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CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
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Regional Planning and Environment
Division South
Environmental Planning Branch

Draft FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Additional Dredged Material Placement Areas For Maintenance of Bayou Chene Terrebonne Parish, Louisiana Environmental Assessment #590

The U.S. Army Corps of Engineers (USACE), Mississippi River Valley Division, Regional Planning and Environment Division South, has prepared a draft Environmental Assessment (EA) for the New Orleans District (CEMVN) to evaluate potential impacts associated with additional dredged material placement areas which would be designated and used for the placement of shoal material removed during routine maintenance of the Federally authorized project of "Atchafalaya River and Bayous Chene, Boeuf, and Black, Louisiana" navigation channel's Bayou Chene reach (hereinafter referred to as "Bayou Chene"). The proposed new dredged material placement areas are located along the east bank of the Avoca Island Cutoff. The proposed project is located in Berwick approximately 10 miles south of Morgan City, Louisiana in Terrebonne Parish.

The original project, Atchafalaya River and Bayous Chene, Boeuf, and Black, Louisiana, was constructed to permit the passage of large offshore drilling rigs and related marine equipment between construction and repair facilities on Bayous Boeuf and Black to drilling sites in the Gulf of Mexico. This objective was accomplished by enlarging certain existing navigation channels located in Assumption, St. Mary, and Terrebonne Parishes, east and south of Morgan City between US Highway 90 and the Gulf of Mexico. Channel dimensions in the current project area were increased to 20-by 400-feet. Dredged material from the channel enlargements was deposited within diked disposal areas, confined shallow water areas along the waterway, and unconfined disposal in marsh, willow thickets, and open water.

Local interest was a significant deciding factor in adding these new beneficial use placement areas. Marshlands along the east bank of Bayou Chene have subsided overtime and the gradual expansion of Lake Gascha's connection with the bayou has led to infilling of the lake. Local property managers and landowners expressed an interest in restoring the bayou's bankline to protect interior wetlands and converting Lake Gascha into a more productive fisheries habitat. As both of these objectives are feasible from an engineering perspective and likely would not increase maintenance dredging costs, the District decided to evaluate use of these sites for future maintenance events.

The CEMVN proposes additional dredge material placement areas along the east bank

of the Avoca Island Cutoff which would be utilized during routine maintenance of Bayou Chene. Shoal material removed from the channel would be used beneficially to increase the elevation of shallow open-water areas in Lake Gascha to within the range of normal plants and more productive fisheries habitat. Dredged material would also be sprayed or applied as a thin layer to placement areas along the channel banklines to add mineral solids to and fill shallow depressions within sections of fragmented marsh.

Lake Gascha Placement Areas – A 100-acre area along the northern rim of the lake and 250-acre area along the southern rim of the lake would be designated for dredged material placement. Existing landforms along the lake's edge and temporary earthen dikes would be used to control the spread of dredged material within the designated areas and direct dredged slurry away from adjacent watercourses. Natural landform elevations are approximately +4.5-feet North American Vertical Datum 1988 (NAVD88), and temporary earthen dikes would have an elevation of about +6-feet NAVD88. Due to the high silt and clay content of Bayou Chene shoal material, initial dredge slurry stacking height would be within about 1 foot of the water surface elevation during placement operations and is expected to settle to an elevation between +1 and +3-feet NAVD88 (coincident with normal high and low river stage) after completion of work.

Bankline Placement Areas – A 2,500-foot segment of the bankline just north of Lake Gascha and a 7,500-foot segment of the bankline south of the lake would be designated for dredged material placement. A specialized work barge anchored near the bankline of Bayou Chene would be used to spray dredged material out into the bankline placement areas. The sprayed dredge slurry would spread as a thin layer, approximately 6 inches to 1 foot thick and extending out about 500 feet from the point of discharge, with solids being filtered out by existing vegetation and settling in shallow depressions. Initial dredged material stacking heights would not exceed above +5 feet NAVD88 and the work barge would be repositioned, as needed, to avoid excessive stacking of dredged material.

Approximately 30 acres of fragmented marsh north of the lake and 90 acres south of the lake would be nourished by the discharge.

In addition to the Proposed Action, a "No Action" alternative was also evaluated.
For the Proposed Action, the potential effects were evaluated. A summary of the potential effects are listed in Table 1:

Table 1: Summary of Potential Effects of the Recommended Plan

	Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Aquatic resources/Fisheries	☒	☐	☐
Wetlands	☒	☐	☐
Wildlife habitat	☒	☐	☐
Threatened/Endangered Species – Critical Habitat	☒	☐	☐

	Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Cultural resources	☒	☐	☐
Water quality	☒	☐	☐
Environmental Justice	☐	☐	☒
Socio-Economic Resources	☐	☐	☒
Visual Resources (Aesthetics)	☐	☐	☒
Prime and Unique Farmland	☐	☐	☒
Recreational resources	☐	☐	☒
Air Quality	☒	☐	☐
Hazardous, toxic & radioactive waste	☒	☐	☐
Tribal trust resources	☐	☐	☒
Navigation	☒	☐	☐

All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the Proposed Action.

The proposed action will allow restoration of safe navigation within the bayou and will also enhance wetland functional quality at the site by converting open water to marsh. The exact acreage of the marsh created at the site will be dependent upon bottom contours and composition of dredged material. Even though minimal in size when compared to the extent of the adjacent marsh, marsh directly and/or secondarily affected by development activities, and wetland loss from natural causes, the proposed created wetland would contribute cumulatively to wetland restoration within the Subbasin. Based on human activities and land use trends in this region, it is reasonable to anticipate that future activities will further contribute to cumulative degradation of wetland resources from the public and private sectors obtaining Section 10/404 permits; local, state and federal projects; and natural events such as subsidence and wave erosion. In the past, many actions were taken with little consideration given to project related impacts on wetland ecosystems. However, a greater realization of the importance of wetlands to the public has resulted in more critical evaluation of the need to impact wetland for residential, commercial or industrial, and governmental projects. With gained knowledge comes technological advancement in developing more environmentally sensitive project designs and construction methods, as well as requirements to functionally compensate for unavoidable project-related impacts to wetlands so as to meet the Nation’s goal of no net loss of wetland resources. Wetlands will continue to be impacted by public, private, and governmental projects. However, in having a greater awareness of the importance of wetlands, impacts associated with this and future projects will be evaluated to assure a balance is maintained between the proposed action and impacts on the environment. No significant impacts to existing wetlands near the project area would occur. It is anticipated that through the efforts taken to avoid and minimize wetland impacts and the beneficial placement of dredged material that functionally compensates unavoidable remaining

impacts, the project will not result in substantial direct, secondary or cumulative adverse impact on the aquatic environment. With implementation of the proposed action, there will be some disturbances to water quality in the immediate vicinity of the dredge and disposal areas; however, the increase in turbidity should primarily be confined to Bayou Chene and Lake Gascha and the immediately adjacent waterways. Given the high background turbidity levels in the area, disturbance to water quality would be temporary, confined, and short lived.

Pursuant to section 7 of the Endangered Species Act (ESA) of 1973, as amended, USACE has determined the proposed action is not likely to adversely affect any threatened or endangered species or their associated critical habitat. The Application for Information and Planning Consultation (IPaC), developed by the U.S. Fish and Wildlife Service, resulted in a determination of "may affect, not likely to adversely affect" on July 15, 2022. Pursuant to Executive Order 13175, the National Environmental Policy Act (NEPA), and Section 106 of the National Historic Preservation Act (NHPA), on October 17, 2022, CEMVN submitted a finding of "No Historic Properties Affected" for this undertaking to the Louisiana State Historic Preservation Officer (SHPO) of the Department of Culture Recreation and Tourism, the Choctaw Nation of Oklahoma, the Coushatta Tribe of Louisiana, Chitimacha Tribe of Louisiana, the Jena Band of Choctaw Indians, the Mississippi Band of Choctaw Indians, Muscogee Creek Nation, the Seminole Nation of Oklahoma, Seminole Tribe of Florida, and the Tunica-Biloxi Tribe of Louisiana. SHPO concurrence with this determination was received on November 23, 2022. In addition, on November 19, 2022, the Choctaw Nation of Oklahoma responded, via email, that the project lies outside of their area of historic interest; no other consulting parties responded within the regulatory consultation timeframe as specified per 36 CFR 800.4(d)(1)(i) and 36 CFR 800.5(c)1. Accordingly, CEMVN may proceed with the Undertaking assuming concurrence in compliance with Section 106 of the NHPA and in coordination NEPA, as amended (42 U.S.C. § 4321 et seq.). No impact to known or unknown cultural resources is expected to occur by the proposed action. This project would be subject to the standard change in scope of work, unexpected discovery, and unmarked human burial sites act provisions.

Pursuant to the Clean Water Act (CWA) of 1972, as amended, a CWA Section 404(b)(1) public notice was distributed to the public and comments were solicited on January 26, 2022. No adverse comments were received in response to the 30-day public review. A Section 404(b)(1) short form evaluation was signed on December 08, 2022. Additionally, a CWA Section 401 State Water Quality Certificate was received by the Louisiana Department of Environmental Quality for the proposed action in EA #590 on May 17, 2022 (WQC 220517-01).

Pursuant to the Coastal Resources Management Act of 1978, as amended, the Louisiana Department of Natural Resources (LDNR) concurred with the USACE determination that the project as proposed is consistent with the Louisiana Coastal Resources Program. LDNR issued Coastal Zone Consistency in a letter dated October 12, 2022 (C20220114).

The following environmental design commitments are an integral part of the proposed action:

1. If the proposed action is changed significantly or is not implemented within one-year MVN will reinitiate coordination with the USFWS to ensure that the proposed action would not adversely affect any Federally-listed threatened or endangered species or their habitat.

2. If any unrecorded cultural resources are determined to exist within the proposed project boundaries no work will proceed in the area containing these cultural resources until an MVN archeologist has been notified and final coordination with the SHPO and the Tribal Historic Preservation Officer has been completed.

The proposed action has been coordinated with appropriate Federal, state, and local agencies and businesses; organizations; and individuals through distribution of draft EA #590 for their review and comment. Draft EA #590 is attached hereto and made a part of this draft FONSI.

This office has assessed the potential environmental impacts of the proposed action. Based on this assessment, a review of the comments made on draft EA #590, and the implementation of the environmental design commitments listed above, a determination has been made that the proposed action would have no significant impact on the human environment. Therefore, an Environmental Impact Statement will not be prepared.

DRAFT

_____
Date

_____
CULLEN A. JONES
COL, U.S. Army
Commanding

DRAFT ENVIRONMENTAL ASSESSMENT

ADDITIONAL DREDGED MATERIAL PLACEMENT AREAS

FOR

MAINTENANCE OF BAYOU CHENE

TERREBONNE PARISH, LOUISIANA

EA #590

U.S. Army Corps of Engineers
Mississippi Valley Division
Regional Planning and Environment Division South
New Orleans District

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FOR

MAINTENANCE OF BAYOU CHENE

TERREBONNE PARISH, LOUISIANA

EA #590

1. INTRODUCTION

1.0 The U.S. Army Corps of Engineers (USACE), Mississippi River Valley Division, Regional Planning and Environment Division South, has prepared this draft Environmental Assessment (EA) for the New Orleans District (CEMVN) to evaluate potential impacts associated with additional dredged material placement areas which would be designated and used for the placement of shoal material removed during routine maintenance of the Federally-authorized project of "Atchafalaya River and Bayous Chene, Boeuf, and Black, Louisiana" navigation channel's Bayou Chene reach (hereinafter referred to as "Bayou Chene"; see Figure 1). The proposed new dredged material placement areas are located along the east bank of the Avoca Island Cutoff. The proposed project is located in Berwick approximately 10 miles south of Morgan City, Louisiana in Terrebonne Parish.

The original project, Atchafalaya River and Bayous Chene, Boeuf, and Black, Louisiana, was constructed to permit the passage of large offshore drilling rigs and related marine equipment between construction and repair facilities on Bayous Boeuf and Black to drilling sites in the Gulf of Mexico. This objective was accomplished by enlarging certain existing navigation channels located in Assumption, St. Mary, and Terrebonne Parishes, east and south of Morgan City between US Highway 90 and the Gulf of Mexico. Channel dimensions in the current project area were increased to 20-by 400-feet. Dredged material from the channel enlargements was deposited within diked disposal areas, confined shallow water areas along the waterway, and unconfined disposal in marsh, willow thickets, and open water.

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engineering perspective and likely would not increase maintenance dredging costs, the District decided to evaluate use of these sites for future maintenance events.

This draft EA has been prepared in accordance with the National Environmental Policy Act of 1969 and the Council on Environmental Quality's Regulations (40 CFR 1500-1508), as reflected in the USACE Engineering Regulation (ER) 200-2-2. This draft EA provides sufficient information on the potential adverse and beneficial environmental effects to allow the District Commander, USACE, CEMVN, to make an informed decision on the appropriateness of an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

1.1 PROPOSED ACTION

1.1.1 The CEMVN proposes additional dredge material placement areas along the east bank of the Avoca Island Cutoff which would be utilized during routine maintenance of Bayou Chene. Shoal material removed from the channel would be used beneficially to increase the elevation of shallow open-water areas in Lake Gascha to within the range of normal high and low river stages, thereby promoting the establishment of emergent wetland plants and more productive fisheries habitat. Dredged material would also be sprayed or applied as a thin layer to placement areas along the channel banklines to add mineral solids to and fill shallow depressions within sections of fragmented marsh.

