

Appendix C

Real Estate

Hickory Cove Marsh Restoration & Living Shoreline

Bridge City, TX

WRDA 2016 Section 1122

Beneficial Use of Dredged Material Pilot Program

October 2021



US Army Corps
of Engineers®
Galveston District

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List of Acronyms

API	American Petroleum Institute
BCE	Baseline Cost Estimate
CESWG-RE	Galveston District, Real Estate Division
DI	Design and Implementation Phase
GLO	Texas General Land Office
HQUSACE	U.S. Army Corps of Engineers Headquarters
HTRW	Hazardous, Toxic, and Radioactive Waste
LERRD	Lands, Easements, Rights-of-Way, Relocations, and Disposals
NFS	Non-Federal Sponsor
O&M	Operations & Maintenance
PA	Placement Area
PDT	Project Delivery Team
PGL	Policy Guidance Letter
PL	Public Law
PPA	Project Partnership Agreement
REP	Real Estate Plan
ROM	Rough Order of Magnitude
SNWW	Sabine-Neches Waterway
USACE	U.S. Army Corps of Engineers
WRDA	Water Resources Development Act

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1 General Background

This Real Estate Plan (REP) is the real estate work product of the U.S. Army Corps of Engineers (USACE), Galveston District, Real Estate Division that supports the Hickory Cove Marsh Restoration & Living Shoreline Study. It identifies and describes the lands, easements, rights-of-way, relocations, and disposals (LERRD) required for the construction, operation and maintenance of the proposed project, including those required for relocations (i.e., P.L. 91-646 relocations and utility/facility relocations), borrow material, and dredged or excavated material disposal. Furthermore, the REP describes the estimated LERRD value, together with the estimated administrative and incidental costs attributable to providing LERRD, and the acquisition process.

This report is prepared based on specific data from the USACE, Galveston District Project Delivery Team (PDT) for the Hickory Cove Marsh Restoration & Living Shoreline Study. However, this plan is tentative in nature and intended for planning purposes only. Modifications to the recommended plan could occur and change the determinations of real property lines, estimations of values, and rights required for the project, etc. as outlined in this plan, even after final report approval. The level of detail provided in this REP is understood to be equivalent to the other PDT disciplines.

2 Project Type and Purpose

The Hickory Cove Marsh Restoration & Living Shoreline project is one of only 10 proposals evaluated and selected by a panel of reviewers from Southwestern Division and Headquarters for inclusion in the Section 1122 Beneficial Use of Dredged Material pilot program. The pilot program evaluated 95 proposals and identified projects for the pilot program that could accomplish the purposes of:

- reducing storm damage to property and infrastructure;
- promoting public safety;
- protecting, restoring, and creating aquatic ecosystem habitats;
- stabilizing stream systems and enhancing shorelines;
- promoting recreation;
- supporting risk management adaptation strategies; and
- reducing the cost of dredging and dredged material placement or disposal, such projects that use dredged material for construction or fill material, civic improvement objectives; and other innovative uses and placement alternatives that produce public economic or environmental benefits.

The proposal was submitted to USACE by Ducks Unlimited to propose using the dredged material from the Sabine and/or Neches Rivers to restore the Hickory Cove marsh area. This area is an important habitat for wintering migratory waterfowl and other water birds, specifically the Northern Pintail (wintering and migratory resident) and the Mottled Duck (year-round resident). Additionally, the Texas General Land Office (GLO) specifically identified the Hickory Cove area as a statewide priority for coastal resiliency planning. GLO expects the restoration of the coastal marsh will provide storm surge protection and a buffer for critical petrochemical infrastructure, as well as for residents and other businesses in the Bridge City and Orange areas. This area was significantly impacted by Hurricane Ike in 2008 and more recently by Hurricane Harvey in 2017.

The project seeks to obtain dredged material from a six (6) mile stretch of the Sabine Neches Waterway (SNNW) from the intersection of the Neches and Sabine Rivers, extending north towards the Port of Orange. A highlight of this project is the relatively short pumping distance from the waterway to the proposed placement site of between one (1) to three (3) miles.

3 Study Scope

This feasibility study focused on measures and alternatives, which simultaneously meet the criteria for inclusion within the Section 1122 pilot program and address the problems, opportunities, and constraints set forth by the study authority. Specifically, this project's scope is to beneficially utilize the dredged material from the SNWW to restore the Hickory Cove Marsh area.

4 Authority

The authority for this project is Section 1122 of the Water Resources Development Act (WRDA) of 2016, Beneficial Use of Dredged Material. Section 1122 of WRDA 2016 (a-h) directs the Secretary to establish a pilot program consisting of 10 projects for the beneficial use of dredged material for certain, specified purposes. It provides for the establishment of regional beneficial use terms to identify and assist in implementation of projects under the pilot program.

5 Study Area and Project Location

The study area is situated in Orange County in the easternmost part of Texas, adjacent to the Louisiana border (Figure 1). The closest city is Bridge City, which is located approximately 3.5 miles northwest of Hickory Cove Bay in Orange County, Texas (Figure 2). The project location is located within Hickory Cove Bay. The total scope of the analysis is approximately 1,700 acres in size and located adjacent to the Sabine River (Figure 3). Material from a six (6) mile reach of the SNWW beginning at the intersection of the Neches and Sabine Rivers extending north towards the Port of Orange will be utilized.

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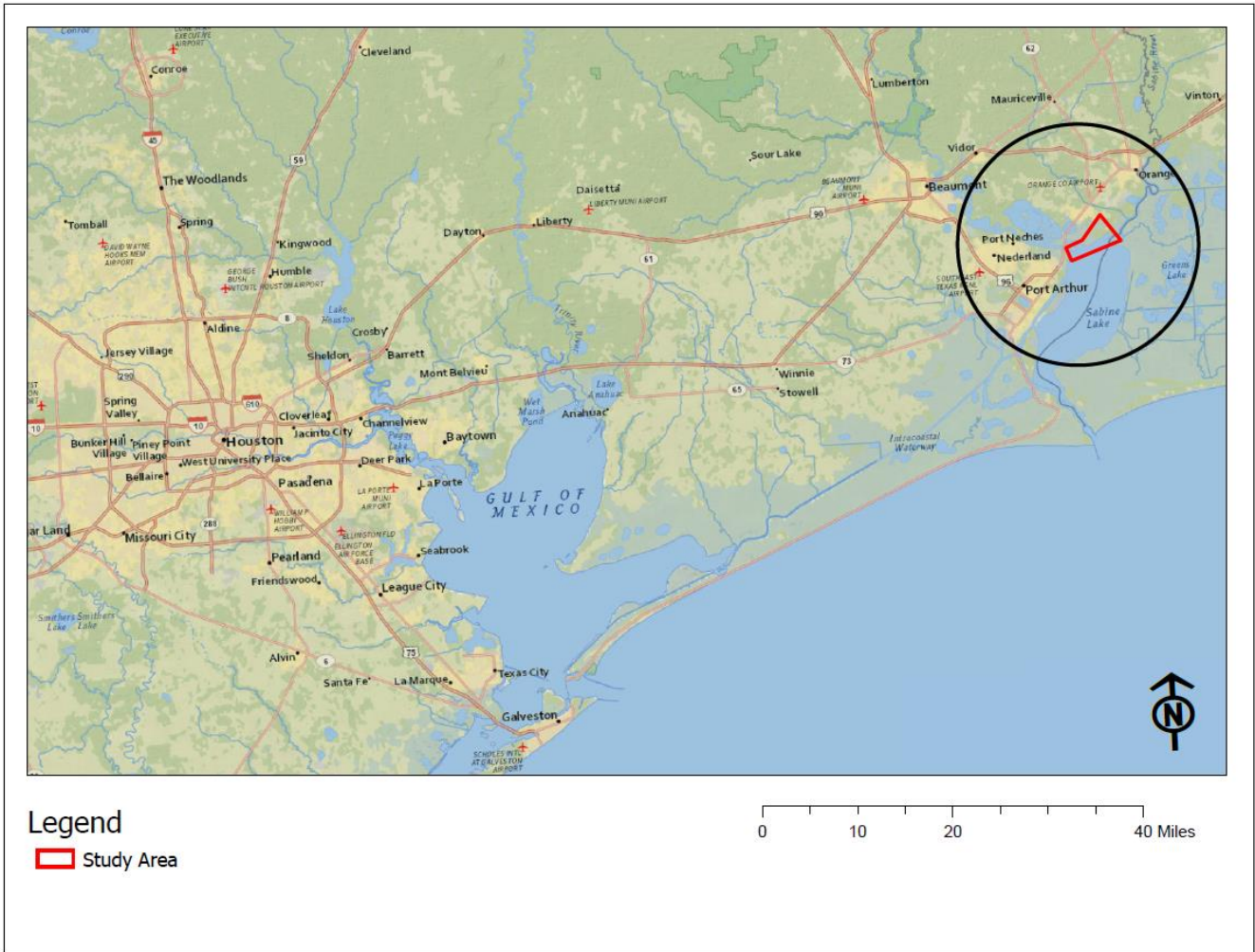


