



**Gulf Coast Ecosystem Restoration Council
Finding of No Significant Impact
Chenier Plains Beneficial Use of Dredge Material for
Habitat Restoration Project at Bessie Heights - Implementation**

The Gulf Coast Ecosystem Restoration Council (Council) hereby adopts the [Texas Trustee Implementation Group Final 2017 Restoration Plan/Environmental Assessment: Restoration of Wetlands, Coastal, and Nearshore Habitats; and Oysters](#). The Council adopts this Environmental Assessment (EA) in order to address requirements of the *National Environmental Policy Act* (42 U.S.C. §§ 4321 et seq.) (NEPA) associated with the approval of implementation funding for the Chenier Plains Beneficial Use of Dredge Material for Habitat Restoration Project at Bessie Heights (Bessie Heights project) sponsored by the Texas Commission on Environmental Quality (TCEQ) and located within the Nelda Stark Unit of the Lower Neches Wildlife Management Area, in Orange County, Texas.

The Council has reviewed the EA and determined that it addresses the environmental effects of the Bessie Heights project activity to be funded. On April 23, 2026, the Council opened a public comment period on this proposed project and the associated environmental compliance documentation. This public notice also sought comment on the Council's proposals to approve funding for other Council activities sponsored by the TCEQ under the Council's Funded Priorities List (FPL) 3b. The public comment period ended on May 26, 2026. The Council received no public comments regarding the Bessie Heights project during the comment period.

The Council has determined that approval of funding for the Bessie Heights project would not result in a significant effect on the human environment. The following is a brief description of the activity to be funded, the EA being adopted by the Council, and contact information pertaining to this action.

Funded Activity

The Council is approving \$6,000,000 in implementation funding for the Bessie Heights project, which is part of the Texas Chenier Plain Ecosystem Restoration Program sponsored by TCEQ. This funding was originally budgeted in Category 2 for the Chenier Plains Program of the Council's approved FPL 3b. Since the publication of FPL 3b, all environmental compliance necessary for a Council vote to approve implementation funding for the Bessie Heights project has been completed. FPL 3b was developed pursuant to the *Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012* (RESTORE Act) (33 U.S.C. § 1321(t) and note).

The Bessie Heights project will construct up to 1,000 acres of intertidal marsh utilizing approximately one million cubic yards of suitable hydraulically dredged material that will be placed within levees constructed from on-site sediment to restore wetlands within subsided open water habitat. The Bessie Heights project is expected to restore wetlands, reduce erosion, improve water quality, create habitat,

provide land reclamation, and increase coastal resiliency. The dredged material would be sourced from the Gulf Intracoastal Waterway, federal ship channels, private docks and berths, and possible mining of dredged material placement areas.

More information on the RESTORE Act and FPL 3b can be found at www.restorethegulf.gov.

Environmental Assessment Adopted

The EA is hereby incorporated by reference into this Council finding, consistent with the Council’s NEPA Procedures (May 6, 2026). Prepared pursuant to NEPA, the EA analyzes the environmental impacts and cumulative effects of and alternatives for the Bessie Heights project. Additional environmental compliance coordination was completed for the *Fish and Wildlife Coordination Act* (FWCA), the *Endangered Species Act* (ESA), the *Magnuson-Stevens Fishery Conservation and Management Act* (MSA), and the *National Historic Preservation Act* (NHPA) by both the NRDA trustees during preparation of the EA and by the U.S. Army Corps of Engineers (USACE) during the environmental evaluation process for USACE Clean Water Act permit SWG-2016-00565.

Environmental Conditions

In addition to NEPA, the Council has an independent responsibility to comply with all other applicable Federal laws. To ensure compliance with FWCA, ESA, MSA, NHPA, and other relevant laws, the Council will require that the sponsor of the Bessie Heights project adhere to all applicable conditions in the EA, USACE permit authorization, and the associated environmental compliance documents. Compliance with these conditions is mandatory and serves to limit the environmental effects of an action to those that are insignificant, discountable or beneficial, and do not result in take or adverse effects to designated critical habitat. The TCEQ is also responsible for ensuring that any contractors that may work on this project are aware of and comply with all of these environmental compliance requirements.

Finding of No Significant Impact

Based on an independent review of the information and analysis provided in the EA, the Council hereby issues this Finding of No Significant Impact (FONSI) for the Bessie Heights project. The EA is incorporated herein by reference. In making this determination, the Council has coordinated with the TCEQ, the sponsor of the activity. The Council has authorized the Executive Director of the Council to execute the FONSI on its behalf.

Determination by Responsible Official

I have determined that the Bessie Heights project would not have a significant effect on the human environment.

Mary S. Walker
Executive Director, Gulf Coast Ecosystem Restoration Council

(Signature) _____

For Further Information

For further information, please contact Heather Young, Senior Advisor for Ecosystem Restoration and Environmental Compliance, Gulf Coast Ecosystem Restoration Council, at (504) 252-7716 or by e-mail at heather.young@restorethegulf.gov.

**Deepwater Horizon Oil Spill Texas
Trustee Implementation Group
Final 2017 Restoration
Plan/Environmental Assessment:
Restoration of Wetlands, Coastal, and
Nearshore Habitats; and Oysters

2017**

This document is available online:

<https://www.gulfspillrestoration.noaa.gov/media/document/nrdatxtigfinalrpea2017pdf>

Suggested citation: Texas Trustee Implementation Group (Texas TIG). 2017. Deepwater Horizon Oil Spill Natural Resource Damage Assessment, Texas Trustee Implementation Group, Final 2017 Texas Restoration Plan/Environmental Assessment: Restoration of Wetlands, Coastal, and Nearshore Habitats; and Oysters.



UNITED STATES DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office

263 13th Avenue South

St. Petersburg, Florida 33701-5505

<http://sero.nmfs.noaa.gov>

August 3, 2017

F/SER46: AC/RS

Christy Fellas
NOAA Restoration Center
Deepwater Horizon NRDA Program
St. Petersburg, FL 33701

Dear Ms. Fellas:

The NOAA's National Marine Fisheries Service Habitat Conservation Division (NMFS HCD) has reviewed the Essential Fish Habitat (EFH) Assessment for the Bessie Heights Wetlands Restoration Project. We concur that any adverse impacts that might occur to EFH would be offset by the long-term benefits to federally managed species provided by restored estuarine emergent marsh. Therefore, NMFS HCD does not object to this project and no further EFH consultation is required.

If we may be of further assistance, please contact Mr. Aaron Chastain of our Galveston Facility at (409) 766-3699.

Sincerely,

A handwritten signature in cursive script that reads "Virginia M. Fay".

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division





United States Department of the Interior

FISH AND WILDLIFE SERVICE


1875 Century Boulevard
Atlanta, Georgia 30345

In Reply Refer To:
FWS/R4/DH NRDAR

Memorandum

July 25, 2017

To: Field Supervisor, Texas Coastal Ecological Services Field Office, Houston, TX

From: Deputy *Deepwater Horizon* Natural Resource Damage Assessment and Restoration (NRDAR), Department of the Interior Case Manager 

Subject: Informal Consultation Request for three proposed projects in Texas

Overview

Projects are currently being evaluated as potential restoration projects to restore natural resources in Texas that were injured as a result of the *Deepwater Horizon (DWH)* oil spill. We have reviewed thirteen of these projects in accordance with Section 7 of the ESA. Consultations and permits are current for three of these projects. We have made No Effect determinations for seven of these projects. We are requesting concurrence on the other three projects. A list and brief description of these thirteen projects is provided in Table 1 below. Species determinations are summarized in Table 2 below.

Background

After the *DWH* oil spill, federal and state natural resource trustee agencies (Trustees) came together to assess the effects of the spill and plan for the restoration of injured natural resources. As part of the legal settlement reached with BP in 2016, the Trustees prepared a Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement (Final PDARP/PEIS), to provide the framework for *DWH* oil spill restoration across the Gulf.

The Final PDARP/PEIS established Trustee Implementation Groups (TIGs) that develop plans for, choose, and implement specific restoration actions under the Final PDARP/PEIS. The Texas Trustee Implementation Group (TX TIG) is made up of the following agencies: Texas Commission on Environmental Quality (TCEQ); Texas Parks and Wildlife Department (TPWD); Texas General Land Office (TGLO); U.S. Department of the Interior, as represented by the National Park Service, U.S. Fish and Wildlife Service (USFWS), and Bureau of Land Management; National Oceanic and Atmospheric Administration, on behalf of the U.S. Department of Commerce; U.S. Department of Agriculture; and U.S. Environmental Protection Agency.

The TX TIG is currently evaluating the subject projects as potential restoration projects under the draft Texas Trustee Implementation Group Restoration Plan/Environmental Assessment: Restoration of Wetlands, Coastal and Nearshore Habitats; and Oysters, which was released for public review and comment on May 18, 2017. If the TX TIG selects the subject projects, the TCEQ, TPWD, TGLO, or USFWS would implement the projects. A brief description of the subject projects is provided in Table 1 below.

These facts lead us to the conclusion that consultation under Section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.S 1531 *et seq.*), is required for the proposed projects and we wish to engage in such consultation. We have reviewed each of the projects for potential impacts to listed, candidate, and proposed species, and designated and proposed critical habitats in accordance with Section 7 of the ESA. Potential effects, conservation measures, and justifications for our determinations are presented in the attached Biological Evaluation (BE) forms. Our determinations are summarized in Table 2 below.

Within the BE forms, we have also reviewed the proposed projects for impacts to bald eagles and migratory birds in accordance with the Bald and Golden Eagle Protection Act (BGEPA) of 1940 (16 U.S.C. 668-668c) and the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-712), respectively and we determined take would be avoided.

This letter requests your concurrence with our determinations for three of the subject projects:

- Pierce Marsh Wetland Restoration through Beneficial Use of Dredged Material,
- Bessie Heights Wetland Restoration, and
- Follets Island Conservation Initiative.

A list of references cited in the BE forms is attached. References are available upon request. To facilitate your response, should you concur with our determinations, we have attached a template response letter. If you have questions or concerns regarding this request for informal consultation, please contact Ashley Mills, Fish and Wildlife Biologist, at 812-756-2712 or ashley_mills@fws.gov.

Attachments (15)

- Biological Evaluation (BE) forms (13) including project maps
- List of References
- Template response letter

Table 1. Brief descriptions of the thirteen subject projects in the TX TIG RP/EA.

* indicates that consultations and permits exist for this project

^ indicates that concurrence is requested

Proposed Projects	Brief Description
Indian Point Shoreline Erosion Protection*	Construct approximately 2,800 linear-feet of segmented breakwaters to protect 50 acres of critical seagrass, coastal marsh, lagoons and associated upland habitats within Indian Point on Corpus Christi Bay in San Patricio County. Protect the existing shoreline from wind and wave driven erosion and protect the remaining marsh and associated coastal habitats adjacent to the shoreline.
McFaddin Beach and Dune Restoration*	Place sand along an 18-mile section of shoreline in northeastern Texas. Texas TIG would partner with other funding sources to complete construction implementation, monitoring, and/or planning activities. Provide important ecological benefits by restoring lost beach and dune habitat and by helping to slow or stop marsh and land loss in McFaddin NWR interior marshes.
Bahia Grande Hydrologic Main Channel*	Restore and conserve the Bahia Grande wetland complex in the Laguna Atascosa NWR near Brownsville, Texas. Enlarge and stabilize a pilot channel that would increase tidal flow into Bahia Grande, restoring the system's natural tidal exchange and creating habitat for a variety of fish, shellfish, and migratory waterfowl.
Pierce Marsh Wetland Restoration through Beneficial Use of Dredged Material^	Restore and conserve wetlands and coastal habitats by beneficially using dredged material to create a viable, vegetated, wetland habitat for a variety of plants, fish, birds, and other wildlife that frequent the area. The placement of dredged material and associated planting would restore up to 150 acres of marsh and contribute to an ongoing effort to restore the wetland complex in West Galveston Bay.
Bessie Heights Wetland Restoration^	Restore wetlands in Bessie Heights Marsh located within the Lower Neches Wildlife Management Area (WMA) in Orange County, Texas. The project would beneficially use sediment obtained from dredging of the federally managed Sabine-Neches Waterway (SNWW), and mining dredged material from dredged material placement areas (DMPAs) and private navigation channels and berths to restore coastal wetlands. The placement of dredged material, construction of containment levees, and associated planting would restore up to 900 acres of intertidal marsh.
Essex Bayou Habitat Restoration Engineering (E&D)	Conduct E&D necessary to restore and conserve coastal and nearshore habitats. E&D is necessary to understand the factors that contribute to high salinities within Essex Bayou and the Slop Bowl Marsh system and develop solutions that would create a more stable estuarine system.

Bird Island Cove Habitat Restoration Engineering (E&D)	Conduct E&D necessary to restore and conserve wetlands and coastal habitats in Galveston Bay. This phase of the project (Phase I) would investigate ongoing issues associated with habitat degradation and develop strategies to protect and restore existing estuarine habitats with the goal of increasing the productivity and longevity of up to 170 acres of estuarine marsh complex (marsh, sand flat, and protected shallow water).
Dredge Material Planning for wetland restoration (E&D)	Develop a Master Plan to identify priority locations and develop design work necessary for the permitting of the beneficial use of dredged material (BUDM) for marsh restoration at eight locations along the Texas coast. Coordinate efforts to prioritize sites and produce guidelines to restore currently degrading intertidal habitats.
Oyster Restoration Engineering (E&D)	Conduct initial alternatives analysis to identify the BMPs for rehabilitating oyster reefs buried by sediment and for constructing intertidal oyster reefs within the Galveston Bay System. Results of this analysis would then be used to develop location-specific engineering, design, and environmental permitting documents for one or more oyster restoration projects that could be readily implemented.
Follets Island Conservation Initiative [^]	Acquisition and conservation of approximately 300 acres of wetland and coastal habitats on Follets Island between San Luis Pass and Drum Bay, Texas. Conserve dune, coastal strand prairie, and marsh habitat in perpetuity through fee-simple acquisition. Once acquired, the land would be transferred to and managed by the TPWD for the purpose of habitat preservation.
Laguna Atascosa Habitat Acquisition	Acquisition of important coastal habitat that would be conveyed to the USFWS to be managed as part of the Laguna Atascosa NWR. This tract includes 1,682 acres of beach, dune, and tidal habitats on South Padre Island, Texas.
Midcoast Habitat Acquisition	Acquire a coastal estuarine land tract that would be conveyed to the USFWS to be managed as part of the Texas Mid-Coast NWR Complex in Matagorda County. The proposed tract is around 800 acres, including 555 acres of mostly estuarine wetlands. The restoration action would protect the tract, thereby providing a protective buffer to estuarine and bay waters from future land use changes.
Bahia Habitat Coastal Corridor Acquisition	Acquisition of important coastal habitat that would be conveyed to the USFWS to be managed as part of the Laguna Atascosa NWR. This tract includes 1,322 acres of tidal wetlands, thorn scrub, and coastal prairie with more than a mile of frontage on the Lower Laguna Madre and almost 2 miles frontage on a tidal inlet called Laguna Vista Cove.

Table 2. Summary of ESA determinations for thirteen proposed projects in the TX TIG RP/EA 2017.

ESA Species under USFWS jurisdiction	Status	Indian Point Shoreline Erosion Protection*	McFaddin Beach and Dune Restoration*	Bahia Grande Hydrologic Main Channel*	Pierce Marsh Wetland Restoration through Beneficial Use of Dredged Material [^]	Bessie Heights Wetland Restoration [^]	Essex Bayou Habitat Restoration Engineering (E&D)	Bird Island Cove Habitat Restoration Engineering (E&D)	Dredge Material Planning for wetland restoration (E&D)	Oyster Restoration Engineering (E&D)	Follers Island Conservation Initiative [^]	Laguna Atascosa Habitat Acquisition	Midcoast Habitat Acquisition	Bahia Habitat Coastal Corridor Acquisition
Loggerhead sea turtle - terrestrial	Threatened	-	NLAA	NE	-	-	-	-	-	-	NE	NE	-	-
Green sea turtle - terrestrial	Threatened	-	NLAA	NE	-	-	-	-	-	-	NE	NE	-	-
Kemp's ridley sea turtle - terrestrial	Endangered	-	NLAA	NE	-	-	-	-	-	-	NLAA	NE	-	-
Leatherback sea turtle - terrestrial	Endangered	-	NLAA	NE	-	-	-	-	-	-	NE	NE	-	-
Hawksbill sea turtle - terrestrial	Endangered	-	NLAA	NE	-	-	-	-	-	-	NE	NE	-	-
West Indian Manatee	Endangered	-	NLAA	NE	NLAA	NLAA	NE	-	NE	NE	NLAA	NE	NE	NE
Piping plover	Threatened	NE	NLAA	NE	NLAA	NLAA	NE	NE	NE	-	NLAA	NE	NE	NE
Piping plover - CH	Designated	NE	-	-	-	-	-	-	NE	-	-	NE	-	-
Red knot	Threatened	NE	NLAA	NE	NLAA	NLAA	NE	NE	NE	-	NLAA	NE	NE	NE
Northern aplomado falcon	Endangered	-	-	NE	-	-	NE	-	-	-	NE	NE	NE	NE
Whooping crane	Endangered	-	-	-	-	-	-	-	NE	-	-	-	NE	-
Whooping crane - CH	Designated	-	-	-	-	-	-	-	NE	-	-	-	-	-
Ocelot	Endangered	-	-	NE	-	-	-	-	-	-	-	NE	-	NE
Gulf coast jaguarundi	Endangered	-	-	NE	-	-	-	-	-	-	-	NE	-	NE
* Consultations and permits exist for this project														
[^] Concurrence is requested														
-- indicates the species or critical habitat does not occur in the project area														

Biological Evaluation Form

Deepwater Horizon Oil Spill Restoration

U.S. Fish and Wildlife Service & National Marine Fisheries Service

This form will be filled out by the Implementing Trustee and used by the regulatory agencies. The form will provide information to initiate informal Section 7 consultations under the Endangered Species Act (ESA) and may be used to document a No Effect determination or to initiate pre-consultation technical assistance.

It is recommended that this form also be completed to inform and evaluate additional needs for compliance with the following authorities: Migratory Bird Treaty Act (MBTA), Marine Mammal Protect Act (MMPA), Coastal Barrier Resources Act (CBRA), Bald and Golden Eagle Protection Act (BGEPA) and Section 106 of the National Historic Preservation Act (NHPA).

Further information may be required beyond what is captured on this form. Note: if you need additional space for writing, please attach pages as needed.

A. Project Identification

Federal Action Agency:

U.S. Fish and Wildlife Service/National Marine Fisheries Service

Agency Contact(s)

USFWS: Ashley Mills at 812-756-2712 and Ashley_Mills@fws.gov

NMFS: Christy Fellas at 727-551-5714 and Christina.Fellas@noaa.gov

- I. Implementing Trustee
Texas Commission on Environmental Quality (TCEQ) – for purposes of this BE form only
- II. Applicant Contact Person
Angela Schrift/Kathryn Burger
- III. Phone
512-389-8755; 512-389-8153
Email:
angela.schrift@tpwd.texas.state.gov; Kathryn.Burger@tpwd.texas.state.gov
- IV. Project Name and ID# (Official name of project and ID number assigned by action agency)
Bessie Heights Wetland Restoration

- V. NMFS Office (Choose appropriate office based on project location)
NMFS Southeast Regional Office
- VI. FWS Office (Choose appropriate office based on project location)
Texas Coastal Ecological Services Field Office, Houston, TX
- VII. Restoration Type 1
Restore and Conserve Wetlands, Coastal, and Nearshore Habitat
- VIII. Project Type 2, if helpful
N/A

B. Project Location

I. Project Location

The Nelda Stark Unit of the Lower Neches Wildlife Management Area (WMA) in Orange County comprises approximately 3,375 acres located along the eastern bank of the Neches River approximately 5 miles north of the confluence of the Neches and Sabine Rivers at Sabine Lake. The area within and surrounding the Nelda Stark Unit is often referred to as the Bessie Heights Marsh and is also the site of the Port Neches oilfield. The project site is located about 3 miles northeast of Port Neches and about 2 miles northeast of the Neches River and only accessible via water/boat.

II. State & County/Parish of Project Site
Orange County, Texas

III. Latitude & Longitude for Project Site (Decimal degrees and datum [e.g., 27.71622°N, 80.25174°W NAD83] [online conversion: <https://www.fcc.gov/encyclopedia/degrees-minutes-seconds-tofrom-decimal-degrees>])

Approximate 30.029121°, -93.935121°; WGS84

IV. Township, range and section of the project area
Texas does not use the public land survey system.

C. Description of Action Area

#1 Attach a separate map delineating where the action will occur.

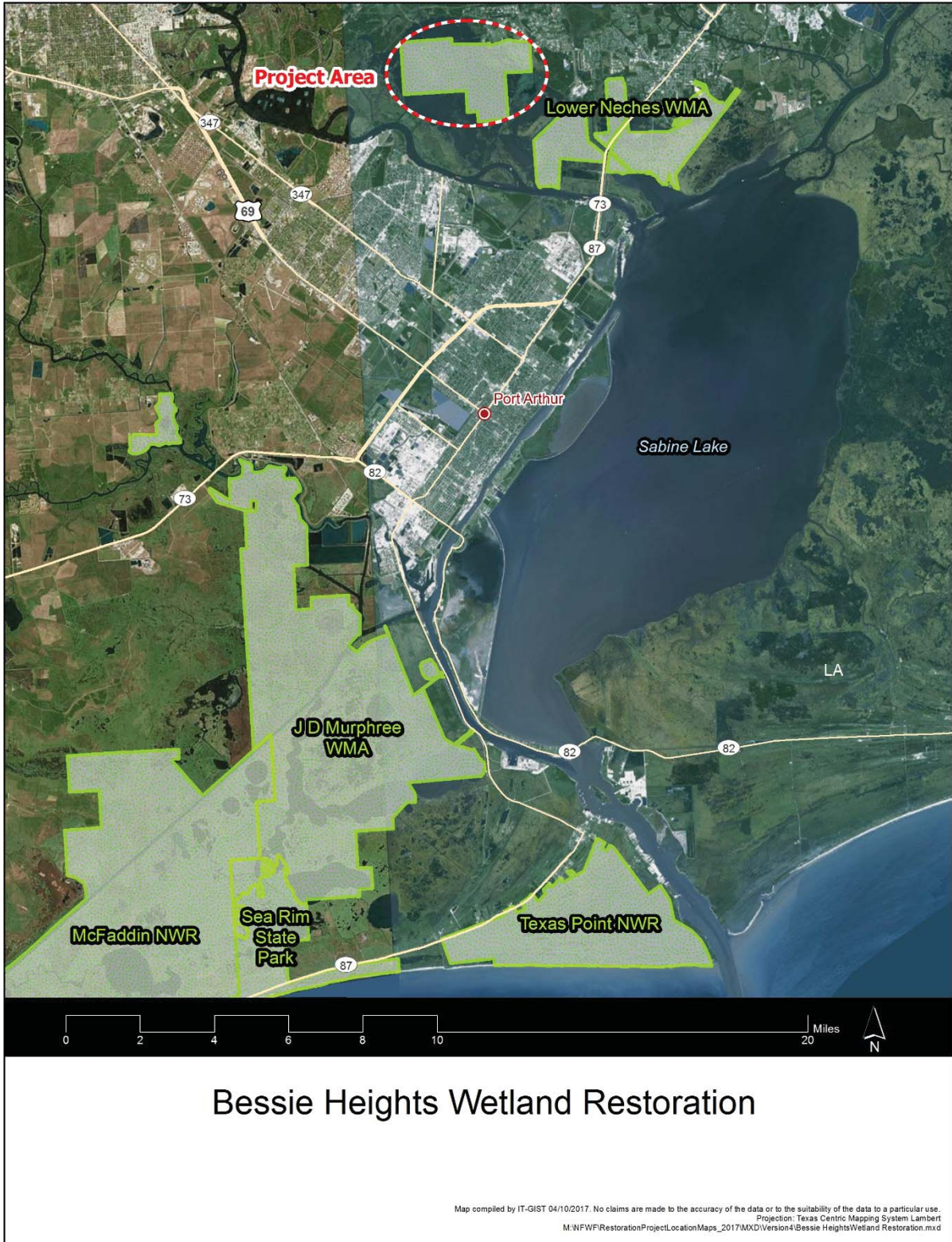


Figure 1. Map showing the location of the Bessie Heights Wetland Restoration project in Orange County.

#2 Describe ALL areas that may be affected directly or indirectly by the action and not merely the immediate action area involved in the action, or just where species or critical habitat may be present. Provide a description of the existing environmental conditions and characteristics (e.g., topography, vegetation type, soil type, substrate type, water quality, water depth, tidal/riverine/estuarine, hydrology and drainage patterns, current flow and direction), and land uses (e.g., public, residential, commercial, industrial, agricultural).

The Bessie Heights Wetland Restoration project would restore wetlands in Bessie Heights Marsh located within the Lower Neches WMA in Orange County, Texas. The project would beneficially use sediment obtained from dredging of the federally managed Sabine-Neches Waterway (SNWW), and mining dredged material from dredged material placement areas (DMPAs) and private navigation channels and berths to restore coastal wetlands. The placement of dredged material, construction of containment levees, and associated planting would restore up to 900 acres of intertidal marsh.

Bessie Heights for the most part is only accessible by water. There are small roads that the WMA staff can use to access the site; however, these are not used regularly for land-based transportation. The site is adjacent to the commercially important SNWW.

The Bessie Heights marsh is part of a WMA that has no infrastructure associated with its operations. Within Bessie Heights, there is infrastructure associated with oil and gas extraction from the Port Neches Oilfield.

See below for detailed descriptions of the action area.

Existing Environmental Conditions and Characteristics

Substrate type, Topography, and Soils

The Orange County landscape is dominated by the broad flat valleys of the Sabine and Neches Rivers that are covered by coastal-type marsh vegetation. Geologic units exposed in the area include the Beaumont Clay, Deweyville Formation, and Quaternary alluvium. The surface topography of the project area is mainly flat to gently rolling and slopes to the southeast toward the Gulf. The coastal areas are barrier headlands consisting of beach or eroding marsh shores, dune and supratidal habitats that naturally decrease in elevation toward fringing intertidal marshes, lakes, and ponds. The coastal zone is underlain by sedimentary deposits that originated in ancient but similar coastal systems - Recent and Holocene-age alluvium containing thick deposits of clay, silt, sand, and gravel, overlying the Pleistocene Beaumont Formation (Barnes 1982, 1987; McGowen et al. 1976). These formations consist mainly of stream channel, point bar, natural levee, and backswamp deposits associated with former and current river channels and bayous. The substrate in the vicinity of the restoration sites is predominantly comprised of fine silts, clay alluvium, and peat overlying the Beaumont Clay. The Bessie Heights site would be restored over submerged sediments in subtidal/estuarine marsh habitat.

This project would utilize source material from USACE dredged material placement areas that are associated with federally-maintained navigation channels. Fill material would be sourced from SNWW, mining from federal dredged material placement areas (DMPAs), private navigation channels, and berths to restore coastal wetlands. These placement areas are maintained and operated as part of the federal SNWW project. Excavated dredge material would be transported via pipeline. The project will likely require staging areas, which will be determined by the contractor once the final engineering and design is complete. While the Bessie Heights Wetland Restoration project is utilizing material sourced

from a USACE maintenance dredging operation, the actual dredging of the SNWW is outside of the scope of this project and would occur regardless of whether or not this project was implemented. The dredging activities are not being funded through NRDA settlement money, and would occur regardless of whether the Bessie Heights Wetland Restoration is implemented. Therefore the dredging activities and source area are not included in the compliance discussion below. The SNWW sediments would vary but would include silts and sands.

Existing Vegetation Type

The predominant wetland habitats near the Lower Neches WMA are characterized as palustrine marsh and estuarine open water. However, no vegetation exists at the site.

Water Quality, Water Depth, Tidal/Riverine/Estuarine, Hydrology and Drainage Patterns, Current Flow and Direction

The site is adjacent to the commercially important SNWW. The Sabine region's circulation and salinity patterns are complex. Fresh water enters the system through several tributaries, including the Sabine and Neches Rivers. The Sabine and Neches Rivers flow into Sabine Lake and into the Gulf of Mexico through Sabine Pass. The SNWW Navigation Channel system serves as a pathway for both freshwater from the inflowing rivers and the saltwater wedge coming up the deep draft channel through Sabine Pass. This combination results in highly stratified conditions in the navigation channel, bringing saltwater up the SNWW and into the northwest corner of Sabine Lake and the lower reaches of the Neches River. As a result, the observed salinity in Sabine Lake is highest at both the southern end, where the lake connects to Sabine Pass, and the northern end, where the lake connects to the SNWW. The lowest salinities are observed in the central and eastern portions of the lake, which are furthest from sources of salt water (USACE 2011).

Natural forces, which shape the system, include dominant south to southeast winds, tropical weather systems, and a substantial rainfall of over 60 inches per year. Flooding and freshwater inflows are key systemic processes, which buffer salinity and provide nutrients and sediments to extensive estuaries in the Sabine region.

The Sabine River has the largest water discharge at its mouth of any Texas river. The total basin drainage area is 9,756 square miles with 7,426 square miles within Texas borders (TCEQ n.d.). The tidal portion of the Sabine River, Texas river segment 0501, does not meet assigned water quality standards for bacteria and exceeds allowable concentrations of PCBs in fish tissue (TCEQ 2014). Sampling results of fish tissue in nearby Sabine Lake prompted the issuance of Texas Department of State Health Services Fish and Shellfish Consumption Advisory ADV-46 for Sabine Lake and all contiguous waters that recommended limited consumption of gafttopsail catfish (TDSHS 2011). The GIWW tidal portion, Neches-Trinity Coastal Basin segment 0702 adjacent to the J.D. Murphree WMA, was not found to be covered by any fish advisories and fully supported aquatic life, contact recreation, and general uses (TCEQ 2002).

The Neches River has a 10,011 square mile drainage basin that intersects the Sabine River at the north end of Sabine Lake. Similar to the Sabine River tidal portion, the Neches River tidal portion, Texas River segment 0601 adjacent to Bessie Heights, does not meet water quality standards for bacteria and allowable concentrations of PCBs in fish tissue (TCEQ 2015b). This portion of the Neches River is also contiguous with Sabine Lake and subject to the ADV-16 fish consumption advisory for gafttopsail catfish.

Land Uses

The Bessie Heights marsh is part of a WMA that has no infrastructure associated with its operations.

Within Bessie Heights, there is infrastructure associated with oil and gas extraction from the Port Neches Oilfield.

Lower Neches River WMA has 7,998 acres located near Bridge City in Orange County (TPWD 2017). The WMA is composed of three separate units. The Nelda Stark and Old River units are located adjacent to the lower Neches River. The Nelda Stark Unit is primarily shallow open water, which resulted from the degradation of a former marsh system by saltwater intrusion and subsidence. The Old River Unit, near the mouth of the Neches River, is a mixture of intermediate marsh and open water. The Bessie Heights marsh is managed by TPWD as a part of the Lower Neches WMA. The management includes the use the marsh for recreational fishing and waterfowl hunting. The project area is open water, however, hunting, fishing, hiking and wildlife viewing are regularly enjoyed by the public on the Lower Neches WMA. Bessie Heights for the most part is only accessible by water. There are small roads that the WMA staff can use to access the site; however, these are not used regularly for land-based transportation. The site is adjacent to the commercially important SNWW. Vessels use the nearby SNWW. Commercial and recreational fishing, boating, and potentially wildlife viewing does occur in the open water areas.

#3 If habitat for species is present in the action area, provide a general description of the current state of the habitat.

The proposed project site is currently open water. Water dependent birds use the open bay to forage and roost. These would include loons, bay ducks, gulls and terns, and pelicans.

4 Identify any management or other activities already occurring in the area.

Submerged bay bottom is managed by the state of Texas. The Bessie Heights marsh is part of a WMA that has no infrastructure associated with its operations. Within Bessie Heights, there is infrastructure associated with oil and gas extraction from the Port Neches Oilfield.

Lower Neches River WMA has 7,998 acres located near Bridge City in Orange County (TPWD 2017). The WMA is composed of three separate units. The Nelda Stark and Old River units are located adjacent to the lower Neches River. The Nelda Stark Unit is primarily shallow open water, which resulted from the degradation of a former marsh system by saltwater intrusion and subsidence. The Old River Unit, near the mouth of the Neches River, is a mixture of intermediate marsh and open water.

The recreational and industrial users of Bessie Heights are accustomed to navigating the marsh via the existing channels and avoiding shallow areas and areas that contain obstructions. The immediate vicinity of the project area was historically uplands habitat, but has since been inundated primarily due to subsidence from growing industry in the area. This has had adverse impacts on coastal resiliency and deleterious effects on the protectiveness of the area for storm surges.

#5 Provide or attach a detailed map of the area of potential effect for ground disturbing activities if the area is different from the action area.

The potential area of impact from the construction activities is shown in Figure 1. Dredged material will be placed on submerged lands to raise elevations.

Underwater sediments may be trenched to allow for pipeline routing from the borrow site to the project area. Material would be utilized from maintenance dredging of the SNWW. This dredging would occur despite this restoration project, and is outside of the scope of this project.

a. Waterbody (If applicable. Name the body of water, including wetlands (freshwater or estuarine),

on which the project is located. If the location is in a river or estuary, please approximate the navigable distance from the project location to the marine environment.)

The site is adjacent to the Neches River.

- b. Existing Structures (If applicable. Describe the current and historical structures found in the action area (e.g., buildings, parking lots, docks, seawalls, groynes, jetties, marina.)). If known, please provide the years of construction.**

The Bessie Heights marsh is part of a WMA that has no infrastructure associated with its operations. Within Bessie Heights, there is pipeline infrastructure associated with oil and gas extraction from the Port Neches Oilfield.

- c. Seagrasses & Other Marine Vegetation (If applicable. Describe seagrasses found in action area. If a benthic survey was done, provide the date it was completed and a copy of the report. Estimate the species area of coverage and density. Attach a separate map showing the location of the seagrasses in the action area.)**

There are no known seagrasses in the project area. The TPWD seagrass viewer does not show any seagrasses in the project area (<http://tpwd.texas.gov/gis/seagrass/>).

- d. Mangroves (If applicable. Describe the mangroves found in action area. Indicate the species found (red, black, white), the species area of coverage in square footage and linear footage along project shoreline. Attach a separate map showing the location of the mangroves in the action area.)**

There are no mangroves present in the proposed project site as it is open water.

- e. Corals (If applicable. Describe the corals found in action area. If a benthic survey was done, provide the date it was completed and a copy of the report. Estimate the species area of coverage and density. Attach a separate map showing the location of the corals in the action area.)**

There are no corals in the project area. Appropriate habitat does not exist.

- f. Uplands (If applicable. Describe the current terrestrial habitat in which the project is located (e.g. pasture, forest, meadows, beach and dune habitats, etc.).**

The restoration is proposed to take place in an open water area.

No potential upland sites will be impacted by the proposed activities, with the exception of existing levees on the site. They are generally unvegetated and contain no nesting habitat. They may be utilized as resting habitat for migratory birds. Any areas with critical habitat will be avoided and the activities associated with the use of an upland borrow site would not adversely affect listed species. To the maximum extent practicable, locations with habitats of at-risk species will also be avoided.

- g. Marine Mammals (If applicable. Indicate and describe the species found in the action area. Use NMFS' Stock Assessment Reports (SARs) for more information, see <http://www.nmfs.noaa.gov/pr/sars/region.htm>)**

The bottlenose dolphin and the West Indian Manatee could potentially be in the project area. Manatees are rarely found in Texas waters, including Sabine Lake and are not expected to be found in the project area.

D. Project Description

I. Construction Schedule (What is the anticipated schedule for major phases of work? Include duration of in-water work.)

This project received funds for E&D in 2017 through the RESTORE Act. A USACE permit will be obtained with RESTORE funding. Other Federal compliance will be undertaken through the NRDA process. Construction and dredged material placement must be done in coordination with the USACE dredging schedule. It is estimated that the next window of availability for coordination with USACE may be 2018. Project construction may span either one or two USACE maintenance dredging cycles to gather sufficient material for marsh restoration. The schedule for the use of dredged material from private industry sources would depend on the timing of construction and maintenance of those facilities. Project construction is not expected to take longer than 6 months if only one dredge cycle is needed for sufficient material. The timing of contracting awards and weather conditions could impact the construction schedule. To prevent disturbance to nearby residential communities, construction activities that produce significant noise or require precision, such as dredging and placing material, would be limited to daylight hours. Additionally, all in water work activities will be conducted during daylight hours.

To comply with the NMFS PDCs, a monitoring report will be submitted to NMFS including the following information:

- Response and outcome of any spills that occur during construction per PDC 2.d
- As-built project completion drawings and photos
- Any interactions with protected species listed in PDC 4

II. Describe the Proposed Action:

#1 What is the purpose and need of the proposed action?

For the lower Neches River, from Beaumont to Sabine Lake, significant systematic change occurred between the 1950s and the 2000s as palustrine marsh was lost (reduced from 10,184 hectares (ha) to 4,279 ha) and converted to estuarine open water (increased from 694 ha to 5,080 ha). The largest

degree of loss of palustrine marsh was in the vicinity of the Lower Neches WMA where oil and gas production in the Port Neches Oil field caused subsidence via the activation of a pair of high-angle faults that promoted marsh flooding and conversion to open water (Tremblay and Calnan 2009). Previous restoration efforts in Bessie Heights have focused on restoring estuarine intertidal marsh by construction marsh terraces and through the BUDM. The proposed project would be a continuation of those efforts.

The Bessie Heights Wetland Restoration project would restore wetlands in Bessie Heights Marsh located within the Lower Neches WMA in Orange County, Texas. The project would beneficially use sediment obtained from dredging of the federally managed SNWW, and mining dredged material from DMPAs and private navigation channels and berths to restore coastal wetlands. The placement of dredged material, construction of containment levees, and associated planting would restore up to 900 acres of intertidal marsh.

#2 How do you plan to accomplish it? Describe in detail the construction equipment and methods needed; permanent vs. temporary impacts; duration of temporary impacts; dust, erosion, and sedimentation controls; restoration areas; if the project is growth-inducing or facilitates growth; whether the project is part of a larger project or plan; and what permits will need to be obtained.**

To implement this project, the Texas TIG would partner with the USACE to use dredged material from the SNWW to increase elevations in areas of Bessie Heights and make them suitable for the establishment and long-term sustainability of a shallow intertidal wetland. The Texas TIG would coordinate with the USACE on this project to beneficially use dredged material from maintenance dredging of the SNWW and DMPAs. Dredged material may also be obtained from the dredging of private industrial docks, berths, and channels. The Texas TIG would coordinate with the appropriate parties for each sediment source to ensure the material is not contaminated and is appropriate for marsh restoration. The project would fund the construction of containment levees as needed to contain and dewater the dredged sediments. Sediment would be placed within these containment areas to build bottom elevations suitable for marsh growth as determined from adjacent natural wetlands. This would allow the marshes to return to sustainable and productive intertidal wetlands.

In general, construction would require the use of barges, small watercraft, large track hoe excavators, earth moving equipment, cutterhead-hydraulic or clamshell dredges, and a dockside staging area. The necessity for a staging area would be determined by the contractor during final engineering and design phases of this project. Equipment and materials for the construction activities would be transported via roads and marine waterways. Large equipment and materials moved by barges would use the established interconnected waterways. This may include the GIWW, SNWW, and/or other navigation channels.