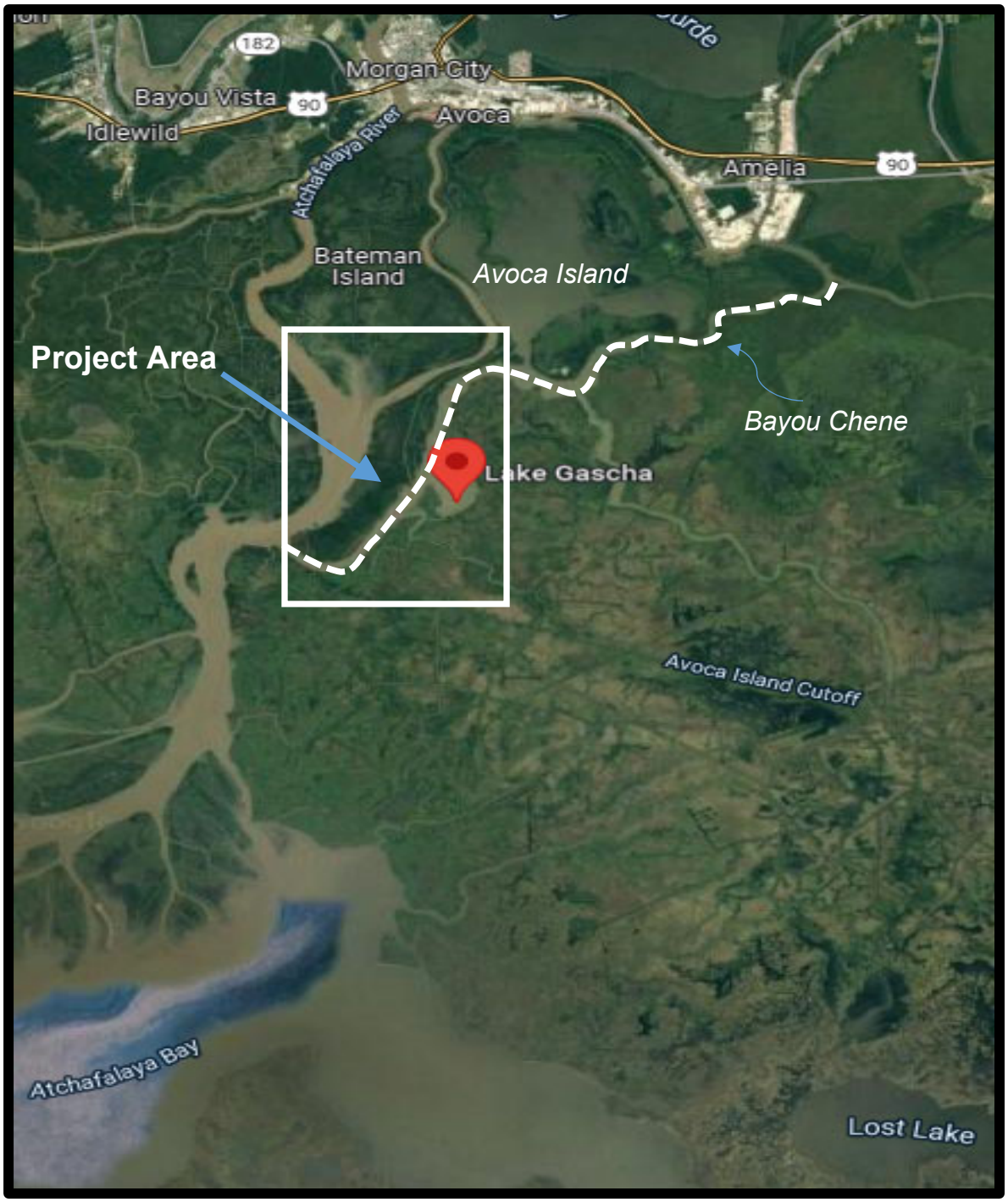


Figure 1. Project Vicinity Map

1.1.2 ***Lake Gascha Placement Areas*** – A 100-acre area along the northern rim of the lake and 250-acre area along the southern rim of the lake would be designated for dredged material placement (Figure 2). Existing landforms along the lake's edge and temporary earthen dikes would be used to control the spread of dredged material within

the designated areas and direct dredged slurry away from adjacent watercourses. Natural landform elevations are approximately +4.5-feet North American Vertical Datum 1988 (NAVD88), and temporary earthen dikes would have an elevation of about +6-feet NAVD88. Due to the high silt and clay content of Bayou Chene shoal material, initial dredge slurry stacking height would be within about 1 foot of the water surface elevation during placement operations and is expected to settle to an elevation between +1 and +3-feet NAVD88 (coincident with normal high and low river stage) after completion of work.

1.1.3 ***Bankline Placement Areas*** – A 2,500-foot segment of the bankline just north of Lake Gascha and a 7,500-foot segment of the bankline south of the lake would be designated for dredged material placement (Figures 3 and 4). A specialized work barge anchored near the bankline of Bayou Chene would be used to spray dredged material out into the bankline placement areas. The sprayed dredge slurry would spread as a thin layer, approximately 6 inches to 1 foot thick and extending out about 500 feet from the point of discharge, with solids being filtered out by existing vegetation and settling in shallow depressions. Initial dredged material stacking heights would not exceed above +5 feet NAVD88 and the work barge would be repositioned, as needed, to avoid excessive stacking of dredged material. Approximately 30 acres of fragmented marsh north of the lake and 90 acres south of the lake would be nourished by the discharge.

If necessary, temporary access channels for the specialized work barge would be constructed between (perpendicular to) the navigation channel and bankline. Dredged material excavated from the access channels would be temporarily stockpiled on a work barge or in adjacent waters and used as backfill upon completion of work.

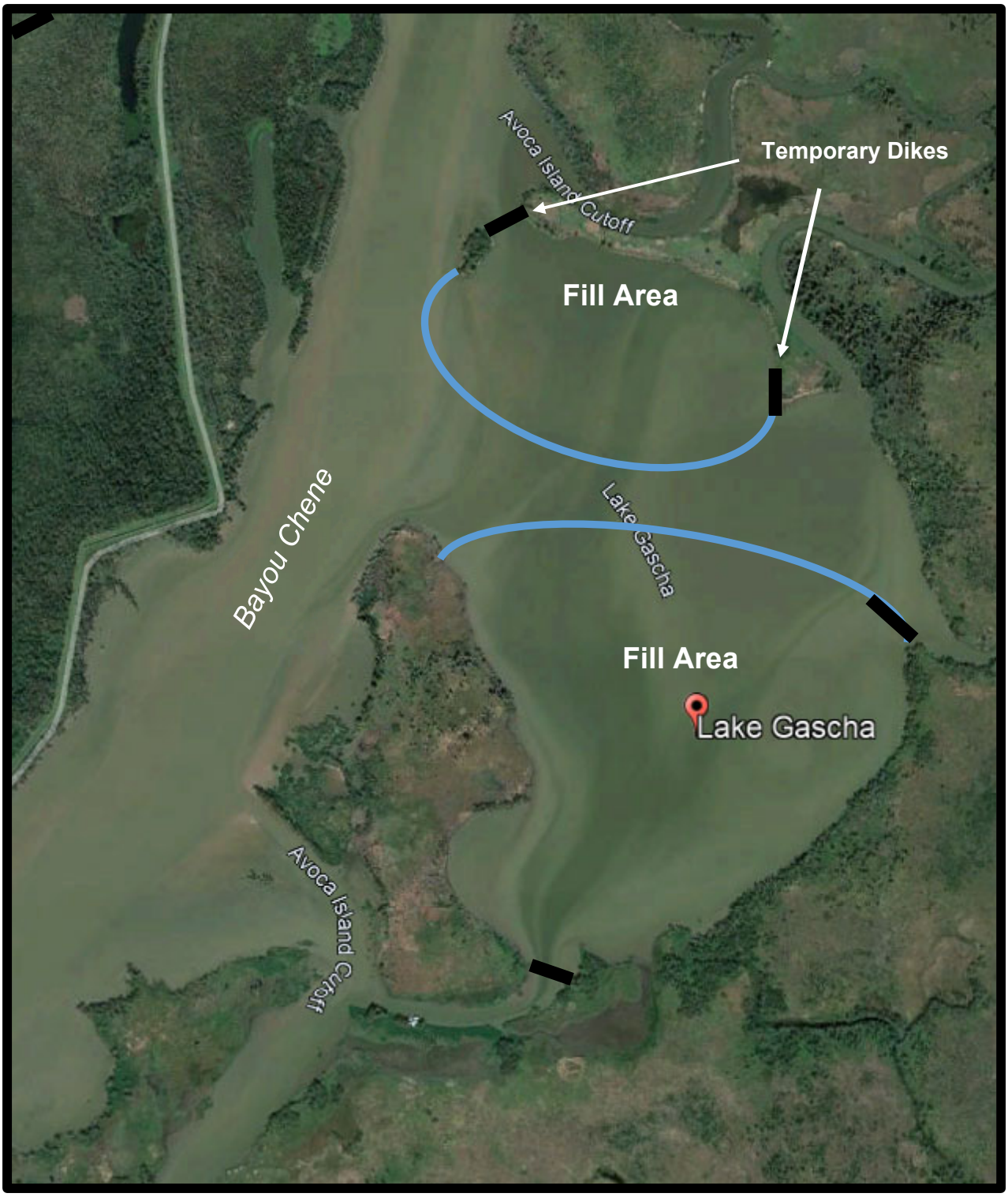
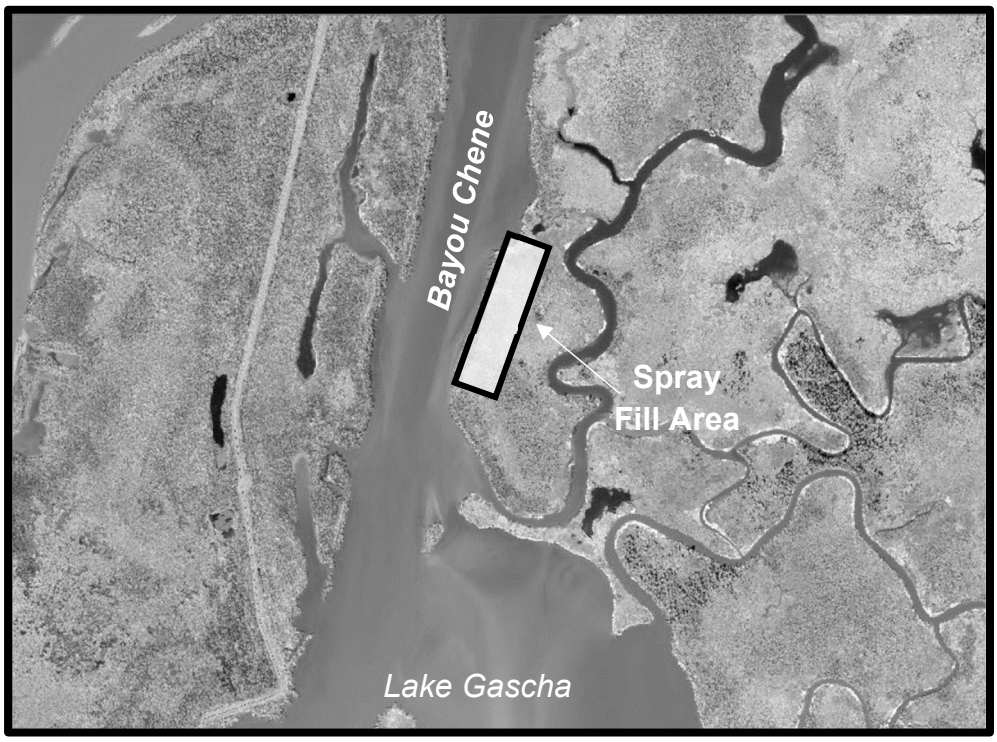
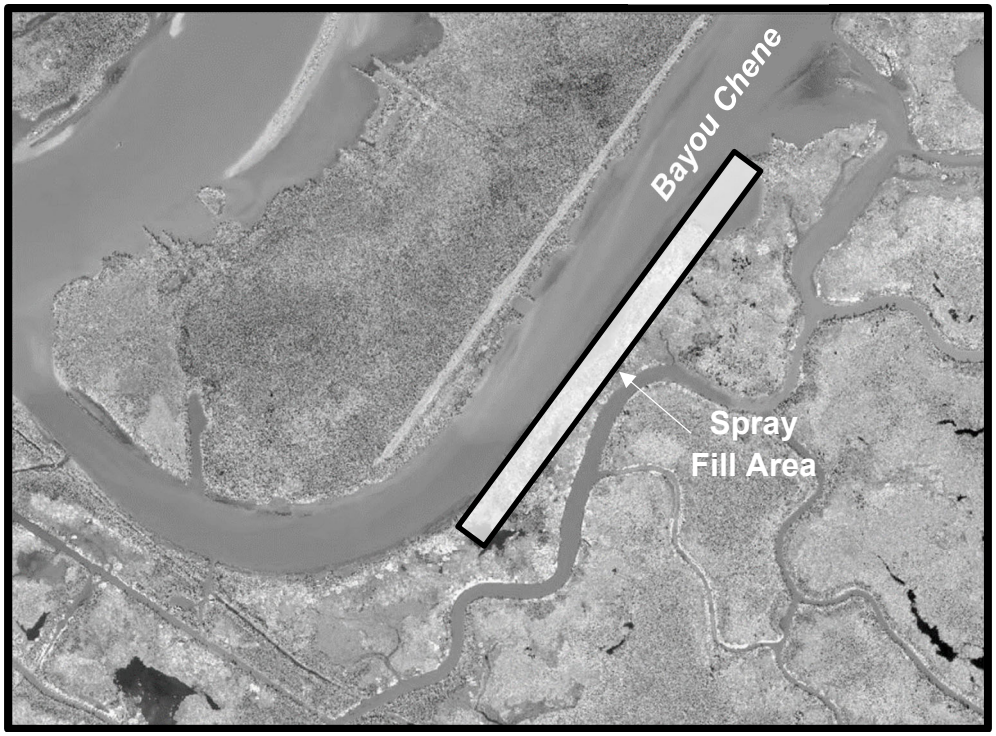


Figure 2. Dredged material placement areas within Lake Gascha.



Figures 3 and 4. Bankline placement areas north and south of Lake Gascha (above and below, respectively).



1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the proposed action is to designate additional dredged material placement areas. The proposed designation and use of the dredged material disposal areas described in this draft EA would allow for continued maintenance of Bayou Chene, creation of wetlands, restoration of fisheries grounds in Lake Gascha, and restoration of the east bank of the Avoca Island Cutoff. Shoaling of the area has resulted in insufficient water depths for small boat navigation. This action will help improve access to this area.

1.3 AUTHORITY

1.3.1 The proposed action was authorized by the Rivers and Harbors Act of 1968, House Document 155, 90th Congress, 1st Session, which provided for the following plan of improvement:

(a) a channel 20 feet deep over a bottom width of 400 feet from the vicinity of the U.S. Highway 90 crossing over Bayou Boeuf to the Gulf of Mexico via the GIWW, Bayou Chene, the Avoca Island-Cutoff Bayou Drainage channel, the Lower Atchafalaya River, and the existing project across Atchafalaya Bay to the 20-foot-depth contour in the Gulf of Mexico, except that the width in Bayou Boeuf would be reduced to not less than 300 feet where necessary because of industrial developments on both sides of the bayou, and

(b) a 20-by 400-foot-channel in Bayou Black and the GIWW from the major shipyard on Bayou Black at U.S. Highway 90 to Bayou Chene.

Construction of the inland portions of Bayous Boeuf and Black was completed in June 1978. Construction of the Bayou Chene and Avoca Island Cutoff reach was completed in September 1981. The navigational channel is maintained to project dimensions of -24 feet Mean Low Gulf (2 feet of advanced maintenance plus 2 feet of allowable over depth) by 400 feet.

