III. PROJECT DESCRIPTION/SCOPE OF ACTIVITIES FOR ANALYSIS

Authority

The Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) is federal legislation enacted in 1990 to plan, design, and construct coastal wetlands restoration projects. The legislation (Public Law 101-646, Title III CWPPRA) was approved by the U.S. Congress and signed into law by former President George H. W. Bush.

On January 16, 2014, the Island Road Marsh Creation and Nourishment Project (herein referred to as TE-117) was authorized as part of the CWPPRA 23rd Priority Project List and funded for Engineering and Design. The National Oceanic and Atmospheric Administration's National Marine Fisheries Services (NOAA/NMFS) is serving as the federal sponsor and the Louisiana Coastal Protection and Restoration Authority serving as the local sponsor and is also performing the engineering and design.

NOAA implements many kinds of wetland restoration, such as fringing marsh and sediment/materials placement. These restoration activities create the desired elevation and hydrology for wetland vegetation and fish habitat. Potential impacts from restoration activities range from very low impacts from planting to more acute impacts caused by the use of heavy equipment on site, followed by lasting benefits. Consequently, these techniques are grouped into Section 4.5.2.11.2 and 4.5.2.11.3 of NOAA's Programmatic Environmental Impact Statement (PEIS) for the analysis of impacts.

2017 Coastal Master Plan

The 2017 Coastal Master Plan for Louisiana identifies projects that would build and maintain land, reduce flood risk to citizens and communities, and provide habitats to support ecosystems. Master Plan Project 03a.MC.09b includes the creation of 5,400 acres of marsh south of Montegut between Bayou St. Jean Charles and Bayou Pointe aux Chenes to create new wetland habitat and restore degraded marsh. All three marsh creation and nourishment cells for TE-117 are located within the Master Plan Project 03a.MC.09b and consistent with the plan. Cumulative beneficial impacts are expected if TE-117 is built as a component of that larger State Master Plan element.

Project Setting

The TE-117 project area is located south of Montegut between Isle de Jean Charles and Pointe aux Chenes in Terrebonne Parish, Louisiana (Figure 1). The project site contains organic and highly compressible soils (Timbalier muck) with expansive open water areas. High subsidence (6.4 mm/yr), wind erosion, storms, oil and gas canals, and pipelines have altered hydrology and contributed to widespread historic and continued rapid land loss within the project site and vicinity. The wetland loss rate is -1.46% per year based on USGS data from 1984 to 2020 for the extended project boundary. As interior marsh has converted to open water leaving marsh along relic distributary channels, there is increased wave fetch and tidal and surge flooding, reducing wetland habitat and resiliency of communities in the southeast portion of the Parish.

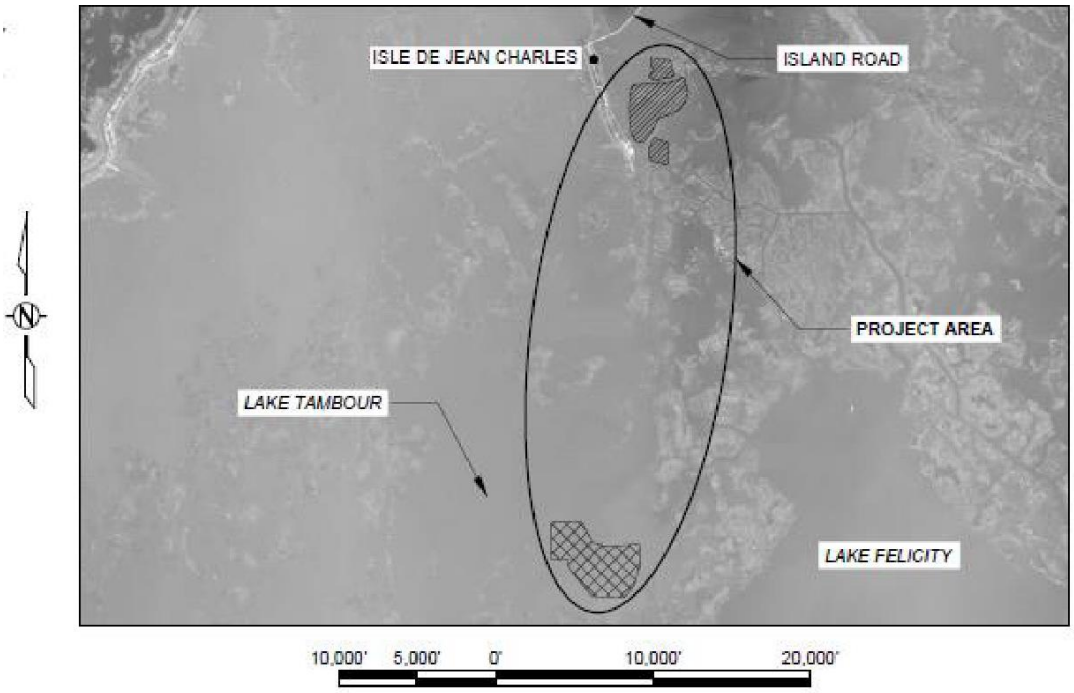

Figure 1. Project Location and General Vicinity

Project Goals

The general goal is to create coastal wetland habitat and start rebuilding the marsh along the Twin Pipelines corridor. Material would be dredged from a borrow area in Lake Tambour. Specific goals are to 1) create 229 acres of marsh, 2) nourish 66 acres of marsh, and 3) result in 206 acres at Target Year 20 having approximately 70% vegetative cover and the average land elevations with a percent flooding between 20% and 80% using the nearest continuous water level gauge. The goals would be accomplished by dredging material from Lake Tambour for marsh creation and nourishment as further described below.

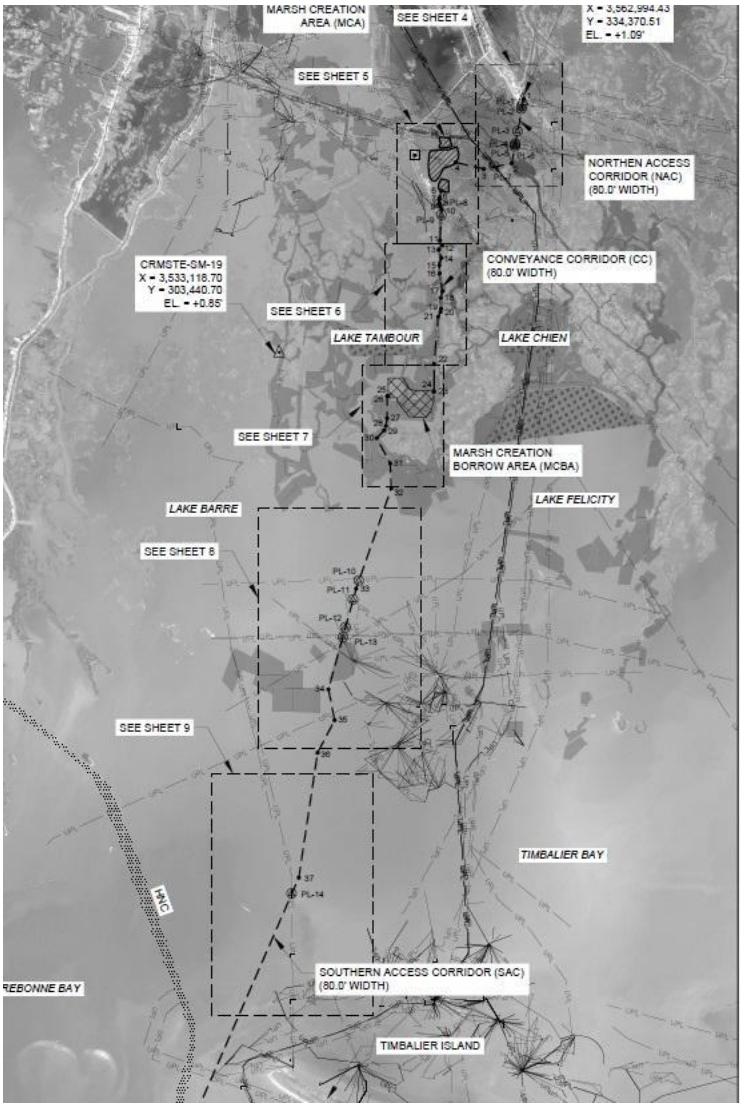

Figure 2. Flotation access and dredge pipeline corridors, borrow area, and marsh creation cells

Marsh Creation and Borrow Areas

The goal of the marsh creation areas is to create habitat, address marsh loss in the Twin Pipelines area between Pointe aux Chenes and Isle de Jean Charles. This is to begin restoring the structural framework of the marsh in the immediate vicinity in the near term and a larger across-basin area cumulatively long term in conjunction with other projects. Elevation, soil, and cultural resources surveys, analysis and design was conducted in a step-wise fashion given water depths, soils, infrastructure, utilities, land rights, oyster, and potential cultural resource considerations. In total, six marsh creation alternatives and seven borrow areas were evaluated to inform the current configuration presented here. Developmental details are documented in reports and covered in a 30% Design Review meeting on October 23, 2019, and a 95% Design Review on September 23, 2021 (CPRA, 2019 and CPRA 2021). The marsh creation areas evolved from parallel and north of the Twin Pipelines to perpendicular and south of the Twin Pipelines and parallel with the Isle de Jean Charles. The borrow area was relocated from a conceptual location in Lake Chien/Felicity to Lake Tambour based on pumping distance, oyster lease and seed grounds, and survey data.

