DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
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Regional Planning and Environment
Division South
Environmental Planning Branch

17 May 2024

DRAFT

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

DRAFT ENVIRONMENTAL ASSESSMENT PORT FOURCHON BELLE PASS DEEPENING, LAFOURCHE PARISH LOUISIANA

DRAFT PORT FOURCHON EA #601

Description of the Proposed Action

The United States Army Corps of Engineers (USACE), Mississippi Valley Division (MVD), New Orleans District (CEMVN), Regional Planning and Environment Division South (RPEDS), prepared draft Environmental Assessment #601 (EA 601) in accordance with the National Environmental Policy Act of 1969, as amended. EA 601 addresses the environmental impacts associated with the proposed action to deepen the Federal navigation channel for deep draft navigation in Port Fourchon.

In 2019, the Greater Lafourche Port Commission (GLPC) conducted a feasibility study to address navigation improvements for the Port Fourchon Belle Pass Channel. The GLPC's first tentatively selected plan (TSP) was to deepen Port Fourchon to the following dimensions: 30x300 foot at Bayou Lafourche; 50x475 foot at Belle Pass; and 52x475 foot at the entrance channel.

The GLPC revised their feasibility study in 2020 to address navigation improvements for the Port Fourchon Belle Pass Channel. At this point, the TSP was changed to a -30 ft MLLW channel inland, and a -32 ft MLLW channel offshore, compared to the currently authorized, existing channel depth of -24 ft MLLW. The study was submitted to the ASA through Section 203 of the Water Resources Development Act (WRDA) of 1986 (PL 99-662) as modified by Section 1014 of Water Resources and Reform Development Act (WRRDA) 2014. Section 203 allows non-Federal interests, such as GLPC, to undertake feasibility studies of proposed navigation projects and submit them to the ASA-CW.

In April 2020, the Office of the Assistant Secretary of the Army for Civil Works (OASACW) conducted a concurrent review of this submittal with the Headquarters, U.S. Army Corps of Engineers (Corps) with the purpose of determining Federal interest. Based on the results of the review process, the Secretary determined that the Port Commission's recommended plan is feasible from an engineering and construction

viewpoint, but certain issues were not resolved as documented in their Review Assessment Report.

The ASA-CW April 2020 Review Assessment originally contained 44 comments. The action to address these comments includes the USACE-CEMVN drafting a Letter Report for the proposed Corps project, with supporting documentation as needed (i.e., NEPA Environmental Assessment (EA), certified cost estimate) based on the ASA-CW April 2020 Review Assessment and the Non-Federal Sponsor GLPC Section 203 Revised Feasibility Report. Information that has been developed to address the ASA's comments is documented as addendums to the Letter Report, including this EA, a Dredge Material Management Plan (including Economics and Engineering appendices) and a Real Estate Plan.

Following the review of the Letter Report and the resolution of any issues, the ASA-CW may transmit to Congress, in writing, the Final Review Assessment with modifications and conditions for the proposed project that the Secretary deems appropriate. The Non-Federal Sponsor GLPC Section 203 Revised Feasibility Report will not be further revised as part of this effort.

The Federal proposed plan includes deepening and maintenance of the Port Fourchon Federal navigation channel which was considered through a 50-year period of analysis. The proposed dredging would start at approximately Station 0+00 and end at approximately Station 330+00. Deepening would be achieved by the same dredging operation that is currently used for maintenance. The existing maintenance project was authorized by WRDA 1996 for a navigation channel 300 ft wide with an elevation of -24 ft Mean Lower Low Water (MLLW) on the inland reach for mile 3.4 to Mile 0.0 and to an elevation of -26 ft MLLW for the offshore reach from Mile 0.0 to Mile -1.3. The proposed action would dredge the Federal navigation channel to an elevation of -30 ft MLLW for the inland reach plus 3 ft of advanced maintenance and to -32 ft MLLW for the offshore reach plus 4 ft of advanced maintenance (Figure 1). The proposed action follows the alignment of the existing maintenance project and extends to the newly authorized limits following the natural contour of the Gulf of Mexico. Dredging would be accomplished with a hydraulic cutter-head dredge and material excavated would be transported to two (2) sites in a slurry via pipeline. The two dredge material disposal sites are located on the exterior of the existing jetties near the intersection with the existing shoreline. Discharge location would be 200 ft offshore and would extend 300 – 3000 ft from the jetties in the shallow open water and be allowed to flow (Figure 1). Construction access for dredge, attendant plant, and discharge line is in open water. No upland areas would be utilized for construction or maintenance of the project.

There are two pipelines that have the potential to interfere with the proposed dredge action. The pipeline companies are required to submit a permit application to LDNR and the USACE in order to obtain a Coastal Use Permit (CUP) and a Section 408 permit for

the removal of the pipelines. The permit applications would be subject to review and approval by the Corps under Section 408, as the action is within a Federal channel, and by LDNR to ensure compliance with Louisiana Office of Coastal Management Coastal Use Guidelines. Port Fourchon has a 300 ft channel bottom width. The removal effort assumes 100 ft extensions are needed from the bottom edge of each cut, on both sides of the channel, so a full 500 ft clearance width will be required at an elevation of -45 ft MLLW or -47 ft MLLW depending on the reach of channel. The footprint for the removal assumes an additional 50 ft of clearance on both sides parallel to the channel and 100 ft of clearance parallel to the pipeline. The footprint is therefore 120,000 square feet, or 2.8 acres (600 ft by 200 ft). The footprint would be centered on each pipeline. The construction window is assumed to involve shutdown of the channel during daylight hours for five (5) days. This assumes 12 hours of work removing the pipeline and 12 hours per day of no restriction for channel users. The full construction window will be longer than the actual removal because time is needed in advance of the removal for surveys, excavation over the proposed cut and plug, completion of the plug, and removal of pipeline segment adjacent to the remaining stub. This segment adjacent to the stub would not encroach on the channel. Work is required on both cut and cap locations on the east and west side of the channel. 3-D coordinates of the pipeline stub will be provided to the Corps for both sides. Coordination with the Port and Coast Guard would be done in advance of the removal and during removal operations. Total duration for all work is assumed at 60 calendar days.

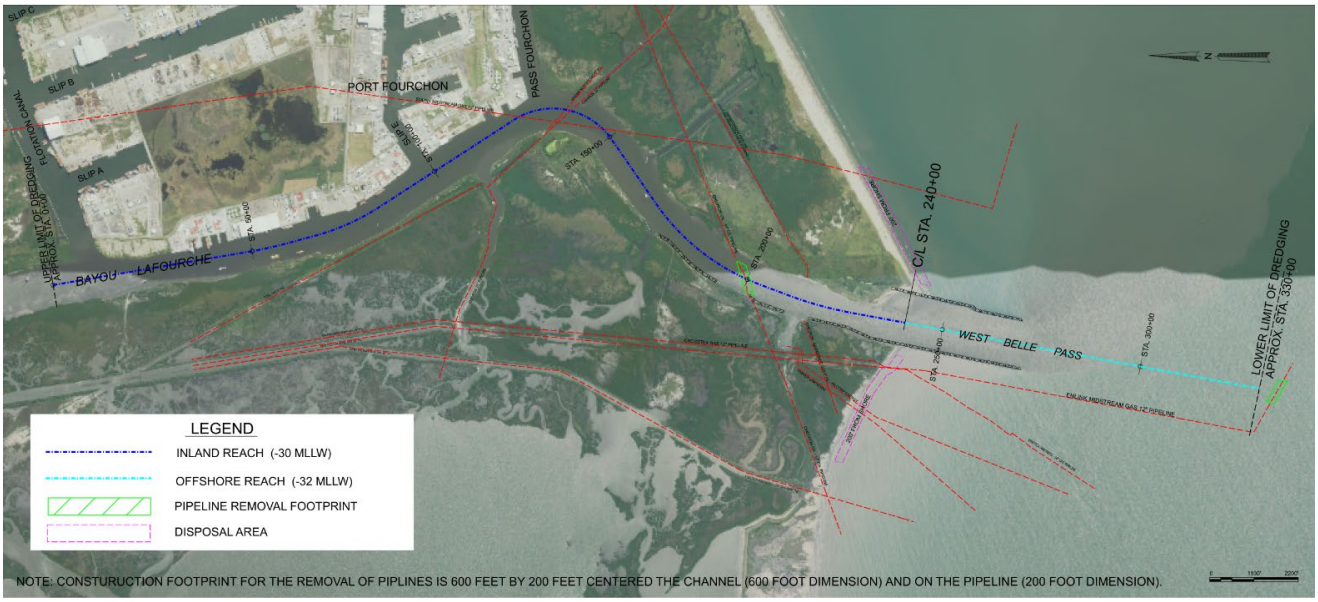


Figure 1. Map of the proposed Federal action location in Bayou Lafourche in Port Fourchon, Louisiana. The proposed Federal action for dredging is denoted by the blue lines (dark blue line denotes inland reach, which is being dredged to -30 ft MMLW, and the light blue line denotes the offshore reach which is being dredged to -32 ft MLLW) and the proposed dredge material disposal areas are denoted by the pink lines. Pipeline removal footprints are denoted by two lime green boxes (Chevron and EnLink, respectively).

Factors Considered in Determination

The proposed action would have no significant direct, indirect, or cumulative impacts to the relevant resources identified in EA 601.

All reasonable means of avoiding and minimizing adverse environmental effects have been adopted and are discussed in EA 601. The area to be dredged is already routinely maintained to a depth of -24 ft on the inland reach and -26 ft on the offshore reach about every two years with the same dredge material disposal area within the same footprint as this proposed effort.

CLEAN AIR ACT OF 1970

The Clean Air Act (CAA) sets goals and standards for the quality and purity of air. It requires the Environmental Protection Agency to set NAAQS for pollutants considered harmful to public health and the environment. The Project Area is in Lafourche Parish,

which is currently in attainment of NAAQS. A general conformity determination is not required.

NOISE CONTROL ACT OF 1972

The Noise Control Act of 1972 establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. The Act also serves to establish a means for effective coordination of Federal research and activities in noise control, authorizes the establishment of Federal noise emission standards for products distributed in commerce, and provides information to the public respecting the noise emission and noise reduction characteristics of such products. While primary responsibility for control of noise rests with State and local governments, Federal action is essential to deal with major noise sources in commerce, control of which require national uniformity of treatment. EPA is directed by Congress to coordinate the programs of all Federal agencies relating to noise research and noise control. The proposed action is consistent with this act.

CLEAN WATER ACT OF 1972 – SECTION 401 AND 404

The Clean Water Act (CWA) sets and maintains goals and standards for water quality and purity. Section 401 requires a Water Quality Certification (WQC) from the LDEQ that a proposed project does not violate established effluent limitations and water quality standards. On November 28, 2023 the LDEQ determined the need for a Water Quality Certification and Water Quality Certification number 240404-01 was obtained for this effort on April 06, 2024.

As required by Section 404(b)(1) of the CWA, an evaluation to assess the short- and long-term impacts associated with the discharge of dredged and fill materials into waters of the United States resulting from this Project has been completed. Section 404(b)(1) public notice would be mailed out for the public review and comment period beginning May 17, 2024 and ending June 15, 2024. The draft 404(b)(1) evaluation is located in Appendix C. The final Section 404(b)(1) evaluation would be located in Appendix C for the final EA.

COASTAL ZONE MANAGEMENT ACT OF 1972

The Coastal Zone Management Act (CZMA) requires that “each Federal agency conducting or supporting activities directly affecting the coastal zone shall conduct or support those activities in a manner which is, to the maximum extent practicable, consistent with approved state management programs.” In accordance with Section 307, a Consistency Determination was prepared for the proposed project and was submitted on April 18, 2024 to Louisiana Department of Natural Resources (LDNR) for the Proposed Action, and LDNR concurred via letter dated May 8, 2024 (Appendix B).

COASTAL BARRIER RESTORATION ACT OF 1982

Congress passed the Coastal Barrier Resources Act of 1982 to address problems caused by coastal barrier development. CBRA restricts most Federal expenditures and financial assistance that tend to encourage development, including Federal flood insurance, in the John H. Chafee Coastal Barrier Resource System. Three important goals of CBRA are to: (1) minimize loss of human life by discouraging development in high risk areas; (2) reduce wasteful expenditure of federal resources; and (3) protect the natural resources associated with coastal barriers. The proposed action would comply with CBRA because the Port has already been developed and is an active working Port. Economic analysis has found the proposed action to be of federal interest. Nearshore disposal would not incur any adverse impacts regarding coastal barrier. The proposed action could provide benefits to coastal barrier resources by disposing of dredge material in the surf zone. This could allow for flow and mixing of dredge material into the nearshore system potentially allowing for wetlands to capture and accrete sediment.

ENDANGERED SPECIES ACT OF 1973

The Endangered Species Act (ESA) is designed to protect and recover Threatened and Endangered (T&E) species of fish, wildlife, and plants. The USFWS identified the piping plover, red knot, Eastern black rail, West Indian manatee the hawksbill, Kemp's Ridley, leatherback, and loggerhead sea turtles which are known to occur or believed to occur within the vicinity of the Proposed Action, as T&E species. Other protected species that might be found in the area include colonial nesting wading birds, shore birds, bald eagles, brown pelicans, and bottlenose dolphins. On 28 March 2024 USFWS reviewed this project for effects to Federal trust resources under their jurisdiction and currently protected by the Endangered Species Act of 1973, concurring that the project, as proposed, is not likely to adversely affect these resources (Appendix B).

The USACE has made a no effect determination for all whale species and the oceanic whitetip shark as they are highly unlikely to be present in the project area. USACE has made a NLAA determination for all sea turtle species and the giant manta ray as all dredge work would be conducted using a cutterhead dredge which is not known to cause take of listed species. While coordinating with USACE, the NMFS developed a Gulf Regional Biological Opinion (GRBO) in 2007 that explains that non-hopper type dredges are “not known to take turtles.” Since the proposed action only plans to use non-hopper type dredges, USACE considers the findings in the GRBO to support our determination of NLAA under the ESA for future maintenance dredging activities. The USACE will be initiating informal consultation with NMFS under section 7(a)(2) of the ESA for the initial deepening around the removed pipelines and the additional 3 ft of advanced maintenance dredging that would occur on the offshore reach to a total elevation of -36 ft MLLW. Consultation would be completed before the FONSI is signed. The GRBO requires all non-hopper hydraulic dredges to be used, whenever possible, between April 1 and November 30 in Gulf of Mexico waters and up to one mile into

rivers. Construction activities would adhere to the Protected Species Construction Conditions and the Vessel Strike Avoidance Measures found in Appendix B.

FISH AND WILDLIFE COORDINATION ACT OF 1934

The Fish and Wildlife Coordination Act (FWCA) provides authority for the USFWS involvement in evaluating impacts to fish and wildlife from proposed water resource development projects. The FWCA requires that fish and wildlife resources receive equal consideration to other project features. The FWCA also requires Federal agencies that construct, license or permit water resource development projects to first consult with the USFWS, NMFS, and state resource agencies regarding the impacts on fish and wildlife resources and measures to mitigate these impacts. Section 2(b) requires the USFWS to produce a coordination act report (CAR) that details existing fish and wildlife resources in a Project Area, potential impacts due to a proposed project and recommendations for a project. The USFWS reviewed the proposed action and provided a Draft CAR with project specific recommendations on 28 March 2024 (Appendix B).

USFWS Recommendations:

1. The Service recommends that to the extent feasible all dredged material should be used beneficially to restore coastal habitats that are in decline. In doing so, saline wetlands would benefit by providing sediments and nutrients into the system, directly creating marsh, reducing open water, and reducing wave fetch, thus helping to combat wetland loss in the area.

USACE Response: The amount of dredge material from the proposed action would not be sufficient to use beneficially so material would be disposed of in the surf zone and allowed to flow. This would be the same dredge material disposal method that is currently used by USACE for routine maintenance of the channel. Coordination with USFWS and NMFS has been informally conducted on the proposed disposal plan. The vast majority of material that exists within the proposed authorized dredging limits discussed herein would be used beneficially by the CWPPRA Program prior to the proposed action.

2. The Service recommends that prior to a Finding of No Significant Impact being signed, the USACE prepare a Biological Evaluation to address potential project impacts to threatened and endangered species and their critical habitats and determine whether those impacts would be likely (or not likely) to adversely affect those federally listed species or adversely modify their critical habitats.

USACE Response: Coordination with USACE and USFWS is ongoing. USACE has prepared and submitted a Biological Evaluation on 16 April 2024 to resolve this comment.

MARINE MAMMAL PROTECTION ACT 1972

All marine mammal species found in U.S. waters are protected under the Marine Mammal Protection Act (MMPA), as well as marine mammals listed as endangered or threatened under the Endangered Species Act worldwide. The MMPA generally prohibits the "take" of marine mammals (e.g., harassment, hunting, capturing, collecting, or killing). The act also makes it illegal to import or export marine mammals and marine mammal products into or out of the United States without a permit or other applicable authorization. NOAA Fisheries authorizes take for certain activities, for example, scientific research, commercial and educational photography, and incidental take during commercial fishing operations and other non-fishery commercial activities like construction projects. Three federal entities share responsibility for implementing the MMPA:

- NOAA Fisheries is responsible for the protection of whales, dolphins, porpoises, seals, and sea lions.
- U.S. Fish and Wildlife Service is responsible for the protection of walrus, manatees, sea otters, and polar bears.
- Marine Mammal Commission provides independent, science-based oversight of domestic and international policies and actions of federal agencies addressing human impacts on marine mammals and their ecosystems.

The proposed action would be consistent with the MMPA as there would be no anticipated take of marine mammals.

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

The USACE is obligated under ER 1165-2-132 to assume responsibility for the reasonable identification and evaluation of all Hazardous, Toxic, and Radioactive Waste (HTRW) contamination within the vicinity of Proposed Actions. ER 1165-2-132 provides that in the PED Phase that, for proposed project in which the potential for HTRW problems has not been considered, an HTRW initial assessment should be conducted as a priority. USACE HTRW policy is to avoid the use of project funds for HTRW removal and remediation activities. If the initial assessment indicates the potential for HTRW, testing, as warranted and analysis similar to a feasibility study should be conducted prior to proceeding with the project design. The NFS would be responsible for planning and accomplishing any HTRW response measures and would not receive credit for the costs incurred.

Dredged materials and sediments beneath navigable waters proposed for dredging qualify as HTRW only if they are within the boundaries of a site designated by the Environmental Protection Agency or a state for a response action (either a removal action or a remedial action), under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or if they are part of a National Priority List site under CERCLA. None of the proposed dredging regions is so designated. An American Society for Testing and Materials 1527-13 Phase I Environmental Site Assessment was completed on 18 March 2024 and is on file in the CEMVN-PDC. There is a low probability of encountering HTRW during construction of the project.

MAGNUSON-STEVENS FISHERIES CONSERVATION MNAGEMENT ACT

The Magnuson-Stevens Fishery Conservation and Management Act, as amended, addresses the protection of EFH by NMFS in association with regional Fishery Management Councils. NMFS has a “findings” with the CEMVN on the fulfillment of coordination requirements under provisions of the Magnuson-Stevens Fishery Conservation and Management Act. In those findings, the CEMVN and NMFS have agreed to complete EFH coordination requirements for Federal civil works projects through the review and comment on National Environmental Policy Act documents prepared for those projects. See 50 CFR 600.920(f) (allowing use of existing environmental review procedures). This Draft EA will be provided to NMFS on 17 May 2024 at the start of the 30-day public review. Consultation with NMFS is on-going and would be concluded prior to the signing of a FONSI.

MIGRATORY BIRD TREATY ACT

The bald eagle was removed from the List of Endangered and Threatened Species in August 2007 but continues to be protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). Colonial nesting wading bird, neotropical migratory birds, and other birds are protected under the MBTA (50 CFR 10.13). During nesting season, construction and other related activities must take place outside of USFWS/LDWF buffer zones. The proposed action is consistent with the MBTA as all construction activities would take place within open water.

NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The procedures in 36 CFR Part 800 define how Federal agencies meet these statutory responsibilities. The Section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties, including the

State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) and any Tribe that attaches religious or cultural significance to historic properties that may be affected by an undertaking. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties. NHPA consultation letters pursuant to Section 106 were mailed to SHPO on 5 December 2023 for a 30-day review. In a letter dated 19 December 2023, the LA SHPO concurred that the actions of this EA are determined as having no effect on historic properties; 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 (See Appendix A).

EXECUTIVE ORDER 11988 FLOODPLAIN MANAGEMENT

Executive Order 11988 directs Federal agencies to reduce flood loss risk; minimize flood impacts on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by flood plains. Agencies must consider alternatives to avoid adverse and incompatible development in the flood plain. If the only practical alternative requires action in the floodplain, agencies must design or modify their Executive Order 11988 (EO 11988) action to minimize adverse impacts. Some project features would extend into floodplains; however, the proposed action would not promote future development within the floodplain that otherwise would not occur. The proposed action is compliant with EO 11988.

EXECUTIVE ORDER 11990 PROTECTION OF WETLANDS

Executive Order 11990 (EO 11990) directs Federal agencies to avoid to the extent possible, long and short term adverse impacts associated with the destruction or modification of wetlands, and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. The proposed action would not occur in wetlands and therefore would have no impacts.

TRIBAL CONSULTATION

It is the policy of the Federal government to consult with Federally recognized Tribal Governments on a Government-to-Government basis as required in E.O. 13175 (“Consultation and Coordination with Indian Tribal Governments;” U.S. President 2000). The requirement to conduct coordination and consultation with Federally recognized Tribes on and off of Tribal lands for “any activity that has the potential to significantly affect protected tribal resources, tribal rights (including treaty rights), and Indian lands” finds its basis in the constitution, Supreme Court cases, and is clarified in later planning laws. The USACE Tribal Consultation Policy, 5 December 2023, specifically implemented this E.O. and later Presidential guidance. The 2023 USACE Tribal Consultation Policy and Related Documents provide definitions for key terms, such as

tribal resources, tribal rights, Indian lands, consultation, as well as guidance on the specific trigger for consultation.

According to available government records, there are no tribal lands, nor are there specific tribal treaty rights related to access or traditional use of the natural resources in the project area. To augment CEMVN's background research into the interested Federally-recognized Tribes and the types of tribal resources that have the potential to be within the project area, CEMVN, consulted with Federally-recognized Indian tribes on actions having the potential to significantly affect protected tribal resources, tribal rights, or Indian lands via our National Historic Preservation Act (NHPA) Section 106 consultation letter (see Appendix A).

