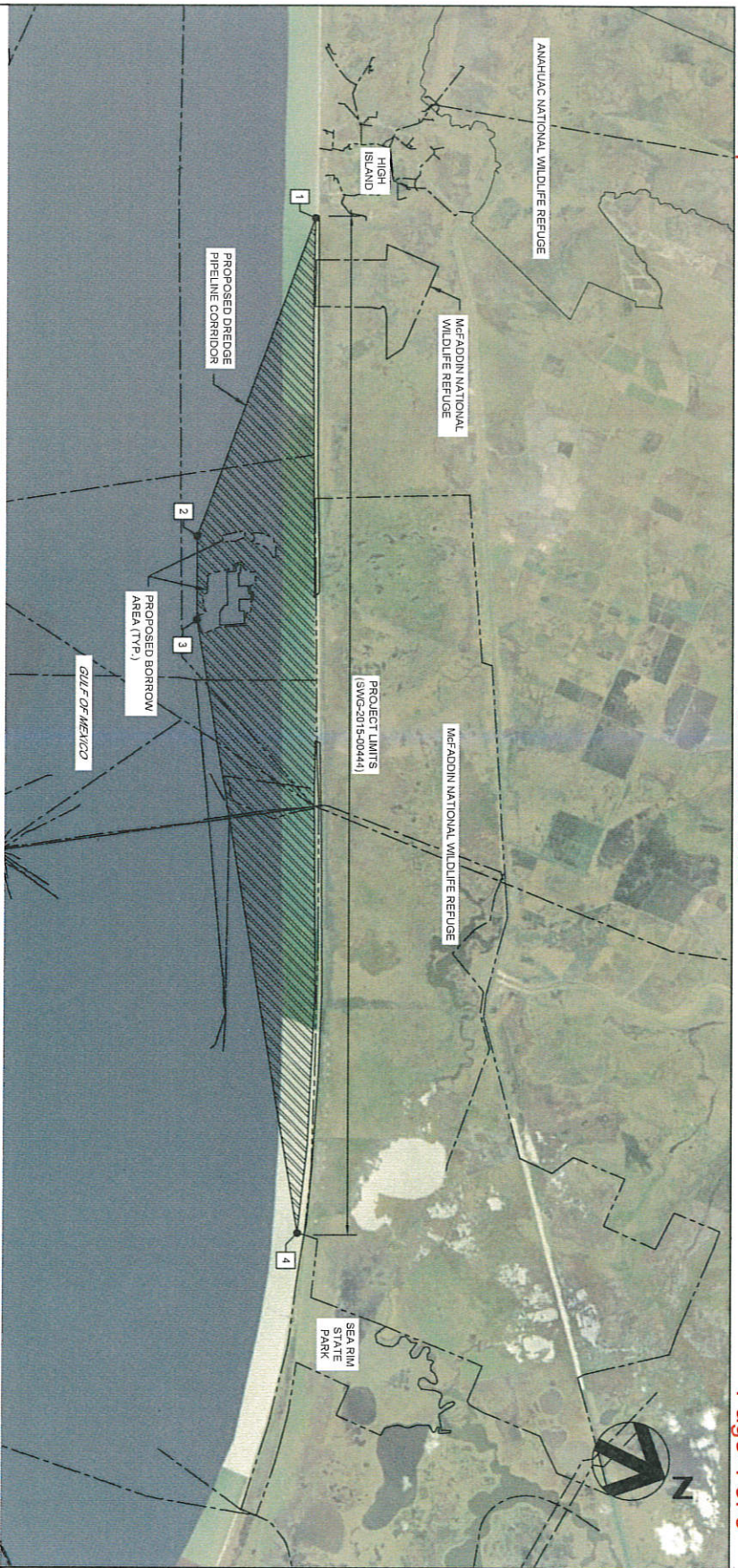
ACTIVITY: McFADDIN BEACH RIDGE RESTORATION & NOURISHMENT - SWG-2015-00444  
 APPLICANT: JEFFERSON COUNTY  
 1149 PEAL STREET, BEAUMONT, TX. 77701  
 DATE: 09/12/2019

HDR PROJECT NO: 10100488  
 DATUM: NAD 83  
 REV. DATE:  
 SHEET 3 OF 9

FOR COE USE ONLY

PERMIT APPLICATION NO:  
 APPLICANT NAME:  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_



THIS DOCUMENT IS RELEASED ONLY FOR THE PURPOSE OF PERMITTING UNDER THE AUTHORITY OF PHILIP J. BLACKWATER, P.E., LICENSE NO. 126679 ON 09/12/2019. IT IS NOT TO BE USED FOR CONSTRUCTION OR BIDDING PURPOSES.



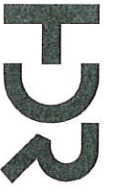
**PROPOSED PIPELINE CORRIDOR**



POINT NO.	LATITUDE	LONGITUDE
1	N029.55554746	W094.36955075
2	N029.56098037	W094.28078035
3	N029.57043170	W094.23599197
4	N029.66060529	W094.06905734

**LEGEND:**  
 PROPOSED DREDGE PIPELINE CORRIDOR  
 EXISTING OIL & GAS PIPELINES (THRC DATABASE 2013)

**NOTE:**  
 1. AERIAL PHOTOGRAPHY WAS OBTAINED FROM DIGITALGLOBE SERVICES VIA ESRI'S ARCGIS ONLINE DATA FERRYWAY 2017.



Texas P. E. Firm  
 Registration No. F-754

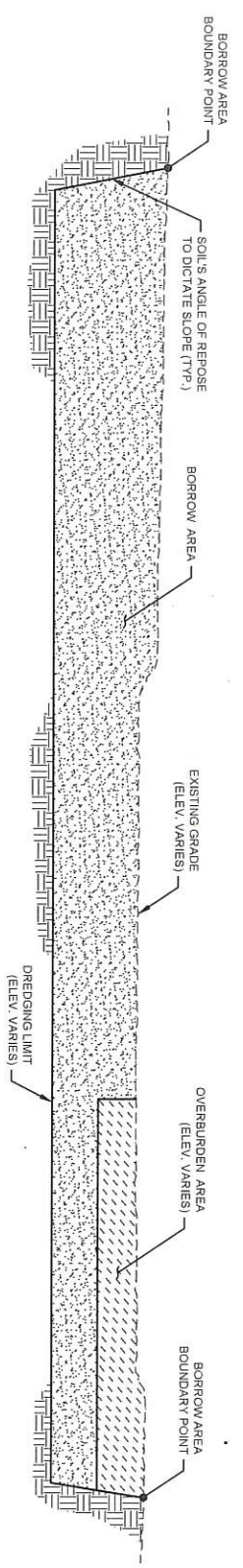
ACTIVITY: McFADDIN BEACH RIDGE RESTORATION & NOURISHMENT - SWG-2015-00444  
 APPLICANT: JEFFERSON COUNTY  
 1149 PEAL STREET, BEAUMONT, TX. 77701  
 DATE: 09/12/2019