1.4 PRIOR NEPA DOCUMENTS

The March 1973 Final Environmental Impact Statement (1973 FEIS), “Atchafalaya River and Bayous Chene, Boeuf, and Black, Louisiana.”, evaluated the environmental impacts the enlargement of existing navigation channels in Atchafalaya River and Bayous Chene, Boeuf, and Black to 20 feet by 400 feet to permit the passage of large offshore drilling rigs and related marine equipment. A Statement of Findings was signed on September 24, 1973. A Final Supplement to the 1973 FEIS was filed in February 1977 (USACE 1977) which assessed the dredging reaches and disposal sites for the bay and bar channel segments of the Atchafalaya River and Bayous Chene, Boeuf, and Black, Louisiana project and in Supplemental Information Report #5 dated July 25, 1984 (USACE 1984). The beneficial use-placement of dredged material on either side of the channel was cleared in EA #51 *(Atchafalaya River and Bayous Chene, Boeuf, and Black Louisiana-Deposition of Dredged Material with Developing Atchafalaya River Delta),* with

a signed FONSI dated August 28, 1985 (USACE 1985); and in EA #129 *(Atchafalaya River and Bayous Chene, Boeuf, and Black, 1990),* with a signed FONSI dated December 13, 1990 (USACE 1990).

1.5 PUBLIC CONCERNS

The public is concerned with maintaining a navigable channel to allow access by sea-going vessels to Morgan City, the GIWW, and Bayous Chene, Boeuf, and Black from the Gulf of Mexico. Marshlands along the east bank of Bayou Chene have subsided over time and the gradual expansion of Lake Gascha's connection with the bayou has led to infilling of the lake. Maintenance dredging of the Avoca Island Cutoff portion of Bayou Chene project ensures the safe and efficient passage of commercial vessels to and from these areas. Widespread public support also exists to avert further loss of coastal habitats and associated fish and wildlife resources in Louisiana, which are being lost to subsidence and erosion at a rate of approximately 25,200 acres per year since the 1970s (Barras et al. 2003). The public supports the beneficial use of dredged material, including the restoration of fish and wildlife habitat, when feasible. As these objectives are feasible from an engineering perspective and likely would not increase maintenance dredging costs, the CEMVN decided to evaluate use of these sites for future maintenance events.

2.0 ALTERNATIVES TO THE PROPOSED ACTION

2.1 ALTERNATIVE 1 – NO ACTION

The "no action" alternative to the proposed action was considered. Future CEMVN maintenance dredging operations in the inland reach of Bayou Chene of the Federally-maintained "Atchafalaya River and Bayous Chene, Boeuf, and Black, Louisiana" project would continue; however, without spraying the shoal material to the proposed placement areas, the areas would be subject to severe wave-induced erosion and ship-wake effects from the Atchafalaya River. Maintenance dredging of shoal material in the navigation channel prevents loss of project dimensions, and allows continued access to Morgan City, the GIWW, and Bayous Chene, Boeuf, and Black from the Gulf of Mexico. Without the additional proposed dredged material placement areas for Bayou Chene,. the existing disposal areas would continue to be used for disposal of maintenance-dredged material until all disposal capacity is exhausted. Once the existing disposal areas reach full capacity, dredged material would be hauled to designated disposal areas located at distances requiring a significant increase in CEMVN operations and maintenance (O&M) funding for their use. In the absence of the proposed action of shoreline protection and marsh restoration, the predicted additional environmental gains would not be achieved.

3 AFFECTED ENVIRONMENT

3.1 DESCRIPTION OF THE PROJECT AREA

The proposed action would be performed along the riverbanks of Bayou Chene and Lake Gascha in south central Louisiana within the Deltaic Plain portion of the Gulf Coastal Plain with the Atchafalaya River acting as the primary influence on geomorphic processes in this region of Terrebonne Parish. The Deltaic Plain is characterized by a shoreline with numerous bays and extensive marshes with numerous small lakes (Wells et al. 1981). This area is characterized by vast bayous, lakes, cypress swamps, willow swamps, and freshwater marshes. The project area is primarily composed of four habitat types: developed; upland; aquatic; and wetland. The developed habitats are predominantly used for pasture and other agricultural purposes. Oyster, shrimp, crabs, and fish are the major seafood contributors to the economy. Sugarcane, cattle, citrus and vegetables are the major agronomic crops in the parish. Terrebonne Parish is one of the most southern parishes of Louisiana and according to the U.S. Census data, the parish had a population of 109,580 in 2020. The proposed dredge material placement areas are situated along the bank of Bayou Chene and Lake Gascha, southeast of the confluence of Bayou Shafer and the Atchafalaya River approximately 10 miles south of Morgan City in the south-central part of Louisiana. The proposed placement areas, the area in general, are extremely shallow, with an average water depth of 3 feet. The riverbank where the shoal material would be sprayed consists of shallow open-water areas and fragmented marsh. The property adjacent to the proposed placement areas consists of freshwater marsh and cypress/willow swamp.

3.2 DESCRIPTION OF THE WATERSHED

A watershed is an area of land drained by a particular set of streams and rivers. Of the twelve major watersheds within Louisiana, the proposed action is located within the Terrebonne River Basin in Terrebonne Parish, Louisiana (Figure 5). The Terrebonne Basin covers approximately 1,712,500 acres in south central Louisiana (LACWS, 2005). Terrebonne Parish is located within the Terrebonne Basin, which itself is located within the larger Barataria-Terrebonne Estuarine System and includes parts of St. Mary, Lafourche, Ascension, Assumption, and Iberville parishes. It is bordered by Bayou Lafourche on the east, the Atchafalaya Basin floodway on the west, the Gulf of Mexico on the south, and the Mississippi River to the north (LCA, 2005). The Terrebonne Parish is at the heart of coastal Louisiana. The extreme north portion of the basin is primarily agriculture lands, which continue south along its eastern edge within the flood plains of the Mississippi River and Bayou Lafourche. The western half of the basin consists of bottomland hardwood forests and cypress-tupelo and black gum swamps. The coastal zone transitions from fresh and intermediate marsh inland to brackish and salt marsh near the bays and gulf (LCA, 2005). It supports thriving oil & gas and fishing industries; it has one of the strongest economies in coastal Louisiana; and it is the epicenter of land loss that threatens the sustainability of its unique communities. Between 1956 and 2004, Terrebonne Basin lost 321 square miles of land and an additional 17 square miles of coastal land was lost in 2005 due to the effects of Hurricanes Katrina and Rita.

The Terrebonne Basin is part of the Lafourche Delta that formed between 800 to 2,500 years ago when the Mississippi River flowed through what is now Bayou Lafourche. Once the river changed course, the delta's growth slowed. The normal process of subsidence eventually took over, developing bays inside of barrier islands that marked the delta's farthest point as it marched toward the Gulf of Mexico. Terrebonne Bay, Timbalier Bay, and the barrier islands of Timbalier and East Timbalier are remnants of this Lafourche Delta. The Terrebonne Basin is an abandoned delta complex, characterized by a thick section of unconsolidated sediments that are undergoing dewatering and compaction, contributing to high subsidence, and a network of old distributary ridges extending southward from Houma. The southern end of the basin is defined by a series of narrow, low-lying barrier islands (the Isles Dernieres and Timbalier chains), separated from the mainland marshes by a series of wide, shallow lakes and bays (e.g., Lake Pelto, Terrebonne Bay, Timbalier Bay).

The name Terrebonne derives from the French and translates to "good earth," a nod to the fertile Terrebonne Basin at the time of settlement. This major drainage basin—one of 12 in Louisiana—is currently made up of about 729,000 acres of swamp and marsh, varying from fresh marsh inland to brackish and saline marsh near bays and the Gulf. The basin's major bayous are Terrebonne, Black, Blue, Dularge, Petit Calliou and Grand Calliou. The area supports sugar cane production and a wilderness of tidal marshes and lagoons, including Lake Hatch, in the middle of the Mandalay National Wildlife Refuge.

The Terrebonne Basin's two major urban complexes, Houma-Thibodaux and Plaquemine-Port Allen, are well connected (including by waterways), making these areas attractive to commerce and industry. The 1,300-mile GIWW runs through the middle of this basin and directly through the heart of the national wildlife refuge on its journey from Florida to Texas. Completed in the mid-1900s, the GIWW was designed primarily for barge traffic and allows for the transport of goods in safer waters inland, away from the Gulf. Recreational boaters also use the waterway to move vessels to maintenance facilities or other points along the coast.

As with all human intervention in the Atchafalaya and along the Louisiana coastline, the GIWW changes the way water flows through the rivers and bayous it encounters in the Terrebonne Basin, equalizing flows between some waterways that would normally be separated by distance and their natural levees. Approximately 10 percent of the Atchafalaya flow turns east and west at the GIWW and then continues on to the Gulf. Additional challenges affecting the southernmost part of the Terrebonne Basin include coastal erosion, substantial subsidence, sediment deficit, marsh loss and saltwater intrusion.

Fresh water from the Atchafalaya River flows into this system from the Atchafalaya River, Atchafalaya Bay, and the GIWW through a number of bayous and canals. "In recent years, the Penchant and Verret Sub-basins have experienced significant freshwater impacts from the Atchafalaya River. Historic wetlands loss resulting from subsidence, saltwater intrusion, and oil and gas activity appears to have moderated, but areas of cypress swamp (Verret) and flotant marsh (Penchant) are experiencing stress from high

water levels in the Penchant Subbasin, the use of freshwater and sediment resources is not being maximized" (LCA, 2005).

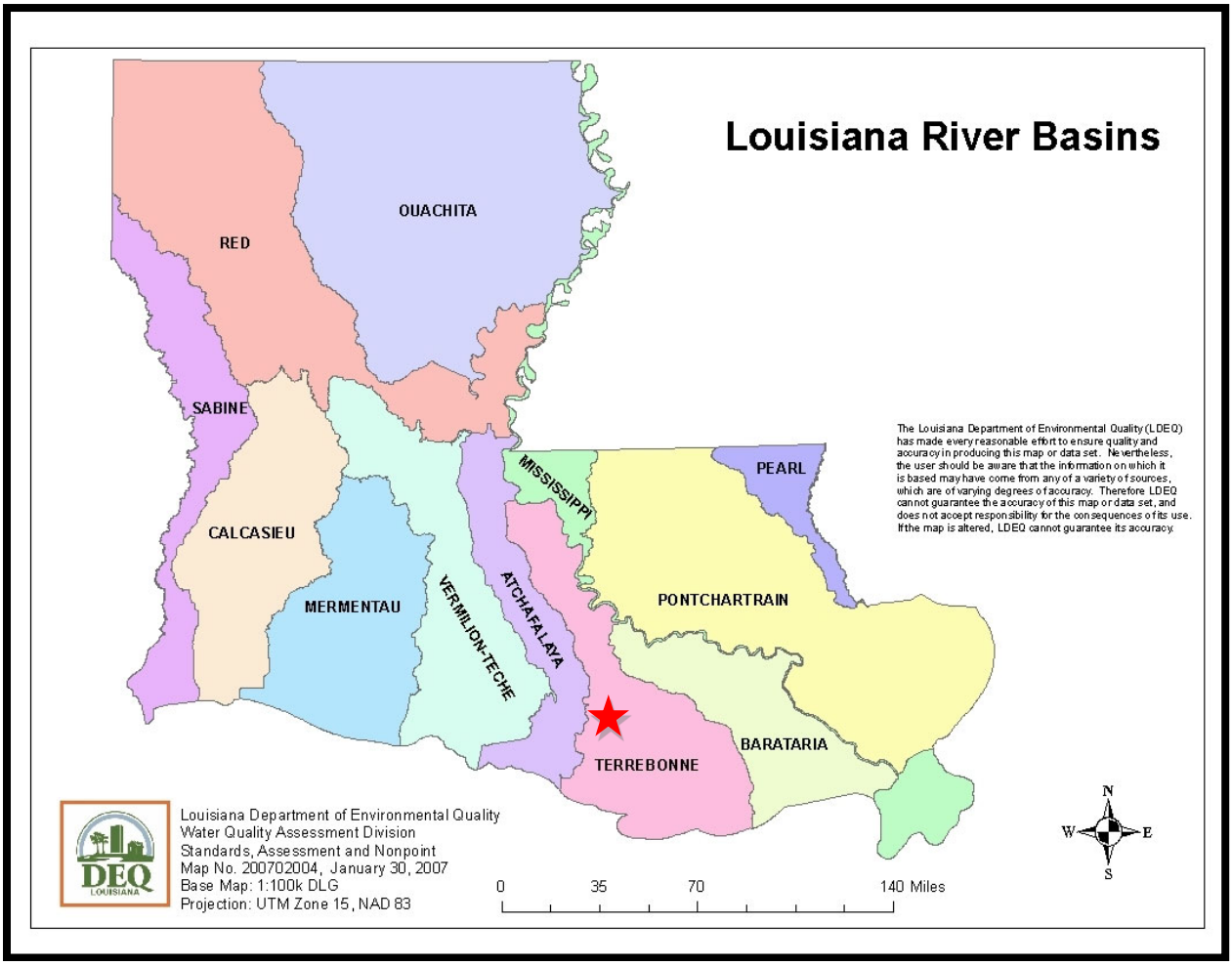


Figure 5: Louisiana River Basins (Map provided by Louisiana Department of Environmental Quality). The Terrebonne River Basin is shown in pink. The location of the Work is represented by a red star.

3.3 CLIMATE

The climate in the proposed action area is humid and subtropical with a strong maritime character. Warm, moist, southeasterly winds from the Gulf of Mexico prevail throughout most of the year, with occasional cool, dry fronts dominated by northeast high-pressure systems. The influx of cold air occurs less frequently in autumn and only rarely in summer. In winter, the average temperature is 54˚F and the average daily minimum temperature is 41˚F. In summer, the average temperature is 78˚F and the average daily maximum temperature is 89˚F. Summer thunderstorms are common and tornadoes strike occasionally. The total annual precipitation is about 60.7 inches, of this, 30 inches, or 50 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 16 inches (http://www.srcc.lsu.edu/).

3.4 GEOLOGY

The project area lies within the Deltaic Plain, a physiographic subprovince of the Gulf Coastal Plain within Louisiana. Sediments deposited in the Deltaic Plain are complexly interfingered, both laterally and vertically. The Deltaic Plain deposits of Coastal Louisiana are the result of seaward outbuilding of the land surfaces; that is, prograding and aggrading deltaic-marine sedimentary processes, by deltas of the Mississippi River. Of the seven major deltaic complexes that have formed over the last 5,000 years in the coastal areas of Louisiana, only the Sale-Cypremort and the Tech provided direct land mass buildup in the project area. The maximum seaward extension of these two deltaic complexes is defined by the Trinity Shoals approximately 15 miles seaward of the present shoreline. The surface sediments in the area are quite varied and typical of Gulf Coastal alluvial, deltaic, and marine environments. These deposits are predominantly a thick segment of poorly consolidated peats and clays, silty clays, sands, and silts. Occasionally, reef deposits may be found. The sediments are entirely Holocene (Recent) Age overlying Pleistocene Age deposits.

3.5 RELEVANT RESOURCES

This section contains a description of relevant resources that could be impacted by the proposed action. The important resources described are those recognized by laws, executive orders, regulations, and other standards of national, state, or regional agencies and organizations; technical or scientific agencies, groups, or individuals; and the general public. Table 1 provides summary information of the institutional, technical, and public importance of these resources.