The proposed project now spans approximately 295 acres across three marsh creation areas (measured to the dike centerline) within an area of primarily open water and broken saline marsh (Figure 3). The constructed marsh fill elevation will be +3.0 feet NAVD88 Geoid 12a +/- 0.25 feet with a target settled elevation of +0.68 feet NAVD88. Earthen containment dikes will be used to contain sediment for the marsh creation cells using in situ material excavated no more than -10 feet NAVD88 GEOID 12a from existing waterbottoms either or both inside or outside the cells depending on the dike reach. The size and configuration of the dikes varies depending on location (e.g., soils, existing mudline elevation, and wave fetch exposure) and does not require temporary protection, geotextile fabric, or sheet pile closures. A separation is included between the two northernmost marsh creation areas to maintain drainage from the existing pumping station, navigation, and organism and material linkages west and north of the marsh creation areas. That in conjunction with the separation between the southernmost two marsh creation areas as well as connectivity to existing canals is included to prevent backwater flooding in the future with the project. The containment dikes will be gapped to the extent possible prior to construction demobilization to allow dewatering. Completion of dike gapping will be field fit through site inspections and review of elevation surveying no later than 3 years after construction completion to allow sheet flow, material linkages, and access for fish and wildlife. The dimensions of the gapping will vary. The selected plan maximizes the year 20 net acres of marsh within the 20% to 80% inundation elevation for habitat functionality and resiliency.

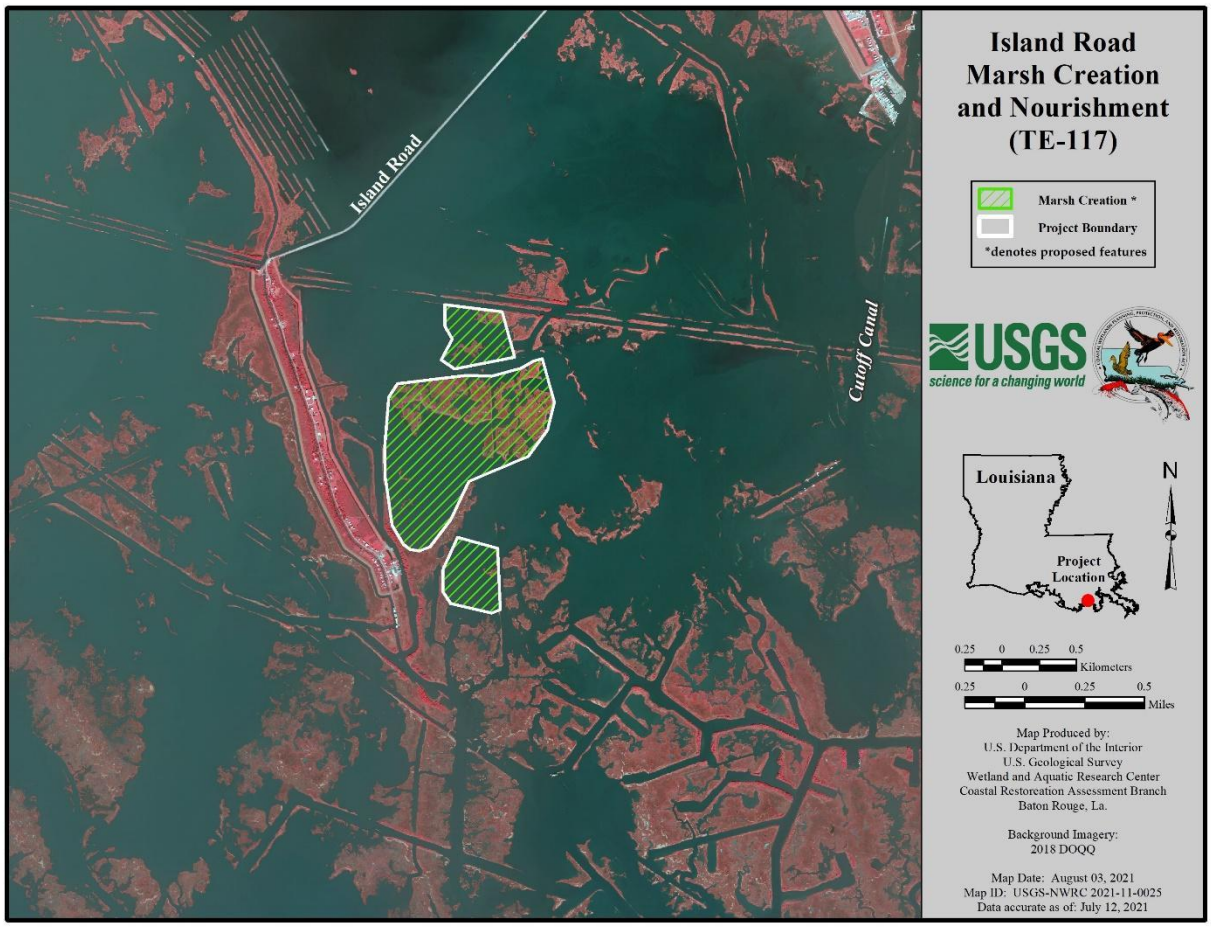

Figure 3. Project location and proposed marsh restoration areas.

Construction access is provided from the north via Pointe aux Chenes and from the south through the Federally-authorized and maintained Houma Navigation Canal and across Terrebonne Bay and Lake Barre to the borrow area in Lake Tambour. As proposed, there are 14 pipeline crossings. Encroachment guidelines were collected from some pipeline companies and further coordination with pipeline companies is planned if funded for construction. No (borrow or flotation) excavation or project features overlap existing pipelines and floating pipe or bridging across exposed existing pipelines by using pontoons is planned.

The borrow area is 394 acres and is sized and sited with a 1,500 feet offset buffer from state oyster seed grounds and 1,000 feet buffer from existing marsh to avoid impacts to existing habitats. Wave refraction/diffraction modeling showed no significant impact to wave energies post dredging. The borrow area would be dredged to an elevation no greater than -15 feet NAVD88. The designed borrow area of 394 acres provides three times the 1.5 million cubic yards of fill volume needed; therefore, all 394 acres would not be dredged. Material would be hydraulically pumped seven miles from the borrow area to the fill areas.

The project includes maintenance and monitoring items and costs to deliver tidal benefits and assess project performance. Maintenance includes gapping of earthen containment dikes no later than three years after construction. Monitoring includes soil geotechnical monitoring, marsh creation elevation surveys, land/water and vegetation classification and analysis, and reporting. Soil geotechnical and elevation monitoring is included to evaluate project performance relative to the design and construction. Land/water and vegetation classification is included to track the achieved vs designed land acreage and projected marsh vegetation cover over time.

IV. PROJECT IMPACT ANALYSIS

As described in Section 2.2.2.11 of the RC PEIS Inclusion Analysis, wetland restoration projects included in this analysis are designed to restore and maintain ecological function and are planned and designed with those principles in mind. Potential avoidance, minimization, and mitigating measures are described in Table 1. A Hazardous, Toxic, and Radioactive Waste Phase I Environmental Site Assessment was completed and identified previous spills from the Pointe aux Chenes Marina. The identified Bayou Jean Production Facility was determined to not represent a recognized environmental condition to the assessed project area nor does Pointe aux Chenes Marina represent a vapor encroachment (Tetra Tech, Inc., 2017).

TABLE 1. SUMMARY OF EXPECTED IMPACTS FROM IMPLEMENTATION OF THE TE-117 PROJECT AND AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

Resource	Impacts to Resources	Potential Avoidance, Minimization and Mitigation Measures
Geology and Soils	Dredging and sediment placement for marsh construction would result in long-term, direct, beneficial impacts in the proposed project area. Marsh construction would replace shallow water habitat with elevations conducive to marsh establishment portions of which would convert back to shallow water habitat over time.	Vegetative recruitment and retention dikes around disturbed areas would stabilize soil and reduce resuspension of recently deposited sediment. Borrow area is located far enough into Lake Tambour that no impacts to shorelines are anticipated.