Public Involvement

The Federal proposed plan has been coordinated with appropriate Federal, state, and local agencies and businesses, organizations, and individuals through distribution of Draft EA 601 for a 30-day public review and comment period from May 17, 2024 through June 15, 2024.

Decision

I have reviewed the EA 601 and have considered public and agency comments and recommendations. Based on the assessment conducted in EA 601, which is attached hereto and made a part hereof, I have determined that the Federal proposed plan would have no significant impact on the human environment. Therefore, an Environmental Impact Statement will not be prepared.

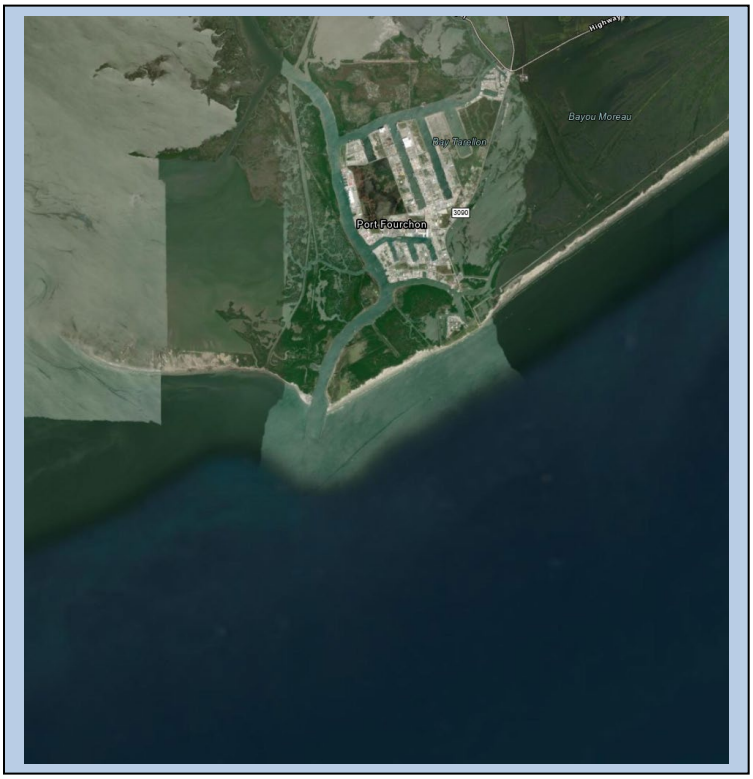
Based on the above-described evaluation and coordination, the Federal proposed plan is the recommended plan for implementation. The plan is justified and complies with relevant environmental statutes. All practicable means to avoid and minimize environmental impacts have been incorporated. It is in the public interest to implement the Proposed Federal Plan.

_____
Date

_____
CULLEN A. JONES, P.E., PMP
COL, ENG
Commanding

Mississippi Valley Division,
Regional Planning and Environment Division South

Draft Environmental Assessment Port Fourchon Belle Pass Deepening, Lafourche Parish Louisiana



Draft Port Fourchon EA #601

May 2024

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Section 1
Introduction

The U.S. Army Corps of Engineers (USACE), Mississippi Valley Division (MVD), New Orleans District (MVN), Regional Planning and Environment Division South (RPEDS), has prepared this Draft Environmental Assessment for the Port Fourchon Belle Pass Deepening, Lafourche Parish Louisiana (EA #601). This EA is an evaluation of the potential impacts associated with the proposed Corps action for the initial deepening and subsequent maintenance dredging of the Federal navigation channel at Port Fourchon, Louisiana.

This EA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality's Regulations (40 Code of Federal Regulations [CFR] §1500-1508), as reflected in the USACE Engineering Regulations (ER) 200-2-2 and 1105-2-100. This EA provides sufficient information on the potential adverse and beneficial environmental effects to allow the District Commander, CEMVN, to make an informed decision on the appropriateness of an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). The appendices to this EA include the technical appendices that contain supporting data.

1.1 STUDY AUTHORITY AND CONDITIONAL AUTHORIZATION

The study was authorized by Section 203 of the Water Resources and Development Act (WRDA) of 1986 (PL 99-662) as modified by Section 1014 of Water Resources and Reform Development Act (WRRDA) 2014. Also, by Section 1126 of the Water Infrastructure Improvements of the Nation Act (Public Law 114-322) which is also known as WRDA of 2016, and section 1152 of WRDA 2018. Section 203, as amended via the above referenced provisions, allows non-Federal interests, such as GLPC, to undertake feasibility studies of proposed navigation projects and submit them to the (ASA-CW).

In accordance with Section 203, as amended, GLPC prepared "Port Fourchon Belle Pass Channel Deepening Project Section 203 Feasibility Study," dated January 2019 and revised January 2020, which it submitted to the ASA(CW) for its review assessment which was then transmitted to Congress.

The Project is conditionally authorized by WRDA 2020 Section 403. *"PORT FOURCHON BELLE PASS CHANNEL, LOUISIANA. —The project for navigation, Port Fourchon Belle Pass Channel, Louisiana, as described in the review assessment of the Secretary, titled ''Review Assessment of Port Fourchon Belle Pass Channel Deepening Project Section 203 Feasibility Study (January 2019, revised January 2020)'' and dated April 2020, at a total cost of $95,483,000."* The project cannot proceed to construction until the outstanding issues

from the Review Assessment have been resolved and the ASA(CW) transmits the Final Assessment to Congress.

Historical Authorizations

The existing Port Fourchon navigation project was authorized by Section 101(a)(16), WRDA 1996 for a navigation channel in Belle Pass and Bayou Lafourche from Gulf of Mexico (mile 0.0) to mile 3.4 at a depth of -24 feet Mean Lower Low Water (MLLW) over a bottom width of 300 feet, and an entrance channel extending approximately 1.3 miles from the gulf shore to the -27 foot MLLW contour with a depth of -26 feet MLLW over a bottom width of 300 feet, as generally described in the Port Fourchon, Louisiana Feasibility Report and Environmental Impact Statement, dated August 1994, and approved by the Chief of Engineers on April 7, 1995. The Corps completed construction and has maintained the authorized navigation project.

1.2 OVERVIEW OF THE PROPOSED ACTION

The Federal proposed plan includes deepening and maintenance of the Port Fourchon Federal navigation channel which was considered through a 50-year period of analysis. The proposed dredging would start at approximately Station 0+00 and end at approximately Station 330+00. Deepening would be achieved by the same dredging operation that is currently used for maintenance. The proposed action would dredge the Federal navigation channel to an elevation of -30 ft MLLW for the inland reach plus 3 ft of advanced maintenance and to -32 ft MLLW for the offshore reach plus 4 ft of advanced maintenance (Figure 1). The proposed action follows the alignment of the existing maintenance project and extends to the newly authorized limits following the natural contour of the Gulf of Mexico. Dredging would be accomplished with a hydraulic cutter-head dredge and material excavated would be transported to two (2) sites in a slurry via pipeline. The two dredge material disposal sites are located on the exterior of the existing jetties near the intersection with the existing shoreline. Discharge location would be 200 ft offshore and would extend 300 – 3000 ft from the jetties in the shallow open water and be allowed to flow (Figure 1). Construction access for dredge, attendant plant, and discharge line is in open water. No upland areas would be utilized for construction or maintenance of the project.

There are two pipelines that have the potential to interfere with the proposed dredge action. The pipeline companies are required to submit a permit application to LDNR and the USACE in order to obtain a Coastal Use Permit (CUP) and a Section 408 permit for the removal of the pipelines. The permit applications would be subject to review and approval by the Corps under Section 408, as the action is within a Federal channel, and by LDNR to ensure compliance with Louisiana Office of Coastal Management Coastal Use Guidelines. The Federal channel, Belle Pass, has a 300 ft channel bottom width. The removal effort assumes 100 ft extensions are needed from the bottom edge of each cut, on both sides of the channel, so a full 500 ft clearance width will be required at an elevation of -45 ft MLLW or -47 ft MLLW depending on the reach of channel. The footprint for the removal assumes an

additional 50 ft of clearance on both sides parallel to the channel and 100 ft of clearance parallel to the pipeline. The footprint is therefore 120,000 square feet, or 2.8 acres (600 ft by 200 ft). The footprint would be centered on each pipeline. The construction window is assumed to involve shutdown of the channel during daylight hours for five (5) days. This assumes 12 hours of work removing the pipeline and 12 hours per day of no restriction for channel users. The full construction window will be longer than the actual removal because time is needed in advance of the removal for surveys, excavation over the proposed cut and plug, completion of the plug, and removal of pipeline segment adjacent to the remaining stub. This segment adjacent to the stub would not encroach on the channel. Work is required on both cut and cap locations on the east and west side of the channel. 3-D coordinates of the pipeline stub will be provided to the Corps for both sides. Coordination with the Port and Coast Guard would be done in advance of the removal and during removal operations. Total duration for all work is assumed at 60 calendar days.

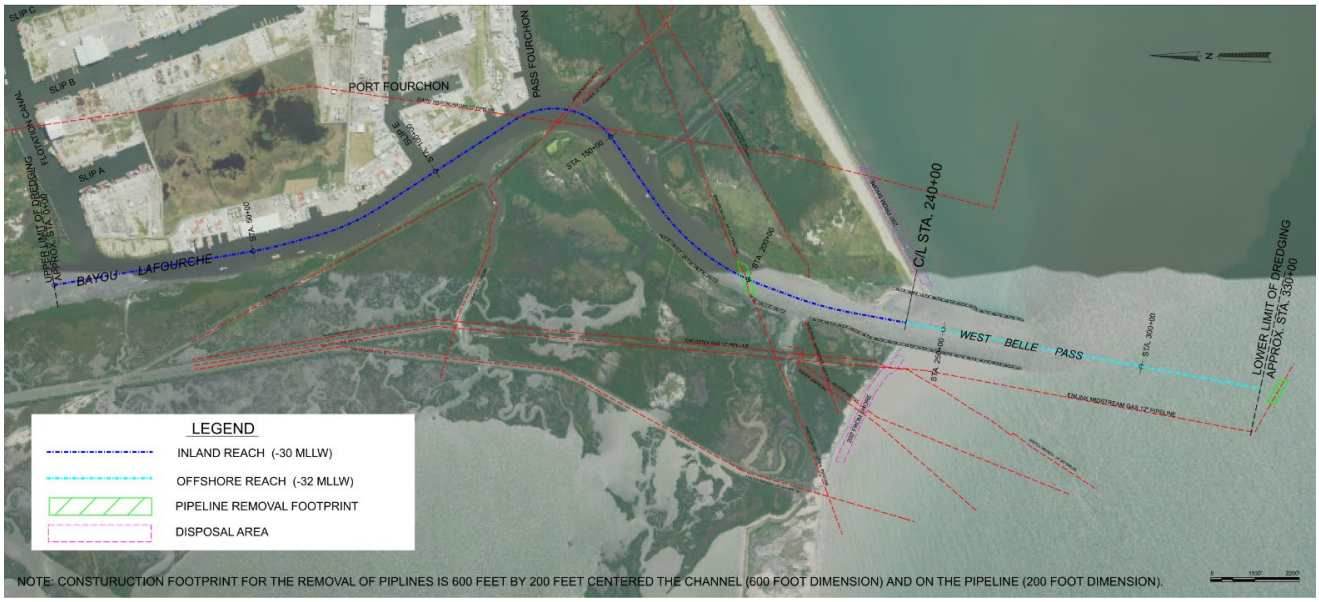

Figure 1. Map of the proposed Federal action location in Bayou Lafourche in Port Fourchon, Louisiana. The proposed Federal action for dredging is denoted by the blue lines (dark blue line denotes inland reach, which is being dredged to -30 ft MMLW, and the light blue line denotes the offshore reach which is being dredged to -32 ft MLLW) and the proposed dredge material disposal areas are denoted by the pink lines. Pipeline removal footprints are denoted by two lime green boxes (Chevron and EnLink, respectively).

1.3 PURPOSE AND NEED

The study's purpose is to investigate increasing the controlling depth of the Bayou Lafourche Waterway Federal navigation channel at Port Fourchon, Louisiana, to an engineering, economic and environmentally feasible depth and extend the main access channel to the natural contour of the Gulf of Mexico at the optimum depth. The objective of the proposed project is to increase the channel depth of Bayou Lafourche inshore and offshore to accommodate deep draft vessels used for industrial purposes. Accommodating deep draft vessels is important to the public interest as well as being important to advance the USACE role in deep draft navigation in order to provide safe, reliable, and efficient waterways for the movement of commerce, national security needs, and recreation (ER 1105-2-100).

1.4 STUDY AREA

Port Fourchon is on the southern tip of Lafourche Parish, Louisiana, just north of the Gulf of Mexico. It is the southernmost point of Louisiana accessible by automobile, via Highway 1. The study area is located immediately inside the mouth of Bayou Lafourche. Port Fourchon is closer than any other service-oriented port to the largest number of existing and potential leases for oil and gas industry. Its location on the southeast coast of Louisiana was chosen to minimize the distance required to service oil and gas exploration and production industry.

1.5 BACKGROUND AND HISTORY

Relevant studies, reports, and projects in the study area are listed below in Table 1-1.

Table 1-1. Relevant Prior Reports and Studies

Project Year	Study/Report/Environmental Document Title	Document Type
2023	West Fourchon Marsh Creation & Nourishment Project SEA TE-0134	EA
2020	West Fourchon Marsh Creation & Nourishment Project EA TE-0134	EA
2020	Revised Port Fourchon Belle Pass Channel Deepening Project Lafourche Parish, Louisiana Section 203 Feasibility Report	Feasibility Report
2018	Draft Environmental Impact Statement for Port Fourchon Belle Pass Channel Deepening Project to the USACE ASA	Draft EIS
2015	Federal Assumption of Maintenance Feasibility Study, Bayou Lafourche, LA	EA
2013	Proposed Extension of Port Fourchon East Jetty	Public Notice
2012	Draft Environmental Assessment, Fourchon Beach Shoreline Protection GLPC, Lafourche Parish, LA	Draft EA

Project Year	Study/Report/Environmental Document Title	Document Type
	(Louisiana FEMA-1603-DR-LA)	
2007	Beneficial Use of Dredged Material Disposal History	Engineering Document
1995	Bayou Lafourche and Lafourche Jump Waterway	Communication with ASA(CW)
1994	Feasibility Report and EIS, Port Fourchon, LA	EIS
1979	Final DEIS on the Proposed Port Fourchon Development Plan (Phase Four), Lafourche Parish, LA	EIS

Section 2
Alternatives Including the Proposed Action

Only the No-Action Alternative (Future without Project) and the Federal Proposed Action are being considered in this EA because the Federal Proposed Action was determined to be the only reasonable alternative which may be feasibly carried out following the conditional authorization by the ASA-CW through Section 203 for Bayou Lafourche Waterway Federal navigation channel at Port Fourchon, Louisiana. The Federal Proposed Action involves dredging the Federal channel to an engineering, economic, and environmentally feasible depth and extending the main access channel to the natural contour of the Gulf of Mexico at the optimum depth. This is discussed in further detail below in Section 2.3.

2.1 NO ACTION ALTERNATIVE

NEPA requires that in analyzing alternatives to a proposed action, a Federal agency consider an alternative of “No-Action”. The No-Action alternative evaluates the impacts associated with not implementing the proposed action and represents the Future without Project (FWOP) condition against which alternatives considered in detail are compared. The FWOP provides a baseline essential for impact assessment and alternative analysis.

Under the FWOP condition (No-Action), the channel would be maintained to the depth of the existing authorized project, but the Federal Proposed Action would not occur.

The West Fourchon Marsh Creation and Nourishment Project, Fed No. TE-134, Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) project (TE-134), as covered in Supplemental EA TE-134, would occur as part of the FWOP. The Final Supplemental Environmental Assessment for TE-134 (2023 SEA) is a supplemental environmental assessment prepared by the National Oceanic and Atmospheric Administration (NOAA) to modify the borrow area component of the previously approved CWPPRA project as described and evaluated in the 2020 West Fourchon Marsh Creation and Nourishment Project EA (2020 EA). The TE-134 project would allow for the one-time dredging of all Federal channel sections (see Section 3.3.1) in the 30' deepening project footprint- starting at Sta. 0+00 and extending out into the Gulf of Mexico to Sta. 330+00. The width of the cut will remain 300' and the final elevation would be -33' MLLW. The one exception would be a no-dredge zone in Belle Pass where the Chevron pipeline is located (Sta. 199+25). This no-dredge zone would include an appropriate buffer distance surrounding the pipeline. See summary of dredging in Table 2-1 below.

Table 2-1. Summary table based on TE-134 information provided by NFS 95 % design (as of

12 and 24 January 2024).

Channel Reach	Channel Mile (Mi 0 = STA 242+00)	CWPRRA TE-134 Project Depth (MLLW ft)
Sta. 0+00 to 130+00	4.6 to 2.1	-33.0
Sta. 130+00 to 220+00	2.1 to 0.4	-33.0
Sta. 220+00 to 330+00	**+0.4 to – 1.7**	**-33.0**

2.2 PROPOSED ACTION

The proposed action is a dredge operation, with initial deepening and maintenance, which was considered through a 50-year period of analysis, to provide enhanced navigation to shipping industry in the Federal channel of Bayou Lafourche, Louisiana. Deepening of the Federal navigation channel beyond the dimensions of the project that was authorized in WRDA 1996 would be achieved by the same dredging operation that is currently used for maintenance. The existing maintenance project was authorized for a navigation channel 300 ft wide with an elevation of -24 ft MLLW on the inland reach from Mile 3.4 to Mile 0.0 and to an elevation of -26 ft MLLW for the offshore reach from Mile 0.0 to Mile -1.3. The proposed action would dredge the Federal navigation channel to an elevation of -30 ft MLLW for the inland reach plus 3 ft of advanced maintenance and to -32 ft MLLW for the offshore reach plus 4 ft of advanced maintenance (Figure 1). The proposed action follows the alignment of the existing maintenance project and extends to the newly authorized dredge limits following the natural contour of the Gulf of Mexico. Dredging would be accomplished with a hydraulic cutter-head dredge and material excavated would be transported to two (2) sites in a slurry via pipeline. The two dredge material disposal sites are the same as what is currently utilized for the routine maintenance dredge events and located on the exterior of the existing jetties near the intersection with the existing shoreline. Discharge location would be 200 ft offshore and would extend 300 – 3000 ft from the jetties in the shallow open water and be allowed to flow (as shown in Figure 1 above). Construction access for dredge, attendant plant, and discharge line is in open water. No upland areas would be utilized for construction or maintenance of the project.

Pipelines were identified within the proposed action footprint and ownership of the facilities listed was confirmed to a feasibility level. Two pipelines have been identified as interfering or are assumed to interfere with the proposed action: pipeline No. 7 and pipeline No. 9 (Table 2-2). Pipeline No. 7 has been identified to be owned by Chevron Corporation. Communication between USACE and the non-Federal sponsor (NFS) has indicated that the pipeline will be removed by Chevron Corporation prior to construction. Pipeline No. 9 was identified to be historically owned by EnLink, however communications with the company indicated that it was no longer owned or operated by EnLink. Efforts to identify the new owner were unsuccessful and assumptions were made that the pipeline has been abandoned. As a result, assumptions regarding removal requirements were made based on

the proposed feasibility level project design and project location. These requirements are based on the latest removal methods used by other facility owners. Pipeline No. 9 was assumed to be within the current -32 ft MLLW contour, due to the uncertainty of its location. Existing facility maps, databases, and historical project files all proposed different locations for pipeline No. 9, which ranged from project station 332+00 - 350+00.

For pipeline removal, the pipeline company is required to submit a permit application to LDNR and the USACE in order to obtain a Coastal Use Permit (CUP) and a Section 408 permit. The permit applications will be subject to review and approval by the Corps under Section 408, as the action is within a Federal channel, and by LDNR to ensure compliance with Louisiana Office of Coastal Management Coastal Use Guidelines. The Federal channel, Belle Pass, has a 300-foot channel bottom width. The removal effort assumes 100-foot extensions are needed from the bottom edge of each cut, on both sides of the channel, so a full 500-foot clearance width will be required at an elevation of (-) 45 ft MLLW or (-) 47.0 ft MLLW depending on the reach of channel. The footprint for the removal assumes an additional 50-foot clearance on both sides parallel to the channel and 100-foot clearance parallel from the pipeline. The footprint is therefore 120,000 square feet, or 2.8 acres (600 feet by 200 feet). The footprint would be centered on each pipeline. The construction window assumes shutdown of the channel during daylight hours for five (5) days. This assumes 12 hours of work removing the pipeline and 12 hours per day of no restriction for channel users. The full construction window will be longer than the actual removal. Time is needed in advance of the removal for surveys, excavation over the proposed cut and plug, completion of the plug, and removal of pipeline segment adjacent to the remaining stub. This segment adjacent to the stub would not encroach on the channel. Work is required on both cut and cap locations on the east and west side of the channel. 3-D coordinates of the pipeline stub will be provided to the Corps both sides. Coordination with the Port and Coast Guard will be done in advance of the removal and during removal operations. Total duration for all work is assumed at 60 calendar days.

Removals would be resolved in fiscal year (FY) 2025.

Table 2-2. List of pipelines identified and their crossing conflict status.

No.	Operator	Crossing Location (Sta.)	Size (in)	Description	Depth (ft)	Pipeline Status	Crossing Conflict Status
1	Unknown	610+00** (Flotation Canal)	Unknown	Gas	Unknown	N/A	NO CONFLICT *(UNCONFIRMED)*
2	Unknown	614+00 (Flotation Canal)	Unknown	Unknown	Unknown	N/A	NO CONFLICT *(UNCONFIRMED)*
3	Enlink	125+00**	12"	Natural Gas	N/A	N/A	NO CONFLICT (CONFIRMED)

4	Kinder Morgan	137+50	6"	Natural Gas	-72.0' MLG (-73.26' MLLW)	Permanently Abandoned	NO CONFLICT (CONFIRMED)
5	Chevron Pipeline	138+11	10"	Crude	-50.0' MLG (-51.26 MLLW)	Active	NO CONFLICT (CONFIRMED)
6	Enlink	147+00 - 147+20**	12"	Natural Gas	N/A	N/A	NO CONFLICT (CONFIRMED)
7	Chevron Pipeline	199+27	10"	Crude	-36.2' MLG (-37.46 MLLW)	Permanently Abandoned	CONFLICT (CONFIRMED). To be removed by owner.
8	Chevron Pipeline	214+40 - 215+00	6"	Crude	N/A	Permanently Abandoned	NO CONFLICT (CONFIRMED)
9	Enlink Midstream	332+00 - 350+00	12"	Gas	-40.0' MLG (-41.26 MLLW)	Abandoned	CONFLICT (CONFIRMED) To be removed.