Figure 1: Study Area in Relation to Houston/Galveston

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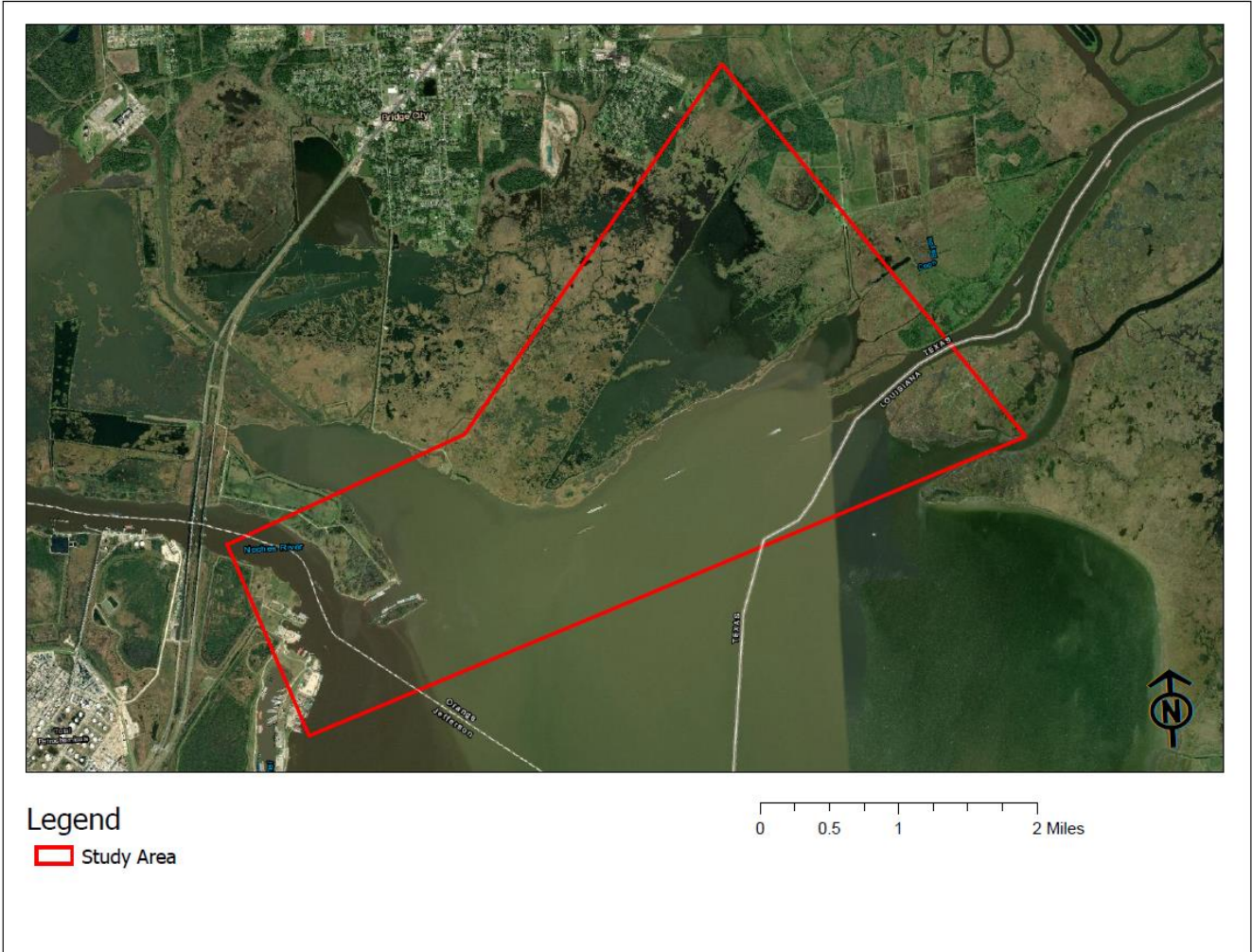


Figure 2: Study Area in Relation to Bridge City, TX

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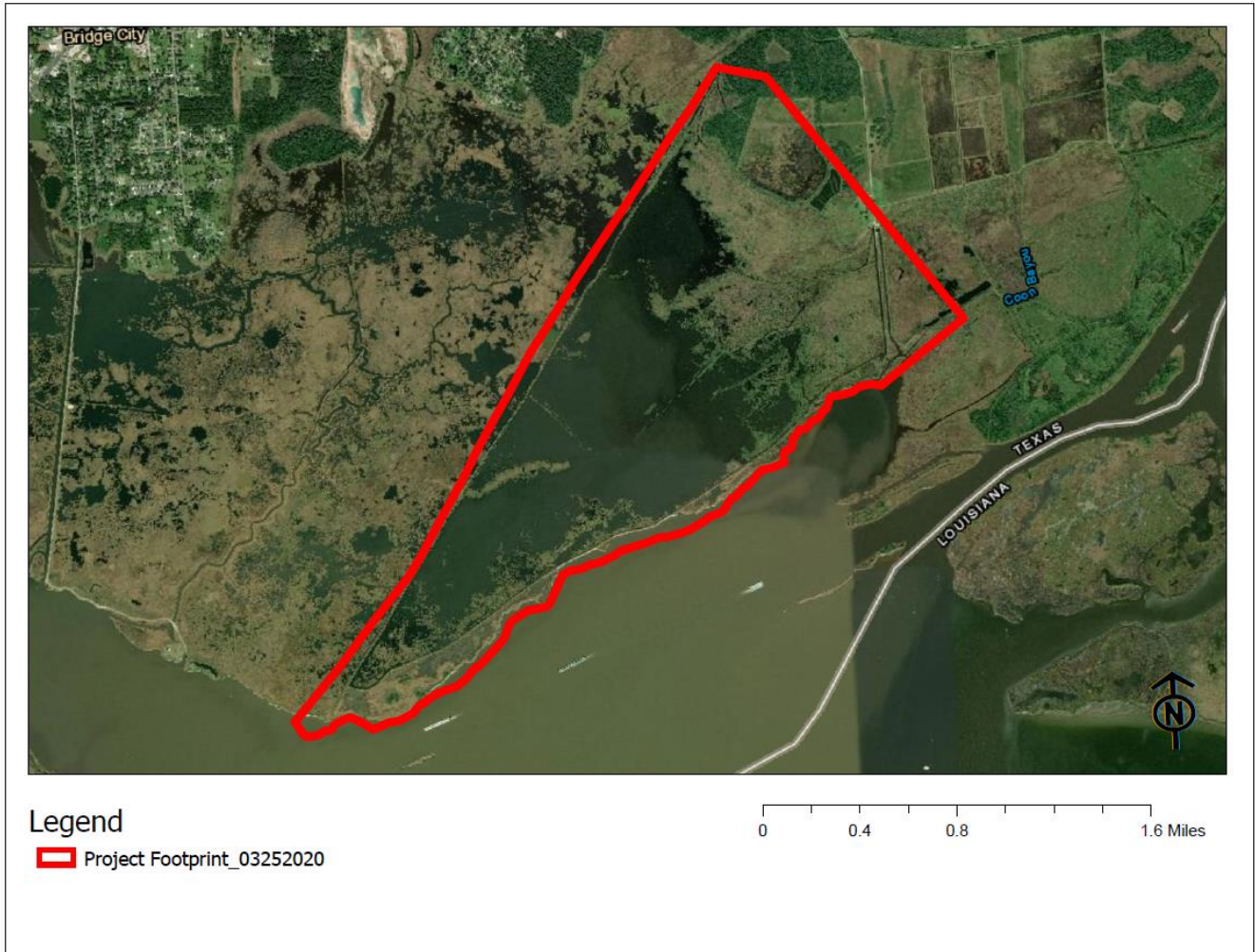


Figure 3: Project Area

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6 Non-Federal Sponsors, Partners and Acquisition Responsibilities

6.1 Non-Federal Sponsor

As part of the Section 1122 Pilot Program, the feasibility portion of the study was done at 100% federal expense. To accomplish the Design & Implementation (DI) portion of the study, USACE has identified the Orange County Navigation & Port District (Port of Orange) as a potential Non-Federal Sponsor (NFS) for this project. The Port of Orange has actively participated in the feasibility portion of the project, attending site visits and PDT meetings.

6.2 Other Study Participants

As the entity that submitted the Section 1122 proposal, Ducks Unlimited has also actively participated in the feasibility portion of the project by attending site visits and PDT meetings. Ducks Unlimited is not an official study sponsor or partner.

6.3 NFS Acquisition Responsibilities and Capabilities

The NFS is responsible for providing all LERRD required for the project. An acquisition capabilities assessment has been completed for the Port of Orange (Exhibit A). While the Port of Orange has the authority and capability to furnish the private lands, easements, and rights-of-way for this project, they are unwilling to exercise condemnation authority on private lands. The PDT has determined this to be of minimal risk to the project and further details are outlined in Section 10.6.1.

7 NFS Notification of Risk

Real Estate has notified the NFS of the risks in acquiring land prior to the signing of the Project Partnership Agreement (PPA). A copy of the risk letter is shown in Exhibit B.

8 Alternative Formulation Process and Recommended Plan

The project set out to restore habitats and attenuate coastal storm forces to enhance the resiliency of portions of Bridge City, Texas and surrounding areas through beneficial use of dredged material from the Sabine River. The PDT evaluated alternatives designed to:

- reduce storm damage to property;
- protect, restore, and create aquatic and ecologically related habitats that include wetlands; and
- transport and place suitable sediment for the purposes of improving environmental conditions in the marsh and littoral systems, stabilizing stream channels, and enhancing shorelines.

8.1 Alternatives Considered

The PDT considered the following alternatives:

- No Action – Maintenance dredging within the Sabine River section of the SNWW navigation channel would occur infrequently, as routine maintenance of the waterway has been limited due to the lack of placement areas. Site improvements would be required for Placement Areas 29A and 29 B, for placement of dredged material.
- Hickory Cove Marsh Placement with a series of incremental measures:
 - Alternative 1: Restoring marsh to a target elevation for vegetation establishment utilizing dredged material on three potential scales based on estimated volumes (Figure 4). Future dredging volumes are variable as a result of storm conditions, available funding and the dredging depth and extent. The maximum quantity of sediment is considered for the marsh restoration, by may vary by the time of construction. The uncertainty was addressed by considering different volumes and found to be feasible. This alternative

would restore an existing containment levee and restore marsh habitat. It does not include a breakwater or living shoreline.

- 1a: Marsh restoration based on 500,000 cy of material.
- 1b: Marsh restoration based on 900,000 cy of material.
- 1c: Marsh restoration based on 1,300,000 cy of material.