Based on existing preliminary designs, the project would place up to 4.8 million cubic yards of material to restore up to 900 acres of intertidal wetland complex. Final E&D stages for this project have recently been funded but not implemented through the RESTORE Act Bucket 2 (GCERC 2015). This project would not be implemented until the final E&D funded under the RESTORE Act have been completed. Final material volumes and acreage is dependent upon material available through adjacent dredge projects

and selected contractor capabilities. It is anticipated that the next opportunity to partner with USACE to receive dredged material for restoration purposes would be between 2018 and 2020. Depending on availability of funding, this project may run more than one USACE maintenance dredging cycle.

Estimated material volume and restored acreage is currently based on existing preliminary designs. Final material volumes and acreage is dependent upon material available through adjacent USACE dredge projects and selected contractor capabilities.

This project will comply with NOAA's PDCs. Specifically, all project related vessels will follow NMFS's Vessel Strike Avoidance Measures and Reporting for Mariners, and all in-water work activities will be conducted during daylight hours.

Project Construction and Installation

Project proponents would engage the services of professional surveyors, coastal planners and coastal engineering firms to conduct site assessments and analyses, complete construction drawings, identify potential sources of dredged material, prepare lease and permit applications to the TGLO and USACE, and otherwise move the project to a shovel-ready state.

Construction may require temporary trenches and channels to provide equipment access and routing of dredge pipelines to the restoration sites. The pipeline to transport dredge material would be temporary, and would not be buried. The pipeline will float or be sunk into the sediment depending on the safety needs or concerns of the contractor. The need for and location of temporary channels would be determined in the final E&D. All temporary channels would be backfilled upon completion of construction work. All sources of borrow material would be assessed for suitability from an engineering perspective and would be evaluated for environmental conditions to ensure sediments are uncontaminated and there are no significant impacts to cultural and sensitive resources.

Hydraulic dredging utilizes in-situ water to mobilize the sediments through the pipeline. To achieve the target elevation for the restored wetlands, dredged material would be placed such that, after consolidation, elevations suitable to support intertidal marsh vegetation would be present. Mechanically excavated sediment from the existing substrates may be used to form containment levees to contain the dredged material, facilitate dewatering and protect the restoration sites from erosion until vegetation is established. After dewatering, the site would be planted with native species such as smooth cordgrass. The transplants would be propagated from upper Texas coast stocks.

Specific methods and equipment used would be approved by a professional engineer (PE) and the project team that includes Texas TIG representatives and TPWD land managers prior to construction. Environmental considerations, BMPs, land use approvals, and permit requirements must be met regardless of methods and equipment chosen. These would be outlined in the bid specification package developed by the PE and contracting officers. This specification package would ensure that the contractor is made aware of the engineering specifications as well as any additional obligations they would incur associated with federal and state laws governing activities associated with the project. It would also provide the project related approvals needed by the project manager and the PE to conduct the project.

Beneficial Use of Dredged Material

This project would utilize source material from ongoing dredging operations and/or material harvested

from existing placement areas that are associated with federally-maintained navigation channels. These placement areas are maintained and operated as part of the SNWW federal project. (While the Bessie Heights Wetland Restoration project is utilizing material sourced from a USACE maintenance dredging operation, the actual dredging of the SNWW is outside of the scope of this project and would occur regardless of whether or not this project was implemented. This activity is not being funded through NRDA settlement money, and therefore is not included in the compliance discussion below.)

Dredged material would be used to construct containment levees as needed to contain and dewater dredged sediments. Sediment would be placed within these containment areas to build bottom elevations suitable for marsh growth as determined from adjacent natural wetlands. Containment levees may be intentionally breached or lowered as needed after dredged material dewatering in order to establish adequate tidal circulation to the restored marsh.

Dredged material would be sourced from the SNWW or private navigation channels. Another method of BUDM is to mine existing USACE DMPAs that are associated with federally maintained navigation channels. Material would be mined using hydraulic excavation techniques.

The Texas TIG would consider all current information to determine the appropriate level of contamination testing for sediments used in this project. For sediments from federally-maintained navigation channels or associated DMPAs, previously collected contaminant analysis and bio-assay data would be obtained from the USACE Galveston District - Operations Branch records. Based upon this information, the USACE and state and federal resource agency personnel would be consulted to determine the amount of sampling and the type of chemical analyses that may be needed. For private industry docks and channels, state and federal resource agency personnel would be consulted to determine the amount of sampling and the type of chemical analyses that may be needed. All environmental reviews required for the placement of the material obtained as part of a beneficial use disposal process would be coordinated with the project (e.g. a navigation maintenance project) supplying the dredged material.

Measures to control turbidity caused by construction activities, decanting water, and sediment movement would be in place to ensure sensitive habitats are protected, water quality standards are met, and sensitive resources are not affected. These measures may include appropriate water control structures to decant water, as well as the installation of silt fences, hay bales, filter-fabric, and/or levees to control sediments and avoid negative impacts associated with the fill placement. No known oyster reefs, other hard structure reef resources, or seagrass beds are present within or adjacent to the restoration sites that would require the use of significant control measures during project implementation.

Either a hydraulic cutter-head dredge or clamshell dredge would be used, as these do not pose a risk to pelagic aquatic organisms such as sea turtles. Material would be transported to the placement area via a hydraulic dredge pipeline. Location of the pipelines will be determined by the contractor. The dredge pipeline would be routed to avoid disturbance to sensitive resource areas such as oyster reefs and seagrass beds if identified along the pipeline route. Typically, pipelines would be submerged in deeper waters (where dolphins are could occur) in order to avoid impacts with marine traffic. Floating pipelines may be used in shallow water areas (approximately 3 feet or less) where dolphins are not likely to be present. Measures will be taken to ensure that floating pipelines will not trap marine mammals. Any areas containing such resources in the construction area and pipeline route would be protected using BMPs such as hay bales, silt fences or other appropriate methods.

Levees

Levees would be utilized in this project to contain dredged material and to facilitate dewatering of the dredged slurry. They also may serve to protect the restored habitat from erosion. In addition to construction of new levees, existing levees may be rehabilitated and utilized in this effort.

The amount, grading, and size of material (such as rock) that may be used to stabilize the levees would be dependent on several factors determined in the final design. These include wave and current energy expected, as well as intended use of the levees. Containment levees may be intentionally breached or lowered as needed after dredged material dewatering in order to establish adequate tidal circulation to the restored marsh.

Vegetation Planting

Planting of native vegetation would occur in two stages. First, once the earthen fill has dewatered and sediments have settled substantially enough, the marsh would be seeded and/or sprigged with native vegetation such as smooth cordgrass. This can help decrease the time it takes to dewater the sediments through evapotranspiration. During the second stage, once the material has settled to marsh elevations, unvegetated areas of the marsh would be planted with sprigs. Settlement could take between 1 to 5 years after initial construction. Specific targeted number of acres for vegetative plantings for the marsh site would be developed concurrently with the E&D phase of this project. Vegetation success would be monitored as a part of the project's MAM plan.

Colonization by invasive species is not likely, however there is potential for short-term growth of salt cedar. If encountered this plant and other invasive species would be removed by hand. In the long-term, these species would not survive inundation once the sediments compress to marsh elevation.

Operations and Maintenance

Maintenance activities on the restored marsh sites would be managed by TPWD. Appropriate lease(s) or modifications to existing leases would be obtained prior to implementing the proposed restoration actions. TPWD has managed several similar projects to restore wetlands and marsh in the same area. As a member of the project team and the Texas TIG, TPWD would participate in final design development and be cognizant of obligations related to long-term management. A maintenance plan would be finalized concurrently with the final E&D phase of this project, which is funded through the RESTORE Act. Maintenance activities may include management of water control structures to facilitate dewatering, monitoring of levee height, and modifications to containment levees by breaching or lowering as needed after dredged material dewatering in order to establish adequate tidal circulation to the restored marsh.

Is the project part of a larger project or plan?

Restoration of Texas coastal wetlands through beneficially using dredged material supports the needs or goals of several conservation plans. These plans include but are not limited to the following national, state, and regional planning documents:

- Texas Coastal Management Program Final Environmental Impact Statement (NOAA and State of Texas 1996); and
- Gulf of Mexico Regional Sediment Management Master Plan (Gulf of Mexico Alliance 2009).

What permits will need to be obtained?

A USACE permit will be needed for this project. Maintenance activities on the restored marsh sites would be managed by TPWD. Appropriate lease(s) or modifications to existing leases would be obtained prior to implementing the proposed restoration actions.

#3 Attach a separate map showing project footprint, avoidance areas, construction accesses, stanging/laydown areas. **If construction involves overwater structures, pilings and sheetpiles, boat slips, boat ramps, shoreline armoring, dredging, blasting, or artificial reefs, list the method here, but complete the next section(s) in detail.

In general, construction would require the use of barges, small watercraft, large track hoe excavators, earth moving equipment, cutterhead-hydraulic or clamshell dredges, and a dockside staging area. Equipment and materials for the construction activities would be transported via roads and marine waterways. Large equipment and materials moved by barges would use the established interconnected waterways. This may include the GIWW, SNWW, and/or other navigation channels.

Underwater sediments may be trenched to allow for pipeline routing from the borrow site to the project area. Material would be utilized from maintenance dredging of the SNWW. This dredging would occur despite this restoration project, and is outside of the scope of this project.

Bessie Heights for the most part is only accessible by water. There are small roads that the WMA staff can use to access the site; however, these are not used regularly for land-based transportation. The site is adjacent to the commercially important SNWW.

The Bessie Heights marsh is part of a WMA that has no infrastructure associated with its operations. Within Bessie Heights, there is infrastructure associated with oil and gas extraction from the Port Neches Oilfield.

Coordination under Section 106 NHPA has been initiated for this project. There are no known historic sites or significant cultural, scientific, or historic resources in the area that would be affected by the proposed restoration actions. No cultural, scientific, or historic resources are known to be located in the vicinity of the project. Prior to any work which could impact cultural resources a full and complete review under Section 106 of the NHPA will be completed.

II. Specific In-Water and/or Terrestrial Construction Methods (Provide a detailed account of construction methods. It is important to include step-by-step descriptions of how demolition or removal of structures is conducted and if any debris will be moved and how. Describe how construction will be implemented, what type and size of materials will be used and if machines will be used, manual labor, or both. Indicate if work will be done from upland, barge, or both.)
See above.

a. Overwater Structures

#1 Is the proposed use of this structure for a docking facility or an observation platform? No

#2 If no, is this a fishing pier? Public or Private? How many people are expected to fish per day? How do you plan to address hook and line captures? This is not a fishing pier.

#3 Use of “Dock Construction Guidelines”?

<http://sero.nmfs.noaa.gov/pr/endangered%20species/Section%207/DockGuidelines.pdf>

This is not applicable. No dock is being constructed.

#4 Type of decking: Grated – 43% open space; Wooden planks or composite planks – proposed spacing?

This is not applicable. There is no decking

#5 Height above Mean High Water (MHW) elevation?

Height will be sufficient to support marsh vegetation.

#6 Directional orientation of main axis of dock?

Not applicable.

#7 Overwater area (sqft)?

Not applicable.

b. Pilings & Sheetpiles (What type of material is the piling or sheetpiles? What size and how many will be used? Method used to install: impact hammer, vibratory hammer, jetting, etc.?)

Not applicable.

c. Marinas and Boat Slips (Describe the number and size of slips and if the number of new slips changes from what is currently available at the project. Indicate how many are wet slips and how many are dry slips. Estimate the shadow effect of the boats - the area (sqft) beneath the boats that will be shaded.)

Boat slips are not part of this project.

d. Boat Ramp (Describe the number and size of boat ramps, the number of vessels that can be moored at the site (e.g., staging area) and if this is a public or private ramp. Indicate the boat trailer parking lot capacity, and if this number changes from what is currently available at the project.)

Boat ramps are not part of this project.

e. Shoreline Armoring (This includes all manner of shoreline armoring (e.g., riprap, seawalls, jetties, groins, breakwaters, etc.). Provide specific information on material and construction methodology used to install the shoreline armoring materials. Include linear footage and square footage. Attach a separate map showing the location of the shoreline armoring in the action area.

Shoreline armoring is not part of this project.

f. Dredging or digging (Provide details about dredge type (hopper, cutterhead, clamshell, etc.), maximum depth of dredging, area (ft²) to be dredged, volume of material (yd³) to be produced, grain size of material, sediment testing for contamination, spoil disposition plans, and hydrodynamic description (average current speed/direction)). If digging in the terrestrial environment, please describe fully with details about possible water jetting, vibration methods to install pilings for dune walk-over structure, or other methods. If using devices/methods/turtle relocation dredging to relocate sea turtles then describe the methods here.

This project would utilize source material from ongoing dredging operations and/or material harvested from existing placement areas that are associated with federally-maintained navigation channels. These placement areas are maintained and operated as part of the SNWW federal project. While the Bessie Heights Wetland Restoration project is utilizing material sourced from a USACE maintenance dredging operation, the actual dredging of the SNWW is outside of the scope of this project and would occur regardless of whether or not this project was implemented. This activity is not being funded through NRDA settlement money, and therefore is not included in the compliance discussion below.

Dredged material would be used to construct containment levees as needed to contain and dewater dredged sediments. Sediment would be placed within these containment areas to build bottom elevations suitable for marsh growth as determined from adjacent natural wetlands. Dredged material would be sourced from the SNWW or private navigation channels. Another method of BUDM is to mine existing USACE DMPAs that are associated with federally maintained navigation channels. Material would be mined using hydraulic excavation techniques.

The Texas TIG would consider all current information to determine the appropriate level of contamination testing for sediments used in this project. For sediments from federally-maintained navigation channels or associated DMPAs, previously collected contaminant analysis and bio-assay data would be obtained from the USACE Galveston District - Operations Branch records. Based upon this information, the USACE and state and federal resource agency personnel would be consulted to determine the amount of sampling and the type of chemical analyses that may be needed. For private industry docks and channels, state and federal resource agency personnel would be consulted to determine the amount of sampling and the type of chemical analyses that may be needed. All environmental reviews required for the placement of the material obtained as part of a beneficial use disposal process would be coordinated with the project (e.g. a navigation maintenance project) supplying the dredged material.

Measures to control turbidity caused by construction activities, decanting water, and sediment movement would be in place to ensure sensitive habitats are protected, water quality standards are met, and sensitive resources are not affected. These measures may include appropriate water control structures to decant water, as well as the installation of silt fences, hay bales, filter-fabric, and/or levees to control sediments and avoid negative impacts associated with the fill placement. No known oyster reefs, other hard structure reef resources, or seagrass beds are present within or adjacent to the restoration sites that would require the use of significant control measures during project implementation.

Either a hydraulic cutter-head dredge or clamshell dredge would be used, as these do not pose a risk to pelagic aquatic organisms such as sea turtles. Material would be transported to the placement area via a

hydraulic dredge pipeline. The dredge pipeline would be routed to avoid disturbance to sensitive resource areas such as oyster reefs and seagrass beds if identified along the pipeline route. Any areas containing such resources in the construction area and pipeline route would be protected using BMPs such as hay bales, silt fences or other appropriate methods.

g. Blasting (Projects that use blasting might not qualify as “minor projects,” and a Biological Assessment (BA) may need to be prepared for the project. Arrange a technical consultation meeting with NMFS Protected Resources Division to determine if a BA is necessary. Please include explosive weights and blasting plan.)

This project does not involve blasting activities.

h. Artificial Reefs (Provide a detailed account of the artificial reef site selection and reef establishment decisions (i.e., management and siting considerations, stakeholder considerations, environmental considerations), deployment schedule, materials used, deployment methods, as well as final depth profile and overhead clearance for vessel traffic. For additional information and detailed guidance on artificial reefs, please refer to the artificial reef program websites for the particular state the project will occur in.

Artificial reef creation is not part of this project.

i. Fishery Activities (Describe any use of gear that could entangle or capture protected species. This includes activities that may enhance fishing opportunities (e.g. fishing piers) or be fishery/gear research related (e.g. involve trawl gear, gillnets, hook and line gear, crab pots etc)).

No fishery activities are part of this project.

E. NOAA Species & Critical Habitat and Effects Determination Requested

#1 List all species, critical habitat, proposed species and proposed critical habitat that may be found in the action area.

Species and/or Critical Habitat	CH Unit (if applicable)	Location (sea turtles only)	Determination
Loggerhead Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect
Green Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect
Kemp’s Ridley Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect
Hawksbill Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect
Leatherback Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect

Determination Definitions

NE = no effect. This determination is appropriate when the proposed action will not directly, indirectly, or cumulatively impact, either positively or negatively, any listed, proposed, candidate species or designated/proposed critical habitat.

NLAA = not likely to adversely affect. This determination is appropriate when the proposed action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources.

Response requested is concurrence with the not likely to affect determination. This conclusion is appropriate when effects to the species or critical habitat will be wholly beneficial, discountable, or insignificant. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or habitat.

Insignificant effects relate to the size of the impact, while discountable effects are those that are extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur. If the Services concur in writing with the Action Agency's determination of "is not likely to adversely affect" listed species or critical habitat, the section 7 consultation process is completed.

LAA = likely to adversely affect. This determination is appropriate when the proposed action is likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat.

Response requested for listed species is formal consultation for action with a likely to adversely affect determination, with a biological opinion as the concluding document. Response requested for proposed and candidate species is "Conference." This conclusion is reached if any adverse effect to listed species or critical habitat may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable or insignificant. In the event the overall effect of the proposed action is beneficial to the listed species or critical habitat, but may also cause some adverse effect on individuals of the listed species or segments of the critical habitat, then the determination is "likely to adversely affect." Any LAA determination requires formal section 7 consultation and will require additional information.

#2 Attach a separate map identifying species/critical habitat locations within the action area. Identify if Gulf sturgeon are in marine or in freshwater in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Gulf sturgeon CH - marine). Identify if sea turtles are in water or on land in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Loggerhead sea turtle CH - terrestrial).

There is no critical habitat in the project area.

F. USFWS Species & Critical Habitat and Effects Determination Requested

#1 List all species, critical habitat, proposed species and proposed critical habitat that may be found in the action area.

Species and/or Critical Habitat	CH Unit (if applicable)	Location (sea turtles only)	Determination
Piping Plover			May Affect, Not Likely to Adversely Affect
Red Knot			May Affect, Not Likely to Adversely Affect
West Indian Manatee			May Affect, Not Likely to Adversely Affect

#2 Attach a separate map identifying species/critical habitat locations within the action area. For information on species and critical habitat under USFWS jurisdiction, visit <http://www.fws.gov/endangered/species/>. Identify if Gulf sturgeon are in marine or in freshwater in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Gulf sturgeon CH - marine). Identify if sea turtles are in water or on land in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Loggerhead sea turtle CH - terrestrial).

There is no critical habitat within the project area.

Determination Definitions

NE = no effect. This determination is appropriate when the proposed action will not directly, indirectly, or cumulatively impact, either positively or negatively, any listed, proposed, candidate species or designated/proposed critical habitat.

NLAA = not likely to adversely affect. This determination is appropriate when the proposed action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources.

Response requested is concurrence with the not likely to affect determination. This conclusion is appropriate when effects to the species or critical habitat will be wholly beneficial, discountable, or insignificant. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or habitat.

Insignificant effects relate to the size of the impact, while discountable effects are those that are extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur. If the Services concur in writing with the Action Agency's determination of "is not likely to adversely affect" listed species or critical habitat, the section 7 consultation process is completed.

LAA = likely to adversely affect. This determination is appropriate when the proposed action is likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat.

Response requested for listed species is formal consultation for action with a likely to adversely affect determination, with a biological opinion as the concluding document. Response requested for proposed and candidate species is "Conference." This conclusion is reached if any adverse effect to listed species or critical habitat may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable or insignificant. In the event the overall effect of the proposed action is beneficial to the listed species or critical habitat, but may also cause some adverse effect on individuals of the listed species or segments of the critical habitat, then the determination is "likely to adversely affect." Any LAA determination requires formal section 7 consultation and will require additional information.

G. Effects of the Proposed Project

1. **Explain the potential beneficial and adverse effects to each species listed above (Describe what, when, and how the species will be impacted and the likely response to the impact. Be sure to include direct, indirect, interdependent, interrelated, connected actions, and cumulative impacts. Where possible, quantify effects. If species are present (or potentially present) and will not be adversely affected describe your rationale. If species are unlikely to be present in the general area or action area, explain why. This justification provides documentation for your administrative record, avoids the need for additional correspondence regarding the species, and helps expedite review.)**

Piping Plover:

The project may affect but is not likely to adversely affect this species. The piping plover is a seasonal resident on the Texas coast and occurs in south of the project area in Jefferson County. However, piping plover tend to use beach and bay shorelines and there are no documented records of piping plovers in the project area. Piping plovers are not expected to occur in the construction area because typical habitats, beach and bayside tidal flat habitats, for the species do not exist. Construction activities will occur when the species is present along the Texas coastline. Individual piping plovers could rest on the existing levees. Piping plovers, if present and disturbed by the noise, have access to nearby habitat that is within their normal flying distances for daily foraging movement. Upland excavation activities will not occur in habitat used by this species.

Red Knot:

The project may affect but is not likely to adversely affect this species. The red knot is primarily migratory along the northern Texas coast. Red knots are not expected to occur in the construction area because typical habitats, beach and bayside tidal flat habitats, for the species do not exist. Construction activities will occur when the species is present along the Texas coastline. Individual red knots could rest on the existing levees. Red knots, if present and disturbed by the noise, have access to nearby habitat that is within their normal flying distances for daily foraging movement.

West Indian Manatee:

The project is not likely to adversely affect this species. This species is uncommon in Texas waters and is not likely to occur in the action area (Fertl and others 2005). If present, the conservation measures described below will be followed.

Green Sea Turtle:

This project may affect but is not likely to adversely affect this species. No sea turtle nesting activities are expected to occur here since there is no beach habitat. Green Sea Turtles could occur in the project area and may be in the water during construction activities including the building of levees and potential construction of trenches. However, due to the low salinities in the project area the likelihood of a sea turtles being in the area is low. Impacts to bay bottom would have minimal impacts to foraging habitat

for this species because this project will avoid and/or minimize impacts to seagrass beds and oyster reef habitats. Green sea turtles are specialist feeders that target sponges and seagrass or macroalgae. Substrate at the aquatic borrow areas largely consists of unvegetated sandy bottom.

Kemp's Ridley Sea Turtle:

This project may affect but is not likely to adversely affect this species. No sea turtle nesting activities are expected to occur here since there is no beach habitat. Kemp's Ridley sea turtles could occur in the project area and may be in the water during construction activities including the building of levees and potential construction of trenches.

The effects due to loss of foraging habitat on Kemp's ridley sea turtles are insignificant. This species is a generalist carnivore, typically preying on benthic mollusks and crustaceans in the nearshore environment. Kemp's ridley can be found foraging in shallow sandy habitat. However, any impacts to foraging habitat for Kemp's ridleys will be temporary and would only affect a small area relative to the foraging habitat available in the nearshore marine environment off Texas.

Loggerhead Sea Turtle:

This project may affect but is not likely to adversely affect this species. No sea turtle nesting activities are expected to occur here since there is no beach habitat. This species is rarely seen in inland waters along the northern Texas coast and is unlikely to be in the project area due to low salinities. These sea turtles may be in the water during construction activities including the building of levees and potential construction of trenches.

The effects due to loss of foraging habitat on loggerhead sea turtles are insignificant. This species is a generalist carnivore, typically preying on benthic mollusks and crustaceans in the nearshore environment. Loggerheads can be found foraging in shallow sandy habitat. However, any impacts to foraging habitat for loggerheads will be temporary and would only affect a small area relative to the foraging habitat available in the nearshore marine environment off Texas.

Hawksbill Sea Turtle:

This project may affect but is not likely to adversely affect this species. No sea turtle nesting activities are expected to occur here since there is no beach habitat. This species is rarely seen in inland waters along the northern Texas coast and is unlikely to be in the project area due to low salinities. These sea turtles may be in the water during construction activities including the building of levees and potential construction of trenches.

Impacts to bay bottom would have minimal impacts to foraging habitat for this species because this project will avoid and/or minimize impacts to seagrass beds and oyster reef habitats. Hawksbill sea turtles are specialist feeders that target sponges and seagrass or macroalgae. Substrate at the dredging and disposal sites largely consists of unvegetated sandy bottom.

Leatherback Sea Turtle:

This project may affect but is not likely to adversely affect this species. No sea turtle nesting activities are expected to occur here since there is no beach habitat. This species is rarely seen in inland waters along the northern Texas coast and is unlikely to be in the project area due to low salinities. These sea turtles may be in the water during construction activities including the building of levees and potential construction of trenches. Impacts to bay bottom would have minimal impacts to foraging habitat for this species since it is a pelagic feeder.

II. Explain the potential beneficial and adverse effects to critical habitat listed above (Describe what, when, and how the critical habitat will be impacted and the likely response to the impact. Be sure to include direct, indirect, interdependent, interrelated, connected actions, and cumulative impacts. Where possible, quantify effects (e.g. acres of habitat, miles of habitat). Describe your rationale if designated or proposed critical habitats are present and will not be adversely affected.

There is no critical habitat in the action area.

H. Actions to Reduce Adverse Effects

Explain the actions to reduce adverse effects to each species listed above (For each species for which impacts were identified, describe any conservation measures (e.g. BMPs) that will be implemented to avoid or minimize the impacts. Conservation measures are designed to avoid or minimize effects to listed species and critical habitats or further the recovery of the species under review. Conservation measures are considered part of the proposed action and their implementation is required. Any changes to, modifications of, or failure to implement these conservation measures may result in a need to reinitiate this consultation.)

Piping Plover:

The project may affect but is not likely to adversely affect this species. The piping plover is a winter resident on the Texas coast and occurs in Galveston County. However, there are no documented records of piping plovers in the project area. Piping plovers are not expected to occur in the construction area because typical habitats, beach and bayside tidal flat habitats, for the species do not exist. Construction activities will occur when the species is present along the Texas coastline. Individual piping plovers could rest on the existing levees. Piping plovers, if present and disturbed by the noise, have access to nearby habitat that is within their normal flying distances for daily foraging movement. Upland excavation activities will not occur in habitat used by this species.

Red Knot:

The project may affect but is not likely to adversely affect this species. The red knot is primarily migratory in Galveston County. Red knots are not expected to occur in the construction area because typical habitats, beach and bayside tidal flat habitats, for the species do not exist. Construction activities will occur when the species is present along the Texas coastline. Individual red knots could rest on the

existing levees. Red knots, if present and disturbed by the noise, have access to nearby habitat that is within their normal flying distances for daily foraging movement.

West Indian Manatee:

The project may affect but is not likely to adversely affect this species. All construction personnel will be notified of the potential presence of West Indian Manatee in the water and reminded of the criminal and civil penalties associated with harassing, injuring, or killing West Indian Manatees. All workers will be educated that there could be West Indian manatees in the water and will be advised to look for manatees and, if observed, wait until manatees leave the area to put the equipment in the water. Care will be taken when using equipment in the water to ensure that no harm is caused to any West Indian Manatee that may be nearby. Should a West Indian Manatee come within 50 foot of the project area during construction activities, work would immediately cease until the West Indian Manatee has moved away from the project area on its own. Construction noise will be kept to the minimum feasible.

Green Sea Turtle:

The project may affect but is unlikely to adversely affect this species. Sea turtle and smalltooth sawfish construction conditions and measures for reducing entrapment risk to protected species will be followed for all aspects of this project

(http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/sea_turtle_and_smalltooth_sawfish_construction_conditions_3-23-06.pdf;

http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/entrapment_bmps_final.pdf).

Sea turtles may be affected by placement of fill material below mean high water. However, these effects are discountable because sea turtles are highly mobile and can avoid the area during sand placement activities and through the implementation of NMFS' Sea Turtle and Smalltooth Sawfish Construction Conditions. Application of fill material is a slow process allowing time for sea turtles to leave the area.

Hawksbill Sea Turtle:

The project may affect but is unlikely to adversely affect this species. Sea turtle and smalltooth sawfish construction conditions and measures for reducing entrapment risk to protected species will be followed for all aspects of this project

(http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/sea_turtle_and_smalltooth_sawfish_construction_conditions_3-23-06.pdf;

http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/entrapment_bmps_final.pdf).

Sea turtles may be affected by the placement of fill material below mean high water. However, these effects are discountable because sea turtles are highly mobile and can avoid the area during sand placement activities and through the implementation of NMFS' Sea Turtle and Smalltooth Sawfish

Construction Conditions. Application of fill material is a slow process allowing time for sea turtles to leave the area.

Leatherback Sea Turtle:

The project may affect but is unlikely to adversely affect this species. Sea turtle and smalltooth sawfish construction conditions and measures for reducing entrapment risk to protected species will be followed for all aspects of this project

(http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/sea_turtle_and_smalltooth_sawfish_construction_conditions_3-23-06.pdf;

http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/entrapment_bmps_final.pdf).

Sea turtles may be affected the placement of fill material below mean high water. However, these effects are discountable because sea turtles are highly mobile and can avoid the area during sand placement activities and through the implementation of NMFS' Sea Turtle and Smalltooth Sawfish Construction Conditions. Application of fill material is a slow process allowing time for sea turtles to leave the area.

Kemp's Ridley Sea Turtle

The project may affect but is unlikely to adversely affect this species. Sea turtle and smalltooth sawfish construction conditions and measures for reducing entrapment risk to protected species will be followed for all aspects of this project

(http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/sea_turtle_and_smalltooth_sawfish_construction_conditions_3-23-06.pdf;

http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/entrapment_bmps_final.pdf).

Sea turtles may be affected by the placement of fill material below mean high water. However, these effects are discountable because sea turtles are highly mobile and can avoid the area during sand placement activities and through the implementation of NMFS' Sea Turtle and Smalltooth Sawfish Construction Conditions. Application of fill material is a slow process allowing time for sea turtles to leave the area.

Loggerhead Sea Turtle:

The project may affect but is unlikely to adversely affect this species. Sea turtle and smalltooth sawfish construction conditions and measures for reducing entrapment risk to protected species will be followed for all aspects of this project

(http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/sea_turtle_and_smalltooth_sawfish_construction_conditions_3-23-06.pdf;

http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/entrapment_bmps_final.pdf).

Sea turtles may be affected by the placement of fill material below mean high water. However, these effects are discountable because sea turtles are highly mobile and can avoid the area during sand placement activities and through the implementation of NMFS' Sea Turtle and Smalltooth Sawfish Construction Conditions. Application of fill material is a slow process allowing time for sea turtles to leave the area.

- II. Explain the actions to reduce adverse effects to critical habitat listed above (For critical habitat for which impacts were identified, describe any conservation measures (e.g. BMPs) that will be implemented to avoid or minimize the impacts. Conservation measures are designed to avoid or minimize effects to listed species and critical habitats or further the recovery of the species under review. Conservation measures are considered part of the proposed action and their implementation is required. Any changes to, modifications of, or failure to implement these conservation measures may result in a need to reinitiate this consultation.)**

There is no critical habitat within the project area.

I. Marine Mammals

- I. The Marine Mammal Protection Act prohibits the taking (including disruption of behavior, entrapment, injury, or death) of all marine mammals (e.g., whales, dolphins, manatees). However, the MMPA allows limited exceptions to the take prohibition if authorized, such as the incidental (i.e., unintentional but not unexpected) take of marine mammals. The following questions are designed to allow the Agencies to quickly determine if your action has the potential to take marine mammals. If the information provided indicates that incidental take is possible, further discussion with the Agencies is required.**

Is your activity occurring in or on marine or estuarine waters, or could it impact the quality (e.g., salinity, temperature) of marine or estuarine waters? Yes

II. Does your activity involve any of the following (answer yes or no):

- a. *Use of active acoustic equipment (e.g., echosounder) producing sound below 200 kHz: no*
- b. *In-water construction or demolition: yes*
- c. *Temporary or fixed use of active or passive sampling gear (e.g., nets, lines, traps; turtle relocation trawls): no*
- d. *In-water Explosive detonation: no*
- e. *Building or enhancing areas for water-related recreational use or fishing opportunities (e.g. fishing piers, bridges, boat ramps, marinas): no*

- f. *Aquaculture: no*
- g. *Dredging or in-water construction activities to change hydrologic conditions or connectivity, create breakwaters and living shorelines, etc.: yes*
- h. *Restoration of barrier islands, levee construction or similar projects: yes, levee construction is part of this project*
- i. *Fresh-water river diversions: no*

III. If you checked “Yes” to any of the activities immediately above or whether the activity could impact the quality of marine or estuarine waters, please describe the nature of the activities in more detail or indicate which section of the form already includes these descriptions:

Construction activities described above.

Bottlenose dolphins could be present, albeit not likely, in the action area. Impacts to wildlife would be avoided via management guidelines and techniques as appropriate. BMPs as described above for sea turtles and manatees will be implemented along with the [NMFS 2008 vessel strike avoidance measures](#). If marine mammals are sighted within 50 feet of the construction area and could be affected (e.g. work would not be stopped if a dolphin was sighted on the outside of a levee), work would stop until the animals move away from the area under their own volition. Therefore, no incidental take of marine mammals is anticipated.

During construction, there would be short-term minor impacts to EFH through dredged material deposition and increased turbidity. The conversion of shallow open water to intertidal marsh would result in long-term minor adverse impacts to this habitat and species that utilize the habitat, including bald or golden eagles. However, this impact would be offset by the long-term major beneficial impact from restoring intertidal marsh.

Potential minor adverse effects of this project could include disturbance to marine mammals, sea turtles, and birds in nearshore waters from increased vessel traffic. Additional minor long-term adverse impacts to species would stem from the conversion of existing subsided habitat to salt marsh, and the loss of habitat associated with that action. Any potential minor, adverse effects to bottlenose dolphins in the project area are likely to be offset by implementing the BMPs discussed above, including having someone observe when marine mammals enter the project area. Therefore, no incidental take of dolphins is anticipated.

IV. Are any measures planned to mitigate potential impacts to marine mammals? yes

If yes, provide text in below.

BMPs including the Sea Turtle and Smalltooth Sawfish Construction Conditions (NMFS 2006) would be followed. If marine mammals are sighted within 50 feet of the construction area, work would

stop until the animals move away from the area under their own volition. Therefore, no incidental take of marine mammals is anticipated.

This project will follow the PDCs described in NMFS's Framework Biological Opinion on Deepwater Horizon Oil Spill Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Impact Statement (SER-2015-17459). NMFS' PDCs consider where construction would occur, construction methodologies, BMPs that would be implemented, and reporting requirements (NOAA 2016).

J. Bald Eagles

Are bald eagles present in the action area?

Yes, bald eagles potentially forage within the project location.

If YES, the following conservation measures should be implemented:

1.If bald eagle breeding or nesting behaviors are observed or a nest is discovered or known, all activities (e.g., walking, camping, clean-up, use of a UTV, ATV, or boat) should avoid the nest by a minimum of 660 feet. If the nest is protected by a vegetated buffer where there is *no* line of sight to the nest, then the minimum avoidance distance is 330 feet. This avoidance distance shall be maintained from the onset of breeding/courtship behaviors until any eggs have hatched and eaglets have fledged (approximately 6 months).

2.If a similar activity (e.g., driving on a roadway) is closer than 660 feet to a nest, then you may maintain a distance buffer as close to the nest as the existing tolerated activity.

3.If a vegetated buffer is present and there is no line of sight to the nest and a similar activity is closer than 330 feet to a nest, then you may maintain a distance buffer as close to the nest as the existing tolerated activity.

4.In some instances, activities conducted at a distance greater than 660 feet of a nest may result in disturbance. If an activity appears to cause initial disturbance, the activity shall stop and all individuals and equipment will be moved away until the eagles are no longer displaying disturbance behaviors.

Will you implement the above measures?

No, since the project area is open water, they would not be nesting in the action area. Therefore the conservation measures would not be necessary.

If these measures cannot be implemented, then you must contact the Service's Migratory Bird Permit Office.

Texas – (505) 248-7882 or by email: permitsR2MB@fws.gov

K. Migratory Birds

Identify the species anticipated in the action area and behaviors (breeding, roosting, foraging) anticipated during project implementation. You may list similar species on a single line and categorize by type (e.g., Wading birds - great blue heron, snowy egret, reddish egret). If species or habitat impacts could occur, identify avoidance and minimization measures to prevent incidental take. Incidental take of Migratory Birds cannot be authorized. Use additional tables on the next page if needed.

Species/Species Group	Behavior	Species/Habitat Impacts and Conservation Measures to Minimize Impacts
Waterfowl	Roosting and Foraging	Open water associated with the project site is used by wintering waterfowl. Work associated with the project may disturb birds and cause them to move from areas of project activity to adjacent areas.
Loons and grebes	Roosting and foraging	Open water associated with the project site is used by wintering and migrating loons and grebes. Work associated with the project may disturb birds and cause them to move from areas of project activity to adjacent areas. The site is used by anglers and visiting public and birds are habituated to some level of human activity.
Pelicans and allies	Roosting and foraging	Open water and shoreline associated with the project site are used by pelicans and cormorants year-round. Work associated with the project may disturb birds and cause them to move from areas of project activity to adjacent areas.
Wading Birds	Roosting and Foraging	Shorelines and wetlands associated with the project site are used by wading birds (herons, egrets, and ibis) year-round. Work associated with the project may disturb birds and cause them to move from areas of project activity to adjacent areas.
Rails and Coots	Nesting, Roosting, and Foraging	Waters and wetlands associated with the project site are used by rails and coots. The Clapper Rail may nest during the breeding season. Work associated with the project may disturb roosting and foraging birds and cause them to move from areas of project activity to adjacent areas. Nesting habitat (heavily vegetated areas) for the Clapper Rail will be avoided.
Shorebirds	Nesting, Roosting, and Foraging	Shorelines and tidal flats associated with the project site are used by shorebirds year-round. Species that may nest include the Willet, Killdeer, and Wilson's Plover. Work associated with the project may disturb roosting and foraging birds and cause them to move from areas of project activity to adjacent areas. To ensure no nesting birds are affected, surveys will be performed to guide project activity so that impacts to nesting species are avoided.

Species/Species Group	Behavior	Species/Habitat Impacts and Conservation Measures to Minimize Impacts
Gulls and Terns	Roosting, and Foraging	Waters and shorelines associated with project site are used by Gulls and Terns year-round. Work associated with the project may disturb roosting and foraging birds and cause them to move from areas of project activity to adjacent areas. Project activities may attract birds to forage at or near project site activities.
Songbirds and Land Birds	Nesting, Roosting, and Foraging	Some landbirds may use vegetation associated with the site. However, the level of disturbance is so low as to not affect nesting songbirds.

NEPA Documents

Is the NEPA analysis for this project complete or in progress (yes or no)?

Yes, draft EA has been reviewed by the public.

Does this project fall under a programmatic NEPA document different from the PDARP/PEIS? (e.g. US Army Corps of Engineers, BOEM or other agency) Answer yes or no.

No.

Fish and Wildlife Coordination Act (FWCA) consultation initiated or completed, if applicable? (answer yes or no)

No.

If yes to any question above, please provide details in the text box below (i.e. link to the document, or name of the document, year, lead federal agency, USFWS Field Office involved, etc.). If you do not have a link, attach documents to this BE form. Any documentation or information provided will be very helpful in moving your project forward.