HDR PROJECT NO: 10100488  
 DATUM: NAD 83  
 REV. DATE:  
 SHEET 4 OF 9

FOR COE USE ONLY  
 PERMIT APPLICATION NO.: \_\_\_\_\_  
 APPLICANT NAME: \_\_\_\_\_  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 THIS DOCUMENT IS RELEASED ONLY FOR THE PURPOSE OF PERMITTING UNDER THE AUTHORITY OF PHILIP J. BLACKMAR, P.E., LICENSE NO. 128679 ON 09/12/2019. IT IS NOT TO BE USED FOR CONSTRUCTION OR BIDDING PURPOSES.







A  
 3  
 TYPICAL SECTION - PROPOSED BORROW AREA  
 N.T.S.



Texas P.E. Firm  
 Registration No. F-754

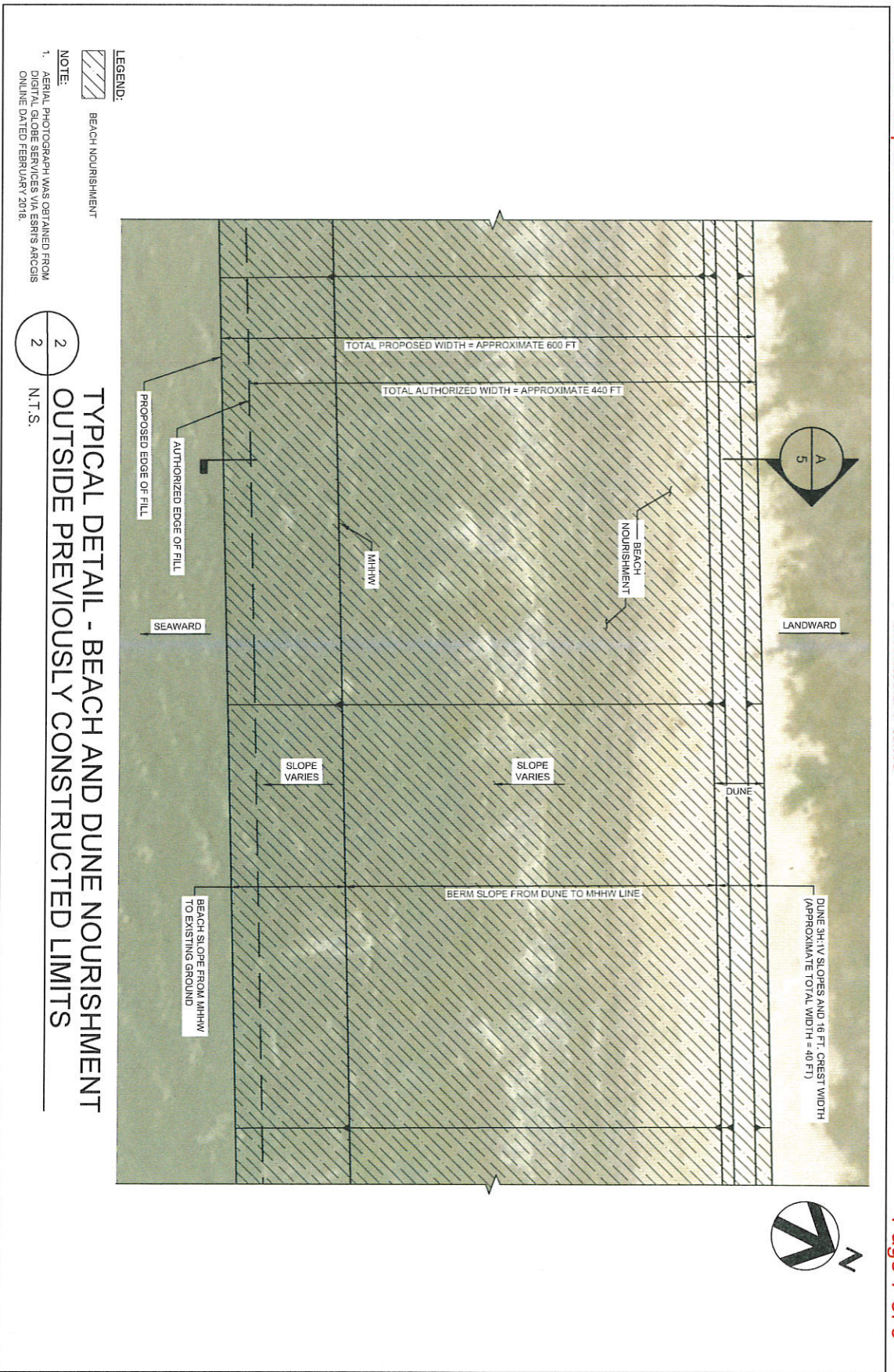
ACTIVITY: McFADDIN BEACH RIDGE RESTORATION  
 & NOURISHMENT - SWG-2015-00444  
 APPLICANT: JEFFERSON COUNTY  
 1149 PEAL STREET, BEAUMONT, TX. 77701  
 DATE: 09/12/2019

HDR PROJECT NO: 10100488  
 DATUM: NAD 83  
 REV. DATE:  
 SHEET 6 OF 9

FOR GOE USE ONLY

PERMIT APPLICATION NO.: \_\_\_\_\_  
 APPLICANT NAME: \_\_\_\_\_  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_

THIS DOCUMENT IS RELEASED ONLY FOR THE  
 PURPOSE OF PERMITTING UNDER THE  
 AUTHORITY OF PHILIP J. BLACKMAR, P.E., LICENCE  
 NO. 126679 ON 09/12/2019. IT IS NOT TO BE USED  
 FOR CONSTRUCTION OR BIDDING PURPOSES.