Figure 4: Alternative 1

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- Alternative 2: This alternative builds upon Alternative 1 by including shoreline protection in the form of a detached breakwater to armor the shoreline along the SNWW to reduce erosion of sediment and ensure sustainability of the marsh (Figure 5). The proposed breakwater is approximately 14,623 linear feet.

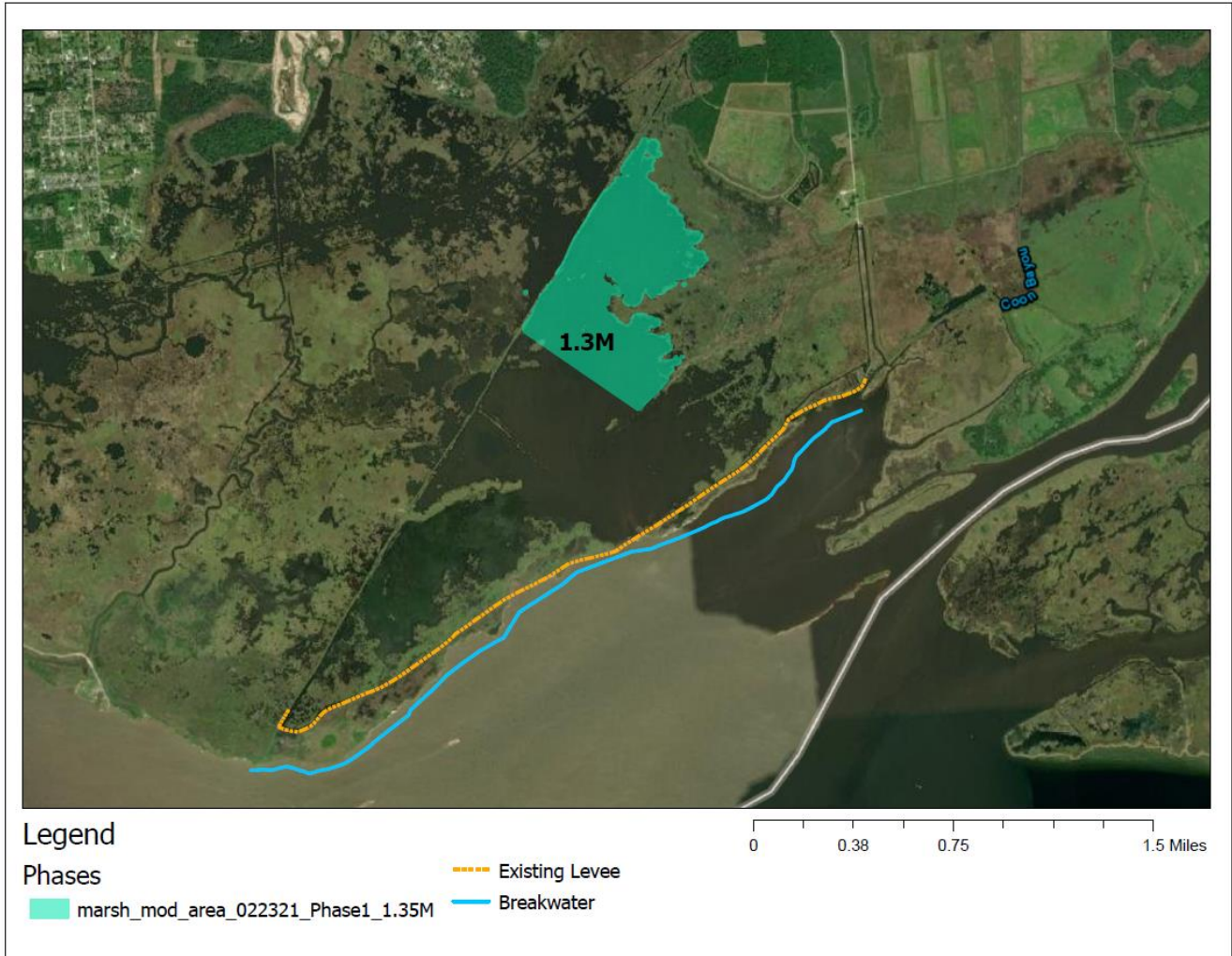


Figure 5: Alternative 2

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- Alternative 3: Alternative 3 adds a living shoreline to Alternative 2 to provide a comprehensive solution that would include marsh restoration, breakwater shore protection, as well as additional sediment and vegetation between the containment levee and the breakwater to produce additional habitat (Figure 6).

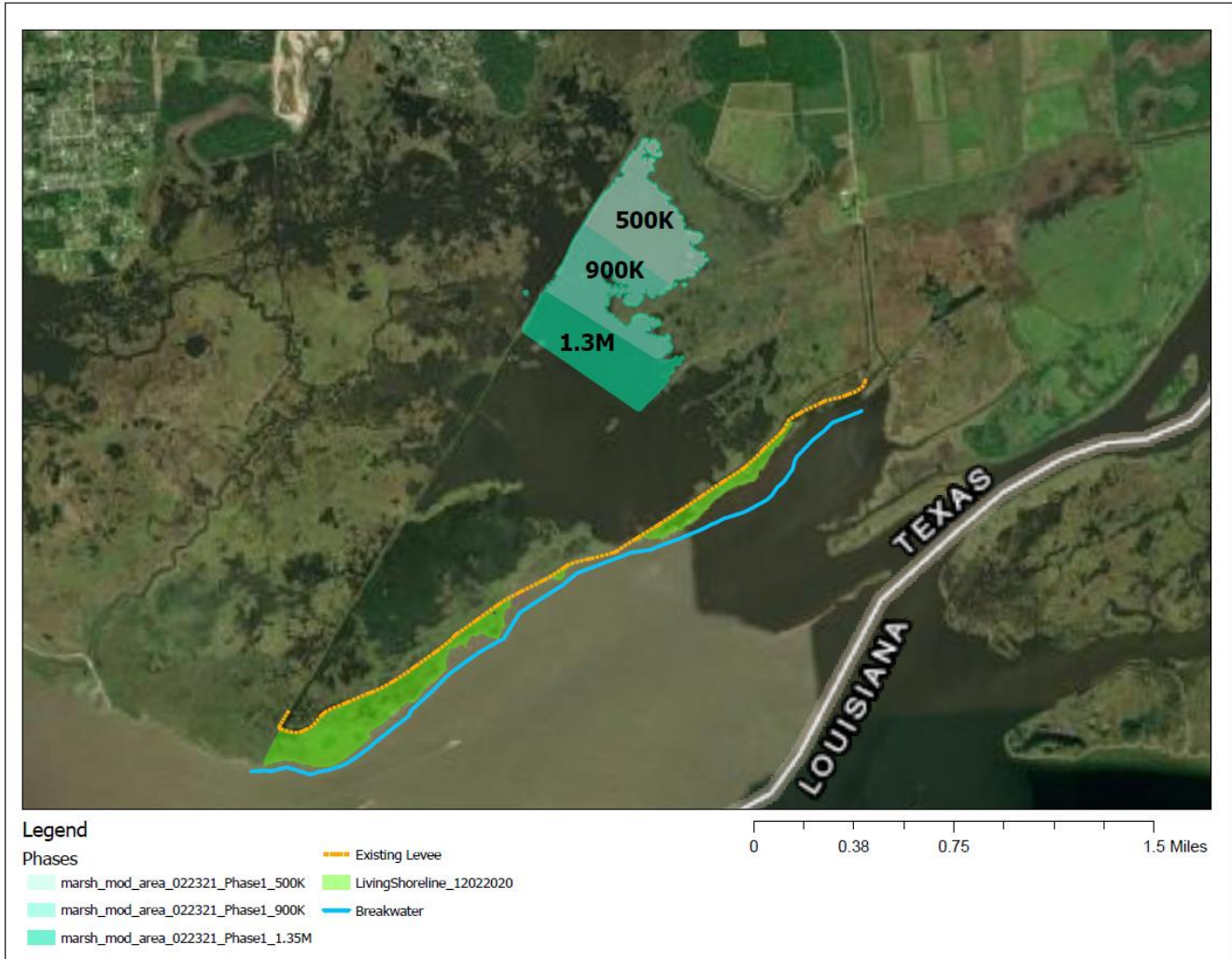


Figure 6: Alternative 3

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While not included in the above alternatives, the study also identified two additional increments of marsh modification and restoration that could be completed at a later date, should dredged material become available. The second increment would restore an additional 260 acres of marsh, with the third increment restoring the final 157 acres of marsh (Figure 7) This was proposed to facilitate continued dredging and marsh restoration opportunities into the future, and to encourage additional BU over time .