The NEPA for this project was included as part of the Texas Trustee Implementation Group (Texas TIG). 2017. Deepwater Horizon Oil Spill Natural Resource Damage Assessment, Texas Trustee Implementation Group, Draft 2017 Texas Restoration Plan/Environmental Assessment: Restoration of Wetlands, Coastal, and Nearshore Habitats; and Oysters. May 2017.

The NEPA is also addressed as part of the Deepwater Horizon Final PDARP/PEIS.

<http://www.gulfspillrestoration.noaa.gov/restoration-planning/gulf-plan>

NMFS ESA § 7 Consultation

We request that all ESA §7 consultation requests/packages be submitted electronically to: Christina.Fellas@noaa.gov

Questions about consultation status may be directed to the email address above or by phone: Christy Fellas: 727-551-5714

USFWS ESA § 7 Consultation

We request that all consultation requests/packages to USFWS be submitted electronically to:
Ashley_Mills@fws.gov.

You will be notified when we receive your Biological Evaluation. Upon receipt, we will conduct a preliminary review and provide any comments and feedback, including any requests for modifications or additional information. If modifications or additional information is necessary, we will work with you until the Biological Evaluation form is considered complete. Once complete, we will send your Biological Evaluation to the appropriate Field Office to conduct consultation.

Questions about consultation status may be directed to the email address above or by phone:
Ashley Mills: 812-756-2712

Name of Person Completing this Form: Kathryn Burger/Angela Schriff

Name of Project Lead:

Date Form Completed: 7/20/2017

Date Form Updated:

Endangered Species Act Programmatic Biological Opinion *Deepwater Horizon Oil Spill Restoration* National Marine Fisheries Service

Complete this section only if your project qualifies for streamlined ESA consultation under the ESA Framework Programmatic Biological Opinion completed by NMFS on February 10, 2016. To be eligible for streamlined ESA consultation with NMFS, you must implement all Project Design Criteria (PDCs) applicable to your project. By checking all boxes below that apply to this project you are confirming that PDCs are incorporated into the project design and construction. The entire Biological Evaluation Form must be completed and include any information necessary to verify that all applicable PDCs are incorporated into the project. If the project incorporates more than one type of restoration, check boxes in all appropriate categories.

You must receive NMFS approval before proceeding with your project. Note that this PDC checklist does not apply to ESA consultation with USFWS.

Full text of the PDCs can be reviewed at:

http://sero.nmfs.noaa.gov/protected_resources/section_7/freq_biop/documents/DWH_bo/appendix_a.pdf

PDC for Marsh Creation and Enhancement – Yes

Yes - Project is designed to avoid techniques and locations listed in the marsh creation PDCs 1.a-1.f

Yes - Follows NMFS' Sea Turtle and Smalltooth Sawfish Conditions (PDC 2.a)

Yes - Follows NMFS' Vessel Strike Avoidance Measures and Reporting for Mariners (PDC 2.b)

Yes - All in-water work activities will be conducted during daylight hours (PDC 2.c)

Yes - Spill prevention and response plan has been developed (PDC 2.d)

Yes - Fill material is not sourced using hopper dredge or from sea turtle, Gulf sturgeon or smalltooth sawfish critical habitat and in-water borrow sites do not impact turtle nesting beaches (PDC 2.e)

Yes - Design and materials do not create entrapment or entanglement risks to ESA-listed species and do not block migration (PDC 2.f)

Yes - In-water construction does not impede sea turtle access to or from nesting sites during nesting season (PDC 2.g)

Yes - Methods are employed to avoid turbidity impacts to ESA-listed species (PDCs 2.h)

Yes - Monitoring plan is included and final reports will be submitted to NMFS (PDC 3 and 4)

Check the box to confirm that all applicable requirements are met and a streamlined consultation with NMFS is requested:

Name of person completing this form: Angela Schrif/Kathryn Burger

Date form completed:7/20/17

***You must receive NMFS approval before proceeding with your project ***



In Reply Refer To:
02ETCP00-
2017-I-0018

United States Department of the Interior


FISH AND WILDLIFE SERVICE
Coastal Ecological Services Field Office
17629 El Camino Real, Suite 211
Houston, Texas 77058
281/286-8282 / (FAX) 281/488-5882



August 9, 2017

Memorandum

To: Deputy *Deepwater Horizon* Department of the Interior Natural Resource Damage Assessment and Restoration (NRDAR) Case Manager

From: Field Supervisor, Chuck Ardizzone 

Subject: Informal Consultation for the Proposed Bessie Heights Wetland Restoration, Orange County, Texas

This memorandum acknowledges our receipt of your memorandum on July 28, 2017. This response is in accordance with Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (ESA). We have reviewed your proposed project and concur with your July 28, 2017 determinations for endangered and threatened species, their critical habitat, and at-risk species (should they become listed). We based our concurrence on the justification below. Where more than one justification was applicable, multiple boxes are checked and additional comments are added.

- Species-specific surveys were conducted and there are no endangered, threatened, or at-risk species or designated critical habitat on site. Comments: _____
- Endangered, threatened, and at-risk species are not known from and are not expected to occur within the vicinity of the proposed project. Comments: The project area is outside the typical habitat type for piping plover, red knot and West Indian manatee.
- Appropriate avoidance and minimization measures have been included within the project description to ensure that any effects to listed species (or at-risk species should they become listed) are insignificant or discountable. Comments: The project will follow the Project Design Criteria described in NMFS's *Framework Biological Opinion on Deepwater Horizon Oil Spill Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Impact Statement*, NMFS's *Vessel Strike Avoidance Measures and Reporting for Mariners* and Best Management Practices including NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions*. Collision with

and/or injury of manatees should also be reported to the U.S. Fish and Wildlife Service at (281-286-8282).

Critical habitat is not present on site and does not occur within the vicinity of the proposed project. Comments: Piping plover critical habitat is present along much of the Texas coast but no units are located in the vicinity of the project area.

Appropriate avoidance and minimization measures have been included within the project description to ensure PCEs and/or critical habitat will not be adversely modified or destroyed. Comments:

The proposed project is completely beneficial to the listed or at-risk species and/or critical habitat considered. Comments:

Unless the project description changes, or new information reveals that the effects of the proposed action may affect listed species in a manner or to an extent not considered, or a new species or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the ESA is necessary.

If you have questions, please contact Susan Stanley at (281) 286-8282 ext. 229 or email susan_stanley@fws.gov.



July 28, 2017

David Bernhart
Assistant Regional Administrator for Protected Resources
Attn: Mike Tucker
NOAA Fisheries Service, Southeast Regional Office
263 13th Avenue South
Saint Petersburg, Florida 33701

Re: Request for section 7 Endangered Species Act Informal Consultation for Projects Proposed for Funding under the Deepwater Horizon Oil Spill Natural Resource Damage Assessment in the Texas Trustee Implementation Group Restoration Plan #1 and Environmental Assessment

Dear David,

The National Oceanic and Atmospheric Administration (NOAA) Restoration Center requests informal consultation under section 7 of the Endangered Species Act (ESA) for the projects listed below that are not likely to adversely affect ESA-listed species. None of the proposed projects will affect any designated critical habitat.

Two of the five proposed projects have been design to meet the project design criteria described in NMFS' February 2016 Framework Biological Opinion on the Preferred Alternative within the Deepwater Horizon Oil Spill Programmatic Damage Assessment and Restoration Plan and Programmatic Environmental Impact Statement.

The NOAA Restoration Center, a Lead Federal Agency, is requesting consultation on behalf of the Texas Trustee Implementation Group. Enclosed please find a Biological Evaluation form for each project based on the following effect determinations:

Project Name	Location	Not Likely to Adversely Affect	Requesting Streamlined Consultation under NMFS' DWH ESA Framework BiOp?
Bessie Heights Wetland Restoration	Orange County, TX	Green Sea Turtle Hawksbill Sea Turtle Leatherback Sea Turtle Loggerhead Sea Turtle Kemp's Ridley Sea Turtle	Yes
Pierce Marsh Restoration	Galveston County, TX	Green Sea Turtle Hawksbill Sea Turtle Leatherback Sea Turtle Loggerhead Sea Turtle Kemp's Ridley Sea Turtle	Yes

Indian Point Shoreline Erosion Protection	Nueces County, TX	Green Sea Turtle Hawksbill Sea Turtle Leatherback Sea Turtle Loggerhead Sea Turtle Kemp's Ridley Sea Turtle	No
McFaddin Beach and Dune Restoration	Jefferson and Chambers Counties, TX	Green Sea Turtle Hawksbill Sea Turtle Leatherback Sea Turtle Loggerhead Sea Turtle Kemp's Ridley Sea Turtle	No
Bahia Grande Hydrologic Main Channel	Cameron County, TX	Green Sea Turtle Hawksbill Sea Turtle Leatherback Sea Turtle Loggerhead Sea Turtle Kemp's Ridley Sea Turtle	No

For further questions about the projects, please contact Christy Fellas in the NOAA Restoration Center, Southeast Region at 727-551-5714 or christina.fellas@noaa.gov. Thank you for your assistance.

Sincerely,



Christy Fellas
DWH Environmental Compliance Coordinator
NOAA Restoration Center

Biological Evaluation Form

Deepwater Horizon Oil Spill Restoration

U.S. Fish and Wildlife Service & National Marine Fisheries Service

This form will be filled out by the Implementing Trustee and used by the regulatory agencies. The form will provide information to initiate informal Section 7 consultations under the Endangered Species Act (ESA) and may be used to document a No Effect determination or to initiate pre-consultation technical assistance.

It is recommended that this form also be completed to inform and evaluate additional needs for compliance with the following authorities: Migratory Bird Treaty Act (MBTA), Marine Mammal Protect Act (MMPA), Coastal Barrier Resources Act (CBRA), Bald and Golden Eagle Protection Act (BGEPA) and Section 106 of the National Historic Preservation Act (NHPA).

Further information may be required beyond what is captured on this form. Note: if you need additional space for writing, please attach pages as needed.

A. Project Identification

Federal Action Agency:

U.S. Fish and Wildlife Service/National Marine Fisheries Service

Agency Contact(s)

USFWS: Ashley Mills at 812-756-2712 and Ashley_Mills@fws.gov

NMFS: Christy Fellas at 727-551-5714 and Christina.Fellas@noaa.gov

- I. Implementing Trustee
Texas Commission on Environmental Quality (TCEQ) – for purposes of this BE form only
- II. Applicant Contact Person
Angela Schrift/Kathryn Burger
- III. Phone
512-389-8755; 512-389-8153
Email:
angela.schrift@tpwd.texas.state.gov; Kathryn.Burger@tpwd.texas.state.gov
- IV. Project Name and ID# (Official name of project and ID number assigned by action agency)
Bessie Heights Wetland Restoration

- V. NMFS Office (Choose appropriate office based on project location)
NMFS Southeast Regional Office
- VI. FWS Office (Choose appropriate office based on project location)
Texas Coastal Ecological Services Field Office, Houston, TX
- VII. Restoration Type 1
Restore and Conserve Wetlands, Coastal, and Nearshore Habitat
- VIII. Project Type 2, if helpful
N/A

B. Project Location

I. Project Location

The Nelda Stark Unit of the Lower Neches Wildlife Management Area (WMA) in Orange County comprises approximately 3,375 acres located along the eastern bank of the Neches River approximately 5 miles north of the confluence of the Neches and Sabine Rivers at Sabine Lake. The area within and surrounding the Nelda Stark Unit is often referred to as the Bessie Heights Marsh and is also the site of the Port Neches oilfield. The project site is located about 3 miles northeast of Port Neches and about 2 miles northeast of the Neches River and only accessible via water/boat.

II. State & County/Parish of Project Site
Orange County, Texas

III. Latitude & Longitude for Project Site (Decimal degrees and datum [e.g., 27.71622°N, 80.25174°W NAD83] [online conversion: <https://www.fcc.gov/encyclopedia/degrees-minutes-seconds-tofrom-decimal-degrees>])

Approximate 30.029121°, -93.935121°; WGS84

IV. Township, range and section of the project area
Texas does not use the public land survey system.

C. Description of Action Area

#1 Attach a separate map delineating where the action will occur.



Figure 1. Map showing the location of the Bessie Heights Wetland Restoration project in Orange County.

#2 Describe ALL areas that may be affected directly or indirectly by the action and not merely the immediate action area involved in the action, or just where species or critical habitat may be present. Provide a description of the existing environmental conditions and characteristics (e.g., topography, vegetation type, soil type, substrate type, water quality, water depth, tidal/riverine/estuarine, hydrology and drainage patterns, current flow and direction), and land uses (e.g., public, residential, commercial, industrial, agricultural).

The Bessie Heights Wetland Restoration project would restore wetlands in Bessie Heights Marsh located within the Lower Neches WMA in Orange County, Texas. The project would beneficially use sediment obtained from dredging of the federally managed Sabine-Neches Waterway (SNWW), and mining dredged material from dredged material placement areas (DMPAs) and private navigation channels and berths to restore coastal wetlands. The placement of dredged material, construction of containment levees, and associated planting would restore up to 900 acres of intertidal marsh.

Bessie Heights for the most part is only accessible by water. There are small roads that the WMA staff can use to access the site; however, these are not used regularly for land-based transportation. The site is adjacent to the commercially important SNWW.

The Bessie Heights marsh is part of a WMA that has no infrastructure associated with its operations. Within Bessie Heights, there is infrastructure associated with oil and gas extraction from the Port Neches Oilfield.

See below for detailed descriptions of the action area.

Existing Environmental Conditions and Characteristics

Substrate type, Topography, and Soils

The Orange County landscape is dominated by the broad flat valleys of the Sabine and Neches Rivers that are covered by coastal-type marsh vegetation. Geologic units exposed in the area include the Beaumont Clay, Deweyville Formation, and Quaternary alluvium. The surface topography of the project area is mainly flat to gently rolling and slopes to the southeast toward the Gulf. The coastal areas are barrier headlands consisting of beach or eroding marsh shores, dune and supratidal habitats that naturally decrease in elevation toward fringing intertidal marshes, lakes, and ponds. The coastal zone is underlain by sedimentary deposits that originated in ancient but similar coastal systems - Recent and Holocene-age alluvium containing thick deposits of clay, silt, sand, and gravel, overlying the Pleistocene Beaumont Formation (Barnes 1982, 1987; McGowen et al. 1976). These formations consist mainly of stream channel, point bar, natural levee, and backswamp deposits associated with former and current river channels and bayous. The substrate in the vicinity of the restoration sites is predominantly comprised of fine silts, clay alluvium, and peat overlying the Beaumont Clay. The Bessie Heights site would be restored over submerged sediments in subtidal/estuarine marsh habitat.

This project would utilize source material from USACE dredged material placement areas that are associated with federally-maintained navigation channels. Fill material would be sourced from SNWW, mining from federal dredged material placement areas (DMPAs), private navigation channels, and berths to restore coastal wetlands. These placement areas are maintained and operated as part of the federal SNWW project. Excavated dredge material would be transported via pipeline. The project will likely require staging areas, which will be determined by the contractor once the final engineering and design is complete. While the Bessie Heights Wetland Restoration project is utilizing material sourced

from a USACE maintenance dredging operation, the actual dredging of the SNWW is outside of the scope of this project and would occur regardless of whether or not this project was implemented. The dredging activities are not being funded through NRDA settlement money, and would occur regardless of whether the Bessie Heights Wetland Restoration is implemented. Therefore the dredging activities and source area are not included in the compliance discussion below. The SNWW sediments would vary but would include silts and sands.

Existing Vegetation Type

The predominant wetland habitats near the Lower Neches WMA are characterized as palustrine marsh and estuarine open water. However, no vegetation exists at the site.

Water Quality, Water Depth, Tidal/Riverine/Estuarine, Hydrology and Drainage Patterns, Current Flow and Direction

The site is adjacent to the commercially important SNWW. The Sabine region's circulation and salinity patterns are complex. Fresh water enters the system through several tributaries, including the Sabine and Neches Rivers. The Sabine and Neches Rivers flow into Sabine Lake and into the Gulf of Mexico through Sabine Pass. The SNWW Navigation Channel system serves as a pathway for both freshwater from the inflowing rivers and the saltwater wedge coming up the deep draft channel through Sabine Pass. This combination results in highly stratified conditions in the navigation channel, bringing saltwater up the SNWW and into the northwest corner of Sabine Lake and the lower reaches of the Neches River. As a result, the observed salinity in Sabine Lake is highest at both the southern end, where the lake connects to Sabine Pass, and the northern end, where the lake connects to the SNWW. The lowest salinities are observed in the central and eastern portions of the lake, which are furthest from sources of salt water (USACE 2011).

Natural forces, which shape the system, include dominant south to southeast winds, tropical weather systems, and a substantial rainfall of over 60 inches per year. Flooding and freshwater inflows are key systemic processes, which buffer salinity and provide nutrients and sediments to extensive estuaries in the Sabine region.

The Sabine River has the largest water discharge at its mouth of any Texas river. The total basin drainage area is 9,756 square miles with 7,426 square miles within Texas borders (TCEQ n.d.). The tidal portion of the Sabine River, Texas river segment 0501, does not meet assigned water quality standards for bacteria and exceeds allowable concentrations of PCBs in fish tissue (TCEQ 2014). Sampling results of fish tissue in nearby Sabine Lake prompted the issuance of Texas Department of State Health Services Fish and Shellfish Consumption Advisory ADV-46 for Sabine Lake and all contiguous waters that recommended limited consumption of gafttopsail catfish (TDSHS 2011). The GIWW tidal portion, Neches-Trinity Coastal Basin segment 0702 adjacent to the J.D. Murphree WMA, was not found to be covered by any fish advisories and fully supported aquatic life, contact recreation, and general uses (TCEQ 2002).

The Neches River has a 10,011 square mile drainage basin that intersects the Sabine River at the north end of Sabine Lake. Similar to the Sabine River tidal portion, the Neches River tidal portion, Texas River segment 0601 adjacent to Bessie Heights, does not meet water quality standards for bacteria and allowable concentrations of PCBs in fish tissue (TCEQ 2015b). This portion of the Neches River is also contiguous with Sabine Lake and subject to the ADV-16 fish consumption advisory for gafttopsail catfish.

Land Uses

The Bessie Heights marsh is part of a WMA that has no infrastructure associated with its operations.

Within Bessie Heights, there is infrastructure associated with oil and gas extraction from the Port Neches Oilfield.

Lower Neches River WMA has 7,998 acres located near Bridge City in Orange County (TPWD 2017). The WMA is composed of three separate units. The Nelda Stark and Old River units are located adjacent to the lower Neches River. The Nelda Stark Unit is primarily shallow open water, which resulted from the degradation of a former marsh system by saltwater intrusion and subsidence. The Old River Unit, near the mouth of the Neches River, is a mixture of intermediate marsh and open water. The Bessie Heights marsh is managed by TPWD as a part of the Lower Neches WMA. The management includes the use the marsh for recreational fishing and waterfowl hunting. The project area is open water, however, hunting, fishing, hiking and wildlife viewing are regularly enjoyed by the public on the Lower Neches WMA. Bessie Heights for the most part is only accessible by water. There are small roads that the WMA staff can use to access the site; however, these are not used regularly for land-based transportation. The site is adjacent to the commercially important SNWW. Vessels use the nearby SNWW. Commercial and recreational fishing, boating, and potentially wildlife viewing does occur in the open water areas.

#3 If habitat for species is present in the action area, provide a general description of the current state of the habitat.

The proposed project site is currently open water. Water dependent birds use the open bay to forage and roost. These would include loons, bay ducks, gulls and terns, and pelicans.

4 Identify any management or other activities already occurring in the area.

Submerged bay bottom is managed by the state of Texas. The Bessie Heights marsh is part of a WMA that has no infrastructure associated with its operations. Within Bessie Heights, there is infrastructure associated with oil and gas extraction from the Port Neches Oilfield.

Lower Neches River WMA has 7,998 acres located near Bridge City in Orange County (TPWD 2017). The WMA is composed of three separate units. The Nelda Stark and Old River units are located adjacent to the lower Neches River. The Nelda Stark Unit is primarily shallow open water, which resulted from the degradation of a former marsh system by saltwater intrusion and subsidence. The Old River Unit, near the mouth of the Neches River, is a mixture of intermediate marsh and open water.

The recreational and industrial users of Bessie Heights are accustomed to navigating the marsh via the existing channels and avoiding shallow areas and areas that contain obstructions. The immediate vicinity of the project area was historically uplands habitat, but has since been inundated primarily due to subsidence from growing industry in the area. This has had adverse impacts on coastal resiliency and deleterious effects on the protectiveness of the area for storm surges.

#5 Provide or attach a detailed map of the area of potential effect for ground disturbing activities if the area is different from the action area.

The potential area of impact from the construction activities is shown in Figure 1. Dredged material will be placed on submerged lands to raise elevations.

Underwater sediments may be trenched to allow for pipeline routing from the borrow site to the project area. Material would be utilized from maintenance dredging of the SNWW. This dredging would occur despite this restoration project, and is outside of the scope of this project.

a. Waterbody (If applicable. Name the body of water, including wetlands (freshwater or estuarine),

on which the project is located. If the location is in a river or estuary, please approximate the navigable distance from the project location to the marine environment.)

The site is adjacent to the Neches River.

b. Existing Structures (If applicable. Describe the current and historical structures found in the action area (e.g., buildings, parking lots, docks, seawalls, groynes, jetties, marina.)). If known, please provide the years of construction.

The Bessie Heights marsh is part of a WMA that has no infrastructure associated with its operations. Within Bessie Heights, there is pipeline infrastructure associated with oil and gas extraction from the Port Neches Oilfield.

c. Seagrasses & Other Marine Vegetation (If applicable. Describe seagrasses found in action area. If a benthic survey was done, provide the date it was completed and a copy of the report. Estimate the species area of coverage and density. Attach a separate map showing the location of the seagrasses in the action area.)

There are no known seagrasses in the project area. The TPWD seagrass viewer does not show any seagrasses in the project area (<http://tpwd.texas.gov/gis/seagrass/>).

d. Mangroves (If applicable. Describe the mangroves found in action area. Indicate the species found (red, black, white), the species area of coverage in square footage and linear footage along project shoreline. Attach a separate map showing the location of the mangroves in the action area.)

There are no mangroves present in the proposed project site as it is open water.

e. Corals (If applicable. Describe the corals found in action area. If a benthic survey was done, provide the date it was completed and a copy of the report. Estimate the species area of coverage and density. Attach a separate map showing the location of the corals in the action area.)

There are no corals in the project area. Appropriate habitat does not exist.

f. Uplands (If applicable. Describe the current terrestrial habitat in which the project is located (e.g. pasture, forest, meadows, beach and dune habitats, etc.).

The restoration is proposed to take place in an open water area.

No potential upland sites will be impacted by the proposed activities, with the exception of existing levees on the site. They are generally unvegetated and contain no nesting habitat. They may be utilized as resting habitat for migratory birds. Any areas with critical habitat will be avoided and the activities associated with the use of an upland borrow site would not adversely affect listed species. To the maximum extent practicable, locations with habitats of at-risk species will also be avoided.

- g. Marine Mammals (If applicable. Indicate and describe the species found in the action area. Use NMFS' Stock Assessment Reports (SARs) for more information, see <http://www.nmfs.noaa.gov/pr/sars/region.htm>)**

The bottlenose dolphin and the West Indian Manatee could potentially be in the project area. Manatees are rarely found in Texas waters, including Sabine Lake and are not expected to be found in the project area.

D. Project Description

I. Construction Schedule (What is the anticipated schedule for major phases of work? Include duration of in-water work.)

This project received funds for E&D in 2017 through the RESTORE Act. A USACE permit will be obtained with RESTORE funding. Other Federal compliance will be undertaken through the NRDA process. Construction and dredged material placement must be done in coordination with the USACE dredging schedule. It is estimated that the next window of availability for coordination with USACE may be 2018. Project construction may span either one or two USACE maintenance dredging cycles to gather sufficient material for marsh restoration. The schedule for the use of dredged material from private industry sources would depend on the timing of construction and maintenance of those facilities. Project construction is not expected to take longer than 6 months if only one dredge cycle is needed for sufficient material. The timing of contracting awards and weather conditions could impact the construction schedule. To prevent disturbance to nearby residential communities, construction activities that produce significant noise or require precision, such as dredging and placing material, would be limited to daylight hours. Additionally, all in water work activities will be conducted during daylight hours.

To comply with the NMFS PDCs, a monitoring report will be submitted to NMFS including the following information:

- Response and outcome of any spills that occur during construction per PDC 2.d
- As-built project completion drawings and photos
- Any interactions with protected species listed in PDC 4

II. Describe the Proposed Action:

#1 What is the purpose and need of the proposed action?

For the lower Neches River, from Beaumont to Sabine Lake, significant systematic change occurred between the 1950s and the 2000s as palustrine marsh was lost (reduced from 10,184 hectares (ha) to 4,279 ha) and converted to estuarine open water (increased from 694 ha to 5,080 ha). The largest

degree of loss of palustrine marsh was in the vicinity of the Lower Neches WMA where oil and gas production in the Port Neches Oil field caused subsidence via the activation of a pair of high-angle faults that promoted marsh flooding and conversion to open water (Tremblay and Calnan 2009). Previous restoration efforts in Bessie Heights have focused on restoring estuarine intertidal marsh by construction marsh terraces and through the BUDM. The proposed project would be a continuation of those efforts.

The Bessie Heights Wetland Restoration project would restore wetlands in Bessie Heights Marsh located within the Lower Neches WMA in Orange County, Texas. The project would beneficially use sediment obtained from dredging of the federally managed SNWW, and mining dredged material from DMPAs and private navigation channels and berths to restore coastal wetlands. The placement of dredged material, construction of containment levees, and associated planting would restore up to 900 acres of intertidal marsh.

#2 How do you plan to accomplish it? Describe in detail the construction equipment and methods needed; permanent vs. temporary impacts; duration of temporary impacts; dust, erosion, and sedimentation controls; restoration areas; if the project is growth-inducing or facilitates growth; whether the project is part of a larger project or plan; and what permits will need to be obtained.**

To implement this project, the Texas TIG would partner with the USACE to use dredged material from the SNWW to increase elevations in areas of Bessie Heights and make them suitable for the establishment and long-term sustainability of a shallow intertidal wetland. The Texas TIG would coordinate with the USACE on this project to beneficially use dredged material from maintenance dredging of the SNWW and DMPAs. Dredged material may also be obtained from the dredging of private industrial docks, berths, and channels. The Texas TIG would coordinate with the appropriate parties for each sediment source to ensure the material is not contaminated and is appropriate for marsh restoration. The project would fund the construction of containment levees as needed to contain and dewater the dredged sediments. Sediment would be placed within these containment areas to build bottom elevations suitable for marsh growth as determined from adjacent natural wetlands. This would allow the marshes to return to sustainable and productive intertidal wetlands.

In general, construction would require the use of barges, small watercraft, large track hoe excavators, earth moving equipment, cutterhead-hydraulic or clamshell dredges, and a dockside staging area. The necessity for a staging area would be determined by the contractor during final engineering and design phases of this project. Equipment and materials for the construction activities would be transported via roads and marine waterways. Large equipment and materials moved by barges would use the established interconnected waterways. This may include the GIWW, SNWW, and/or other navigation channels.

Based on existing preliminary designs, the project would place up to 4.8 million cubic yards of material to restore up to 900 acres of intertidal wetland complex. Final E&D stages for this project have recently been funded but not implemented through the RESTORE Act Bucket 2 (GCERC 2015). This project would not be implemented until the final E&D funded under the RESTORE Act have been completed. Final material volumes and acreage is dependent upon material available through adjacent dredge projects

and selected contractor capabilities. It is anticipated that the next opportunity to partner with USACE to receive dredged material for restoration purposes would be between 2018 and 2020. Depending on availability of funding, this project may run more than one USACE maintenance dredging cycle.

Estimated material volume and restored acreage is currently based on existing preliminary designs. Final material volumes and acreage is dependent upon material available through adjacent USACE dredge projects and selected contractor capabilities.

This project will comply with NOAA's PDCs. Specifically, all project related vessels will follow NMFS's Vessel Strike Avoidance Measures and Reporting for Mariners, and all in-water work activities will be conducted during daylight hours.

Project Construction and Installation

Project proponents would engage the services of professional surveyors, coastal planners and coastal engineering firms to conduct site assessments and analyses, complete construction drawings, identify potential sources of dredged material, prepare lease and permit applications to the TGLO and USACE, and otherwise move the project to a shovel-ready state.

Construction may require temporary trenches and channels to provide equipment access and routing of dredge pipelines to the restoration sites. The pipeline to transport dredge material would be temporary, and would not be buried. The pipeline will float or be sunk into the sediment depending on the safety needs or concerns of the contractor. The need for and location of temporary channels would be determined in the final E&D. All temporary channels would be backfilled upon completion of construction work. All sources of borrow material would be assessed for suitability from an engineering perspective and would be evaluated for environmental conditions to ensure sediments are uncontaminated and there are no significant impacts to cultural and sensitive resources.

Hydraulic dredging utilizes in-situ water to mobilize the sediments through the pipeline. To achieve the target elevation for the restored wetlands, dredged material would be placed such that, after consolidation, elevations suitable to support intertidal marsh vegetation would be present. Mechanically excavated sediment from the existing substrates may be used to form containment levees to contain the dredged material, facilitate dewatering and protect the restoration sites from erosion until vegetation is established. After dewatering, the site would be planted with native species such as smooth cordgrass. The transplants would be propagated from upper Texas coast stocks.

Specific methods and equipment used would be approved by a professional engineer (PE) and the project team that includes Texas TIG representatives and TPWD land managers prior to construction. Environmental considerations, BMPs, land use approvals, and permit requirements must be met regardless of methods and equipment chosen. These would be outlined in the bid specification package developed by the PE and contracting officers. This specification package would ensure that the contractor is made aware of the engineering specifications as well as any additional obligations they would incur associated with federal and state laws governing activities associated with the project. It would also provide the project related approvals needed by the project manager and the PE to conduct the project.

Beneficial Use of Dredged Material

This project would utilize source material from ongoing dredging operations and/or material harvested

from existing placement areas that are associated with federally-maintained navigation channels. These placement areas are maintained and operated as part of the SNWW federal project. (While the Bessie Heights Wetland Restoration project is utilizing material sourced from a USACE maintenance dredging operation, the actual dredging of the SNWW is outside of the scope of this project and would occur regardless of whether or not this project was implemented. This activity is not being funded through NRDA settlement money, and therefore is not included in the compliance discussion below.)

Dredged material would be used to construct containment levees as needed to contain and dewater dredged sediments. Sediment would be placed within these containment areas to build bottom elevations suitable for marsh growth as determined from adjacent natural wetlands. Containment levees may be intentionally breached or lowered as needed after dredged material dewatering in order to establish adequate tidal circulation to the restored marsh.

Dredged material would be sourced from the SNWW or private navigation channels. Another method of BUDM is to mine existing USACE DMPAs that are associated with federally maintained navigation channels. Material would be mined using hydraulic excavation techniques.

The Texas TIG would consider all current information to determine the appropriate level of contamination testing for sediments used in this project. For sediments from federally-maintained navigation channels or associated DMPAs, previously collected contaminant analysis and bio-assay data would be obtained from the USACE Galveston District - Operations Branch records. Based upon this information, the USACE and state and federal resource agency personnel would be consulted to determine the amount of sampling and the type of chemical analyses that may be needed. For private industry docks and channels, state and federal resource agency personnel would be consulted to determine the amount of sampling and the type of chemical analyses that may be needed. All environmental reviews required for the placement of the material obtained as part of a beneficial use disposal process would be coordinated with the project (e.g. a navigation maintenance project) supplying the dredged material.

Measures to control turbidity caused by construction activities, decanting water, and sediment movement would be in place to ensure sensitive habitats are protected, water quality standards are met, and sensitive resources are not affected. These measures may include appropriate water control structures to decant water, as well as the installation of silt fences, hay bales, filter-fabric, and/or levees to control sediments and avoid negative impacts associated with the fill placement. No known oyster reefs, other hard structure reef resources, or seagrass beds are present within or adjacent to the restoration sites that would require the use of significant control measures during project implementation.

Either a hydraulic cutter-head dredge or clamshell dredge would be used, as these do not pose a risk to pelagic aquatic organisms such as sea turtles. Material would be transported to the placement area via a hydraulic dredge pipeline. Location of the pipelines will be determined by the contractor. The dredge pipeline would be routed to avoid disturbance to sensitive resource areas such as oyster reefs and seagrass beds if identified along the pipeline route. Typically, pipelines would be submerged in deeper waters (where dolphins are could occur) in order to avoid impacts with marine traffic. Floating pipelines may be used in shallow water areas (approximately 3 feet or less) where dolphins are not likely to be present. Measures will be taken to ensure that floating pipelines will not trap marine mammals. Any areas containing such resources in the construction area and pipeline route would be protected using BMPs such as hay bales, silt fences or other appropriate methods.

Levees

Levees would be utilized in this project to contain dredged material and to facilitate dewatering of the dredged slurry. They also may serve to protect the restored habitat from erosion. In addition to construction of new levees, existing levees may be rehabilitated and utilized in this effort.

The amount, grading, and size of material (such as rock) that may be used to stabilize the levees would be dependent on several factors determined in the final design. These include wave and current energy expected, as well as intended use of the levees. Containment levees may be intentionally breached or lowered as needed after dredged material dewatering in order to establish adequate tidal circulation to the restored marsh.

Vegetation Planting

Planting of native vegetation would occur in two stages. First, once the earthen fill has dewatered and sediments have settled substantially enough, the marsh would be seeded and/or sprigged with native vegetation such as smooth cordgrass. This can help decrease the time it takes to dewater the sediments through evapotranspiration. During the second stage, once the material has settled to marsh elevations, unvegetated areas of the marsh would be planted with sprigs. Settlement could take between 1 to 5 years after initial construction. Specific targeted number of acres for vegetative plantings for the marsh site would be developed concurrently with the E&D phase of this project. Vegetation success would be monitored as a part of the project's MAM plan.

Colonization by invasive species is not likely, however there is potential for short-term growth of salt cedar. If encountered this plant and other invasive species would be removed by hand. In the long-term, these species would not survive inundation once the sediments compress to marsh elevation.

Operations and Maintenance

Maintenance activities on the restored marsh sites would be managed by TPWD. Appropriate lease(s) or modifications to existing leases would be obtained prior to implementing the proposed restoration actions. TPWD has managed several similar projects to restore wetlands and marsh in the same area. As a member of the project team and the Texas TIG, TPWD would participate in final design development and be cognizant of obligations related to long-term management. A maintenance plan would be finalized concurrently with the final E&D phase of this project, which is funded through the RESTORE Act. Maintenance activities may include management of water control structures to facilitate dewatering, monitoring of levee height, and modifications to containment levees by breaching or lowering as needed after dredged material dewatering in order to establish adequate tidal circulation to the restored marsh.

Is the project part of a larger project or plan?

Restoration of Texas coastal wetlands through beneficially using dredged material supports the needs or goals of several conservation plans. These plans include but are not limited to the following national, state, and regional planning documents:

- Texas Coastal Management Program Final Environmental Impact Statement (NOAA and State of Texas 1996); and
- Gulf of Mexico Regional Sediment Management Master Plan (Gulf of Mexico Alliance 2009).

What permits will need to be obtained?

A USACE permit will be needed for this project. Maintenance activities on the restored marsh sites would be managed by TPWD. Appropriate lease(s) or modifications to existing leases would be obtained prior to implementing the proposed restoration actions.

#3 Attach a separate map showing project footprint, avoidance areas, construction accesses, stanging/laydown areas. **If construction involves overwater structures, pilings and sheetpiles, boat slips, boat ramps, shoreline armoring, dredging, blasting, or artificial reefs, list the method here, but complete the next section(s) in detail.

In general, construction would require the use of barges, small watercraft, large track hoe excavators, earth moving equipment, cutterhead-hydraulic or clamshell dredges, and a dockside staging area. Equipment and materials for the construction activities would be transported via roads and marine waterways. Large equipment and materials moved by barges would use the established interconnected waterways. This may include the GIWW, SNWW, and/or other navigation channels.

Underwater sediments may be trenched to allow for pipeline routing from the borrow site to the project area. Material would be utilized from maintenance dredging of the SNWW. This dredging would occur despite this restoration project, and is outside of the scope of this project.

Bessie Heights for the most part is only accessible by water. There are small roads that the WMA staff can use to access the site; however, these are not used regularly for land-based transportation. The site is adjacent to the commercially important SNWW.

The Bessie Heights marsh is part of a WMA that has no infrastructure associated with its operations. Within Bessie Heights, there is infrastructure associated with oil and gas extraction from the Port Neches Oilfield.

Coordination under Section 106 NHPA has been initiated for this project. There are no known historic sites or significant cultural, scientific, or historic resources in the area that would be affected by the proposed restoration actions. No cultural, scientific, or historic resources are known to be located in the vicinity of the project. Prior to any work which could impact cultural resources a full and complete review under Section 106 of the NHPA will be completed.

II. Specific In-Water and/or Terrestrial Construction Methods (Provide a detailed account of construction methods. It is important to include step-by-step descriptions of how demolition or removal of structures is conducted and if any debris will be moved and how. Describe how construction will be implemented, what type and size of materials will be used and if machines will be used, manual labor, or both. Indicate if work will be done from upland, barge, or both.)
See above.

a. Overwater Structures

#1 Is the proposed use of this structure for a docking facility or an observation platform? No

#2 If no, is this a fishing pier? Public or Private? How many people are expected to fish per day? How do you plan to address hook and line captures? This is not a fishing pier.

#3 Use of “Dock Construction Guidelines”?

<http://sero.nmfs.noaa.gov/pr/endangered%20species/Section%207/DockGuidelines.pdf>

This is not applicable. No dock is being constructed.

#4 Type of decking: Grated – 43% open space; Wooden planks or composite planks – proposed spacing?

This is not applicable. There is no decking

#5 Height above Mean High Water (MHW) elevation?

Height will be sufficient to support marsh vegetation.

#6 Directional orientation of main axis of dock?

Not applicable.

#7 Overwater area (sqft)?

Not applicable.

b. Pilings & Sheetpiles (What type of material is the piling or sheetpiles? What size and how many will be used? Method used to install: impact hammer, vibratory hammer, jetting, etc.?)

Not applicable.

c. Marinas and Boat Slips (Describe the number and size of slips and if the number of new slips changes from what is currently available at the project. Indicate how many are wet slips and how many are dry slips. Estimate the shadow effect of the boats - the area (sqft) beneath the boats that will be shaded.)

Boat slips are not part of this project.

d. Boat Ramp (Describe the number and size of boat ramps, the number of vessels that can be moored at the site (e.g., staging area) and if this is a public or private ramp. Indicate the boat trailer parking lot capacity, and if this number changes from what is currently available at the project.)

Boat ramps are not part of this project.

e. Shoreline Armoring (This includes all manner of shoreline armoring (e.g., riprap, seawalls, jetties, groins, breakwaters, etc.). Provide specific information on material and construction methodology used to install the shoreline armoring materials. Include linear footage and square footage. Attach a separate map showing the location of the shoreline armoring in the action area.