	Short-term, direct, moderate, adverse effects would occur in the proposed borrow areas associated with suspension of sediments.	
Water Quality	Dredging and material placement would result in adverse, direct, short-term, minor impacts to water quality associated with (1) localized increased turbidity and decreased dissolved oxygen in the water column at the dredge site (dredge plume) and at the construction location; (2) exhumation of buried debris; and (3) discharges from the dredge vessel. Long-term beneficial impact to surface water quality would result from increased wetland acreage and filtering storm water discharge from a pumping station.	Containment dikes and construction management practices would minimize turbidity in dewatering areas adjacent to the marsh creation areas. Compliance with the Clean Water Act and other regulations would protect water resources. Post-construction dike gapping would allow natural surface water flow when regulation of flows is no longer needed for soil retention.
Air Quality	Construction and dredging would result in adverse, direct, short-term, minor impacts from exhaust diesel fumes and fugitive dust generated by dredging and earthmoving equipment.	Best management practices would minimize exhaust fumes and fugitive dust. Primary production through increased marsh productivity would benefit air quality in long-term.
Living Coastal and Marine Resources and EFH	Material placement would result in adverse, direct, short-term, minor impacts to wetlands. Material placement would increase wetland acreage and provide long-term benefits to fish and wildlife resources in the wetlands. Construction and dredging would result in localized, adverse, direct, short-term, minor impacts to fisheries and Essential Fish Habitat (EFH). Slow-moving or sessile organisms in the borrow areas may be killed during	Project-specific evaluations and coordination with appropriate federal, state, and local agencies would focus on effective vegetation management. Containment dikes and construction management would minimize turbidity in dewatering areas. Compliance with the Clean Water Act, Section 404 and Section 301, would protect wetlands from unnecessary disturbance.

	dredging. Sessile organisms in the placement areas may be buried or injured. Short-term increases in turbidity may temporarily reduce habitat quality in the borrow areas and the placement areas. Long-term, moderate, direct and indirect beneficial impacts would result to EFH and nursery resources through protection, restoration, creation of marsh.	Non-dredged areas adjacent to the borrow area would provide source organisms for recolonization. Project-specific evaluations and coordination with appropriate federal, state, and local agencies would focus on protecting sensitive species. Containment dikes would be gapped after construction to provide tidal connection.
Threatened and Endangered Species	Construction and dredging would result in localized, adverse, direct, short-term, minor impacts by construction disturbance. Appendix A lists the species potentially impacted.	Construction and dredging would result in localized, adverse, direct, short-term, minor impacts by construction disturbance that could cause listed species to avoid the site during construction. Species in the project area that may be affected include manatee and black rail. These species may avoid the construction site but should return once conditions stabilize. The project was determined to not likely adversely affect West Indian Manatee or Eastern Black Rail (Appendix A). There will be no affect to NOAA trust ESA listed species as they are not present in the action area. Creation of wetlands would result in beneficial, direct, long-term, minor impacts to any threatened and endangered species should they occur in the same area, and increase the longevity of wetland habitat that may be used by such species. Impacts to manatees and to solitary and colonial waterbirds would be avoided by following USFWS and LDWF guidelines.

		Standard Manatee Conditions for In-Water Activities and measures for Reducing Entrapment Risk to Protected Species would be implemented. Bird abatement would be implemented, if necessary.
Cultural and Historic Resources	No impact. No resources of concern were identified through project-specific cultural resource surveys, review of previous surveys, and coordination with SHPO. Coordination with Tribal Historic Preservation Officers remains ongoing. Dredging would not occur around cultural resources and placement would not require accessing cultural resource sites.	If artifacts of potential cultural or historical significance are unearthed, construction or excavation activities would be immediately halted and the Louisiana State Historic Preservation Office (SHPO) and Tribal Historic Preservation Office (THPO) consulted. Appropriate section 106 Consultation with the Louisiana State Historic Preservation Office is completed (Appendix B). Coordination Tribal Historic Preservation Officers is completed.
Land Use and Recreation	Construction would result in adverse, direct, short-term, minor impacts to land use, including minor, localized disruption of fishing. Long-term, direct, beneficial impacts to recreation, including improved fisheries nursery habitat. Long-term, beneficial impacts would be expected for oil and gas leases and infrastructure, as pipelines would be better protected from problems associated with erosion. Short-term, moderate, adverse impacts are possible and would be avoided through buffer zones around areas of potential impact. Areas of potential hazard would be avoided, and increasing the elevation in the area can help protect area pipelines from future exposure.	Coordination with appropriate federal, state, and local agencies would focus on maintaining the quality of public recreation in the area. Staging areas used for construction materials or debris would be returned to pre-construction, or better conditions. Construction would avoid pipelines and other oil and gas equipment, which have already been identified by magnetometer surveys and ongoing coordination with the pipeline owners.

Socioeconomic Resources	No adverse impacts to socioeconomics are expected. The project would result in long-term, moderate, beneficial impacts to socioeconomics by improving fisheries, recreational opportunities, commercial fishing, and pipelines.	Coordination with appropriate federal, state, and local agencies would ensure that public concerns are addressed.
Environmental Justice	The social and economic welfare of minority and low-income populations may be disproportionately impacted by the project. Temporary adverse impacts from noise, traffic, and displacement of fishing grounds will occur. See **ENVIRONMENTAL JUSTICE** below.	Direct and indirect adverse impacts to habitat areas valued by the community will be temporary and minimized by design and construction management. Habitat creation and resiliency of the created habitat will provide longterm benefit and fishing use as well as filtering water discharged from a pumping station, and some daily tide and sub-tropical storm buffer.

COORDINATION

The project has been designed in coordination with the public, private land owners, state and federal agencies mentioned elsewhere in this PEIS Inclusion Document. A summary of comments from a solicitation of views and relevant agency comments are also provided in the Persons/Agencies Consulted section (Appendix C). NEPA coordination was suspended in the interim during portions of the seven years of design to resolve design and construction feasibility for the project to proceed.

ENVIRONMENTAL JUSTICE

The methodology for this environmental justice (EJ) analysis included identifying low-income and minority populations relative to the project vicinity. A potential disproportionate impact may occur when the impact is appreciably more severe or greater in magnitude on minority or low-income populations than the adverse effect suffered by the non-minority or low-income populations after taking offsetting benefits into account. The hurricanes of 2020 and 2021 impacted the project vicinity and may increase demographic and environmental uncertainty verses the data prior to 2020. For similar reasons, pre-COVID-19 data are used.

Four geographic areas were investigated relative to the TE-117 project. These were a 10 mile radius from the center of the TE-117 marsh creation areas using the 2020 Version of EPA EJSCREEN, the Galliano Census Designated Place (CDP), and Terrebonne Parish Block 3 Census Tract 11 and Block 1 Census Tract 12.02 with some comparisons to the Parish, State and United States. Tract 11 includes Montegut, Pointe aux Chenes, and Isle de Jean Charles. Tract 12.02 includes Chauvin. Further EJ analysis details are in Appendix D. Education, income, lead paint housing, and waste water contamination were identified as high percentile variables in a Standard report from EJSCREEN for the 10-mile radius area from TE-117.

Demographics (e.g., race, income status, and education level) may be a general indicator of a community's potential susceptibility to environmental exposures (EPA, 2019). Table 2 provides a generalized breakdown of demographics by each of the four search areas.
The 10-mile EJSCREEN search area yielded:

- education (95th percentile of state having less than high school education),
- income (74th percentile of US low income),
- lead paint housing (80th percentile of EPA region with pre-1960s housing)
- waste water contamination (74th percentile of US distance to wastewater discharge)

Table 2. Minority is race reported as other than white alone. Education is reported as percent of the total with less than a high school diploma. Values were rounded to the nearest whole number. "a" = 2019 ACS 5 year estimate; "b" = 2014 – 2018 ACS report, low income only available; "c" = 2019

Area	Percent Minority	Percent Below Poverty Level	Education
Terrebonne Parish, Block 3, Tract 11	28%[a]	31%[a]	43%[a]
Terrebonne Parish, Block 1, Tract 12.02	9%[a]	16%[a]	16%[a]
EPA EJSCREEN 10-mile search	20%[b]	33%[b]	28%[b]
Galliano CDP, Lafourche Parish	22%[c]	18%[c]	28%[c]
Terrebonne Parish	30%[a]	21%[a]	21%[a]
Louisiana	38%[a]; 37%[c]	19%[c]	15%[c]
U.S. States	27%[a]	13% [a]	12%[a]

Minority and/or low income-population groups residing, working, subsisting, or recreating near the construction sites (e.g., marsh creation areas, borrow areas, access corridors, and dredge pipe corridor) may experience direct impacts due to added water and land-based traffic congestion, construction noise, turbidity and loss of open water. However, impacts would be temporary, lasting only as long as the construction and other residents and citizens are expected to be similarly impacted. By design, three separate marsh creation areas will maintain drainage from the Isle de Jean Charles pumping station so as to prevent inducing backwater flooding with the project and allow for navigation access around the created marsh and maintain access to the Isle de Jean Charles and Pointe aux Chenes Marinas during and after construction. Created wetlands will assist with treating storm water discharged into the estuary. Outreach plans will include communicating with minority and/or low-income population groups on the project construction for awareness and safe navigation. Indirect beneficial impacts consist of land restoration in the form of wetlands that provide habitat for fish and wildlife consumptive and non-consumptive resources that may assist the Isle de Jean Charles and Pointe aux Chenes Marinas and fisheries. Additionally, the project may provide some daily tidal and sub-tropical storm buffer for a minor amount of immediately adjacent areas.