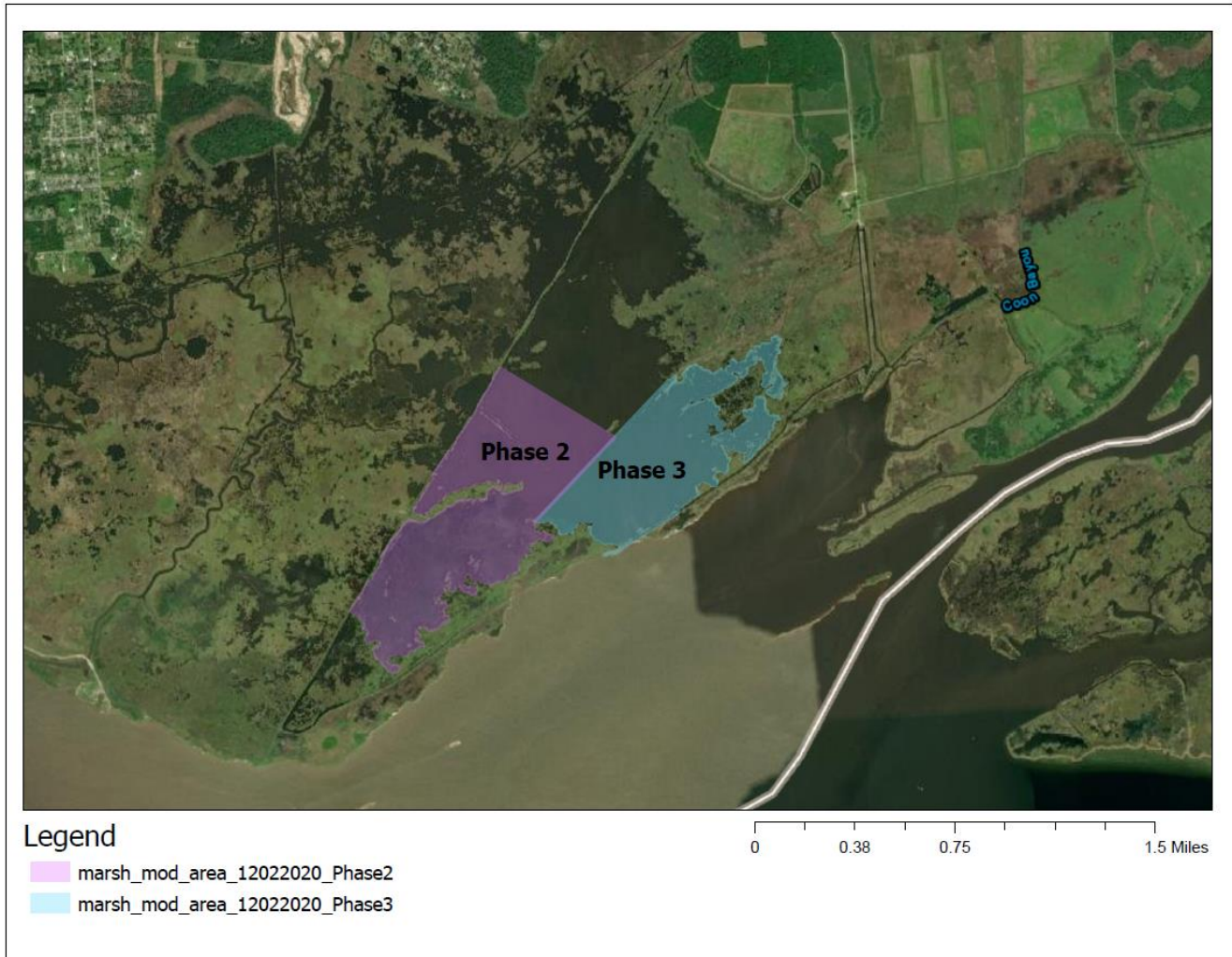


Figure 7: Additional Increments

8.2 Recommended Plan

The recommended plan is Alternative 3 (Figure 6). Alternative 3 would beneficially use 1.3 mcy of dredged material from the SNWW to restore approximately 190 acres of marsh within a 1200-acre impoundment at Hickory Cove in Orange County, Texas. The restoration will raise the elevation of the marsh with placement of sediment, removal of invasive species and planting of desired vegetation. The total scope of analysis for the project includes repairs to breaches in the southeast levee of the impoundment and the installation of a breakwater and living shoreline on the channel side of the breached levee. This will reduce erosion of the marsh over time. The footprint for the living shoreline is estimated to be approximately 95 acres.

9 Existing Real Estate Interests

Existing federal real estate interests and existing non-federal sponsor real estate interests are outlined below.

9.1 Existing Federal Real Estate Interests

The federal government has no existing interests within the project footprint. Immediately available real estate records indicate the federal government has existing interests in numerous tracts in the project vicinity (Figure 8). Many tracts were used as placement areas in the past (PA 29, PA 29-A, and PA 29-B). However, it is suspected these easements have been revoked and there are no active placement areas in the vicinity. USACE has disposed of several tracts just to the northeast of the project vicinity and west of the project vicinity.

Table 1: USACE Tracts

USACE Tract	PA Intersection	Tract Acres	Interest	Status Notes
SNWW5_79	N/A	4.65	Deed dated 23 MAY 1912	-
SNWW5_80	N/A	18.59	Deed dated 23 MAY 1912	-
SNWW5_81	N/A	4.24	Perpetual Easement dated 9 OCT 1923	-
SNWW5_86	N/A	-	Perpetual Easement dated 6 APR 1937	-
SNWW5_100E	PA 29	44	Perpetual ROW Easement dated 11 DEC 1956	-
SNWW5_101E	PA 29-A	171	Revocable Easement (after 1 year) dated 4 JUN 1948	Revoked as of 19 OCT 2006
SNWW5_102E	PA 29-A	151.24	Revocable Easement (after 1 year) dated 4 JUN 1948	Revoked as of 19 OCT 2006
SNWW5_103E	PA 29-B	80.76	Revocable Easement (after 1 year) dated 4 JUN 1948	Revoked as of 20 OCT 2003
SNWW5_104E	PA 29-B	320	Revocable Easement (after 1 year) dated 4 JUN 1948	Revoked as of 20 OCT 2003
SNWW5_105E	PA 29-B	53	Revocable Easement (after 1 year) dated 4 JUN 1948	Revoked as of 20 OCT 2003
SNWW5_106E	N/A	27	Perpetual Easement dated 8 NOV 1960	-

Table 2: USACE PAs

USACE PA	PA Acres	Interest	Status
PA 29-A	114.14	Revocable Easement (after 1 year) dated 4 JUN 1948 from SNWW5_102E	Revoked as of 19 OCT 2006
PA 29-B	151.50	Revocable Easement (after 1 year) dated 4 JUN 1948 from SNWW5_103E, 104E, and 105E	Revoked as of 20 OCT 2003

In August 2012, emergency dredging of the SNWW prompted the Port of Orange's procurement of a temporary dredge spoil easement for PAs 29-A and 29-B, allowing USACE to place material, dated August 27, 2012 that expired on August 27, 2014. There is no active USACE or Port of Orange interest on these PAs currently.



Figure 8: USACE Interests in Project Vicinity

9.2 Existing NFS Real Estate Interests

The NFS does not have any real estate interests in the project vicinity.

10 New Real Estate Requirements

The new real estate requirements for Alternative 3 are outlined below.

10.1 Alternative 3

The real estate requirements to accomplish the dredged material placement, create the living shoreline, and native species planting include the acquisition of a fixed-term easement, as described in Section 10.5.1 below, over approximately 337 acres, impacting 6 tracts and one private landowner. Specific pipeline routes to move dredged material have not yet been identified but are assumed to be submerged and not impacting any additional upland parcels. The approximately 14,623 linear foot breakwater would be constructed exclusively upon approximately 10 acres of submerged lands, therefore navigation servitude will be exercised and no acquisition will be required for this aspect of the project. The real estate requirements outlined in Table 3 below represent the widest possible footprint for consideration and are expected to be refined during the next phase of the project. This section of the REP will be updated as more information is available.

Table 3: New Real Estate Requirements for Alternative 3

Parcel ID	Total Tract Acres (per Orange County Appraisal District)	Acres Needed for 1.3 MCY Marsh Modification	Acres Needed for Existing Levee Repair	Acres Needed for Landside Access	Acres Needed for Breakwater	Acres Needed for Living Shoreline	Total Acreage (% of Total Tract)
R25748	474	76	N/A	4	N/A	N/A	80 (16.9%)
R16179	381	114	N/A	6	N/A	N/A	120 (31.5%)
R23869	105	N/A	.73	10	N/A	17	27.73 (26.4%)
R20762	716.7	N/A	.63	28	N/A	4	32.63 (4.6%)
R23002	117.8	N/A	.65	N/A	N/A	5	5.65 (4.8%)
R18038	331	N/A	1.26	N/A	N/A	70	71.26 (21.5%)
Submerged Lands	N/A	N/A	N/A	N/A	~10	N/A	N/A

10.2 Additional Increments

Should additional dredged material become available for the project, the real estate requirements for marsh modification phases 2 and 3 would include the acquisition of an additional 260 acres and 157 acres, respectively. Table 4 below outlines the anticipated new real estate requirements to construct the entire scoped project.

Table 4: New Real Estate Requirements for Additional Increments

Parcel ID	Total Tract Acres (per Orange County Appraisal District)	Acres Needed for 1.3 MCY Marsh Modification	Acres Needed for Existing Levee Repair	Acres Needed for Landside Access	Acres Needed for Breakwater	Acres Needed for Living Shoreline	Acres Needed for Marsh Modification 2	Acres Needed for Marsh Modification 3	Total Acreage (% of Total Tract)
R25748	474	76	N/A	4	N/A	N/A	118	53	251 (52.9%)
R16179	381	114	N/A	6	N/A	N/A	N/A	1	121 (31.8%)
R23869	105	N/A	.73	10	N/A	17	N/A	64	91.73 (87.4%)
R20762	716.7	N/A	.63	28	N/A	4	N/A	11	43.63 (6.1%)
R23002	117.8	N/A	.65	N/A	N/A	5	32	28	66.65 (55.7%)
R18038	331	N/A	1.26	N/A	N/A	70	70	N/A	141.26 (42.7%)
R27371	50	N/A	N/A	N/A	N/A	N/A	40	N/A	40 (80%)
Submerged Lands	N/A	N/A	N/A	N/A	~10	N/A	N/A	N/A	N/A

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10.3 Breakwater

The entirety of the breakwater footprint is on submerged lands, adjacent to the SNWW (Figure 9). The breakwater feature is approximately 14,623 linear feet. At its widest point beneath the water at the -3' contour, the breakwater is estimated to be 30' in width. At the crest elevation of +3.5' above the water, the breakwater is estimated to be 4' in width, with an anticipated slope of 2:1. The total footprint of the feature is approximately 10 acres.

While the Texas GLO manages all submerged lands 10.35 miles out into the Gulf of Mexico, the Federal Government is able to exercise navigation servitude to construct this aspect of the project. Therefore, there are no real estate requirements to construct the breakwater. This is covered further in Section 17 below.