Table note: ** denotes the same pipeline.

Before the initial construction of the proposed Corps project, the majority of the material in the Federal channel would be dredged by the CWPPRA TE-134 marsh creation project and disposed of beneficially in marsh creation sites as features of the CWPPRA TE-134 project.

The initial USACE deepening dredging contract would be to -32 ft MLLW plus 4 ft of advanced maintenance for the offshore reach and -30 ft MLLW plus 3 ft of advanced maintenance for the inshore reach at the Chevron pipeline, following removal. The estimated quantity for the initial USACE deepening study dredging contract would be approximately 330 thousand cubic yards (TCY). These 330 TCY would be disposed of in the nearshore disposal areas shown in Figure 1. An analysis of inshore and offshore channel dredged every 4 years for 20 years by USACE resulted in an estimated quantity of 1.44 MCY of dredge material. The offshore channel would be dredged every 2 years for 20 years by USACE resulting in an estimated quantity of 720 TCY of dredge material. The USACE Operation and Maintenance (O&M) quantity would be about 250 TCY to 1 MCY of sand and silty sand about every 2 years. Depending on the quantity of dredged material removed, each maintenance event would impact about 10 to 40 acres of shallow open water near the shoreline. The dredged material would be re-worked by wave energy and incorporated into the longshore drift for dispersion along the beachhead.

2.3 PLAN FORMULATION AND EVALUATION

In 2019, the Greater Lafourche Port Commission (GLPC) conducted a feasibility study to address navigation improvements for the Port Fourchon Belle Pass Channel. The GLPC's first tentatively selected plan (TSP) was to deepen Port Fourchon to the following

dimensions: 30x300 foot at Bayou Lafourche; 50x475 foot at Belle Pass; and 52x475 foot at the entrance channel.

The GLPC revised their feasibility study in 2020 to address navigation improvements for the Port Fourchon Belle Pass Channel. At this point, the TSP was changed to a -30 ft MLLW channel inland, and a -32 ft MLLW channel offshore, compared to the currently authorized, existing channel depth of -24 ft MLLW. The study was submitted to the ASA through Section 203 of the Water Resources Development Act (WRDA) of 1986 (PL 99-662) as modified by Section 1014 of Water Resources and Reform Development Act (WRRDA) 2014. Section 203 allows non-Federal interests, such as GLPC, to undertake feasibility studies of proposed navigation projects and submit them to the ASA-CW.

In April 2020, the Office of the Assistant Secretary of the Army for Civil Works (OASACW) conducted a concurrent review of this submittal with the Headquarters, U.S. Army Corps of Engineers (Corps) with the purpose of determining Federal interest. Based on the results of the review process, the Secretary determined that the Port Commission's recommended plan is feasible from an engineering and construction viewpoint, but certain issues were not resolved as documented in their Review Assessment Report.

The ASA-CW April 2020 Review Assessment originally contained 44 comments. The action to address these comments includes the USACE-CEMVN drafting a Letter Report regarding the proposed Corps project, with supporting documentation as needed (i.e., NEPA Environmental Assessment (EA), certified cost estimate) based on the ASA-CW April 2020 Review Assessment and the Non-Federal Sponsor GLPC Section 203 Revised Feasibility Report. Information that has been developed to address the ASA's comments is documented as addendums to the Letter Report, including this EA, a Dredged Material Management Plan (including Economics and Engineering appendices) and a Real Estate Plan.

Following the review of the Letter Report and the resolution of any issues, the ASA-CW may transmit to Congress, in writing, a Final Assessment of the proposed project with modifications and conditions that the Secretary deems appropriate. The Non-Federal Sponsor GLPC Section 203 Revised Feasibility Report will not be further revised as part of this effort.

Section 3
Affected Environment

3.1 DESCRIPTION OF PROJECT AREA

Port Fourchon is located on the southern tip of Lafourche Parish, Louisiana, just north of the Gulf of Mexico. It is the southernmost point of Louisiana accessible by automobile, via Highway 1.

The upstream limit of the inland reach begins approximately at Station 0+00 to provide access for the flotation canal and slips A, B and C. The flotation canal and slips A, B, and C are maintained by the GLPC and not maintained by USACE (See Figure 2). The offshore reach terminates at the downstream end in the Gulf of Mexico at approximately the -32 ft contour at Station 330+00. The channel is protected from excessive sedimentation and the dynamic/turbulent northern Gulf of Mexico environment by two jetties on the east and west side of the channel. The East jetty is approximately 3,300 linear feet and the West jetty is approximately 3,000 linear feet. See Figure 1 for general location of the project. The headlands on both sides of the jetties are also crucial for protecting both the infrastructure of Port Fourchon and the ecosystem in the vicinity.

Figure 2. Map of the existing conditions at Port Fourchon, Louisiana at the mouth of Bayou Lafourche, Louisiana. The orange lines denote the slips and flotation canal maintained by the non-Federal sponsor: Greater Lafourche Port Commission. The green line denotes the inland reach maintained by USACE and the purple line denotes the offshore reach maintained by USACE.

3.2 CLIMATE, CLIMATE CHANGE, SEA-LEVEL RISE, AND SUBSIDENCE

The climate in the vicinity of the project area is subtropical, marine with long humid summers and short moderate winters. The seasonal rainy period occurs from mid-December to mid-March with dry periods in May, October, and November.

Hurricanes and tropical storms typically occur in the area between June and November. Summer thunderstorms are common, and tornadoes strike occasionally. These storms are of short duration and are quite variable in the amount and location of damage incurred. The

occurrence of tropical depressions, tropical storms, and hurricanes bring heavy rains that last up to several days. These storms typically cause alterations to the hydrologic regimes causing damage and loss of property and contribute to coastal land loss.

Coastal Louisiana has one of the highest land loss rates in the country and this is exacerbated by natural and anthropogenic activities such as global climate change, increased frequency and severity of storms, and industry (Couvillion et al., 2017). Coastal Louisiana is experiencing land loss at a varied rate of around -83.5 +/- 11.8 km^2 per year to -28.01 +/- 16.37 km^2 per year (Couvillion et al., 2017). From 1932 to 2016 there has been a net wetland loss of around -4,833 km^2 coastwide (Couvillion et al., 2017). Coastal Louisiana is increasingly vulnerable to relative sea-level rise, storm damage, and flood events.

The 2014 USACE Climate and Resiliency Policy Statement states: “USACE shall continue to consider potential climate change impacts when undertaking long-term planning, setting priorities, and making decisions affecting its resources, programs, policies, and operations.” Climate Change information and relative sea level rise (RSLR) estimates were used to predict habitat impacts for the Proposed Action.

3.3 RELEVANT RESOURCES

This section contains a description of relevant resources that could be impacted by the Proposed Action. Relevant resources described are those recognized by: National, state, or regional agencies and organizations as required by laws, executive orders, regulations, and other official standards of technical or scientific agencies, groups, or individuals; and the general public. Table 3-1 provides summary information of the institutional, technical, and public importance of these resources.

When discussing wildlife resources, the scientific name associated with all common species names will be presented the first time the common name is utilized. Afterward, only the common name will be used.

Environmental Justice is a not a relevant resource in this EA, as the nearest EJ community is located 15 miles north of the proposed channel dredging, and therefore, will not be impacted by the proposed action. Although the project area is mapped on the Climate and Economic Justice Screening Tool as being within a disadvantaged community, as previously mentioned, the nearest EJ community is actually located 15 miles north of the channel dredging in Golden Meadow, Louisiana, within a Federal flood protection system. Hence, this project would not impact the human environment. Disposal of the dredge material would be in the surf zone on the east and west side of the jetties at the mouth of Bayou Lafourche, of which would be brought there in a slurry via pipeline. So, dredged material would not be traveling through, or going on, land at all for dredge material disposal. Further, dredging of the channel would allow for more deep draft navigation vessels to access the port, which has the potential to benefit the local and national economy. Please refer to sections 3.3.7 and 4.1.7 for more information on the socioeconomic impacts of the proposed project.

Table 3-1. Relevant Resources and their Institutional, Technical, and Public Importance

Resource	Institutionally Important	Technically Important	Publicly Important
Wetlands	Clean Water Act of 1972, 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.
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.
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.
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, EPA, LDWF, and LDNR 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.
Water Quality	Clean Water Act of 1972, Fish and Wildlife Coordination Act, Coastal Zone Mg Act of 1972, and Louisiana State & Local Coastal Resources Act of 1978	USACE, USFWS, NMFS, NRCS, EPA, and State DNR and wildlife/fishery offices recognize value of fisheries and good water quality and the national and 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.

Resource	Institutionally Important	Technically Important	Publicly Important
Socioeconomics	USACE ER 1105-2-100, and National Environmental Policy Act of 1969	When an environmental document is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental document should consider and discuss all of these effects on the human environment.	Government programs, policies and projects can cause potentially significant changes in many features of the socioeconomic environment. Social concerns and items affecting the area's economy are of significant interest to communities.
Cultural Resources	National Historic Preservation Act of 1966, as amended; the Native American Graves Protection and Repatriation Act of 1990; and the Archeological Resources Protection Act of 1979	State and Federal agencies document and protect sites. Cultural resources are important for 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.
Recreation Resources	Federal Water Project Recreation Act of 1965 as amended, and Land and Water Conservation Fund Act of 1965 as amended	Provide high economic value of the local, state, and national economies.	Public makes high demands on recreational areas. There is a high value that the public places on fishing, hunting, and boating, as measured by the large number of fishing and hunting licenses sold in Louisiana; and the large per-capita number of recreational boat registrations in Louisiana.
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.
Greenhouse Gas	Council of Environmental Quality (CEQ), CEQ-2022-0005, on January 9, 2023	Federal agencies consider the effects of greenhouse gas emissions when establishing a project.	Public concern regarding climate change and the impacts of climate change to the human environment is prevalent.
Transportation	National Environmental Policy Act, (Public Law 91-190); ER-200-2-2, Procedures for Implementing NEPA	Local, state, and Federal agencies consider effects on routes important to public transportation as well as the importance of movement for commerce, national security, and recreation.	Changes to the transportation and traffic patterns affect the public and are of interest to the community.
Navigation	Rivers and Harbors Act of 1899 and River and Harbor Flood Control Act of 1970 (PL 91-611)	Providing safe, reliable, efficient, and environmentally sustainable waterborne transportation systems (channels, harbors, and waterways) is important for movement of commerce, national security needs, and recreation.	Navigation concerns affect area economy and are of significant interest to community.

3.3.1 Hydrology

Historic and Existing Conditions:

Bayou Lafourche is a 106-mile bayou in southeastern Louisiana beginning in Ascension Parish, flowing through parts of Assumption and Lafourche Parishes and finally flowing into the northern Gulf of Mexico in Louisiana. Segmenting these 39 miles are a number of small channels which create connectivity between Bayou Lafourche, adjacent marshlands, and surrounding bays; including Timbalier Bay and other various bays within the Barataria Basin.

Bayou Lafourche was created naturally about 800 to 2,500 years ago as a Mississippi River outlet and this created and nourished wetland and estuarine ecosystems until its confluence with the Mississippi River was cut off around 1903. Since then, much of the Bayou has been dredged to control water flow (https://waterheritage.atchafalaya.org/trail-sites.php?trail=Pumping-Station). Navigation is a primary reason for this dredging.

In 1955, a 450 cubic feet per second (cfs) pump station at the Bayou Lafourche's headwaters was constructed to divert Mississippi River water into the bayou and is currently in operation. Since then, a variety of other projects have been undertaken to partially restore Mississippi River water into Bayou Lafourche, such as the proposed Bayou Lafourche Pump Station (Bayou Lafourche Pump Station Project Factsheet, https://coastal.la.gov/news/bayou-lafourche-pump-station/). Future plans for the Bayou Lafourche Pump Station include operation of a 1,000 cfs pump station that is currently under construction by the Louisiana Coastal Restoration and Protection Authority (CPRA).

Bayou Lafourche has several sections that are Federally maintained downstream of its historic confluence with the Mississippi River:

1. The Bayou Lafourche Waterway, LA is a Federally authorized and maintained channel with a width of 300 ft and a depth of -24 ft between stations 0+00 and 130+00.

2. Belle Pass is a Federally authorized and maintained channel continuing from Bayou Lafourche at station 130+00 to a width of 300 ft and a depth of -24 ft. The Entrance Channel to Belle Pass is flanked by a pair of jetties and begins at station 240+00 where the 300 ft wide and -24 ft deep channel deepens to -26 ft and extends to the Gulf Contour.

3. The Turning Basin is a Federally authorized and maintained basin with a diameter of 1,500 ft and a depth of -24 ft deep in the Belle Pass channel between stations 140+00 and 150+00 and is dredged to the currently authorized and maintained depth of Bayou Lafourche and Belle Pass, which is -24 ft.

Port Fourchon is operated by the GLPC. This busy port is located on the east bank of Bayou Lafourche. Bayou Lafourche is an active navigation channel and the lower 3.4 miles of Bayou Lafourche are dredged approximately every two years by the USACE to maintain navigation.

3.3.1.1 Tide

Historic and Existing Conditions:

Tidal exchange within lower portions of Bayou Lafourche reflects astronomical and wind induced oscillations from the Gulf of Mexico; freshwater flows from the Bayou Lafourche watershed; and geometrical connectivity between the channels and local marshes. The ebb and flow of the changing tides coupled with variable freshwater flows affects the currents and circulation. In turn, this influences water quality parameters and channel shoaling patterns and locations which vary seasonally.

The average tidal range, recorded by NOAA, where the mouth of Belle Pass meets the northern Gulf of Mexico at Port Fourchon is 1.21 ft. The tide level on any given day can deviate from astronomical projections due to meteorological factors.

Since the 1950's, changes in geometry (e.g., dredging) and the disconnection and subsequent limited connection through levees with the Mississippi River have likely affected tidal exchange throughout the watershed. Tidal exchange of marshes has also been impacted by pipeline and access canals dredged by the oil and gas industry in the area.

3.3.2 Water Quality

Historic and Existing Conditions:

Bayou Lafourche is a 106-mile bayou in southeastern Louisiana beginning in Ascension Parish, flowing through parts of Assumption and Lafourche Parishes and finally flowing into the northern Gulf of Mexico in Louisiana. Bayou Lafourche was created naturally about 800 to 2,500 years ago as a Mississippi River outlet and has since been dammed and dredged to control water flow (https://waterheritage.atchafalaya.org/trail-sites.php?trail=Pumping-Station).

Some turbidity caused by ongoing/routine maintenance dredging of the Port, vessels, and storm events, causes temporary fluxes in water quality in the proposed project area. The average salinity between 2006 and 2014 was 25.1 ppt; salinities ranged from about 17 to 32 ppt. Tides are diurnal, with a mean tide range of approximately 1.21 feet.

Changes in geometry (e.g., dredging) and the disconnection and subsequent limited connection with the Mississippi River have likely increased the salinity in the vicinity relative to the historical channel (i.e., pre 1900s). The project area also likely has lower turbidity, outside of maintenance events as described above, in general due to a lack of exchange with the Mississippi River. There are considerable amounts of contaminants in the

Mississippi River associated with upstream activities (e.g., agricultural runoff pesticides), and the river contains relatively high levels of nutrients (e.g., nitrates, nitrates, phosphates), which can contribute to inducing hypoxic zones in the northern Gulf of Mexico in the summer months (Rabalais et al., 2001). The significantly reduced connectivity with the Mississippi River relative to the historic condition has likely resulted in reduced contaminant and nutrient levels within the project area.

The State of Louisiana and the EPA have established surface water quality standards to assess ambient water quality conditions and to establish a priority ranking for such waters ((Louisiana Administrative Code (LAC), Title 33:IX.1101 et seq. (LAC 2021)). Most recently, the LDEQ released the 2022 Louisiana Water Quality Inventory: Integrated Report. The proposed project footprint overlaps with the following subsegments in the Terrebonne and Barataria watershed basins: LA120803_00 (Timbalier Bay), LA020403_00 (Bayou Lafourche – From Yankee Canal and saltwater barrier to Gulf of Mexico), LA120806_00 (Terrebonne Basin Coastal Bays and Gulf Waters to the State 3 mile limit), LA020905_00 (Bayou Moreau), and LA021102_00 (Barataria Basin Coastal bays and Gulf Waters to the 3 mile limit). Impairments in each subsegment are listed in Table 3-2 below:

Table 3-2. Water Quality Impairments within Terrebonne and Barataria Basin subsegments that overlap with the proposed project area.

Subsegment	Impairment	Source
LA120803_00	Enterococcus	Unknown
LA020403_00	Enterococcus	Unknown
LA120806_00	Enterococcus and Dissolved Oxygen	Unknown
LA020905_00	Enterococcus	Unknown
LA021102_00	Enterococcus and Fecal Coliform	Unknown

3.3.3 Wetlands

Historic and Existing Conditions:

Wetlands in the proposed project area are within the Barataria-Terrebonne National Estuary and are essential to renewable fishery resources that are important to the local, state, and national economy. A healthy coastal marsh provides nursery habitat for fishes, crustaceans, and bivalves, provides habitat for waterfowl, wading birds, shore birds, small mammals, various amphibians, and reptiles, reduces storm surge; and helps maintain water quality (Chesney et al., 2000).

The general elevation of the saltmarshes in the vicinity is less than 5 feet above sea level and they are often partially inundated at higher tides. They are populated by plant species which are extremely tolerant of or require high salinity such as smooth cordgrass (*Spartina alterniflora*), which is the dominant plant species, wiregrass (*Spartina patens*), saltgrass (*Distichlis spicata*), black rush (*Juncus roemerianus*), sea ox-eye (*Borrichia frutescens*), saltwort (*Batis maritima*), and glasswort (*Salicornia maritima*).

The uptake by marsh vegetation functions as nitrogen and phosphorus sinks. The above ground plant structure buffers storm waves while its root systems help reduce wave generated erosion (Knuston et al., 1982). Marsh vegetation also provides nurseries for larval forms of shrimp, crabs, and fish, as well as habitat for birds, small mammals, reptiles, and various amphibians (Chesney et al., 2000).

Historically, these wetlands existed to a much larger extent than they do currently (USGS, 2017). They were nourished and maintained by Mississippi River water, nutrients, and sediments. Since the early 1900s, many wetlands in the vicinity have been lost and or degraded due to a variety of anthropogenic and natural factors, such as but not limited to the damming of the Mississippi River, creation of canals, dredging, subsidence, erosion, and nutria herbivory.

Pursuant to the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA), NOAA and the State of Louisiana, as represented by the Coastal Protection and Restoration Authority, have been approved to proceed with the “West Fourchon Marsh Creation and Nourishment Project” (TE-134). TE-134 includes the one-time dredging of the channel to a final elevation of -33 feet MLLW, with the exception of a ‘no work area in the vicinity of the Chevron pipeline, and the placement of the dredged material in sites for a marsh restoration project. The CWPPRA TE-134 project is expected to enhance wetlands in the vicinity, and it would be constructed in advance of this proposed Corps action. The CWPPRA TE-134 project is estimated to create up to 820 acres of new marsh in Lafourche Parish, Louisiana to the west of Belle Pass, located approximately 1.7 miles north of the Gulf of Mexico. The marsh creation area is privately owned and is located west of Port Fourchon, Louisiana between Timbalier Bay and Bayou Lafourche at the southeastern end of the Terrebonne Basin. The TE-134 project is located within the South Bully Camp Marsh Mapping Unit of Region 3 of the Louisiana Coast 2050 Restoration Plan (LCWCRTF and WCRA 1998, 1999; West Fourchon TE-0134 EA, 2020).

3.3.4 Wildlife Resources

Historic and Existing Conditions:

Approximately 735 species of birds, finfish, shellfish, reptiles, amphibians, and mammals spend all or part of their life cycle in the estuaries of coastal Louisiana (USACE 2004).

Birds: Port Fourchon is located within the Mississippi Flyway, a major bird migration route between North and South America. Wading birds inhabiting the project area include great

egrets, black and yellow crowned night herons, ibis, roseate spoonbill, and anhingas. Seabird species present within the project area and vicinity include black skimmers, double-crested cormorant, red-breasted merganser (winter), royal tern, least tern, laughing gull, brown and white pelicans. Several birds of prey species, such as the marsh hawk and sparrow hawk, have been observed within close vicinity to the project area. Marsh areas also function as popular wintering habitat for waterfowl species such as pied-billed grebes, double-crested cormorants, coots, teal, mottled ducks, mallards, gadwalls, and widgeons. (GLPC, 2020).

Mammals: Mammals within the project area can be separated into four major groups: (1) small mammals, (2) furbearers, (3) game animals, and (4) marine mammals.

Small mammals that are likely to occur near the project area include the nine-banded armadillo, marsh rice rat, and species of bats.

Furbearing mammals native to saltmarsh communities which are known to occur within the vicinity of Port Fourchon include muskrats, nutria, mink, raccoons, and otters (Lindstedt, 2005). Coyotes are also present in the project area, and they began appearing in Louisiana in the early 1950's as per Louisiana Department of Wildlife and Fisheries (LDWF). They cause livestock and agricultural dames. They are omnivores and may be responsible for reducing number of minks and otters in the project vicinity.

The only game species that is commonly found within the project area is the swamp rabbit.

There are two species of marine mammals that potentially occur in the vicinity of the project area: the Atlantic bottled-nosed dolphin and the West Indian manatee. The West Indian manatee is protected under the Endangered Species Act (ESA) and the bottle-nosed dolphin is protected under the Marine Mammal Protection Act (MMPA). Both species have been periodically observed along the Gulf of Mexico coastline and in rivers which discharge into the Gulf (GLPC, 2020).

Reptiles and Amphibians: Only two species of reptiles are known to occur within saltmarsh habitats surrounding the project area: the Gulf saltmarsh snake and the diamondback terrapin. Diamondback terrapins can be found in Louisiana salt marshes (Louisiana National Heritage Program, 1986-2004). Marine turtle species may nest near the southern extent of the project area along beaches of the northern Gulf of Mexico shoreline. The Gulf Coast toad species, which also occupies shoreline habitat along the northern Gulf of Mexico, is common to the project area (GLPC, 2020). There have been no documented reports of Diamondback terrapins or sea turtles utilizing or nesting in the area (confirmed with USFWS on 02 April 2024).