The following resources have been considered and found to not be affected by the alternative under consideration: Gulf water bottoms; beaches; traffic; floodplains; terrestrial resources, including prime and/or unique farmlands; recreation; aesthetics; socio-economic resources; and environmental justice.

The following relevant resources listed in Table 1 are discussed in this draft EA: wetlands, aquatic resources/fisheries, wildlife, threatened or endangered species, cultural resources, air quality, hydrology and water quality, essential fish habitat (EFH), and navigation.

Table 1: Relevant Resources

Resource	Institutionally Relevant	Technically Relevant	Publicly Relevant
Wetlands	Clean Water Act of 1977, as amended; Executive Order 11990 of 1977, Protection of Wetlands; Coastal Zone Management Act of 1972, as amended; and the Estuary Protection Act of 1968., EO 11988, and Fish and Wildlife Coordination Act.	They provide necessary habitat for various species of plants, fish, and wildlife; they serve as ground water recharge areas; they provide storage areas for storm and flood waters; they serve as natural water filtration areas; they provide protection from wave action, erosion, and storm damage; and they provide various consumptive and non-consumptive recreational opportunities.	The high value the public places on the functions and values that wetlands provide. Environmental organizations and the public support the preservation of marshes.
Aquatic Resources/ Fisheries	Fish and Wildlife Coordination Act of 1958, as amended; Clean Water Act of 1977, as amended; Coastal Zone Management Act of 1972, as amended; and the Estuary Protection Act of 1968.	They are a critical element of many valuable freshwater and marine habitats; they are an indicator of the health of the various freshwater and marine habitats; and many species are important commercial resources.	The high priority that the public places on their esthetic, recreational, and commercial value.
Wildlife	Fish and Wildlife Coordination Act of 1958, as amended and the Migratory Bird Treaty Act of 1918	They are a critical element of many valuable aquatic and terrestrial habitats; they are an indicator of the health of various aquatic and terrestrial habitats; and many species are important commercial resources.	The high priority that the public places on their esthetic, recreational, and commercial value.
Threatened and Endangered Species	The Endangered Species Act of 1973, as amended; the Marine Mammal Protection Act of 1972; and the Bald Eagle Protection Act of 1940.	USACE, USFWS, NMFS, NRCS, USEPA, LDWF, and LADNR cooperate to protect these species. The status of such species provides an indication of the overall health of an ecosystem.	The public supports the preservation of rare or declining species and their habitats.
Cultural Resources	National Historic Preservation Act of 1966, as amended; Native American Graves Protection and Repatriation Act of 1990; Archeological Resources Protection Act of 1979; EO 13175 – Consultation and Coordination with Indian Tribal Governments	Federal, Tribal and State, agencies document and protect sites. Their association or linkage to past events, to historically important persons, and to design and construction values; and for their ability to yield important information about prehistory and history.	Preservation groups and private individuals support protection and enhancement of historical resources.
Air Quality	Clean Air Act of 1970, Louisiana Environmental Quality Act of 1983.	State and Federal agencies recognize the status of ambient air quality in relation to the NAAQS.	Virtually all citizens express a desire for clean air.
Hydrology Water Quality	Clean Water Act of 1977, Fish and Wildlife Coordination Act Coastal Zone Mgt Act of 1972, and La State & Local Coastal Resources Act of 1978.	USACE, USFWS, NMFS, USEPA, and State DEQ and wildlife/fishery offices recognize value of fisheries and good water quality. State standards established to assess water quality	Environmental organizations and the public support the preservation of water quality and fishery resources and the desire for clean drinking water.
Essential Fish Habitat (EFH)	Magnuson-Stevens Fishery Conservation and Management Act of 1996, Public Law 104-297	Federal and state agencies recognize the value of EFH. The Act states, EFH is “those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.”	Public places a high value on seafood and the recreational and commercial opportunities EFH provides.
Navigation	Rivers and Harbors Act of 1899 and River and Harbor Flood Control Act of 1970 (PL 91-611).	The Corps provides safe, reliable, efficient, and environmentally sustainable waterborne transportation systems (channels, harbors, and waterways) for movement of commerce, national security needs, and recreation.	Navigation concerns affect area economy and are of significant interest to community.

3.6 WETLANDS

3.6.1 **Existing Conditions**

Wetlands in the vicinity of the project area are tidally influenced and classified as mainly marsh, composed primarily of vegetation that is rooted in seasonally or permanently flooded mineral soils with most of the vegetative portion of the plant above water. Limited portions of the marsh consist of flotants, or floating mats of emergent vegetation. Marsh in the project area is dominated by fresh marsh, with areas of intermediate and brackish marsh. Water levels fluctuate from six to twelve inches or more in the vegetated areas. The marshes in the project area are strongly influenced by freshwater discharges from the Atchafalaya River and associated distributary outlets. A brief description of the marsh types in or near the project area follows.

Fresh marsh is strongly influenced by freshwater discharges. Salinity in areas of freshwater marsh rarely increases above 2.0 parts per thousand (ppt), with a year-round average of 0.5-1.0 ppt (Chabreck 1970). Freshwater marsh contains a high soil organic matter content and a high diversity of plant species, and is typically dominated by maidencane (*Panicum hemitomon*), bulltongue (*Sagittaria lancifolia*), pickerelweed (*Pontederia cordata*), alligatorweed (*Alternanthera philoxeroides*), saltmeadow cordgrass (*Sporobolus pumilus)*, cattail (*Typha* sp.), and sawgrass (*Cladium jamaicense*). Freshwater marshes have undergone the largest rate of reduction in acreage of any of the marsh types in Louisiana over the past few decades (The Nature Conservancy 2013).

Intermediate marsh is subjected to an irregular tidal regime and oligohaline conditions, with salinities generally ranging from 1.0-8.0 ppt (Chabreck 1970). This marsh type is characterized by near total ground cover of emergent wetland plants with small pools or ponds scattered throughout. Intermediate marsh contains a higher diversity of species than salt or brackish marsh, many of which are found in freshwater marsh and some of which are found in brackish marsh. Saltmeadow cordgrass generally dominates this marsh type; however, common reed, bulltongue, giant bulrush (*Scirpus californicus*), three-cornered grass (*Scirpus olneyi*), leafy three-square and common three-square (*Scirpus americanus*) are characteristic species as well. This marsh type is very important to many species of birds and supports large numbers of wintering waterfowl. It is also critical nursery habitat for larval and juvenile marine organisms. Gradual changes in salinity can cause this habitat to shift towards brackish marsh. Although still a common natural community type in Louisiana, intermediate marshes are declining in aerial extent due to shifts toward brackish marsh caused by increased salinity levels (The Nature Conservancy 2013).

Brackish tidal marsh communities occur where water salinity levels are between 0.5 to 18 parts per thousand (ppt) and water is less than 2 m (6 feet) at high tide (New York Natural Heritage Program. 2023). Smooth cordgrass often dominates the emergent vegetation here, and may be interspersed with small ponds and water channels. Saltmeadow cordgrass, salt grass, leafy three-square, and widgeongrass (*Ruppia maritima*) may occur

as well. Brackish marsh is of very high value to estuarine larval and juvenile forms of marine organisms such as shrimp, crabs, menhaden, etc. This marsh type is very susceptible to saltwater intrusion and conversion to open water (The Nature Conservancy 2013).

The marshes in the project vicinity provide nursery habitat for estuarine larval and juvenile fish, crab, and shrimp species. Additionally, numerous estuarine-dependent fish and shellfish, migratory waterfowl, furbearers and other wildlife, and several species of wading, diving, and shore birds may be found in the marsh areas of the project setting.

Wetlands within the project area consist primarily of fresh marsh and submergent and floating aquatic vegetation. Vegetation types range from fresh to saline, with fresh and intermediate marshes existing only in managed areas. Since 1932, the Terrebonne Basin has lost approximately 20% of its wetlands. Current loss rates range from approximately 4,500 to 6,500 acres/year (CWPPRA, 2018). At this rate, approximately 130,000 acres of wetlands will be lost during the next 20 years without restorative action. One-third of the Terrebonne Basin's remaining wetlands would be lost to open water by the year 2040. Losses would be concentrated in the lower basin, where Timbalier Bay could become open to the Gulf of Mexico and the existing shoreline could retreat as much as 10 miles north (LCWCRTF 1993).

USACE has constructed and maintains navigation channels in the Terrebonne Basin, which cross sensitive wetland areas. Vessel traffic in the channels is a major source of erosion in wetland areas. These channels also provide an avenue for saltwater intrusion into fragile wetland areas, thereby changing the salinity and nature of these wetlands and leading to deterioration and conversion to open water.

Subsidence occurs at different rates throughout the inactive deltaic plain as unconsolidated sediment dewaters and compacts. Subsidence in the Terrebonne Basin is among the highest in Louisiana at 0.42 inches/year (Penland et al. 1989). As subsidence occurs, flooding in wetlands increases, contributing to marsh loss. The most critical wetland problem in the Terrebonne Basin is excessive flooding. Prolonged high water leads to direct wetland loss and shifts in plant species composition. High water levels increase erosion rates along natural lake rims that protect more fragile interior marshes that are lower in elevation. Once the protective lake rims are lost, erosion rates accelerate. Many areas within the Terrebonne Basin have experienced marsh loss due to saltwater intrusion, which mainly impacts areas adjacent to human-made channels and dredged waterways. In these areas, salt-intolerant plants are destroyed, leaving marsh soils unprotected. Under these conditions, the basin's characteristic organic soils are easily eroded by tidal movement, resulting in the conversion of marsh to open water.

3.7 AQUATIC RESOURCES/FISHERIES

3.7.1 **Existing Conditions**

The proposed project area contains shallow open-water habitat with water depths of approximately 1 to 5 feet. The water bottom in this area is composed of firm silty, sandy clay mainly deposited by the river. These submerged lands are typically soft and almost fluid, but some areas are firm where heavier silts and sands have been deposited. Submerged aquatic vegetation occurs in some portions of the shallow open-water areas, with the most common species including pondweed (*Potamogeton* spp.), coontail (*Ceratophyllum* sp.), and water milfoil (*Myriophyllum* spp*.)*. These submerged plants provide a source of food for the large numbers of waterfowl frequently found in the area during winter. Shellfish species including oysters, shrimp, and crabs are found in the brackish marshes near the proposed project area. Many juveniles of these species use fringe marsh, interspersed shallow ponds, and submerged aquatic vegetation for grazing.

Fishing is a major recreational and commercial activity in the project area and surrounding waters. The estuarine nature of the project area provides a dynamic aquatic environment where freshwater and saltwater meet, providing a transitional zone between the two aquatic ecosystems. The marshes and waterways of the proposed project area provide important spawning and nursery habitat and a food source for a wide variety of fresh and saltwater fish species. Vegetation and marsh loss degrades the utility of the area as a nursery habitat and food source.

Important recreational fish species that occur in the project area include catfishes (*Ictalurus* spp.), crappie (*Pomoxis* spp.), gar (*Lepisosteus* spp.), sunfishes (*Lepomis* spp.), largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), black drum (*Pogonias cromis*), red drum (*Sciaenops ocellatus*), spotted seatrout (*Cynoscion nebulosus*), and southern flounder (*Paralichthys lethostigma*). Common commercial fish found in or near the project area include sand seatrout (*Cynoscion arenarius*), striped mullet (*Mugil cephalus*), Gulf menhaden (*Brevoortia patronus*), Atlantic croaker (*Micropogonias undulatus*), southern flounder, spot (*Leiostomus xanthurus*), and several species of baitfish.

Commercially important shellfish found in the area are also mainly estuarine, and include blue crab (*Callinectes sapidus*), Gulf stone crab (*Menippe adina*), brown shrimp (*Farfantepenaeus aztecus*), pink shrimp (*Farfantepenaeus duorarum*), white shrimp (*Litopenaeus setiferus*), and oysters (*Crassostrea virginica*). Other commercially less important species include grass shrimp (*Palaemonetes pugio*), mysid shrimp (*Mysidopsis bahia*), roughneck shrimp (*Trachypenaeus constrictis*), and mud crab (*Eurypanopeus depressus*).

The proposed project area also supports populations of phytoplankton and zooplankton (e.g., copepods, rotifers, fish larvae, and molluscan and crustacean larvae). Benthic invertebrate populations are comprised of both epifaunal and infaunal species (e.g., polychaete and oligochaete worms, crustaceans, bivalves and gastropod mollusks).

These organisms constitute vital components of the aquatic food chain and may comprise the diets of numerous finfish and shellfish species in the area.

3.8 WILDLIFE

3.8.1 **Existing Conditions**

The proposed project area contains a variety of birds, mammals, and other wildlife. Both migratory and resident birds occur in or near the project area. Common birds include ibis (*Plegadis* spp.; *Eudocimus albus*), egrets (*Ardea alba*; *Egretta thula*), cormorants (*Phalacrocorax* spp.), terns (*Sterna* spp.), gulls (*Larus* spp.), skimmers (*Rynchops niger*), sandpipers (*Calidris* spp.), pelicans (*Pelecanus* spp.), osprey (*Pandion haliaetus*), herons (*Ardea 20odiceps*; *Egretta* spp.; *Nycticorax* spp.), hawks (*Accipiter* spp.; *Buteo* spp.), kestrels (*Falco sparverius*), vultures (*Coragyps atratus*; *Cathartes aura*), frigatebirds (*Fregata magnificens*), grackles (*Quiscalus* spp.), blackbirds (*Agelais phoeniceus*), and several species of swallows, flycatchers, wrens, warblers, and sparrows. Wintering migratory waterfowl using the surrounding marshes include snow geese (*Chen caerulescens*), gadwalls (*Anas strepera*), pintails (*Anas acuta*), mallards (*Anas platyrhynchos*), blue-winged teal (*Anas discors*), green-winged teal (*Anas crecca*), shovelers (*Anas clypeata*), coot (*Fulica americana*), redheads (*Aythya americana*), lesser scaup (*Aythya affinis*), mergansers (*Mergus* spp.; *Lophodytes cucullatus*), wigeons (*Anas americana*), canvasbacks (*Aythya valisineria*), and some black ducks (*Anas rubripes*). The mottled duck (*Anas fulvigula*), highly sought by sportsmen, is the only species of waterfowl nesting and wintering in the area. Grebes (*Podilymbus 20odiceps*; *Podiceps* spp.) and loons (*Gavia immer*) are nongame migratory waterfowl wintering in the area, and the common snipe (*Gallinago gallinago*) is the only game species of shorebird wintering in the area. Numerous other shorebirds use the area as a resting and staging area during migration.

Mammals using the marshes and scrub-shrub habitat in the project area include numerous furbearers, such as nutria, muskrat, swamp rabbit, mink (*Mustela vison*), river otter (*Lontra canadensis*), raccoons, and white-tailed deer. Scrub-shrub in the project area also provides habitat for salamanders, toads, frogs, turtles, and several species of poisonous and nonpoisonous snakes. The American alligator (*Alligator mississippiensis*) is abundant in fresh to intermediate marsh and is caught commercially for its hide and meat.