It is a possibility that the breakwater may be constructed by a third party, Ducks Unlimited. Should Ducks Unlimited implement the breakwater feature at a later date through grant funding, the private organization would need to seek a lease from the Texas GLO to support construction and any continued operations and maintenance.

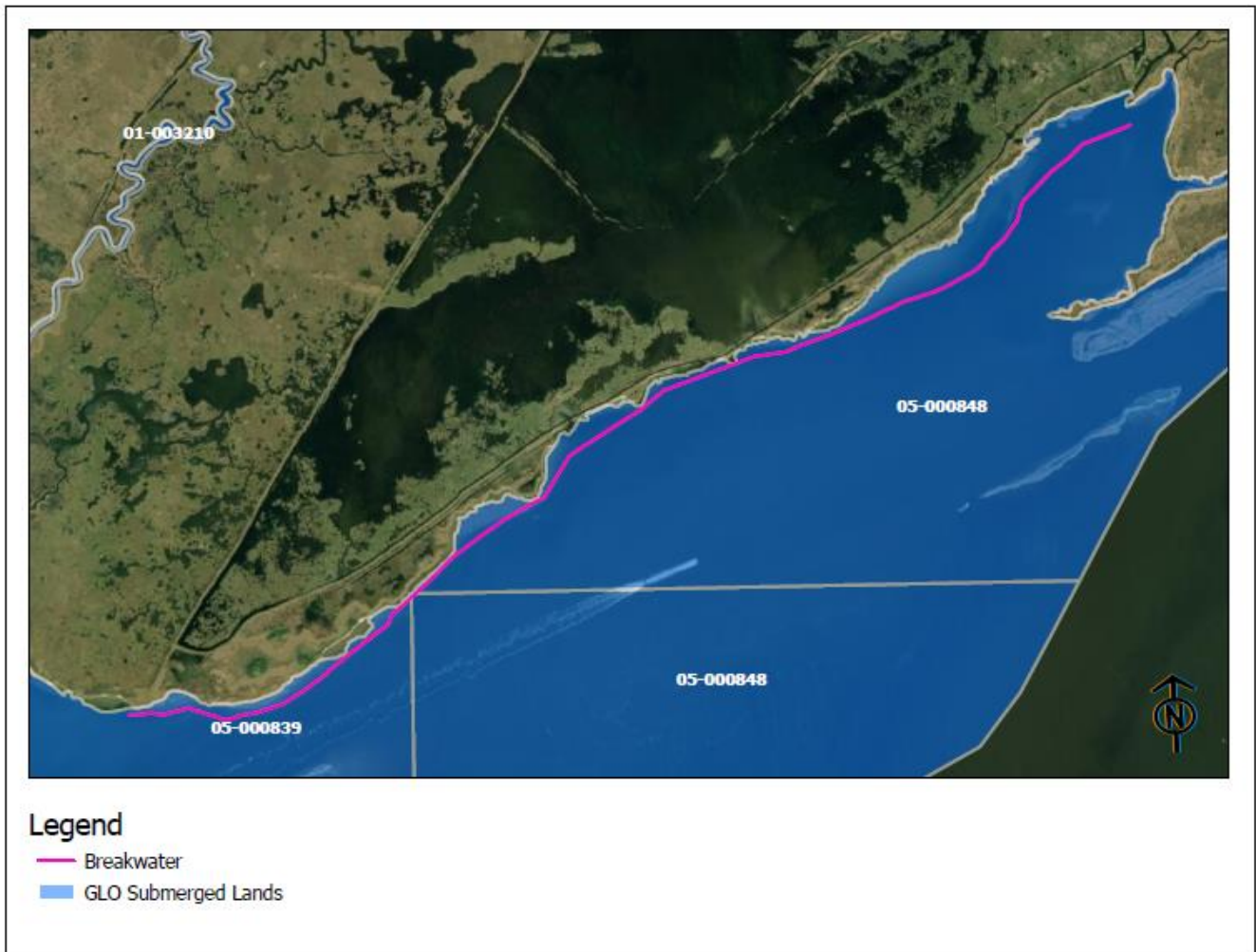


Figure 9: Breakwater Footprint

10.4 Access/Staging Areas

It is assumed that no access and/or staging areas beyond the limits of the project footprint will be required. This will be confirmed during the DI phase. At the conclusion of the DI phase, when the project reaches 95% design, determinations can be finalized and the REP will be updated to include this information, as well as the duration for any temporary work area easements (Standard Estate #15), if determined to be necessary as described in section 10.6.

10.5 Mitigation

There is no mitigation required for this project.

10.6 Estates

The NFS is responsible for securing and maintaining the minimum real estate interests required for the project. Construction of the complete project, including the breakwater and living shoreline, may require a variety of real estate interests as outlined below and in Table 5.

For the emergent and submerged lands on the privately-owned parcels, the Galveston District's Real Estate Division (CESWG-RE) is proposing the use of a non-standard, fixed-term ecosystem restoration easement to cover the placement of dredged material, planting activities, and pipeline placement to move dredged material. This is covered further in Section 10.6.1 below.

As stated in Section 10.3, navigation servitude will be exercised to construct the breakwater feature. This is covered further in Section 17 below.

Should any access/staging areas be identified outside of the limits of the project footprint, standard estate #15, Temporary Work Area Easement would apply. This easement is outlined in Section 10.6.2 below.

Table 5: Estates Required

Project Feature	Estates
Dredged Material Placement, Plantings of Native Species, Living Shoreline, Pipeline for Dredged Material, Levee Repairs on Emergent and Submerged Lands within Privately-Owned Parcels	Non-Standard Estate: Fixed-Term Ecosystem Restoration Easement
Breakwater within Submerged Lands	N/A – Navigation Servitude
Access/Staging Areas	Standard Estate #15 – Temporary Work Area Easement

10.6.1 Non-Standard Estate for Private Lands

CESWG-RE acknowledges that it is USACE policy to acquire fee simple title for ecosystem restoration projects, as fee interest ensures complete and permanent control over future use of lands and fully protects the interest of the Government. However, USACE regulations also indicate that a lesser interest, such as a specific type of easement, may be appropriate depending on the operational requirements of the project and other circumstances relevant to project implementation, including landowner preference (EP 1165-2-502, Paragraph 17b. and ER 405-1-12-9, Paragraph a(6)). CESWG-RE proposes the acquisition of a Non-Standard Fixed Term Ecosystem Restoration Easement in lieu of fee for this pilot program Project.

This project involves the beneficial use placement of dredged material sourced from SNWW. The life of the project, for period of analysis purposes, is considered to be 50 years. A timeline for work on the

tracts cannot be developed at this time, as the waterways targeted for material are not regularly dredged and are not on the schedule for work plan funding per the Operations Division.

Once the dredged material is placed and final plantings are completed, activities on the project lands will cease. No future operations and maintenance (O&M) is planned for the project. Environmental monitoring will continue for 10 years as required by Section 1161 of WRDA 2016. The project is expected to be self-sustaining. Therefore, it is the opinion of the PDT that acquisition of fee title is not necessary to accomplish the construction and operation and maintenance of the project, and that those requirements can be accomplished through the acquisition of a fixed-term ecosystem restoration easement which clearly defines the rights needed for the project and which sustains the Federal investment. The non-standard estate will propose termination of the fixed-term easement at 10 years post-construction or upon the Project's deauthorization.

At the time of this report, the non-standard estate is continuing to be refined at the District and is expected to be routed by separate request to USACE Headquarters (HQUSACE). Real estate has worked closely with the NFS on drafting the non-standard estate. Additionally, the NFS has engaged the landowner in discussions to ensure the language presented for approval to HQUSACE will be acceptable to the landowner upon project implementation. The latest draft of the granting clause appears below.

DRAFT Non-Standard Estate: Fixed Term Ecosystem Restoration Easement

An assignable right, servitude, and ecosystem restoration easement in, on, over and across the lands of the Grantors described in Exhibit A [Tract Nos. _____, _____, _____], attached hereto, for a period not to exceed ten (10) years to construct, operate, maintain, repair, alter, rehabilitate, remove, replace and monitor features of the HICKORY COVE MARSH RESTORATION & LIVING SHORELINE PROJECT, BRIDGE CITY, TX. In the event the Project is de-authorized by the federal government, this Easement and all rights granted hereunder shall terminate.

The Grantee shall have the right to construct, operate, maintain, repair, replace, rehabilitate, monitor, and adaptively manage the Project on the Property, which rights shall include the right to: (a) excavate and deposit dredged material, sediment, and/or other beneficial materials on the Property; (b) accomplish any alterations or contours on the Property to accommodate the materials deposited on the Property in connection with the Project and to perform necessary work for the prevention or remediation of damages to marsh, wetlands, habitat restoration, or other natural values; (c) install, construct, store, alter, maintain, repair, replace, relocate, and remove dikes, berms, fencing, monitoring devices, equipment, supplies, materials, warning or informational signs, notices, markers and other similar items related to the Project; (d) conduct surveys, borings, inspections, investigations, monitoring, adaptive management practices, and similar activities to evaluate the effectiveness of the Project, and/or to enhance, extend, periodically replenish and maintain the material deposited or placed on the Property, and/or to determine if the Grantor, or its successors, heirs, and assigns are complying with the covenants and prohibitions contained in this Easement; (e) plant, cause the growth of, nourish, replenish, manage, and maintain vegetation and control or remove invasive species; together with the right to remove structures or obstructions including levees; reserving, however, to the owners, their heirs and assigns, all other rights and privileges that may be used without interfering with or abridging the enumerated rights and easement hereby conveyed and acquired; all subject to existing easements for public roads and highways, public utilities, railroads and pipelines.

At the request of the landowner, it is expected the final easement will also include language requiring notification prior to work and language expressing that, if at all possible, work will avoid the months of November through February to minimize disturbance to wintering waterfowl. These requests were reviewed and approved by the PDT. The Operations Division concurred and added that the timing of

funding, as well as the District's ability to dictate Order of Work, could likely accommodate the request with minimal disturbance during the month of November.