Shoreline armoring is not part of this project.

f. Dredging or digging (Provide details about dredge type (hopper, cutterhead, clamshell, etc.), maximum depth of dredging, area (ft²) to be dredged, volume of material (yd³) to be produced, grain size of material, sediment testing for contamination, spoil disposition plans, and hydrodynamic description (average current speed/direction)). If digging in the terrestrial environment, please describe fully with details about possible water jetting, vibration methods to install pilings for dune walk-over structure, or other methods. If using devices/methods/turtle relocation dredging to relocate sea turtles then describe the methods here.

This project would utilize source material from ongoing dredging operations and/or material harvested from existing placement areas that are associated with federally-maintained navigation channels. These placement areas are maintained and operated as part of the SNWW federal project. While the Bessie Heights Wetland Restoration project is utilizing material sourced from a USACE maintenance dredging operation, the actual dredging of the SNWW is outside of the scope of this project and would occur regardless of whether or not this project was implemented. This activity is not being funded through NRDA settlement money, and therefore is not included in the compliance discussion below.

Dredged material would be used to construct containment levees as needed to contain and dewater dredged sediments. Sediment would be placed within these containment areas to build bottom elevations suitable for marsh growth as determined from adjacent natural wetlands. Dredged material would be sourced from the SNWW or private navigation channels. Another method of BUDM is to mine existing USACE DMPAs that are associated with federally maintained navigation channels. Material would be mined using hydraulic excavation techniques.

The Texas TIG would consider all current information to determine the appropriate level of contamination testing for sediments used in this project. For sediments from federally-maintained navigation channels or associated DMPAs, previously collected contaminant analysis and bio-assay data would be obtained from the USACE Galveston District - Operations Branch records. Based upon this information, the USACE and state and federal resource agency personnel would be consulted to determine the amount of sampling and the type of chemical analyses that may be needed. For private industry docks and channels, state and federal resource agency personnel would be consulted to determine the amount of sampling and the type of chemical analyses that may be needed. All environmental reviews required for the placement of the material obtained as part of a beneficial use disposal process would be coordinated with the project (e.g. a navigation maintenance project) supplying the dredged material.

Measures to control turbidity caused by construction activities, decanting water, and sediment movement would be in place to ensure sensitive habitats are protected, water quality standards are met, and sensitive resources are not affected. These measures may include appropriate water control structures to decant water, as well as the installation of silt fences, hay bales, filter-fabric, and/or levees to control sediments and avoid negative impacts associated with the fill placement. No known oyster reefs, other hard structure reef resources, or seagrass beds are present within or adjacent to the restoration sites that would require the use of significant control measures during project implementation.

Either a hydraulic cutter-head dredge or clamshell dredge would be used, as these do not pose a risk to pelagic aquatic organisms such as sea turtles. Material would be transported to the placement area via a

hydraulic dredge pipeline. The dredge pipeline would be routed to avoid disturbance to sensitive resource areas such as oyster reefs and seagrass beds if identified along the pipeline route. Any areas containing such resources in the construction area and pipeline route would be protected using BMPs such as hay bales, silt fences or other appropriate methods.

g. Blasting (Projects that use blasting might not qualify as “minor projects,” and a Biological Assessment (BA) may need to be prepared for the project. Arrange a technical consultation meeting with NMFS Protected Resources Division to determine if a BA is necessary. Please include explosive weights and blasting plan.)

This project does not involve blasting activities.

h. Artificial Reefs (Provide a detailed account of the artificial reef site selection and reef establishment decisions (i.e., management and siting considerations, stakeholder considerations, environmental considerations), deployment schedule, materials used, deployment methods, as well as final depth profile and overhead clearance for vessel traffic. For additional information and detailed guidance on artificial reefs, please refer to the artificial reef program websites for the particular state the project will occur in.)

Artificial reef creation is not part of this project.

i. Fishery Activities (Describe any use of gear that could entangle or capture protected species. This includes activities that may enhance fishing opportunities (e.g. fishing piers) or be fishery/gear research related (e.g. involve trawl gear, gillnets, hook and line gear, crab pots etc)).

No fishery activities are part of this project.

E. NOAA Species & Critical Habitat and Effects Determination Requested

#1 List all species, critical habitat, proposed species and proposed critical habitat that may be found in the action area.

Species and/or Critical Habitat	CH Unit (if applicable)	Location (sea turtles only)	Determination
Loggerhead Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect
Green Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect
Kemp’s Ridley Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect
Hawksbill Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect
Leatherback Sea Turtle		Marine	May Affect, Not Likely to Adversely Affect

Determination Definitions

NE = no effect. This determination is appropriate when the proposed action will not directly, indirectly, or cumulatively impact, either positively or negatively, any listed, proposed, candidate species or designated/proposed critical habitat.

NLAA = not likely to adversely affect. This determination is appropriate when the proposed action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources.

Response requested is concurrence with the not likely to affect determination. This conclusion is appropriate when effects to the species or critical habitat will be wholly beneficial, discountable, or insignificant. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or habitat.

Insignificant effects relate to the size of the impact, while discountable effects are those that are extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur. If the Services concur in writing with the Action Agency's determination of "is not likely to adversely affect" listed species or critical habitat, the section 7 consultation process is completed.

LAA = likely to adversely affect. This determination is appropriate when the proposed action is likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat.

Response requested for listed species is formal consultation for action with a likely to adversely affect determination, with a biological opinion as the concluding document. Response requested for proposed and candidate species is "Conference." This conclusion is reached if any adverse effect to listed species or critical habitat may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable or insignificant. In the event the overall effect of the proposed action is beneficial to the listed species or critical habitat, but may also cause some adverse effect on individuals of the listed species or segments of the critical habitat, then the determination is "likely to adversely affect." Any LAA determination requires formal section 7 consultation and will require additional information.

#2 Attach a separate map identifying species/critical habitat locations within the action area. Identify if Gulf sturgeon are in marine or in freshwater in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Gulf sturgeon CH - marine). Identify if sea turtles are in water or on land in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Loggerhead sea turtle CH - terrestrial).

There is no critical habitat in the project area.

F. USFWS Species & Critical Habitat and Effects Determination Requested

#1 List all species, critical habitat, proposed species and proposed critical habitat that may be found in the action area.

Species and/or Critical Habitat	CH Unit (if applicable)	Location (sea turtles only)	Determination
Piping Plover			May Affect, Not Likely to Adversely Affect
Red Knot			May Affect, Not Likely to Adversely Affect
West Indian Manatee			May Affect, Not Likely to Adversely Affect

#2 Attach a separate map identifying species/critical habitat locations within the action area. For information on species and critical habitat under USFWS jurisdiction, visit <http://www.fws.gov/endangered/species/>. Identify if Gulf sturgeon are in marine or in freshwater in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Gulf sturgeon CH - marine). Identify if sea turtles are in water or on land in your Species and/or Critical Habitat list to determine which federal agency will perform the analysis (e.g. Loggerhead sea turtle CH - terrestrial).

There is no critical habitat within the project area.

Determination Definitions

NE = no effect. This determination is appropriate when the proposed action will not directly, indirectly, or cumulatively impact, either positively or negatively, any listed, proposed, candidate species or designated/proposed critical habitat.

NLAA = not likely to adversely affect. This determination is appropriate when the proposed action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources.

Response requested is concurrence with the not likely to affect determination. This conclusion is appropriate when effects to the species or critical habitat will be wholly beneficial, discountable, or insignificant. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or habitat.

Insignificant effects relate to the size of the impact, while discountable effects are those that are extremely unlikely to occur. Based on best judgment, a person would not: (1) be able to meaningfully measure, detect, or evaluate insignificant effects; or (2) expect discountable effects to occur. If the Services concur in writing with the Action Agency's determination of "is not likely to adversely affect" listed species or critical habitat, the section 7 consultation process is completed.

LAA = likely to adversely affect. This determination is appropriate when the proposed action is likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat.

Response requested for listed species is formal consultation for action with a likely to adversely affect determination, with a biological opinion as the concluding document. Response requested for proposed and candidate species is "Conference." This conclusion is reached if any adverse effect to listed species or critical habitat may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable or insignificant. In the event the overall effect of the proposed action is beneficial to the listed species or critical habitat, but may also cause some adverse effect on individuals of the listed species or segments of the critical habitat, then the determination is "likely to adversely affect." Any LAA determination requires formal section 7 consultation and will require additional information.

G. Effects of the Proposed Project

1. **Explain the potential beneficial and adverse effects to each species listed above (Describe what, when, and how the species will be impacted and the likely response to the impact. Be sure to include direct, indirect, interdependent, interrelated, connected actions, and cumulative impacts. Where possible, quantify effects. If species are present (or potentially present) and will not be adversely affected describe your rationale. If species are unlikely to be present in the general area or action area, explain why. This justification provides documentation for your administrative record, avoids the need for additional correspondence regarding the species, and helps expedite review.)**

Piping Plover:

The project may affect but is not likely to adversely affect this species. The piping plover is a seasonal resident on the Texas coast and occurs in south of the project area in Jefferson County. However, piping plover tend to use beach and bay shorelines and there are no documented records of piping plovers in the project area. Piping plovers are not expected to occur in the construction area because typical habitats, beach and bayside tidal flat habitats, for the species do not exist. Construction activities will occur when the species is present along the Texas coastline. Individual piping plovers could rest on the existing levees. Piping plovers, if present and disturbed by the noise, have access to nearby habitat that is within their normal flying distances for daily foraging movement. Upland excavation activities will not occur in habitat used by this species.

Red Knot:

The project may affect but is not likely to adversely affect this species. The red knot is primarily migratory along the northern Texas coast. Red knots are not expected to occur in the construction area because typical habitats, beach and bayside tidal flat habitats, for the species do not exist. Construction activities will occur when the species is present along the Texas coastline. Individual red knots could rest on the existing levees. Red knots, if present and disturbed by the noise, have access to nearby habitat that is within their normal flying distances for daily foraging movement.

West Indian Manatee:

The project is not likely to adversely affect this species. This species is uncommon in Texas waters and is not likely to occur in the action area (Fertl and others 2005). If present, the conservation measures described below will be followed.

Green Sea Turtle:

This project may affect but is not likely to adversely affect this species. No sea turtle nesting activities are expected to occur here since there is no beach habitat. Green Sea Turtles could occur in the project area and may be in the water during construction activities including the building of levees and potential construction of trenches. However, due to the low salinities in the project area the likelihood of a sea turtles being in the area is low. Impacts to bay bottom would have minimal impacts to foraging habitat

for this species because this project will avoid and/or minimize impacts to seagrass beds and oyster reef habitats. Green sea turtles are specialist feeders that target sponges and seagrass or macroalgae. Substrate at the aquatic borrow areas largely consists of unvegetated sandy bottom.

Kemp's Ridley Sea Turtle:

This project may affect but is not likely to adversely affect this species. No sea turtle nesting activities are expected to occur here since there is no beach habitat. Kemp's Ridley sea turtles could occur in the project area and may be in the water during construction activities including the building of levees and potential construction of trenches.

The effects due to loss of foraging habitat on Kemp's ridley sea turtles are insignificant. This species is a generalist carnivore, typically preying on benthic mollusks and crustaceans in the nearshore environment. Kemp's ridley can be found foraging in shallow sandy habitat. However, any impacts to foraging habitat for Kemp's ridleys will be temporary and would only affect a small area relative to the foraging habitat available in the nearshore marine environment off Texas.

Loggerhead Sea Turtle:

This project may affect but is not likely to adversely affect this species. No sea turtle nesting activities are expected to occur here since there is no beach habitat. This species is rarely seen in inland waters along the northern Texas coast and is unlikely to be in the project area due to low salinities. These sea turtles may be in the water during construction activities including the building of levees and potential construction of trenches.

The effects due to loss of foraging habitat on loggerhead sea turtles are insignificant. This species is a generalist carnivore, typically preying on benthic mollusks and crustaceans in the nearshore environment. Loggerheads can be found foraging in shallow sandy habitat. However, any impacts to foraging habitat for loggerheads will be temporary and would only affect a small area relative to the foraging habitat available in the nearshore marine environment off Texas.

Hawksbill Sea Turtle:

This project may affect but is not likely to adversely affect this species. No sea turtle nesting activities are expected to occur here since there is no beach habitat. This species is rarely seen in inland waters along the northern Texas coast and is unlikely to be in the project area due to low salinities. These sea turtles may be in the water during construction activities including the building of levees and potential construction of trenches.

Impacts to bay bottom would have minimal impacts to foraging habitat for this species because this project will avoid and/or minimize impacts to seagrass beds and oyster reef habitats. Hawksbill sea turtles are specialist feeders that target sponges and seagrass or macroalgae. Substrate at the dredging and disposal sites largely consists of unvegetated sandy bottom.

Leatherback Sea Turtle:

This project may affect but is not likely to adversely affect this species. No sea turtle nesting activities are expected to occur here since there is no beach habitat. This species is rarely seen in inland waters along the northern Texas coast and is unlikely to be in the project area due to low salinities. These sea turtles may be in the water during construction activities including the building of levees and potential construction of trenches. Impacts to bay bottom would have minimal impacts to foraging habitat for this species since it is a pelagic feeder.

II. Explain the potential beneficial and adverse effects to critical habitat listed above (Describe what, when, and how the critical habitat will be impacted and the likely response to the impact. Be sure to include direct, indirect, interdependent, interrelated, connected actions, and cumulative impacts. Where possible, quantify effects (e.g. acres of habitat, miles of habitat). Describe your rationale if designated or proposed critical habitats are present and will not be adversely affected.

There is no critical habitat in the action area.

H. Actions to Reduce Adverse Effects

Explain the actions to reduce adverse effects to each species listed above (For each species for which impacts were identified, describe any conservation measures (e.g. BMPs) that will be implemented to avoid or minimize the impacts. Conservation measures are designed to avoid or minimize effects to listed species and critical habitats or further the recovery of the species under review. Conservation measures are considered part of the proposed action and their implementation is required. Any changes to, modifications of, or failure to implement these conservation measures may result in a need to reinitiate this consultation.)

Piping Plover:

The project may affect but is not likely to adversely affect this species. The piping plover is a winter resident on the Texas coast and occurs in Galveston County. However, there are no documented records of piping plovers in the project area. Piping plovers are not expected to occur in the construction area because typical habitats, beach and bayside tidal flat habitats, for the species do not exist. Construction activities will occur when the species is present along the Texas coastline. Individual piping plovers could rest on the existing levees. Piping plovers, if present and disturbed by the noise, have access to nearby habitat that is within their normal flying distances for daily foraging movement. Upland excavation activities will not occur in habitat used by this species.

Red Knot:

The project may affect but is not likely to adversely affect this species. The red knot is primarily migratory in Galveston County. Red knots are not expected to occur in the construction area because typical habitats, beach and bayside tidal flat habitats, for the species do not exist. Construction activities will occur when the species is present along the Texas coastline. Individual red knots could rest on the

existing levees. Red knots, if present and disturbed by the noise, have access to nearby habitat that is within their normal flying distances for daily foraging movement.

West Indian Manatee:

The project may affect but is not likely to adversely affect this species. All construction personnel will be notified of the potential presence of West Indian Manatee in the water and reminded of the criminal and civil penalties associated with harassing, injuring, or killing West Indian Manatees. All workers will be educated that there could be West Indian manatees in the water and will be advised to look for manatees and, if observed, wait until manatees leave the area to put the equipment in the water. Care will be taken when using equipment in the water to ensure that no harm is caused to any West Indian Manatee that may be nearby. Should a West Indian Manatee come within 50 foot of the project area during construction activities, work would immediately cease until the West Indian Manatee has moved away from the project area on its own. Construction noise will be kept to the minimum feasible.

Green Sea Turtle:

The project may affect but is unlikely to adversely affect this species. Sea turtle and smalltooth sawfish construction conditions and measures for reducing entrapment risk to protected species will be followed for all aspects of this project

(http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/sea_turtle_and_smalltooth_sawfish_construction_conditions_3-23-06.pdf;

http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/entrapment_bmps_final.pdf).

Sea turtles may be affected by placement of fill material below mean high water. However, these effects are discountable because sea turtles are highly mobile and can avoid the area during sand placement activities and through the implementation of NMFS' Sea Turtle and Smalltooth Sawfish Construction Conditions. Application of fill material is a slow process allowing time for sea turtles to leave the area.

Hawksbill Sea Turtle:

The project may affect but is unlikely to adversely affect this species. Sea turtle and smalltooth sawfish construction conditions and measures for reducing entrapment risk to protected species will be followed for all aspects of this project

(http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/sea_turtle_and_smalltooth_sawfish_construction_conditions_3-23-06.pdf;

http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/entrapment_bmps_final.pdf).

Sea turtles may be affected by the placement of fill material below mean high water. However, these effects are discountable because sea turtles are highly mobile and can avoid the area during sand placement activities and through the implementation of NMFS' Sea Turtle and Smalltooth Sawfish

Construction Conditions. Application of fill material is a slow process allowing time for sea turtles to leave the area.

Leatherback Sea Turtle:

The project may affect but is unlikely to adversely affect this species. Sea turtle and smalltooth sawfish construction conditions and measures for reducing entrapment risk to protected species will be followed for all aspects of this project

(http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/sea_turtle_and_smalltooth_sawfish_construction_conditions_3-23-06.pdf;

http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/entrapment_bmps_final.pdf).

Sea turtles may be affected the placement of fill material below mean high water. However, these effects are discountable because sea turtles are highly mobile and can avoid the area during sand placement activities and through the implementation of NMFS' Sea Turtle and Smalltooth Sawfish Construction Conditions. Application of fill material is a slow process allowing time for sea turtles to leave the area.

Kemp's Ridley Sea Turtle

The project may affect but is unlikely to adversely affect this species. Sea turtle and smalltooth sawfish construction conditions and measures for reducing entrapment risk to protected species will be followed for all aspects of this project

(http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/sea_turtle_and_smalltooth_sawfish_construction_conditions_3-23-06.pdf;

http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/entrapment_bmps_final.pdf).

Sea turtles may be affected by the placement of fill material below mean high water. However, these effects are discountable because sea turtles are highly mobile and can avoid the area during sand placement activities and through the implementation of NMFS' Sea Turtle and Smalltooth Sawfish Construction Conditions. Application of fill material is a slow process allowing time for sea turtles to leave the area.

Loggerhead Sea Turtle:

The project may affect but is unlikely to adversely affect this species. Sea turtle and smalltooth sawfish construction conditions and measures for reducing entrapment risk to protected species will be followed for all aspects of this project

(http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/sea_turtle_and_smalltooth_sawfish_construction_conditions_3-23-06.pdf;

http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/entrapment_bmps_final.pdf).

Sea turtles may be affected by the placement of fill material below mean high water. However, these effects are discountable because sea turtles are highly mobile and can avoid the area during sand placement activities and through the implementation of NMFS' Sea Turtle and Smalltooth Sawfish Construction Conditions. Application of fill material is a slow process allowing time for sea turtles to leave the area.

- II. Explain the actions to reduce adverse effects to critical habitat listed above (For critical habitat for which impacts were identified, describe any conservation measures (e.g. BMPs) that will be implemented to avoid or minimize the impacts. Conservation measures are designed to avoid or minimize effects to listed species and critical habitats or further the recovery of the species under review. Conservation measures are considered part of the proposed action and their implementation is required. Any changes to, modifications of, or failure to implement these conservation measures may result in a need to reinitiate this consultation.)**

There is no critical habitat within the project area.

I. Marine Mammals

- I. The Marine Mammal Protection Act prohibits the taking (including disruption of behavior, entrapment, injury, or death) of all marine mammals (e.g., whales, dolphins, manatees). However, the MMPA allows limited exceptions to the take prohibition if authorized, such as the incidental (i.e., unintentional but not unexpected) take of marine mammals. The following questions are designed to allow the Agencies to quickly determine if your action has the potential to take marine mammals. If the information provided indicates that incidental take is possible, further discussion with the Agencies is required.**

Is your activity occurring in or on marine or estuarine waters, or could it impact the quality (e.g., salinity, temperature) of marine or estuarine waters? Yes

II. Does your activity involve any of the following (answer yes or no):

- a. Use of active acoustic equipment (e.g., echosounder) producing sound below 200 kHz: no**
- b. In-water construction or demolition: yes**
- c. Temporary or fixed use of active or passive sampling gear (e.g., nets, lines, traps; turtle relocation trawls): no**
- d. In-water Explosive detonation: no**
- e. Building or enhancing areas for water-related recreational use or fishing opportunities (e.g. fishing piers, bridges, boat ramps, marinas): no**

- f. *Aquaculture: no*
- g. *Dredging or in-water construction activities to change hydrologic conditions or connectivity, create breakwaters and living shorelines, etc.: yes*
- h. *Restoration of barrier islands, levee construction or similar projects: yes, levee construction is part of this project*
- i. *Fresh-water river diversions: no*

III. If you checked “Yes” to any of the activities immediately above or whether the activity could impact the quality of marine or estuarine waters, please describe the nature of the activities in more detail or indicate which section of the form already includes these descriptions:

Construction activities described above.

Bottlenose dolphins could be present, albeit not likely, in the action area. Impacts to wildlife would be avoided via management guidelines and techniques as appropriate. BMPs as described above for sea turtles and manatees will be implemented along with the [NMFS 2008 vessel strike avoidance measures](#). If marine mammals are sighted within 50 feet of the construction area and could be affected (e.g. work would not be stopped if a dolphin was sighted on the outside of a levee), work would stop until the animals move away from the area under their own volition. Therefore, no incidental take of marine mammals is anticipated.

During construction, there would be short-term minor impacts to EFH through dredged material deposition and increased turbidity. The conversion of shallow open water to intertidal marsh would result in long-term minor adverse impacts to this habitat and species that utilize the habitat, including bald or golden eagles. However, this impact would be offset by the long-term major beneficial impact from restoring intertidal marsh.

Potential minor adverse effects of this project could include disturbance to marine mammals, sea turtles, and birds in nearshore waters from increased vessel traffic. Additional minor long-term adverse impacts to species would stem from the conversion of existing subsided habitat to salt marsh, and the loss of habitat associated with that action. Any potential minor, adverse effects to bottlenose dolphins in the project area are likely to be offset by implementing the BMPs discussed above, including having someone observe when marine mammals enter the project area. Therefore, no incidental take of dolphins is anticipated.

IV. Are any measures planned to mitigate potential impacts to marine mammals? yes

If yes, provide text in below.

BMPs including the Sea Turtle and Smalltooth Sawfish Construction Conditions (NMFS 2006) would be followed. If marine mammals are sighted within 50 feet of the construction area, work would

stop until the animals move away from the area under their own volition. Therefore, no incidental take of marine mammals is anticipated.

This project will follow the PDCs described in NMFS's Framework Biological Opinion on Deepwater Horizon Oil Spill Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Impact Statement (SER-2015-17459). NMFS' PDCs consider where construction would occur, construction methodologies, BMPs that would be implemented, and reporting requirements (NOAA 2016).

J. Bald Eagles

Are bald eagles present in the action area?

Yes, bald eagles potentially forage within the project location.

If YES, the following conservation measures should be implemented:

- 1.If bald eagle breeding or nesting behaviors are observed or a nest is discovered or known, all activities (e.g., walking, camping, clean-up, use of a UTV, ATV, or boat) should avoid the nest by a minimum of 660 feet. If the nest is protected by a vegetated buffer where there is *no* line of sight to the nest, then the minimum avoidance distance is 330 feet. This avoidance distance shall be maintained from the onset of breeding/courtship behaviors until any eggs have hatched and eaglets have fledged (approximately 6 months).**
- 2.If a similar activity (e.g., driving on a roadway) is closer than 660 feet to a nest, then you may maintain a distance buffer as close to the nest as the existing tolerated activity.**
- 3.If a vegetated buffer is present and there is no line of sight to the nest and a similar activity is closer than 330 feet to a nest, then you may maintain a distance buffer as close to the nest as the existing tolerated activity.**
- 4.In some instances, activities conducted at a distance greater than 660 feet of a nest may result in disturbance. If an activity appears to cause initial disturbance, the activity shall stop and all individuals and equipment will be moved away until the eagles are no longer displaying disturbance behaviors.**

Will you implement the above measures?

No, since the project area is open water, they would not be nesting in the action area. Therefore the conservation measures would not be necessary.

If these measures cannot be implemented, then you must contact the Service's Migratory Bird Permit Office.

Texas – (505) 248-7882 or by email: permitsR2MB@fws.gov

K. Migratory Birds

Identify the species anticipated in the action area and behaviors (breeding, roosting, foraging) anticipated during project implementation. You may list similar species on a single line and categorize by type (e.g., Wading birds - great blue heron, snowy egret, reddish egret). If species or habitat impacts could occur, identify avoidance and minimization measures to prevent incidental take. Incidental take of Migratory Birds cannot be authorized. Use additional tables on the next page if needed.

Species/Species Group	Behavior	Species/Habitat Impacts and Conservation Measures to Minimize Impacts
Waterfowl	Roosting and Foraging	Open water associated with the project site is used by wintering waterfowl. Work associated with the project may disturb birds and cause them to move from areas of project activity to adjacent areas.
Loons and grebes	Roosting and foraging	Open water associated with the project site is used by wintering and migrating loons and grebes. Work associated with the project may disturb birds and cause them to move from areas of project activity to adjacent areas. The site is used by anglers and visiting public and birds are habituated to some level of human activity.
Pelicans and allies	Roosting and foraging	Open water and shoreline associated with the project site are used by pelicans and cormorants year-round. Work associated with the project may disturb birds and cause them to move from areas of project activity to adjacent areas.
Wading Birds	Roosting and Foraging	Shorelines and wetlands associated with the project site are used by wading birds (herons, egrets, and ibis) year-round. Work associated with the project may disturb birds and cause them to move from areas of project activity to adjacent areas.
Rails and Coots	Nesting, Roosting, and Foraging	Waters and wetlands associated with the project site are used by rails and coots. The Clapper Rail may nest during the breeding season. Work associated with the project may disturb roosting and foraging birds and cause them to move from areas of project activity to adjacent areas. Nesting habitat (heavily vegetated areas) for the Clapper Rail will be avoided.
Shorebirds	Nesting, Roosting, and Foraging	Shorelines and tidal flats associated with the project site are used by shorebirds year-round. Species that may nest include the Willet, Killdeer, and Wilson's Plover. Work associated with the project may disturb roosting and foraging birds and cause them to move from areas of project activity to adjacent areas. To ensure no nesting birds are affected, surveys will be performed to guide project activity so that impacts to nesting species are avoided.

Species/Species Group	Behavior	Species/Habitat Impacts and Conservation Measures to Minimize Impacts
Gulls and Terns	Roosting, and Foraging	Waters and shorelines associated with project site are used by Gulls and Terns year-round. Work associated with the project may disturb roosting and foraging birds and cause them to move from areas of project activity to adjacent areas. Project activities may attract birds to forage at or near project site activities.
Songbirds and Land Birds	Nesting, Roosting, and Foraging	Some landbirds may use vegetation associated with the site. However, the level of disturbance is so low as to not affect nesting songbirds.

NEPA Documents

Is the NEPA analysis for this project complete or in progress (yes or no)?

Yes, draft EA has been reviewed by the public.

Does this project fall under a programmatic NEPA document different from the PDARP/PEIS? (e.g. US Army Corps of Engineers, BOEM or other agency) Answer yes or no.

No.

Fish and Wildlife Coordination Act (FWCA) consultation initiated or completed, if applicable? (answer yes or no)

No.

If yes to any question above, please provide details in the text box below (i.e. link to the document, or name of the document, year, lead federal agency, USFWS Field Office involved, etc.). If you do not have a link, attach documents to this BE form. Any documentation or information provided will be very helpful in moving your project forward.

The NEPA for this project was included as part of the Texas Trustee Implementation Group (Texas TIG). 2017. Deepwater Horizon Oil Spill Natural Resource Damage Assessment, Texas Trustee Implementation Group, Draft 2017 Texas Restoration Plan/Environmental Assessment: Restoration of Wetlands, Coastal, and Nearshore Habitats; and Oysters. May 2017.

The NEPA is also addressed as part of the Deepwater Horizon Final PDARP/PEIS.

<http://www.gulfspillrestoration.noaa.gov/restoration-planning/gulf-plan>

NMFS ESA § 7 Consultation

We request that all ESA §7 consultation requests/packages be submitted electronically to: Christina.Fellas@noaa.gov

Questions about consultation status may be directed to the email address above or by phone: Christy Fellas: 727-551-5714

USFWS ESA § 7 Consultation

We request that all consultation requests/packages to USFWS be submitted electronically to:
Ashley_Mills@fws.gov.

You will be notified when we receive your Biological Evaluation. Upon receipt, we will conduct a preliminary review and provide any comments and feedback, including any requests for modifications or additional information. If modifications or additional information is necessary, we will work with you until the Biological Evaluation form is considered complete. Once complete, we will send your Biological Evaluation to the appropriate Field Office to conduct consultation.

Questions about consultation status may be directed to the email address above or by phone:
Ashley Mills: 812-756-2712

Name of Person Completing this Form: Kathryn Burger/Angela Schriff

Name of Project Lead:

Date Form Completed: 7/20/2017

Date Form Updated:

Endangered Species Act Programmatic Biological Opinion *Deepwater Horizon Oil Spill Restoration* National Marine Fisheries Service

Complete this section only if your project qualifies for streamlined ESA consultation under the ESA Framework Programmatic Biological Opinion completed by NMFS on February 10, 2016. To be eligible for streamlined ESA consultation with NMFS, you must implement all Project Design Criteria (PDCs) applicable to your project. By checking all boxes below that apply to this project you are confirming that PDCs are incorporated into the project design and construction. The entire Biological Evaluation Form must be completed and include any information necessary to verify that all applicable PDCs are incorporated into the project. If the project incorporates more than one type of restoration, check boxes in all appropriate categories.

You must receive NMFS approval before proceeding with your project. Note that this PDC checklist does not apply to ESA consultation with USFWS.

Full text of the PDCs can be reviewed at:

http://sero.nmfs.noaa.gov/protected_resources/section_7/freq_biop/documents/DWH_bo/appendix_a.pdf

PDC for Marsh Creation and Enhancement – Yes

Yes - Project is designed to avoid techniques and locations listed in the marsh creation PDCs 1.a-1.f

Yes - Follows NMFS' Sea Turtle and Smalltooth Sawfish Conditions (PDC 2.a)

Yes - Follows NMFS' Vessel Strike Avoidance Measures and Reporting for Mariners (PDC 2.b)

Yes - All in-water work activities will be conducted during daylight hours (PDC 2.c)

Yes - Spill prevention and response plan has been developed (PDC 2.d)

Yes - Fill material is not sourced using hopper dredge or from sea turtle, Gulf sturgeon or smalltooth sawfish critical habitat and in-water borrow sites do not impact turtle nesting beaches (PDC 2.e)

Yes - Design and materials do not create entrapment or entanglement risks to ESA-listed species and do not block migration (PDC 2.f)

Yes - In-water construction does not impede sea turtle access to or from nesting sites during nesting season (PDC 2.g)

Yes - Methods are employed to avoid turbidity impacts to ESA-listed species (PDCs 2.h)

Yes - Monitoring plan is included and final reports will be submitted to NMFS (PDC 3 and 4)

Check the box to confirm that all applicable requirements are met and a streamlined consultation with NMFS is requested:

Name of person completing this form: Angela Schrif/Kathryn Burger

Date form completed:7/20/17

***You must receive NMFS approval before proceeding with your project ***

Kathryn Burger

From: Christina Fellas - NOAA Federal <christina.fellas@noaa.gov>
Sent: Friday, September 22, 2017 5:08 PM
To: Angela Schrift; Kathryn Burger
Cc: Jamie Schubert - NOAA Federal
Subject: Fwd: Bessie Heights Wetland Restoration Project

See below for the ESA consultation response from NMFS on the Bessie Heights Project.

Christy Fellas

NOAA Restoration Center
Deepwater Horizon NRDA Program
St. Petersburg, FL
727-551-5714
christina.fellas@noaa.gov

----- Forwarded message -----

From: Michael Tucker - NOAA Federal <michael.tucker@noaa.gov>
Date: Fri, Sep 22, 2017 at 1:53 PM
Subject: Bessie Heights Wetland Restoration Project
To: Christina Fellas - NOAA Federal <christina.fellas@noaa.gov>
Cc: Rachel Sweeney - NOAA Federal <rachel.sweeney@noaa.gov>, Leslie Craig - NOAA Federal <leslie.craig@noaa.gov>

Dear Ms. Fellas:

This responds to your 7/28/17 request for streamlined informal consultation with us, the National Marine Fisheries Service (NMFS), pursuant to the process described in the Framework Programmatic Biological Opinion on the Deepwater Horizon Oil Spill Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement (Framework Programmatic Opinion; SER-2015-17459) for the Bessie Heights Wetland Restoration Project. As described in the Framework Programmatic Opinion, NMFS evaluated potential effects of several specific restoration activities that have been repeatedly and widely implemented throughout the Gulf of Mexico, and have been the subject of previous ESA Section 7 consultations with NMFS. In that Opinion, we determined that specific restoration actions are not likely to adversely affect NMFS-managed ESA-listed species or their designated critical habitats provided that all applicable Project Design Criteria (PDC) are incorporated into the project design. Based on the project description you have provided, NMFS has determined that the Bessie Heights Wetland Restoration Project (1) meets the description of a “Marsh Creation and Enhancement” project as describe in Appendix A of the Framework Programmatic Opinion; and (2) fully incorporates all applicable PDCs for Marsh Creation and Enhancement Projects (also described in Appendix A of the Framework Programmatic Opinion).

This concludes your consultation responsibilities under the ESA for species under NMFS’s purview. Consultation must be reinitiated if a take occurs or if new information reveals effects of the action not previously considered, or if the identified action is subsequently modified in a manner that causes an effect to listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action. NMFS’s findings on the project’s potential effects are based on the project description you provided in your 7/28/17 submission, and your documented commitment to fully implement all applicable PDCs for Marsh Creation and Enhancement as

describe in Appendix A of the Framework Programmatic Opinion. Any changes to the proposed action may negate the findings of this consultation and may require reinitiation of consultation with NMFS.

We look forward to further cooperation with you and the Deepwater Horizon Trustee Implementation Groups on future restoration projects. If you have any questions on this consultation, please contact Michael Tucker, Consultation Biologist, at [\(727\) 209-5981](tel:7272095981), or by email at michael.tucker@noaa.gov.

--

Michael Tucker

*NOAA Fisheries Southeast Region
U.S. Department of Commerce
Michael.Tucker@NOAA.gov
[727-209-5981](tel:7272095981)
<http://sero.nmfs.noaa.gov/>*

Deepwater Horizon Administrative Record

Consultations completed under Section 106 of the National Historic Preservation Act (NHPA) may include confidential information protected under Section 304 of the NHPA. If you would like to request correspondence or information produced as part of the Section 106 consultation process for a restoration project, please submit your request to Ben Frater at benjamin_frater@fws.gov or the Department of the Interior, Deepwater Horizon Gulf Restoration Office, 341 Greeno Road North, Suite A, Fairhope, AL 36532.



DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

October 29, 2018

Policy Analysis Branch

SUBJECT: Permit Application – SWG-2016-00565

Mr. Stephen McDowell
Texas Parks and Wildlife Department (TPWD)
10 Parks and Wildlife Drive
Port Arthur, Texas 77640

Dear Mr. McDowell:

The above numbered permit has been approved and a signed copy is enclosed for your retention.

Also enclosed is a copy of "Notice to Permittee" which provides important information for permit administration. You should notify the District Engineer, in writing, upon completion of the authorized work. To assist us in improving our service to you, please complete the survey found at:

http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

Sincerely,

A handwritten signature in black ink, appearing to read "Robert W. Heinly".

for
Robert W. Heinly
Chief, Policy Analysis Branch

cc w/Encl.

EPA Kasper.paul@epa.gov; maria.martinez@epa.gov

Texas Commission on Environmental Quality (TCEQ) 401Certs@tceq.texas.gov

United States Coast Guard (USCG) d8dpball@uscg.mil

National Ocean Service (NOAA) tara.wallace@noaa.gov

DEPARTMENT OF THE ARMY PERMIT

Permittee Texas Parks and Wildlife Department

Permit No. SWG-2016-00565

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: To restore 1,000 acres of degraded marsh using in-situ clay soils for the construction of levees followed by the deposition of beneficial use dredged material. The calculated amount of fill material to be discharged is 1,049,378 cubic yards, and the calculated amount of dredged material is 4,844,059 cubic yards. The project will be conducted in accordance with the attached plans, in 10 sheets.

Project Location: The project site is located east of the Sabine-Neches Waterway in Bessie Heights Marsh; northeast of Port Neches and west of Bridge City, Orange County, Texas. LATITUDE & LONGITUDE (NAD 83): Latitude: 30.0341° N; Longitude: -93.9363° W.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on 31 December 2023. 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.

Special Conditions:

1. 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.
2. When structures or work authorized by this permit are determined by the District Engineer to have become abandoned, obstructive to navigation or cease to be used for the purpose for which they were permitted, such structures or other work must be removed, the area cleared of all obstructions, and written notice given to the Corps of Engineers, Galveston District, Regulatory Division, Chief of the Compliance Branch (Corps), within 30 days of completion.
3. The permittee must install and maintain, at the permittee's expense, any safety lights, signs and signals required by United States Coast Guard, through regulations or otherwise, on the permittee's fixed structures. To receive a United States Coast Guard Private Aids to Navigation marking determination, at no later than 30 days prior to installation of any fixed structures in navigable waters and/or prior to installation of any floating private aids to navigation, you are required to contact the Eighth Coast Guard District (dpw), 500 Poydras St., Suite 1230, New Orleans, LA 70130, (504) 671-2328 or via email to: D8oanPATON@uscg.mil. For general information related to Private Aids to Navigation please visit the Eighth Coast Guard District web site at: <http://www.uscg.mil/d8/waterways/PATON.Home.asp>.
4. The permittee will submit monitoring reports in accordance with USACE Regulatory Guidance Letter (RGL) 08-03 "Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources". Reports presenting documentation of monitoring findings will be submitted to the USACE Regulatory Division by January 1st of each year, following the start of construction until project is complete.
5. All noxious and invasive species currently listed by the Texas Department of Agriculture (TDA 2007) (Texas Register, Volume 32, Number 23, June 8, 2007, Pages 3077-3422) must comprise no more than five percent (5%) actual cover of the herbaceous or other strata within the project area.
6. All dredge material will be sampled and tested in accordance with the Evaluation of Dredge Material Proposed for Discharges in Waters of the US., Inland Testing Manual (USEPA/USACE, 1998), and will not exceed contaminant levels set by the Texas Commission on Environmental Quality.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
 - (X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
 - (X) 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:

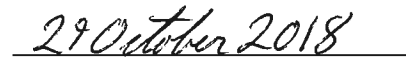
- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching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

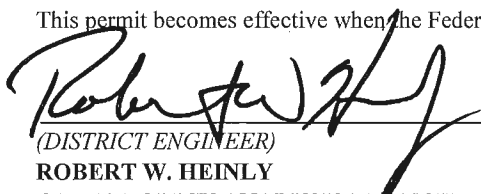
6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable 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)
TEXAS PARKS AND WILDLIFE DEPARTMENT


(DATE)

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


(DISTRICT ENGINEER)
ROBERT W. HEINLY
CHIEF, POLICY ANALYSIS BRANCH
FOR COLONEL LARS N. ZETTERSTROM


(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.