Native American Tribes

The four federally-recognized tribes in Louisiana include the Chitimacha Tribe of Louisiana, Jena Band of Choctaw, Coushatta Tribe of Louisiana, and the Tunica-Biloxi Tribe of Louisiana. Although project features do not overlap tribal lands, the project features may include aboriginal lands or be used at times for subsistence, income earning, or recreation through activities including, but not limited to fishing, hunting, and trapping. Coordination with these tribes is ongoing.

There are three state-recognized tribes in close proximity to the project features including the Isle de Jean Charles Band of the Biloxi-Chitimacha Confederation of Muskogees, the United Houma Nation, and the Pointe-au-Chien Tribe. For more information on the island and people of Isle de Jean Charles, see the web

sites http://isledejeancharles.com and https://isledejeancharles.la.gov. Additional information on the respective tribes can be found on tribe-specific websites. Only portions of tribal lands are within local or federal levee flood protection systems and much of the aboriginal lands are not habitable and may include portions of the proposed TE-117 project features, construction access or dredge pipe corridors. As the amount of land loss in southeast Terrebonne Parish has increased, land has diminished and shifted from coastal ridges and flanking natural levees with fresh to saline marsh to submerging ridges, saline marsh and open water. As a result, activities by the tribes in the project area has evolved from livestock and plant-based agriculture, trapping, and fishing, to primarily just fishing.

The Isle de Jean Charles area once comprised 22,000 acres and currently, approximately 320 acres remain restricted to the southern end of Island Road and Bayou Jean Charles. The residents of Isle de Jean Charles are predominantly of American Indian ancestry and may or may not affiliate themselves with one or more of the state-recognized tribes.

In 2016, the U.S. Department of Housing and Urban Development awarded the state of Louisiana Community Development Block Grant funds for the Resettlement of the Isle de Jean Charles, as part of the Office of Community Development's winning application to the National Disaster Resilience Competition. For more information on the resettlement of the Isle de Jean Charles, see the website https://isledejeancharles.la.gov. The resettlement entails three options for eligible applicants: 1) a new home in the New Isle located in Schriever, Terrebonne Parish, Louisiana, 2) an existing home in Louisiana, or 3) an improved lot in the New Isle. Eligibility is limited. Participation is voluntary and participants must agree to terms related to use of the vacated island property. Based on information from the Louisiana Office of Community development, the total numbers for the three resettlement options most recently available are: 1) 37 individuals have chosen a home in the New Isle, 2) 1 person chose an existing home in Louisiana, and 3) 18 individuals are eligible to receive an improved lot in the New Isle.

Construction of TE-117 is pending authorization of construction funds with the earliest potential for authorization being January 2022. Therefore, the earliest it would be feasible to commence construction is 2023, which may influence potential temporary impacts. However, temporary adverse impacts to tribes during construction of the project will result from replacement of open water with created marsh and turbidity displacing localized fishing. Turbidity caused by the project will cease after hydraulic pumping is completed and allow a rapid return of target fishery species and fishing effort adjacent to the marsh creation areas near Isle de Jean Charles and Pointe aux Chenes. From approximately year 3 to 20 post-construction of the project, created marsh will promote fisheries directly and indirectly for sustenance, recreation, and potential income. The project will provide some protection through daily tidal and sub-tropical storm buffer to aboriginal and tribal lands.

COMPLIANCE WITH LAWS AND REGULATIONS

All relevant federal, state, and local laws and regulations were considered during development of the proposed restoration project, as well as several regulatory requirements that are typically evaluated during the permitting process. Relevant correspondence is provided and the status in Table 3. The project manager would ensure that there is coordination among these programs where possible and that project implementation and monitoring comply with all applicable laws and regulations.

TABLE 3. STATUS OF LAW AND REGULATION COMPLIANCE

Law or Regulation	Status
Archeological & Historic Preservation Act of 1974	Initiated October 29, 2019 and pending

Clean Air Act of 1970	Pending, prepared concurrently with the joint permit application to USACE and LDEQ. Both CZM and CAA are delegated to the State of Louisiana and will be granted under the Coastal User Permit.
Clean Water Act	Pending, permit application to USACE for section 404 has been drafted will be submitted after a preapplication meeting if a decision to fund the construction of the project is made
Coastal Zone Management Act of Louisiana Executive Order 11998, Floodplain Management	Pending, a permit application has been drafted concurrent with the permit application for Section 404
Endangered Species Act of 1973	Reinitiated October, 2021 and pending with FWS. Consultation for NOAA trust species and critical habitat being initiated concurrent with NEPA.
Executive Order 11990, Protection of Wetlands	In compliance
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations & Low-Income Populations	In compliance, assessed with this RC PEIS Inclusion Analysis
Executive Order 13175 Consultation and Coordination with Indian Tribal Governments	In compliance, coordination with Tribes concurrent with this RC PEIS Inclusion
Fish & Wildlife Coordination Act	Integrated with Clean Water Act permit process
Magnuson-Stevens Fishery Conservation & Management Act	Coordination with NMFS Habitat Conservation Division for EFH ongoing. Appendix A of this PEIS Inclusion requests initiation of EFH consultation with the NMFS Habitat Conservation Division.
Migratory Bird Treaty Act of 1918	Coordination under MBTA is generally incorporated into Section 404 of the CWA, NEPA, or other federal permit, license or review requirements.
Marine Mammal Protection Act of 1972	Project is being coordinated with USFWS and NMFS and will implement measures to minimize impacts to marine mammals. Entrapment avoidance monitoring is included for marine mammals pursuant to the NMFS Protected Resources Division best management practices
National Environmental Policy Act of 1969	In Process with this RC PEIS Inclusion Analysis draft
National Historic Preservation Act of 1966	Completed coordination (Appendix B)

Pursuant to the 2001 EFH Findings with CWPPRA agencies, an EFH consultation will be initiated concurrent with the NEPA document and when the NEPA document is used as the consultation mechanism and it should contain an EFH assessment. The EFH assessment is included in Appendix D and is provided for review by NOAA's Habitat Conservation Division (HCD) and concurrence with the determination that the project will not have substantial adverse impacts on EFH or federally managed fishery species.

CONCLUSIONS

The natural processes of subsidence, habitat change, and erosion of wetlands have been exacerbated by widespread human alterations of sediment delivery and other processes, resulting in marked degradation of the Louisiana coastal area. The project will result in short term, direct adverse impacts to a number or resources but will provide positive long term impacts to many resources offsetting adverse impacts and resulting in net benefits. Without marsh restoration intervention, Louisiana's healthy and highly productive coastal ecosystem would degrade and diminish. This RC PEIS Inclusion Analysis provides information on the expected impacts from the implementation of the TE-117 project and the avoidance, minimization, and mitigation measures to be taken.

PREPARERS

This PEIS inclusion analysis was prepared by Patrick Williams, Cecelia Linder, and Joy Merino of NOAA Fisheries.

PERSONS/AGENCIES CONSULTED

Public comments were received in support of funding the project design in 2013. A solicitation of comments on the proposed project was conducted by mailing letters to the following listed entities in November, 2014 with comments requested by December 25, 2015. Comments received are summarized below and were considered in project design. Full letters of reply are available in the project files maintained by the NOAA Fisheries Service. Land rights have been assessed and coordination with landowners has occurred. During advanced design since 2015, coordination with the oil and gas companies, land owners, Parish government, State Historic Preservation Office, State Office of Community Development, and Indian tribes has occurred. Project information has been supplied to federally-recognized Indian tribes soliciting comments. Project information also has been supplied to state-recognized tribes in the vicinity of the project area. Given energy and attention is focused by many residents in Terrebonne Parish on recovering from Hurricane Ida storm impacts, outreach remains ongoing including distribution of this draft document for their awareness and input. Appendix D includes the 2013 public comments, the list of entities comments were solicited in 2014 and a summary of the comments, and list of the land owners.

LITERATURE CITED

CPRA, 2021. Draft TE-117 Island Road Marsh Creation and Nourishment Project, Coastal Wetlands Planning Protection and Restoration Act, 95% Design Report. 76 pp.

U.S. Environmental Protection Agency (EPA), 2019. EJSCREEN Technical Documentation. 115pp.

LCWCRTF and WCRA, 1999. Coast 2050: Toward a Sustainable Coastal Louisiana. Baton Rouge, Louisiana: Louisiana Department of Natural Resources.

NMFS, 2021. Draft TE-117 Island Road Marsh Creation and Nourishment Project, Coastal Wetlands Planning Protection and Restoration Act, Wetland Value Assessment Project Information Sheet. 19 pp.

Tetra Tech, Inc., 2017. Hazardous, Toxic, and Radioactive Waste Phase I Environmental Site Assessment, Coastal Protection and Restoration Authority, Island Road Marsh Creation and Nourishment, Terrebonne Basin, Terrebonne Parish, Louisiana, Project No. 100-BRT-T36142. 506 pp.