3.3.5 Essential Fish Habitat

Historic and Existing Conditions:

All marine and estuarine waters of the northern Gulf of Mexico, including the eastern portion of Lake Pontchartrain, have been designated as Essential Fish Habitat (EFH) through regulations promulgated by the National marine Fisheries Service (NMFS) and the Gulf of Mexico Fishery Management Council, as required by the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). EFH is described as waters and substrates necessary for Federally managed species to spawn, breed, feed, and grow to maturity. In the northern Gulf of Mexico, EFH generally includes areas where individual life-stages of specific Federally managed species are common, abundant, or highly abundant. In estuarine areas, EFH includes all estuarine waters and substrates (mud, sand, shell, rock, and associated biological communities), including the subtidal vegetation (submerged aquatic vegetation and algae) and adjacent intertidal vegetation (marshes and mangroves).

The Gulf of Mexico Fisheries Management Council (GMFMC), in cooperation with NMFS, has delineated EFH for Federally managed species identified in Gulf Fisheries Management Plans (FMPs) (GMFMC 2016). The estuarine waters in the proposed project area include EFH for several Federally managed species (Table 3-3).

Table 3-3. Essential Fish Habitat for Life Stages of Species managed by the Gulf of Mexico Fishery Management Council in Eco Region 4: Port Fourchon, Lafourche, Louisiana.

Species	Life Stage	Essential Fish Habitat
Brown Shrimp	Adult, juvenile, larvae, and post-larvae	Gulf of Mexico <110 m, silt sand, muddy sand, marsh edge, submerged aquatic vegetation (SAV), tidal creeks, inner and emergent marsh, oyster reefs, soft bottom, sand shell, pelagic
Cobia	Adult, juvenile, larvae, post-larvae, and eggs	Pelagic
Gray (mangrove) snapper	Adult	Soft bottom, emergent marsh, hardbottom, shoal-banks
Gray triggerfish	Adult, juvenile, larvae, and post-larvae	Sand shell, mangrove, drift algae
Greater amberjack	Adult, and juvenile	Nearshore, drift algae
King mackerel	Adult, juvenile	Pelagic

Lane snapper	Adult, juvenile, larvae, and post-larvae	Shoal-banks, SAV, soft bottom, sand shell, mangrove
Red drum	Adult, juvenile, larvae, and post-larvae	Gulf of Mexico & estuarine mud bottoms, oyster reef, SAV, estuarine mud bottoms, marsh/water interface, all estuaries planktonic, emergent marsh
Red snapper	Juvenile, larvae	Soft bottom, sand shell, hard bottom, pelagic
White Shrimp	Adult, juvenile, larvae, and post-larvae	Gulf of Mexico <33 m, Silt, soft mud, emergent marsh, SAV, marsh ponds, inner marsh, oyster reefs, sand shell, soft bottom, pelagic

Table 3-4. Essential Fish Habitat for Life Stages of Highly Migratory Species managed by NMFS in Eco Region 4: Port Fourchon, Lafourche, Louisiana.

Species	**Life Stage**	**Essential Fish Habitat**
Atlantic sharpnose shark	Adult, juvenile, and neonate	Nearshore and estuarine waters; Barataria Bay, Terrebonne and Timbalier Bay
Blacktip shark	Juvenile	Terrebonne Bay to Mississippi River delta
Bull Shark	Adult, juvenile, and neonate	All estuarine waters, Terrebonne Bay to Mississippi River delta, Gulf of Mexico <25m, bays, marsh edge, estuarine mud bottoms, oyster reefs
Finetooth shark *(Carcharhinus isodon)*	Adult, juvenile, and neonate	Estuarine and nearshore waters east of Terrebonne Bay, Timbalier Bay and waters off o Timbalier Islands
Scalloped hammerhead	Adult, juvenile, and neonate	All nearshore waters to 30 fathoms

3.3.5.1 Fisheries and Aquatic Resources

Additionally, coastal wetlands provide nursery and foraging habitat that supports economically important marine fishery species such as spotted seatrout, southern flounder, Atlantic croaker, Gulf menhaden, striped mullet, and blue crab. These species serve as prey for other Federally managed fish species such as mackerels, snappers, groupers, billfishes, and sharks. Dominant invertebrates include several species of crabs including lesser and greater blue crabs, fiddler crabs, ghost crabs, and brown, white, and pink shrimp. A diverse

assemblage of invertebrates and fish inhabit the surf zone. Fish species also include, silver perch, ladyfish, speckled and white trout, bluefish, Spanish mackerel, red and black drum, and various sharks including bull, spinner, and black- tipped. Additionally, numerous juvenile offshore species seasonally inhabit the shallow waters.

The most typical bottom substrate in the northern Gulf of Mexico is soft muddy bottom where polychaetes are the dominant benthic organism. Benthic habitats support bacteria, algae, and seagrasses; abundances are controlled by scarcity of suitable substrates and limited light penetration. When turbidity is low, coralline red algae and other benthic algae grow in water depths to at least 180 m (DOI MMS 2002).

Open-water habitat includes the Gulf to the south, and marshes and open water, including bays, to the north, as well as a large shallow breach in the headland that allows gulf waters to mingle directly with Barataria Bay. The pelagic offshore water-column biota contains: (1) primary producers— phytoplankton and bacteria, with 90 percent of the phytoplankton in the northern Gulf of Mexico composed of diatoms; (2) secondary producers—zooplankton; and (3) consumers—larger marine species, including fish, reptiles, cephalopods, crustaceans, and marine mammals. The zooplankton consists of holoplankton (organisms for which all life stages are spent in the water column), and meroplankton (mostly invertebrate and vertebrate organisms for which larval stages are spent in the water column). Planktonic primary producers drift with currents, whereas zooplankton move by swimming (DOI MMS 2002).

Floating Sargassum in the Gulf can support more than 100 animal species (DOI MMS 2002). Hydroids and copepods dominate the assemblage, which also includes fish, crabs, gastropods, polychaetes, bryozoans, anemones, and sea spiders. Most of these species depend on the Sargassum algae. During their early years of life, sea turtles drift with the Sargassum and feed off living organisms associated with the seaweed.

3.3.6 Threatened, Endangered, and Other Protected Species

Historic and Existing Conditions:

Within the State of Louisiana there are 42 threatened and endangered (T&E) or at-risk species (some with critical habitat) under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS). USACE conducted an Information for Planning and Consultation (IPaC) search on 29 February 2024 and confirmed with USFWS that within the proposed project area there are 16 species that should be considered. These species can be found in the table below:

Table 3-5 Threatened and Endangered Species Considered under the Endangered Species Act

	Common Name	Species	ESA status	*Critical Habitat
Mammals	West Indian Manatee	*Trichechus manatus*	Threatened	No
	Fin Whale	*Balaenoptera physalus*	Endangered	No
	Rice's Whale	*Balaenoptera ricei*	Endangered	No
	Sei Whale	*Balaenoptera borealis*	Endangered	No
	Sperm Whale	*Physeter macrocephalus*	Endangered	No
Birds	Eastern Black Rail	*Laterallus jamaicensis ssp. jamaicensis*	Threatened	No
	Piping Plover	*Charadrius melodus*	Threatened	Yes
	Rufa Red Knot	*Calidris canutus rufa*	Threatened	No
Reptiles	Hawksbill Sea Turtle	*Eretmochelys imbricata*	Endangered	No
	Kemp's Ridley Sea Turtle	*Lepidochelys kempii*	Endangered	No
	Leatherback Sea Turtle	*Dermochelys coriacea*	Endangered	No
	Loggerhead Sea Turtle	*Caretta caretta*	Threatened	No
	Green Turtle	*Chelonia mydas*	Threatened	No
Fishes	Oceanic Whitetip Shark	*Carcharhinus longimanus*	Threatened	No
	Giant Manta Ray	*Manta birostris*	Threatened	No
Insects	Monarch Butterfly	*Danaus plexippus*	Candidate	No

*Critical Habitat within the project area

There are both Federally listed species and species of concern within the project area.

The piping plover and red knot bird species are the only two endangered species listed which commonly occur within the project area. Tidal flats surrounding the project area serve as potential wintering and foraging ground for piping plover and have been designated as a critical habitat unit. Additionally, these tidal flats provide yearlong foraging habitat for the red knot. Marine mammal and sea turtle species listed under this section are believed to occur within the study area, although, sightings have rarely been documented in the project area.

Species of concern present within the project area include the bald eagle, brown pelican, and other colonial nesting birds. Colonial nesting birds include a wide range of species

which nest on small coastal islands – several species of cormorants, herons, egrets, ibises, gulls, skimmers, and the least tern.

West Indian Manatee: Manatees are listed as threatened under the ESA and are protected under the Marine Mammal Protection Act (MMPA). Manatees inhabit coastal areas from Florida to the Greater Antilles and suitable habitats in Central and South America. While the West Indian manatee has been observed in the coastal waters of Louisiana occasionally, it is unlikely that they would be found near the project area due to the lack of vegetation for foraging.

Given the extensive areas of relatively undisturbed wetlands in the region and the paucity of food sources in the project area, it is considered unlikely for the manatee to frequent and utilize waterways within the project area. The project area does not contain West Indian manatee critical habitat.

Fin Whale: The fin whale is the second-largest whale species on earth, second only to the blue whale. It is found throughout the world's oceans. It gets its name from an easy-to-spot fin on its back, near its tail. The fin whale is listed as endangered under the ESA and depleted under the MMPA. Fin whale is highly unlikely to be found in the project area because the project area is located in shallow waters and there would be a lack of food source for them.

Rice's Whale: The Rice's whale has been consistently located in the northeastern Gulf of Mexico, along the continental shelf break between 100 and about 400 meters depth. They are the only resident baleen whale in the Gulf of Mexico. The Rice's whale is highly unlikely to be found in the project area because the project area is located in shallow waters and there would be a lack of food source for them.

Sei Whale: Sei whales are found in all the oceans of the world and are usually found in deep waters. As a highly pelagic species, sei whales will make seasonal migrations from low-latitude wintering areas to high-latitude summer feeding grounds. Sei whales primarily appear to be associated with the continental shelf edge and are rarely seen in the Gulf of Mexico. (Hain et al. 1985). The Sei whale is highly unlikely to be found in the project area because the project area is located in shallow waters and there would be a lack of food source for them.

Sperm Whale: Sperm whales are protected under the MMPA and the ESA and occur throughout the world's oceans. They are known to inhabit Gulf of Mexico waters but are primarily found in waters deeper than about 1,640 feet due to their food source being comprised mainly of deep- diving squid and fishes. Sperm whales stay within the Gulf of Mexico, in waters about 656 – 11,480 feet deep and are unlikely to venture into the project area.

Eastern Black Rail: As of November 9, 2020, the Eastern black rail was listed as threatened. The Eastern black rail preferred habitat is high elevation marshes and inland coastal

prairies. Since the project area does not contain this habitat type, it is highly unlikely that the Eastern black rail would be found within the project area.

Rufa Red Knot: The rufa subspecies of the red knot is listed as threatened under the ESA. Louisiana is a migration stopover for this species of red knots in both spring and fall, and some birds may overwinter in small numbers. Rufa red knots are known to occur in the project area. In the southeastern United States, Rufa red knots forage along sandy beaches, tidal mudflats, salt marshes, and peat banks. Observations along the Texas coast indicate that Rufa red knots forage on beaches, oyster reefs, and exposed bay bottoms and roost on high sand flats, reefs, and other sites protected from high tides. Since the project area does not contain this habitat type, it is highly unlikely that the Rufa red knot would be found within the project area.

Piping Plover: The piping plover is listed as threatened under the ESA. The piping plover does not nest in Louisiana, but it winters along its coastal beaches and barrier islands. Breeding and wintering plovers forage in exposed wet sand in wash zones; intertidal ocean beach; wrack lines; wash over passes; mud-, sand-, and algal flats; and shorelines by probing for invertebrates at or just below the surface. They use beaches adjacent to foraging areas for roosting and preening. Small sand dunes, debris, and sparse vegetation within adjacent beaches provide shelter from wind and extreme temperatures. Port Fourchon is designated as critical habitat for wintering piping plover. Critical habitat constitutes areas considered essential for the conservation of a listed species.

Marine Turtles: The Green (*Chelonia mydas*) and Loggerhead (*Caretta caretta*) sea turtles are listed as threatened and the Kemp's Ridley (*Lepidochelys kempii*), Leatherback (*Dermochelys coriacea*) and Hawksbill (*Eretmochelys imbricate*) are listed as endangered under the ESA. All of these species are known to utilize the offshore and inshore areas of the Gulf of Mexico near Port Fourchon. Critical habitat for the Loggerhead is located just outside of the project footprint. During their early years of life, sea turtles drift with the *Sargassum* and feed off living organisms associated with the seaweed. In 2014, the NOAA Fisheries designated *Sargassum* habitat in the Gulf of Mexico as critical habitat for the Northwest Atlantic Ocean Distinct Population Segment (DPS) of the loggerhead sea turtle. This designated critical habitat is located approximately 4 miles off the coast of Louisiana and is well outside the project area.

Nesting of any of these species has not been documented in Louisiana, however, sea turtles have been known to get stranded on beaches of Louisiana. Contractors would be informed of the potential of encountering stranded turtles and would be directed to report any siting's to the Louisiana Department of Wildlife and Fisheries (LDWF) at (337) 962-7092.

Oceanic White Tip: Threatened Oceanic whitetip sharks are large, pelagic sharks found in tropical and subtropical oceans throughout the world. They live offshore in deep water but spend most of their time in the upper part of the water column near the surface. They are highly unlikely to be found in the project area as they prefer deeper offshore water. In 2018, NOAA Fisheries listed the species as threatened under the ESA.

Giant Manta Ray: In 2018, NOAA Fisheries listed the species as threatened under the ESA. The giant manta ray is found worldwide in tropical, subtropical, and temperate bodies of water and is commonly found offshore, in oceanic waters, and in productive coastal areas. The species has also been observed in estuarine waters, oceanic inlets, and within bays and intercoastal waterways. As such, giant manta rays can be found in cool water, as low as 19°C, although temperature preference appears to vary by region. For example, off the U.S. East Coast, giant manta rays are commonly found in waters from 19 to 22°C, whereas those off the Yucatan peninsula and Indonesia are commonly found in waters between 25 to 30°C. The giant manta ray is a migratory species and seasonal visitor along productive coastlines with regular upwelling, in oceanic island groups, and near offshore pinnacles and seamounts. The timing of these visits varies by region and seems to correspond with the movement of zooplankton, current circulation and tidal patterns, seasonal upwelling, seawater temperature, and possibly mating behavior.

Monarch Butterfly: Identified as a Candidate species, the biggest threat to monarchs are herbicides, insecticides, and climate change.

Colonial Nesting Waterbirds: Coastal Louisiana contains habitats suitable for support of colonial nesting waterbirds which are protected under the MBTA. Louisiana is considered a hotspot for colonial wading bird and seabird nesting in all of the United States because of its position in the Mississippi Alluvial Valley and along the Gulf of Mexico. It is estimated that the Louisiana coastal area is home to approximately 200 rookeries of wading birds and seabirds. The Proposed Action would be located in an area where colonial nesting waterbirds, such as anhingas, cormorants, great blue herons, great egrets, snowy egrets, little blue herons, tricolor herons, reddish egrets, cattle egrets, green herons, black-crowned night-herons, yellow crowned night-herons, ibises, and roseate spoonbills occur. Geologic subsidence, saltwater intrusion, and significant tropical storm activity all will continue to impact birds in the project area. All of the above have combined to impact available marsh, barrier islands, beach, and dredged spoil nesting habitat for colonial nesting seabirds within the Louisiana coastal zone.

Bald Eagle (Haliaeetus leucocephalus): Although it is delisted, the bald eagle is still protected by the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). Bald eagles nest in Louisiana from December through mid-May in mature trees (e.g., bald cypress, sycamore, willow, etc.) near fresh to intermediate marshes or open water. Nest sites typically include at least one perch with a clear view of the water or area where the eagles usually forage. Habitats suitable for use by the bald eagle are present throughout coastal Louisiana and can be found in the project area.

Brown Pelican (*Pelecanus occidentalis*): On November 17, 2009, the brown pelican was removed from the Federal list of threatened and endangered species. However, the Brown pelican is still protected under the MBTA and is a state listed species. Habitats suitable for use by the brown pelican are present throughout coastal Louisiana, including the project area.

Bottlenose dolphins: Common bottlenose dolphins are protected under the MMPA and are found throughout the world in both offshore and coastal waters, including harbors, bays, gulfs, and estuaries of temperate and tropical waters. Bottlenose dolphins are known to inhabit the project area and could venture very close to shore.

3.3.7 Socioeconomics: Population Characteristics

Historic and Existing Conditions:

Port Fourchon is located in Lafourche Parish, Louisiana and the population trends are shown in Table 3-6. Lafourche Parish has been consistently increasing in population size since 1970, with the most dramatic increases being a 20% increase in population from 1970 to 1980, and an 8% increase from 2000 to 2010. Similarly, there has been a consistent growth in population seen in the overall state of Louisiana. According to Moody Analytics (ECCA) Forecast, these population trends would continue until 2040.

Table 3-6. Total Population: 1970-2040.

Location	1970	1980	1990	2000	2010	2020	2030	2040
Lafourche Parish	69,046	83,465	85,809	89,775	96,681	98,663	99,223	99,499
State of Louisiana	3,641,306	4,205,900	4,219,973	4,468,976	4,533,372	4,657,757	4,816,694	4,868,183
Source: Moody Analytics, United States Census Bureau								

The trends for number of households in Lafourche Parish are represented in Table 3-7. Similar to the total population, there has been consistent growth in the number of households with the most dramatic increase being from 1970 to 1980. Since then, there has been a decrease in the growth rate, but nonetheless an increase is expected until 2040 according to Moody Analytics (ECCA) Forecast.

Table 3-7. Total Number of Households: 1970-2040.

Location	1970	1980	1990	2000	2010	2020	2030	2040
Lafourche Parish	18,010	25,696	28,818	32,054	35,654	38,095	40,034	41,520
Source: Moody Analytics, United States Census Bureau								

Unemployment in Lafourche increased from 1990 to 2010, with a 36 percent increase from 2000 to 2010 likely due to the Great Recession (Table 3-8). This increase in unemployment follows the trends that occurred at the state and national level. The unemployment rate slightly decreased in 2020 and although Moody Analytics (ECCA) Forecast predicts an increase through 2040, there has been a continued decrease in the unemployment rate over the past couple of years.

Table 3-8. Unemployment Rate (%): 1990-2040.

Location	1990	2000	2010	2020	2030	2040
Lafourche Parish	4.1	4.5	6.1	5.9	6.5	6.4
Source: Moody Analytics, U.S. Bureau of Labor Statistics						

Examining the per capita income in Lafourche Parish, there has been consistent growth since 1970 and according to Moody Analytics (ECCA) Forecast, upward trends are going to continue until 2040. These trends mirror the population and housing trends that were examined earlier (Table 3-9).

Table 3-9. Per Capita Annual Income ($): 1970-2040.

Location	1970	1980	1990	2000	2010	2020	2030	2040
Lafourche Parish	2,829	9,200	13,329	23,485	40,391	50,061	65,374	86,374
Source: Moody Analytics, U.S. Bureau of Economic Analysis, U.S. Census Bureau								

The top industry for employment in the Lafourche Parish across all years is Trade, Transportation, and Utilities. On average, about ten percent of the total population works in this industry and about fifteen percent of all employment lies in this industry. Other top industries for employment in Lafourche Parish include Warehousing and Utilities, Government, and manufacturing.

3.3.8 Cultural Resources

Historic and 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. The project is located south of Port Fourchon within the Belle Pass Federal channel of Bayou Lafourche in Lafourche Parish, Louisiana. The proposed project consists of a dredging maintenance, and material disposal project to deepen the Federal channel. Recently, NOAA, in conjunction with the GLPC, completed a Supplemental EA, SEA TE-134, to deepen the Belle Pass Federal channel and four boat slips within the Port Fourchon shipyard. CEMVN's proposed project would further deepen the area around the Chevron pipeline in the Federal channel and the offshore reach of the Federal channel, the inshore reach would be maintained at the -30 ft MLLW depth. The Federal project excludes dredging the boat slips. The Federal project also includes a long-term dredging-maintenance operations plan after the NOAA project and

initial deepening is completed. Dredging operations would utilize a hydraulic cutter-head dredge and transport material to the disposal sites in a slurry via floating pipelines. The discharge locations are placed on the left and right of the existing channel jetties approximately 200 feet offshore within the shallow open waters to allow water and sediment flow. Construction access for the dredge operations, attendant plant, and discharge line would be located within the open water.

The project sits at the interface of the Atchafalaya and Barataria Basins and the southernmost extent of the Lafourche Delta Complex. This deltaic complex served as the Mississippi River's major distributary system around 2000 B.P. and was initiated upon the abandonment of the St. Bernard Complex. The project area is located at the terminus of the Bayou Lafourche distributary, the last lobe to form within the complex and activated around 800 B.P. (Godzinkski et al 2018; Saucier 1994). The cultural history of the project area, therefore, begins relatively late compared to other parts of the deltaic plain because the land was not created or habitable until 1200 A.D. at the earliest. Thus, the Poverty Point Period (1,500 B.C. - 500 B.C.), Tula Period (500 B.C. – 1 A.D.), Marksville Period (1 A.D. – 400 A.D.), and Baytown Period (400 A.D. – 700 A.D.) are not present in the immediate project area, though some Baytown Period sites are located upriver within the upper portions of the Lafourche Delta Complex. The earliest identified material culture in the project area is associated with the Coles Creek Period (700 A.D. – 1200 A.D.). The proliferation of Coles Creeks sites, particularly in southeast Louisiana, has been interpreted as a population explosion for the time. Coles Creek archaeological sites are known to include large earthen mounds and cluster-mounds encircling plazas with mortuary and temple structures located on the tops of platform or truncated pyramid mounds. Coles Creek sites near the project area include shell middens, mound sites, and artifact scatters. An inundated cemetery site (16LF250) is located upriver on the bank of Bayou Lafourche outside of the project area but may be associated with Coles Creek.