Numerous terrestrial invertebrates are found throughout the project area. The most notable are insects, which often serve as vectors, transmitting disease organisms to higher animals including man. Mosquitoes are the most important of the vectors in the area, although other groups, such as deer flies, horseflies, and biting midges are also considered vectors. The area provides suitable breeding habitat for such species as the salt-marsh mosquitoes (*Aedes sollicitans* and *Culex salinarius*), and other species of mosquitoes. Mosquitoes carry the West Nile virus, which has recently caused illness and death of both animals and humans in Louisiana.

3.9 THREATENED OR ENDANGERED SPECIES

3.9.1 **Existing Conditions**

Nine federally threatened, endangered, or candidate species are either known to or may possibly occur in Terrebonne Parish Louisiana. Of those nine: West Indian manatee (*Trichechus manatus*) (threatened) and Eastern Black Rail (Laterallus jamaicensis ssp. Jamaicensis) (threatened) may be found within the project area.

West Indian manatees can be found in shallow, slow-moving rivers, estuaries, salt-water bays, canals, and coastal areas (LDWF, 2012). West Indian manatees are typically found in waters with dense submerged aquatic beds or floating vegetation where the species grazes on a variety of aquatic plants. The manatee has declined in numbers due to collisions with boats and barges, entrapment in flood control structures, poaching, habitat loss, and pollution.

The Eastern Black Rail is a sparrow-sized, secretive marsh bird which can be found along portions of the Gulf Coast. The eastern black rails can be found in higher elevation wetland zones with some shrubby vegetation. Impounded and unimpounded intermediate marshes, which are marshes that are closer to high elevation areas, also provide habitat for the subspecies. Inland coastal prairies and associated wetlands may also provide habitat for the bird, but are largely uninvestigated (USFWS 2020). There have only been a small number of credible records of their presence in Louisiana. This species is identified by the USFWS as potentially being within the project area, but the likelihood of an Eastern black rail actually being within the proposed project area is extremely low.

3.10 CULTURAL RESOURCES

3.10.1 **Existing Conditions**

The National Historic Preservation Act of 1966 (NHPA), Public Law No. 89-655, as amended; NEPA of 1969, Public Law No. 91-90, as amended; and other applicable laws and regulations require Federal agencies to take into account the effects of their undertaking on the environment and any significant cultural resources within the Project Area of the proposed undertaking, as well as its area of potential effects. Typically, these studies to inventory existing conditions require archival searches and field surveys to identify any cultural resources. When significant sites are recorded, efforts are made to minimize adverse effects and preserve the site(s) in place. If any significant sites cannot be avoided and would be adversely impacted, an appropriate mitigation plan would be implemented to recover data that would be otherwise lost due to the undertaking.

Additionally, NEPA, Section 106 of the NHPA, EO 13175 (“Consultation and Coordination with Indian Tribal Governments”), the American Indian Religious Freedom Act, and

related statutes and policies have a consultation component. In accordance with CEMVN's responsibilities under these laws, regulations, and guidance, CEMVN offers Federally-recognized Indian Tribes the opportunity to review and comment on the potential of the proposed action to significantly affect protected tribal resources, tribal rights, or Indian lands.

The project is located along Bayou Chene and Lake Gashca, southeast of the confluence of Bayou Shafer and the Atchafalaya River, which is characterized as freshwater coastal marsh. The local surficial geology is mapped as Holocene marsh overlapping older, alluvial deposits related to the Mississippi River's Maringouina and Teche delta complexes buried beneath. These recent Holocene deposits have formed low natural levee features along many of the larger streams in the area such as Bayous Shafer and Cutoff. These stable natural levee features as well as other instances of stable high ground in the surrounding marshes could have had a high probability of prehistoric archaeological sites. Prehistoric settlement in the area is commonly represented in the archaeological record by village, midden, and procurement sites and include Cole Creek (Deer Island [16TR88/103] and Elephant Ear [16SMY48]) and Mississippi period (Chene Cut-Off [16TR104] and Treestump [16TR108]) occupations. In the early eighteenth century, the Chitimacha Tribe claimed home to the lower stretches of the Atchafalaya River and Bayous Teche and Lafourche and may have been present in the remote areas of the Atchafalaya basin due to conflicts with the French. Chitimacha villages were recorded by Swanton (1911) in areas of Bayous Teche and Lafourche as last as 1784. In addition, displaced bands of Houma Indians relocated were recorded in the area during the late eighteenth century, having left from the Mississippi River. Overall, however, this area has a low probability for historic settlement as it was not conducive to farming or pastures. A review of historical maps and resources did not indicate any nineteenth-century land claims near the project or make any mentions of settlers in the area. Though plantations were well established in Avoca Island, just north of the project, the archival records do not indicate any plantation development below the mouth of Bayou Boeuf. The project is located just west of lands claimed by the 1880s Louisiana Land Reclamation Company, which drained and modified lands to make them suitable for agriculture and grazing livestock. However, archival research indicates that the area around the project was not drained or modified by those activities.The project consists of dredging the Avoca Island Cutoff portion of Bayou Chene and depositing the dredge material along the western banks of the waterway and infilling a portion of Lake Gascha, an adjacent freshwater lake. The Avoca Island Cutoff waterway was constructed by the US. Army Corps of Engineers as part of a levee projects finished in 1953, which started at the crossing of Bayou Beouf and extended down west of Avoca Island to Bayou Penchant, along the east bank of Bayou Shafer and Sweet Bay Lake, to the intersection of Cutoff Bayou and the Atchafalaya River. The Avoca Island Cutoff portion of Bayou Chene has been maintained and repeatedly dredged by the U.S. Army Corps of Engineers since its construction; due to these repeated dredging operations, there are no cultural resources documented within this waterway. However, the dredge spray locations (i.e., "Project Area") had not undergone previous cultural resources investigations. CEMVN then conducted a Phase I cultural resources survey of the Project Area in July 2022. No cultural resources were identified during the survey. CEMVN coordinated with the Louisiana State

Historic Preservation Office (SHPO) and Federally-recognized Tribes (e.g., Alabama-Coushatta Tribe of Texas, Caddo Nation, Chitimacha Tribe of Louisiana, Choctaw Nation of Oklahoma, Coushatta Tribe of Louisiana, Jena Band of Choctaw Indians, Mississippi Band of Choctaw Indians, Muscogee Creek Nation, Seminole Nation of Oklahoma, Seminole Tribe of Florida, Tunic-Biloxi Tribe of Louisiana) for a determination of "No Historic Properties Affected", as stated in a consultation letter emailed to all consulting parties on October 17, 2022. In accordance with 36 CFR 800.4 (d)(1)(i), CEMVN has fulfilled its consultation responsibilities under the NHPA.

3.11 WATER QUALITY

3.11.1 **Existing Conditions**

Water quality in the proposed action area is affected by both point source and non-point source discharges. Point sources include mainly industrial discharges. Non-point sources include storm water runoff, industrial discharges, landscape maintenance activities, and natural sources.

Section 303(d) of the Clean Water Act requires states to identify water bodies that are not meeting water quality standards and to develop total maximum daily loads for those pollutants suspected of preventing the water bodies from meeting their standards. Total maximum daily loads are the maximum amount of a given pollutant that can be discharged into a water body from all natural and anthropogenic sources including both point and non-point source discharges. In Louisiana, the Department of Environmental Quality oversees the program.

The Louisiana Department of Environmental Quality (LDEQ) surface water monitoring program is designed to measure progress towards achieving water quality goals at state and national levels, to gather baseline data used in establishing and reviewing the state water quality standards, and to provide a data base for use in determining the assimilative capacity of the waters of the state. Information is also used to establish permit limits for wastewater discharges. The program provides baseline data on a water body to monitor long-term trends in water quality.

LDEQ Section 305(b) and 303(d) reports for 2022, included in the Water Quality Inventory Integrated Report, lists one water body that is located adjacent to the proposed action area, the Atchafalaya River. The assigned sub-segment code for the Atchafalaya River is LA010801. Sub-segment Code LA010801 boundaries are described as Atchafalaya River – from ICWW south of Morgan City to Atchafalaya Bay; includes Sweetbay Lake and Bayou Shaffer. The Louisiana Department of Environmental Quality (LDEQ) has assessed water quality fitness in the Atchafalaya River for the following uses: primary contact recreation (swimming), secondary contact recreation (boating and fishing), and fish and wildlife propagation. Based on existing data, water quality is determined to fully support those uses within this section of the Atchafalaya River.

3.12 AIR QUALITY

3.12.1 **Existing Conditions**

The U.S. Environmental Protection Agency (EPA), Office of Air Quality Planning and Standards has set National Ambient Air Quality Standards (NAAQS) for six principal pollutants, called “criteria” pollutants. They are carbon monoxide, nitrogen dioxide, ozone, lead, sulfur dioxide, and particulates of 10 microns or less in size (PM-10 and PM-2.5).

Ozone is the only parameter not directly emitted into the air but forms in the atmosphere when three atoms of oxygen (03) are combined by a chemical reaction between oxides of nitrogen and volatile organic compounds in the presence of sunlight. Motor vehicle exhaust and industrial emissions, gasoline vapors, and chemical solvents are some of the major sources of nitrogen and volatile organic compounds, also known as ozone precursors. Strong sunlight and hot weather can cause ground-level ozone to form in harmful concentrations in the air. The Clean Air Act General Conformity Rule (58 FR 63214, November 30, 1993, Final Rule, Determining Conformity of General Federal Actions to State or Federal Implementation Plans) dictates that a conformity review be performed when a Federal action generates air pollutants in a region that has been designated a non-attainment or maintenance area for one or more National Ambient Air Quality Standards. A conformity assessment would require quantifying the direct and indirect emissions of criteria pollutants caused by the Federal action to determine whether the proposed action conforms to Clean Air Act requirements and any State Implementation Plan.

For Terrebonne Parish, all six parameters are currently in attainment of all NAAQS in accordance with 40 CFR 81.320 (1999 edition). No conformity review (under the Clean Air Act General Conformity Rule) is required for the proposed action because the project area is designated as an attainment area.

3.13 NAVIGATION

3.13.1 **Existing Conditions**

The Atchafalaya River and the Atchafalaya River bar and bay channels provide vessel access to Morgan City, the GIWW, and Bayous Chene, Boeuf, and Black from the Gulf of Mexico. Vessels using the navigation channel consist of oilfield supply boats, offshore tugs, barge tows, and fishing boats. Historically, the Atchafalaya River and Bayous Chene, Boeuf, and Black, Louisiana navigation channel has been dredged to -24 feet MLG (Mean Low Gulf) which includes 20 feet for the authorized channel dimension plus 2 feet advanced maintenance and 2 feet of allowable over depth.

The bay channel and bar channel segments of the lower Atchafalaya River and Bayous Chene, Boeuf, and Black, Louisiana project are located in an area of heavy sedimentation. The bed load fraction of the sediment carried by the Atchafalaya River is

deposited mainly in Atchafalaya Bay, resulting in delta accretion and progradation. As such, the channels must receive periodic maintenance dredging on an annual basis to ensure safe navigation.

3.14 ESSENTIAL FISH HABITAT

3.14.1 **Existing Conditions**

The Magnuson-Stevens Fishery Conservation and Management Act of 1996 (MSFCMA) defines Essential Fish Habitat (EFH) as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity." The estuarine and marine waters in St. Mary Parish, as well as the northern Gulf of Mexico, are designated as EFH. In particular, EFH identified by the Gulf of Mexico Fishery Management Plan (FMP) in St. Mary Parish and adjoining waters—including Atchafalaya Bay—include estuarine water column and estuarine water bottoms, including mud, rock, sand, intertidal vegetation, and shell substrates. No "Habitat Areas of Particular Concern" have been identified in the project vicinity.

The proposed project is located within an area identified as EFH for brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), red drum (*Sciaenops ocellatus*), grey snapper (*Lutjanus griseus*), lane snapper (*Lutjanus synagris*), vermilion snapper (*Rhomboplites aurorubens*), blacktip shark (*Carcharhinus limbatus*), and Atlantic sharpnose shark (*Rhizoprionodon terraenovae*) (Table 2). These species use the proposed project area for foraging and nursery habitat, as well as a migration route to other areas considered to be EFH.

In addition to species designated as EFH listed in Table 2, the proposed project area provides nursery and foraging habitats that support a variety of economically important marine fishery species, such as Atlantic croaker, spotted seatrout, gulf menhaden, blue crab, and striped mullet. Some of these species serve as prey for other fish species managed under the MSFCMA by the Gulf of Mexico Fishery Management Council (i.e., mackerels, snappers, and groupers) and highly migratory species managed by the National Marine Fisheries Service (NMFS) (i.e., billfishes and sharks).

Table 2. EFH species in the project area.

Common Name	Life Stage	EFH
Brown shrimp	Juvenile	Emergent marsh, sand/shell, soft bottoms, submerged aquatic vegetation, oyster reefs
White shrimp	Juvenile	1-30 meters, soft bottom, emergent marsh
Red drum	Larvae, juvenile, adult	Submerged aquatic vegetation, sand/shell, soft

		bottom, emergent marsh, hard bottom
Grey snapper	Adult	Soft bottom, emergent marsh, hard bottom, shoal/banks, sand/shell
Lane snapper	Larvae, juvenile	Submerged aquatic vegetation, sand/shell, soft bottom
Vermilion snapper	Juvenile	1-25 meters, hard bottom
Blacktip shark	Adult	All nearshore and offshore waters, estuarine waters of Vermilion, Atchafalaya, Terrebonne, and Timbalier Bays
Atlantic sharpnose shark	Neonate, juvenile, adult	All life stages: All nearshore and offshore waters from Freeport, Texas to mouth of the Mississippi River. Neonate stage includes Atchafalaya Bay.

4 ENVIRONMENTAL CONSEQUENCES

4.1 WETLANDS

4.1.1 **Future Conditions with No Action Alternative.** With no action, continued erosion of the bayou shoreline at the site would cause further loss of wetlands adjacent to the proposed project area.

4.1.2 **Future Conditions with Proposed Action**. The dredged material would be placed to settle within the proposed disposal areas to a height conducive for marsh development. Considering the proposed action, direct permanent impacts to existing wetland habitat would be avoided. The placement of dredged material immediately adjacent to the existing shoreline would protect the adjacent wetlands from future erosion. Minor "splash" into these wetlands may occur as the material is placed into the adjacent open water. Every effort would be made to avoid incidental fallback during the proposed action. The areas where this occurs should recover shortly after the proposed action as no appreciable change in elevation is expected. The temporal impacts from the placement of dredged material, the temporary earthen dikes, and the work barge are considered minimal, as similar habitat is readily available within the vicinity of the proposed project area. Additionally, the protection gained from future erosion protection and marsh created would prevent an overall loss of wetlands in the vicinity and would create more wetlands.