Appendix A - Agency Compliance Coordination

Species List
Fill & Borrow Areas: West Indian Manatee, Eastern Black Rail, Monarch Butterfly

There are no critical habitats within the project. **USFWS Concurrence Letter**

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Louisiana Ecological Services Field Office
200 Dulles Drive
Lafayette, LA 70506
Phone: (337) 291-3100 Fax: (337) 291-3139

IPaC Record Locator: 715-106581665 October 14, 2021

Subject: Consistency letter for the project named 'CWPPRA Island Road Marsh Creation and Nourishment (TE-117)' for specified threatened and endangered species that may occur in your proposed project location pursuant to the Louisiana Endangered Species Act project review and guidance for other federal trust resources determination key (Louisiana DKey).

Dear Patrick Williams:

The U.S. Fish and Wildlife Service (Service) received on October 14, 2021 your effects determination(s) for the 'CWPPRA Island Road Marsh Creation and Nourishment (TE-117)' (the Action) using the Louisiana DKey within the Information for Planning and Consultation (IPaC) system. The Service developed this system in accordance with the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based on your answers, and the assistance in the Service's Louisiana DKey, you made the following effect determination(s) for the proposed Action:

Species	Determination
Threatened Eastern Black Rail (*Laterallus jamaicensis spp. jamaicensis*	May Affect
Threatened West Indian Manatee (*Trichechus manatus*)	NLAA

Consultation with the Service is not complete. Further consultation or coordination with the Louisiana Ecological Services Office is necessary for those species with a determination of "may affect" listed above. Please contact our office at 337-291-3100 or lafayette@fws.gov to discuss methods to avoid or minimize potential adverse effects to those species.

Please Note: If the Federal Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) may be required. Please contact Ulgonda Kirkpatrick (phone: 321/972-9089, e-mail: ulgonda_kirkpatrick@fws.gov) with any questions regarding potential impacts to bald or golden eagles.

This project has been reviewed for effects to Federal trust resources under our jurisdiction and currently protected by the Endangered Species Act of 1973 (Act.) The project, as proposed,

Is not Likely to adversely effect those resources

BRIGETTE FIRMIN Digitally signed by BRIGETTE FIRMIN
Date: 2021.11.03 08:20:57 -05'00'

Supervisor Date
Louisiana Ecological Services Office
U.S. Fish and Wildlife Service

Appendix B - SHPO Coordination

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
SEFC/Estuarine Habitats & Coastal Fisheries Center
646 Cajundome Boulevard
Lafayette, Louisiana 70506

November 25, 2015

No known historic properties will be affected by this undertaking
This effect determination could change should new information come to our attention.

Phil Boggan
Deputy State Historic Preservation Officer

Date
12/10/2015

Department of Culture Recreation & Tourism/Division of Archaeology
P.O. Box 44247
Capitol Annex 3rd
Baton Rouge, LA 70804

Re: Island Road Marsh Creation and Nourishment (TE-117); Terrebonne Basin

Subject: Solicitation of Views

The NOAA National Marine Fisheries Service is the federal sponsor of the *Island Road Marsh Creation and Nourishment* (TE-117) in Terrebonne Basin. Early in the planning and design stages, views from federal, state, and local agencies and organizations are solicited to aid in the process. Your special knowledge and expertise can assist in identifying possible adverse economic, social, and environmental effects or concerns. We are therefore requesting your review and comment on the proposed project as part of the Environmental Assessment we conduct to comply with the National Environmental Policy Act.

Project Description – The TE-117 project is being funded under the Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA). The proposed project area is shallow open water and saline marsh west of Pointe Aux Chenes. A map is enclosed for your reference. Our proposed action includes re-creating and nourishing over 300 acres of marsh in an area with high subsidence and wetland loss around Island Road. Island Road is the only land access to the Isle de Jean Charles located west of Pointe Aux Chenes which serves Native American and minority communities that historically relied on fishing for their livelihood.

It is requested that you assess the provided information and furnish your view and comments by December 30, 2015. Please reference the subject project in your responses. Thank you in advance for your time and assistance. Please respond to:

John Foret, PhD
NOAA Fisheries Service, 646 Cajundome Blvd. Rm175, Lafayette, LA 70506
john.foret@noaa.gov

Sincerely,

Kimberly Clements
Federal Project Manager
NOAA Fisheries Service

RECEIVED
DEC 01 2015
ARCHAEOLOGY

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
SEFC/Estuarine Habitats & Coastal Fisheries Center
646 Cajundome Boulevard
Lafayette, Louisiana 70506

January 7, 2016

State Historic Preservation Officer
Louisiana Office of Cultural Development
P.O. Box 44247
Baton Rouge LA 70804-44247

Dear Ms. Breaux,

The NOAA, National Marine Fisheries Service is reviewing a marsh creation project in Terrebonne Basin, Terrebonne Parish. We have prepared a cultural resources assessment for this activity (see attachment), as required under Section 106 of the National Historic Preservation Act of 1966, as amended. By transmittal of this letter and the attached cultural resource assessment, we request consultation with your office for cultural resources, and request a concurrence with our determination of effect.

The Island Road Marsh Creation and Nourishment Project (TE-117) is funded under the Coastal Wetlands Planning, Protection and Restoration Act. The Area of Potential Effects (APE) is located at the borrow site and marsh creation areas noted on the attached figure. We found no records of identified sites in the APE on the cultural resources database as of December 22, 2015.

Our proposed action includes creating and nourishing marsh from bay sediments. Potential impacts can occur from dredging that could unearth unknown sites. The dredging proposed for this project will primarily be located where previous settlements are unlikely, such as shallow open water and where significant erosion has occurred. Much of the planned marsh creation area was surveyed by William Haag in 1985 report #22-1160, and was cleared in your review December 10, 2015 (attached). Areas in yellow are currently and historically Lake Tambour bay bottom would be excavated approximately 10 feet deep. Sediments would be transported via the proposed pipeline route noted in red on the attached figure. Surveys of submerged cultural resources are not planned for this area, as we feel it unlikely that they would occur. Given this was a lake historically surrounded by marsh, not on a major navigation route any wreckage uncovered would most likely be storm debris.

Attached are portions of the draft Environmental Assessment (EA) for this project that include the project location and cultural resources summary. Your response would be appreciated no later than January 30, 2016, and may be addressed to me.

Sincerely,

John D. Foret

Dr. John Foret
NOAA Fisheries Service
646 Cajundome Blvd
Lafayette, LA 70506
John.foret@noaa.gov

No known historic properties will be affected by this undertaking. This effect determination could change should new information come to our attention.

Phil Boggan
Deputy State Historic Preservation Officer

Date
02/05/2016

Appendix C – Public Comments

OFFICE OF THE PARISH PRESIDENT
TERREBONNE PARISH CONSOLIDATED GOVERNMENT
P. O. Box 6097
HOUMA, LOUISIANA 70361-6097

MICHEL H. CLAUDET
PARISH PRESIDENT

(985) 873-6401
FAX: (985) 873-6409
E-MAIL: mhclaudet@tpcg.org

November 26, 2013

Colonel Richard Hansen
District Engineer, New Orleans
c/o: Brad Inman
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160

RE: CWPPRA Phase I Funding — Island Road Marsh Creation Project; Terrebonne Parish, LA

Col. Hansen:

As Terrebonne Parish President, it is with the utmost urgency that I ask you, along with the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) Technical Committee and Task Force, to approve Phase I Engineering & Design funding for the Island Road Marsh Creation Project for Priority Project List (PPL) 23 at your upcoming meetings this winter. Terrebonne Parish is Ground Zero for land loss in Coastal Louisiana, and sees loss in the way of an average of a football field every five hours. Projects like the Island Road Marsh Creation can help us reverse some of that loss.

The project is located in the immediate vicinity of a landform known as Isle de Jean Charles, which has been home to dozens of Native American families in the past; however, due to loss of land historically used for both trapping by these residents and protection from storm surge, the island is now home to fewer than thirty families. The restoration of wetland habitat will not only assist in dampening wave energy that plagues this community and its homes, but will also provide protection for Island Road to the north—a parish-owned roadway that has recently been completely reconstructed by Terrebonne Parish Consolidated Government at a cost of over $7 million. This road serves as the only vehicular access to or from Isle de Jean Charles.

In addition to these factors, the overall project area has been historically impacted by subsidence, salt water intrusion, storm surge damage, a lack of sediment supply, and oil and gas canals dating back several decades. The loss of land in this area has devastated habitat necessary for native species of wildlife, fisheries, and vegetation to thrive and reproduce. Marsh creation associated with this project will restore some of that lost habitat and reduce storm surge action in a large open water area, providing future protection to a very fragile portion of the Terrebonne Hydrologic Basin.

When reviewing Louisiana's 2012 Comprehensive Master Plan for a Sustainable Coast, the necessity of this project is quite clear. Much of eastern Terrebonne Parish was ignored in the Master Plan because modeling efforts associated with composition of the plan suggested that the area was not sustainable. Aside from obvious flaws in the modeling efforts, most notably a disregard for synergistic qualities of projects within close proximity to one another, we cannot ignore the emergency needs of an area that thousands of Americans call home. Since the CWPPRA Task Force has elected to require future CWPPRA projects to be consistent with the 2012 State Master Plan, this project may be one of our last chances to put a necessary and highly beneficial project on the ground before the next Master Plan update in 2017.