The Mississippi Period (1200 A.D. – ~1500 A.D.) is the final precontact Native American Period in Louisiana and is well represented by the rise of the Plaquemine culture. Debates continue today on whether the Plaquemine culture was birthed from the local Coles Creek populations' increased interactions with northern Mississippian groups or whether the Plaquemines culture was an endogenous phenomenon created via isolation. Regardless of their origin, this culture marks definitive evidence for ranked societies likely organized by chiefdom-level political systems. Archaeological sites in the vicinity of the project area range from logistical extraction camps and farmsteads to larger villages associated with mounds surrounded by palisades. Located along the edge of the Barataria Basin, the early Mississippi Period is marked by both Medora and Barataria phase ceramics.

The Protohistoric and Early Historic Periods (1543-ca. – 1725) mark the contact and European explorations periods within the deltaic plain. Recordings of contact between Spanish (i.e., de Soto) and later French (i.e., La Salle and Iberville) explorers and Native American groups along the Mississippi River are documented by several surviving accounts. By the middle to late 1700s, the displaced Houma Indians were documented in Ascension,

Lafourche, and Terrebonne Parishes. The Spanish Colonial Period (1725 to 1803) marks the start of Acadian immigration into the Bayou Lafourche area, with clusters of family homesteads creating small hamlets throughout the area utilizing traditional agricultural practices for subsistence. The number of sugarcane plantations increased in the Barataria Basin throughout the latter half of the Colonial Period, the closest of which was the development of the Grand Isle and Cheniere Caminada areas for agriculture. During this time, the Bayou Lafourche waterway became a magnet for watercraft smuggling and privateering activities associated with Jean Lafitte and his crew (Godzinski et al 2018:4-6).

The Antebellum Period (1803-1860) witnessed increased smuggling activities in the project area as Bayou Lafourche became a primary waterway for smaller vessels to navigate up to the Mississippi River and float downstream to New Orleans. Grand Terre Island was primarily used as a site for logistical organization and exchange of contraband between smugglers before heading upriver. At the same time, the plantation sugarcane production increased in lower Lafourche Parish as the sugar economy of southeast Louisiana expanded. The closest and largest plantation to the project area from that time is the Forstall Plantation located on Grand Terre Island.

The immediate project area experienced little military activity during the Civil War Period (1861-1865), though some fortifications were constructed in the upper portions of Bayou Lafourche by Union Troops (Godzinski et al. 2018: 4-23). As with other areas of Louisiana dependent on plantation-derived sugarcane economy, post-Civil War emancipation created a large reorganization of the local labor system eventually leading to a population decline for the area. As a result, local plantations began accommodating tourism to supplement their revenue. Around this same time, the peak of cypress lumbering began in Louisiana, which utilized Bayou Lafourche and the project area as a primary waterway for exporting transportation. The mid-twentieth century petroleum industry boom led to vast development in south Lafourche Parish. Petroleum production and the expansion of offshore drilling rig technology led to a population increase in the local area, with the revitalization of formally depressed and abandoned communities and secondary markets springing up in the local area. Port Fourchon and the Greater Lafourche Port Commission were established in 1960 to support the growing petroleum industry, which required the clearing and dredging of the Port Fourchon slips and dredging of Bayou Lafourche (Godzinski et al. 2018: 4-28).

CEMVN conducted a background and literature review of the project area utilizing the National Register of Historic Places (NRHP) database, NOAA’s Coast Survey's Automated Wreck and Obstruction Information System (AWOIS) database, and the Louisiana Division of Archaeology (LDOA) Louisiana Cultural Resources Map (LDOA Website). Newman (1976) conducted an initial reconnaissance-level cultural resources investigation of the northern portion of Belle Pass, and the entire Federal channel underwent a marine remote sensing survey and desktop review conducted in 2018 (Godzinski et al. 2018). Within Belle Pass, archaeological sites 16LF7, 16LF72, 16LF83, and 16LF84 overlap with the project area and are determined ineligible for listing in the National Register of Historic Places. Archaeological sites 16LF85, 16LF86, and 16LF249 have an undetermined NRHP eligibility

status, but are located along the edge of the Belle Pass channel and would be avoided by dredging operations.

Historical aerial images and topographic maps demonstrate that the dredge disposal areas experienced significant shoreline erosion and disturbance within the last 50 years. The eastern disposal area underwent two terrestrial reconnaissance cultural resources surveys (Gagliano et al. 1976; Beavers and Lamb 1979) and two terrestrial Phase I cultural resources investigations (Braud et al. 2008; Coughlin 2012) when it was a part of the Fourchon Beach shoreline. No cultural resources were identified during these surveys. The initial Belle Pass channel dredging operations previously utilized the proposed western disposal area as a disposal site when it was located along Fourchon Beach before erosion retreated the shoreline to its current location. NOAA's AWOIS database also did not identify any submerged resources within the proposed disposal areas.

CEMVN coordinated with the Louisiana State Historic Preservation Office (SHPO) and Federally-recognized Tribes (i.e., 1) the Chitimacha Tribe of Louisiana, 2) the Coushatta Tribe of Louisiana, 3) the Jena Band of Choctaw Indians, 4) the Mississippi Band of Choctaw Indians, and, 5) the Tunica-Biloxi Tribe of Louisiana) for a determination of "No Historic Properties Affected", as stated in a consultation letter emailed to all consulting parties on 5 December 2023. CEMVN received concurrence from the Louisiana SHPO on 19 December 2023; 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. In accordance with 36 CFR 800.4 (d)(1)(i), CEMVN has fulfilled its consultation responsibilities under the NHPA.

3.3.9 Tribal Resources

Historic and Existing Conditions:

In addition to cultural resources or historic properties considered eligible for the National Register of Historic Places, USACE's 2023 Tribal Consultation Policy asks the agency to determine if any of three categories of resources would be significantly adversely affected by the proposed action. The three categories are: Tribal Rights, Tribal lands, and protected tribal resources (see Section 7. E.O. 13175 for more information on Government-to-Government Consultation between Federally-recognized Tribes and USACE) (Table 3-10). Tribal interest varies by geographic limits and USACE uses the most inclusive approach to consultation and coordination. Five (5) Federally-recognized Tribes have an aboriginal/historic interest in the watershed. The tribes are: 1) the Chitimacha Tribe of Louisiana, 2) the Coushatta Tribe of Louisiana, 3) the Jena Band of Choctaw Indians, 4) the Mississippi Band of Choctaw Indians, and, 5) the Tunica-Biloxi Tribe of Louisiana.

Table 3-10. 2023 USACE Tribal Consultation Policy Definitions.

Category	Definition
Tribal rights:	Those rights legally accruing to a Federally-recognized Tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaties, statutes, judicial decisions, executive orders or agreement and that give rise to legally enforceable remedies.
Tribal lands	Any lands title to which is: either held in trust by the United States for the benefit of any Federally-recognized Indian tribe or individual or held by any Federally-recognized Indian tribe or individual subject to restrictions by the United States against alienation.
Protected tribal resources	Those natural resources and properties of traditional or customary religious or cultural importance, either on or off Tribal lands, retained by, or reserved by or for, Federally-recognized Tribes through treaties, statutes, judicial decisions or executive orders.

According to available government records, there are no tribal lands, nor are there specific tribal treaty rights related to access or traditional use of the natural resources in the project area. There are, however, many protected tribal resources within the Parish representing pre-contact utilization of the landscape, burial practices, and continued historic period occupation. To augment CEMVN's background research into the interested Federally-recognized Tribes and the types of tribal resources that have the potential to be within the project area, CEMVN, consulted with Federally-recognized Indian tribes on actions having the potential to significantly affect protected tribal resources, tribal rights, or Indian lands via our National Historic Preservation Act (NHPA) Section 106 consultation letter (see Appendix A for letter and responses).

3.3.10 Recreational Resources

Historic and Existing Conditions:

This resource is institutionally important because of the Federal Water Project Recreation Act of 1965, as amended, and the Land and Water Conservation Fund Act of 1965, as amended. Recreational resources are technically significant because of the high economic value of recreational activities and their contribution to local, state, and national economies. Recreational resources are publicly significant because of the high value that the public places on fishing, hunting, and boating as measured by the large number of fishing and hunting licenses sold in Louisiana and the large per-capita number of recreational boat registrations in Louisiana.

Recreational activities that occur in the vicinity of Bayou Lafourche and nearby saline marshes include both consumptive and non-consumptive recreational resources. Consumptive resources in the project area and vicinity include fishing, hunting, shrimp

harvesting, and crabbing. Non-consumptive recreational activities include boating, wildlife observation, and photography. Sunbathing, swimming, and surf fishing are popular activities along the beach east of the Belle Pass jetties.

The Irvin P. Melancon Recreational Boat Launch is located in Port Fourchon where there is public access to fishing around the port. The Coastal Wetlands Park is located two miles east of Bayou Lafourche and includes a manmade tidal creek which allows for kayaking, paddleboarding, fishing, and birdwatching and features a boardwalk extending into the marsh with interpretive signage at various points along the boardwalk. These features offer numerous recreational opportunities for locals and tourists visiting the area.

Tables 3-11 through 3-13 below shows the number of fishing licenses, hunting licenses, and boat registrations in the Parish of the project area and vicinity. The fishing and hunting licenses and boat registration data are provided by the Louisiana Department of Wildlife and Fisheries (https://www.wlf.louisiana.gov/resources/category/licenses-and-permits).

Table 3-11: Fishing Licenses Sold in the Vicinity of Project Area - Fiscal Year 2019

Parish	Resident Freshwater	Resident Saltwater	Non-resident Freshwater	Non-resident Saltwater
Lafourche	12,071	11,085	52	48
State / Parish Average	5,071	3,107	36	28

Table 3-12: Hunting Licenses Sold in the Vicinity of the Project Area - Fiscal Year 2019

Parish	Resident	Non-resident	Resident Duck Only	Non-resident Duck Only
Lafourche	2821	1	1,549	1
State / Parish Average	2048	3	684	2

Table 3-13: Active Boat Registrations in the Vicinity of the Project Area - Fiscal Year 2019

Parish	Boat Registrations
Lafourche	12,010
State / Parish Average	4,790

3.3.11 Air Quality

Historic and Existing Conditions:

The 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, particulates of 10 microns or less in size (PM-10 and PM-2.5), and sulfur dioxide. Ozone is the only parameter not directly emitted into the air, but it forms in the atmosphere when three atoms of oxygen (Ozone O_3 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. Table 3-14 gives a brief overview of the following:

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m^3 as a calendar quarter average) also remain in effect.

(2) The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O_3 standards are not revoked and remain in effect for designated areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour (1997) O_3 standards.

(4) The previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO_2 standards or is not meeting the requirements of a SIP call under the previous SO_2 standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS. Table Source: https://www.epa.gov/criteria-air-pollutants/naaqs-table, 28 February 2024.

Table 3-14. Criteria Pollutant NAAQS from the EPA, Office of Air Quality Planning and Standards.

Pollutant [links to historical tables of NAAQS reviews]		Primary / Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		primary and secondary	Rolling 3-month average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)		primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb (2)	Annual Mean
Ozone (O_3)		primary and secondary	8 hours	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (PM)	$PM_{2.5}$	primary	1 year	12.0 µg/m^3	annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m^3	annual mean, averaged over 3 years
		primary and secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
	PM_{10}	primary and secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)		primary	1 hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

The USEPA Green Book Nonattainment Areas for Criteria Pollutants (Green Book) maintains a list of all areas within the United States that are currently designated "nonattainment" areas with respect to one or more criteria air pollutants. Nonattainment areas are discussed by county or metropolitan statistical area (MSA). MSAs are geographic locations, characterized by a large population nucleus, that are comprised of adjacent communities with a high degree of social and economic integration. MSAs are generally composed of multiple counties. Review of the Green Book and Louisiana Department of Environmental Quality Air Quality list of "nonattainment" areas indicates that Lafourche Parish is currently in attainment for all Federal NAAQS pollutants.

3.3.12 Greenhouse Gas

The CEQ's guidance, CEQ-2022-0005, on January 9, 2023, introduced the interim guidance on Greenhouse Gas (GHG) and explained how agencies are able to compute GHG emissions impacts and the social cost for their projects. The components that are analyzed within this EA are Carbon dioxide (CO_2), Methane (CH_4), and Nitrous Oxide (N_2O). Primary sources of CO_2 can be natural sources like decomposition of organic material and anthropogenic sources like burning of fossil fuel (Carbon Dioxide 101, 2023). For CH_4, emissions can come from a variety of anthropogenic processes including flora and fauna sources (Crutzen etc. all, 1986). For N_2O, the majority of the point source emissions revolve around agricultural processes like fertilization (Nitrous Oxide Emissions, 2023). CO_2 is the primary contributor to GHG and climate change, followed by CH_4 and N_2O. Figure 3 outlines the total U.S. emissions of 2021 showing that over 75 percent of GHG is CO_2 (Overview of Greenhous, 2023).

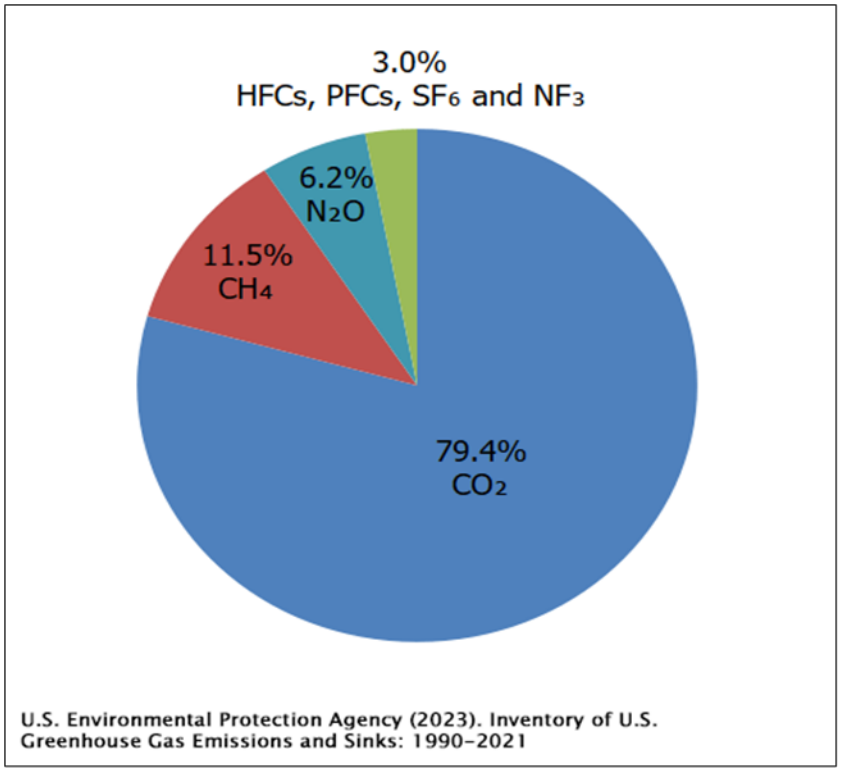

Figure 3. Total U.S. Emissions of GHG

3.3.13 Noise

Historic and Existing Conditions:

The Noise Control Act of 1972 both regulates and promotes an environment for all Americans free from noise that jeopardizes their health or welfare. The Occupational Safety and Health Standards (29 CFR, part 1910) set standards regarding protection against the effects of noise exposure. Noise levels exceeding sound pressure levels are technically significant because noise can negatively affect the physiological or psychological well-being of an individual (Kryter, 1994). These effects can range from annoyance to adverse physiological responses, including permanent or temporary loss of hearing, and other types of disturbance to humans and animals, including disruption of colonial nesting birds. Noise is publicly significant because of the public's concern for the potential annoyance and adverse effects of noise on humans and wildlife.

Noise is generally described as unwanted sound, which can be based either on objective effects (hearing loss, damage to structures, etc.) or subjective judgments (such as

community annoyance). Sound is usually represented on a logarithmic scale with a unit called the decibel (dB). Sound on the decibel scale is referred to as sound level. The low threshold of human hearing is approximately 0 dB, and the threshold of discomfort or pain is around 120 dB.

Noise levels are computed over a 24-hour period and adjusted for nighttime annoyances to produce the day-night average sound level (DNL). DNL is the community noise metric recommended by EPA and has been adopted by most Federal agencies (USEPA 1974). A DNL of 65 weighted decibels (dBA) is the level most commonly used for noise planning purposes and represents a compromise between community impact and the need for activities like construction. Areas exposed to a DNL above 65 dBA are generally not considered suitable for residential use. A DNL of 55 dBA was identified by EPA as a level below which there is no adverse impact (USEPA 1974).

There are many different existing sources of noise throughout the project area, including: operation of commercial and recreational boats, water vessels, air boats, and other recreational vehicles; automobiles, trucks, and all-terrain vehicles; aircraft; operation of machinery and motors; and human industry-related noise (such as oil and gas facilities) at the Port.

3.3.14 Transportation

Historic and Existing Conditions:

Louisiana Highway 1 is the one main highway that connects to Port Fourchon by land. It is 431.88 miles long and runs from the northwestern tip of Louisiana all the way to the southeast, where Port Fourchon is located. Louisiana Highway 3090 is a 3.47-mile highway located in Lafourche Parish that starts at the southernmost part of Louisiana Highway 1 and runs through all of Port Fourchon to the southernmost tip. According to the Louisiana Department of Transportation and Development, the average annual daily traffic in Louisiana Highway 3090 had a value of 10,328 in 2022. This value represents the average number of vehicles that pass the road in both directions over a single year period. The average annual daily traffic has increased by 4% since 2021. Both Louisiana Highway 1 and 3090 are essential for the oil and gas industry, energy industry, and the seafood industry. Additionally, these serve as hurricane evacuation routes for the people of the Lafourche Parish.

3.3.15 Commercial Navigation

Historic and Existing Conditions:

Port Fourchon supports the oil and gas industry in the deeper waters of the Gulf of Mexico, servicing over 95% of the Gulf's deepwater energy (Greater Lafourche Port Commission). There are over 400 supply vessels that transit the port's channels and 250 companies that have made the port the base of their operation. Port Fourchon handles an average of 4.3 million tons per year. Of this tonnage, an average of 1.4 million tons is transported by

offshore supply vessels (OSVs). This supply tonnage is made up of, but not limited to, drilling fluids, cement, fuel, and heavy waters. Approximately 15,000 people per month are flown to offshore locations supported by Port Fourchon.

Section 4
Environmental Consequences

This section describes the environmental consequences of the No Action Alternative (Future Without-Project Conditions; FWOP) and the Proposed Action Alternative (Future Conditions with the Proposed Action; FWP). The discussion includes an analysis of potential beneficial and adverse effects for each alternative and resource shown previously in Table 3-1, including a discussion of direct and indirect impacts, the relationship between short-term uses and long-term productivity, and any irreversible or irretrievable commitments of resources. Cumulative effects are discussed under each relevant resources section.

The No Action Alternative analysis summarizes the impacts of the approved project(s) that are presumed to occur, as discussed in Section 2.1. There are two specific projects included in the no action alternative that are of relevance that warrant briefly mentioning again here:

1. The USACE's continued maintenance of the Port Fourchon channel to the currently authorized depths of -24 ft MLLW on the inland reach from Mile 3.4 to Mile 0.0 and -26 ft MLLW for the offshore reach from Mile 0.0 to Mile -1.3.

2. The TE-134 CWPPRA Project which would perform one-time dredging of the majority of the same channel and project area as the Proposed Action to a depth of –33 ft MLLW.

4.1 RELEVANT RESOURCES AFFECTED

Below is an analysis of the relevant resources that may potentially be affected.

4.1.1 Hydrology

Future Conditions with No Action

Direct and Indirect Impacts: With implementation of the No Action alternative, the Federal Channel would continue to be dredged within the same alignment of the existing maintenance project, and dredge depths would initially be to -33 MLLW through implementation of the CWPPRA TE-134 Project. These depths would not be maintained by the CWPPRA TE-134 project. Subject to the availability of funds, the Corps would continue to maintain the Federal Channel according to the existing maintenance project depths. According to Delft3D modeling included in the GLPC Draft EIS from 2019, there would be temporary, slight reductions in average water velocities and slight reductions in water surface elevations relative to the existing condition following each dredging event. The Federal Channel would likely eventually fill back due to continued vessel traffic combined with sedimentation.

The channel is maintained by USACE at the current authorized depths, and the hydrology would return to very similar conditions after the one-time dredging of the channel as a feature of the CWPPRA TE-134 project.

Dredging activities for the currently authorized Federal Channel are relative to a tidal datum and therefore channel geometry would be expected to be similar even with higher water surface elevations.

Cumulative Impacts:

Increased water surface elevations and increased tidal fluxes could occur in the future due to climate change related RSLR. The hydrologic condition would likely change due to climate change induced RSLR, but these impacts would be somewhat reduced by maintaining the channel to a tidal datum versus a geodetic datum.

Future Conditions with the Proposed Action

Direct and Indirect Impacts: Similar impacts to hydrology are expected for the Proposed Action as discussed in the No Action Alternative. The primary difference would be that the temporary, slight reductions in average water velocities and temporary, slight increases in water surface elevations as described for the No Action Alternative would persist for the Proposed Action Alternative. This would occur, because similar conditions of the Federal Channel following the CWPPRA TE-134 one-time dredging event would be maintained through expected maintenance dredging events every 2 years in the offshore reach and every 4 years for the inshore reach throughout the project life. It should be noted that the Proposed Action would increase the offshore depths by 3 feet, but this is not expected to significantly change the average water velocities and water surface elevations relative to the depths temporarily created by the CWPPRA TE-134 Project.

Dredging activities for the Proposed Action would be relative to a tidal datum and therefore channel geometry would be expected to be similar even with higher water surface elevations.

Cumulative Impacts:

Increased water surface elevations and increased tidal fluxes could occur in the future condition due to climate change related RSLR. The hydrologic condition would likely change due to climate change induced RSLR, but these impacts would be somewhat reduced by maintaining the channel to a tidal datum versus a geodetic datum.

4.1.2 Water Quality

Future Conditions with No Action

Direct and Indirect Impacts: Implementation of the No Action Alternative would include dredging activity as described in the CWPPRA TE-134 EA. This would result in short term

minor impacts associated with increased turbidity in the immediate area of the water column from dredging activities. This could result in temporary and spatially limited anoxic conditions due to borrow area dredging. Some of these locations could be close to the Northern Gulf of Mexico hypoxia zone/s. Any dredging associated hypoxia impacts would be temporary. Oxygen levels are expected to recover to what the levels would be if there was no construction.

As stated in the hydrology section, the channel is expected to fill in and be maintained as currently authorized. Water quality conditions are expected to be similar for the No Action Alternative as they currently are in the existing condition shortly after dredging associated with the CWPPRA TE-134 EA is complete.