4.2 AQUATIC RESOURCES /FISHERIES

4.2.1 **Future Conditions with No Action Alternative**. With no action, continued erosion of the adjacent wetlands would result in an overall reduction in functions and values to fisheries.

4.2.2 **Future Conditions with Proposed Action.** With the proposed action, it is possible that existing fisheries resources could be impacted from the dredging and beneficial use of dredge material along the bank. It is expected that there would be a temporary increase in turbidity within the immediate vicinity. The initial increases in turbidity would likely be diminished by the swift moving currents of the river, and any free-floating sediment would likely settle downstream. Direct impacts to aquatic resources would include the temporary relocation to adjacent available water habitat during the proposed action. Direct impacts to benthic (bottom dwelling) species such as mussels, insect larvae, and various worms, would likely be minimal due to re-colonization of the dredged area as well as the availability of similar adjacent habitat. Most of these negative impacts would be short lived and expected to return to pre-project conditions shortly after the proposed action is complete. The permanent impacts associated with the creation of marsh atop the disposal area are mitigated by the benefits resulting from the created wetlands. Wetland functions that produce benefits to coastal, aquatic populations include: buffering storm impacts; storing and conveying floodwater; absorbing nutrients, sediment and contaminants; maintaining high biological productivity and biodiversity; and serving as a nursery ground for fish, as well as the base for ecosystem food webs. Based on these findings, CEMVN has determined the proposed action will have no adverse effect to Essential Fish Habitat.

4.3 WILDLIFE

4.3.1 **Future Conditions with No Action Alternative.** With no action, wildlife that presently exists within the proposed project area will continue to inhabit the area. However, continued erosion of the shoreline at the site would ultimately lead to a reduced availability of habitat for any wildlife species.

4.3.2 **Future Conditions with the Proposed Action.** With the proposed action, direct impacts to wildlife would be minimal. The direct loss would be considered temporary, due to the similar habitat available adjacent to the proposed project areas. The primary impacts would result from equipment noise and movements that would temporarily displace most wildlife species adjacent to the proposed project site.

The proposed action would have indirect, beneficial impacts on wildlife species, including erosion protection for the existing habitat and direct beneficial impacts from habitat creation through the beneficial use of dredged material placement.

4.4 THREATENED AND ENDANGERED SPECIES

4.4.1 **Future Conditions with No Action Alternative.** With no action, threatened and endangered species and their habitats would not be affected. The proposed project would not be constructed and impacts to threatened and endangered species in the area would not change from current conditions.

4.4.2 **Future Conditions with the Proposed Action.** The proposed project may affect, but is not likely to adversely affect any federally listed threatened or endangered species managed by the USFWS, including the West Indian Manatee or the Eastern Black Rail. No critical habitat for any threatened, endangered, or candidate species has been designated within the project area and none of the species are known to breed within the project vicinity.

The U.S. Fish and Wildlife Service has been consulted and agree with (or something to this effect)? the CEMVN's determination that the proposed project is not likely to adversely affect any federally listed threatened or endangered species managed by USFWS. Standard Manatee protection conditions would be included within the contract plans and specifications. Further, there is an extremely low likelihood of either referenced species being found within the proposed project area.

The CEMVN concluded that no threatened or endangered species or designated critical habitat under the purview of the National Marine Fisheries Service, Protected Resources Division, exist within the proposed project area, and that the project would result in a no effect to listed species under NMFS' jurisdiction.

If the proposed action is changed significantly or is not implemented within one year MVN will reinitiate coordination with the USFWS to ensure that the proposed action would not adversely affect any Federally-listed threatened or endangered species or their habitat.

4.5 CULTURAL RESOURCES

4.5.1 **Future Conditions with No Action Alternative**. Without implementation of the proposed action, there would be no direct or indirect impacts to cultural resources.

4.5.2 **Future Conditions with the Proposed Action.** CEMVN has made a determination that no historic properties will be affected by this undertaking. Concurrence for this determination was received in writing by the Louisiana SHPO on November 23, 2022. In addition, on November 19, 2022, the Choctaw Nation of Oklahoma responded that the project lies outside of their area of historic interest; no other consulting parties responded within the regulatory consultation timeframe as specified per 36 CFR 800.4(d)(1)(i) and 36 CFR 800.5(c)1. No impact to known or unknown cultural resources is expected to occur by the proposed action. This project will be subject to the standard change in scope of work, unexpected discovery, and unmarked human burial sites act provisions.

4.6 WATER QUALITY

4.6.1 **Future Conditions with No Action Alternative**. With no action, no new direct or indirect impacts to water quality would be expected.

4.6.2 **Future Conditions with the Proposed Action.** With implementation of the proposed action, it is expected that there would be an indirect impact to water quality through a temporary increase in turbidity within the waterway directly surrounding any construction activity. Any increases in turbidity would likely be diminished by the swift moving currents of the river, and any free-floating sediment would likely settle downstream.

A Clean Water Act Section 401/404 Public Notice entitled "Additional Dredged Material Placement Areas for Maintenance of Bayou Chene (Terrebonne Parish)" was prepared by the CEMVN and circulated for 30-day public review on January 26, 2022. Additionally, the CEMVN received a state-issued 401 Water Quality Certificate for the project on May 17, 2022 (WQC 220517-01/ CER20220001).

4.7 AIR QUALITY

4.7.1 **Future Conditions with No Action Alternative.** With no action, the status of non-attainment of air quality would remain unchanged from current conditions.

4.7.2 **Future Conditions with the Proposed Action.** Under the proposed action, dredge equipment would emit exhaust and fumes during operation, which would be expected to dissipate quickly and would be limited to the immediate vicinity of the equipment. The ambient air quality would not noticeably change from current conditions, and the status of attainment with air quality standards for the parish would not be altered.

4.8 Navigation

4.8.1 **Future Conditions with No Action Alternative.** Without implementation of the proposed action, direct and indirect impacts to navigation could occur. Shoaling would continue to affect the bay and bar channel segments of the Atchafalaya River and Bayous Chene, Boeuf, and Black, Louisiana project. Maintenance dredging would continue to be needed in portions, or all, of the project approximately every year (based on historical frequency); however, existing nearby disposal areas are either reaching maximum capacity, or are located at distances requiring a significant increase in CEMVN O&M funding for their use. A lack of dredged material disposal capacity could eventually hinder the ability to perform maintenance dredging in portions of the project's navigation channel to authorized dimensions. Without maintenance dredging, further accumulation of shoal material would result in additional loss of project dimensions and severely restrict access to upstream ports and other facilities, with adverse impacts to the shipping industry and to area port economy.

4.8.2 **Future Conditions with the Proposed Action.** Hydraulic cutterhead dredges and disposal pipelines may cause minor and temporary interference of navigation by blocking sections of the channel but are not expected to interfere significantly with shipping traffic. Dredging operations would be closely coordinated with representatives of the navigation industry and a Notice to Mariners would be posted by the USCG. Beneficial use-placement of dredged material in the proposed shallow open water areas could cause minor disruptions to small vessels using these portions of the project area; however, the effects on navigation would be mainly temporary. Portions of the proposed disposal areas may become inaccessible to some watercraft as wetland vegetation eventually colonizes the area; however, the shallow nature of the area currently limits most vessel access.
In general, the increased disposal capacity created with implementation of the proposed action would provide a cost-effective disposal option and indirectly benefit navigation activities in the vicinity, as future maintenance dredging efforts continue to address shoaling in the Atchafalaya River and Bayous Chene, Boeuf, and Black, Louisiana navigation channel. Maintenance dredging would continue to provide safe navigation for both shallow and deep-draft vessels utilizing the channel.

4.9 Essential Fish Habitat

4.9.1 **Future Conditions with No Action Alternative.** Without implementation of the proposed action, no direct impacts to EFH within the project area would occur. However, indirect impacts to EFH will likely occur as existing estuarine emergent marsh areas continue to be converted to open water due to natural and anthropogenic factors in this portion of the Mississippi Deltaic Plain.

4.9.2 **Future Conditions with the Proposed Action.** With implementation of the proposed action, initially some EFH for dependent species would be directly impacted in the project area during the beneficial use-placement of dredged material for wetlands development in the shallow open waters of the proposed disposal areas. Shallow open water bottom and associated EFH habitat (e.g., mud/sand substrates, submerged aquatic vegetation) would be potentially impacted by the placement of dredged material in the proposed disposal areas; however, these areas would be converted to generally more productive categories of EFH (e.g., estuarine emergent marsh, marsh edge, inner marsh, marsh/water interface) as they eventually become colonized by emergent vegetation. Creation of deltaic peninsulas would provide wave energy protection to shallow water areas between peninsulas, providing conditions advantageous for colonization by submerged aquatic vegetation. Thus, the proposed action would provide mainly positive indirect impacts to EFH in the project area, and any direct or temporary adverse impacts would be sufficiently offset by the net benefits from creating marsh, new shallow open water habitat, and associated EFH.

Additional, short term EFH impacts would include a temporary and localized increase in estuarine water column turbidity during the placement of dredged material in shallow open water areas; however, the project area is a naturally turbid environment and increased turbidity is not expected to significantly affect EFH needs within the project area.

4.10 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

The discharge of dredged material into waters of the United States is regulated under the Clean Water Act (CWA). In the absence of a known Hazardous, Toxic, and Radioactive Waste (HTRW) concern, the proposed action would not qualify for an HTRW investigation.

The USACE ER 1165-2-132, Hazardous, Toxic, and Radioactive Waste (HTRW) for Civil Works Projects, states that dredged material and sediments beneath navigable waters proposed for dredging qualify as HTRW only if they are within the boundaries of a site designated by the EPA or a state for a response action (either a removal or a remedial action) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or if they are a part of a National Priority List (NPL) site under CERCLA (NPL is also known as "Superfund"). No portion of the project area proposed for dredging and disposal is included in the National Priority List.

Based upon a review of the NPL and CERCLA action sites, the probability of encountering HTRW in connection with this project is low. The proposed action does not qualify for an HTRW investigation and is evaluated as a water quality issue.

4.11 CUMULATIVE IMPACTS

The Council on Environmental Quality's (CEQ) regulations (40 CFR 1500-1508) implementing the procedural provisions of the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321 et seq.) define cumulative effects as "the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR 1508.7)". Cumulative Effects can result from individually minor but collectively significant actions taking place over a period of time."

The proposed action will allow restoration of safe navigation within the bayou and will also enhance wetland functional quality at the site by converting open water to marsh. The exact acreage of the marsh created at the site will be dependent upon bottom contours and composition of dredged material. Even though minimal in size when compared to the extent of the adjacent marsh, marsh directly and/or secondarily affected by development activities, and wetland loss from natural causes, the proposed created wetland would contribute cumulatively to wetland restoration within the Subbasin. Based on human activities and land use trends in this region, it is reasonable to anticipate that future activities will further contribute to cumulative degradation of wetland resources from the public and private sectors obtaining Section 10/404 permits; local, state and federal projects; and natural events such as subsidence and wave erosion. In the past, many actions were taken with little consideration given to project related impacts on wetland ecosystems. However, a greater realization of the importance of wetlands to the public has resulted in more critical evaluation of the need to impact wetland for residential,

commercial or industrial, and governmental projects. With gained knowledge comes technological advancement in developing more environmentally sensitive project designs and construction methods, as well as requirements to functionally compensate for unavoidable project-related impacts to wetlands so as to meet the Nation's goal of no net loss of wetland resources. Wetlands will continue to be impacted by public, private, and governmental projects. However, in having a greater awareness of the importance of wetlands, impacts associated with this and future projects will be evaluated to assure a balance is maintained between the proposed action and impacts on the environment. No significant impacts to existing wetlands near the project area would occur. It is anticipated that through the efforts taken to avoid and minimize wetland impacts and the beneficial placement of dredged material that functionally compensates unavoidable remaining impacts, the project will not result in substantial direct, secondary or cumulative adverse impact on the aquatic environment. With implementation of the proposed action, there will be some disturbances to water quality in the immediate vicinity of the dredge and disposal areas; however, the increase in turbidity should primarily be confined to Bayou Chene and Lake Gascha and the immediately adjacent waterways. Given the high background turbidity levels in the area, disturbance to water quality would be temporary, confined, and short lived.

5. COORDINATION AND PUBLIC INVOLVEMENT

This draft EA and draft FONSI will be coordinated with the public, appropriate congressional, federal, tribal, state, and local interests, as well as environmental groups and other interested parties.

6. COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

Environmental compliance for the proposed action will be achieved based upon coordination of this draft EA and draft FONSI with all appropriate agencies, organizations, and individuals for their review and comments.

- On March 20, 2023, copies of draft EA #590 and associated draft FONSI were distributed to the public and comments were solicited.
- Under Section 7 of the Endangered Species Act of 1973, the U.S Fish and Wildlife Service has determined that the proposed action for the subject project will not likely adversely affect any threatened or endangered species or their associated critical habitat. The Application for Information and Planning Consultation (IPaC), developed by the U.S. Fish and Wildlife Service, resulted in a determination of "may affect, not likely to adversely affect" on July 15, 2022. (Appendix A)
- In accordance with responsibilities under Executive Order 13175, the National Environmental Policy Act (NEPA), and Section 106 of the National Historic Preservation Act (NHPA), on October 17, 2022, CEMVN submitted a finding of "No Historic Properties Affected" for this undertaking to the Louisiana State Historic Preservation Officer (SHPO) of the Department of Culture Recreation and Tourism, the Choctaw Nation of Oklahoma, the Coushatta Tribe of Louisiana, Chitimacha Tribe of Louisiana, the Jena Band of Choctaw Indians, the Mississippi

Band of Choctaw Indians, Muscogee Creek Nation, the Seminole Nation of Oklahoma, Seminole Tribe of Florida, and the Tunica-Biloxi Tribe of Louisiana. SHPO concurrence with this determination was received on November 23, 2022. Accordingly, CEMVN may proceed with the Undertaking assuming concurrence in compliance with Section 106 of the NHPA and in coordination NEPA, as amended (42 U.S.C. § 4321 et seq.). (Appendix B) A PDF email response was received from the Choctaw Nation of Oklahoma. (Appendix C)

- On January 26, 2022, a Section 404(b)(1) Public Notice was distributed to the public and comments were solicited. No adverse comments were received in response to the 30-day public review. A Section 404(b)(1) short form evaluation was signed on December 08, 2022. (Appendix D)
- Coordination with LDNR confirmed that the proposed action would not impact coastal resources and was concluded on October 12, 2022. (Appendix E)
- The State of Louisiana, Department of Environmental Quality issued Water Quality Certificate 220517-01/AI 98817/CER 20220001 for the proposed project by letter dated May 17, 2022. (Appendix F)
- Additionally, USACE, requires that its agents understand and acknowledge the following conditions required as a result of Section 106 consultation for ground disturbing activities that provide for the protection of and notification protocols for, unexpected discoveries or unexpected effects to historic properties and human remains:

    - **Inadvertent Discovery and Unexpected Effects:** If during the course of work, archaeological artifacts (prehistoric or historic) are discovered or unexpected effects to historic properties, including architecture, architectural elements, and/or archaeology, are identified, the contractor shall stop work in the general vicinity of the discovery or unexpected effect and take all reasonable measures to avoid or minimize harm to the finds or affected property. The contractor would ensure that the discovery or unexpected effects are secured and stabilized, as necessary, and access to the area is restricted. The contractor shall inform their Operations Division (OD) contacts at USACE, who would in turn contact Planning Division (PD) staff. The contractor would not proceed with work until USACE PD completes consultation with the Louisiana SHPO and others, as appropriate.