As we understand it, this project was relocated from its originally proposed location, due to poor soil conditions in the originally proposed area. The geotechnical investigations conducted in the new project area are very promising, and will allow the CWPPRA program to help prove that eastern Terrebonne is, in fact, a very sustainable area that should not be written off and allowed to wash away. The Terrebonne Levee & Conservation District has recently constructed earthen terraces in the immediate vicinity of the project area that have proven viable through the most recent tropical events.

Consisting of 470 acres of marsh and 42 acres of earthen terraces and estimating a cost of approximately $36 million, I again urge you to approve funding of the Madison Bay Marsh Creation and Terracing Project at the December 12, 2013 CWPPRA Technical Committee meeting. Terrebonne is disappearing at an alarmingly fast rate. We need to approve and construct vitally important projects like this one before time runs out for our residents.

Sincerely,

Michel H. Claudet
Parish President

DUCKS UNLIMITED

Leslie R. Suazo
Coastal Restoration Coordinator

C/O ConocoPhillips Company 806 Bayou Black Drive P.O. Box 7097 Houma, LA 70361-7097 lsuazo@ducks.org
985-853-3020 Fax: 985-872-1509

November 26, 2013

Mr. Thomas A. Holden, Chairman
Deputy District Engineer
U.S. Army Engineer District, New Orleans
Office of the Chief
P.O. Box 60267
New Orleans, Louisiana 70160

Re: Phase I Funding Request
Island Road Marsh Creation and Nourishment Project
Grand Bayou Hydrologic Restoration

Dear Mr. Holden:

As you are aware, the Technical Committee of the Coastal Wetlands Planning, Protection and Restoration Act program will be meeting in Baton Rouge on December 12, 2013 to select up to four candidate projects for Phase I, Engineering and Design funding. I would like to offer the following comments in support of two projects in the Terrebonne Basin of importance to Ducks Unlimited and its core mission to preserve, protect and restore waterfowl habitat. As you know, this area lies within the Mississippi flyway, and serves as a critical wintering site for a large number of migratory waterfowl species, as well as providing on-going habitat needs of resident populations of mottled ducks, whistling ducks and wood ducks. I hope that you will consider this information when evaluating candidate projects.

The Island Road Marsh Creation Project sponsored by the NOAA Fisheries Service is located in the eastern portion of the Terrebonne Basin, within the Terrebonne Marshes Ecological Management Unit (EMU) as identified by the Terrebonne Parish Coastal Zone Management Program Document (2000). The area is directly south of the Montegut subunit of the Wildlife Management Area managed by Louisiana Department of Wildlife and Fisheries, and south of Island Road, the boundary between the Montegut EMU and Terrebonne Marshes EMU.

The primary goal of this project is to create approximately 397 acres of marsh and nourish an additional 31 acres between Island Road and the Twin Pipelines Corridor. The project will provide natural protection to Island Road, (the only access between Isle de Jean Charles and the nearest community of Pointe-Aux-Chenes); will restore a portion of Cutoff Canal and the Bayou Jean LaCroix ridge and provide additional protection to non-critical oil and gas facilities (pipelines) located in the

area from wave energy. The restored marsh and associated edge habitat will also promote conditions conducive to the growth of submerged aquatic vegetation, an essential waterfowl habitat.

This project is in keeping with Louisiana's 2012 Comprehensive Plan for a Sustainable Coast (including recent guidance developed for CWPPRA projects), and the Terrebonne Parish Coastal Zone Management and Restoration Advisory Committee continues to rank this area as a priority area in its ongoing restoration planning efforts. In addition, restoration projects in this area will produce positive synergies with on-going levee and mitigation projects in adjacent areas being implemented by the Terrebonne Levee and Conservation District. Synergistic benefits, direct and indirect, will also be provided by ongoing efforts in the area sponsored by Ducks Unlimited, Inc., with the participation of cooperating landowners, Terrebonne Parish Consolidated Government, and the Terrebonne Levee District.

Also in the Terrebonne Basin, in western Lafourche Parish is the proposed Grand Bayou Hydrologic Restoration Project sponsored by the US Fish and Wildlife Service. This project, located within the North Bully Camp and St. Louis Canal mapping units, would increase the flow of fresh water from the Gulf Intra-Coastal Waterway (GIWW) down Grand Bayou Canal. The increase in fresh water would lower salinities and provide nutrients to the wetlands south of the GIWW on the east and west banks of Grand Bayou Canal. The project as proposed would utilize a hydraulic dredge to expand the cross section of the canal from its average of 628 cfs to 1,604 cfs. Material dredged from the channel would be used to create approximately 126 acres of intermediate marsh. A rock plug on the west bank of the canal would be replaced with a 5-48" flap-gated culvert water control structure to provide freshwater flow to the marshes to the west and an earthen plug removed on the east bank to allow freshwater to flow into the marshes to the east through Margaret's Bayou. The project would result in approximately 676 net acres over the project life.

This project is also consistent with the principles of Louisiana's 2012 Comprehensive Plan for a Sustainable Coast, and has long been an area of common concern for Terrebonne and Lafourche Parishes.

Please give these projects every favorable consideration possible under the guidelines used by the Coastal Protection and Restoration Authority when evaluating projects for Phase I (E&D) funding through the CWPPRA program.

Please do not hesitate to contact me should you have any questions or require additional information.

Sincerely,

Leslie R. Suazo
Coastal Restoration Coordinator

CC: Garrett Graves, GOCA
Charlotte Randolph, Lafourche Parish Government
Michel Claudet, Terrebonne Parish Government

Timothy Allen, Apache Louisiana Minerals LLC
Phil Precht, Conoco Phillips
Jerry Holden, Ducks Unlimited
Scott Manley, Duck Unlimited
Archie Chaisson, Lafourche Parish Government
Amanda Penick, Lafourche Parish Government
Al Levron, Terrebonne Parish Government
Nick Matherne, Terrebonne Parish Government

985.873.6401 Office

985.873-6409 Fax

Saltwater Fishing Capital of the World

Go Green. Please consider the environment before printing this email.

LBC_ConsolGovRGB

From: Michel Claudet
Sent: Friday, December 06, 2013 9:13 AM
To: 'Hansen, Richard L COL MVN'; 'Holden, Thomas A MVN'
Subject:

Dear Colonel and Tom, the CWPPRA Tech Committee is scheduled for Thursday in Baton Rouge. Terrebonne has two projects that need the support of the Corps. I have attached data sheets and talking points on each project. Madison Bay is up for construction funding and Island Road is up for engineering and design.

These projects are both very critical. I certainly helps to protect our Morganza levees. It certainly is in an area with a large Native American population. We have strong agency support but we need your support.

Please remember that these are both in Eastern Terrebonne which had overwhelming public support for additional projects in our area.

We respectfully ask for your support.

Michel H. Claudet

Parish President

P.O. Box 6097

Houma, LA 70361

985.873.6401 Office

985.873-6409 Fax

Island Road Marsh Creation

Up for Engineering & Design Funding

- Isle de Jean Charles – Native American Community
- Island Road only access for residents
- Road recently reconstructed by TPCG at a cost of over $7 million
- Open water area south of Road creates hard wave energy that impacts island and road
- Only 2 landowners: Apache & ConocoPhillips – both supportive
- Important duck habitat.
- Ducks Unlimited and ConocoPhillips planning to build terraces nearby, supplementing the project
- It's been 3 years since a project has received Engineering funding in Terrebonne. 1/5 of LA's land loss, 2nd most rapidly-vanishing parish, not enough projects coming our way.

Corporate Real Estate
SLA / Feelands
ConocoPhillips Company
P.O. Box 7097
Houma, LA 70361-7097
phone 985-879-1517
fax 985-872-1509

ConocoPhillips

December 9, 2013

Mr. Thomas A. Holden
Deputy District Engineer
U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, Louisiana 70160

Re: Phase I Funding Request
Island Road Marsh Creation and Nourishment Project
Grand Bayou Hydrologic Restoration

Dear Mr. Holden:

As you are aware, the Technical Committee of the Coastal Wetlands Planning, Protection and Restoration Act program will be meeting in Baton Rouge on December 12, 2013 to select up to four candidate projects for Phase I, Engineering and Design funding.

The Island Road Marsh Creation Project sponsored by the NOAA Fisheries Service is located in the eastern portion of the Terrebonne Basin, directly south of the Montegut subunit of the Wildlife Management Area managed by Louisiana Department of Wildlife and Fisheries, and south of Island Road, between Island Road and the Twin Pipelines corridor.

The Louisiana Land & Exploration Company LLC (LL&E) and ConocoPhillips is the major landowner in which the above referenced project is proposed. LL&E is in support of this project and will provide land rights as we have done on all the past CWPPRA projects.

As you know, the primary goal of this project is to create approximately 397 acres of marsh and nourish an additional 31 acres in the area between Island Road and the Twin Pipelines Corridor. The project will provide natural protection to Island Road, (the only access between Isle de Jean Charles and the nearest community of Pointe-Aux-Chenes); will restore a portion of Cutoff Canal and the Bayou Jean LaCroix ridge and provide additional protection to non-critical oil and gas facilities (pipelines) located in the area from wave energy. The restored marsh and associated edge habitat will also promote conditions conducive to the growth of submerged aquatic vegetation, an essential waterfowl habitat.