At the time of this report, the project's DI schedule aims for real estate certification in February 2023. Timely approval of a non-standard estate stipulating less than fee interest is an implementation risk to the project. Without approval, the lands required for the construction of the project will not be acquired.

10.6.2 Standard Estate

Standard Estate #15 – Temporary Work Area Easement

A temporary easement and right-of-way in, on, over and across (the land described in Schedule A) (Tracts Nos. _____, _____ and _____), for a period not to exceed _____, beginning with date possession of the land is granted to the United States, for use by the United States, its representatives, agents, and contractors as a (borrow area) (work area), including the right to (borrow and/or deposit fill, spoil and waste material thereon) (move, store and remove equipment and supplies, and erect and remove temporary structures on the land and to perform any other work necessary and incident to the construction of the _____ Project, together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

11 Borrow Material

All material necessary for the project will be obtained during normal maintenance cycles or from new work construction from the SNWW. The intention of Section 1122 pilot program is to beneficially utilize dredged material, therefore no additional sources of borrow are planned.

This area is not regularly dredged. As such, implementation of the project is dependent on the Operations Division receiving workplan funding. The Operations Division has requested workplan funding for this project in FY2023, but no schedule for the proposed dredging and marsh restoration has been prepared at this time. Once a schedule for dredging has been prepared, Real Estate will create a table outlining the contract, dredge locations, volumes, and tracts impacted.

12 Recreation Features

There are no recreation features proposed for this project.

(The remainder of this page intentionally left blank.)

13 Timber Rights and Mineral/Energy Activity

There is no known timber activity within the project area.

Oil and gas exploration and production activities are prevalent in the southeast Texas area. Figure 10 shows the wells and pipelines in the study area. The project footprint overlaps the location of three buried pipelines and one well.

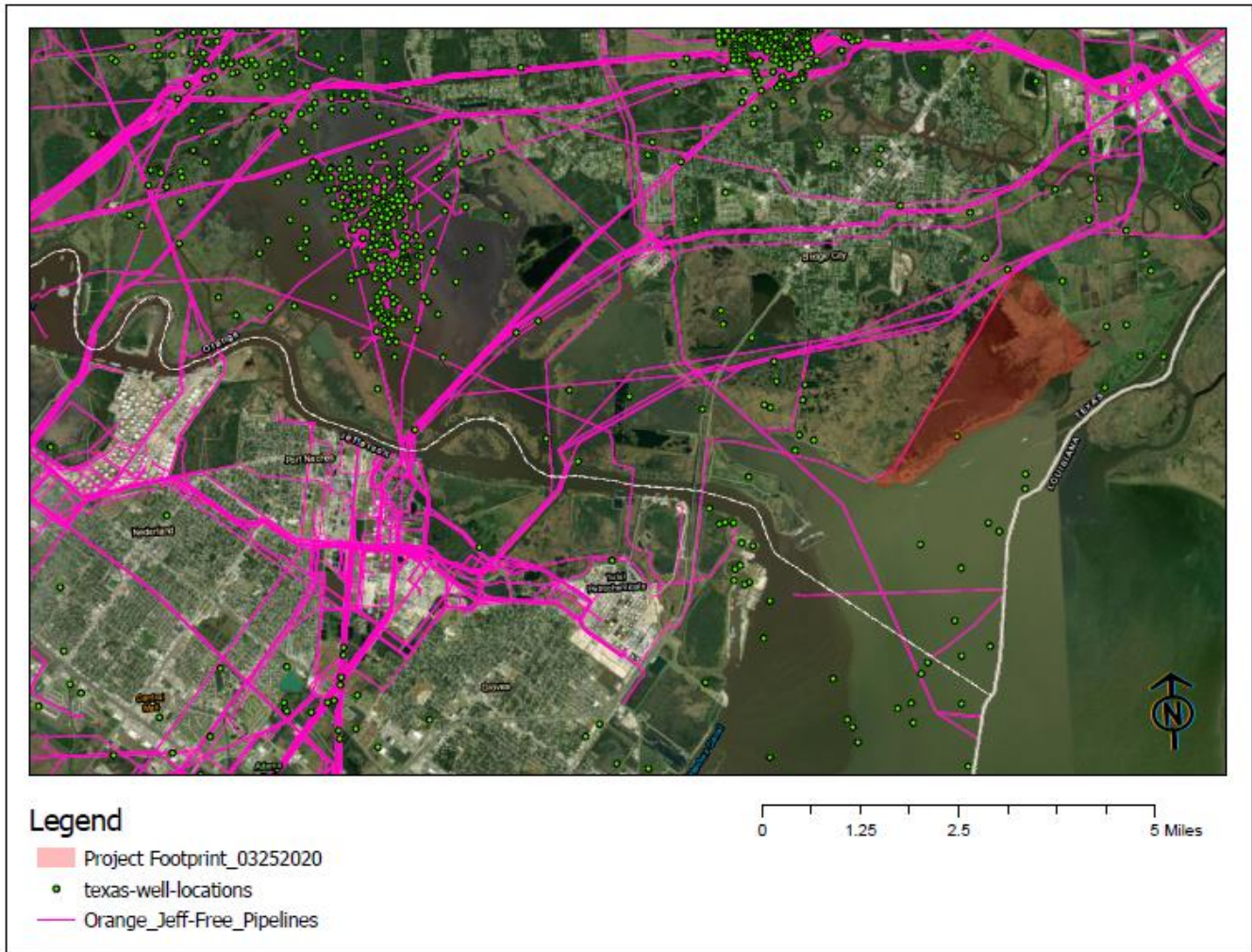


Figure 10: Mineral Activity in the Study Area

Parcel ID R18038 contains a well that is an inactive dry-hole on the northeast portion of the tract along the western boundary of Parcel ID 23002 (Figure 11). Pipeline activity is discussed further in Section 14 below. With respect to the well activity, this area of Texas was heavily exploited in the past and minimal further exploration is anticipated. A search of deed records confirms the warranty deed conveyance of the properties was completed subject to all valid and subsisting mineral conveyances. A search of the Railroad Commission of Texas records did not produce any documentation for the American Petroleum Institute (API) number 36130452. It is the opinion of the landowner that the well has been abandoned. From an ecosystem restoration viewpoint, the PDT believes the acquisition of mineral rights for the sole purpose of protecting the project is not justified.

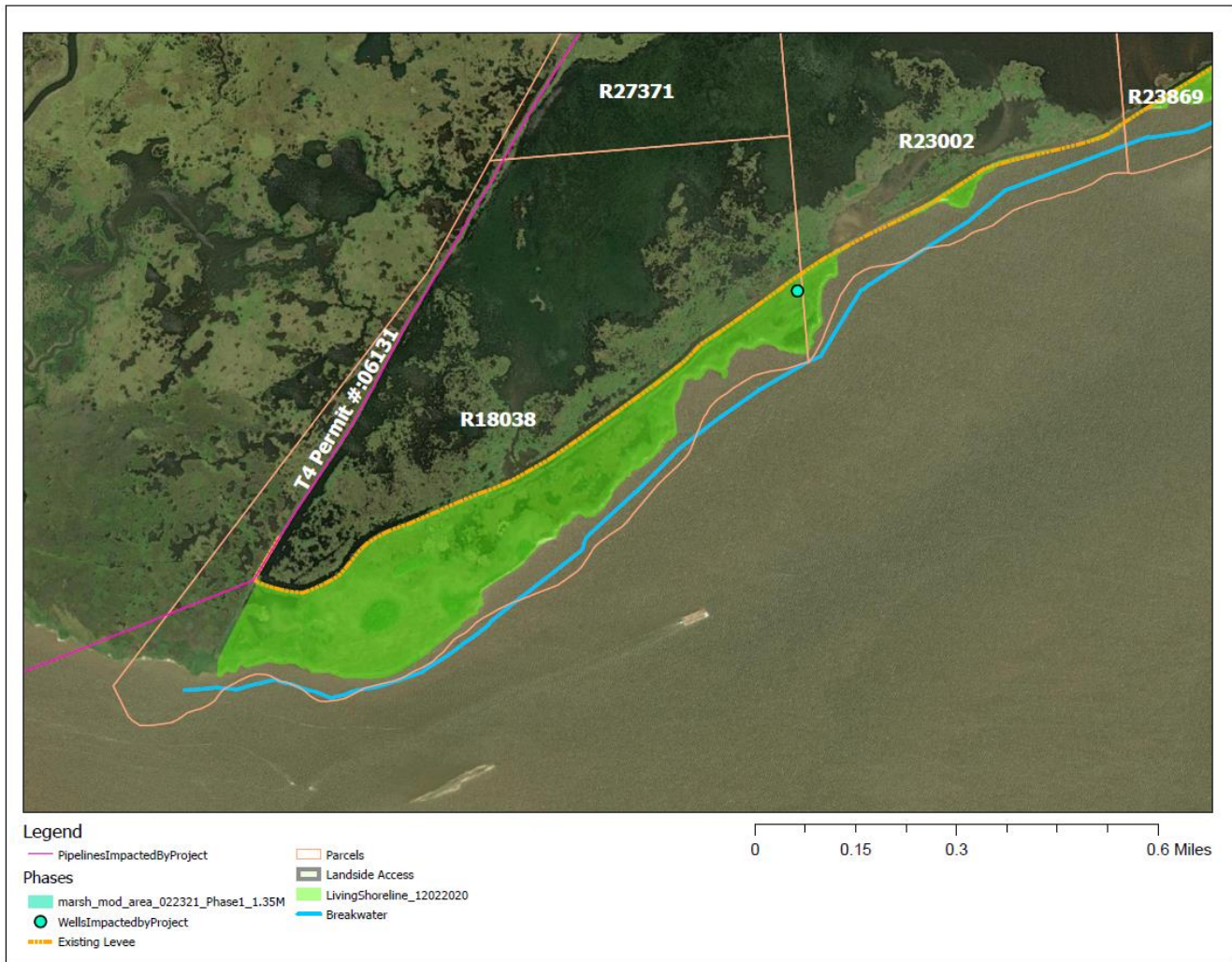


Figure 11: Well in Project Area

At this time, there are no expected impacts to the oil and gas industry during the restoration of the marsh or planting activities. It is expected the ecosystem restoration efforts, such as marsh elevation development, removal of invasive species, and planting of native species can be conducted to avoid impacting subsurface rights and the inactive well within the proposed project footprint. The placement of dredged material to the target fill is not expected to impact the buried pipeline running along the very northern edge of the project alignment. It is likely the pipeline can be avoided in its entirety. Repairs and maintenance to the well could potentially disrupt project features. However, mitigating solutions can be addressed in the Section 408 review process.