Similar temporary minor impacts would occur during maintenance dredging of the Federal Channel associated with the current Project's authorized depth.

Cumulative Impacts:

Increased water surface elevations and increased tidal fluxes could occur in the future due to climate change and associated RSLR could increase salinities and water temperature in the future for the No Action Alternative. Increases in water temperature could cause impacts to water quality such as decreased dissolved oxygen levels. Some of this may be ameliorated through implementation and construction of the 1,000 cfs structure at the confluence of Bayou Lafourche and the Mississippi River as discussed in Section 3.3.1.

The growing hypoxia zone, warming temperatures, and increased salinities in the northern Gulf of Mexico are likely to have cumulative impacts on water quality as well.

Future Conditions with the Proposed Action

Direct and Indirect Impacts: Immediately following dredging and disposal events there would be temporary impacts associated with water quality in the dredging and disposal areas. These would be similar to the impacts described for the CWPRRA TE-134 EA dredging project in the No Action Alternative and for impacts associated with routine maintenance of the Federal Channel as authorized.

The Proposed Action would maintain a deeper channel than what is currently authorized. Available water quality modeling data does not indicate there would be significant, long-term, or continuous impacts to water quality in the Federal Channel associated with implementation of the Proposed Action. Slight (< 1 part per thousand) increases in salinity could occur near where Bayou Lafourche meets the Gulf of Mexico. This impact could potentially be offset by implementation of the 1,000 cfs structure at the confluence of Bayou Lafourche and the Mississippi River as discussed in Section 3.3.1.

Cumulative Impacts:

Climate change associated RSLR could increase salinities and water temperature in the future for the Proposed Action Alternative. Increases in water temperature could cause impacts to water quality such as decreased dissolved oxygen levels. Some of this may be ameliorated through implementation and construction of the 1,000 cfs structure at the confluence of Bayou Lafourche and the Mississippi River.

Increased water surface elevations and increased tidal fluxes could occur in the future due to climate change related RSLR. The growing hypoxia zone, and increased salinities in the northern Gulf of Mexico are likely to have cumulative impacts on water quality as well.

4.1.3 Wetlands

Future Conditions with No Action

Direct and Indirect Impacts: Without implementation of the proposed action, there would be direct and indirect impacts to wetlands through implementation of the CWPPRA TE-134 marsh creation project. There would be short term negative impacts such as disturbance to benthic habitat, but there would be net benefits to wetlands by way of ~820 acres of newly created marsh in the vicinity of the proposed project area once TE-134 has been completed. Routine maintenance dredging of the Port Fourchon channel would have no direct or indirect impacts to wetlands.

Cumulative Impacts:

Wetlands would continue to experience RSLR and could be impacted from an overall loss of land in the project vicinity and surrounding areas.

Future Conditions with the Proposed Action

Direct and Indirect Impacts: With implementation of the proposed action there would be no direct impacts to wetlands. There could be some indirect benefits to wetlands due to disposing of dredge material in the surf zone. This could allow for flow and mixing of dredge material into the nearshore system, potentially allowing for wetlands to capture and accrete sediment. There is a high uncertainty with potential indirect impacts with respect to sediment flow. The same net benefits as described in the No Action Alternative would occur in the future if the Proposed Action would be implemented.

Cumulative Impacts:

Wetlands would continue to experience RSLR and could be impacted from an overall loss of land in the project vicinity and surrounding areas. The 2023 Louisiana Coastal Master Plan identifies some potential marsh creation projects in the area, but these remain at various levels of funding and design. The CWPPRA project (TE-134) would provide for an increase of about ~820 acres of new marsh which would be a net benefit to wetlands.

4.1.4 Wildlife Resources

Future Conditions with No Action

Direct and Indirect Impacts: Without implementation of the proposed action, there could be direct and indirect impacts to wildlife resources through implementation of the CWPPRA TE-134 marsh creation project. Wildlife resources could experience temporary, negative, direct and indirect impacts by marsh creation construction, but there would be net benefits to wildlife because of the creation of increased wetland acres. Net benefits to wildlife could include increased opportunities for nesting, foraging, and nursery habitat, just to name a few, for the animals that occur in the wetlands.

Cumulative Impacts:

Wildlife would continue to experience RSLR and could be impacted from an overall loss of land in the project vicinity and surrounding areas. At the same time, wildlife would see long-term benefits from the cumulative impacts of the CWPPRA TE-143 creating additional marsh habitat.

Future Conditions with the Proposed Action

Direct and Indirect Impacts: With implementation of the proposed action there would be no adverse direct impacts to wildlife. There could be temporary direct impacts to wildlife that are immobile and utilize the benthic habitat when the pipelines are removed, the channel is being dredged, and when dredge material is disposed of nearshore. However due to the current channel maintenance dredging and dynamic nature of this aquatic system, the benthos would recover to pre-dredging conditions.

There could be some indirect benefits to wildlife due to disposing of dredge material in the surf zone. This could allow for flow and mixing of dredge material into the nearshore system potentially allowing for wetlands to capture and accrete sediment providing additional new habitat for wildlife in the area. There is a high uncertainty with potential indirect impacts with respect to sediment flow and accretion of wetland habitat for wildlife. The same net benefits as described in the No Action Alternative would occur in the future if the Proposed Action would be implemented.

Cumulative Impacts:

Wildlife would continue to experience RSLR and could be impacted from an overall loss of land in the project vicinity and surrounding areas. At the same time, wildlife would benefit from the cumulative impacts of the CWPPRA TE-143 as there would be more marsh habitat in the future for wildlife to utilize.

4.1.5 Essential Fish Habitat

Future Conditions with No Action

Direct and Indirect Impacts: Without implementation of the proposed action, there could be direct and indirect impacts to EFH through implementation of the CWPPRA TE-134 marsh creation project. Benthic EFH could experience temporary, negative, direct and indirect impacts by dredging activities for the TE-134 marsh creation project.

Cumulative Impacts:

Essential Fish Habitat would continue to experience RSLR and would be impacted from an overall loss of land in the project vicinity and surrounding areas. At the same time, EFH could benefit from the cumulative impacts of the CWPPRA TE-143 creating additional marsh habitat, which would provide more available nursery habitat for juvenile EFH species.

Future Conditions with the Proposed Action

Direct and Indirect Impacts: With implementation of the proposed action, EFH could experience temporary, negative, direct and indirect impacts by pipeline removal and dredging activities. Benthic EFH could be disturbed and/or removed by construction of a deeper navigation channel and/or removal of pipelines, which would cause temporary negative impacts in and around where those construction activities would occur. This would be temporary as the dynamic nature of the nearshore system would recover by re-sedimentation. Non-sessile fishes could easily swim away from any pipeline removal and dredging related activities for the proposed action. Subaquatic vegetation could be temporarily impacted but would likely grow back post-dredging effort.

Cumulative Impacts:

EFH would continue to experience RSLR and could be impacted from an overall loss of land in the project vicinity and surrounding areas. At the same time, EFH would benefit from the cumulative impacts of the CWPPRA TE-143 creating additional marsh creating additional marsh habitat, which would provide more available nursery habitat for juvenile EFH species.

4.1.5.1 Fisheries and Aquatic Resources

Future Conditions with No Action

Direct and Indirect Impacts: Without implementation of the proposed action, CWPPRA TE-134 would still be constructed and this would likely not cause any adverse direct or indirect impacts to fisheries and aquatic resources in the area. There could be short-term temporary impacts to some aquatic resource species such as fishes, bivalves, and crustaceans due to the dredging and marsh creation effort.

Cumulative Impacts:

Fisheries and aquatic resources would continue to experience RSLR and could be impacted from an overall loss of land in the project vicinity and surrounding areas. At the same time, fisheries and aquatic resources would benefit from the cumulative impacts of the CWPPRA

TE-143 creating additional marsh habitat, which would provide more available nursery and foraging habitat for some aquatic resources such as fishes, marine mammals, bivalves, and crustaceans species.

Future Conditions with the Proposed Action

Direct and Indirect Impacts: With implementation of the proposed project, there would likely not be any long-term direct or indirect impacts to fisheries and aquatic resources in the area. Benthic organisms could be disturbed and/or removed by construction of a deeper navigation channel and/or removal of pipelines, and nearshore disposal which would cause temporary negative impacts in and around where those construction activities would occur. This would be temporary as the dynamic nature of the nearshore system would recover by re-sedimentation. Non-sessile fishes could easily swim away from any pipeline removal and dredging activities for the proposed action.

Cumulative Impacts:

Fisheries and aquatic resources would continue to experience RSLR and could be impacted from an overall loss of land in the project vicinity and surrounding areas. At the same time, fisheries and aquatic resources would benefit from the cumulative impacts of the CWPPRA TE-143 creating additional marsh habitat, which would provide more available nursery and foraging habitat for some aquatic resources such as fishes, marine mammals, bivalves, and crustaceans species.

4.1.6 Threatened, Endangered, and Protected Species

Future Conditions with No Action

Direct and Indirect Impacts: CWPPRA TE-134 EA (2020) and CWPPRA TE-134 SEA (2023) detail the anticipated impacts to T&E species for the CWPPRA TE-134 marsh creation project. In summary, their marsh creation project may include material placement that would result in adverse, direct, short-term, minor impacts to threatened and endangered species. Long-term benefit to some threatened and endangered species could result due to increasing longevity of marsh habitat. Benthic organisms could be disturbed and/or removed by construction of a deeper navigation channel and/or removal of pipelines, which would cause temporary negative impacts in and around where those construction activities would occur. Provisions to avoid impacts to nesting birds and threatened and endangered species would be implemented. Project would not increase invasive species. TE-134 EA and SEA made determinations of not likely to adversely affect T&E species within the project area.

Cumulative Impacts:

Threatened, endangered, and protected species would continue to experience RSLR and could be impacted from an overall loss of land in the project vicinity and surrounding areas. At the same time, threatened, endangered, and protected species could benefit from the cumulative impacts of the CWPPRA TE-143 creating additional marsh habitat creating

additional marsh habitat, which would provide more available nursery habitat for some of their offspring as well as their prey species.

Future Conditions with the Proposed Action

Direct and Indirect Impacts:

On 29 February 2024, USACE-CEMVN used the Louisiana DKey within the IpaC system which generated a consistency letter (Appendix B) that includes determinations for the species under USFWS jurisdiction that occur in the area. The Dkey resulted in determinations of not likely to adversely affect (NLAA) for the piping plover, red knot, Eastern black rail, and West Indian manatee and may affect for the hawksbill, Kemp's Ridley, leatherback, and loggerhead sea turtles. On 16 April 2024, USACE prepared and submitted a biological evaluation (BE) (Appendix B) to the USFWS with the determination of may affect but not likely to adversely affect for all of the listed sea turtles. All dredge and disposal work would occur within the water and therefore would not impact nesting activities if they were to occur.

Piping Plover critical habitat exists within the project footprint. However, dredge material placement would occur in the shallow waters adjacent to the shoreline and therefore the critical habitat would not be impacted. The project could however have an indirect benefit to critical habitat by providing more area to support primary constituents.

The listed whale and sea turtle species that potentially utilize the area, as well as the oceanic whitetip shark and the giant manta ray, fall under the jurisdiction of the National Marine Fisheries Service (NMFS). The USACE has made a no effect determination for all whale species and the oceanic whitetip shark as they are highly unlikely to be present in the project area. All of the whale species listed above, and the oceanic whitetip shark prefer offshore deep water and the construction activities would take place close to the shore in shallow waters and within the channel. USACE has made a NLAA determination for all sea turtle species and the giant manta ray as all dredge work would be conducted using a cutterhead dredge which is not known to cause take of listed species. Also, the area that would be dredged is already routinely maintained to a depth of -26 ft every two years with the same dredge material disposal area within the same footprint as this proposed effort. Additionally, while coordinating with USACE, the NMFS developed a Gulf Regional Biological Opinion (GRBO), dated 2007, which addresses impacts to listed sea turtles and Gulf sturgeon due to certain construction and maintenance activities in the Gulf of Mexico. Importantly, the GRBO explained that non-hopper type dredges are "not known to take turtles." Since the proposed action only plans to use non-hopper type dredges, USACE considers the findings in the GRBO to support our determination of NLAA under the ESA for future maintenance dredging activities. The USACE will be initiating informal consultation with NMFS under section 7(a)(2) of the ESA for the initial deepening around the removed pipelines and the additional 3 ft of advanced maintenance dredging that would occur on the offshore reach to a total elevation of -36 ft MLLW. The GRBO requires all non-hopper hydraulic dredges to be used, whenever possible, between April 1 and November 30 in Gulf

of Mexico waters and up to one mile into rivers. Construction activities would adhere to the Protected Species Construction Conditions and the Vessel Strike Avoidance Measures found in Appendix B.

Loggerhead critical habitat is located near the project area but over 12,000 feet (2 miles) from the project footprint and is not expected to be impacted by construction activities.

The risk of direct physical contact is unlikely as all T&E species identified have the ability to move away from construction activities into adjacent suitable habitat. Although the presence and noise of construction activities could cause listed species to avoid the area, it is already supporting vessel traffic to and from the Port daily, so it is reasonable to assume that the species are accustomed to regular activity.

Other protected species that might be found in the area include colonial nesting wading birds, shore birds, bald eagles, brown pelicans, and bottlenose dolphins. None of the protected bird species would be impacted by the proposed project as all construction activities would take place within open water. Some prey species, such as polychaetas or small bivalves, could get churned up and provide food for birds during dredging activities, however, this would be short-term and temporary. The risk of direct physical contact with the bottlenose dolphin is unlikely as dolphins are fast and agile species that would likely avoid construction activities. The avoidance of the area due to construction activities would be an insignificant temporary adverse impact as it is expected that bottlenose dolphins would return upon completion of the proposed project.

Cumulative Impacts:

Threatened, endangered, and protected species would continue to experience RSLR and could be impacted from an overall loss of land in the project vicinity and surrounding areas. At the same time, threatened, endangered, and protected species could benefit from the cumulative impacts of the CWPPRA TE-143 creating additional marsh habitat, which would provide more available nursery habitat for some of their offspring as well as their prey species.

4.1.7 Socioeconomics: Population Characteristics

Future Conditions with No Action

Direct and Indirect Impacts:

There would be no significant direct or indirect impacts to population characteristics. The CWPPRA TE-143 project could postpone marsh loss which could indirectly protect infrastructure, commercial and recreational fisheries species for the surrounding communities.

Cumulative Impacts:

Population and income would likely continue to trend upwards as predicted in Section 3.3.7.

Future Conditions with the Proposed Action

Direct and Indirect Impacts:

There would be short-term direct impacts to population characteristics as there would be an increase in construction employment during the pipeline removal, and subsequent construction periods for dredging. There could be some local economic benefits associated with the proposed plan since the purpose of the proposed plan is to accommodate deep draft vessels.

Cumulative Impacts:

Population and income would likely continue to trend upwards as predicted in Section 3.3.7.

4.1.8 Cultural Resources

Future Conditions with No Action

Direct and Indirect Impacts:

Without implementation of the proposed action, there would be no direct or indirect impacts to cultural resources. Impacts to Cultural resources were also considered in the CWPPRA TE-134 EA (2020) and CWPPRA TE-134 SEA (2023) and did not anticipate any adverse impacts to cultural resources.

Cumulative Impacts:

Cumulatively, without the implementation of the proposed action, over time the continued impacts of coastal shoreline erosion and land loss may potentially adversely impact inland cultural resources. However, the CWPPRA TE-134 project could postpone marsh loss which could delay erosion that could affect cultural resources.

Future Conditions with the Proposed Action

Direct and Indirect Impacts:

CEMVN has made a determination that no historic properties would be affected by this undertaking. Concurrence for this determination was received in writing by the Louisiana SHPO on 19 December 2023; 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.

Cumulative Impacts:

Cumulatively, the implementation of the proposed action, will provide a buffer to the long-term effects of coastal shoreline erosion and land loss to inland cultural resources.

4.1.9 Tribal Resources

Future Conditions with No Action

Direct and Indirect Impacts:

Without implementation of the proposed action, there would be no direct or indirect impacts to Tribal resources. Impacts to tribal resources were also considered in the CWPPRA TE-134 EA (2020) and CWPPRA TE-134 SEA (2023) and did not anticipate any adverse impacts to tribal resources.

Cumulative Impacts:

Cumulatively, without the implementation of the proposed action, over time the continued impacts of coastal shoreline erosion and land loss may potentially adversely impact inland Tribal resources such as terrestrial archaeological sites.

Future Conditions with the Proposed Action

Direct and Indirect Impacts:

CEMVN has made a determination that no historic properties would be affected by this undertaking. Concurrence for this determination was received in writing by the Louisiana SHPO on 19 December 2023; 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 tribal resources is expected to occur by the proposed action because, according to available government records, there are no tribal lands, nor are there specific tribal treaty rights related to access or traditional use of the natural resources in the project area. CEMVN consulted with Federally-recognized Indian tribes via our National Historic Preservation Act (NHPA) Section 106 consultation letter (see Appendix A for responses).

Cumulative Impacts:

Cumulatively, the implementation of the proposed action will provide a buffer to the long-term effects coastal shoreline erosion and land loss to inland resources that may be important to Tribes such as terrestrial archaeological sites. This project will be subject to the standard change in scope of work, unexpected discovery, and unmarked human burial sites act provisions.

4.1.10 Recreational Resources

Future Conditions with No Action

Direct and Indirect Impacts:

Under the FWOP condition (No-Action), the Federal Proposed Action would not occur. The CWPPRA TE-134 project as covered in Supplemental EA TE-134 would occur as part of the FWOP. The TE-134 project would allow for marsh creation on the west side of the channel from material dredged from the Calcasieu shipping channel. Recreational resources could be negatively affected directly and indirectly by the marsh creation construction. These impacts are expected to be temporary while the marshes naturally regenerate.

Cumulative Impacts:

The building of the marsh could prevent the conversion to open water and improve the fishery and wildlife habitats. These improvements would enhance recreational opportunities in the Port Fourchon area.

Future Conditions with the Proposed Action

Direct and Indirect Impacts:

Prior to the proposed action, two pipelines located near STA 199 and STA 330 will need to be removed. These removals are necessary prior to channel dredging due to the conflict of their location in relation to the contour of the channel. Both removals will occur in open water in the vicinity of Belle Pass. During the removal of the pipelines there will be intermittent channel traffic restrictions. Full closure of the channel is not anticipated, however, Port Fourchon authorities will be available to assist boat traffic should it be necessary. Coordination with the Port and Coast Guard will be done in advance of the removal and during removal operations. The disruptions to recreational boating would be minimal and temporary during the pre-dredging phase and are expected to return to normal once the pipeline removal is complete.

The recreational environment in the vicinity of Bayou Lafourche would experience limited short-term disruption due to the physical size and working activities imposed by the floating dredge facility. Dredging activity would increase turbidity in the area of Bayou Lafourche experiencing active work and in the vicinity of the discharge pipes. This turbidity in the water and noise from construction would disrupt recreational activity taking place within the area of work, especially fishing and wildlife viewing.

Cumulative Impacts:

Positive long-term benefits would be realized via the deposition of dredged material along the shoreline east and west of the jetties extending two hundred feet in each direction. Beach related activities, especially fishing and swimming, would be temporarily affected in the vicinity of disposal. Beach users would benefit in the long-term from the erosion control that the dredged material provides. All recreational opportunities are expected to return to normal once the proposed action is complete.

4.1.11 Air Quality

Future Conditions with No Action

Direct and Indirect Impacts: Without implementation of the proposed action, there would be no substantial direct or indirect impacts to Air Quality. However, the approved CWPPRA TE-134 project efforts within the study area could have minor, adverse, temporary, direct impacts to Air Quality due to exhaust diesel fumes generated by dredging. Emissions from construction equipment are expected to dissipate with offshore breezes and be insignificant. For additional information regarding those impacts, please refer to the TE-134 EA (2020) and TE-134 SEA (2023).

Cumulative Impacts:

Lafourche Parish is in attainment with National Ambient Air Quality Standards (NAAQS). There are no expected cumulative impacts to air quality associated with the no action.

Future Conditions with the Proposed Action

Direct Impacts:

During construction of this project, an increase in air emissions could be expected. These emissions could include exhaust emissions from operations of various types of non-road construction equipment.

Any site-specific construction effects would be temporary and dust emissions, if any, would be controlled using standard BMPs. Air quality would return to pre-construction conditions shortly after the completion of construction activities. The project area is in a parish in attainment of NAAQS; therefore, a conformity determination is not required.

Indirect Impacts:

There would be no adverse indirect impacts to air quality in the parish with construction of the proposed action.

Cumulative Impacts:

Lafourche Parish is in attainment with NAAQS. There are no expected cumulative impacts to air quality associated with the Federal proposed plan.

4.1.12 Greenhouse Gas

Background Information on Impact Assessment for Greenhouse Gas:

Within this evaluation, two alternatives for Port Fourchon Belle Pass Deepening were considered for GHG emission: No Action, Proposed Action. The total GHG emissions for the project were calculated using the type, quantity, horsepower, total hours, and associated

emission factors of the equipment (i.e., boats pushing the equipment and the excavators placing the stone). Approximately 42 pieces of equipment were evaluated to determine the GHG emissions for the dredging described within the Proposed Action. For the No Action and the Proposed Action, emission standards for the Offshore Vessel 1 (OSV-1) were used for computing GHG for vessels. The social cost of greenhouse gas emissions (SC-GHG) were calculated for each project alternative by summing the individual emissions from the major greenhouse gas pollutants CO_2, CH_4, and N_2O, and then multiplying by the social cost of each pollutant for the year in which they were generated using the tables from the Interagency Working Group on Social Cost of Greenhouse Gases (IWGSC) report as established by Executive Order 13990 to provide interim updated social costs values, with a 3% discount rate (IWG 2021).Social cost (SC) was estimated using the below formula to translate the climate impact to the proposed metric of dollars.

$$SC - GHG = CO_2 * SC - CO_2 + CH_4 * SC - CH_4 + N_2O * SC - N_2O$$

Where:

$$SC - GHG = social\ cost\ of\ greenhouse\ gas\ emmisions\ in\ dollars =$$
$$= \text{total carbon dioxide emissions in metric tons } CO_2$$
$$= \text{total methane emissions in metric tons } CH_4$$
$$= \text{total nitrous oxide emissions in metric tons } N_2O$$
$$= \text{social cost of carbon dioxide } SC - CO_2$$
$$= \text{social cost of methane } SC - CH_4$$
$$= \text{social cost of nitrous oxide } SC - N_2O$$

Future Conditions with No Action

Direct impacts

There would be direct emissions from the No Action due to the continued usage of OSV-1 within the project area. The No Action for this evaluation was computed from the total number of OSV-1 used annually within the Port Fourchon region: approximately 720 OSV-1. The total mileage of the OSV-1, 195 miles per trip, was used as a contributing factor for GHG. Without the proposed project, the total OSV-1 is projected to remain the same. The below table, Table 4-1, outlines the proposed GHG emissions if the current conditions were to remain. The TE-134 project is expected to contribute minor direct GHG emissions as well.