This project is in keeping with Louisiana's 2012 Comprehensive Plan for a Sustainable Coast (including recent guidance developed for CWPPRA projects), and is a priority project area for

Terrebonne Parish. Additionally, restoration projects in this area will produce positive synergies with on-going levee and mitigation projects in adjacent areas being implemented by the Terrebonne Levee and Conservation District as well as our own restoration efforts in the area through our restoration partnership with Ducks Unlimited, Inc. We fully support this project and sincerely believe that it will be of great value in enhancing the overall restoration protection and restoration activities planned for the area.

Also in the Terrebonne Basin, in western Lafourche Parish is the proposed Grand Bayou Hydrologic Restoration Project sponsored by the US Fish and Wildlife Service. This project, located within the North Bully Camp and St. Louis Canal mapping units, would increase the flow of fresh water from the Gulf Intra-Coastal Waterway (GIWW) down Grand Bayou Canal. The increase in fresh water would lower salinities and provide nutrients to the wetlands south of the GIWW on the east and west banks of Grand Bayou Canal. While not directly impacted by this project as landowners, LL&E Coastal Wetlands located to the south of the project area would receive benefit from the addition of freshwater in to this area. Furthermore, through its partnership with Ducks Unlimited, ConocoPhillips plans an aggressive terracing program in this area, and additional freshwater will increase the overall benefits provided by the terraces through increased habitat diversity.

As you may know, LL&E has long been a supporter of coastal restoration activities in Louisiana. We have spent millions in the wetlands trying to stem the tide of coastal erosion. Since the inception of the CWPPRA Program, we have fully supported both State and Federal efforts to restore, enhance or protect coastal wetlands. We, along with Fina-LaTerre, now Apache, were the first private entities to sponsor a coastal restoration project, the Brady Canal Project. LL&E has also donated thousands of acres for coastal restoration projects such as the Barrier Islands and the West Belle Pass Restoration Projects. Working with public agencies, we have issued numerous scientific research permits, as well as servitudes and easements for other restoration projects. We have also issued a permit covering portions of our property in a 7-parish area for the CRMS Study.

We sincerely appreciate the cooperative efforts of all parties involved in the protection and restoration of Louisiana's coastal wetlands. Continuing with that spirit of cooperation, we are requesting your support for these projects.

Sincerely,

The Louisiana and Land and Exploration Company LLC
Phillip R. Precht
Attorney-in-Fact

Mailing list for 2014 Solicitation of View:

Coalition to Restore Coastal Louisiana
Barataria-Terrebonne National Estuary Program
Department of Public Safety Highway Safety Commission
Department of the Army Technical Support
Department of Wildlife & Fisheries Louisiana Natural Heritage Program
Department of Agriculture and Forestry - Office of Soil & Water Conservation and Office of Forestry
Department of Culture Recreation & Tourism/Division of Archaeology and Office of State Parks
Department of Economic Development Office of Business Development
Division of Administration State Land Office and State Planning Office
Ducks Unlimited Restoration Coordinator, Leslie Suazo
Environmental Protection Agency Source Water Protection and Federal Activities
Federal Transit Administration Region 6
Floodplain Management Program District 64
Floodplain administrator Terrebonne parish police
Houma-Terrebonne Planning and Zoning Commission
Isle de Jean Charles Band
Inter-Tribal Council of Louisiana, Inc.
Lafourche-Terrebonne Soil and Water Conservation District
Louisiana Department of Environmental Quality Linda Hardy, Office of the Secretary
Louisiana House of Representatives District 53, 52, and 51
Louisiana Senate District 20 and 21
Louisiana Department of Natural Resources Office of Conservation, Office of Mineral Resources
Louisiana Good Roads Association
Louisiana Intertribal Council
Louisiana State University Sea Grant Legal Advisory Service
Louisiana Choctaw Tribe
Natural Resources Conservation Service
Nichols State University SLEC
Office of Indian Affairs
Point au Chien Tribe
South Central Planning and Development Commission
South Louisiana Economic Council
Seminole Nation of Oklahoma
Terrebonne Parish Consolidated Government
Terrebonne Parish School Board
Terrebonne Port Director
Terrebonne Parish Civil Defense
United Houma Nation
U.S. Geological Survey
U.S. House of Representatives; 1st district Steve Scalise
U.S. National Park Service
U.S. Senate - David Vitter and Bill Cassidy

Summary of Comments from 2014 Solicitation of Views

- Ducks Unlimited - Leslie Suazo indicated the project is “a high priority and will provide important habitat for a variety of fish and wildlife.” 01-19-2016
- DOTD – Jennifer Deglandon Rachal, Floodplain Management Program Coordinator, indicated that “during the improvements and construction, there must be allowance for the adequate flow of water

and assurance that there will be no back up of water. There must be no instance of the creation of flooding where there was no flooding prior to construction. At this time, consideration must be given to the responsibility for cleaning debris and keeping the surrounding area clear so as not to interfere with its function."12-28-2015

- LDWF – Amity Bass, Natural Heritage Program Coordinator, indicated the Coastal and Nongame Resources Division concluded "no impacts to rare, threatened, or endangered species or critical habitats within Louisiana's boundary are anticipated for the proposed project." The Louisiana natural heritage program (LNHP) reports do not address the occurrence of wetlands at the project site. "If at any time Heritage tracked species are encountered within the project area, please contact the LNHP Data Manager." 12-18-2015
- South Central Planning and Development commission (SCPDC) –Kevin Belanger, Chief Executive Officer, stated "the proposed project will not have a negative impacts on open space, recreational, or cultural facilities. We do not anticipate any impact on the existing demographic employment or income patterns of the area as a result of the project." 12-15-2015
- Lafourche- Terrebonne Soil and Water Conservation District – Jerome Cantrelle, Chairman, stated the district supported the project. 12-18-2015
- EPA - Sole Source Aquifer Program – Omar Martinez, Coordinator, confirmed the project "does not lie within the boundaries of a designated sole source aquifer and is thus not eligible for review under the SSA program." 12-22-2015
- USACE –Karen Clement, Solicitation of Views Manager, advised that a wetland permit would be necessary and provided a case # MVN-2015-02393-ST. 12-15-2015
- LDEQ- Linda Hardy had "no objections" to the project as proposed and provided general guidelines and contacts to obtain approvals and environmental permits for the project. Further, Lafourche Parish was listed as having attainment with the National Ambient Air Quality Standards" 12-15-2015
- LDNR Office of Conservation –James Welsh, Commissioner, replied with an oil and gas infrastructure findings and listing contact information. 12-10-2015
- Terrebonne Parish Consolidated Government Planning and Zoning- Christopher Pulaski stated the Houma-Terrebonne Regional Planning Commission had "no objection." 12-4-2015
- SHPO replied "no known historic properties would be affected by this undertaking" 12/10/2015 to the SOV, and the same when a cultural resource statement for the borrow area was provided 02/05/2016

Assessed land owners:

Apache Louisiana Minerals LLC
ConocoPhillips/Louisiana Land and Exploration Company
Dennis Cenac, III et al.
State of Louisiana

Appendix D – EJSCREEN Analysis

A Standard report from *EPA EJSCREEN* was run with a 10-mile radius from the center of the TE-117 marsh creation areas and provides the findings of U.S. Census Bureau 2010 census and estimates from the American Community Survey 2014 to 2018 estimates for the defined area vs State, EPA region, and USA averages. The 10-mile radius includes Block Group 3 Census Tract 11 with Montegut, Pointe aux Chenes and Isle de Jean Charles and Block Group 1, Census Tract 12.01 with Chauvin. The results provide variables for detailed exploration and are summarized here. Variables from the EPA EJStandard report were reviewed for any having notable difference from 50th percentile –:

- education (95th percentile of state having less than high school education),
- income (74th percentile of US low income),
- lead paint housing (80th percentile of EPA region with pre-1960s housing)
- waste water contamination (74th percentile of US distance to wastewater discharge)

Census Reports of 2010 indicate the majority of the population are adults 18-65, with a high (84%) home-ownership, and a 4% unemployment rate. This is above average for the age range and ownership, with an average unemployment rate. These indicators help focus the information searches below, such as excluding children / focus on adults when possible. This was compared to the 2020 census. No dramatic changes in population are indicated by the 2020 census (*QuickFacts*, which shows populations above 5k). The total population change of the nearest the Galliano Census Designated Place (CDP) with a 2020 population of 7,100 down 1.08% from 2010s estimate. The race composition for Block Group 3, Census tract 11 shows a 25.5% decrease in Indians and 112% increase in whites based on the 2019 ACS five year estimates.

Significant EJSCREEN Variable Education:

The factor of education is relevant to this project impact analysis in that any public material, meetings, and possibly access to that information can be affected by the populations' ability to absorb and relate the planned action to potential impacts. Limited education may also be an indicator for other community and cultural factors. For the 10 mile radius of the proposed marsh creation area 35% (~2,903 individuals) have less than a high school education (table below).