(TRANSFEEEE – Typed/Printed Name)

(DATE)

(TRANSFEEEE - Signature)

(Mailing Address)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Texas Parks and Wildlife	File Numbers: SWG-2016-00565	Date:
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
X	PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/cecwo/reg/> Or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved jurisdictional determination (JD) or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Sam Watson, Regulatory Project Manager
CESWG-RD-P
2000 Fort Point
Galveston, Texas 77553-1229
Telephone: 409-766-3946; FAX: 409-766-3931

If you only have questions regarding the appeal process you may also contact:

Mr. Elliott Carman
Administrative Appeals Review Officer (CESWD-PDO)
U.S. Army Corps of Engineers
1100 Commerce Street, Suite 831
Dallas, Texas 75242
469-487-7061 (phone)

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or authorized agent.

Date: _____

Telephone number: _____

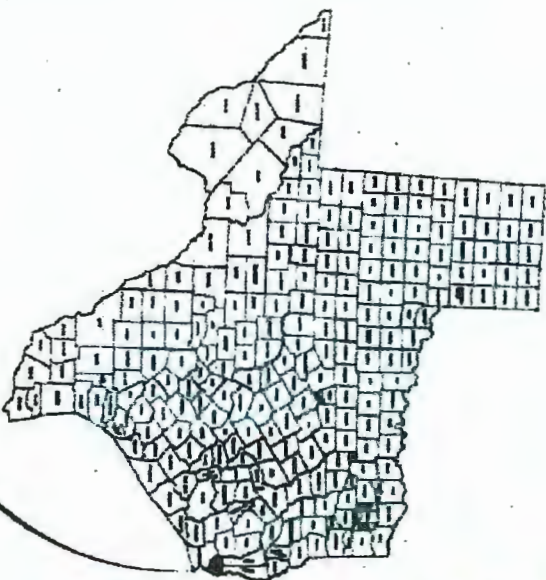


**DUCKS
UNLIMITED**

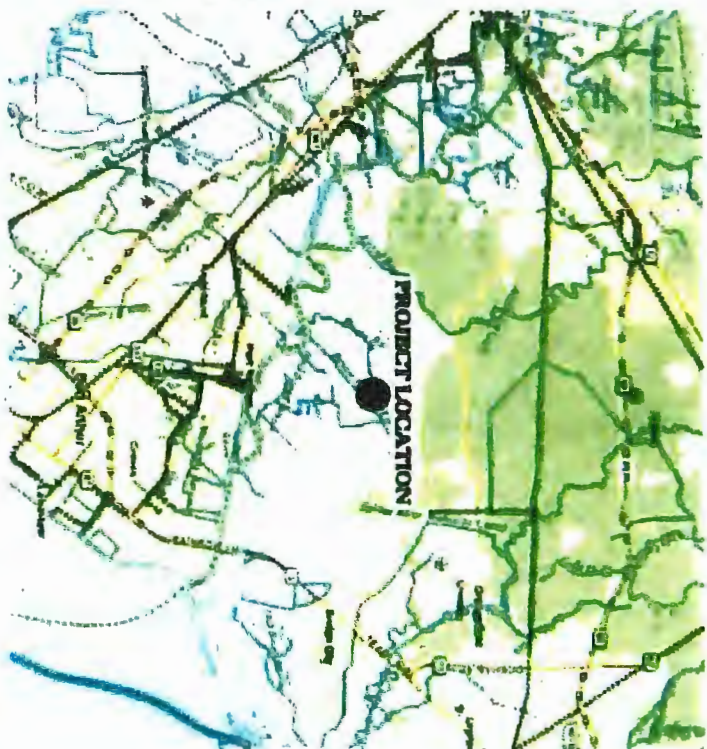
**DUCKS UNLIMITED, INC.
LOWER NECHES WMA
NELDA STARK UNIT**

ORANGE COUNTY, TX
 IN COOPERATION WITH

TEXAS PARKS AND WILDLIFE DEPARTMENT



PROJECT LOCATION

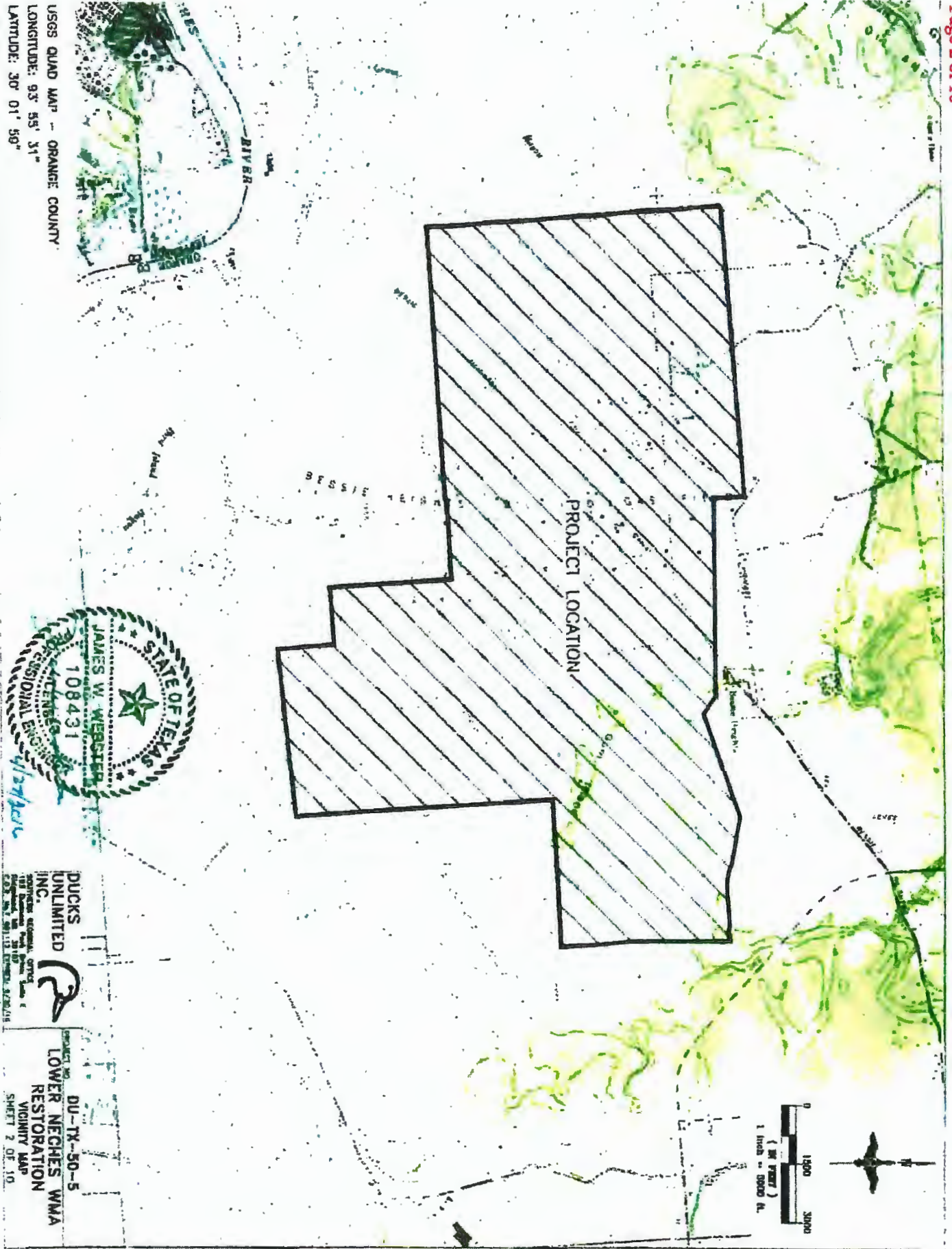


- INDEX**
- 1 COVER SHEET
 - 2 VICINITY MAP
 - 3 UNIT LOCATIONS
 - 4 UNIT 1
 - 5 UNIT 2
 - 6 UNIT 3, 6, 7
 - 7 UNIT 4
 - 8 UNIT 5
 - 9 TYPICAL DETAILS
 - 10 TEMPORARY DRAINAGE STRUCTURE

CAUTION: Engineering geotechnical plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the provider of these plans.

DUCKS UNLIMITED
 INC.
 1931 West Loop West, Suite 5
 Houston, Texas 77056
 Phone: 281.237.3700
 Fax: 281.237.3701

DU-1X-50-5
 LOWER NECHES WMA
 RESTORATION
 COVER SHEET
 SHEET 1 OF 10

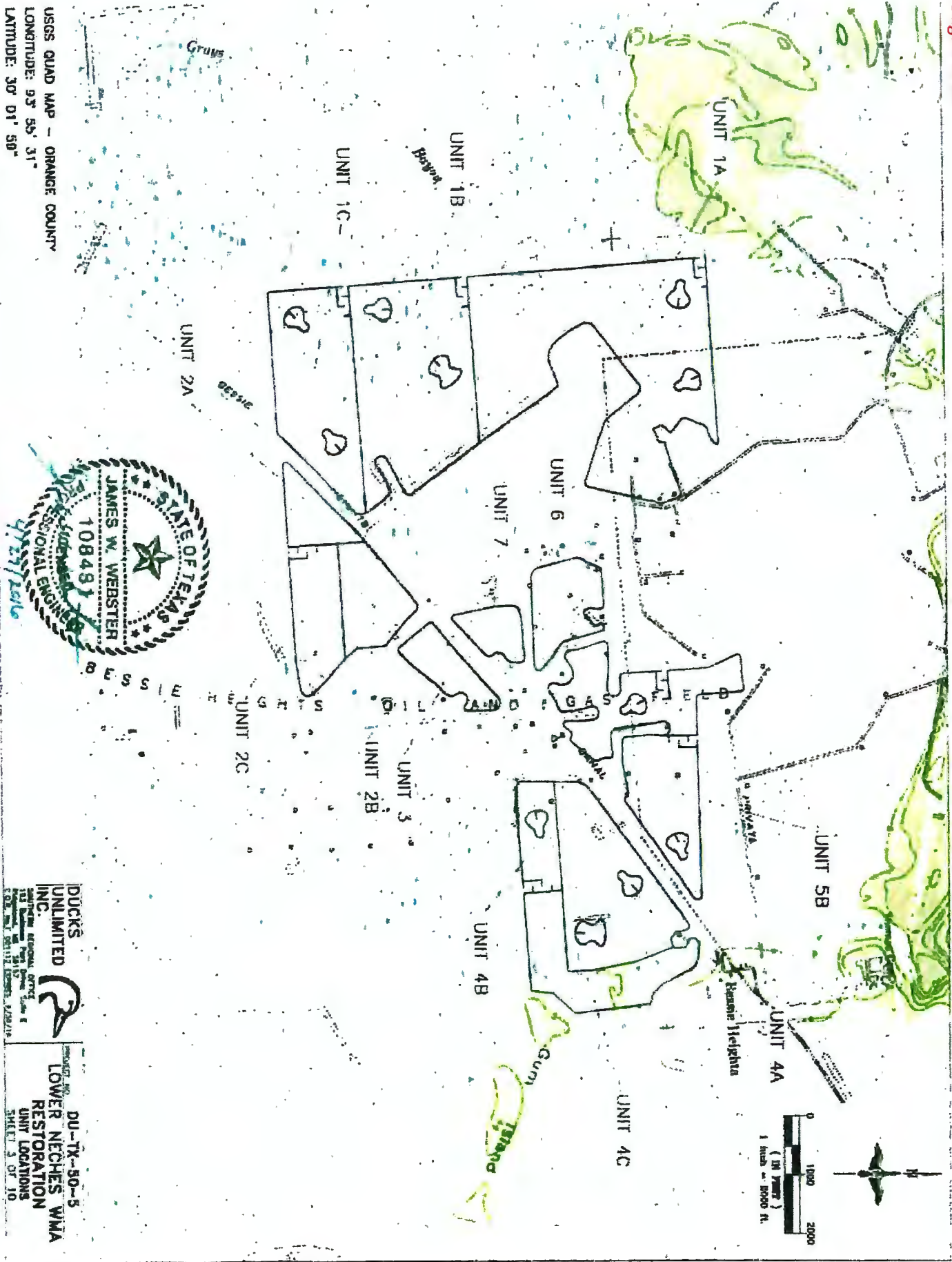


USGS QUAD MAP -- ORANGE COUNTY
LONGITUDE: 95° 55' 31"
LATITUDE: 30° 01' 50"

STATE OF TEXAS
JAMES W. WEBSTER
108431
LICENSED PROFESSIONAL ENGINEER
4/13/2016

DUCKS UNLIMITED INC.
18777 Highway 281, Suite 100
Copper Center, TX 75845
936-281-1111

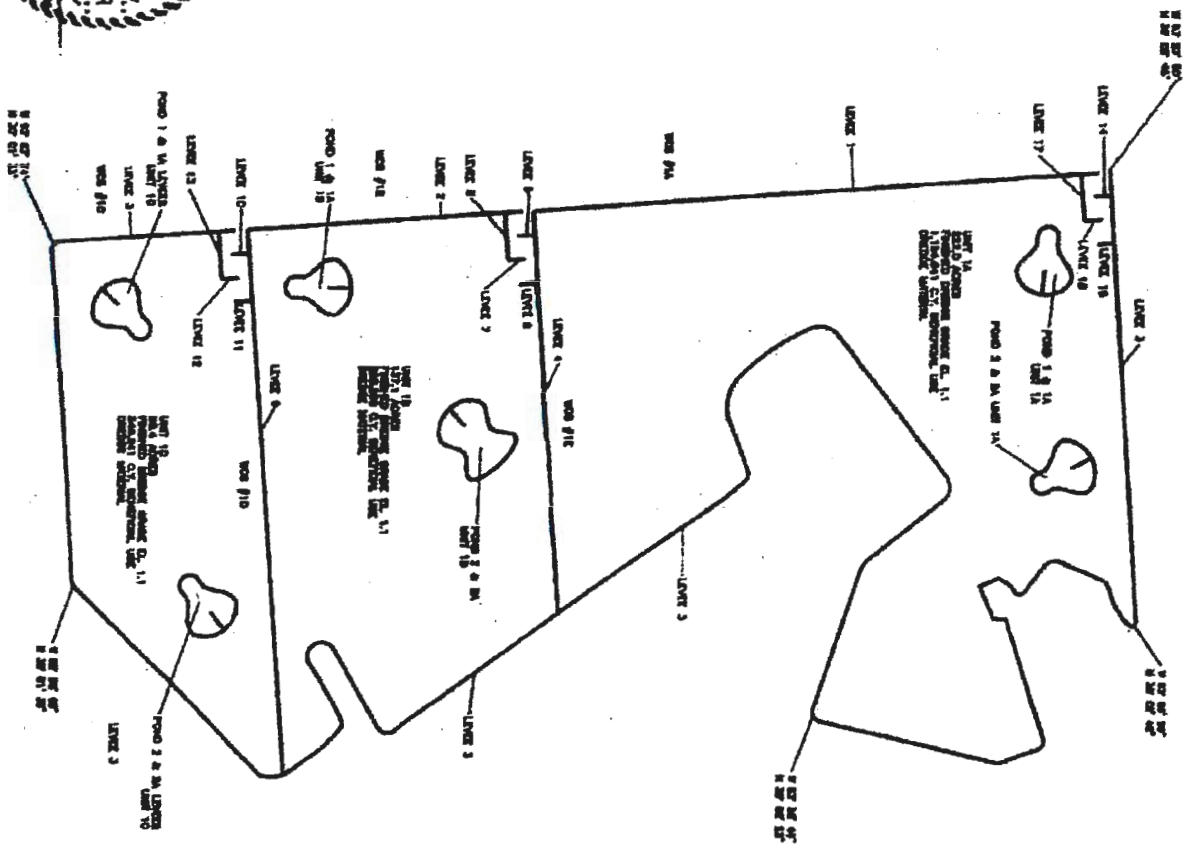
DU-TR-50-5
LOWER NECHES WMA
RESTORATION
VICINITY MAP
SHEET 2 OF 10



USGS QUAD MAP - ORANGE COUNTY
 LONGITUDE: 95° 55' 31"
 LATITUDE: 30° 01' 50"

DUCKS UNLIMITED INC.
 LOWER NECHES WMA RESTORATION UNIT LOCATIONS
 SHEET 3 OF 10

PERMITTED PLANS



LINE#	LENGTH (L.F.)	DRAINAGE (CY)
1	3,861'	42,336 CY
2	1,922'	21,718 CY
3	23,186'	188,192 CY
4	2,783'	32,008 CY
5	120'	1,482 CY
6	120'	1,482 CY
7	120'	1,482 CY
8	3,784'	32,444 CY
10	120'	1,376 CY
11	120'	1,368 CY
12	120'	1,384 CY
13	380'	3,820 CY
14	120'	1,008 CY
15	120'	1,008 CY
16	120'	1,004 CY
17	380'	2,272 CY

POUND	LENGTH (L.F.)	DRAINAGE (CY)
UNIT 1A POUND 1	1,324	11,001
UNIT 1A POUND 1A	180	1,487
UNIT 1A POUND 2	1,324	1,747
UNIT 1A POUND 2A	180	1,444
UNIT 1B POUND 1	1,324	13,840
UNIT 1B POUND 1A	180	1,741
UNIT 1B POUND 2	1,324	18,512
UNIT 1B POUND 2A	180	1,800
UNIT 1C POUND 1	1,324	12,972
UNIT 1C POUND 1A	180	1,684
UNIT 1C POUND 2	1,324	18,337
UNIT 1C POUND 2A	180	1,728

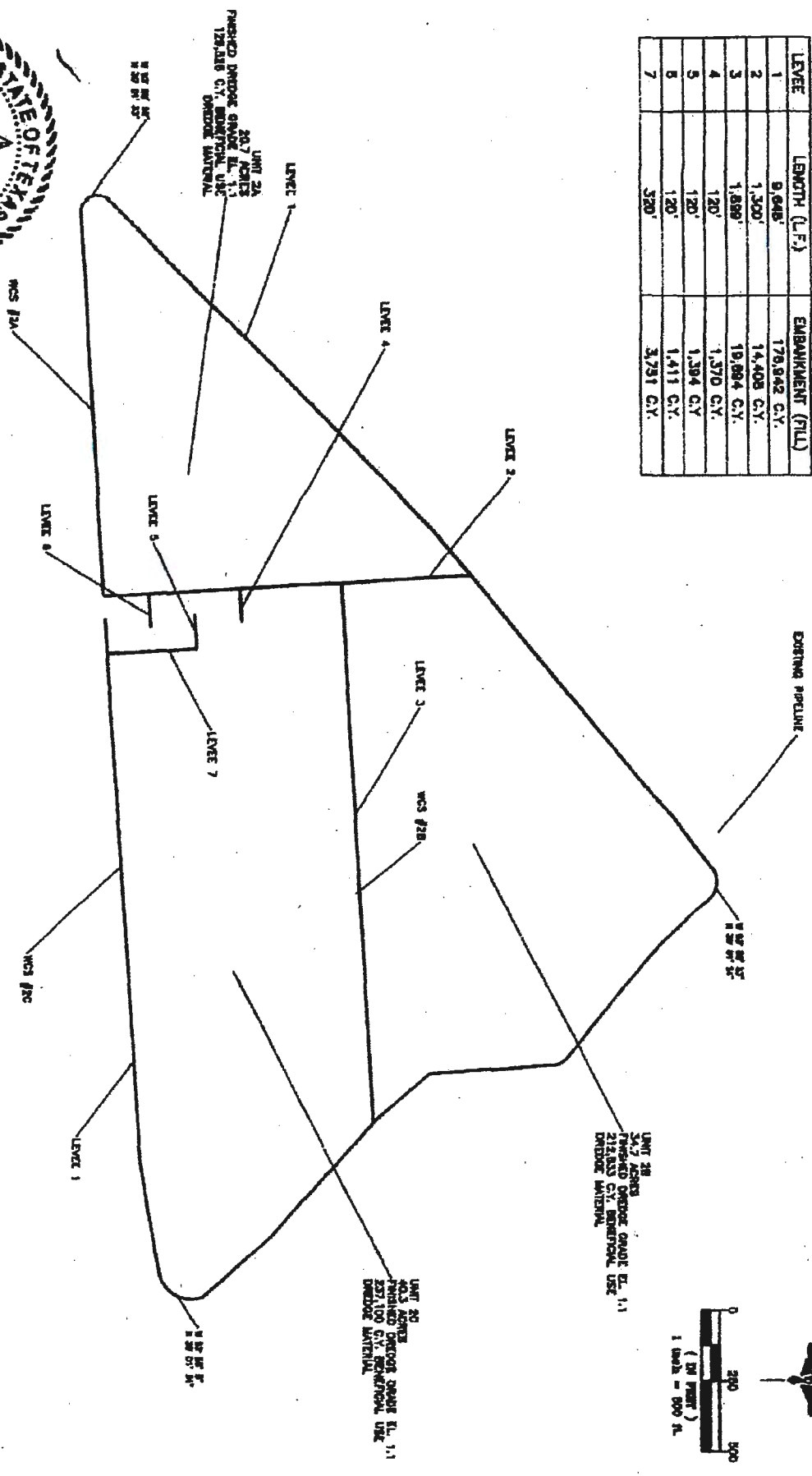
POUND	DRAINAGE (CY)
UNIT 1A POUND 1	6,433
UNIT 1A POUND 2	8,467
UNIT 1B POUND 1	13,840
UNIT 1B POUND 2	8,198
UNIT 1C POUND 1	8,417
UNIT 1C POUND 2	8,488



DUCKS UNLIMITED INC.
 GENERAL ANIMAL OFFICE
 10000 N. Loop West, Suite 2
 Houston, Texas 77048-1789/VA

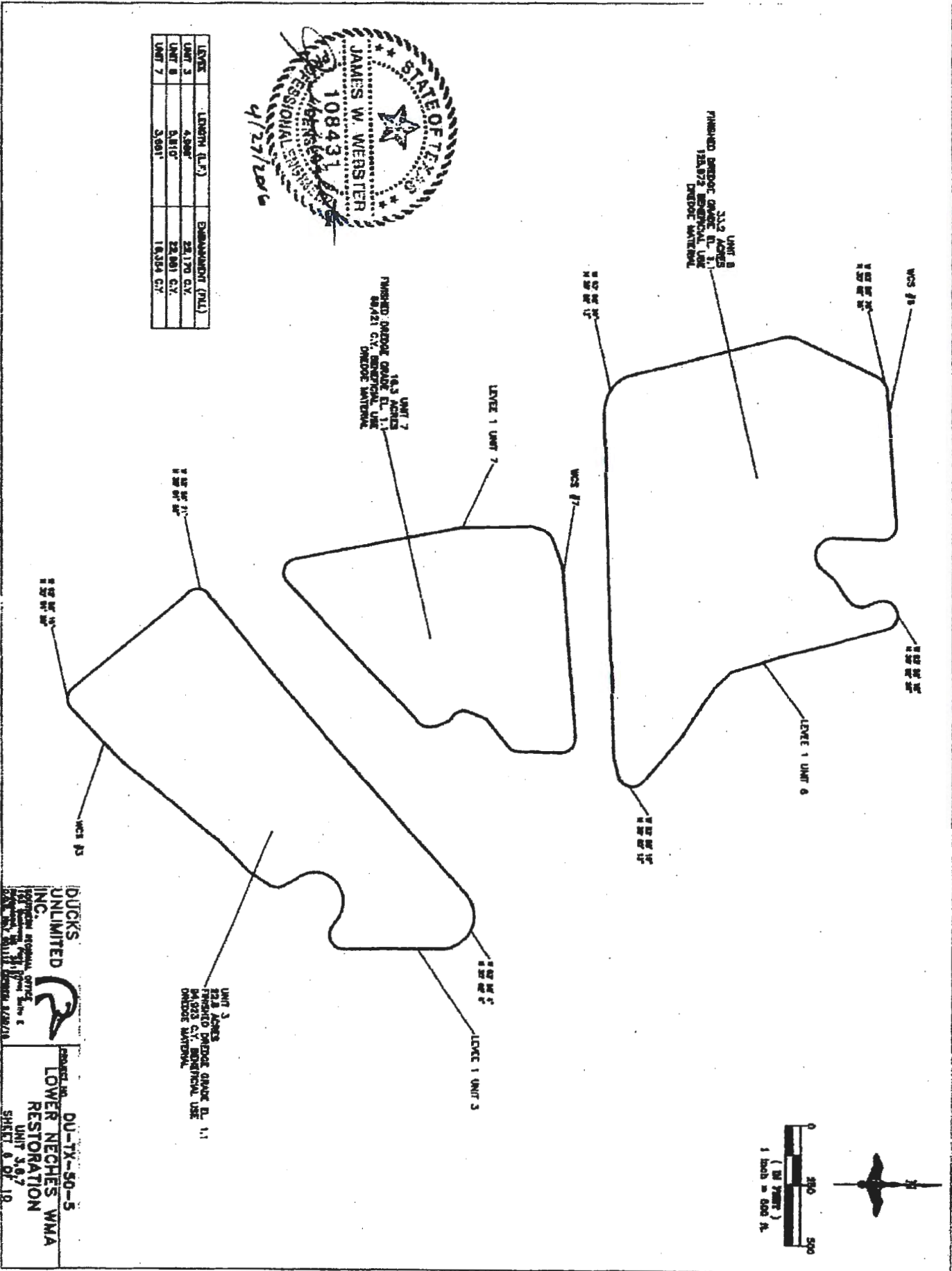
DU-TR-50-5
 LOWER NECHES WMA
 RESTORATION UNIT 1
 SHEET 4 OF 10

LEVEL	LENGTH (L.F.)	EMBANKMENT (FILL)
1	9,948'	179,942 C.Y.
2	1,320'	14,408 C.Y.
3	1,889'	19,994 C.Y.
4	120'	1,370 C.Y.
5	120'	1,394 C.Y.
6	120'	1,411 C.Y.
7	320'	3,231 C.Y.



DUCKS UNLIMITED INC.
 12700 W. 11th Street, Suite 100
 Fort Worth, TX 76177
 (817) 412-1111

DU-1X-50-5
 LOWER NECHES WMA
 RESTORATION
 UNIT 2
 SHEET 5 OF 10

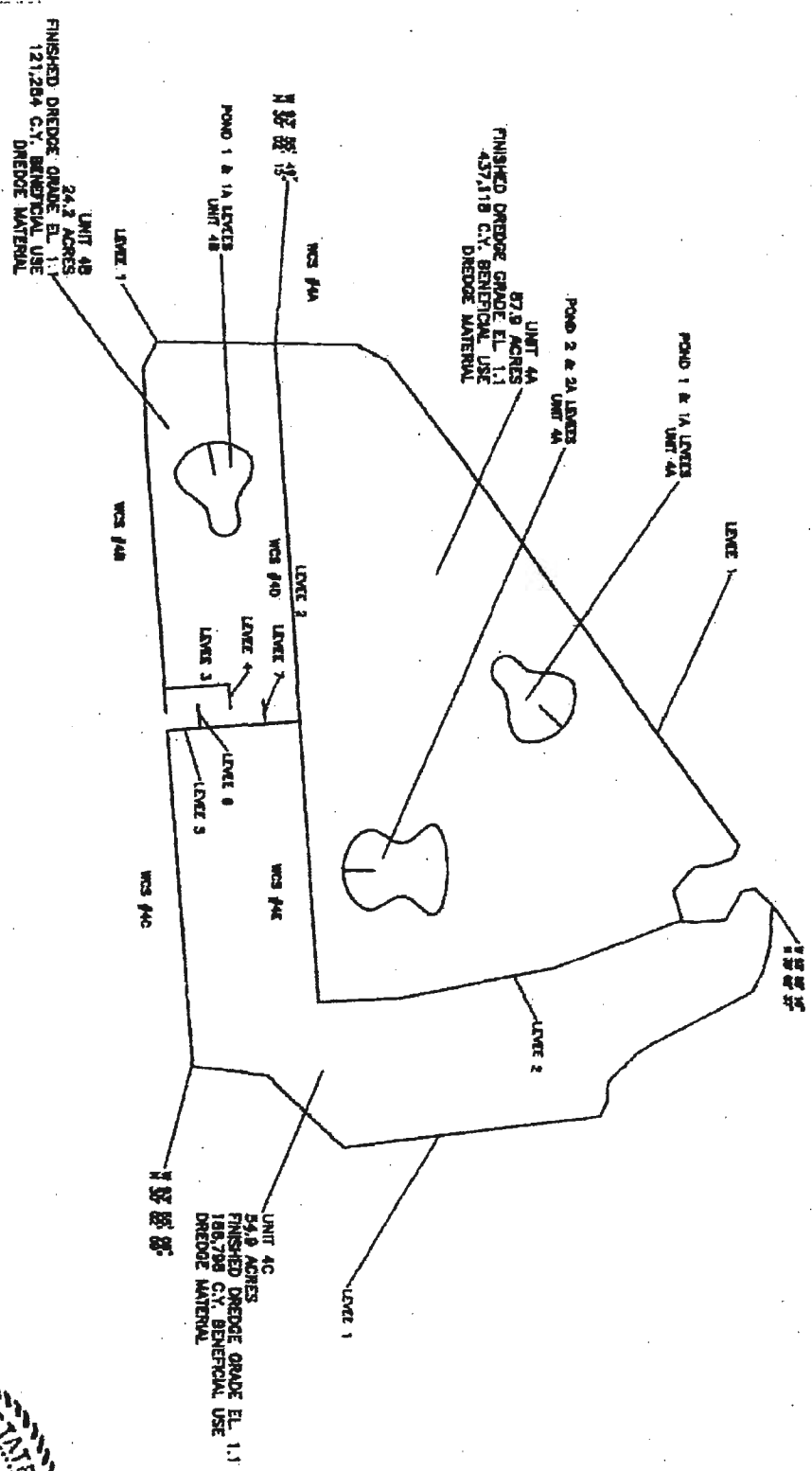
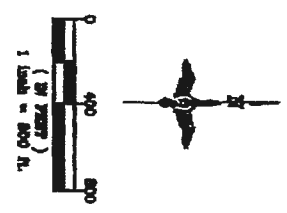


LEVEE	LENGTH (L.F.)	EMBANKMENT (CY)
UNIT 3	4,368'	22,170 C.Y.
UNIT 6	2,910'	22,081 C.Y.
UNIT 7	3,961'	16,334 C.Y.

DUCKS UNLIMITED INC.
 INCORPORATED IN TEXAS
 10000 W. 34TH STREET, SUITE 100, FORT WORTH, TEXAS 76133
 (817) 441-1111

PROJECT NO. DU-TX-50-5
LOWER NECHES WMA RESTORATION
 UNIT 3 & 7
 SHEET 6 OF 10

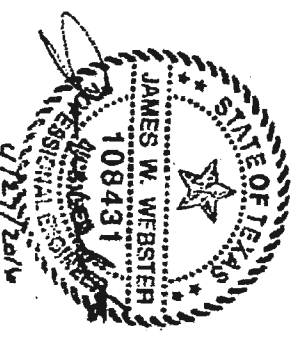
PERMITTED PLANS



POUND	LENGTH (L.F.)	EMBANKMENT (FTL)
UNIT 4A POND 1	1,284	8,890
UNIT 4A POND 1A	180	1,147
UNIT 4A POND 2	1,212	11,082
UNIT 4A POND 2A	180	1,208
UNIT 4B POND 1	1,204	11,956
UNIT 4B POND 1A	180	1,487

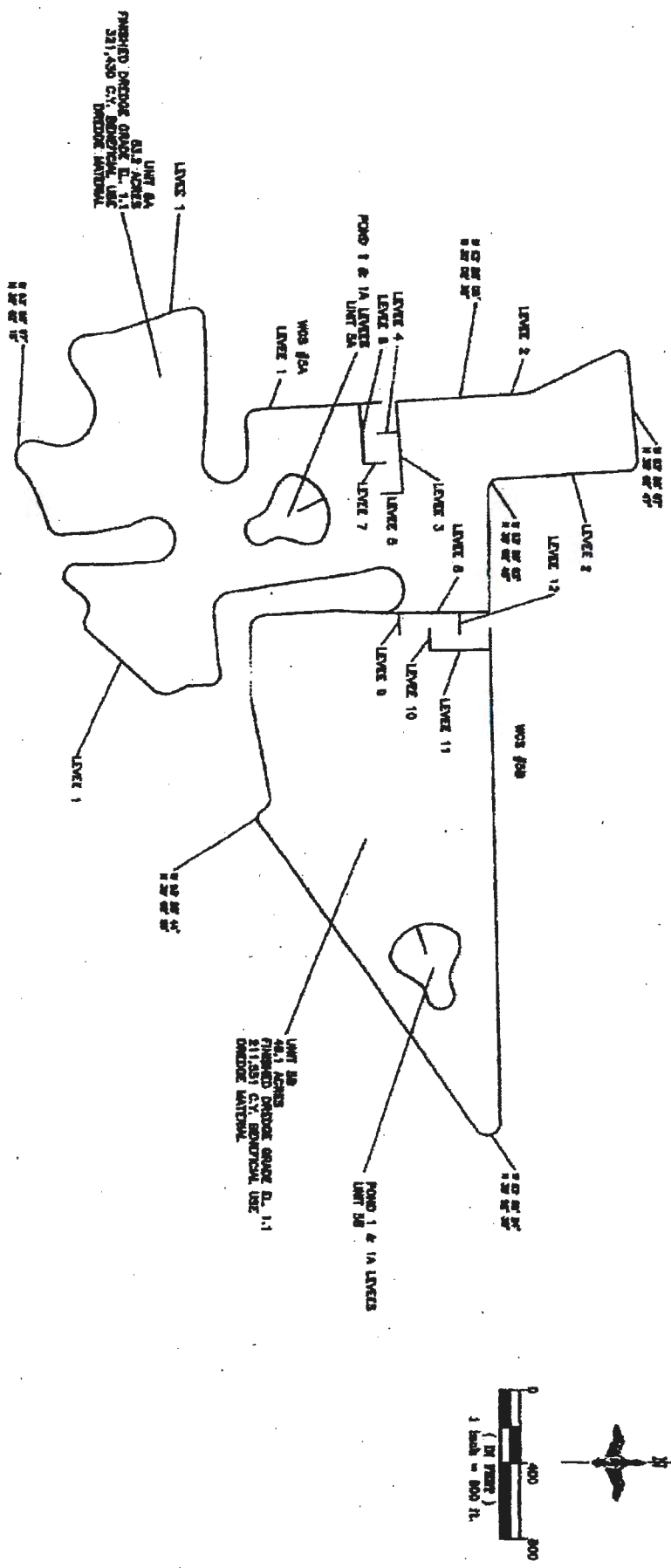
LEVEL	LENGTH (L.F.)	EMBANKMENT (FTL)
1	12,204	64,404 C.Y.
2	8,045	34,948 C.Y.
3	3,200	3,647 C.Y.
4	180	1,440 C.Y.
5	851	7,818 C.Y.
6	120	1,417 C.Y.
7	130	1,380 C.Y.

POUND	DREDGE (CY)
UNIT 4A POND 1	8,817
UNIT 4A POND 2	8,720
UNIT 4B POND 1	7,264



DUCKS UNLIMITED INC.
 10101 W. LOOP WEST, SUITE 100
 HOUSTON, TEXAS 77042
 PHONE: 281.486.1111
 FAX: 281.486.1112
 WWW.DUCKSUNLIMITED.COM

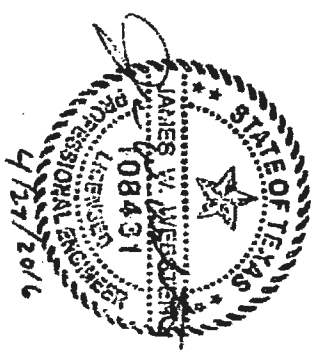
DU-TX-50-5
 LOWER NECHES WMA
 UNIT 4
 SHEET 7 OF 10



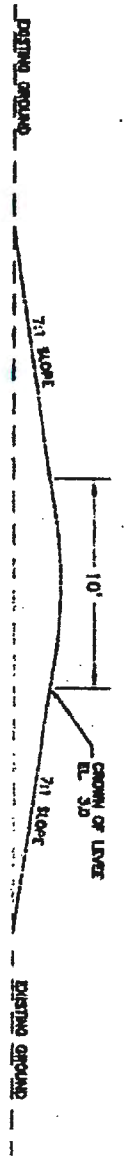
LEVEL	LENGTH (L.F.)	EMBANKMENT (FILL)
1	18,189'	116,744 C.Y.
2	3,338'	37,898 C.Y.
3	480'	4,330 C.Y.
4	120'	1,282 C.Y.
5	120'	1,275 C.Y.
6	320'	3,307 C.Y.
7	120'	1,278 C.Y.
8	595'	4,741 C.Y.
9	120'	989 C.Y.
10	120'	1,061 C.Y.
11	321'	2,885 C.Y.
12	120'	1,097 C.Y.