**LEGEND:**  
 BEACH NOURISHMENT

**NOTE:**  
 1. AERIAL PHOTOGRAPH WAS OBTAINED FROM DIGITAL GLOBE SERVICES VIA ESRI'S ARCGIS ONLINE DATED FEBRUARY 2018.

2  
 2 N.T.S.  
**TYPICAL DETAIL - BEACH AND DUNE NOURISHMENT  
 OUTSIDE PREVIOUSLY CONSTRUCTED LIMITS**

**HDR**  
 Texas P.E. Firm  
 Registration No. F-754

ACTIVITY: McFADDIN BEACH RIDGE RESTORATION  
 & NOURISHMENT - SWG-2015-00444

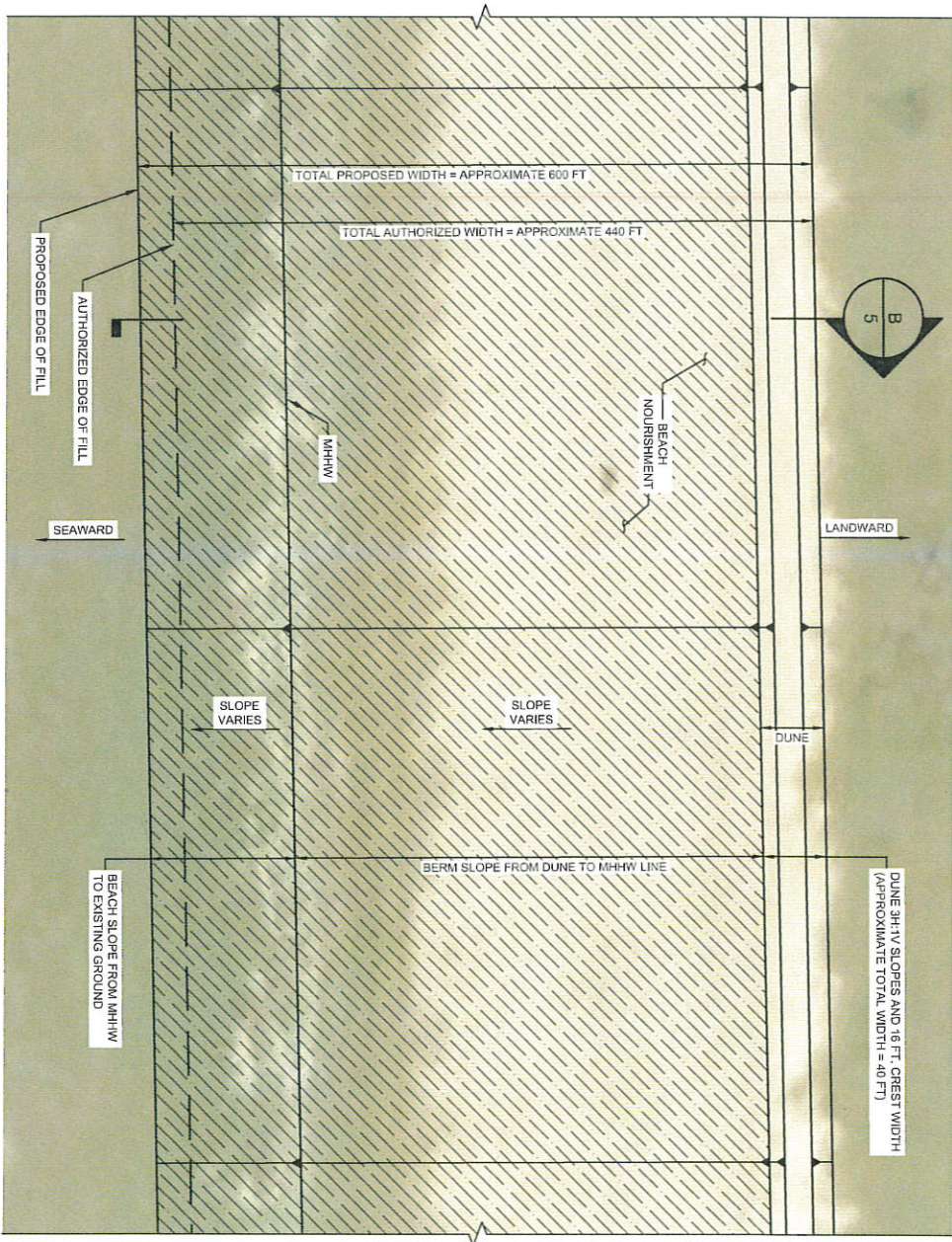
APPLICANT: JEFFERSON COUNTY  
 1149 PEAL STREET, BEAUMONT, TX. 77701

DATE: 09/12/2019

HDR PROJECT NO: 10100488  
 DATUM: NAD 83  
 REV. DATE:  
 SHEET 7 OF 9

FOR COE USE ONLY  
 PERMIT APPLICATION NO.:  
 APPLICANT NAME:  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_

THIS DOCUMENT IS RELEASED ONLY FOR THE PURPOSE OF PERMITTING UNDER THE AUTHORITY OF PHILIP J. BLACKMAR, P.E., LICENCE NO. 126679 ON 09/12/2019. IT IS NOT TO BE USED FOR CONSTRUCTION OR BIDDING PURPOSES.



**LEGEND:**  
 BEACH NOURISHMENT

**NOTE:**  
 1. AERIAL PHOTOGRAPH WAS OBTAINED FROM DIGITAL GLOBE SERVICES VIA ESRI'S ARCGIS ONLINE DATED FEBRUARY 2018.

3  
 2  
 N.T.S.