	United States	Louisiana	EPA-10 mile search
Population with less than High School Education	13%	15%	35%

Based on the 2019 ACS five year estimates, approximately 43% of Block 3, Census Tract 11 and 16% of Terrebonne Parish had an education level less than a high school diploma.

There is a total of 17% non-English speakers (~1,315 individuals age 5+) for the 10 mile radius of the marsh creation area; and a 35.1% for the Galliano CDP compared to only 8% of the state of Louisiana. Additional communication accommodations may be necessary.

Significant EJSCREEN Variable Income:

For the US, roughly 10% of the adult population were in poverty according to the US Census 2014-2020 records. Language and lack of high school diplomas are related to low income rates. Another variable of consideration is race relative to income, as more than twice the average percentage of poverty is reported for those identifying with any Black or Hispanic races. In contrast to EJSCREEN, 31% of Block 3 Census Tract 11 was within the poverty level for the 2019 ACS five year estimate.

Only 1% identify as Black which is unusually low for the state, where as 82% are White Alone. The search area population is 13% American Indian which may include another 3% for those reporting two or more races for a potential 2014-2018 total of~1280 +/605 individuals. As the census only reports Select

Populations of American Indian (none of which are in the state), further racial influence is not reportable. The project design and construction aspects should be especially sensitive to any influences on income, education, and language. Examples would include ensuring marina access for fishermen, parking and business access are not encumbered with equipment, and when possible encouragement to support local businesses be offered. A cultural representative, and language translators can be offered to ensure concerns are heard and addressed.

Significant EJSCREEN Variable Other:
Lead paint would be an indicator to consider with cumulative impacts of hazards. It shows the area is already suffering from above average toxicity and thus should have special consideration when potentially adding exhaust fumes, potential spills, etc. from the project. However, this data is likely significantly different than last reported given the storms and community relocations that have occurred since this data was collected relative to age of housing.

Water Contamination would be an indicator as above toward added health risks, and also as it relates to the project increase in turbidity due to construction, or risks of water contamination from work equipment, vehicular waste, or pipeline rupture risks. For this project, any risk of impact would be localized to a smaller area than the 10 mile radius defined. State water quality monitoring data was reviewed as part of the assessment. The project would not adversely contribute to these water quality limitations.

Subsegment IDs were identified from *LDEQ* maps, and the latest *Water Quality Report* reviewed for listed impairments. Area water quality monitoring indicates water is not sufficient for swimming or oyster propagation, but fully supports boating and fish and wildlife propagation. Suspected causes of impairments are from fecal coliform and enterococcus. The suspected source of impairment includes sewage discharges and marina / on-vessel discharges.

Appendix E - Marine Resources and EFH Assessment

This PEIS Inclusion Analysis Supplement Appendix is provided for EFH consultation with the NMFS Habitat Conservation Division.

The proposed project area contains EFH as designated by the Gulf of Mexico Fishery Management Council (GMFMC) for species that are federally managed under the Magnuson-Stevens Fishery Conservation and Management Act, P.L. 104-297; 16 U.S.C. 1801 et seq. (Magnuson-Stevens Act). Categories of EFH in the project area include estuarine emergent wetlands (*e.g.,* marsh), estuarine water column, and estuarine water bottoms (e.g., soft bottom) (GMFMC 2005). The table below lists the categories of EFH in the project area and borrow areas by life stage for federally managed species.

In the Terrebonne Basin, the estuarine-dependent assemblage, including white and brown shrimp, has shown decreasing trends over the last 10 to 20 years (LCWCRTF and WCRA 1999). These species migrate through tidal passes during their post-larval life stage and depend on the estuarine environment for survival and reproduction. Shrimp are prey species for other federally managed fish and crustaceans (GMFMC 1998).

TABLE 1. ESSENTIAL FISH HABITAT (EFH) IN THE PROJECT AREA (INCLUDING BORROW AREA) FOR FISHERY SPECIES MANAGED BY THE GULF OF MEXICO FISHERY MANAGEMENT COUNCIL AND HIGHLY MIGRATORY SPECIES MANAGED BY THE NATIONAL MARINE FISHERIES SERVICE.

Species	Life Stage	Habitat
Brown shrimp	Post larvae/juvenile	estuarine marsh, water column, and soft bottom
White shrimp	Post larvae/juvenile	estuarine marsh, water column, and soft bottom
Red drum	Post larvae/juvenile/adult	estuarine marsh, water column, and soft bottom

Source: National Marine Fisheries Service

Impacts of No Action

The marsh creation areas comprised of three cells total 295 acres of estuarine marsh and softbottom. The borrow area is 394 surface acres of softbottom in Lake Tambour. Existing marsh in the marsh creation areas are expected to continue the current conversion of marsh to open-water. The land loss rate is estimated at -1.46%/year with subsidence of the marsh at 6.4 mm/year. Open-water EFH that is already plentiful in the area would increase. The borrow area is not expected to change without the proposed action, but would be considered for similar wetland restoration actions that seek accessible viable material sources. Three oyster leases fall within the 1,500 ft. buffer of the project features and dredge pipe conveyance corridor. Less than 1 acre of oyster lease would have to be acquired whereas oyster assessments will be conducted for the other two leases unless a waiver is granted from LDWF. The amount of shell substrate existing is to be determined.

A 2021 Wetland Value Assessment (WVA) of the project 295-acre area estimated that 17 acres of marsh will be converted to water within 20 years:

Target Year 0:	Marsh 66 acres = 22%	Water = 229 acres
Target Year 1:	Marsh 65 acres = 22%	Water = 230 acres
Target Year 20:	Marsh 49 acres = 17%	Water = 246 acres

Based on field investigations there are not submerged aquatic vegetation in the project area and the WVA assumed there was none during all years in the future without the project.

Impacts of Preferred Action – Marsh Creation

The general goal of the marsh creation areas is to create habitat, address marsh loss in the Twin Pipelines area between Pointe aux Chenes and Isle de Jean Charles. This is to begin restoring the structural framework of the marsh in the immediate vicinity in the near term and a larger across basin area cumulatively over the longer term in conjunction with other projects. The specific project goal is to create 229 acres and nourish 66 acres of saline marsh in current shallow open water/broken marsh and maximize the amount of time the created marsh platform is intertidal throughout the project 20-year design life.

Construction impacts from sediment removal and materials placement activities are similar to each other, and would cause direct and indirect, short-term, localized, minor and moderate, adverse impacts to living coastal and marine resources and EFH during the implementation phase of the project. Waterbottom, water column, and existing marsh habitat for fisheries in the creation and nourished areas will be temporarily lost during construction and up to three years after construction. This is based on the settlement curves in the design report showing the time for the constructed marsh fill elevation to settle into the inundation and Mean Low Water to Mean High Water ranges and also the two-step plans for containment dike gapping for dewatering and tidal exchange. The containment dikes will be gapped to the extent possible prior to construction demobilization to allow dewatering. Completion of dike gapping will be field fit through site inspections and review of elevation surveying no later than 3 years after construction completion to allow sheet flow, material linkages, and access for fish and wildlife. Access to and use by fisheries organisms of the created and nourished acreage will increase over 20 years as the marsh creation areas settle and sea level rises. Heavy construction and access machinery has the potential to increase turbidity at the marsh creation and borrow areas, compact soils, and leak petroleum products.

Slow-moving or sessile organisms in the borrow areas may be killed during dredging. Sessile organisms in the placement areas may be buried or injured. These infaunal species are anticipated to quickly recolonize after construction completion. Use of the created marsh by motile nekton will be similar to natural marsh once the hydraulically placed fill settles and the dikes are gapped. Created marsh will provide indirect benefits to adjacent water column, waterbottoms, and saline marsh by creating quiescent areas from reducing wave fetch. Material placement would increase estuarine saline marsh acreage, longevity, and quality providing long-term benefits to fish and wildlife resources.

A 2020 Wetland Value Assessment of the project 295-acre area, which included the projected relative sea level rise, marsh acres would be increased within 3 years of the proposed action and have a net increase of 206 acres of marsh after 20 years:

Target Year 1: Marsh = 56 acres = 19%; Water = 2 acre
Target Year 3: Marsh = 132 acres = 45% Water = 6 acres
Target Year 5: Marsh = 284 acres = 96% Water = 11 acres
Target Year 20: Marsh = 255 acres = 86% Water = 40 acres
Net acres (FWOP-FWP) at TY20 = ***206 acres***

The WVA assumed a minor increase in submerged aquatic vegetation in water within the marsh creation areas to 10% cover at years five and 20.

Determination

NOAA has determined the project will result in temporary adverse impacts to waterbottoms and water column. However, beneficial temporal and vastly net positive impacts to estuarine marsh will result. Therefore the project would not have a substantial adverse effect on EFH or federally managed fishery species. Concurrence on this determination is requested from the NOAA National Marine Fisheries Service, Southeast Regional Office, Habitat Conservation Division.