PONDS	LENGTH (L.F.)	EMBANKMENT (FILL)
UNIT 8A POND 1	1,324	12,380
UNIT 8A POND 1A	160	1,600
UNIT 8B POND 1	1,324	8,533
UNIT 8B POND 1A	160	810

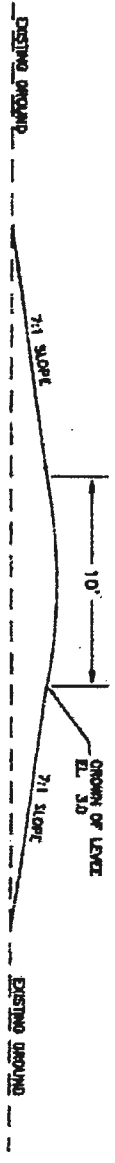
PONDS	DREDGE (FILL)
UNIT 8A POND 1	8,838
UNIT 8B POND 1	3,872



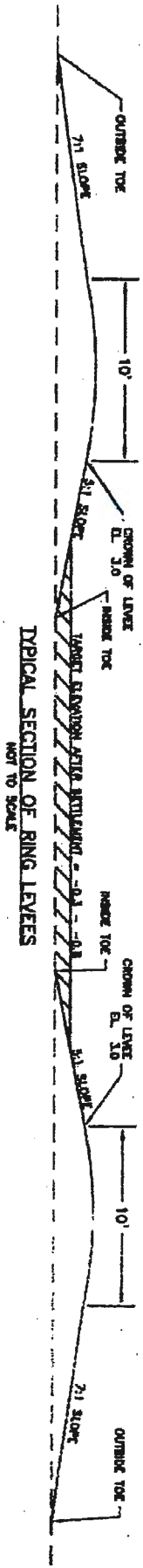
DUCKS UNLIMITED INC.
 11111 Highway 197, Suite 100
 Houston, Texas 77058-4646
 PROJECT NO. DU-TX-80-5
 LOWER NECHES WMA RESTORATION
 UNIT 5
 SHEET 8 OF 10



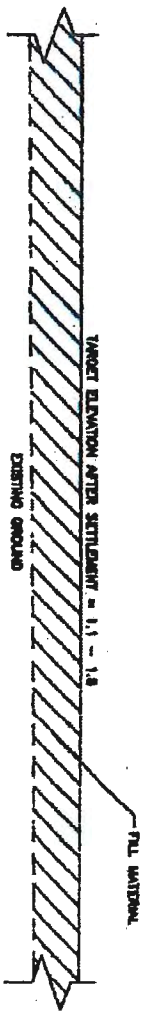
TYPICAL SECTION OF EXTERIOR LEVELS
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TYPICAL SECTION OF INTERIOR LEVELS
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TYPICAL SECTION OF RING LEVELS
 NOT TO SCALE

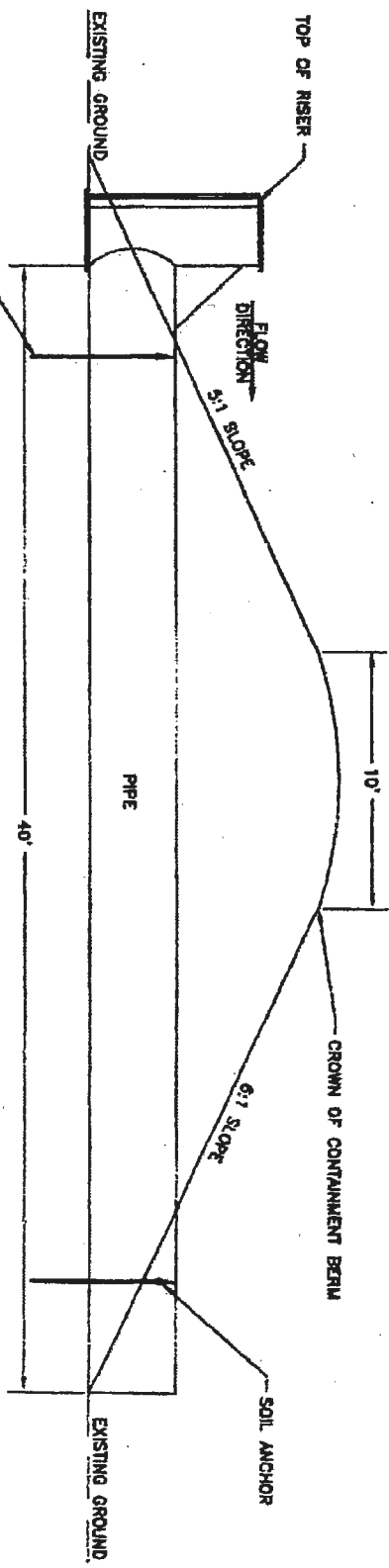


TYPICAL SECTION OF DREDGE PLACEMENT INSIDE OF UNIT
 NOT TO SCALE



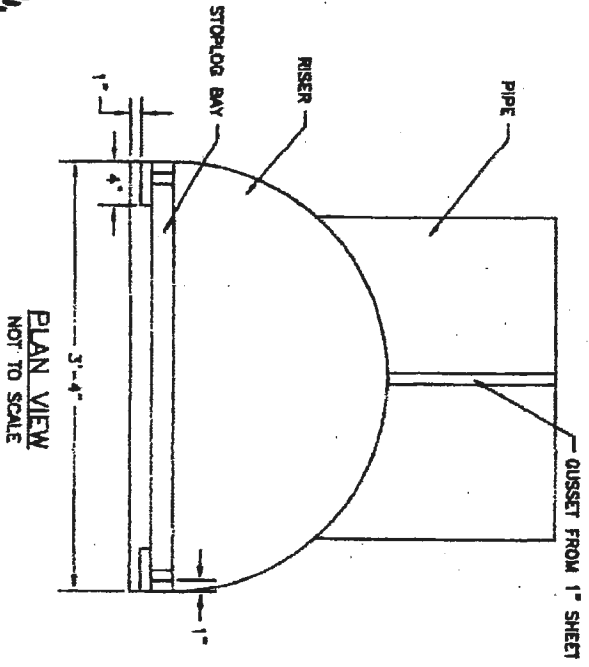
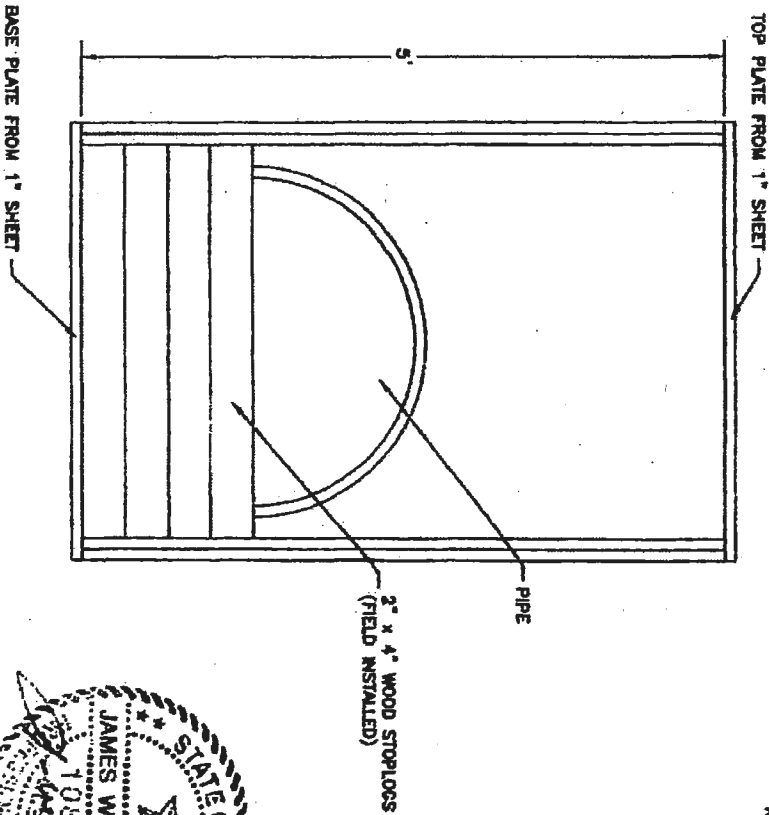
DUCKS UNLIMITED INC.
 1777 WESTERN AVENUE
 SUITE 100
 HOUSTON, TEXAS 77056
 281.462.1200
 www.ducksunlimited.com

PROJECT NO. **DU-TX-50-6**
LOWER NECHES WMA RESTORATION
 TYPICAL DETAILS
 SHEET 9 OF 19



NOTE:
 DRENATED DREDGED MATERIAL SHALL SETTLE FOR A MINIMUM 3 WEEKS PRIOR TO DECANTING WATER CONTROL STRUCTURE REMOVAL.

TYPICAL SECTION OF TEMPORARY DECANT STRUCTURE
 NOT TO SCALE



DUCKS UNLIMITED INC.
 10000 W. LOOP W. SUITE 100
 HOUSTON, TEXAS 77042
 TEL: 281-486-1111 FAX: 281-486-1112
 WWW.DUCKSUNLIMITED.COM

PROJECT NO. DU-TX-60-8
 LOWER NECHES WMA RESTORATION
 TEMPORARY DECANT STRUCTURE
 SHEET 10 OF 10



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, GALVESTON DISTRICT
2000 FORT POINT RD
GALVESTON, TEXAS 77550

January 11, 2024

Evaluation Branch

SUBJECT: Permit No. SWG-2016-00565; EXTENSION OF TIME

Texas Parks and Wildlife Department (TPWD)
Attn: Stephen McDowell
10 Parks and Wildlife Drive
Port Arthur, Texas 77640

Dear Mr. McDowell:

This is in reference to your 28 August 2023, request, to amend Department of the Army (DA) Permit SWG-2016-00565. The amendment consists of a request for an extension of time to complete previously authorized work associated with the restoration of 1,000 acres of degraded marsh using in-situ clay soils for the construction of levees followed by the deposition of beneficial use dredged material. The calculated amount of fill material to be discharged is 1,049,378 cubic yards, and the calculated amount of dredged material is 4,844,059 cubic yards. The project site is located in Bessie Heights Marsh, northeast of Port Neches and west of Bridge City in Orange County, Texas.

DA Permit SWG-2016-00565 was issued to TPWD on 18 October 2018 and authorized the applicant to restore 1,000 acres of degraded marsh using in-situ clay soils for the construction of levees followed by the deposition of beneficial use dredged material. The calculated amount of fill material to be discharged is 1,049,378 cubic yards, and the calculated amount of dredged material is 4,844,059 cubic yards.

Your amendment request is approved, pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. All work is to be performed in accordance with the enclosed plans in 10 sheets. The permit conditions, as amended, remain in full force and effect, with the exception of the time limit for completion. The time limit for completing the work authorized ends on December 31, 2028. 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. Below is a list of all permit conditions associated with your authorization:

1. 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.

2. When structures or work authorized by this permit are determined by the District Engineer to have become abandoned, obstructive to navigation or cease to be used for the purpose for which they were permitted, such structures or other work must be removed, the area cleared of all obstructions, and written notice given to the Corps of Engineers, Galveston District, Regulatory Division, Chief of the Compliance Branch (Corps), within 30 days of completion.
3. The permittee must install and maintain, at the permittee's expense, any safety lights, signs and signals required by United States Coast Guard, through regulations or otherwise, on the permittee's fixed structures. To receive a United States Coast Guard Private Aids to Navigation marking determination, at no later than 30 days prior to installation of any fixed structures in navigable waters and/or prior to installation of any floating private aids to navigation, you are required to contact the Eight Coast Guard District (dpw), 500 Poydras St. Suite 1230, New Orleans, LA 70130, (504) 671-2328 or via email to: D8oanPATON@uscg.mil. For general information related to Private Aids to Navigation please visit the Eight Coast Guard District web site at: <http://www.uscg.mil/d8/waterways/PATON.Home.asp>.
4. The permittee will submit monitoring reports in accordance with USAGE Regulatory Guidance Letter (RGL) 08-03 "Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources". Reports presenting documentation of monitoring findings will be submitted to the USAGE Regulatory Division by January 1st of each year, following the start of construction until project is complete.
5. All noxious and invasive species currently listed by the Texas Department of Agriculture (TOA 2007) (Texas Register. Volume 32, Number 23. June 8, 2007. Pages 3077-3422) must comprise no more than five percent (5%) actual cover of the herbaceous or other strata within the project area.
6. All dredge material will be sampled and tested in accordance with the Evaluation of Dredge Material Proposed for Discharges in Waters of the US., Inland Testing Manual (USEPA/USACE, 1998), and will not exceed contaminant levels set by the Texas Commission on Environmental Quality.

This permit decision does not address nor include any consideration for geographic jurisdiction on aquatic resources and shall not be interpreted as such. If you have any questions, please contact Broc Adams by electronic mail (email) [Sterling.B.Adams@USACE.Army.Mil](mailto: Sterling.B.Adams@USACE.Army.Mil) or by telephone at 409-766-3171. Please notify the Chief of the Compliance Branch in the Galveston District Regulatory Division in writing by email at [CESWGRegulatoryInbox@USACE.Army.Mil](mailto: CESWGRegulatoryInbox@USACE.Army.Mil), upon completion of the authorized project.

FOR THE DISTRICT COMMANDER:

A handwritten signature in black ink, appearing to read 'Andria Davis', with a stylized flourish at the end.

Andria Davis
Leader, North Evaluation Unit

cc w/Encl.
Eighth Coast Guard District, New Orleans, LA

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coast & Geodetic Survey, Silver Spring, MD

Texas Commission on Environmental Quality

Texas General Land Office

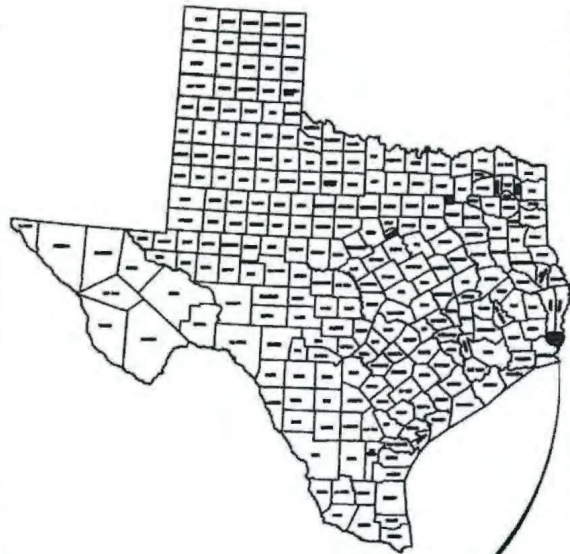


DUCKS UNLIMITED, INC. LOWER NECHES WMA NELDA STARK UNIT

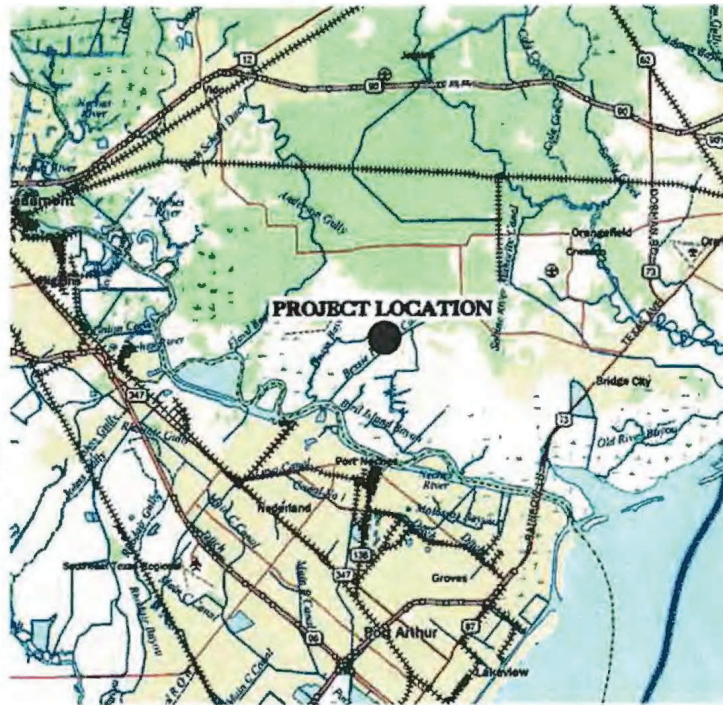


ORANGE COUNTY, TX
IN COOPERATION WITH

TEXAS PARKS AND WILDLIFE DEPARTMENT



PROJECT LOCATION



INDEX

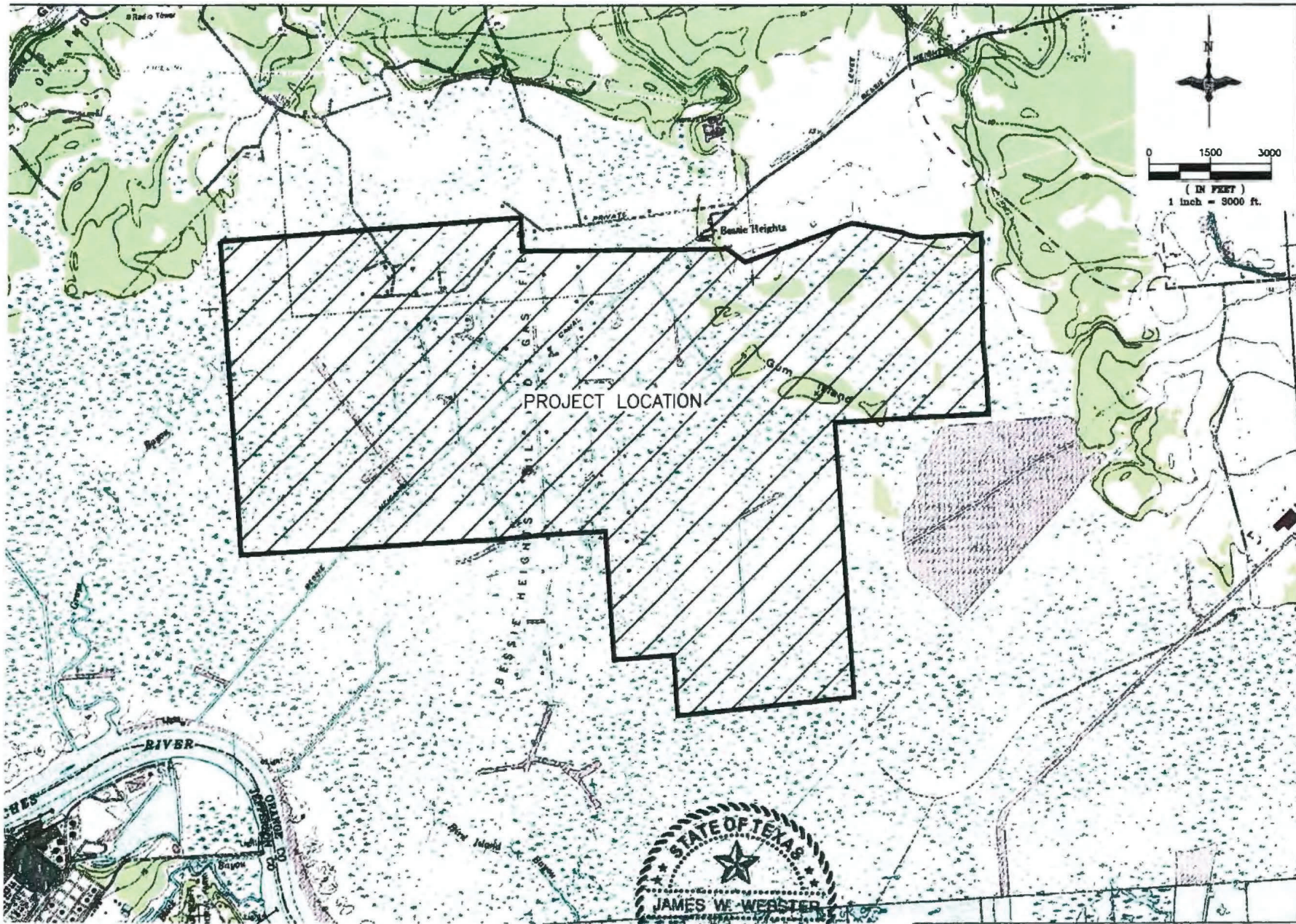
- 1 COVER SHEET
- 2 VICINITY MAP
- 3 UNIT LOCATIONS
- 4 UNIT 1
- 5 UNIT 2
- 6 UNIT 3,6,7
- 7 UNIT 4
- 8 UNIT 5
- 9 TYPICAL DETAILS
- 10 TEMPORARY DECANT STRUCTURE

DUCKS UNLIMITED INC.
SOUTHERN REGIONAL OFFICE
193 Business Park Drive, Suite E
Ridgeland, MS 39157
C.O.P. No.7 001112 EXPIRES: 8/30/18

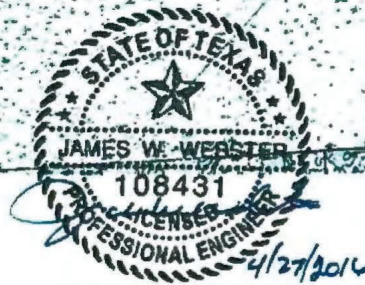


PROJECT NO. **DU-TX-50-5**
**LOWER NECHES WMA
RESTORATION
COVER SHEET
SHEET 1 OF 10**

CAUTION:
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or use of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

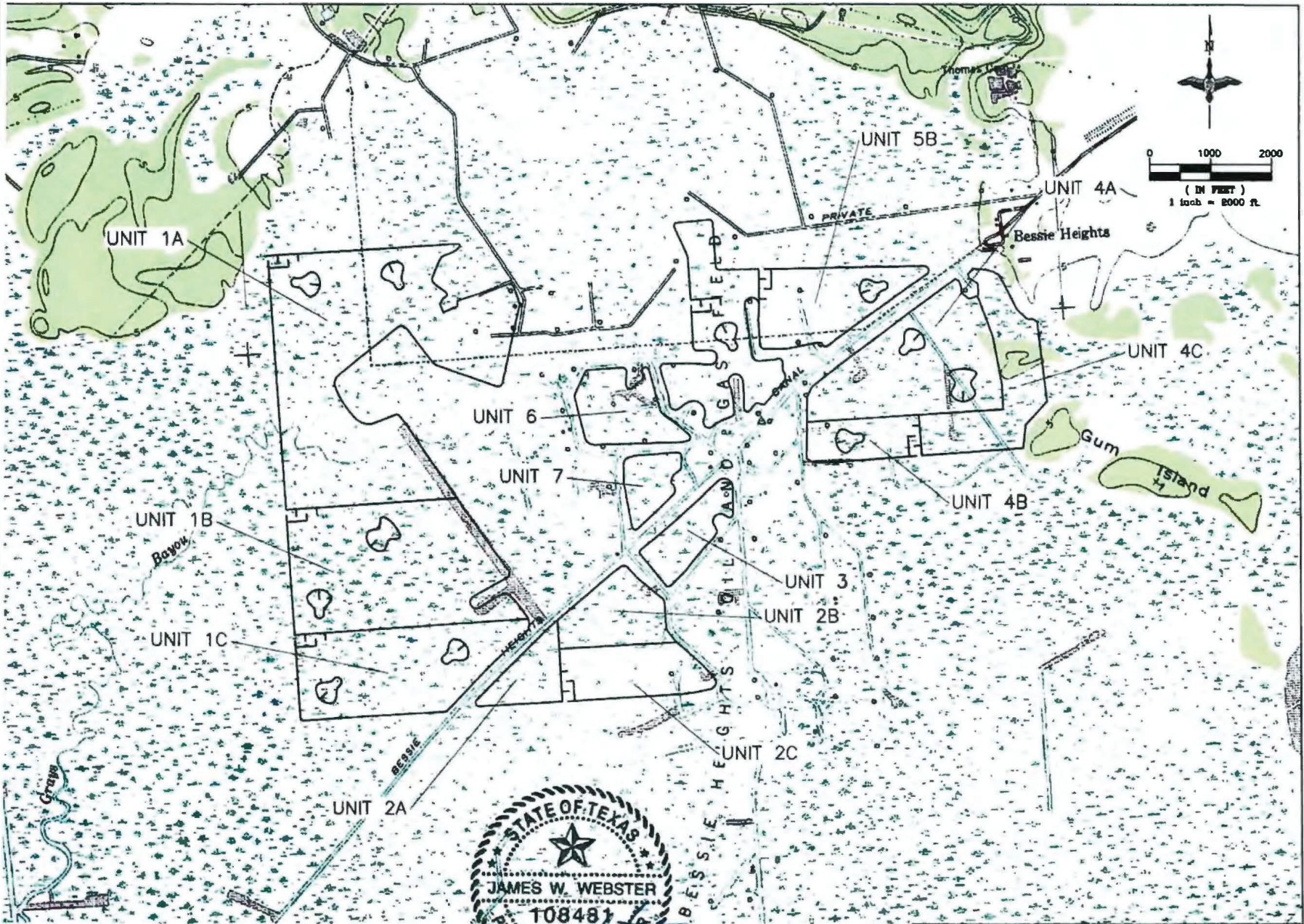


USGS QUAD MAP — ORANGE COUNTY
LONGITUDE: 93° 55' 31"
LATITUDE: 30° 01' 59"



DUCKS UNLIMITED INC.
SOUTHERN REGIONAL OFFICE
185 Business Park Drive, Suite C
Birmingham, MS 38117
C.O.P. No. Y 50112 EXPIRES: 8/30/16

PROJECT NO. **DU-TX-50-5**
LOWER NECHES WMA RESTORATION VICINITY MAP SHEET 2 OF 10

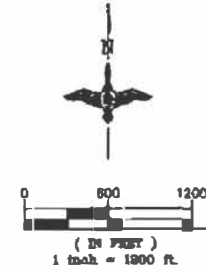
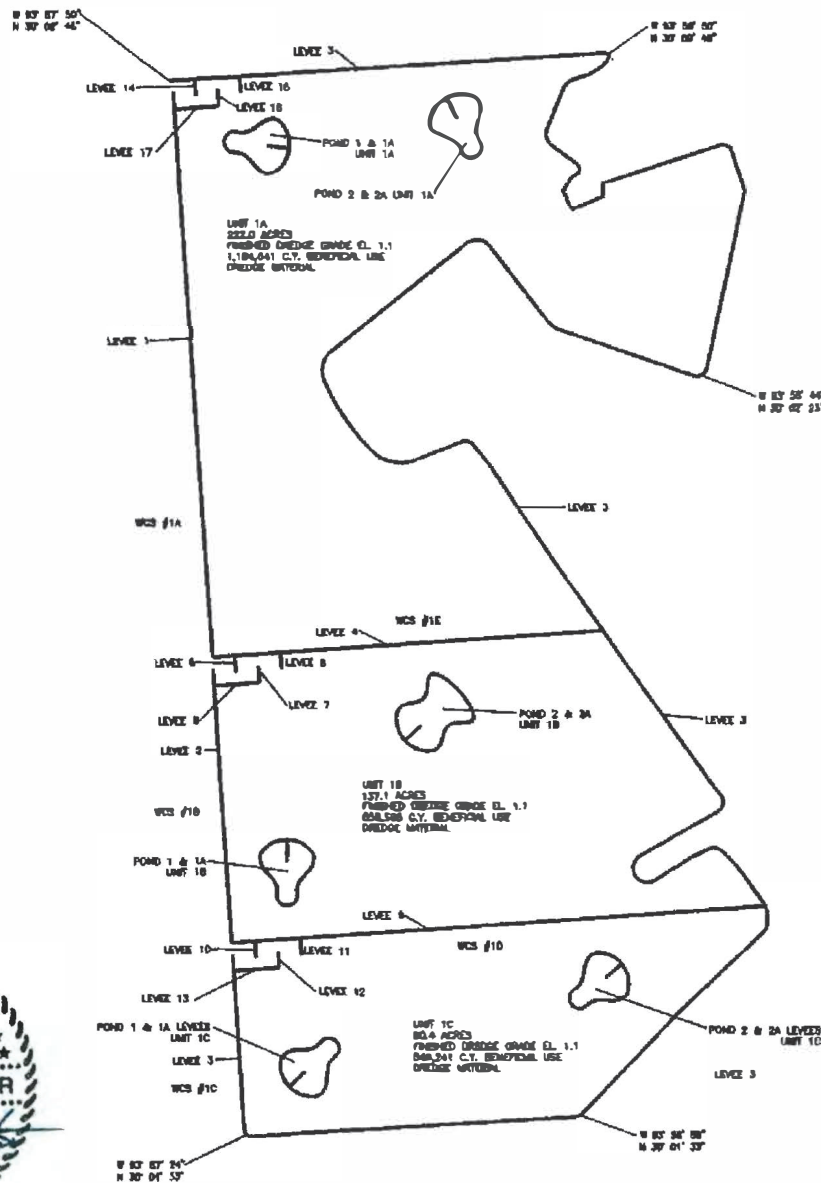


USGS QUAD MAP - ORANGE COUNTY
LONGITUDE: 93° 55' 31"
LATITUDE: 30° 01' 59"

STATE OF TEXAS
JAMES W. WEBSTER
10848
PROFESSIONAL ENGINEER
4/27/2016

DUCKS UNLIMITED INC.
SOUTHERN REGIONAL OFFICE
165 Business Park Drive, Suite E
Ridgeland, MS 39157
C.O.P. No. 7 99112 EXPIRES: 8/30/18

PROJECT NO. DU-TX-50-5
LOWER NECHES WMA
RESTORATION
UNIT LOCATIONS
SHEET 3 OF 10



LEVEL	LENGTH (L.F.)	EMBANKMENT (FILL)
1	3,981'	42,334 C.Y.
2	1,822'	21,716 C.Y.
3	23,168'	168,152 C.Y.
4	2,783'	32,008 C.Y.
5	120'	1,482 C.Y.
6	120'	1,482 C.Y.
7	120'	1,488 C.Y.
8	320'	3,844 C.Y.
9	3,784'	40,030 C.Y.
10	120'	1,375 C.Y.
11	120'	1,365 C.Y.
12	120'	1,384 C.Y.
13	320'	3,620 C.Y.
14	120'	1,006 C.Y.
15	120'	1,063 C.Y.
16	120'	1,054 C.Y.
17	320'	2,772 C.Y.

PONDS	LENGTH (L.F.)	EMBANKMENT (FILL)
UNIT 1A POND 1	1,324	11,001
UNIT 1A POND 1A	180	1,457
UNIT 1A POND 2	1,324	11,427
UNIT 1A POND 2A	180	1,544
UNIT 1B POND 1	1,324	12,850
UNIT 1B POND 1A	180	1,741
UNIT 1B POND 2	1,324	18,512
UNIT 1B POND 2A	180	1,980
UNIT 1C POND 1	1,324	12,972
UNIT 1C POND 1A	180	1,604
UNIT 1C POND 2	1,324	12,337
UNIT 1C POND 2A	180	1,729

PONDS	DREDGE (FILL)
UNIT 1A POND 1	6,523
UNIT 1A POND 2	6,457
UNIT 1B POND 1	13,948
UNIT 1B POND 2	9,158
UNIT 1C POND 1	6,417
UNIT 1C POND 2	6,486

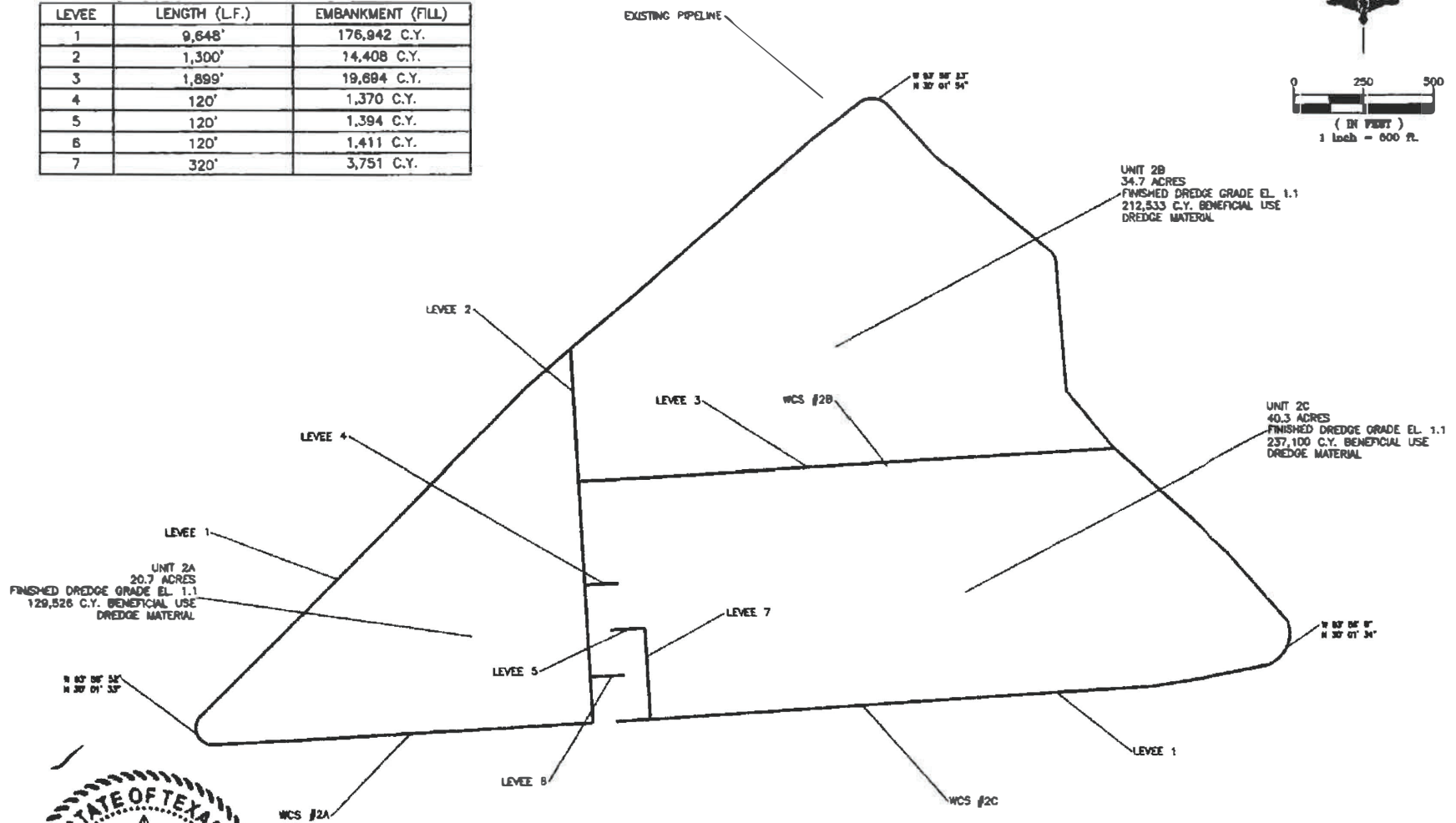


DUCKS
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INC.
SOUTHERN REGIONAL OFFICE
183 Bushwood Park Drive, Suite C
Blosswood, MS 38127
C.O.P. No. 001122 Expires: 8/30/18



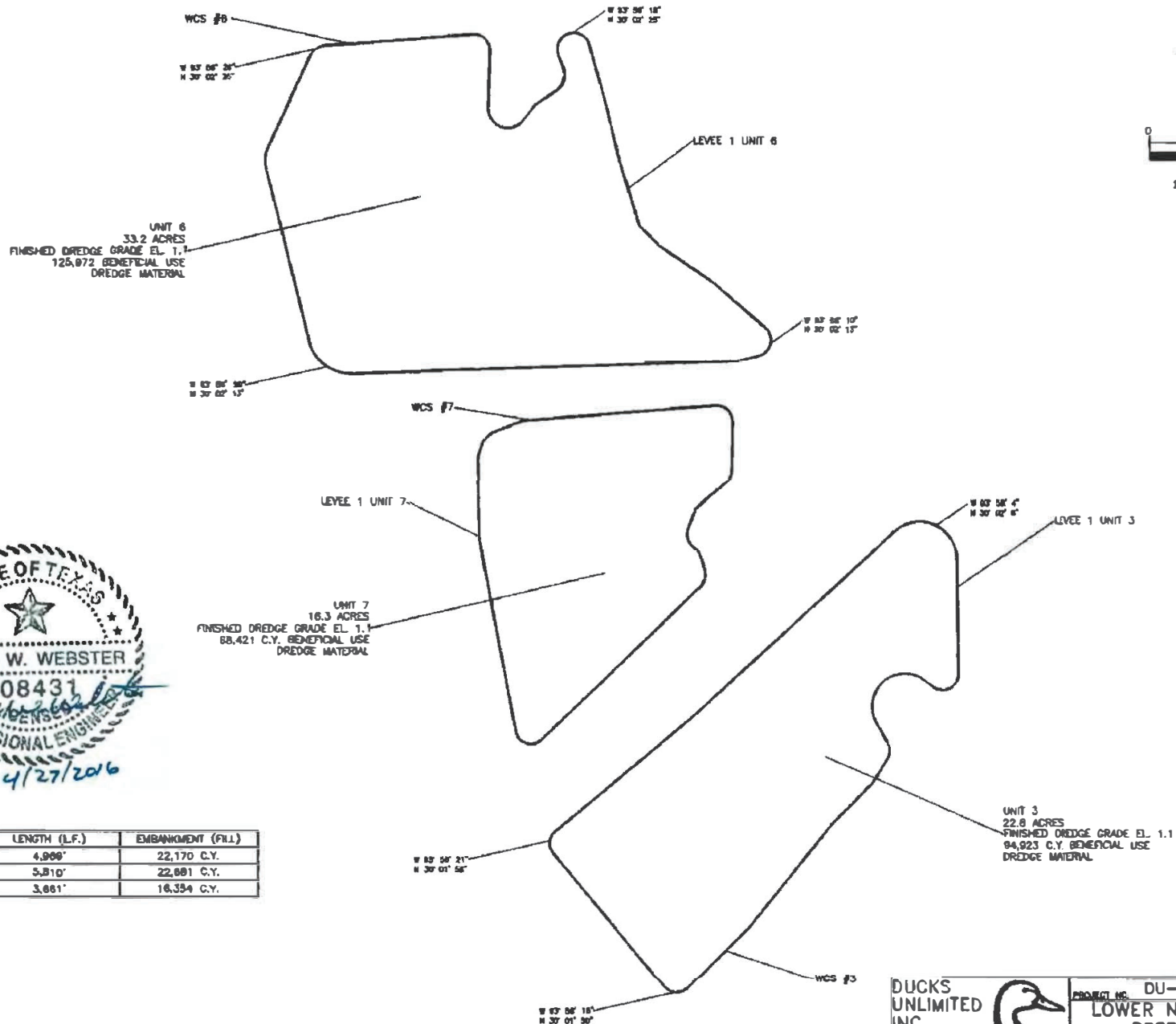
PROJECT NO. DU-TX-50-5
LOWER NECHES WMA
RESTORATION
UNIT 1
SHEET 4 OF 10

LEEVE	LENGTH (L.F.)	EMBANKMENT (FILL)
1	9,648'	176,942 C.Y.
2	1,300'	14,408 C.Y.
3	1,899'	19,684 C.Y.
4	120'	1,370 C.Y.
5	120'	1,394 C.Y.
6	120'	1,411 C.Y.
7	320'	3,751 C.Y.



DUCKS
UNLIMITED
INC.
SOUTHERN REGIONAL OFFICE
193 Business Park Drive, Suite E
Risingwood, TX 78157
C.O.C. No. 991112 EXPIRES: 8/30/18

PROJECT NO. DU-TX-50-5
LOWER NECHES WMA
RESTORATION
UNIT 2
SHEET 5 OF 10

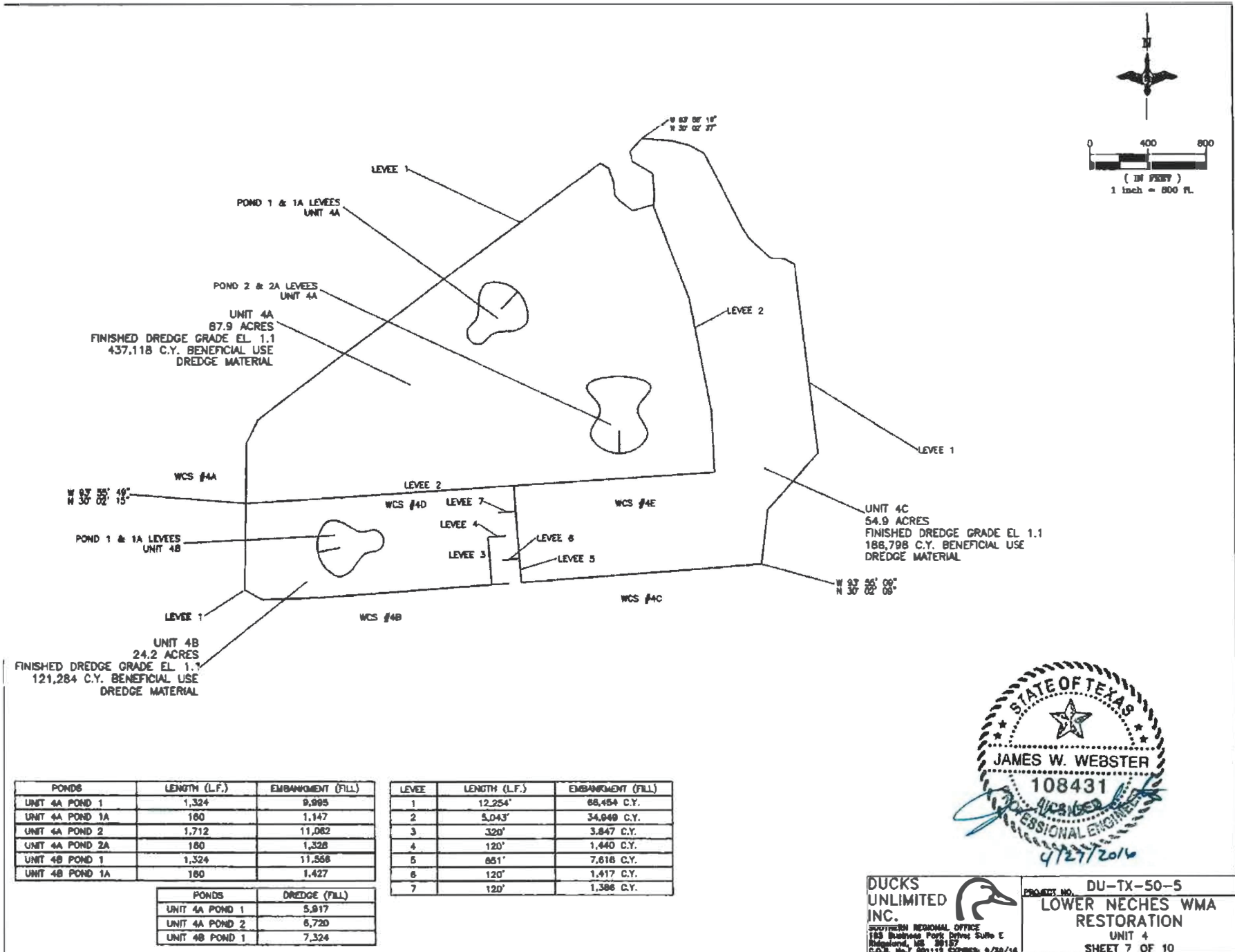


LEVEL	LENGTH (L.F.)	EMBANKMENT (FILL)
UNIT 3	4,998'	22,170 C.Y.
UNIT 6	5,810'	22,881 C.Y.
UNIT 7	3,861'	18,354 C.Y.