**TYPICAL DETAIL - BEACH AND DUNE NOURISHMENT  
 WITHIN PREVIOUSLY CONSTRUCTED LIMITS**



Texas P.E. Firm  
 Registration No. F-754

**ACTIVITY:** McFADDIN BEACH RIDGE RESTORATION  
 & NOURISHMENT - SWG-2015-00444

**APPLICANT:** JEFFERSON COUNTY  
 1149 PEAL STREET, BEAUMONT, TX. 77701

**DATE:** 09/12/2019

**HDR PROJECT NO:** 10100488

**DATUM:** NAD 83

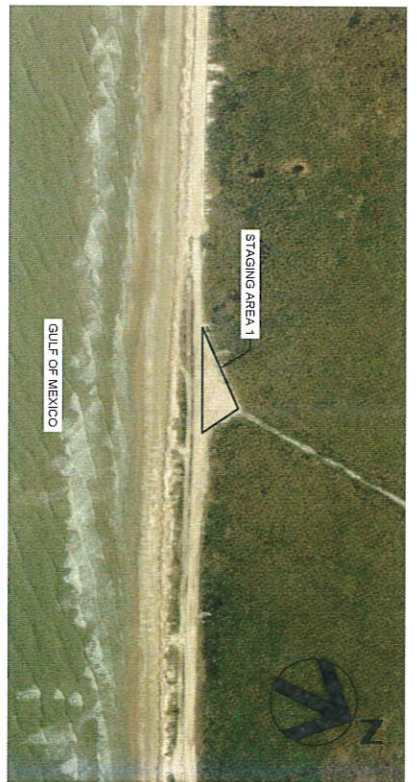
**REV. DATE:**

**SHEET 8 OF 9**

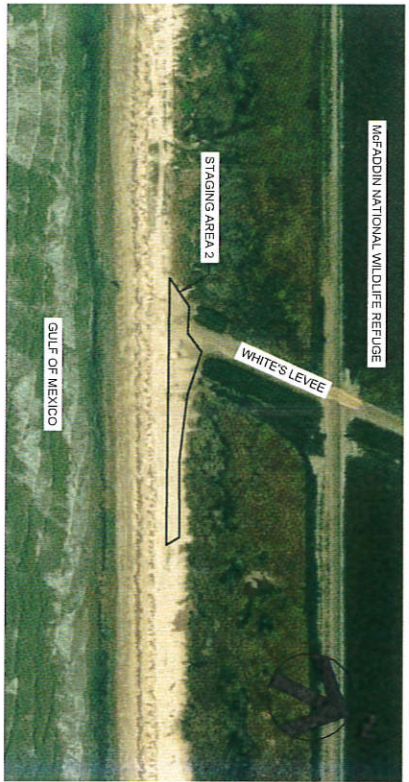
FOR GOE USE ONLY

PERMIT APPLICATION NO.: \_\_\_\_\_  
 APPLICANT NAME: \_\_\_\_\_  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_

THIS DOCUMENT IS RELEASED ONLY FOR THE  
 PURPOSE OF PERMITTING UNDER THE  
 AUTHORITY OF PHILIP J. BLACKMAR, P.E., LICENCE  
 NO. 126679 ON 09/12/2019. IT IS NOT TO BE USED  
 FOR CONSTRUCTION OR BIDDING PURPOSES.



1  
2  
STAGING AREA 1  
N.T.S.



2  
2  
STAGING AREA 2  
N.T.S.



3  
2  
STAGING AREA 3 AND 4  
N.T.S.



Texas P.E. Firm  
 Registration No. F-754

ACTIVITY: McFADDIN BEACH RIDGE RESTORATION  
 & NOURISHMENT - SWG-2015-00444  
 APPLICANT: JEFFERSON COUNTY  
 1149 PEAL STREET, BEAUMONT, TX. 77701  
 DATE: 09/12/2019

HDR PROJECT NO: 10100488  
 DATUM: NAD 83  
 REV. DATE:  
 SHEET 9 OF 9

FOR COE USE ONLY

PERMIT APPLICATION NO.:

APPLICANT NAME:

SHEET \_\_\_\_\_ OF \_\_\_\_\_

THIS DOCUMENT IS RELEASED ONLY FOR THE  
 PURPOSE OF PERMITTING UNDER THE  
 AUTHORITY OF PHILIP J. BLACKMAR, P.E., LICENCE  
 NO. 126679 ON 09/12/2019. IT IS NOT TO BE USED  
 FOR CONSTRUCTION OR BIDDING PURPOSES.

**INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM**

Originating Person: Douglas Head  
Telephone Number: 409-971-2909  
Date: 5 May 2019

**I. Region: Region 2**

**II. Service Activity (Program):** Refuges: Proposed construction to nourish an approximate 20-mile stretch of shoreline to restore the degraded dune ridge via U.S. Department of the Army Corps of Engineers (Corps) permit SWG-2015-00444. The proposed project will reduce the frequency and extent of sea water inundation of interior fresh water marshes located within McFaddin National Wildlife Refuge (NWR), arrest shoreline retreat along the McFaddin coastline, and restore historic, native beach habitat. The proposed project will also provide improved beach profiles as well as protecting interior marshlands. The U.S. Fish and Wildlife Service (Service) and National Marine Fisheries Service (NMFS) entered into a Memorandum of Understanding (1974) defining their respective roles in the administration of marine turtles. NMFS has sole responsibility over sea turtles when in a marine environment and the Service has sole jurisdiction over sea turtles when on land. Therefore, this document addresses only the Service's concerns regarding marine turtles and other wildlife under its jurisdiction.

**III. Pertinent Species and Habitat:****A. Listed species and/or their critical habitat within the action area:**

Green sea turtle (*Chelonia mydas*)  
Hawksbill sea turtle (*Eretmochelys imbricate*)  
Kemp's ridley sea turtle (*Lepidochelys kempii*)  
Leatherback sea turtle (*Dermochelys coriacea*)  
Loggerhead sea turtle (*Caretta caretta*)  
Piping Plover (*Charadrius melodus*)  
Red Knot (*Calidris canutus rufa*)  
West Indian Manatee (*Trichechus manatus*)

**B. Proposed species and/or proposed critical habitat within the action area:**

Eastern Black Rail (*Laterallus jamaicensis jamaicensis*)

**C. Candidate species within the action area: None****IV. Geographic area or station name and action:**

**Station:** McFaddin NWR, Jefferson County, Texas

**Action:** Nourish a 20-mile stretch of shoreline to restore the degraded dune ridge, thus reducing the frequency and extent of sea water inundation of interior fresh water marshes located in McFaddin NWR, Sabine Pass, Texas via beach erosion of adjacent State of Texas lands.

**V. Location (attach map):** Included as Attachment 1

**A. Ecoregion Number and Name:** Gulf Coast.

**B. County and State:** Jefferson and Chambers Counties, Texas.

**C. Section, township, and range (or latitude and longitude):**

29.648077 lat /-94.138454 long, along the previous Highway 87 route, from nearshore Gulf waters. Additionally, the nourishment site is located within the Chenier Plain of southeast Texas, extending from the Sea Rim State Park boundary, west of Sabine Pass, to the Chambers- Galveston County line.

**D. Distance (miles) and direction to nearest town:** Located along SH 87 in southeast Texas, near the Louisiana border. McFaddin NWR lies approximately 15 miles south of Port Arthur, 90 miles east of Houston, and 12 miles west of Sabine Pass. McFaddin NWR is bounded on the south by the Gulf of Mexico, on the east by Texas Parks and Wildlife Department (TPWD) Property and private land, on the west by private land near High Island, and both the GIWW and private property to the north.

**E. Species/habitat occurrence:** Ranges for listed species include Jefferson and Chambers County and are mostly tied specifically to the beach area. Piping plovers have been seen using the beach area on the eastern most three miles of the project, as well as mud flat areas along the GIWW. Mud flats are several miles interior of the beach area.