    - **Louisiana Unmarked Human Burial Sites Preservation Act:** If human bone or unmarked grave(s) are present within the proposed action area, compliance with the Louisiana Unmarked Human Burial Sites Preservation Act (R.S. 8:671 et seq.) is required. The contractor shall notify the law enforcement agency of the jurisdiction where the remains are located within twenty-four hours of the discovery. The contractor shall also notify USACE and the Louisiana Division of Archaeology within seventy-two hours of the discovery. Discoveries of unmarked graves, burials, human remains, or items of cultural patrimony on federal or tribal lands shall be subject to the

Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. §3001-3013, 18 U.S.C. § 1170) and the Archaeological Resources Protection Act of 1979 (ARPA)(16 U.S.C. §470aa – 470mm).

7. CONCLUSION

The proposed action would provide additional open water disposal areas that would allow for the beneficial use of shoal material removed during maintenance dredging of Bayou Chene. The additional disposal capacity in the area would allow CEMVN to continue much needed maintenance dredging efforts in the navigation channel. Maintenance dredging of shoal material in the navigation channel prevents loss of project dimensions and allows continued access to upstream ports and other facilities. The proposed action has been found to have an overall beneficial effect on the human environment by ensuring adequate access and beneficial use of dredged material. While there would be temporary impacts from placement of the dredged material, these impacts would be considered temporary and minimal as similar habitat is readily available within the vicinity of the proposed project. Additionally, the establishment of vegetation within the disposal area and protection of the existing wetlands would be beneficial to the local environment.

This office has assessed the environmental impacts of the proposed action and has determined that the proposed action would have no significant adverse impact on the human environment.

8. PREPARED BY

Draft Environmental Assessment #590 and the associated Draft Finding of No Significant Impact were prepared by Ms. Samantha Martin, Environmental Protection Specialist, with relevant sections and contributions prepared by: Mr. Joseph Musso (HTRW); and Mr. Brian Ostahowski (Cultural Resources). The address of the preparers is: U.S. Army Corps of Engineers, New Orleans District; Regional Planning and Environment Division South, CEMVN-PDC-C; 7400 Leake Avenue; New Orleans, Louisiana 70118.

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APPENDIX A

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

In Reply Refer To: July 15, 2022
Project code: 2022-0063985
Project Name: ADDITIONAL DREDGED MATERIAL PLACEMENT AREAS FOR MAINTENANCE OF BAYOU CHENE (TERREBONNE PARISH)

Subject: Verification letter for the project named 'ADDITIONAL DREDGED MATERIAL PLACEMENT AREAS FOR MAINTENANCE OF BAYOU CHENE (TERREBONNE PARISH)' 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 Samantha Martin:

The U.S. Fish and Wildlife Service (Service) received on July 15, 2022 your effects determination(s) for the 'ADDITIONAL DREDGED MATERIAL PLACEMENT AREAS FOR MAINTENANCE OF BAYOU CHENE (TERREBONNE PARISH)' (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	Listing Status	Determination
Eastern Black Rail (*Laterallus jamaicensis ssp. jamaicensis*)	Threatened	NLAA
West Indian Manatee (*Trichechus manatus*)	Threatened	NLAA

Species protective measures (contained within this application) will be used by the applicant and will be incorporated into any special conditions of a DA permit; therefore the Service concurs with the U.S. Army Corps of Engineers "may affect, not likely to adversely affect" determination(s) for the species listed above. Your agency has met consultation requirements by

informing the Service of your "No Effect" determinations. No consultation for this project is required for species that you determined will not be affected by this action.

This concurrence verification letter confirms you may rely on effect determinations you reached by considering the Louisiana DKey to satisfy agency consultation requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.; ESA). No further consultation for this project is required for species that you determined will not be affected by this action.

The Service recommends that your agency contact the Louisiana Ecological Services Field Office or re-evaluate the project in IPaC if: 1) the scope or location of the proposed project is changed significantly, 2) new information reveals that the action may affect listed species or designated critical habitat; 3) the action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed or critical habitat designated. If any of the above conditions occurs, additional consultation with the Louisiana Ecological Services Field Office should take place before project changes are final or resources committed.

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.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

ADDITIONAL DREDGED MATERIAL PLACEMENT AREAS FOR MAINTENANCE OF BAYOU CHENE (TERREBONNE PARISH)

2. Description

The following description was provided for the project 'ADDITIONAL DREDGED MATERIAL PLACEMENT AREAS FOR MAINTENANCE OF BAYOU CHENE (TERREBONNE PARISH)':

> Additional dredged material placement areas would be designated and used for the placement of shoal material removed during routine maintenance Bayou Chene. Dredged material would be used beneficially at these placement areas to create wetlands and restore degraded segments of the bankline along the Avoca Island Cutoff.

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@29.5753958,-91.19899114685688,14z

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

   Yes

2. Is the action authorized, funded, or being carried out by the:

   a. U.S Army Corps of Engineers

3. Please identify your agency or organization type:

   a. Federal agency

4. Have you determined that the project will have "no effect" on federally listed species? (If unsure select "No")

   No

5. Are you with the U.S. Army Corps of Engineers Regulatory Division?

   No

6. Are you with the U.S. Army Corps of Engineers Planning Division?

   Yes

7. Is the action part of a Civil Works project?

   Yes

8. Does the action result in the discharge of fill into wetlands that meets the *de minis* standard?

   Yes

9. [Hidden Semantic] Does the project intersect the eastern black rail AOI?

   Automatically answered

   Yes

10. Will the proposed project involve human disturbance or ground disturbance (such as foot traffic, vehicles, tracked equipment, excavating, grading, placing fill material, etc.)?

    Yes

11. Does the action consist of either fire management, grazing, haying, mowing and/or other mechanical treatment activities?

    No

12. Will the project result in changes to wetland hydrology (i.e. via new construction or change in existing operation of water control structures, waterbody diversion, major water withdrawals, levee construction, etc.)?

    No

13. Will the project directly impact suitable eastern black rail nesting habitat (shallow inundated wetlands containing mesic to hydric soils with dense herbaceous plant cover) or foraging habitat (wetland-upland transition zones with dense cover and 1-3 cm deep pools) and/or roosting habitat (elevated wetlands that allow for refugia from high water events and nest to be elevated above water level)?

    No

14. [Hidden Semantic] Does the project intersect the west indian manatee AOI?

    Automatically answered
    Yes

15. (Semantic) Is the project located within the manatee consultation zone, excluding the Mississippi River?

    Automatically answered
    Yes

16. Is the project footprint entirely on land?

    No

17. Is the water depth within the project greater than 2 feet (at mean high tide)?

    Yes

18. Will the project occur during the months of June through November?

    Yes

19. Will the following Standard Manatee Conditions for in-Water Activities be included as permit conditions?

    Yes

20. [Hidden Semantic] Does the project intersect the pink mucket mussel AOI ?

    Automatically answered
    No

21. [Semantic] Does the project intersect the Northern Long-eared bat AOI?

    Automatically answered
    No

22. (Semantic) Does the project intersect the Louisiana black bear Range?

    Automatically answered
    No

IPaC User Contact Information

Agency: Department of Defense
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State: LA
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APPENDIX B

BILLY NUNGESSER
LIEUTENANT GOVERNOR

State of Louisiana
OFFICE OF THE LIEUTENANT GOVERNOR
DEPARTMENT OF CULTURE, RECREATION & TOURISM
OFFICE OF CULTURAL DEVELOPMENT
DIVISION OF ARCHAEOLOGY

KRISTIN P. SANDERS
ASSISTANT SECRETARY

23 November 2022

Eric Williams
Chief, Environmental Planning Branch
Corps of Engineers, New Orleans District
7400 Leake Ave.
New Orleans, LA 70118

Re: Draft Report
La Division of Archaeology Report No. 22-7137
Phase I Cultural Resources Survey of the Bayou Chene Dredging and Disposal Project, Terrebonne Parish, Louisiana

Dear Eric Williams:

We acknowledge receipt of your letter dated 17 October 2022 and one copy of the above referenced report.

Based on the description of the Area of Potential Effect (APE), the proposed ground-disturbing activities, and the identification of historic properties within the APE, our office concurs with the assessment that no historic properties listed in or eligible for listing in the National Register of Historic Places will be affected by this project. Our office has no further concerns for this project.

Consultation with the State Historic Preservation Office does not constitute consultation with Tribal Historic Preservation Offices, other Native American tribes, local governments, or the public. If archaeological materials are encountered during construction, the procedures codified at 36 CFR 800.13(b) will apply. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal, and glass objects. The federal agency or the applicant receiving federal assistance should contact our office immediately. If human remains are encountered, the provisions of the Louisiana Unmarked Human Burial Sites Preservation Act (Revised Statute 8:671-681) should be followed.

We are accepting the report as final; no further submissions are necessary. If you have any questions, please contact Chip McGimsey at cmcgimsey@crt.la.gov or 225-219-4598.

Sincerely,

Kristin P. Sanders

Kristin Sanders
State Historic Preservation Officer

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APPENDIX C

From: Lindsey Bilyeu
To: Ostahowski, Brian E CIV USARMY CEMVN (USA)
Subject: [Non-DoD Source] RE: Bayou Chene Additional Dredge Placement Areas, Draft Report Submittal and S106 Consultation - CNO
Date: Saturday, November 19, 2022 5:56:58 PM

Mr. Ostahowski,

The Choctaw Nation of Oklahoma thanks the USACE, New Orleans District, for the correspondence regarding the above referenced project. Terrebonne Parish lies outside of our area of historic interest. The Choctaw Nation Historic Preservation Department respectfully defers to the other Tribes that have been contacted.

If you have any questions, please contact me.

Thank you,

Lindsey D. Bilyeu, M.S.
Program Coordinator 2
Choctaw Nation of Oklahoma
Historic Preservation Department
P.O. Box 1210
Durant, OK 74702
Office: (580) 642-8377
Cell: (580) 740-9624

From: Ostahowski, Brian E CIV USARMY CEMVN (USA) <Brian.E.Ostahowski@usace.army.mil>
Sent: Monday, October 17, 2022 2:25 PM
To: Ian Thompson <ithompson@choctawnation.com>; Lindsey Bilyeu <lbilyeu@choctawnation.com>
Subject: Bayou Chene Additional Dredge Placement Areas, Draft Report Submittal and S106 Consultation - CNO

Good Afternoon, Tribal Partner,

Attached please find the Phase I report enclosure and the CEVMN NHRP effect determination letter for your review.

Re: **Phase I Draft Report Submittal and Section 106 Review Consultation**
Undertaking: Bayou Chene Additional Dredged Material Placement Areas, Terrebonne Parish, Louisiana (Lat. 29.544528° Long. 91.214908°)
Determination: No Historic Properties Affected

We look forward to your concurrence with this determination. Should you have any questions or

need additional information regarding this undertaking, please contact Brian Ostahowski, Archaeologist and Tribal Liaison at Brian.E.Ostahowski@usace.army.mil or Jason Emery, Chief of Cultural and Social Resources Section, at jason.a.emery@usace.army.mil.

V/r,

Brian

Brian E. Ostahowski, MA, RPA
Archaeologist and Tribal Liaison
Cultural & Social Resources Section (CEMVN-PDS-N)
MVD Regional Planning Division, South
New Orleans District (MVN)
Office: 504-862-2188
Mobile: 504-247-4939
Brian.E.Ostahowski@usace.army.mil

APPENDIX D

SECTION 404(b)(1) Evaluation[1]

ADDITIONAL DREDGED MATERIAL PLACEMENT AREAS FOR MAINTENANCE OF BAYOU CHENE (TERREBONNE PARISH, LA)

PROJECT PURPOSE: Additional dredged-material placement-areas would be designated and utilized during routine maintenance of the Bayou Chene segment of the "Atchafalaya River and Bayous Chene, Boeuf, and Black" navigation channel (Figure 1).

PROPOSED ACTION: Shoal material dredged from the navigation channel with a cutterhead dredge would be transported via pipeline for discharge into two placement areas within Lake Gascha (Figure 2) and two placement areas along the east bank of Bayou Chene (Figures 3 and 4). These placement areas would accommodate about 750,000 to 1.3 million Cubic Yards of dredged material per maintenance event and have sufficient capacity for two to three maintenance cycles.

Lake Gascha Placement Areas – A 100-acre area along the northern rim of the lake and a 250-acre area along the southern rim of the lake would be designated for dredged material placement. Temporary earthen retention dikes and existing landforms along the lake's edge would be used to control the spread of dredged material within the designated areas and direct dredged slurry away from adjacent watercourses. The earthen dikes would be constructed with mechanical equipment to an elevation of about +6-feet NAVD88. It is anticipated that the dredged material would stack to an initial height within about 1-foot of the water surface elevation during placement operations and is expected to settle to an elevation between +1 and +3-feet NAVD88 after settlement and compaction.

Bankline Placement Areas – A 2,500-foot-long segment of the bankline north of Lake Gascha and a 7,500-foot-long segment of the bankline south of the lake would be designated for dredged material placement. The cutterhead pipeline would be connected to a specialized work barge moored near the bankline and dredged material would be sprayed at least 150-feet out into the marsh. The sprayed dredge slurry would spread as a thin layer, approximately 6-inches to 1-foot thick and extending out about 500 feet from the point of discharge, with solids being filtered out by existing vegetation and settling in shallow depressions. Initial dredged material stacking heights would not exceed about +5-feet NAVD88 and the work barge would be repositioned, as needed, to avoid excessive stacking of dredged material. About 30 acres of fragmented marsh north of the lake and 90 acres south of the lake would be nourished by the discharge.

If necessary, temporary access channels for the specialized work barge would be constructed between (perpendicular to) the navigation channel and bankline. The access channels would be excavated by a barge mounted crane equipped with a bucket or dragline. Sediment excavated from the access channels would be temporarily stockpiled on a work barge or in adjacent waters and used as backfill upon completion of work.

[1] This short form 404(b)(1) evaluation follows the format designed by the Office of the Chief of Engineers. As a measure to avoid unnecessary paperwork and to streamline regulation procedures while fulfilling the spirit and intent of environmental statutes, the New Orleans District is using this format for all proposed project elements requiring 404 evaluation but involving no adverse significant impacts.