DUCKS UNLIMITED INC.
SOUTHERN REGIONAL OFFICE
166 Business Park Drive Suite X
Rockland, MS 39167
C.A.B. No. F 001112 Expires: 8/30/16



PROJECT NO. **DU-TX-50-5**
LOWER NECHES WMA RESTORATION
UNIT 3,6,7
SHEET 6 OF 10



PONDS	LENGTH (L.F.)	EMBANKMENT (FILL)
UNIT 4A POND 1	1,324	9,995
UNIT 4A POND 1A	180	1,147
UNIT 4A POND 2	1,712	11,082
UNIT 4A POND 2A	180	1,328
UNIT 4B POND 1	1,324	11,568
UNIT 4B POND 1A	180	1,427

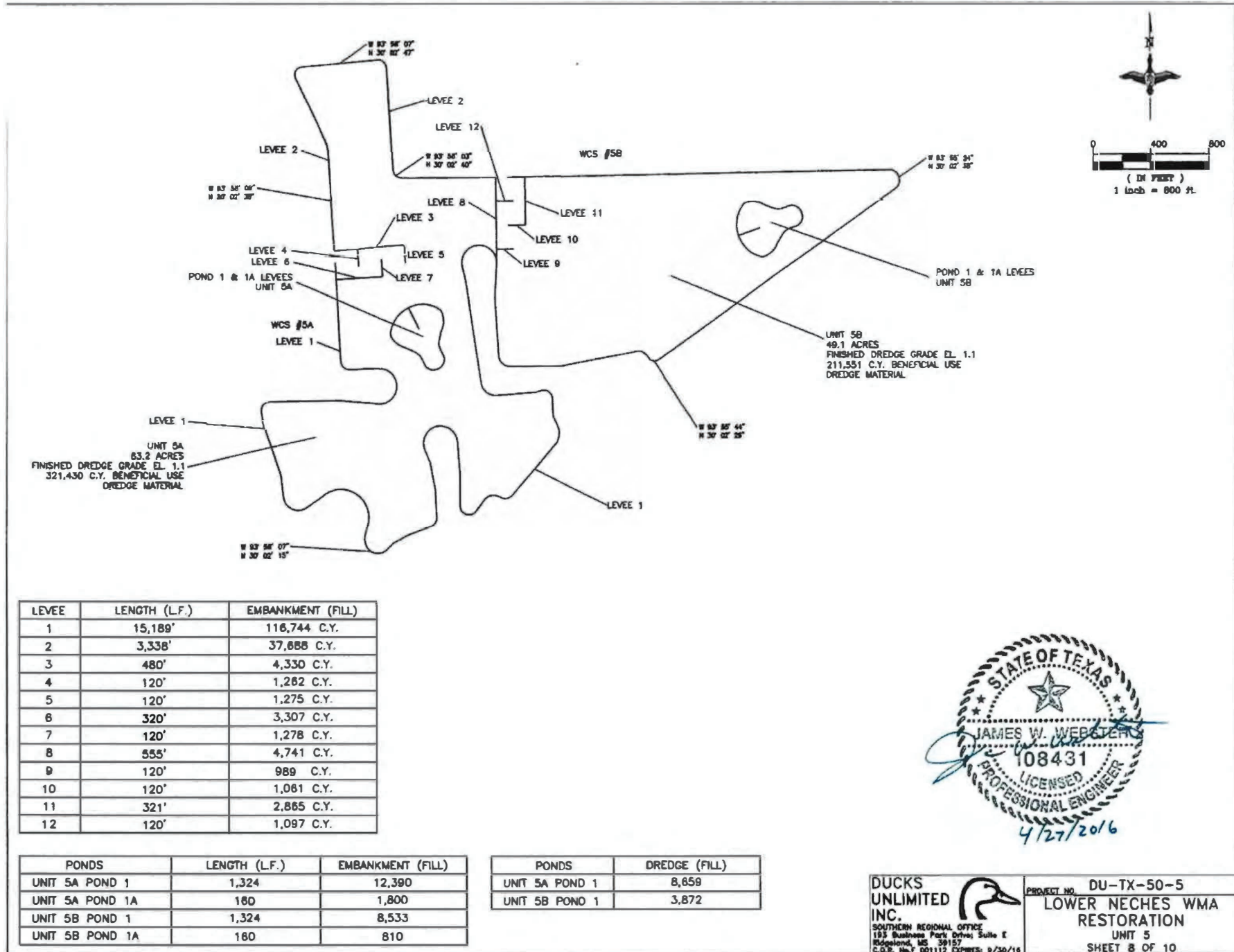
LEVEE	LENGTH (L.F.)	EMBANKMENT (FILL)
1	12,254'	68,454 C.Y.
2	5,043'	34,949 C.Y.
3	320'	3,847 C.Y.
4	120'	1,440 C.Y.
5	651'	7,616 C.Y.
6	120'	1,417 C.Y.
7	120'	1,386 C.Y.

PONDS	DREDGE (FILL)
UNIT 4A POND 1	5,917
UNIT 4A POND 2	8,720
UNIT 4B POND 1	7,324



DUCKS UNLIMITED INC.
SOUTHERN REGIONAL OFFICE
183 Bushness Park Drive Suite E
Blossington, MO 65157
C.O.B. No. 7 891118 EXPIRES: 9/28/14

PROJECT NO. **DU-TX-50-5**
LOWER NECHES WMA RESTORATION
UNIT 4
SHEET 7 OF 10



LEVEE	LENGTH (L.F.)	EMBANKMENT (FILL)
1	15,189'	116,744 C.Y.
2	3,338'	37,888 C.Y.
3	480'	4,330 C.Y.
4	120'	1,262 C.Y.
5	120'	1,275 C.Y.
6	320'	3,307 C.Y.
7	120'	1,278 C.Y.
8	555'	4,741 C.Y.
9	120'	989 C.Y.
10	120'	1,061 C.Y.
11	321'	2,865 C.Y.
12	120'	1,097 C.Y.

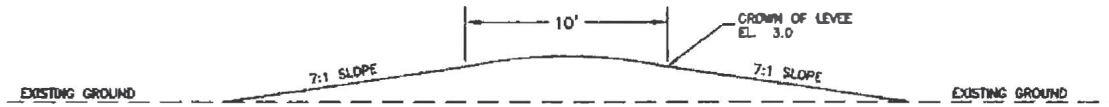
PONDS	LENGTH (L.F.)	EMBANKMENT (FILL)
UNIT 5A POND 1	1,324	12,390
UNIT 5A POND 1A	160	1,800
UNIT 5B POND 1	1,324	8,533
UNIT 5B POND 1A	160	810

PONDS	DREDGE (FILL)
UNIT 5A POND 1	8,659
UNIT 5B POND 1	3,872

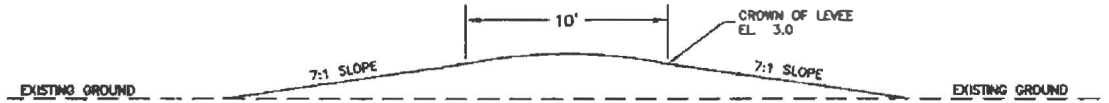


DUCKS UNLIMITED INC.
SOUTHERN REGIONAL OFFICE
193 Business Park Drive, Suite E
Bismarck, MS 39157
C.O.P. No. F 001112 Expires: 9/30/16

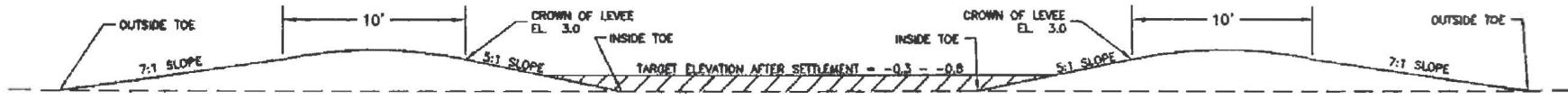
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LOWER NECHES WMA RESTORATION
UNIT 5
SHEET 8 OF 10



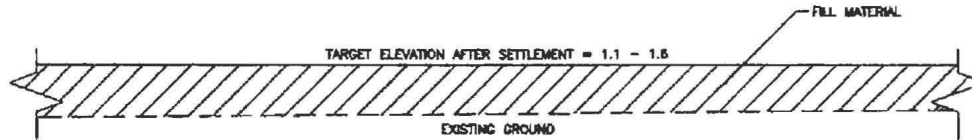
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TYPICAL SECTION OF INTERIOR LEVELS
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TYPICAL SECTION OF RING LEVELS
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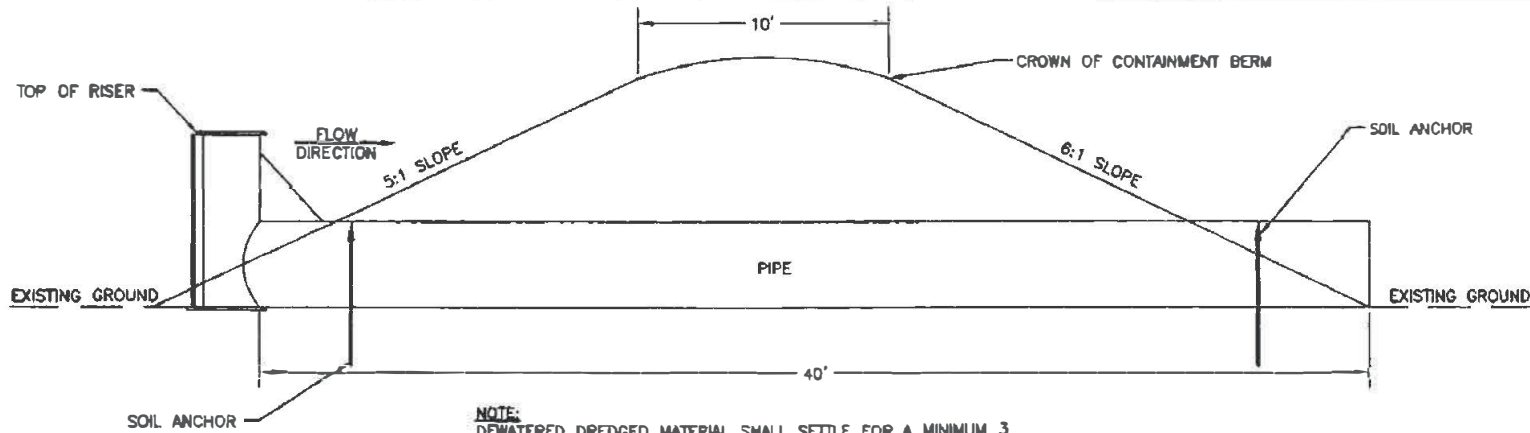
TYPICAL SECTION OF DREDGE PLACEMENT INSIDE OF UNIT
NOT TO SCALE



DUCKS
UNLIMITED
INC.
SOUTHERN REGIONAL OFFICE
188 Business Park Drive, Suite E
Bilalacou, MS 38157
C.D.P. No. 201112 EXPIRES: 9/30/18

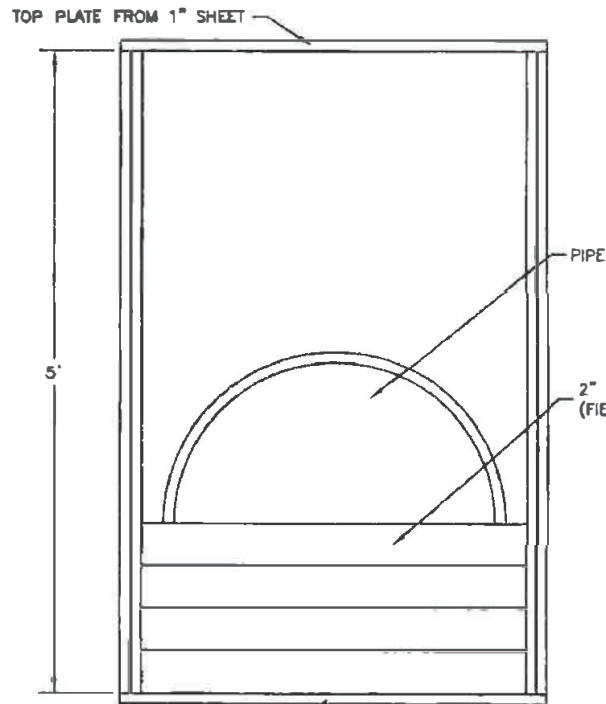


PROJECT NO. DU-TX-50-5
LOWER NECHES WMA
RESTORATION
TYPICAL DETAILS
SHEET 9 OF 10

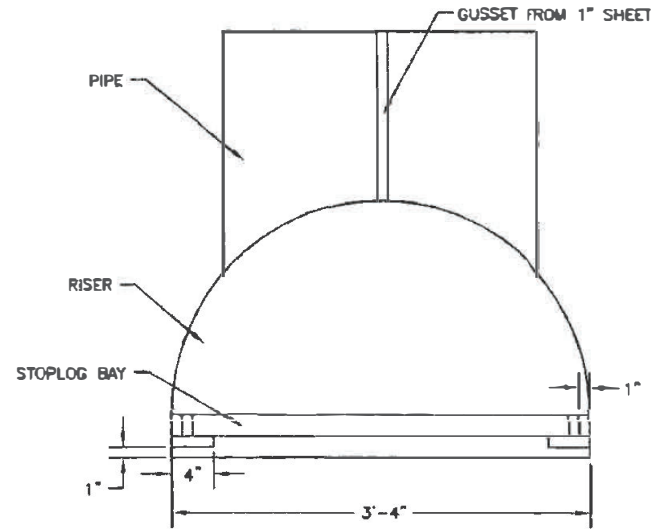


NOTE:
 DEWATERED DREDGED MATERIAL SHALL SETTLE FOR A MINIMUM 3
WEEKS PRIOR TO DECANTING WATER CONTROL STRUCTURE REMOVAL

TYPICAL SECTION OF TEMPORARY DECANT STRUCTURE
 NOT TO SCALE



FRONT VIEW
 NOT TO SCALE



PLAN VIEW
 NOT TO SCALE



PROJECT NO. DU-TX-50-5
**LOWER NECHES WMA
 RESTORATION**
 TEMPORARY DECANT STRUCTURE
 SHEET 10 OF 10



Mills, Ashley <ashley_mills@fws.gov>

CBRA for Deepwater Horizon NRDR project alternatives in Texas

Debora McClain <debora_mcclain@fws.gov>

Mon, Aug 21, 2017 at 9:45 AM

To: Chuck Ardizzone <chuck_ardizzone@fws.gov>

Cc: Ashley Mills <ashley_mills@fws.gov>, Erin Chandler <erin_chandler@fws.gov>, Jennifer Mitchell <jennifer_mitchell@fws.gov>

Hi Debora,

Chuck, Attached please find the Coastal Barrier Resources Act consistency determinations related to proposed projects of the Deepwater Horizon NRDR Texas Trustees. If you have any questions please contact Erin Chandler.

Thanks

Debora L McClain

Deputy DOI DH NRDR Case Manager

Region 4

134 Union Blvd

Lakewood, CO 80228

Office - 303-236-4338

Cell - 303-829-4615

Email - Debora_McClain@fws.gov

 **CBRA letter TX alternatives Aug 11 2017.pdf**
1453K

Chuck,

August 11, 2017

The DOI Deepwater Horizon Case Management Office is working through various environmental compliance consultations on post-settlement proposed restoration alternatives in Texas. First, we would like to thank you for all your efforts in the ESA Section 7 consultations your office has conducted for the Early Restoration projects. We are now working on the Coastal Barrier Resources Act consistency determinations for proposed alternatives. The Texas Trustee Implementation Group (TX TIG) is currently evaluating project alternatives under the draft Texas Trustee Implementation Group Restoration Plan/Environmental Assessment: Restoration of Wetlands, Coastal and Nearshore Habitats; and Oysters, which was released for public review and comment on May 18, 2017. If the TX TIG selects these project alternatives, or any combination of alternatives, after consideration of public comment, the Texas Commission on Environmental Quality (TCEQ), Texas Parks and Wildlife Department (TPWD), Texas General Land Office (TGLO) or United States Fish and Wildlife Service (USFWS) would implement the projects.

We used the Coastal Barrier Resources System mapper – Beta (<http://www.fws.gov/cbra/Maps/Mapper.html> [accessed July 23, 2017]) to determine if proposed alternatives were located within an Otherwise Protected Area or within a System Unit. If the proposed alternatives would occur in an Otherwise Protected Area or outside of a System Unit, no additional analysis was developed.

The table below summarizes the thirteen proposed alternatives and our CBRA Consistency Determinations. These alternatives are briefly described below, and shown in Figures 1-13.

Proposed Alternatives	CBRA Consistency Determination
Indian Point Shoreline Erosion Protection	Does not occur within any CBRS Unit.
McFaddin Beach and Dune Restoration	Occurs in both TX-02P and TX02A. CBRA applies.
Bahia Grande Hydrologic Main Channel	Does not occur within any CBRS Unit.
Pierce Marsh Wetland Restoration through Beneficial Use of Dredged Material	Does not occur within any CBRS Unit.
Bessie Heights Wetland Restoration	Does not occur within any CBRS Unit.
Essex Bayou Habitat Restoration Engineering (E&D)	Does not occur within any CBRS Unit.
Bird Island Cove Habitat Restoration Engineering (E&D)	Does not occur within any CBRS Unit.
Dredge Material Planning for Wetland Restoration (E&D)	Does not occur within any CBRS Unit.
Oyster Restoration Engineering (E&D)	Does not occur within any CBRS Unit.
Follets Island Conservation Initiative	Occurs in T04. CBRA applies.
Laguna Atascosa Habitat Acquisition	Occurs in T11. CBRA applies.
Mid-Coast Habitat Acquisition	Does not occur within any CBRS Unit.
Bahia Habitat Coastal Corridor Acquisition	Does not occur within any CBRS Unit.

1. Indian Point Shoreline Erosion Protection

The Indian Point Shoreline Erosion Protection project alternative would construct approximately 2,800 linear-feet of segmented breakwaters to protect 50 acres of critical seagrass, coastal marsh, lagoons and associated upland habitats within Indian Point on Corpus Christi Bay in San Patricio County. This alternative would protect the existing shoreline from wind and wave driven erosion and protect the remaining marsh and associated coastal habitats adjacent to the shoreline.

Consistency Analysis

The proposed alternative is not within any designated System Unit and is therefore not subject to CBRA.



Figure 1. Indian Point Shoreline Erosion Protection project alternative in Nueces County.

2. McFaddin Beach and Dune Restoration

The McFaddin Beach and Dune Restoration project alternative would include sand placement along an 18-mile section of shoreline in northeastern Texas, and would provide important ecological benefits by restoring lost beach and dune habitat and helping slow or stop marsh and land loss in McFaddin National Wildlife Refuge (NWR) interior marshes.

Consistency Analysis

The project alternative is located within System Unit TX02A and Otherwise Protected Area TX-02P. The portion of the project alternative located within the System Unit is subject to a Consistency Analysis under CBRA. Within TX02A, the proposed action includes placement and stabilization of dredged sand material to prevent erosion. Consequently, this activity is consistent with CBRA per exemption 16 U.S.C. 3505(a)(6)(A) for “Projects for the study, management, protection, and enhancement of fish and wildlife resources and habitats, including acquisition of fish and wildlife habitats, and related lands, stabilization projects for fish and wildlife habitats, and recreational projects.” The purposes of CBRA are “to minimize the loss of human life, wasteful expenditure of Federal revenues, and the damages to fish, wildlife, and other natural resources associated with the coastal barriers along the Atlantic and Gulf Coasts...” 16 U.S.C. §3501(b). The McFaddin Beach and Dune Restoration project alternative is designed to restore natural resources injured by the *Deepwater Horizon* oil spill. Accordingly, this project alternative is consistent with the purposes of the CBRA and falls within the CBRA exemption discussed above.

We have also determined that CBRA does not apply to the portion of the project alternative located within TX-02P. This is an Otherwise Protected Area and the only prohibition is Federal Flood Insurance.

We are requesting your concurrence with our consistency determination.

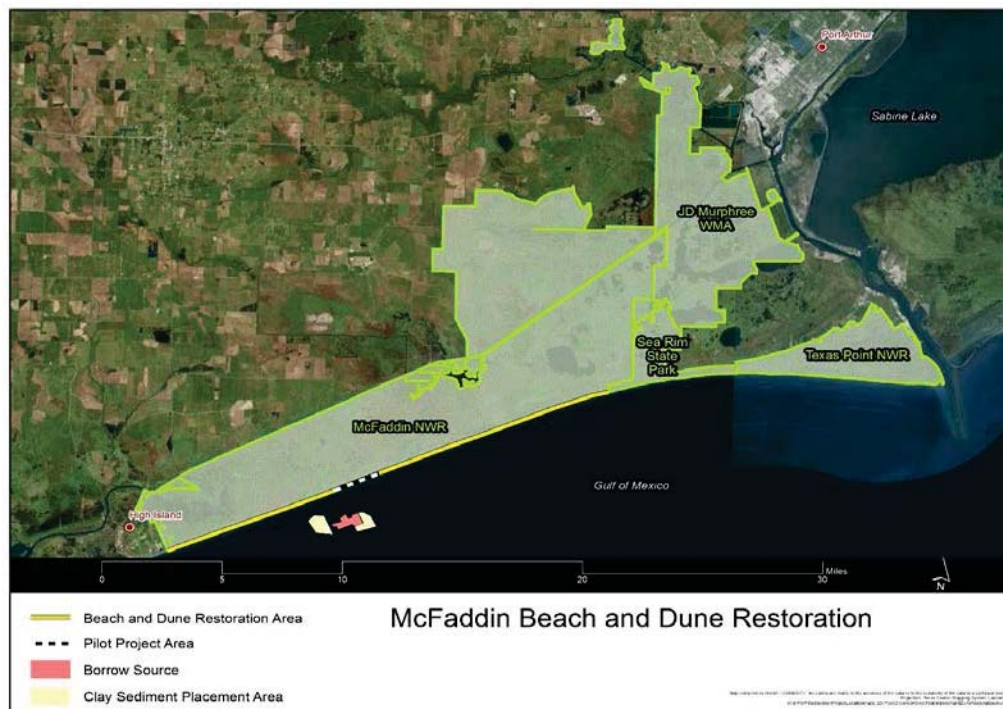


Figure 2. McFaddin Beach and Dune Restoration project alternative in Jefferson County.

3. Bahia Grande Hydrologic Main Channel

The Bahia Grande Hydrologic Restoration project alternative would restore and conserve the Bahia Grande wetland complex in the Laguna Atascosa National Wildlife Refuge (LANWR) near Brownsville, Texas. This project alternative would enlarge and stabilize a pilot channel that would increase tidal flow into Bahia Grande, restoring the system's natural tidal exchange and creating habitat for a variety of fish, shellfish, and migratory waterfowl.

Consistency Analysis

The proposed alternative is not within any designated System Unit and is therefore not subject to CBRA.

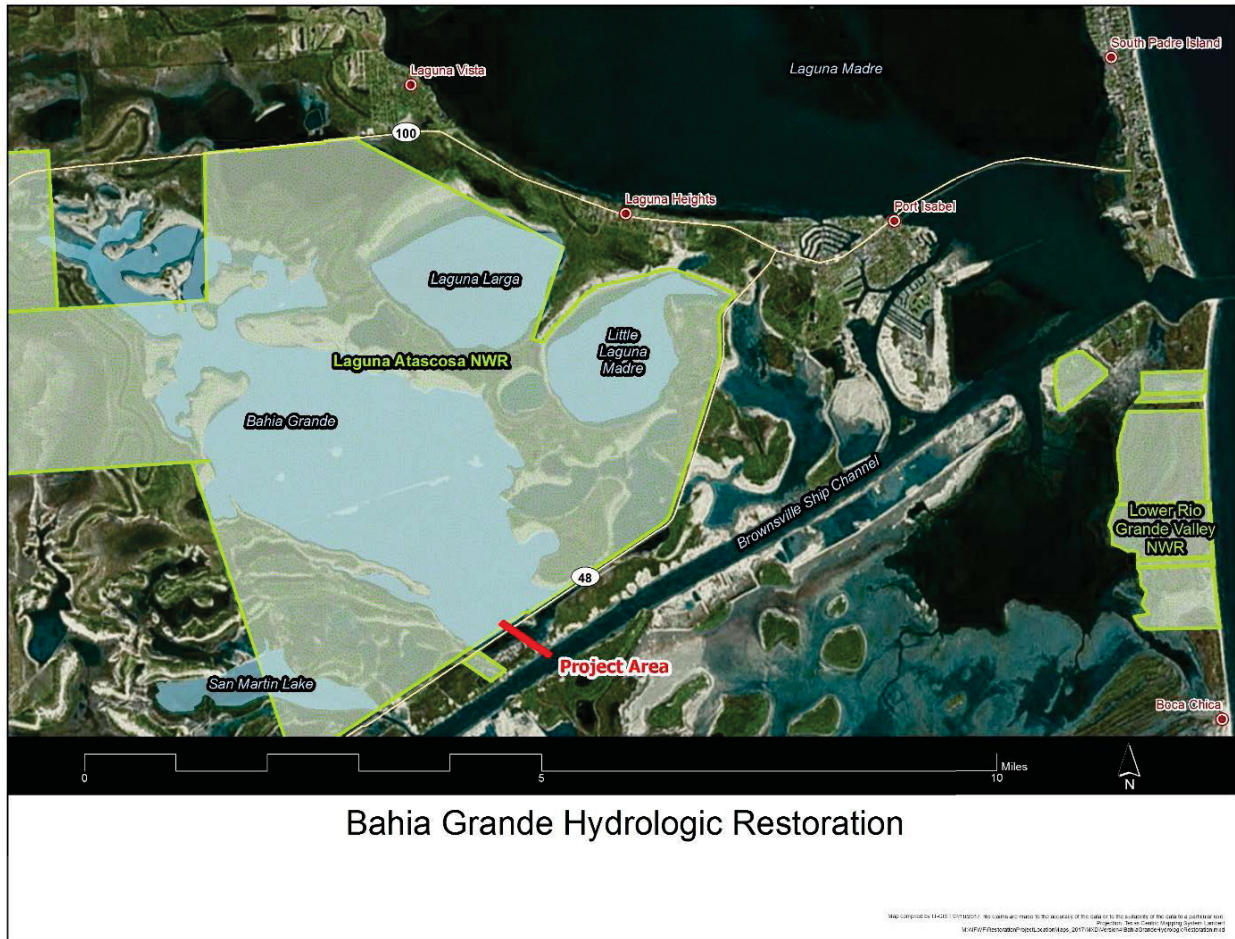


Figure 3. Bahia Grande Hydrologic Restoration project alternative in Cameron County.

4. Pierce Marsh Wetland Restoration through Beneficial Use of Dredged Material

The Pierce Marsh Wetland Restoration project alternative would restore and conserve wetlands and coastal habitats by beneficially using dredged material to create a viable, vegetated, wetland habitat for a variety of plants, fish, birds, and other wildlife that frequent the area. The placement of dredged material and associated planting would restore up to 150 acres of marsh and contribute to an ongoing effort to restore the wetland complex in West Galveston Bay.

Consistency Analysis

The proposed alternative is not within any designated System Unit and is therefore not subject to CBRA.

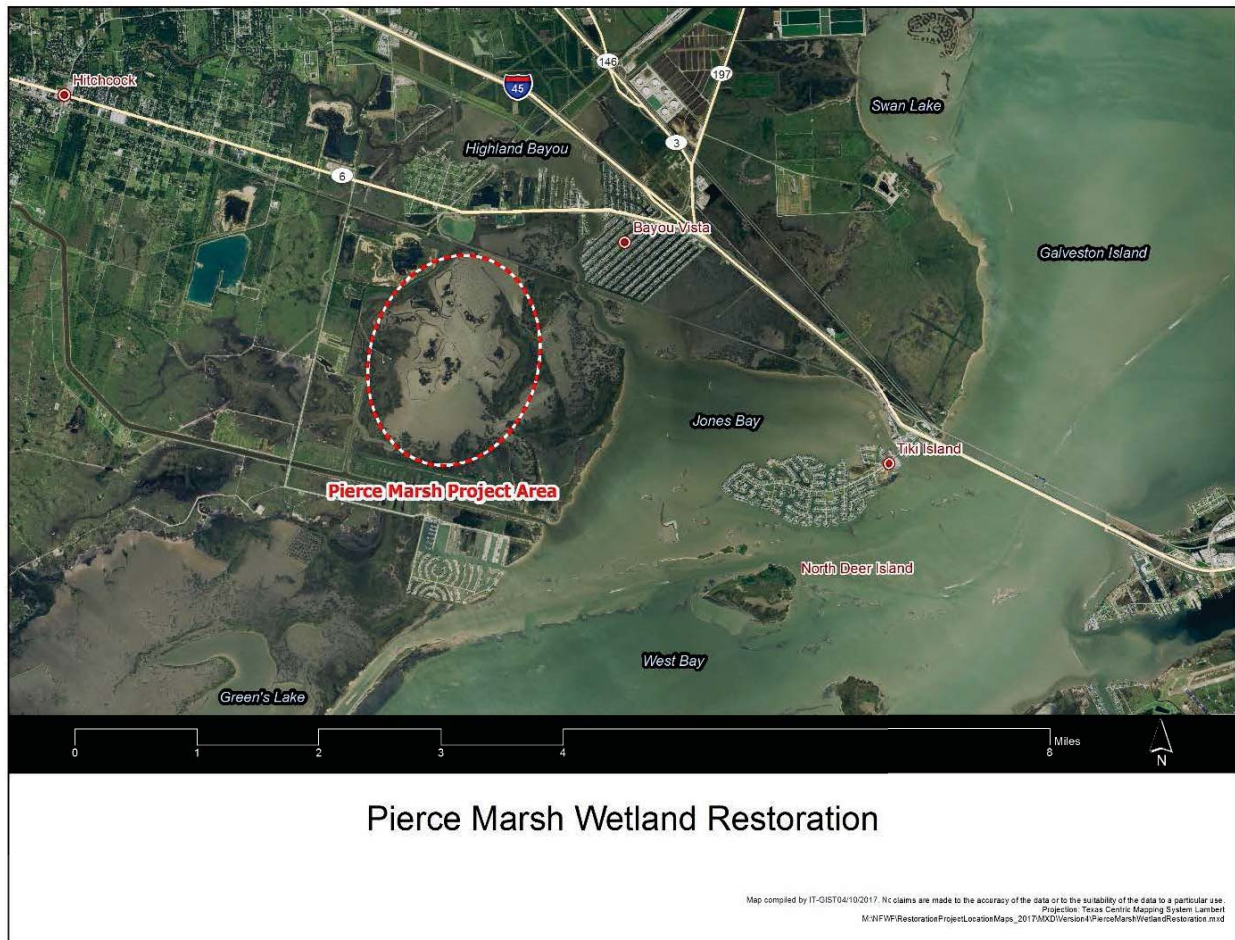


Figure 4. Pierce Marsh Wetland Restoration project alternative in Galveston County.

5. Bessie Heights Wetland Restoration

The Bessie Heights Wetland Restoration project alternative would restore wetlands in Bessie Heights Marsh located within the Lower Neches Wildlife Management Area (WMA) in Orange County, Texas. The project alternative would beneficially use sediment obtained from dredging of the federally managed Sabine-Neches Waterway (SNWW), and mining dredged material from dredged material placement areas (DMPAs) and private navigation channels and berths to restore coastal wetlands. The placement of dredged material, construction of containment levees, and associated planting would restore up to 900 acres of intertidal marsh.

Consistency Analysis

The proposed alternative is not within any designated System Unit and is therefore not subject to CBRA.

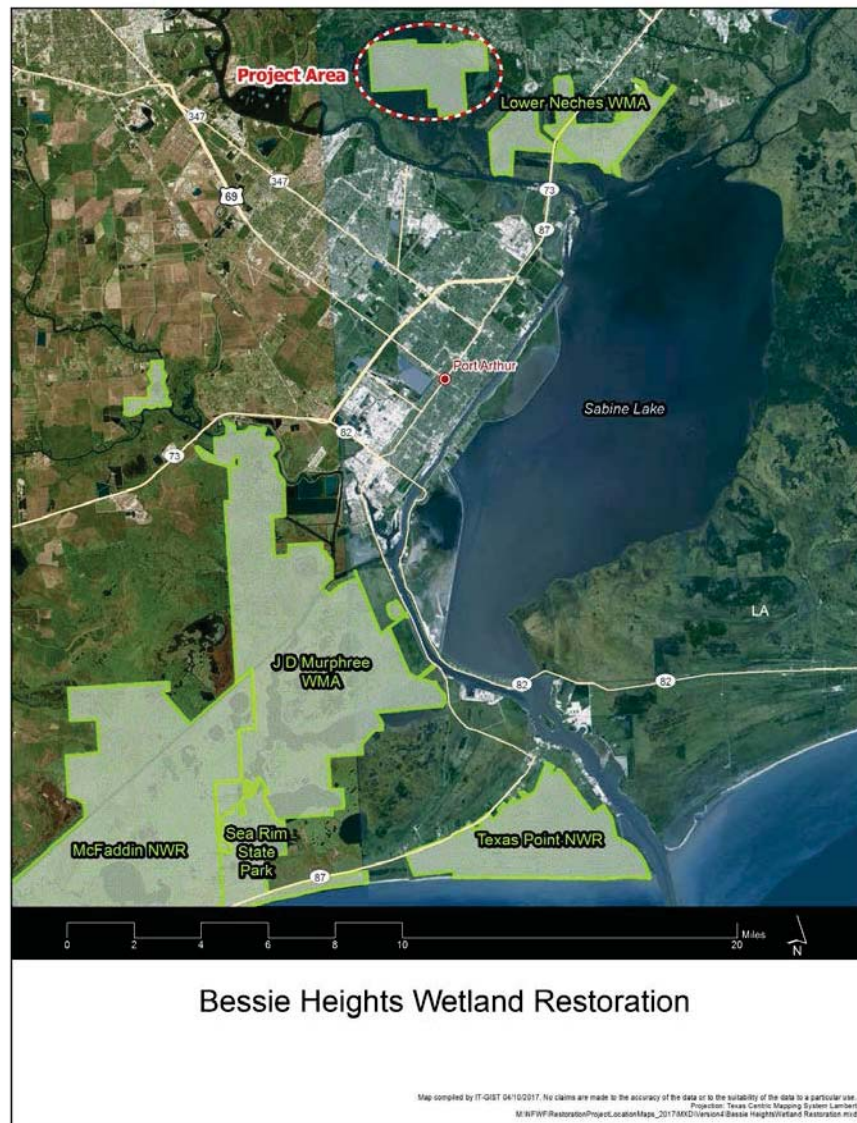


Figure 5. Bessie Heights Wetland Restoration project alternative in Orange County.

6. Essex Bayou Habitat Restoration Engineering (E&D)

The Essex Bayou Habitat Restoration Engineering project alternative would include the E&D necessary to restore and conserve coastal and nearshore habitats. The E&D is necessary to understand the factors that contribute to high salinities within Essex Bayou and the Slop Bowl Marsh system and develop solutions that would create a more stable estuarine system. Subsequent phases, to be considered for funding at a later time, would implement restoration actions, such as improving tidal flow, closing man-made channels, enhancing watershed inflows, and/or planting marsh vegetation, to increase the stability and diversity of the estuarine habitats.

Consistency Analysis

The proposed alternative is not within any designated System Unit and is therefore not subject to CBRA.



Figure 6. Essex Bayou Habitat Restoration Engineering project alternative in Brazoria County.

7. Bird Island Cove Habitat Restoration Engineering (E&D)

The Bird Island Cove Habitat Restoration project alternative would conduct E&D necessary to restore and conserve wetlands and coastal habitats in Galveston Bay. This phase of the project alternative (Phase I) would investigate ongoing issues associated with habitat degradation and develop strategies to protect and restore existing estuarine habitats with the goal of increasing the productivity and longevity of up to 170 acres of estuarine marsh complex (marsh, sand flat, and protected shallow water).

Consistency Analysis

The proposed alternative is not within any designated System Unit and is therefore not subject to CBRA.