**VI. Description of proposed action:**

The proposed action will restore the Chenier beach ridge, delay shoreline retreat, and prevent breaching of the beach ridge by reducing the frequency and extent of sea water inundation to the interior marshes under normal tidal conditions for decades to come. The resulting project is a combination of the preferred alternatives for beach ridge restoration measure, material source, and delivery method, as evaluated in the Environmental Assessment (EA) titled Beach Ridge Restoration on McFaddin National Wildlife Refuge, completed in compliance to the National Environmental Policy Act (NEPA) in February of 2016. The project can be described as re-building of the dune line and beach face with material similar to its native sand from a source outside the NWR. This results in a re-creation of historic dune heights and beach widths necessary for reducing shoreline retreat and protecting sensitive inland marshes.

The proposed action involves dredging sand sediments from an offshore borrow area by using a cutter-head dredge and transferring it to the shore via a submerged pipeline. This is done by lowering a rotating cutter-head, attached to a suction pipe, to the seafloor. Material entering the pipe passes through the dredge pump(s) and is transported via pipeline to the shoreline. To remove material, the dredge (and rigid suction pipe) will swing side to side by applying tension on mooring wires affixed to anchors. As material is depleted, the dredge will progress forward

potentially using a combination of spuds, mooring wires, and tender tugs. Depending upon the distance to the temporary construction area(s), booster pumps may be required.

Once onshore, the material would be pumped along the shoreline via pipeline, located seaward of the vegetation line, to the local construction areas where it will be dispersed and graded to the required construction template with heavy equipment. This onshore pipeline will be built as needed and left in place until the project is complete or until a more efficient route of the underwater pipe is located.

Heavy equipment operators will create temporary earthen containment dikes, which will channelize the flow exiting the dredge pipe. As this flow runs along the beach, sediment will settle out within the project template and effluent will return to the ocean. As sediment builds up in front of the pipe, heavy equipment will grade the sediment to meet the project template. This may be done using grade markers which are set by survey personnel for guidance. This is a continuous process interrupted only by the need to shut down due to dredge maintenance, re-positioning, equipment refueling, adding/removing shoreline pipe, or an emergency. Constant communication is required between shore-crew, dredge crew, and potential booster pump operators.

This alternative was selected based on low impacts of all criteria evaluated. This method is the only one that does not require construction of temporary roads which could permanently impact habitats within the Refuge. Construction, engineering representatives, and refuge management staff will meet periodically to discuss work completed, work to be completed, issues identified, clarifications/directions, etc. Designated environmental monitors will survey the immediate project area, a 100-ft buffer zone, and access routes daily as deemed necessary by the presence of and/or likely presence of threatened and endangered species. Environmental monitors will be in contact with refuge staff to determine this likelihood based on past surveys and current habitat availability. Environmental monitors will be responsible for communication and reporting of endangered species issues during construction. Disturbance effects to the local environment would be localized to construction zones and temporary. Best management practices will be in place to help avoid effects to any threatened and endangered species. These efforts based on conservation measures employed would minimize any disturbance should it occur.

The project site includes both McFaddin NWR lands and adjacent state-owned public beach south of the refuge. During construction periods, the active construction areas will be closed to the public. Active construction areas will be the immediate work area within one mile of where the pumped sand is actively hitting the shoreline. To ensure public safety, these closures will temporarily prevent through traffic on the active construction area of the beach from either the east or west refuge entrances. Active construction areas will move within the seventeen mile construction zone as the project progresses. Off-road access into the sensitive wetland areas of McFaddin NWR for the purpose of avoiding temporary construction closures is not permitted.



The proposed action will conserve one of the largest freshwater marshes on the Texas Coast, along with thousands of acres of intermediate to brackish marsh. McFaddin NWR supplies important feeding and resting habitat for migrating and wintering populations of waterfowl. Meeting the habitat needs of McFaddin NWR's diversity of wetland dependent resident and migratory birds requires maintaining a range of coastal marsh habitat types and sequential stages of the plant community within these marsh types. Providing freshwater inflows and restricting saltwater intrusion are critical to maintaining the Chenier Plain's historic continuum of fresh, intermediate, and brackish marshes. Habitat values for waterfowl, shorebirds and many wading bird species are greatly enhanced in intermediate marshes with early successional plant communities containing several perennial and annual plant species (primarily grasses and sedges) that provide important food resources.

McFaddin NWR is part of the Salt Bayou ecosystem, the largest contiguous estuarine marsh complex in Texas. This ecosystem is approximately 139,000 acres in size within a Chenier Plain landscape that includes freshwater to estuarine marsh, coastal prairie grasslands, tidal flats, creeks and basins and associated aquatic vegetation. This diversity of communities creates a very productive complex for an array of fish and wildlife resources. In May 2013, the Salt Bayou Working Group, comprised of Federal, State, County level government representatives, and wetland conservation Non-Government Organizations (NGOs) completed the Salt Bayou Watershed Restoration Plan. This plan reflected the technical stakeholder group's understanding and knowledge of this ecosystem, as well as consensus on a strategy to collectively improve conditions in the Salt Bayou system. Through scrutiny of the entire watershed, the workgroup studied existing and emerging alterations to the watershed that have the ability to drastically change the hydrologic and biological characteristics of the marshes. These alterations, human-induced and natural changes to hydrology, have altered the historic hydrologic pattern either by reducing the amount of freshwater entering the system or by increasing the amount of saltwater entering the system. These changes to the hydrologic pattern not only create widespread and continuous impacts, but are a major driver of land loss and loss of elevation within the emergent marsh. Saltwater now enters from at least two major locations within the watershed where historically it had not. Without adequately addressing all of the actual and potential alterations to the hydrologic flows into the watershed, we expect marsh loss will continue at an accelerating rate.

Historically, the beach ridge prevented Gulf seawater from directly entering the marshes within what is now McFaddin NWR under all but storm tides. After Hurricane Ike, water from the Gulf of Mexico overtops the eroded ridge several times a year and directly impacts thousands of acres of fresh to intermediate marsh and submerged aquatic vegetation with each overtopping event. A temporary solution was placed to stop degradation of habitat conditions in 2015. This exposed clay core berm has no engineered capacity to survive direct exposure to wave action. The placement of sand into the system is essential to protect the marsh in the long term and allow normal deposition of sand materials to "heal" breaches in the sand ridge. This project will

extend protection of marsh protection beyond 25 years. The high rate of shoreline erosion along this stretch of coast makes rebuilding a stable ridge difficult and expensive. However, without addressing this source of salt water intrusion the loss of marsh between the current shoreline and GIWW is imminent. In response to this finding, the workgroup recommends restoring the degraded beach ridge from High Island to Sabine Pass.