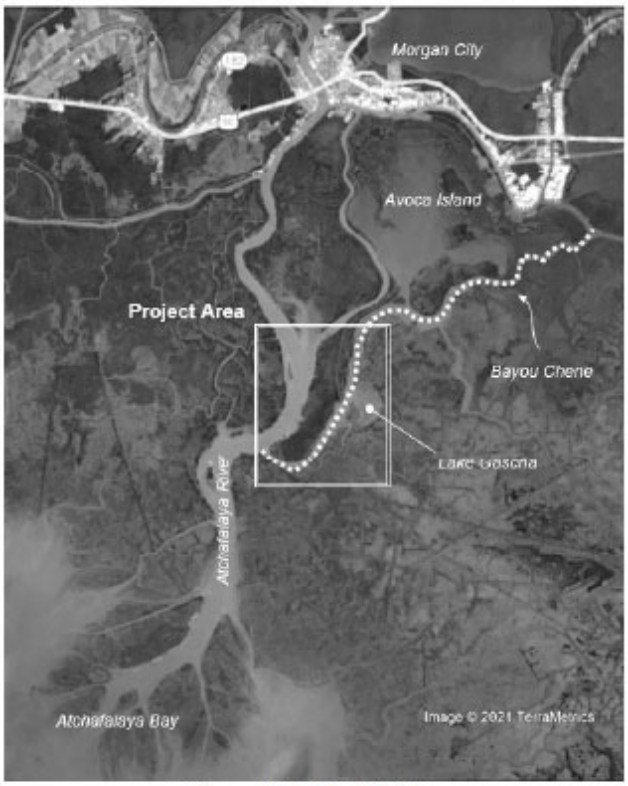


Figure 1. Project Vicinity

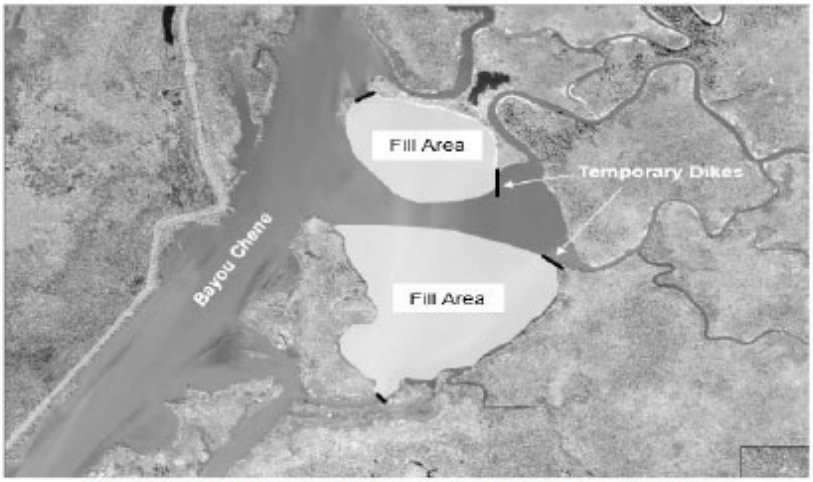
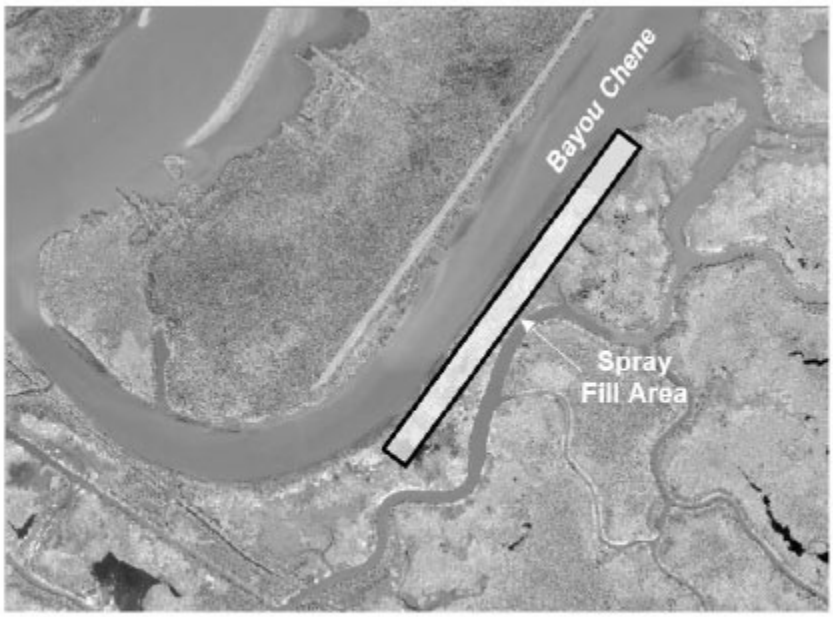


Figure 2. Dredged material placement areas within Lake Gascha

Figure 3. and 4. Bankline placement areas North and South of Lake Gascha (above and below, respectively)



1. Review of Compliance (§230.10 (a)-(d)).	Preliminary[2]		Final[3]	
A review of this project indicates that:				
a. The discharge represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose (if no, see section 2 and information gathered for environmental assessment alternative);	YES	NO*	YES	NO
b. The activity does not appear to: (1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the Clean Water Act; (2) jeopardize the existence of Federally listed endangered or threatened species or their habitat; and (3) violate requirements of any Federally designated marine sanctuary (if no, see section 2b and check responses from resource and water quality certifying agencies);	FOR (1) ONLY YES	NO*	YES	NO
c. The activity will not cause or contribute to significant degradation of waters of the United States including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, esthetic, and economic values (if no, see section 2);	YES	NO*	YES	NO
d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (if no, see section 5).	YES	NO*	YES	NO

*A negative, significant, or unknown response indicates that the project may not be in compliance with the Section 404(b)(1) Guidelines.

[2]Negative responses to three or more of the compliance criteria at this stage indicates that the proposed projects may not be evaluated using this "short form procedure". Care should be used in assessing pertinent portions of the technical information of items 2a-d, before completing the final review of compliance.

[3]Negative responses to one of the compliance criteria at this stage indicates that the proposed project does not comply with the guidelines. If the economics of navigation and anchorage of Section 404(b)(2) are to be evaluated in the decision-making process, the "short form" evaluation process is inappropriate.

2. Technical Evaluation Factors (Subparts C-F).	N/A	Not Significant	Significant*
a. Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C).			
(1) Substrate impacts.		X	
(2) Suspended particulates/turbidity impacts.		X	
(3) Water column impacts.		X	
(4) Alteration of current patterns and water circulation.		X	
(5) Alteration of normal water fluctuations/ hydroperiod.		X	
(6) Alteration of salinity gradients.	X		
b. Biological Characteristics of the Aquatic Ecosystem (Subpart D).			
(1) Effect on threatened/endangered species and their habitat.		X	
(2) Effect on the aquatic food web.		X	
(3) Effect on other wildlife (mammals, birds, reptiles, and amphibians).		X	
c. Special Aquatic Sites (Subpart E).			
(1) Sanctuaries and refuges.	X		
(2) Wetlands.		X	
(3) Mud flats.		X	
(4) Vegetated shallows.		X	
(5) Coral reefs.	X		
(6) Riffle and pool complexes.		X	
d. Human Use Characteristics (Subpart F).			
(1) Effects on municipal and private water supplies.	X		
(2) Recreational and commercial fisheries impacts.		X	
(3) Effects on water-related recreation.		X	
(4) Esthetic impacts.		X	
(5) Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves.	X		

Remarks. Where a check is placed under the significant category, the preparer has attached explanation.

*A negative, significant, or unknown response indicates that the project may not be in compliance with the Section 404(b)(1) Guidelines.

3. Evaluation of Dredged or Fill Material (Subpart G).[4]

a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material.

(1) Physical characteristics	X
(2) Hydrography in relation to known or anticipated sources of contaminants	X
(3) Results from previous testing of the material or similar material in the vicinity of the project	X
(4) Known, significant sources of persistent pesticides from land runoff or percolation	X
(5) Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances	X
(6) Other public records of significant introduction of contaminants from industries, municipalities, or other sources	X
(7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities	X
(8) Other sources (specify). See references below.	X

USCG National Response Center contaminant spill database https://nrc.uscg.mil/

CEMVN FY2008 Bayou Chene dredged material chemical and physical evaluation (unpublished data; OD-TE Files)

b. An evaluation of the appropriate information in 3a above indicates that there is no reason to believe the proposed dredge or fill material is a carrier of contaminants, or the material meets the testing exclusion criteria.

YES NO*

*A negative, significant, or unknown response indicates that the project may not be in compliance with the Section 404(b)(1) Guidelines.

[4]If the dredged or fill material cannot be excluded from individual testing, the "short form" evaluation process is inappropriate.

4. Disposal Site Delineation (§230.11(f)).

a. The following factors, as appropriate, have been considered in evaluating the disposal site.

(1) Depth of water at disposal site	X
(2) Current velocity, direction, and variability at disposal site	X
(3) Degree of turbulence	X
(4) Water column stratification	N/A
(5) Discharge vessel speed and direction	X
(6) Rate of discharge	X
(7) Dredged material characteristics (constituents, amount, and type of material, settling velocities)	X
(8) Number of discharges per unit of time	X
(9) Other factors affecting rates and patterns of mixing (specify)	N/A

Appropriate references: Same as 3(a)

b. An evaluation of the appropriate factors in 4a above indicates that the disposal site and/or size of mixing zone are acceptable.

YES NO*

5. Actions to Minimize Adverse Effects (Subpart H).

All appropriate and practicable steps have been taken, through application of the recommendations of §230.70-230.77 to ensure minimal adverse effects of the proposed discharge.

YES NO*

Actions taken: For the Lake Gascha placement areas, existing landforms along the lake's edge and temporary earthen dikes would be used to control the spread of dredged material within the designated areas and direct dredged slurry away from adjacent watercourses. For the bankline placement areas, dredged material would be discharged as a thin layer to nourish degraded wetlands and fill shallow depressions. Existing vegetation would serve as a physical filter to trap solids within the placement area and slurry elevation would be controlled by regular movement of the spray-disposal work-barge to avoid excessive smothering of the vegetation.

*A negative, significant, or unknown response indicates that the project may not be in compliance with the Section 404(b)(1) Guidelines.

6. Factual Determination (§230.11).

A review of appropriate information as identified in items 2-5 above indicates that there is minimal potential for short- or long-term environmental effects of the proposed discharge as related to:

a. Physical substrate at the disposal site (review sections 2a, 3, 4, and 5 above).	YES	NO*
b. Water circulation, fluctuation and salinity (review sections 2a, 3, 4, and 5).	YES	NO*
c. Suspended particulates/turbidity (review sections 2a, 3, 4, and 5)	YES	NO*
d. Contaminant availability (review sections 2a, 3, and 4).	YES	NO*
e. Aquatic ecosystem structure and function (review sections 2b and c, 3, and 5).	YES	NO*
f. Disposal site (review sections 2, 4, and 5).	YES	NO*
g. Cumulative impact on the aquatic ecosystem.	YES	NO*
h. Secondary impacts on the aquatic ecosystem.	YES	NO*

*A negative, significant, or unknown response indicates that the project may not be in compliance with the Section 404(b)(1) Guidelines.

7. Evaluation Responsibility.

a. Environmental impact assessment was performed by:
Hannah Plaisance
Environmental Resources Specialist, OD-TE
5 December 2022

b. This evaluation was reviewed by:
Jeff Corbino
Chief, OD-T Environmental Function
6 December 2022

8. Findings: The proposed disposal sites for discharge of dredged material comply with the Section 404(b)(1) guidelines.

Date: 12/08/22

JONES.CULLEN.ALBERT.1045365910 Digitally signed by JONES.CULLEN.ALBERT.1045365910 Date: 2022.12.08 14:23:28 -06'00'

CULLEN A. JONES, P.E., PMP
COL, EN
Commanding

APPENDIX E

JOHN BEL EDWARDS
GOVERNOR

THOMAS F. HARRIS
SECRETARY

State of Louisiana

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF COASTAL MANAGEMENT

October 12, 2022

Jeffrey Corbino
Chief, Environmental Function
Corps of Engineers-New Orleans District
7400 Leake Avenue
New Orleans, LA 70118
Via e-mail: Jeffrey.M.Corbino@usace.army.mil

RE: **C20220114**, Coastal Zone Consistency
New Orleans District, Corps of Engineers (COE)
Direct Federal Action
Bayou Chene Maintenance Dredging-Additional Material Placement Area
Terrebonne Parish, Louisiana

Dear Mr. Corbino:

The above referenced project has been reviewed for consistency with the Louisiana Coastal Resources Program in accordance with Section 307 (c) of the Coastal Zone Management Act of 1972, as amended. The project, as proposed in this application, is consistent with the LCRP.

If you have any questions concerning this determination, please contact Ray Reich of the Consistency Section at (225) 342-7949 or ray.reich@la.gov
Sincerely,

/S/ Charles Reulet
Administrator
Interagency Affairs/Field Services Division

CR/MH/rr

cc: Samantha Martin, COE-NOD
Dave Butler, LDWF
Sydney Dobson, CPRA
Rod Pierce, LDNR
Les Rosso, State Lands
Mart Black, Terrebonne Parish

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APPENDIX F

JOHN BEL EDWARDS
GOVERNOR

CHUCK CARR BROWN, PH.D.
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

MAY 17 2022

Ms. Melissa Jacob
US Army Corps of Engineers, New Orleans District
7400 Leake Avenue
New Orleans, Louisiana 70118

AI No.: 98817
Activity No.: CER20220001

RE: USACE, NOD – Maintenance of Atchafalaya River and Bayous Chene, Bouef, and Black
Water Quality Certification WQC 220517-01
Terrebonne Parish

Dear Ms. Jacob:

The Louisiana Department of Environmental Quality, Water Permits Division (LDEQ), has reviewed the application to dredge and place in designated areas shoal material removed during routine maintenance of the Bayou Chene segment of the Atchafalaya River navigation project located in Parish.

The information provided in the application has been reviewed in terms of compliance with State Water Quality Standards, the approved Water Quality Management Plan and applicable state water laws, rules and regulations. LDEQ determined that the requirements for a Water Quality Certification have been met. LDEQ concludes that the deposit of spoil will not violate water quality standards as provided for in LAC 33:IX.Chapter 11. Therefore, LDEQ hereby issues USACE, NOD – Maintenance of Atchafalaya River and Bayous Chene, Bouef, and Black Water Quality Certification, WQC 220517-01.

Should you have any questions concerning any part of this certification, please contact Elizabeth Hill at (225) 219-3225 or by email at elizabeth.hill@la.gov. Please reference Agency Interest (AI) number 98817 and Water Quality Certification 22051701 on all future correspondence to this Department to ensure all correspondence regarding this project is properly filed into the Department's Electronic Document Management System.

Sincerely,

Scott Guilliams
Administrator
Water Permits Division

c: IO-W