Any third-party request to conduct work on USACE project lands will be subject to the Section 408 review process, giving USACE the additional opportunity to ensure the project continues to provide its intended benefit. Approval through Section 408 could include the requirement that, after completing maintenance, the well or pipeline owner is required to restore the project to its pre-maintenance condition.

Additional research will be conducted throughout the remainder of the feasibility phase, as well as continuing through the DI phase to confirm ownership of the wells and investigate the current rights of

the well owner and pipeline owner impacted by the project. Coordination between USACE Engineering, Environmental, and Real Estate teams, as well as the NFS, landowner, well owner, and pipeline owner will be required. As discussions with all parties continue regarding the project features and requirements, responsibilities will be agreed upon and this section of the REP will be revised to reflect those agreements.

14 Facility/Utility/Pipeline Relocations

The project footprint minimally overlaps one buried pipeline on the very northern edge of the project footprint (Table 6 and Figure 12). The pipeline runs along the westernmost edges of six parcels: R18038, R27371, R25748, R16179, R25748, and R20762. A copy of the pipeline easement was reviewed by SWG Real Estate. The private owner granted a non-exclusive easement 30' in width (15' on either side of the centerline). The Right of Way and Easement document

“assigns a Right of Way and Easement, to operate, maintain, inspect, repair, replace, change the size of, and remove, in whole or in part a eight inch (8”) pipeline for the transportation of oil, gas, other liquid or gaseous hydrocarbons, including any products thereof, water and other materials, a communications cable (said communications cable having its only purpose and function as being an appurtenance to the pipeline) and such other equipment and appurtenances as may be necessary or incidental for such operations (hereinafter referred to collectively as “the pipeline”) including, but not limited to, the right to construct, operate and maintain cathodic protection units and necessary equipment upon, over and through” the tracts.

The grantee has reasonable rights of ingress and egress as well as the right to cut and keep clear all trees, brush, and other obstructions that may endanger the safe operation of the pipeline. The pipeline was to be buried at a “sufficient depth so as not to interfere with the cultivation of the soil.” The easement is set to terminate in July 2026, but the Grantee has the right and options to extend up to the year 2101.

Table 6: Pipeline in Project Footprint

Pipeline Operator	T4 Permit #	Diameter (In.)	Commodity	Status	Notes
Enterprise Product Solutions (previously Sabine Pipeline LLC)	06131	8.63	Propylene	In Service	Impacting westernmost edges of parcels R18038, R27371, R25748, R16179, R25748, and R20762.

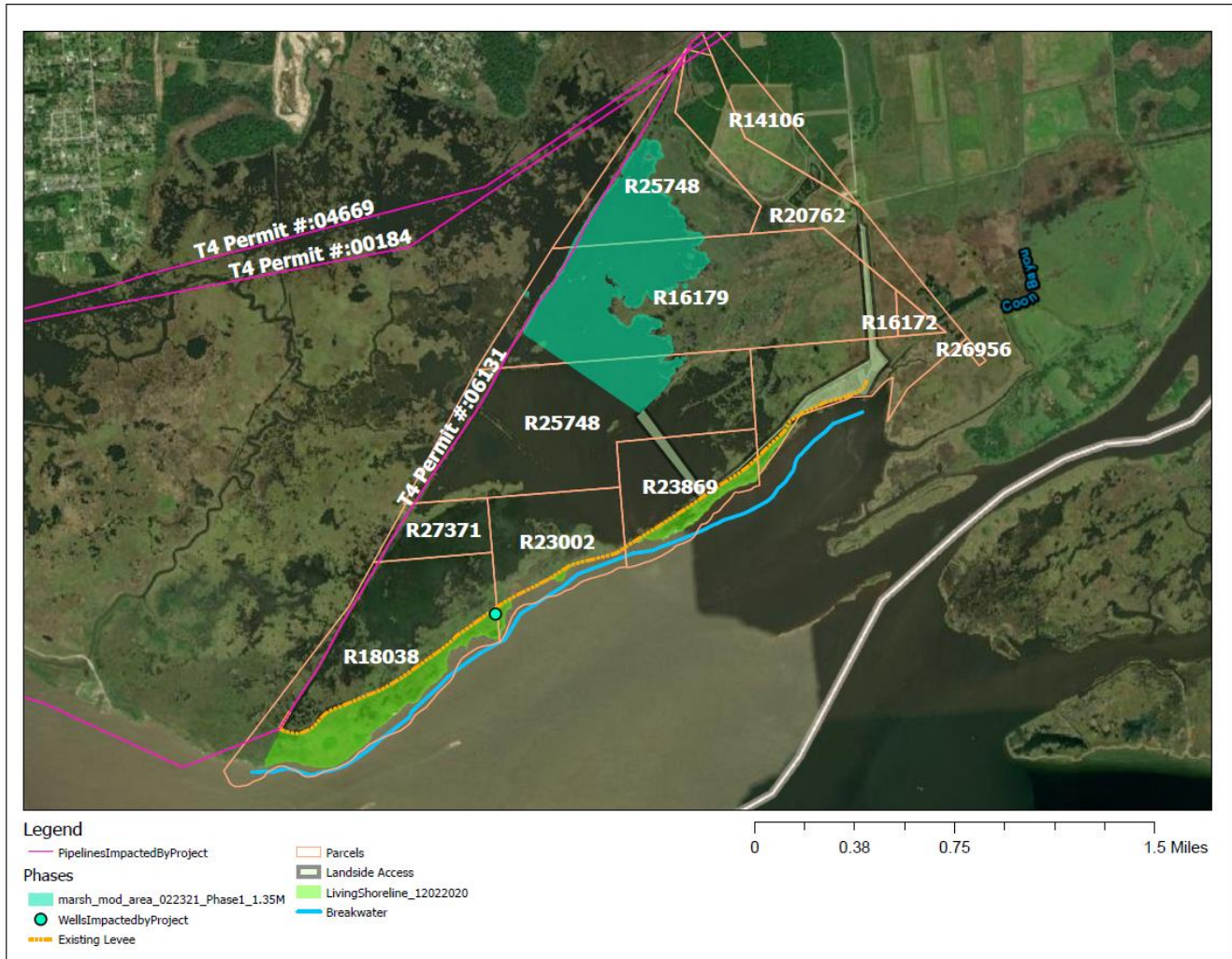


Figure 12: Pipeline in the Project Area

ANY CONCLUSION OR CATEGORIZATION CONTAINED IN THIS REPORT THAT AN ITEM IS A UTILITY OR FACILITY RELOCATION TO BE PERFORMED IS PRELIMINARY ONLY. THE GOVERNMENT WILL MAKE A FINAL DETERMINATION OF THE RELOCATIONS NECESSARY FOR THE CONSTRUCTION, OPERATION, AND MAINTENANCE OF THE PROJECT AFTER FURTHER ANALYSIS AND COMPLETION AND APPROVAL OF FINAL ATTORNEY’S OPINIONS OF COMPENSABILITY FOR EACH OF THE IMPACTED UTILITIES AND FACILITIES.

15 Zoning

Zoning ordinances will not be enacted to facilitate acquisition for the proposed project.

16 Hazardous, Toxic, and Radioactive Waste or Other Environmental Contaminants

No sites were found that had recognized HTRW environmental conditions.

17 Navigation Servitude

Navigation Servitude stems from the Commerce Clause of the Constitution of the United States (U.S. CONST. art.I, Sec.8, cl.3), and is defined as the dominant right of the Federal Government to use, control, and regulate the navigable waters of the United States and submerged lands thereunder for various commerce-related purposes including navigation and flood control. In tidal areas, the servitude extends to all lands below the mean high-water mark, whereas in non-tidal areas, the servitude extends to all lands within the bed and banks of a navigable stream that lie below the ordinary high-water mark.

The breakwater feature, as depicted in Figure 9, will be constructed under navigation servitude.

18 Induced Flooding

There will be no induced flooding by virtue of the construction of the project.

19 Attitudes of the Landowner

No public meeting was held. There is one private landowner impacted directly by the project footprint. The landowner attended the project kick-off meeting to express support, given the disappearance of the marsh and bird habitat during his period of ownership. The landowner has been briefed throughout the project by the NFS. The landowner remains supportive of the project, pending final easement discussions. It is expected reactions to the project from neighboring landowners and residents will be positive.

20 Public Law 91-646 Relocations

There are no residential, commercial, industrial, or farm properties that would be subject to relocation pursuant to Public Law (PL) 91-646.

21 Real Estate Costs

Total project costs for the recommended plan are estimated to be at least \$38 million. Pursuant to Policy Guidance Letter (PGL) 31 dated 11 January 2019, "for projects in which the value of real estate (lands, improvements, and severance damages) are not expected to exceed 15% of total project costs (total costs to implement project), a cost estimate (or rough order of magnitude) will be acceptable for purposes of the feasibility phase." As such, the land cost listed in Table 7 below is based on a rough order of magnitude (ROM) cost estimate. Data to form the cost estimate originated from the Orange County Appraisal District, as well as a gross appraisal performed on similar marsh lands in the vicinity. The Orange County Appraisal District lists the market value of the land to be \$250 per acre. A gross appraisal completed by the USACE on similar lands just south of the project area valued marshland at \$400 per acre for fee value. Even at the highest estimate per acre, land costs are not anticipated to exceed 15% of the total project cost.