Table 4-1. GHG Emission estimates for No Action.

Total GHG Emissions (Metric Tons)				
Emissions	**CO_2**	**CH_4**	**N_2O**	**CO_{2eq}**
Total (metric tons)	32942.6912	1.18766	51.7163	48383.83719

Future Conditions with the Proposed Action

Direct Impacts: There would be direct emissions from the proposed action. The different components for the proposed action were evaluated: Dredging of proposed area and the total OSV-1s used after dredging. It is proposed that after dredging, the total of OSV-1s that would be used would decrease from 720 to 416 due to increased efficiencies associated with deepening the channel for deep draft vessel use.

Dredging of proposed area:

The below table, Table 4-2, outlines the proposed GHG emissions for the dredging within the Proposed Action.

Table 4-2. GHG Emission for Proposed Action dredging activity.

Total GHG Emissions from Proposed action (Metric Tons)				
Emissions	**CO_2**	**CH_4**	**N_2O**	**CO_{2eq}**
Total (metric tons)	1930.82	0.07	4.16	3171.43

Total OSV-1:

The below table, Table 4-3, outlines the projected GHG emissions for OSV-1s after dredging were to occur in the project area.

Table 4-3. GHG Emission for OSV-1.

Total GHG Emissions from OSV-1 decrease due to dredging (Metric Tons)				
Emissions	**CO_2**	**CH_4**	**N_2O**	**CO_{2eq}**
Total (metric tons)	19033.55	0.69	29.88	27955.11

Comparison of No Action and the Proposed Action

The No Action condition in Table 4-4 is the condition if no construction were to occur. The purpose of calculating this allows for an understanding of the net GHG emissions associated with construction that could be calculated by subtracting a construction alternative or feature from the No Action condition. For the No Action condition, average annual OSV-1 data was used to determine the potential GHG emissions. The total of the two alternatives within this analysis were compared in the below table, Table 4-4. Social costs were computed for the alternatives and are compared below in Table 4-5.

Table 4-4. Comparison of the Total GHG emissions for the No Action Alternative and the Proposed Action

Total GHG Emissions by Project Alternative (Metric Tons)				
Emission	**CO_2**	**CH_4**	**N_2O**	**CO_2e**
No-Action Alternative	32942.6912	1.18766	51.7163	48383.83719
Proposed action	20964.37	0.76	34.04	31126.54

Table 4-5. Comparison of Total Social Cost of GHG emissions for the No Action Alternative and the Proposed Action

Total Social Costs of Greenhouse Gases (2025 Dollars)				
	CO_2	**CH_4**	**N_2O**	**Total**
No-Action Alternative	$ 1,844,790.70	$ 2,019.02	$ 1,086,042.10	$ 2,932,851.82
Proposed action	$ 1,174,004.74	$ 1,290.07	$ 714,789.16	$ 1,890,083.97

4.1.13 Noise

Future Conditions with no Action

Direct and Indirect Impacts: Without implementation of the proposed action, there would be no significant adverse direct or indirect impacts to noise. Noise impacts would likely be similar to those under existing conditions, and any noise during dredging and marsh creation activities associated with the TE-134 project would be short-term and temporary. Future noise levels would continue to be dictated by normal daily activities and development in Port Fourchon.

Cumulative Impacts:

Without implementation of the Proposed Action the Port would continue to experience regular noise levels that occur on a daily basis, and the short-term temporary increase of noise due to the CWPPRA TE-134 dredging and marsh creation project. Ambient noise

levels adjacent to the project area are already higher from the adjacent busy navigation channel and Port Fourchon activity.

Future Conditions with the Proposed Action

Direct and Indirect Impacts: Noise levels would temporarily increase in the area due to the operation of equipment and vehicles used during construction of the proposed action and would be present only during daylight hours. While noise impacts may cause a temporary inconvenience to facilities in the immediate area, noise levels associated with construction activities would be temporary and monitored to ensure acceptable standards are maintained. Additionally, this is an industrial area and therefore noise is a daily occurrence. No harmful decibel (dB) levels are expected to occur.

Noise levels associated with construction activities have the potential to temporarily impact wildlife that may be present in the area but would not be significantly different from noise associated with other human (industrial) activities that occur on a daily basis at the Port. After completion of the proposed action, noise levels would be expected to return to pre-action levels. Future maintenance activities could result in a slight increase in noise levels from equipment and associated activities, but any increase in noise levels associated with maintenance activities are anticipated to be lower and of shorter duration than those of construction.

Cumulative Impacts:

With implementation of the proposed action noise levels associated with construction activities have the potential to temporarily impact wildlife that may be present in the area but would not be significantly different from noise associated with other human (industrial) activities that occur on a daily basis at the Port and would not be likely to incur any cumulative impacts. After completion of the proposed action, noise levels would be expected to return to pre-action levels. Future maintenance activities could result in a slight increase in noise levels from equipment and associated activities, but any increase in noise levels associated with maintenance activities are anticipated to be lower and of shorter duration than those of construction.

4.1.14 Transportation

Future Conditions with No Action

Direct and Indirect Impacts:

There would be no significant direct or indirect impacts to transportation under the future with no action, to include the CWPPRA TE-134 project.

Cumulative Impacts:

There are no expected cumulative impacts to transportation associated with the No Action alternative.

Future Conditions with the Proposed Action

Direct and Indirect Impacts:

There would be no significant direct or indirect impacts to transportation under the Proposed Action. If trucks are required for transporting any equipment, there could be a minor, short-term increase in traffic heading down to the Port.

Cumulative Impacts:

There are no expected cumulative impacts to transportation associated with the Federal proposed plan.

4.1.15 Commercial Navigation

Future Conditions with No Action

Direct and Indirect Impacts:

There would be no significant direct or indirect impacts to commercial navigation. In the future without project condition, the vessel traffic in Port Fourchon would operate in a similar fashion as it does currently with the total number of calls increasing as the number of oil and gas leases grow over time.

Because the CWPPRA TE-134 project would be avoiding the Chevron pipeline at approximately Sta. 200+00 in their dredge effort, there would be no anticipated benefits or impacts to navigation under the no action alternative since the channel will still be at the currently authorized depth at this reach. Operating vessels may need to go around active dredging, but they would be able to pass and enter and exit the channel.

Cumulative Impacts:

Commercial navigation trends would continue and there are not expected to be any cumulative impacts.

Future Conditions with the Proposed Action

Direct and Indirect Impacts:

During pipeline removal there could be a direct impact to navigation from partial channel closures for up to 12 hours a day for approximately 5 days. During dredging there could be a minor direct impact to vessel traffic as vessels may need to go around any active dredging but would still be able to enter and exit the channel.

The indirect impact to commercial navigation would be increased efficiencies as the offshore supply vessel fleet becomes more efficient. While the larger offshore supply vessels are not available in the world fleet at this time, research suggests that there is an opportunity to achieve economies of scale in the future. The impact to the future fleet with a modified channel would mean fewer calls in the future with the channel modification in place when compared to the no action alternative.

Cumulative Impacts:

Commercial navigation trends would continue and there are not expected to be any cumulative impacts. Potentially, if larger vessels become available in the world fleet there could be future benefits to navigation from the Federal proposed plan.

4.2 CUMULATIVE IMPACTS ANALYSIS

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."

Port Fourchon, Louisiana is an important Port for commercial and recreational fisheries as well as being an important industrial area for oil and gas in the state and nation. This proposed project would benefit deep draft navigation in and out of the Port enhancing the local and national economy.

Anticipated cumulative impacts for each relevant resource are described above in Section 4.1.1 – 4.1.15.

Overall, the cumulative effects of the proposed action are anticipated to be positive, with long-term benefits to navigation and the economy in the Port Fourchon, Louisiana area.

Section 5
Coordination and Public Involvement

Preparation of this EA and FONSI was coordinated with appropriate Congressional, Federal, Tribal, state, and local interests, as well as environmental groups and other interested parties. The following agencies, as well as other interested parties, received copies of the draft EA and draft FONSI:

U.S. Department of the Interior, Fish and Wildlife Service
U.S. Environmental Protection Agency, Region VI
U.S. Department of Commerce, National Marine Fisheries Service
U.S. Natural Resources Conservation Service, State Conservationist
The Associated Branch (Bar) Pilots
Crescent River Port Pilots Association
New Orleans Baton Rouge Steamship Pilot Association
Associated Federal Pilots
Big River Coalition
Lower Mississippi River Committee (LOMRC)
Coastal Protection and Restoration Authority Board of Louisiana
Advisory Council on Historic Preservation
Governor's Executive Assistant for Coastal Activities
Louisiana Department of Wildlife and Fisheries
Louisiana Department of Natural Resources, Coastal Management Division
Louisiana Department of Natural Resources, Coastal Restoration Division
Louisiana Department of Environmental Quality
Louisiana State Historic Preservation Officer
Lafourche Parish Government
Chitimacha Tribe of Louisiana
Coushatta Tribe of Louisiana
Mississippi Band of Choctaw Indians
Jena Band of Choctaw Indians
Tunica-Biloxi Tribe of Louisiana

Section 6
Compliance with Environmental Laws and Regulations

There are many Federal and state laws pertaining to the enhancement, management and protection of the environment. Federal projects must comply with a variety of environmental laws, regulations, policies, rules, and guidance. Compliance with applicable laws would be accomplished before or concurrent with 30-day public and agency review of this EA and prior to execution of the associated Finding of No Significant Impact.

6.1 CLEAN AIR ACT OF 1970

The Clean Air Act (CAA) sets goals and standards for the quality and purity of air. It requires the Environmental Protection Agency to set NAAQS for pollutants considered harmful to public health and the environment. The project area is in Lafourche Parish, which is currently in attainment of NAAQS. A general conformity determination is not required.

6.2 NOISE CONTROL ACT OF 1972

The Noise Control Act of 1972 establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. The Act also serves to establish a means for effective coordination of Federal research and activities in noise control, authorizes the establishment of Federal noise emission standards for products distributed in commerce, and provides information to the public respecting the noise emission and noise reduction characteristics of such products. While primary responsibility for control of noise rests with State and local governments, Federal action is essential to deal with major noise sources in commerce, and control of which require national uniformity of treatment. EPA is directed by Congress to coordinate the programs of all Federal agencies relating to noise research and noise control. The proposed action is consistent with this act.

6.3 CLEAN WATER ACT OF 1972 – SECTION 401 AND 404

The Clean Water Act (CWA) sets and maintains goals and standards for water quality and purity. Section 401 requires a Water Quality Certification (WQC) from the LDEQ that a proposed project does not violate established effluent limitations and water quality standards. On November 28, 2023 the LDEQ determined the need for a Water Quality Certification and Water Quality Certification number 240404-01 was obtained for this effort on April 06, 2024.

As required by Section 404(b)(1) of the CWA, an evaluation to assess the short- and long-term impacts associated with the discharge of dredged and fill materials into waters of the United States resulting from this Project has been completed. Section 404(b)(1) public notice would be mailed out for the public review and comment period beginning May 17, 2024 and ending June 15, 2024. The draft 404(b)(1) evaluation is located in Appendix C. The final Section 404(b)(1) evaluation would be located in Appendix C for the final EA.

6.4 COASTAL ZONE MANAGEMENT ACT OF 1972

The Coastal Zone Management Act (CZMA) requires that "each Federal agency conducting or supporting activities directly affecting the coastal zone shall conduct or support those activities in a manner which is, to the maximum extent practicable, consistent with approved state management programs." In accordance with Section 307, a Consistency Determination was prepared for the proposed project and was submitted to Louisiana Department of Natural Resources (LDNR) on April 18, 2024 for the Proposed Action, and LDNR concurred via letter dated May 08, 2024 (Appendix B).

6.5 COASTAL BARRIER RESTORATION ACT OF 1982

Congress passed the Coastal Barrier Resources Act of 1982 to address problems caused by coastal barrier development. CBRA restricts most Federal expenditures and financial assistance that tend to encourage development, including Federal flood insurance, in the John H. Chafee Coastal Barrier Resource System. Three important goals of CBRA are to: (1) minimize loss of human life by discouraging development in high risk areas; (2) reduce wasteful expenditure of Federal resources; and (3) protect the natural resources associated with coastal barriers. The proposed action would comply with CBRA because the Port has already been developed and is an active working Port. Economic analysis has found the proposed action to be of Federal interest. Nearshore disposal would not incur any adverse impacts regarding coastal barrier. The proposed action could provide benefits to coastal barrier resources by disposing of dredge material in the surf zone. This could allow for flow and mixing of dredge material into the nearshore system potentially allowing for wetlands to capture and accrete sediment.

6.6 ENDANGERED SPECIES ACT OF 1973

The Endangered Species Act (ESA) is designed to protect and recover Threatened and Endangered (T&E) species of fish, wildlife, and plants. The USFWS identified the piping plover, red knot, Eastern black rail, West Indian manatee the hawksbill, Kemp's Ridley, leatherback, and loggerhead sea turtles which are known to occur or believed to occur within the vicinity of the Proposed Action, as T&E species. Other protected species that might be found in the area include colonial nesting wading birds, shore birds, bald eagles, brown pelicans, and bottlenose dolphins. On 28 March 2024 USFWS reviewed this project for effects to Federal trust resources under their jurisdiction and

currently protected by the Endangered Species Act of 1973, concurring that the project, as proposed, is not likely to adversely affect these resources (Appendix B).

The USACE has made a no effect determination for all whale species and the oceanic whitetip shark as they are highly unlikely to be present in the project area. USACE has made a NLAA determination for all sea turtle species and the giant manta ray as all dredge work would be conducted using a cutterhead dredge which is not known to cause take of listed species. While coordinating with USACE, the NMFS developed a Gulf Regional Biological Opinion (GRBO) in 2007 that explains that non-hopper type dredges are "not known to take turtles." Since the proposed action only plans to use non-hopper type dredges, USACE considers the findings in the GRBO to support our determination of NLAA under the ESA for future maintenance dredging activities. The USACE will be initiating informal consultation with NMFS under section 7(a)(2) of the ESA for the initial deepening around the removed pipelines and the additional 3 ft of advanced maintenance dredging that would occur on the offshore reach to a total elevation of -36 ft MLLW. Consultation with NMFS would be complete before signing the FONSI. The GRBO requires all non-hopper hydraulic dredges to be used, whenever possible, between April 1 and November 30 in Gulf of Mexico waters and up to one mile into rivers. Construction activities would adhere to the Protected Species Construction Conditions and the Vessel Strike Avoidance Measures found in Appendix B.

6.7 FISH AND WILDLIFE COORDINATION ACT OF 1934

The Fish and Wildlife Coordination Act (FWCA) provides authority for the USFWS involvement in evaluating impacts to fish and wildlife from proposed water resource development projects. The FWCA requires that fish and wildlife resources receive equal consideration to other project features. The FWCA also requires Federal agencies that construct, license or permit water resource development projects to first consult with the USFWS, NMFS, and state resource agencies regarding the impacts on fish and wildlife resources and measures to mitigate these impacts. Section 2(b) requires the USFWS to produce a coordination act report (CAR) that details existing fish and wildlife resources in a project area, potential impacts due to a proposed project and recommendations for a project. The USFWS reviewed the proposed action and provided a Draft CAR with project specific recommendations on 28 March, 2024 (Appendix B).

USFWS Recommendations:

1. The Service recommends that to the extent feasible all dredged material should be used beneficially to restore coastal habitats that are in decline. In doing so, saline wetlands would benefit by providing sediments and nutrients into the system, directly creating marsh, reducing open water, and reducing wave fetch, thus helping to combat wetland loss in the area.

USACE Response: The amount of dredge material from the proposed action would not be sufficient to use beneficially so material would be disposed of in the surf zone and allowed to flow. This would be the same dredge material disposal method that is currently used by USACE for routine maintenance of the channel. Coordination with USFWS and NMFS has been informally conducted on the proposed disposal plan. The vast majority of material that exists within the proposed authorized dredging limits discussed herein would be used beneficially by the CWPPRA Program prior to the proposed action.

2. The Service recommends that prior to a Finding of No Significant Impact being signed, the USACE prepare a Biological Evaluation to address potential project impacts to threatened and endangered species and their critical habitats and determine whether those impacts would be likely (or not likely) to adversely affect those federally listed species or adversely modify their critical habitats.

   USACE Response: Coordination between USACE and USFWS is ongoing. USACE has prepared and submitted a Biological Evaluation on 16 April 2024 to resolve this comment.

6.8 MARINE MAMMAL PROTECTION ACT OF 1972

All marine mammal species found in U.S. waters are protected under the Marine Mammal Protection Act (MMPA), as well as marine mammals listed as endangered or threatened under the Endangered Species Act worldwide. The MMPA generally prohibits the "take" of marine mammals (e.g., harassment, hunting, capturing, collecting, or killing). The act also makes it illegal to import or export marine mammals and marine mammal products into or out of the United States without a permit or other applicable authorization. NOAA Fisheries authorizes take for certain activities, for example, scientific research, commercial and educational photography, and incidental take during commercial fishing operations and other non-fishery commercial activities like construction projects. Three Federal entities share responsibility for implementing the MMPA:

- NOAA Fisheries is responsible for the protection of whales, dolphins, porpoises, seals, and sea lions.
- U.S. Fish and Wildlife Service is responsible for the protection of walrus, manatees, sea otters, and polar bears.
- Marine Mammal Commission provides independent, science-based oversight of domestic and international policies and actions of Federal agencies addressing human impacts on marine mammals and their ecosystems.

The proposed action would be consistent with the MMPA as there would be no anticipated take of marine mammals.

6.9 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

The USACE is obligated under ER 1165-2-132 to assume responsibility for the reasonable identification and evaluation of all Hazardous, Toxic, and Radioactive Waste (HTRW) contamination within the vicinity of Proposed Actions. ER 1165-2-132 provides that in the PED Phase that, for a proposed project in which the potential for HTRW problems has not been considered, an HTRW initial assessment should be conducted as a priority. USACE HTRW policy is to avoid the use of project funds for HTRW removal and remediation activities. If the initial assessment indicates the potential for HTRW, testing, as warranted and analysis similar to a feasibility study should be conducted prior to proceeding with the project design. The NFS would be responsible for planning and accomplishing any HTRW response measures and would not receive credit for the costs incurred.

Dredged materials and sediments beneath navigable waters proposed for dredging qualify as HTRW only if they are within the boundaries of a site designated by the Environmental Protection Agency or a state for a response action (either a removal action or a remedial action), under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or if they are part of a National Priority List site under CERCLA. None of the proposed dredging regions is so designated. An American Society for Testing and Materials 1527-13 Phase I Environmental Site Assessment was completed on 18 March 2024 and is on file in the CEMVN-PDC. There is a low probability of encountering HTRW during construction of the project.

6.10 MAGNUSON-STEVENS FISHERIES CONSERVATION MNAGEMENT ACT

The Magnuson-Stevens Fishery Conservation and Management Act, as amended, addresses the protection of EFH by NMFS in association with regional Fishery Management Councils. NMFS has a “findings” with the CEMVN on the fulfillment of coordination requirements under provisions of the Magnuson-Stevens Fishery Conservation and Management Act. In those findings, the CEMVN and NMFS have agreed to complete EFH coordination requirements for Federal civil works projects through the review and comment on National Environmental Policy Act documents prepared for those projects. See 50 CFR 600.920(f) (allowing use of existing environmental review procedures). This Draft EA will be provided to NMFS on 17 May 2024 at the start of the 30-day public review. Consultation with NMFS is on-going and would be concluded prior to the signing of a FONSI.

6.11 MIGRATORY BIRD TREATY ACT

The bald eagle was removed from the List of Endangered and Threatened Species in August 2007 but continues to be protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). Colonial nesting wading bird, neotropical migratory birds, and other birds are protected under the MBTA (50 CFR

10.13). During nesting season, construction and other related activities must take place outside of USFWS/LDWF buffer zones. The proposed action is consistent with the MBTA as all construction activities would take place within open water.

6.12 NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The procedures in 36 CFR Part 800 define how Federal agencies meet these statutory responsibilities. The Section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties, including the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) and any Tribe that attaches religious or cultural significance to historic properties that may be affected by an undertaking. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties. NHPA consultation letters pursuant to Section 106 were mailed to SHPO on 5 December 2023 for a 30-day review. In a letter dated 19 December 2023, the LA SHPO concurred that the actions of this EA are determined as having no effect on historic properties; 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 (See Appendix A).

Tribal Consultation

It is the policy of the Federal government to consult with Federally recognized Tribal Governments on a Government-to-Government basis as required in E.O. 13175 (“Consultation and Coordination with Indian Tribal Governments;” U.S. President 2000). The requirement to conduct coordination and consultation with Federally recognized Tribes on and off of Tribal lands for “any activity that has the potential to significantly affect protected tribal resources, tribal rights (including treaty rights), and Indian lands” finds its basis in the constitution, Supreme Court cases, and is clarified in later planning laws (Table 7-1). The USACE Tribal Consultation Policy, 5 December 2023, specifically implemented this E.O. and later Presidential guidance. The 2023 USACE Tribal Consultation Policy and Related Documents provide definitions for key terms, such as tribal resources, tribal rights, Indian lands, consultation, as well as guidance on the specific trigger for consultation.

According to available government records, there are no tribal lands, nor are there specific tribal treaty rights related to access or traditional use of the natural resources in the project area. To augment CEMVN’s background research into the interested Federally-recognized Tribes and the types of tribal resources that have the potential to be within the project area, CEMVN, consulted with Federally-recognized Indian tribes on actions having the potential to significantly affect protected tribal resources, tribal rights,

or Indian lands via our National Historic Preservation Act (NHPA) Section 106 consultation letter (see Appendix A).