The major elements of the proposed beach restoration are well documented in a significant engineering analysis performed by Jefferson County using federal Coastal Impact Assistance Program funds appropriated in 2001. In addition, the U.S. Army Corps of Engineers (Corps) actively studied the McFaddin NWR coast, in partnership with Jefferson County, between 2001 and 2009, as part of a feasibility study for erosion response. In 2003, the Corps constructed a demonstration project on a test section of McFaddin NWR beach. The test project imported sand and created beach and dunes ultimately providing valuable performance data used during the formulation and evaluation of the proposed project.

The proposed action will also re-create lost dune and beach habitat, as well as return needed sediments to the near shore system. Effects to the shoreline environment would be localized and temporary. We do not expect any adverse effects to any threatened and endangered species or their habitats by employing specified conservation measures listed below.

## **VII. Determination of effects:**

### **Explanation of effects of the action on species and critical habitats in items III:**

#### **Sea Turtles**

Three species of sea turtles, the Kemp's ridley, leatherback, and hawksbill are Federally-listed as endangered, and two species, the loggerhead and green sea turtles, are Federally-listed as threatened. All five species occur in the region's nearshore Gulf waters, and the Kemp's ridley, loggerhead, and green sea turtles can be found in shallow bays typical of East Galveston Bay adjacent to the neighboring Anahuac NWR. Because of their Gulf water habitat and the rare occasion of a stranding, no long-term impacts to sea turtles are expected from the completion of this project. Beach nourishment, as an engineered solution to beach erosion, can provide habitat for sea turtles in areas that otherwise have little to no existing habitat and positive impacts are expected from reconstruction of the beach ridge. The area to be re-nourished does not currently contain suitable nesting habitat for sea turtles; however, once complete, the project will create approximately 20 miles of restored dunes and sandy beach, potentially resulting in suitable nesting habitat.

In most areas current beach conditions are not suitable for sea turtle nesting due to the lack of sand to create a dune ridge capable of keeping nests above high tide. While an occasional turtle

might strand itself on the beach due to health or weather related reasons, there have been no documented turtle nesting attempts on McFaddin Beach since Hurricane Ike in 2008. The beach will be nourished by placing a slurry mixture of sand and water into the designated area. The slurry will naturally de-water over time as the weight compresses the sand. Equipment is used to shape the dunes and beach, and will be concentrated in the immediate construction area where the slurry mix is being pumped. Once the pumped sandy material is graded, piping and equipment will be moved to continue the re-nourishment process. There may be occasional movement of heavy equipment to accommodate repairs and laying additional pipe outside the active construction area, but all activity will remain within the construction zone. Given that equipment will only be in the immediate area for a short time and actual slurry material does not provide suitable nesting habitat, interaction between construction equipment and nesting sea turtles is not expected. Nourishment techniques themselves will not pose negative impacts to sea turtles due to a little presence of suitable nesting habitat.

While finding a sea turtle on McFaddin Beach would be unusual, it is possible they could occur there due to stranding in sargassum, washing ashore when sick/injured or coming ashore to nest. Impacts on sea turtles will be minimized by implementing the conservation measures listed below. The current nourishment design with mild beach face slopes would provide improved availability and accessibility for future nesting sea turtles. The long term beneficial effects of project construction will outweigh any negative effects within the construction zone, which are expected to be minimal to none at all.

We have analyzed the effects of the proposed action on the five species of sea turtles and believe the project will have no negative effects that will produce long term impacts to sea turtles due to the limited presence of current nesting habitat, implementation of conservation measures outlined below, and the presence of environmental monitors for the duration of the project. There may be positive long term impacts from the recreation of sand dunes that could provide adequate habitat for future nesting.

### **Piping Plovers**

Piping plovers, a federally-listed threatened species, occur along the Texas Gulf Coast in large wintering populations. Piping plovers are normally only observed in small numbers wintering on the beaches of McFaddin NWR between July and May. Population surveys on the refuge consist of two types, an annual full beach survey that includes the entire proposed beach and a monthly survey that is done on select preferred habitat areas. The annual survey route is conducted during the middle of the piping plover wintering season on the Texas Gulf Coast (November), at low tide, and runs the entire length of the beach in the proposed area. Bi-monthly surveys have been conducted on two main areas, one on the east end of the route and one on the west end of the route. These surveys are conducted from July-April. Results from Dec 2014-April 2016 show an average of 9 piping plovers per survey, with only one piping plover recorded west of Perkins levee. There are no records to date of nesting piping plovers on the Refuge Complex. Critical Habitat has been designated for wintering piping plovers in Texas; however, it is located

on Bolivar Peninsula, approximately 8 miles west of the west refuge boundary. No long-term adverse impacts to piping plover are expected from beach nourishment activities associated with this project. Similar habitat is abundant in the area and no loss of species diversity or abundance is likely due to current disturbance levels associated with public use on the beach. Short term impacts may occur from disturbance, associated with increased activity within the project area. However, we expect beneficial effects from the creation of suitable wintering/foraging habitat to outweigh the negative effects of potential disturbance.

As indicated by the limited piping plover sightings, population size, and current beach conditions on McFaddin NWR, suitable long term feeding and roosting habitats are not available in most of the project area. Because of the lack of quality habitats, the limited project area at any given time, and the implementation of conservation measures, we expect no long term adverse impacts to the existence of the species or its habitat.

We have analyzed the effects of the proposed action on the threatened piping plover and believe the project may affect, but will not likely adversely affect the piping plover due to: conservation measures outlined below, the current lack of habitat, and the presence of environmental monitors for the duration of the project.

### **Red Knots**

Red knots, listed as threatened under the Endangered Species Act, have the potential to occur within the project area during the migration and winter months. While sightings have been recorded on McFaddin NWR, information on these sightings is limited. Because red knots are found in much the same habitat as piping plovers, we expect impacts to red knots to be similar to piping plovers. No long-term adverse impacts to red knots are expected from the proposed construction activities. Short term impacts could occur due to increased activity within the project area, but similar habitat is abundant in the area. No loss of species diversity or abundance is likely due to current disturbance levels associated with public use on the beach. Beach nourishment would likely have long term beneficial effects to the red knot by increasing the amount of available beach wintering stop over and foraging habitat. Additionally, the beneficial effect of the creation of suitable wintering/foraging habitat should outweigh the negative effects of potential disturbance.