The baseline cost estimate (BCE) provided in this report is based on feasibility-level design. The BCE lacks estimates for anticipated condemnation expenses due to the NFS stance on condemnation for this project. In order to account for the additional risk present when determining real estate requirements for the TSP-level design, a 25% contingency has been included in table below. The BCE is subject to change through the final draft.

Table 7: Baseline Cost Estimate (BCE) for Real Estate

Account	Description	Alternative 3 - 1.3 mcy, Living Shoreline, and Breakwater
01	Acquisitions Labor (4 hrs. x \$150/hr per tract)	\$ 6,000.00
01	Appraisals (\$2,000 per tract)	\$ 20,000.00
01	Survey (\$2,000 per tract)	\$ 20,000.00
01	Temporary work easements, ROW, Permits, License (\$500 per owner)	\$ -
01	Project Related Administration (10 hrs. x \$150 per hr. per tract)	\$ 15,000.00
01	Land Cost	\$ 60,621.48
01	LERRD Crediting Administrative Costs (\$500 per tract)	\$ 5,000.00
01	Title Policy (\$300 per tract)	\$ 3,000.00
	Total Admin and Payments	\$ 129,621.48
	Contingencies (25%)	\$ 32,405.37
	Non-Federal Total	\$ 162,026.85
01	Acquisitions (Review RE Planning Documents & Mapping at 5 hrs. x \$125 per hour per tract)	\$ 6,250.00
01	Appraisal Reviews (8 hrs. x \$125 per hour per tract)	\$ 10,000.00
01	LERRD Crediting and Real Estate Certification (4 hours x \$150 per hour per tract)	\$ 6,000.00
01	Project Related Administration (5 hrs. x \$125 per hour per tract)	\$ 6,250.00
	Total Admin and Payments	\$ 28,500.00
	Contingencies (25%)	\$ 7,125.00
	Federal Total	\$ 35,625.00
	GRAND TOTAL	\$ 197,651.85

There are no costs associated with the 02 Relocations account.

22 Acquisition Schedule

The proposed plan is to acquire a term-limited easement on six privately owned real estate tracts totaling 337 acres from one, willing landowner. Timeline for implementation of this project is heavily dependent upon the Operations Division receiving workplan funding for dredging in the area. As such, the acquisition schedule below is based not only on the signing of the PPA, but also the confirmation of workplan funding. The acquisition schedule below outlines the milestones and approximate durations for the acquisition of LERRD for this project, which can be expected to be completed within one year (Table 8). The durations shown below are the estimated average durations, however milestones may move quicker if preceding tasks are completed sooner than expected. It should be noted that each individual tract acquisition can and should move along the acquisition schedule independently of the other tracts. The acquisition schedule does not include timelines for condemnations, as the sponsor is unwilling to condemn for the project.

Table 8: Land Acquisition Schedule

Milestone	Predecessor	Average Duration
Transmittal of ROW drawings and instruction to proceed with acquisition along with required estate(s)	Immediately after PPA signed	30 days
Obtain Surveys	Upon transmittal of ROW drawings and instruction to proceed with acquisition	60 days
Obtain Title Evidence	Upon completion of surveys	60 days
Obtain Appraisals & Reviews	Upon obtaining title evidence	60 days
Authorization to Proceed with Offer	Upon obtaining appraisals & reviews	30 days
Conclude Negotiations	Upon obtaining authorization to proceed with offer	60 days
Conduct Closings	Upon concluding negotiations	30 days
NFS Attorney Certifies Availability of LERRD	Upon conclusion of closings	30 days
Corps Certifies Availability of LERRD	Upon Attorney Certification of LERRD	30 days
Review LERRD Credit Request	Upon completion of the project and NFS submission of LERRD documentation	60 days
Approve or Deny LERRD Credit Requests	Upon conclusion of review of LERRD Credit Request	15 days

23 Other Real Estate Issues

There are no additional real estate concerns at this time.

24 References

2020. Orange County Appraisal District. Online GIS Viewer.

2020. Railroad Commission of Texas. Online GIS Viewer.

2020. Texas General Land Office. Online GIS Viewer.

Exhibit A

Assessment of NFS Acquisition Capabilities



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

HICKORY COVE MARSH RESTORATION & LIVING SHORELINE
BRIDGE CITY, TEXAS
ORANGE COUNTY NAVIGATION & PORT DISTRICT (PORT OF ORANGE) – NON FEDERAL
SPONSOR

ASSESSMENT OF NON-FEDERAL SPONSOR'S
REAL ESTATE ACQUISITION CAPABILITY

I. Legal Authority:

- a. Does the sponsor have legal authority to acquire and hold title to real property for project purposes? (yes/no; if yes, please cite or attach authority.)

Yes. Please see attached legal opinion and related attachments.
- b. Does the sponsor have the power of eminent domain for this project? (yes/no; if yes, please cite or attach authority.)

Yes, per the Texas Constitution, Article 16, Section 59. See related attachments.
- c. Does the sponsor have "quick-take" authority for this project? (yes/no; if yes, please cite or attach authority.)

Yes. Please see attached legal opinion and related attachments.
- d. Are any of the lands/interests in land required for the project located outside the sponsor's political boundary? (yes/no; if yes, please explain.)

No. All property considered for this project is located within Orange County.
- e. Are any of the lands/interests in lands required for the project unable to be condemned by the sponsor? (yes/no; if yes, please explain.)

The Port is unable to condemn state lands
- f. Is the sponsor willing to acquire lands for the project, even if eminent domain or quick-take are required? (yes/no; if no, please explain)

No. The Port is willing to approach the landowner with a term-limited easement, but is unwilling to exercise eminent domain or quick-take authority. The landowner is willing to take the dredge spoil for this project, pending easement discussions.

II. Human Resource Requirements:

- a. Will the sponsor's in-house staff require training to become familiar with the real estate requirements of Federal projects including Public Law 91-546 (Home Relocation Assistance), as amended? (yes/no)

Yes.

- b. If the answer to II.a. is "yes," has a reasonable plan been developed to provide such training? (yes/no)

Yes.

- c. Does the sponsor's in-house staff have sufficient real estate acquisition experience to meet its responsibilities for the project? (yes/no)

Yes.

- d. Is the sponsor's projected in-house staffing level sufficient considering its other work load, if any, and the project schedule? (yes/no)

Yes.

- e. Can the sponsor obtain contractor support, if required in a timely fashion? (yes/no)

Yes.

- f. Will the sponsor likely request USACE assistance in acquiring real estate? (yes/no; if yes, please explain.)

No.

III. Other Project Variables:

- a. Will the sponsor's staff be located within reasonable proximity to the project site? (yes/no)

Yes.

- b. Has the sponsor approved the project/real estate schedule/milestones? (yes/no)

Yes. SWG's Real Estate staff and the Port are working together to establish the schedule and milestones for this project.

IV. Overall Assessment:

- a. Has the sponsor performed satisfactorily on other USACE projects? (yes/no/not applicable)

Yes.

- b. With regard to this project, the sponsor is anticipated to be: highly capable/fully capable/moderately capable/marginally capable/ insufficiently capable. (If sponsor is believed to be "insufficiently capable," provide explanation.)

Fully capable.

Exhibit B
Risk Letter



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

01 May 2020

Ms. Lorrle Taylor
Executive Port Director/CEO
Port of Orange
1201 Childers Road Suite #2
Orange, TX 77631

Dear Ms. Taylor:

The Intent of this letter is to formally advise the Port of Orange, as a potential Non-Federal Sponsor for the proposed Hickory Cove Marsh Restoration & Living Shoreline project, of the risks associated with land acquisition prior to the execution of a Project Partnership Agreement (PPA) or prior to the Government's formal notice to proceed with acquisition. If a Non-Federal Sponsor deems it necessary to commence acquisition prior to an executed PPA for whatever reason, the Non-Federal Sponsor assumes full and sole responsibility for any and all costs, responsibility, or liability arising out of the acquisition effort.

Generally, these risks include, but may be not be limited to, the following:

- a. Congress may not appropriate funds to construct the proposed project;
- b. The proposed project may otherwise not be funded or approved for construction;
- c. A PPA mutually agreeable to the Non-Federal Sponsor and the Government may not be executed and implemented;
- d. The Non-Federal Sponsor may incur liability and expense by virtue of its ownership of contaminated lands, or interests therein, whether such liability should arise out of local, state, or Federal laws or regulations including liability arising out of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended;
- e. The Non-Federal Sponsor may acquire interests or estates that are later determined by the Government to be inappropriate, insufficient, or otherwise not required for the project;
- f. The Non-Federal Sponsor may initially acquire insufficient or excessive real property acreage which may result in additional negotiations and/or benefit payments under P.L. 91-546 as well as the payment of additional fair market value to affected

landowners which could have been avoided by delaying acquisition until after PPA execution and the Government's notice to commence acquisition and performance of providing lands, easements, rights-of-way, relocations, and disposals (LERRD);

g. The Non-Federal Sponsor may incur costs or expenses in connection with its decision to acquire or perform LERRD in advance of the executed PPA and the Government's notice to proceed which may not be creditable under the provisions of Public Law 99-662 or the PCA as referenced in ER 405-1-12 (Change 31; 1 May 08) Section 12-31 Acquisition Prior to PCA Execution.

For any questions, please contact Nichole Schlund, Realty Specialist within the Galveston District Real Estate Division, at Nichole.L.Schlund@usace.army.mil or 409-766-3146.

Sincerely,

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Timothy Nelson
Chief, Real Estate Division
Galveston District
U.S. Army Corps of Engineers