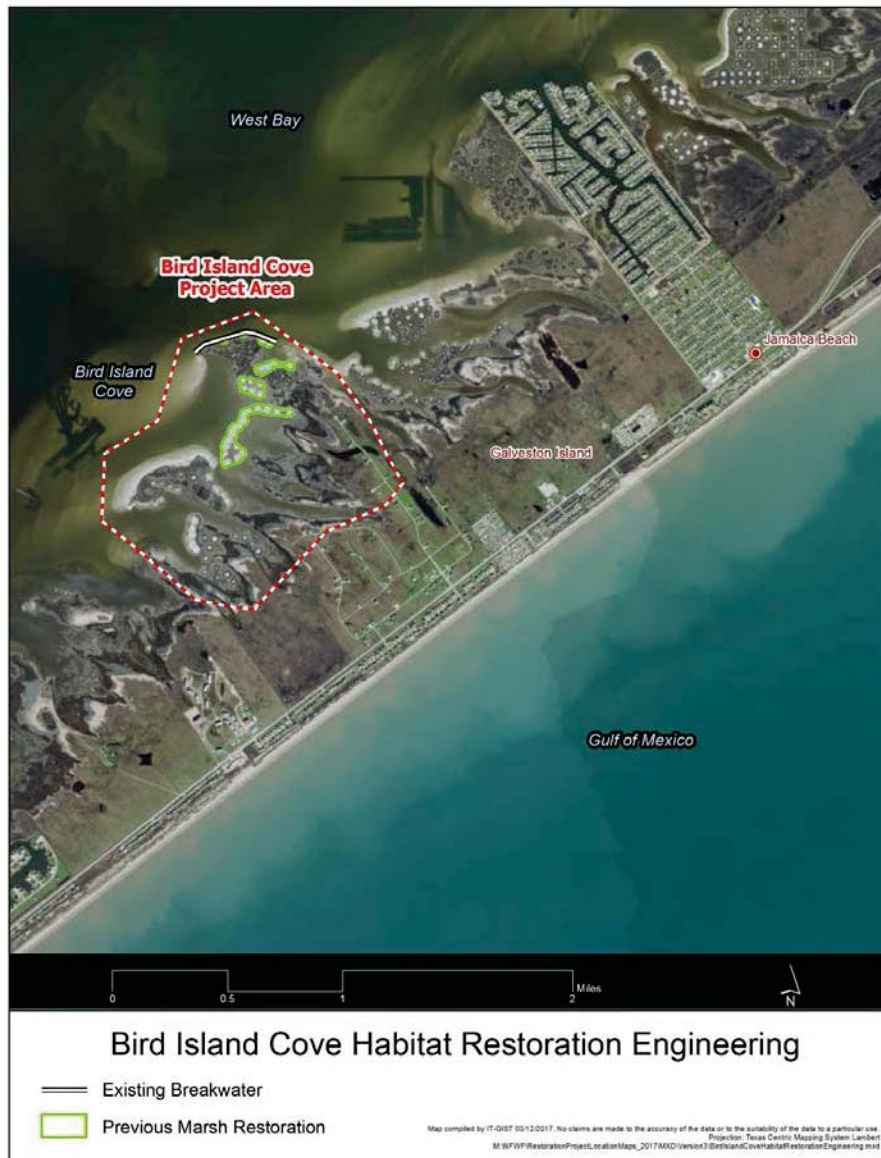


Figure 7. Bird Island Cove Habitat Restoration Engineering project alternative and locations of existing breakwaters and marsh restorations on Galveston Island.

8. Dredge Material Planning for Wetland Restoration (E&D)

The Dredged Material Planning for Wetland Restoration project alternative would include development of a Master Plan to identify priority locations and develop design work necessary for the permitting of the beneficial use of dredged material (BUDM) for marsh restoration at eight locations along the Texas coast. This project alternative would coordinate efforts to prioritize sites and produce guidelines to restore currently degrading intertidal habitats. Implementation of the BUDM to construct intertidal wetlands would take place in subsequent phases of the project alternative.

Consistency Analysis

The proposed alternative is not within any designated System Unit and is therefore not subject to CBRA.

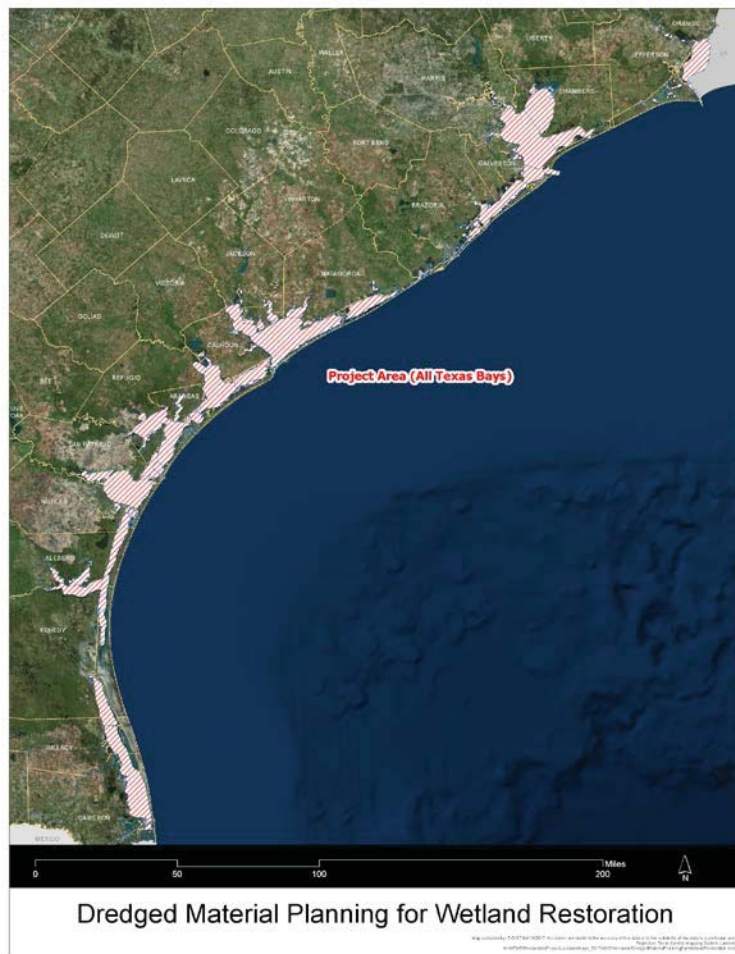


Figure 8. Dredge Material Planning for Wetland Restoration project alternative.

10. Follets Island Conservation Initiative

The Follets Island Conservation Initiative project alternative would include the acquisition and conservation of approximately 300 acres of wetland and coastal habitats on Follets Island between San Luis Pass and Drum Bay, Texas. The project alternative would conserve dune, coastal strand prairie, and marsh habitat in perpetuity through fee-simple acquisition. Once acquired, the land would be transferred to and managed by the TPWD for the purpose of habitat preservation.

Consistency Analysis

The proposed alternative is located within System Unit T04, and therefore is subject to a Consistency Analysis under CBRA. Within T04, the proposed action includes land acquisition and conservation. Consequently, this activity is consistent with CBRA per exemption 16 U.S.C. 3505(a)(6)(A) for “Projects for the study, management, protection, and enhancement of fish and wildlife resources and habitats, including acquisition of fish and wildlife habitats, and related lands, stabilization projects for fish and wildlife habitats, and recreational projects.” The purposes of CBRA are “to minimize the loss of human life, wasteful expenditure of Federal revenues, and the damages to fish, wildlife, and other natural resources associated with the coastal barriers along the Atlantic and Gulf Coasts...” 16 U.S.C. §3501(b). This restoration project alternative is designed to restore natural resources injured by the *Deepwater Horizon* oil spill. Accordingly, the project alternative is consistent with the purposes of the CBRA and falls within the CBRA exemption discussed above.

We are requesting your concurrence with our consistency determination.

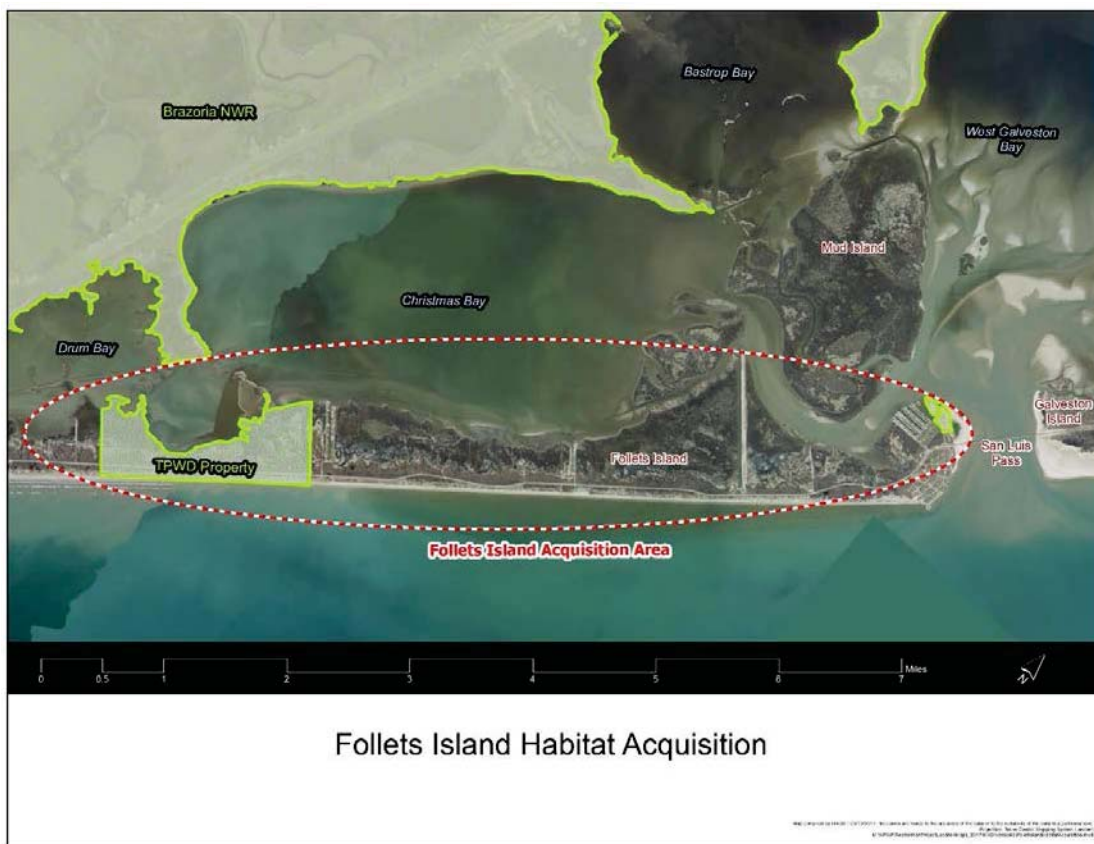


Figure 10. Follets Island Conservation Initiative project alternative in Brazoria County.

11. Laguna Atascosa Habitat Acquisition

The Laguna Atascosa Habitat Acquisition project alternative would include acquisition of important coastal habitat that would be conveyed to the USFWS to be managed as part of the LANWR. This tract includes 1,682 acres of beach, dune, and tidal habitats on South Padre Island, Texas.

Consistency Analysis

The proposed alternative is located entirely within System Unit T11, and therefore is subject to a Consistency Analysis under CBRA. Within T11, the proposed action includes land acquisition. Consequently, this activity is consistent with CBRA per exemption 16 U.S.C. 3505(a)(6)(A) for “Projects for the study, management, protection, and enhancement of fish and wildlife resources and habitats, including acquisition of fish and wildlife habitats, and related lands, stabilization projects for fish and wildlife habitats, and recreational projects.” The purposes of CBRA are “to minimize the loss of human life, wasteful expenditure of Federal revenues, and the damages to fish, wildlife, and other natural resources associated with the coastal barriers along the Atlantic and Gulf Coasts...” 16 U.S.C. §3501(b). This restoration project alternative is designed to restore natural resources injured by the *Deepwater Horizon* oil spill. Accordingly, this project alternative is consistent with the purposes of the CBRA and falls within the CBRA exemption discussed above.

We are requesting your concurrence with our consistency determination.

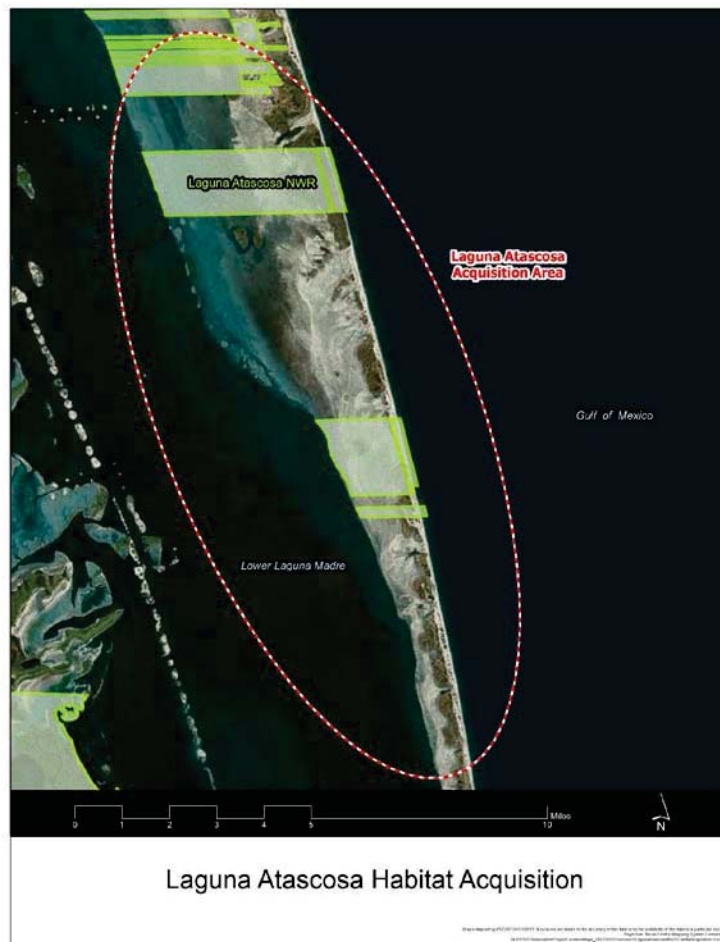


Figure 11. Laguna Atascosa Habitat Acquisition project alternative in Willacy and Cameron Counties.

12. Mid-Coast Habitat Acquisition

The Mid-Coast Habitat Acquisition project alternative would acquire a coastal estuarine land tract that would be conveyed to the USFWS to be managed as part of the Texas Mid-Coast National Wildlife Refuge Complex (Texas Mid-Coast NWR) in Matagorda County. The proposed tract is around 800 acres, including 555 acres of mostly estuarine wetlands. The restoration alternative would protect the tract, thereby providing a protective buffer to estuarine and bay waters from future land use changes.

Consistency Analysis

The proposed alternative is not within any designated System Unit and is therefore not subject to CBRA.

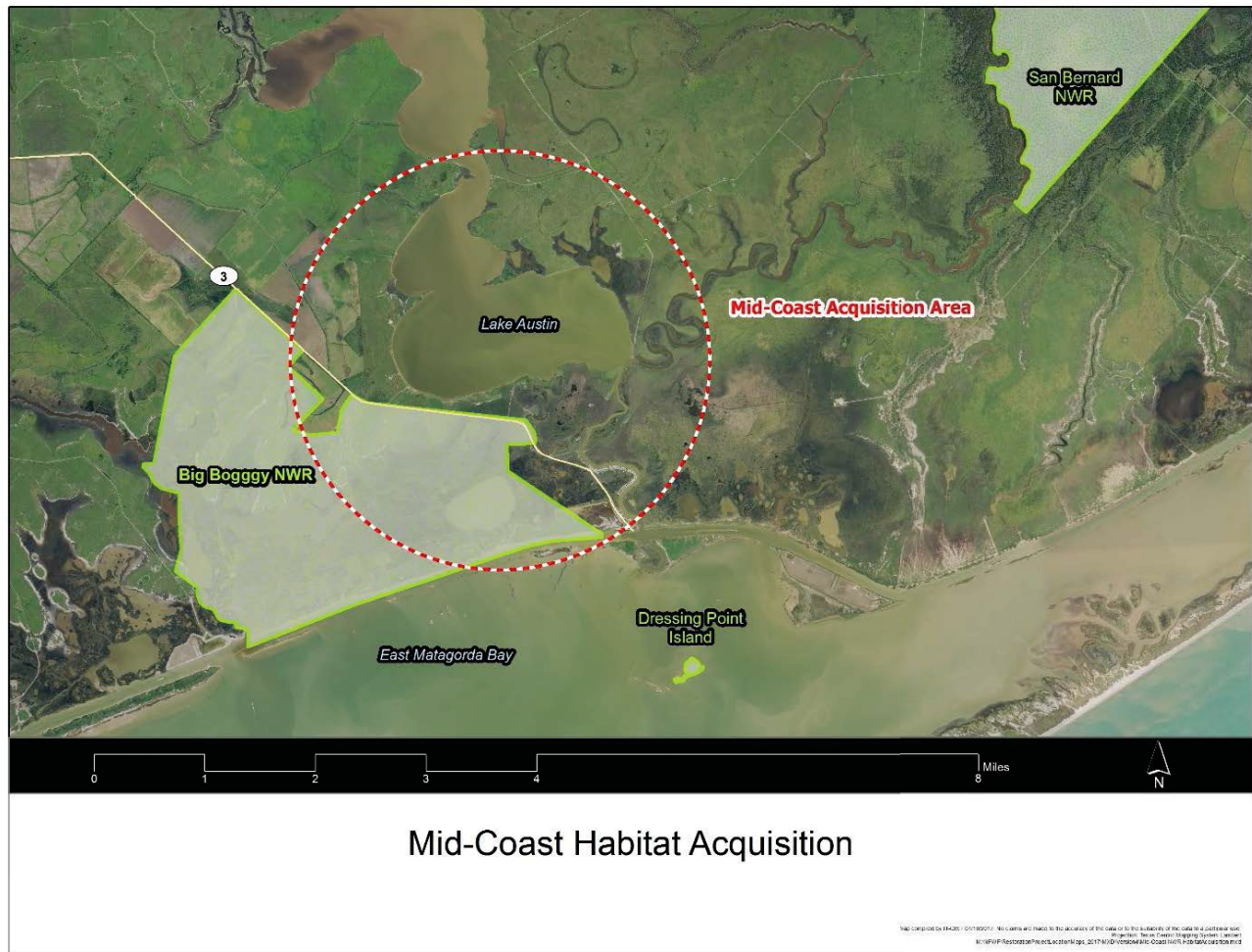


Figure 12. Mid-Coast Habitat Acquisition project alternative in Matagorda County.

13. Bahia Habitat Coastal Corridor Acquisition

The Bahia Grande Coastal Corridor Habitat Acquisition project alternative would include acquisition of important coastal habitat that would be conveyed to the USFWS to be managed as part of the LANWR. This tract includes 1,322 acres of tidal wetlands, thorn scrub, and coastal prairie with more than a mile of frontage on the Lower Laguna Madre and almost 2 miles frontage on a tidal inlet called Laguna Vista Cove.

Consistency Analysis

The proposed alternative is not within any designated System Unit and is therefore not subject to CBRA.



Figure 13. Bahia Grande Coastal Corridor Habitat Acquisition project alternative in Cameron County, Texas.



Mills, Ashley <ashley_mills@fws.gov>

CBRA for Deepwater Horizon NRDR project alternatives in Texas

Ardizzone, Chuck <chuck_ardizzone@fws.gov>

Mon, Aug 21, 2017 at 1:59 PM

To: Debora McClain <debora_mcclain@fws.gov>

Cc: Ashley Mills <ashley_mills@fws.gov>, Erin Chandler <erin_chandler@fws.gov>, Jennifer Mitchell <jennifer_mitchell@fws.gov>, Chip Wood <chip_wood@fws.gov>, David Hoth <david_hoth@fws.gov>, Dawn Gardiner <dawn_gardiner@fws.gov>, John Huffman <john_huffman@fws.gov>

All,

The Texas Coastal Ecological Service's Field Office has reviewed the Coastal Barrier Resources Act (CBRA) consistency determination you provided for the 13 projects proposed for Deepwater Horizon Texas Trustee Implementation Group's 2017 Restoration Plan/Environmental Assessment: Restoration of Wetlands, Coastal, and Nearshore Habitats; and Oysters. We concur with your determinations that these projects are consistent with the purposes of the CBRA or fall within the CBRA exemptions as discussed in your submittal.

We have no additional concerns or recommendations regarding these projects as they relate to the CBRA.

Please let me know if you have any questions.

Chuck Ardizzone
Project Leader
Texas Coastal Ecological Services
U.S. Fish & Wildlife Service
17629 El Camino Real, Ste 211
Houston, TX 77058
W: (281) 286-8282 Ext 228
C: (713) 882-1912
F: (281) 488-5882

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TEXAS GENERAL LAND OFFICE
GEORGE P. BUSH, COMMISSIONER

July 21, 2017

Christopher D. Doley
Designated Trustee Representative for Deepwater Horizon
National Oceanic and Atmospheric Administration
1315 East West Highway
Silver Spring, MD 20910

**Re: Texas Trustee Implementation Group Draft 2017 Restoration Plan/Environmental Assessment: Wetlands, Coastal, and Nearshore Habitats; and Oysters
CMP#: 17-1231-F2**

Dear Mr. Doley:

Pursuant to Title 31 Natural Resources and Conservation, Part 16 Coastal Coordination Council rules, Section 506.30, the project referenced above has been reviewed for consistency with the Texas Coastal Management Program (CMP).

It has been determined that there are no significant unresolved consistency issues with respect to the project. Therefore, this project is consistent with the CMP goals and policies.

Please note that this letter does not authorize the use of Coastal Public Land. No work may be conducted or structures placed on State-owned land until you have obtained all necessary authorizations, including any required by the General Land Office and the U.S. Army Corps of Engineers.

If you have any questions or concerns, please contact me at (409) 741-4057 or at federal.consistency@glo.texas.gov

Sincerely,

Allison Buchtien
Coastal Protection
Texas General Land Office

email cc: Ray Newby, Texas General Land Office



United States Department of the Interior

FISH AND WILDLIFE SERVICE

1875 Century Boulevard
Atlanta, Georgia 30345

In Reply Refer To:
FWS/RW/DH NRDAR

Memorandum

September 25, 2017

To: Manatee Recovery Coordinator, North Florida Ecological Services Field Office

From: Deputy *Deepwater Horizon* Department of the Interior Natural Resource Damage Assessment and Restoration (NRDAR), Case Manager 

Subject: Compliance with Marine Mammal Protection Act

Overview

The Texas Trustee Implementation Group (TX TIG) is currently evaluating thirteen preferred project alternatives (hereafter referred to as “projects”) to restore natural resources injured as a result of the *Deepwater Horizon (DWH)* oil spill. Four of these projects will involve in-water work in areas where West Indian manatee could be present and as such, consultations under Section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.), were initiated (Table 1). Consultations and permits are current for two of the projects. The Department of the Interior (DOI) determined that the two other projects may affect, but would not likely adversely affect the West Indian manatee. USFWS Texas Coastal Ecological Services Field Office concurred with this determination on August 10, 2017, for the two projects, noting that the project areas are outside of the typical habitat for West Indian manatee. A brief summary of the projects and ESA consultation, as related to the West Indian manatee, is provided in Table 1 below.

Background

After the *DWH* oil spill, federal and state natural resource trustee agencies (Trustees) came together to assess the effects of the spill and plan for the restoration of injured natural resources. As part of the legal settlement reached with BP in 2016, the Trustees prepared a Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement (Final PDARP/PEIS), to provide the framework for *DWH* oil spill restoration across the Gulf.

The Final PDARP/PEIS established Trustee Implementation Groups (TIGs) that develop plans for, choose, and implement specific restoration actions under the Final PDARP/PEIS. The Texas Trustee Implementation Group (TX TIG) is made up of the following agencies: Texas Commission on Environmental Quality (TCEQ); Texas Parks and Wildlife Department (TPWD); Texas General Land Office (TGLO); U.S. Department of the Interior, as represented by the National Park Service, U.S. Fish and Wildlife Service (USFWS), and Bureau of Land Management; National Oceanic and Atmospheric Administration (NOAA), on behalf of the U.S.

Department of Commerce; U.S. Department of Agriculture; and U.S. Environmental Protection Agency.

The TX TIG is currently evaluating the subject projects as potential restoration projects under the draft Texas Trustee Implementation Group Restoration Plan/Environmental Assessment: Restoration of Wetlands, Coastal and Nearshore Habitats; and Oysters (TX RP/EA), which was released for public review and comment on May 18, 2017. If the TX TIG selects the subject projects, the TCEQ, TPWD, TGLO, or USFWS would implement the projects. A brief description of the subject projects is provided in Table 1 below.

Marine Mammal Protection Act (MMPA) Project Compliance Information

Four projects in the TX RP/EA include in-water work in areas where West Indian manatee could be present and as such, consultation under Section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*), was initiated (Table 1). Table 1 includes a general description of in-water work and conservation measures for each project.

Because take of manatees, incidental or otherwise, is not presently authorized under the Marine Mammal Protection Act (MMPA) of 1972, as amended (16 U.S.C. 1461 *et seq.*), each consultation where manatees could be affected includes conservation measures to ensure potential effects to manatees are avoided or minimized to an insignificant and discountable level. These consultations considered the likelihood of manatee presence and the potential adverse effects of the projects to the manatee. While manatees are not likely to be present at most of the site locations, they could be transiting the project areas. Therefore, conservation measures for manatee were incorporated into the consultation because in-water work would occur where manatees could be present. In general, where in-water work will occur and manatees could be present, the Trustees will implement the Service's "Standard Manatee Conditions for In-Water Work" dated 2011 or other conservation measures specific to the project (Table 1). The Trustees will also implement NOAA's "Sea Turtle and Small-tooth Sawfish Construction Conditions" dated 2006 for the four projects, as described in Table 1.

Conclusion

DOI anticipates three of the four projects may affect, but would not likely adversely affect the West Indian manatee, and one of the four projects would have no effect on the West Indian manatee. Consultations and permits are current for two of the projects: Bahia Grande Hydrologic Main Channel, and McFaddin Beach and Dune Restoration. The Department of the Interior (DOI) determined that the two other projects may affect, but would not likely adversely affect the West Indian manatee: Bessie Heights Wetland Restoration, and Pierce Marsh Wetland Restoration. USFWS Texas Coastal Ecological Services Field Office concurred with this determination on August 9, 2017, for the two projects, noting that the project areas are outside of the typical habitat for West Indian manatee. A brief summary of the projects and ESA consultation, as related to the West Indian manatee, is provided in Table 1 below.

DOI believes the procedures contained within these consultations constitute appropriate and responsible steps to promote compliance with MMPA prohibitions on take by requiring the activities to achieve a standard of No Effect or May Affect, Not Likely to Adversely Affect for manatees. As such, we do not anticipate any take, incidental or otherwise, under the ESA or MMPA for West Indian manatee as a result of the implementation of these projects.

In addition, the National Marine Fisheries Service (NMFS) is also coordinating with the Trustees under MMPA in order to protect other species of marine mammals that could be present in project areas. NMFS may require additional avoidance measures to protect dolphins or other marine mammals at the project sites. While we have not attempted to catalogue avoidance and minimization measures from NMFS, we believe any additional measures they require will further avoid impacts to manatees should they be present at these project areas.

If modifications are made to any of these projects in a manner that may affect the manatee or its habitat; if additional information involving potential effects to the manatee or other listed species not previously considered becomes available; or if in the unlikely event that the take of a manatee occurs during the project, consultation will be reinitiated.

If you have any questions or concerns regarding this response, please immediately contact Erin Chandler, Fish and Wildlife Biologist, at 404-309-5713, or erin_chandler@fws.gov.

Attachments (5)

- Maps of project locations (Figures 1 - 4)
- Summary of Project Information and ESA Determinations (Table 1)

Figure 1. McFaddin Beach and Dune Restoration Project

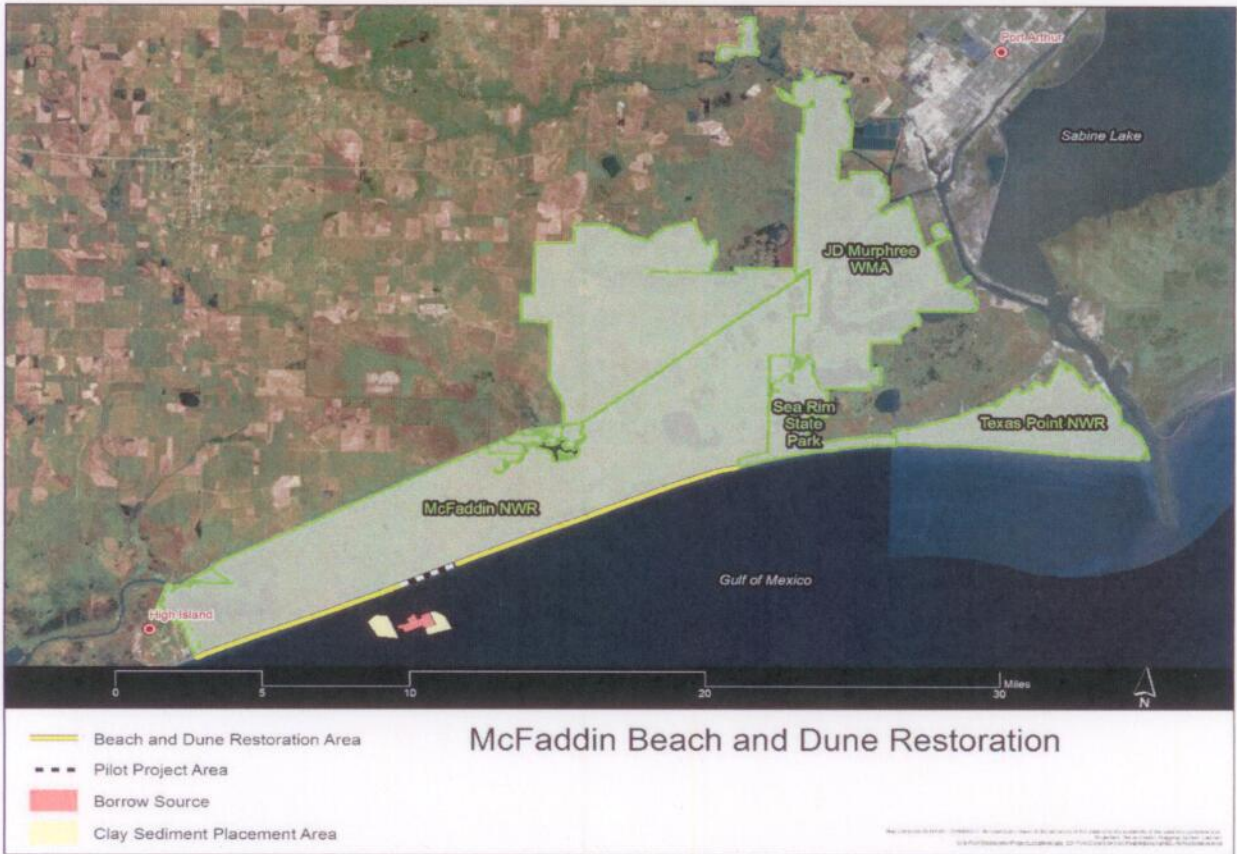


Figure 2. Bahia Grande Hydrologic Main Channel Project



Figure 3. Pierce Marsh Wetland Restoration through Beneficial Use of Dredged Material Project

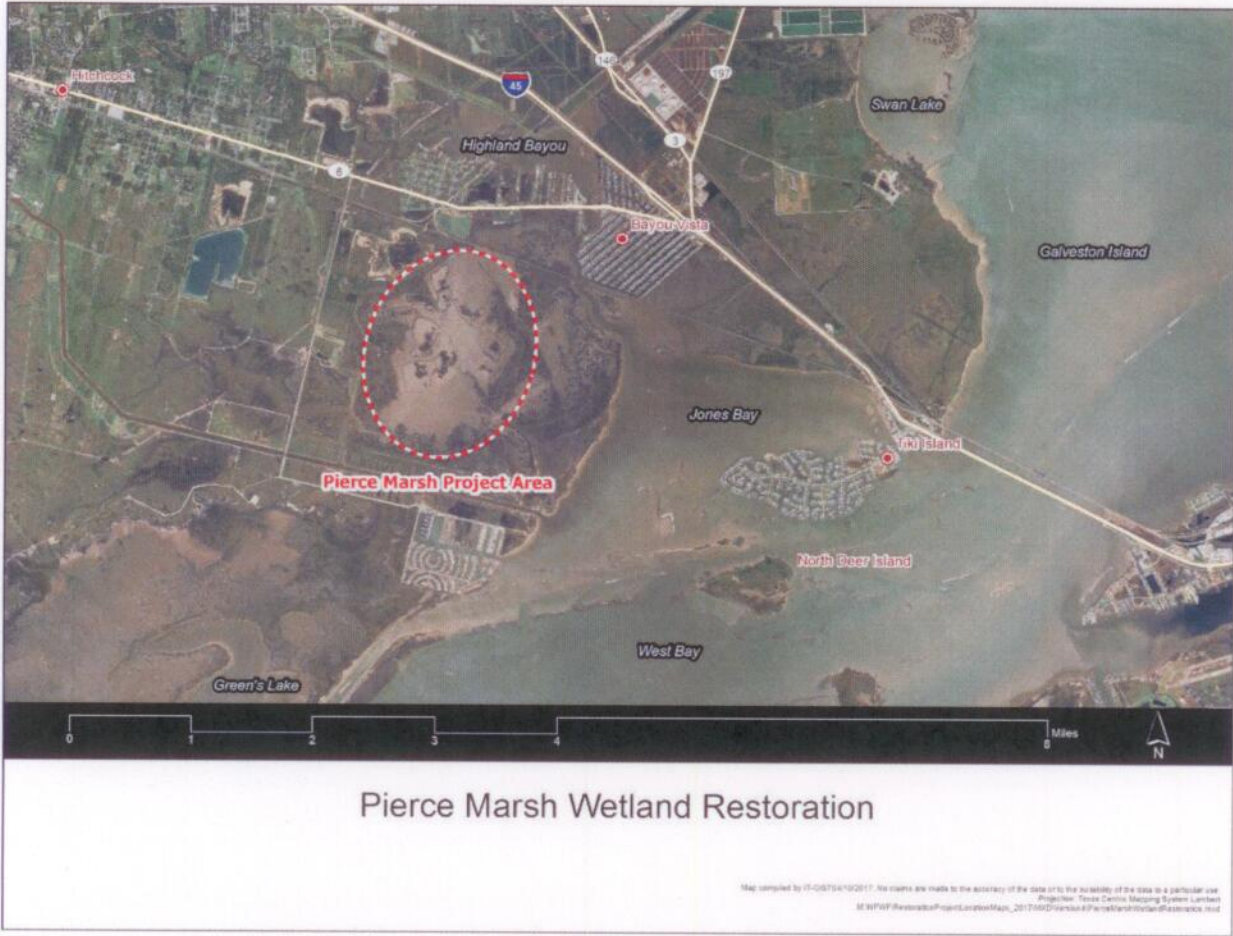


Figure 4. Bessie Heights Wetland Restoration Project



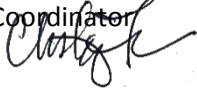
Table 1. Summary of in-water work and conservation measures to protect the West Indian manatee for four projects included in the TX TIG RP/EA. Projects will not proceed with implementation until compliance with all relevant laws is achieved. NE = No Effect; NLAA = May Affect, Not Likely to Adversely Affect; S = Standard Manatee Conditions for In-Water Work, dated 2011; SS = Sea Turtle and Small-tooth Sawfish Construction Conditions, dated 2006.

Project Title	In-Water Work	ESA Determination for Manatee	Conservation Measures for Manatee	Field Office Concurrence
McFaddin Beach and Dune Restoration	Dredging sand sediments from an offshore borrow area by using a cutter-head dredge and transferring it to the shore via a submerged pipeline	NLAA	S, SS	August 10, 2016
Bahia Grande Hydrologic Main Channel	Mechanical and hydraulic dredging to widen and deepen the existing pilot channel (including a temporary access route), placement of dredge material in an existing placement area, and installing permanent riprap scour protection along approximately 400 feet in both directions from the SH 48 bridge, covering approximately 4.3 acres	NE	SS; If marine mammals are sighted within 50 feet of the construction area, work would stop until the animals move away from the area under their own volition.	January 26, 2016
Pierce Marsh Wetland Restoration through Beneficial Use of Dredged Material	Transporting dredge material via hydraulic dredge pipeline, marine track hoe (on floating pontoon) excavation of existing levees, berms, and access corridors, and placement of dredge material in levees	NLAA	SS; All construction personnel will be notified of potential presence of manatee in water and reminded of criminal and civil penalties associated with harassing, injuring, or killing manatees. All workers will be educated about manatees in water and will be advised to look for manatees and, if observed, wait until manatees leave the area to put the equipment in the water. Care will be taken when using equipment in water to ensure no harm is caused to any manatee. Should a manatee come within 50 ft of the project area during construction activities, work would immediately cease until manatee has moved away from the project area on its own. Construction noise will be kept to minimum feasible.	August 9, 2017

<p>Bessie Heights Wetland Restoration</p>	<p>Transporting dredge material via pipeline and placement of dredge material in open water (including use of barges, small watercraft, cutterhead-hydraulic or clamshell dredges, and a dockside staging area)</p>	<p>NLAA</p>	<p>SS: All construction personnel will be notified of potential presence of manatee in water and reminded of criminal and civil penalties associated with harassing, injuring, or killing manatees. All workers will be educated about manatees in water and will be advised to look for manatees and, if observed, wait until manatees leave the area to put the equipment in the water. Care will be taken when using equipment in water to ensure no harm is caused to any manatee. Should a manatee come within 50 ft of the project area during construction activities, work would immediately cease until manatee has moved away from the project area on its own. Construction noise will be kept to minimum feasible.</p>	<p>August 9, 2017</p>
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MEMORANDUM FOR: FILE

FROM: Christy Fellas, DWH Environmental Compliance Coordinator
NOAA Restoration Center, Southeast Region 

DATE: August 1, 2017

SUBJECT: Projects Proposed in Texas Trustee Implementation Group Restoration Plan #1 and Environmental Assessment: No Further Action Needed for NMFS Species Protected under the MMPA

There are more than 22 species of marine mammals in the Gulf of Mexico, including dolphins and whales. The Marine Mammal Protection Act (MMPA), as amended, prohibits the taking of marine mammals, where "take" is defined as "the act of hunting, killing, capture, and/or harassment of any marine mammal; or, the attempt at such" 16 U.S.C. § 1362(13). The Marine Mammal Protection Act does provide a mechanism (section 101(a)(5) (A-D)) for allowing, upon request, the "incidental", but not intentional, taking of small numbers of marine mammals by U.S citizens who engage in a specified activity (other than commercial fishing) within a specified geographic region. Proposed projects were analyzed to evaluate the potential for any such non-fishery interactions with marine mammals.

Based on my review of project materials (Summer 2017) in coordination with representatives from NOAA's Protected Resource Division (PRD) in the South East Regional Office (SERO), the NOAA Restoration Center determined that the land acquisition and engineering and design projects proposed for implementation in the Texas TIG Restoration Plan/Environmental Assessment will have no effect to MMPA protected species under the jurisdiction of National Marine Fisheries Service¹ because the projects are restricted to planning/design and land acquisition. These projects will not require further MMPA evaluation. Should any project be modified in a way that could adversely impact marine mammals, this determination will be reevaluated as appropriate.

Proposed Projects:

- Follets Island Habitat Acquisition
- Midcoast Habitat Acquisition
- Bahia Habitat Coastal Corridor Acquisition
- Laguna Atascosa Habitat Acquisition
- Oyster Restoration Engineering and Design
- Bird Island Cove Habitat Restoration Engineering and Design
- Essex Bayou Habitat Restoration Engineering and Design
- Dredge Material Planning for Wetland Restoration Engineering and Design

¹ This letter is not intended to determine effects to MMPA protected species under the jurisdiction of USFWS.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

In coordination with representatives from NOAA's Protected Resource Division (PRD) in the South East Regional Office (SERO), the NOAA Restoration Center determined that the remained of projects proposed for implementation in the Texas TIG Restoration Plan/Environmental Assessment do not require further evaluation under the MMPA because the projects were reviewed and additional measures to reduce potential harassment were incorporated into the project descriptions. Should any project be modified in a way that could adversely impact marine mammals, this determination will be reevaluated as appropriate. The projects are:

- McFaddin Beach and Dune Restoration / Upper TX Coast
- Bessie Heights Wetland Restoration
- Pierce Marsh Wetland Restoration through Beneficial Use of Dredged Material
- Indian Point Shoreline Erosion Protection
- Bahia Grande Hydrologic Main Channel