As indicated by the lack of red knot confirmed sightings on McFaddin Beach, current beach conditions do not favor suitable red knot habitat mainly due to the lack of sand. Because of the lack of suitable habitat, no interaction with red knots is expected to occur during active construction. The beach will be nourished by placing a slurry mixture of sand and water into the designated area. The slurry will naturally de-water over time as the weight compresses the sand. Equipment is used to shape the dunes and beach and will only be in the immediate construction area while the slurry mix is being pumped. Once the pumped sandy material is graded, all piping

and earth moving equipment will be moved to the next section and completed nourished portions of the project will not be disturbed by subsequent construction passage.

We have analyzed the effects of the proposed action on the threatened red knot and believe the project will not likely adversely affect due to: proposed conservation measures outlined below, the current lack of habitat, and the presence of environmental monitors for the duration of the project.

#### **West Indian Manatee**

The endangered West Indian manatee is most commonly found in shallow, slow-moving waters of rivers, estuaries, saltwater bays, canals and coastal areas where they prefer freshwater habitats. Particularly vulnerable to vessel strikes, the West Indian manatee is unlikely to be encountered in or around the project area. The proposed project plans to utilize a hydraulic cutter-head dredge for the off-shore dredging needs. While this dredge moves slowly, speed limits will be reduced to the maximum extent practicable for all marine vessel traffic.

We have analyzed the effects of the proposed action on the threatened West Indian manatee and believe the project will not likely adversely affect due to: lack of presence in the area, conservation measures outlined in this document, and presence of environmental monitors for the duration of the project.

#### **Eastern Black Rail**

The black rail is currently in the proposal process to be listed as a threatened or endangered species under the Endangered Species Act of 1973. The eastern black rail can be found in a variety of salt, brackish and freshwater marshes in the eastern United States. They occupy areas of dense vegetation and moist soil which allow movement underneath the canopy. The immediate impact area for beach nourishment is a former beach area with no ephemeral wetland component. This area is bare, with little vegetation, mostly clay bluffs. The black rail is unlikely to be encountered in the project area.

We have analyzed the effects of the proposed action on the proposed eastern black rail and due to the project occurring mostly in the inter-tidal zone in an area where there was a former dune system. Few, if any, impacts are expected to occur in adjacent marsh habitats. We believe the project will not affect due to lack of suitable habitat in the area where beach ridge replacement will take place.

#### **Explanation of actions to be implemented to reduce adverse effects:**

Best management practices (BMPs) will be utilized by contractors to minimize impacts to threatened and endangered species. As construction continues throughout the year, specified conservation measures will be employed to protect threatened and endangered species at their time of expected use of the beach. Additionally, phased work will be done in fully completed

sections. Once a section is completed, it will be reopened to the public and normal traffic will be allowed to resume. Vehicles related to the project will be allowed to traverse completed areas of the project as normal traffic adhering to the rules specified below. Staging areas outside of the project area will be utilized to minimize the extent of project vehicular traffic. Equipment and heavy truck traffic will be allowed to traverse completed areas of the project in coordination with established guidelines and the presence of environmental monitors.

With regard to sea turtles, there is currently very little suitable nesting habitat in the re-nourishment areas. The proposed project should have a beneficial effect on sea turtle nesting habitat overall through creation of suitable nesting habitat and improvement of water quality by placement of sand over the existing clay shore, reducing erosion and turbidity in the water column. Thus, the project's contribution to cumulative effects in relation to nesting habitat is expected to be beneficial.

Long term positive benefits from the reconstruction of the beach ridge and sand dune system would be many, including: the restoration of wildlife habitat no longer available across McFaddin Beach; setting back the results of coastal erosion by decades by returning the sand-water interface back to 1960's-70's conditions; and adding additional protection of the interior marsh from saltwater intrusion. Thus, these long term benefits not only benefit species using the beach, but would have positive effects to various vegetative habitats within the interior of McFaddin NWR, benefiting all wildlife species using the refuge.

#### **Conservation Measures:**

To reduce short term impacts, conservation measures have been identified and will be employed by all involved in the project. Both general and specific measures are listed below for the protection of listed T&E species.

#### ***Conservation Measures – General***

The following conservation measures will be incorporated into operations for protection of all listed species:

All crew members (contractors, workers, etc.) will attend training sessions prior to the initiation of, or their participation in, project work activities. Training will be conducted by qualified personnel and the scope of training will include: 1) recognition of sea turtles, piping plovers, red knots and manatees, their habitats, and tracks; 2) recognition of other listed species; 3) impact avoidance measures; 4) reporting criteria; 5) contact information for different rescue agencies in the area. Documentation of this training, including a list of attendees, will be submitted to the Corps and the Service prior to the start of the nourishment project and as new members are trained.

- Project equipment and vehicles transiting between the staging area and project site will use only designated routes. Vehicle access shall be confined to the immediate needs of the project.

- Vehicles will adhere to a reduced speed of 15 miles per hour, the speed limit already prescribed for Texas beaches in the Texas Transportation Code#545.352
- The contractor will coordinate and sequence the work to minimize the frequency and density of vehicular traffic on the beach to the greatest extent practicable. During the beach fill phase of the project, the contractor will minimize the number of vehicles on the beach during vehicle ingress and egress and will avoid “stacking” vehicles on the beach waiting to unload materials or waiting to leave the beach.
- Construction crews and vehicles will avoid the swash zone and the wrack line closest to the swash zone when possible. The swash zone is defined as the area of the beach intermittently covered and uncovered by wave run-up. The wrack line is defined as vegetative area made up of but not limited to sargassum, shell hash, vegetation and some light trash and litter.
- Beach driving by the contractor shall be reduced to the maximum extent practicable. Beach driving by the public will be suspended within the active construction zone until construction is complete, and the surface is deemed sufficiently “hardened” to support vehicles.
- 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.
- Only sand that meets the specifications of the local beach quality (e.g., grain size, color, and mineralogy) will be used for fill and maintenance activities. Beach quality sand will be tested in accordance with ASTM D422.
- A designated monitor(s) will be identified who will act as the single point of contact responsible for communicating and reporting endangered species issues throughout construction of the project.

#### *Conservation Measures Specific to Sea Turtles*

The following conservation measures will be incorporated into operations for protection of threatened and endangered sea turtles:

- Permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles. All construction personnel are responsible for observing beach-related activities for the presence of these species.

- Permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles, which are protected under the Endangered Species Act of 1973.
- During sea turtle nesting season (March 15 to October 1), the County, in coordination with the GLO, USACE and other project proponents, will ensure that a qualified monitor(s) is onsite during work and maintenance activities and provide the USFWS Clear Lake Ecological Services Office with the names and qualifications of the monitor(s).

The monitor(s) will: 1) survey the project area (i.e., immediate project area and 100-ft buffer zone outside the project area) and equipment access routes for turtles and turtle nests before beginning work activities each day, after work has concluded each day, once a day on non-construction days, and other such times as deemed necessary by the monitor(s); 2) escort large vehicles when necessary to ensure that sea turtles and nests are protected; 3) determine when the beach is clear for work; and 4) ensure that tire ruts and other disturbed areas on the beach are smoothed out and sand loosened upon the completion of each work day.

- Information regarding the qualifications of the independent qualified monitor(s) will be submitted to the Corps and the Service prior to starting work in the permitted area.
- If a sea turtle is seen or nest found within 100 ft of the active daily construction, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 100 ft of a sea turtle or nest. Activities may not resume until the protected species has departed the project area of its own volition.
- If a sea turtle or nest is located the monitor will call 1-866-TURTLE-5 and notify the USFWS Clear Lake Ecological Services Field Office (281-286-8282). The sighting will be recorded on the Wildlife Monitoring Checklist (Appendix A).
- All turtles, turtle nests or turtle eggs found during beach nourishment activities will be safeguarded until they can be re-located by properly permitted individual(s).
- Work activities will not resume within 100 ft of the nest site or turtle until authorization from the monitor is received to do so.
- Any equipment, including, but not limited to, silt fencing should be made of a material in which a sea turtle cannot become entangled. Any equipment with potential for entanglement will be monitored closely.



***Conservation Measures Specific to Red Knots, Piping Plovers, and Piping Plover Critical Habitat***

The following conservation measures will be incorporated into operations for the protection of red knots, piping plovers, and piping plover critical habitat:

- A qualified monitor(s) will survey the work areas for wintering piping plovers and red knots, between the dates of 15 July through 15 May. Surveys will take place prior to morning construction activities and will include looking under equipment and vehicles. The monitor(s) will also be onsite to ensure that loafing or resting piping plovers and red knots are not in the project area during project activities. Because piping plovers and red knots are especially vulnerable during periods of cold temperatures and when they are roosting at night, extra care will be taken during these times. Monitors will also ensure tire ruts and other disturbed areas on the beach are smoothed out and sand loosened upon the completion of each work day.
- If a piping plover or red knot is found in an active construction area, work will be stopped within an area specified by the monitor of not less than 75 feet, until the bird(s) leave the construction site. If the bird does not relocate (e.g. injured bird), Refuge staff will be contacted to solicit additional guidance. This activity will be recorded on the Wildlife Monitoring Checklist.

***Conservation Measures Specific to West Indian Manatees***

The following conservation measures will be incorporated into operations for the protection of the West Indian manatee and are consistent with the Standard Manatee Construction Conditions for In-Water Work (FWC, 2011):

- The permittee will instruct all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for being able to correctly identify a manatee while observing water-related activities for the presence of manatees.
- The permittee will advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees, which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973.
- All vessels associated with the construction project shall operate at "no wake/idle" speeds while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow deep water routes whenever possible.
- If a manatee(s) is seen within 300 ft of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure protection

of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 ft to a manatee. Operation of any equipment closer than 50 ft to a manatee shall necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.

**Conservation Measures for Reporting Injured or Dead Protective Species Reporting**

Injured or dead protected species should be reported as follows:

- Work crews shall report sightings of any injured or dead protected species immediately to Refuge staff, regardless of whether the injury or death is caused by project activities. During times when Refuge staff is not available, alternate after-hours contact information will be provided.
- Any collision with and/or injury to a manatee shall be reported immediately to the Texas Marine Mammal Stranding Network at 1-800-962-6625. Collision and/or injury should also be reported to the USFWS (281-286-8282).

**VIII. Effect determination and response requested:**

**A. Listed species/designated critical habitat:**

<u>Determination</u>	<u>Response Requested</u>
No effect/no adverse modification (species: <u>West Indian Manatee</u> )	<u>X</u> Concurrence
May affect, but is not likely to adversely affect species/adversely modify critical habitat (species: <u>Piping Plover, Red Knot, Green, Hawksbill, Loggerhead, Leatherback and Kemp's Ridley Sea Turtles</u> )	<u>X</u> Concurrence
May affect, and is likely to adversely affect species/adversely modify critical habitat (species _____)	___ Formal Consultation

**B. Proposed species/proposed critical habitat:**

<u>Determination</u>	<u>Response Requested</u>
No effect on proposed species/no adverse modification of proposed critical habitat (species: <u>Eastern Black Rail</u> )	<u>X</u> Concurrence
Is not likely to jeopardize proposed species/adversely modify proposed critical habitat (species: _____)	___ Concurrence

Is likely to jeopardize proposed species/adversely modify proposed critical habitat (species: \_\_\_\_\_)

\_\_\_ Conference

**C. Candidate species:**

Determination

Response Requested

No effect (species: \_\_\_\_\_)

\_\_\_ Concurrence

Is not likely to jeopardize proposed species/adversely modify proposed critical habitat (species: \_\_\_\_\_)


\_\_\_ Concurrence

Is likely to jeopardize candidate species (species: \_\_\_\_\_)

\_\_\_ Conference

**D. Remarks:** Contact Douglas Head at 409-971-2909 for additional information.

Reviewed by:

  
\_\_\_\_\_  
Signature

5/30/19  
\_\_\_\_\_  
Date

Tim Cooper, Refuge Complex Manager, Texas Chenier Plain Refuge Complex

**IX. Reviewing ESO Evaluation:** No concurrence required on no effect consultations

A. Concurrence: \_\_\_\_\_ Nonconcurrence: \_\_\_\_\_

B. Formal consultation required \_\_\_\_\_

C. Conference required \_\_\_\_\_

D. Informal conference required \_\_\_\_\_

E. Remarks (attach additional pages as needed):

**JOHN HUFFMAN** Digitally signed by JOHN HUFFMAN  
Date: 2019.06.18 09:43:26 -05'00'

\_\_\_\_\_  
Signature  
John Huffman, Gulf Restoration Supervisor

\_\_\_\_\_  
Date

Attachment 1: Mapped Location of McFaddin NWR and proposed beach nourishment area.