6.13 EXECUTIVE ORDER 11988 FLOODPLAIN MANAGEMENT

Executive Order 11988 directs Federal agencies to reduce flood loss risk; minimize flood impacts on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by flood plains. Agencies must consider alternatives to avoid adverse and incompatible development in the flood plain. If the only practical alternative requires action in the floodplain, agencies must design or modify their Executive Order 11988 (EO 11988) action to minimize adverse impacts. Some project features would extend into floodplains; however, the proposed action would not promote future development within the floodplain that otherwise would not occur. The proposed action is compliant with EO 11988.

6.14 EXECUTIVE ORDER 11990 PROTECTION OF WETLANDS

Executive Order 11990 (EO 11990) directs Federal agencies to avoid to the extent possible, long and short term adverse impacts associated with the destruction or modification of wetlands, and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. The proposed action would not occur in wetlands and therefore would have no impacts to wetlands. The proposed action is compliant with EO 11990.

Section 7
Conclusion

The proposed action involves dredging the Port Fourchon Federal navigation channel to an engineering, economic and environmentally feasible depth. Pipelines identified that cross the channel would be removed in advance of the initial dredge event (as discussed in Section 2).

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 and natural environment as discussed in Section 4 of this draft EA. Therefore, an EIS is not warranted.

Section 8
List of Preparers

This Draft Section 533(D) Report and Environmental Assessment were prepared by Jordan Logarbo, Biologist, U.S. Army Corps of Engineers, New Orleans District; Regional Planning and Environment Division South, MVN-PD; 7400 Leake Avenue, New Orleans, Louisiana 70118.

Title/Topic	Team Member
Sr. Environmental Manager	Dr. Patrick Smith, CEMVN-PDS-R
Environmental Manager, Hydrology, Water Quality, Wetlands, Wildlife Resources, Essential Fish Habitat, Aquatic and Fisheries Resources, Threatened, Endangered, and Protected Species, Noise, Appendices	Jordan Logarbo, CEMVN-PDS-R
Plan Formulation	Lesley Prochaska, CEMVN-PDP-W Cherie Price, CEMVN-PDP-W
Commercial Navigation, Economics	Alicia Gates, CESAM-PD-D Todd Nettles, CESAM-PD-D
Socioeconomics	Cynthia Radja, CEMVN-PDE-R Diane Karnish, CEMVN-PDE
Threatened and Endangered Species Coordination	Jordan Logarbo, CEMVN-PDS-R Tammy Gilmore, CEMVN-PDS
Water Quality, 404 (b)(1)	Isaac Mudge, CEMVN Jordan Logarbo, CEMVN-PDS-R
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Environmental Justice	Quanita Kendrick, CEMVN-PDS-N
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District Quality Control	Tammy Gilmore, CEMVN-PDS Brandon Davis, CEMVD-PDQ
Project Manager	Amanda Landry, CEMVN Amy Dixon, CEMVN
Engineering	Jason Binet and Mallory Gillen, CEMVN
Hydrology & Hydraulics	Isaac Mudge, CEMVN
Transportation	Cynthia Radja, CEMVN-PDE-R Diane Karnish, CEMVN-PDE

Section 9
References and Resources

Beavers, Richard and Teresia Lamb. 1979 *A Level I Cultural Resources Survey and Assessment of Fourchon Island, Lafourche Parish, Louisiana*. Report prepared by the University of New Orleans for the Edward Wisner Donation Advisory Committee (LA DOA Report No. 22-0645).

Braud, Melissa R. with contributions by: Richard A. Weinstein, Paul V. Heinrich, William D. Reeves, Donald Davis, George J. Castille III and Joanne Ryan. 2008 *Cultural Resources Survey of the Caminada Headland Restoration Feasibility Study, Lafourche and Jefferson Parishes, Louisiana*. Report prepared by Coastal Environments, Inc. for T. Baker Smith, Inc. (LA DOA Report No. 22-2966).

Carbon dioxide 101. (2024.). netl.doe.gov. https://www.netl.doe.gov/coal/carbon-storage/faqs/carbon-dioxide-101
Chapter 13: Miscellaneous Sources, AP 42, fifth Edition, Volume I | Clearinghouse for Emission Inventories and Emissions Factors | Technology Transfer Network | US EPA. (2024.). https://www3.epa.gov/ttnchie1/ap42/ch13/

Chesney, E.J., Baltz, D.M. and Thomas, R.G. (2000), Louisiana estuarine and coastal fisheries and habitats: perspectives from a fish's eye view. Ecological Applications, 10: 350-366. https://doi.org/10.1890/1051-0761(2000)010[0350:LEACFA]2.0.CO;2

Coughlin, Sean. 2012 *Negative Findings Report Related to the Phase I Cultural Resources Investigation of the Caminada Headland Beach Resotation Area in LaFourche Parish, Louisiana*. Report prepared by R. Christopher Goodwin & Associates, Inc. for Coastal Engineering Consultants, Inc. (LA DOA Report No. 22-3966).

Couvillion, B.R., Beck, Holly, Schoolmaster, Donald, and Fischer, Michelle, 2017, Land area change in coastal Louisiana 1932 to 2016: U.S. Geological Survey Scientific Investigations Map 3381, 16 p. pamphlet, https://doi.org/10.3133/sim3381.

Gagliano, Sherwood, M., Richard A. Weinstein, and Eileen K. Burden.1976 *Archaeological Survey of the Port Fourchon Area, Lafourche Parish, Louisiana*. Report prepared by Coastal Environments, Inc. for the Greater Lafourche Port Commission (LA DOA Report No. 22-0002).

Godzinkski, Michael, Dyane B. Lee, Elizabeth V. Williams, Donna Greer, and Elena Ricci. 2018 *Cultural Resources Assessment for the Port Fourchon Project and Results of an Initial Remote Sensing Marine Survey, Lafourche Parish, Louisiana*. Report prepared by Coastal

Environments, Inc. for GIS Engineering, LLC. (LA DOA Report No. 22-6170).

Greenhouse Gases Equivalencies Calculator - Calculations and References | US EPA. (2024, March 17). US EPA. https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references

Greenhouse Gas Equivalencies Calculator | US EPA. (2024, March 17). US EPA. https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results

IWG (Interagency Working Group on Social Costs of Greenhouse Gases). 2021. Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990. Available online at: www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf.

Knutson, P. L., Brochu, R. A., Seelig, W. N., & Inskeep, M. (1982). Wave damping in *Spartina alterniflora* marshes. *Wetlands*, *2*(1), 87-104.

Lindstedt, D. M. (2005). Renewable Resources at Stake: Barataria-Terrebonne Estuarine System in Southeast Louisiana. *Journal of Coastal Research*, 162–175. http://www.jstor.org/stable/25737055

National Oceanic and Atmospheric Administration. 2023 *West Fourchon Marsh Creation & Nourishment Project, Supplemental Environmental Assessment, Fed No. TE-0134, Lafourche Parish, Louisiana, October 2023*

Nitrous Oxide Emissions. (2023). UNIVERSITY OF CALIFORNIA Division of Agriculture and Natural Resources. https://ucanr.edu/sites/Nutrient_Management_Solutions/stateofscience/Nitrous_Oxide__In_focus/

Overview of greenhouse gases | US EPA. (2024, March 17). US EPA. https://www.epa.gov/ghgemissions/overview-greenhouse-gases

Paul J. Crutzen, Ingo Aselmann & Wolfgang Seiler (1986) Methane production by domestic animals, wild ruminants, other herbivorous fauna, and humans, Tellus B: Chemical and Physical Meteorology, 38:3-4, 271-284, DOI: 10.3402/tellusb.v38i3-4.15135

Rabalais, N.N., Turner, R.E. and Wiseman, W.J., Jr. (2001), Hypoxia in the Gulf of Mexico. J. Environ. Qual., 30: 320-329. https://doi.org/10.2134/jeq2001.302320x

Saucier, R.T.1994 Geomorphology and Quarternary Geologic History of the Lower Mississippi Valley. Volume 2. Army Engineer Waterways Experiment Station. Vicksburg, Mississippi, Geotechnical Lab.

Section 10

List of Acronyms and Abbreviations

List of Acronyms and Abbreviations can be found in Appendix D.

Mississippi Valley Division,
Regional Planning and Environment Division South

Draft Environmental Assessment Port Fourchon Belle Pass Deepening, Lafourche Parish Louisiana

Appendix A: National Historic Preservation Act

May 2024

From: Ostahowski, Brian E CIV USARMY CEMVN (USA)
To: DCRT Section 106
Subject: CEMVN Port Fourchon Belle Pass Channel Deepening S106 Consultation - No Historic Properties Affected - SHPO
Date: Monday, December 4, 2023 10:59:00 AM
Attachments: CEMVN Port Fourchon Channel Deepening S106 No Historic Properties SHPO.pdf

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EXTERNAL EMAIL Please do not click on links or attachments unless you know the content is safe.

Good Morning, SHPO,

Attached please find a signed consultation letter:

RE: Section 106 Review Consultation
Undertaking: Port Fourchon Belle Pass Channel Deepening Maintenance and Dredge Material Disposal, Lafourche Parish, Louisiana (Lat. 29.085480° Long. -90.226143°)
Determination: No Historic Properties Affected

Should you have any questions or need additional information about this Undertaking, please contact me at [redacted] or Jason A. Emery, Chief of Cultural & Social Resources, [redacted].

Thank you very much.

V/r,

Brian

[redacted]

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVE
NEW ORLEANS LA 70118-3651

December 4, 2023

No known historic properties will be affected by this undertaking. Therefore, our office has no objection to the implementation of this project. This effect determination could change should new information come to our attention.

Kristin P. Sanders

Kristin P. Sanders
State Historic Preservation Officer
Date 12/19/2023

Regional Planning and
Environment Division, South
Environmental Planning Branch
Attn: CEMVN-PDS-N

Kristin Sanders, SHPO
LA State Historic Preservation Officer
P.O. Box 44247
Baton Rouge, LA 70804-4241

RE: Section 106 Review Consultation
Undertaking: Port Fourchon Belle Pass Channel Deepening Maintenance and Dredge Material Disposal, Lafourche Parish, Louisiana (Lat. 29.085480° Long. -90.226143°)
Determination: **No Historic Properties Affected**

Dear Ms. Sanders:

The U.S. Army Corps of Engineers, New Orleans District (CEMVN), is preparing an Environmental Assessment (EA) to evaluate a proposed dredging maintenance and material disposal project to deepen the Belle Pass federal channel located south of Port Fourchon in Lafourche Parish, Louisiana. Recently, the National Oceanic and Atmospheric Administration (NOAA), in conjunction with the Greater Lafourche Port Commission (GLPC), completed a Supplemental EA to deepen the Belle Pass federal channel and four boat slips within the Port Fourchon shipyard (NOAA 2023). CEMVN's proposed project will further deepen the same portion of the federal channel and include a long-term dredging-maintenance operations plan for the channel after the NOAA project is completed. The GLPC is also the Non-Federal Sponsor of CEMVN's project, which is authorized by Section 203 of the Water Resources and Development Act (WRDA) of 1986 (PL 998-662), as modified by Section 1014 of Water Resources and Reform Development Act (WRRDA) 2014.

CEMVN, in partial fulfillment of responsibilities under Executive Order 13175, the National Environmental Policy Act, and Section 106 of the National Historic Preservation Act, previously initiated the consultation process for the Belle Pass federal channel deepening and dredge disposal project in 2019. As part of that initial consultation, CEMVN submitted a Draft Environmental Impact Study (DEIS) prepared by the GLPC and a cultural resources assessment and remote sensing survey prepared by Coastal Environments, Inc. (Godzinski et al. 2018). Since that time, however, the scope and scale of CEMVN's project have been significantly reduced as a result of the NOAA project.

As part of CEMVN's evaluation and in partial fulfillment of responsibilities under the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, CEMVN offers you the opportunity to review and comment on the potential of the proposed action described in this letter to affect historic properties. Additionally, in accordance with the responsibilities of Executive Order 13175, CEMVN offers Federally-recognized Tribes the opportunity to review and comment on the potential of the proposed undertaking described in this letter to significantly affect protected tribal resources, tribal rights, or tribal lands.

Description of the Undertaking

The Undertaking is located south of Port Fourchon within the Belle Pass federal channel (**Figure 1**). NOAA's Supplemental EA elevates the deepening of the federal channel to 300 feet wide to an elevation of (-) 24 feet Mean Low Gulf (MLG) on the inland reach for mile 3.4 to Mile 0.0, and to an elevation of (-) 26 feet MLG for the offshore reach from Mile 0.0 to Mile (-) 1.3. CEMVN's Undertaking will follow the same channel alignment but will deepen an additional 4 feet to an elevation of (-) 30.0 feet MLG continuing offshore to Mile 1.3, and will disposal the dredged material at two (2) sites located on the left and right of the existing channel jetties approximately 200 feet offshore. Dredging operations will utilize a hydraulic cutter-head dredge and will transport material to the disposal sites in a slurry via floating pipelines. The discharge locations are placed approximately 200 feet offshore within the shallow open waters to allow water and sediment flow for beach nourishment. Construction access for the dredge operations, attendant plant, and discharge line will be located within the open water.

Area of Potential Effects (APE)

The APE for direct and indirect effects is represented in **Figure 2.** The APE consists of the footprint of the Belle Pass federal channel and the two dredge disposal shoreline locations along Fourchon Beach. The channel dredging operations extend approximately 4.7 miles long. The eastern disposal location measures 3266 feet long by 217 feet wide (16.3 acres) and the western disposal location measures 3,020 feet long by 185 ft wide (12.8 acres) for 29.1 acres combined.

Identification and Evaluation of Historic Properties

A background and literature review utilizing the National Register of Historic Places (NRHP) database and the Louisiana Division of Archaeology (LDOA) *Louisiana Cultural Resources Map* (LDOA Website) identified that the project APE has undergone several cultural resources investigations (**Figure 3**). Newman (1976) conducted an initial reconnaissance-level cultural resources investigation of the northern portion of Belle Pass, and the entire federal channel underwent a marine remote sensing survey and desktop review conducted for CEMVN's initial Section 106 consultation (Godzinski et al. 2018). Within Belle Pass, archaeological sites 16LF7, 16LF72, 16LF83, and 16LF84 overlap with Project APE and are determined ineligible for listing in the National Register of Historic Places (**Figures 4, 5, 6**). Archaeological sites 16LF85, 16LF86, and

16LF249 have an undetermined NRHP eligibility status, but will be avoided by dredging operations (**Figure 4** and **5**).

Historical aerial images and topographic maps document the dredge disposal areas experienced significant shoreline erosion and disturbance within the last 50 years. The eastern disposal area underwent two terrestrial reconnaissance cultural resources surveys (Gagliano et al. 1976; Beavers and Lamb 1979) and two terrestrial Phase I cultural resources investigations (Braud et al. 2008; Coughlin 2012) when it was a part of the Fourchon Beach shoreline. No cultural resources were identified during these surveys (**Figure 7**). The initial Belle Pass channel dredging operations previously utilized the proposed western disposal area as a disposal site when it was located along Fourchon Beach before erosion retreated the shoreline to its current location (**Figure 2**). In addition, a submerged pipeline impacted the western portion of this disposal area (**Figure 7**). Considered together, previous disturbances and severe erosion have eliminated the potential for the dredge disposal areas to yield intact archaeological deposits. Last, CEMVN reviewed NOAA's Coast Survey's Automated Wreck and Obstruction Information System (AWOIS) database, which did not identify any submerged resources within the proposed disposal areas.

Assessment of Effects

Based on a background and literature review, CEMVN has determined that there are no historic properties, as defined in 36 CFR 800.16 (l) in the APE. Therefore, CEMVN is making a finding of **No Historic Properties Affected** for this undertaking and submitting it to you for review and comment. This project will be subject to the standard change in scope of work, unexpected discovery, and unmarked human burial sites act provisions. CEMVN requests your comments within 30 days, per 36 CFR 800.5(c)

We look forward to your concurrence with this determination. Should you have any questions or need additional information with this undertaking, please contact either Brian Ostahowski, Archaeologist and Tribal Liaison at [redacted] or [redacted] or Jason A. Emery, Chief of Cultural & Social Resources, [redacted] or [redacted]

Sincerely,

ERIC M. WILLIAMS
Chief, Environmental Planning Branch

CC: An electronic copy of this letter with enclosures will be provided to the Section 106 Inbox, section106@crt.la.gov.

Distribution List:

1. LA SHPO
2. Chitimacha Tribe of Louisiana
3. Coushatta Tribe of Louisiana
4. Jena Band of Choctaw Indians
5. Mississippi Band of Choctaw Indians
6. Tunica-Biloxi Tribe of Louisiana

References:

Beavers, Richard and Teresia Lamb
1979 *A Level I Cultural Resources Survey and Assessment of Fourchon Island, Lafourche Parish, Louisiana*. Report prepared by the University of New Orleans for the Edward Wisner Donation Advisory Committee (LA DOA Report No. 22-0645).

Braud, Melissa R. with contributions by: Richard A. Weinstein, Paul V. Heinrich, William D. Reeves, Donald Davis, George J. Castille III and Joanne Ryan
2008 *Cultural Resources Survey of the Caminada Headland Restoration Feasibility Study, Lafourche and Jefferson Parishes, Louisiana*. Report prepared by Coastal Environments, Inc. for T. Baker Smith, Inc. (LA DOA Report No. 22-2966).

Coughlin, Sean
2012 *Negative Findings Report Related to the Phase I Cultural Resources Investigation of the Caminada Headland Beach Resotation Area in LaFourche Parish, Louisiana*. Report prepared by R. Christopher Goodwin & Associates, Inc. for Coastal Engineering Consultants, Inc. (LA DOA Report No. 22-3966).

Gagliano, Sherwood, M., Richard A. Weinstein, and Eileen K. Burden
1976 *Archaeological Survey of the Port Fourchon Area, Lafourche Parish, Louisiana*. Report prepared by Coastal Environments, Inc. for the Greater Lafourche Port Commission (LA DOA Report No. 22-0002).

Godzinkski, Michael, Dyane B. Lee, Elizabeth V. Williams, Donna Greer, and Elena Ricci.
2018 *Cultural Resources Assessment for the Port Fourchon Project and Results of an Initial Remote Sensing Marine Survey, Lafourche Parish, Louisiana*. Report prepared by Coastal Environments, Inc. for GIS Engineering, LLC. (LA DOA Report No. 22-6170).

National Oceanic and Atmospheric Administration
2023 *West Fourchon Marsh Creation & Nourishment Project, Supplemental Environmental Assessment, Fed No. TE-0134, Lafourche Parish, Louisiana, October 2023.*

Figure 1. Project Overview Map. Proposed Federal Channel Dredging Limits are Outlined in Blue and Proposed Dredge Disposal Locations are Outlined in Yellow.

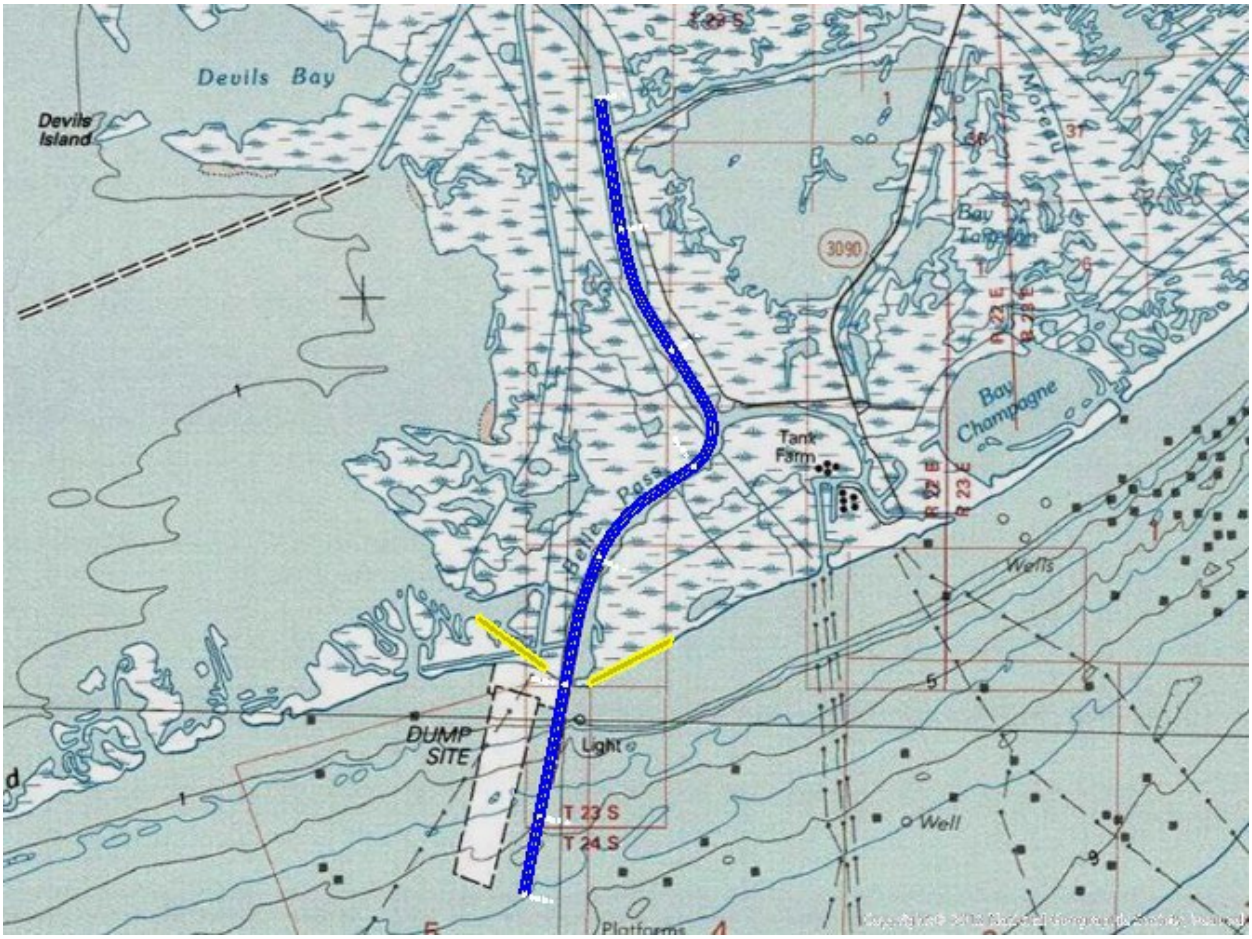

Figure 2. Project Area of Potential Effects (APE) overlaid on the Terrebonne Bay 7.5" US Topographic Map (1983).

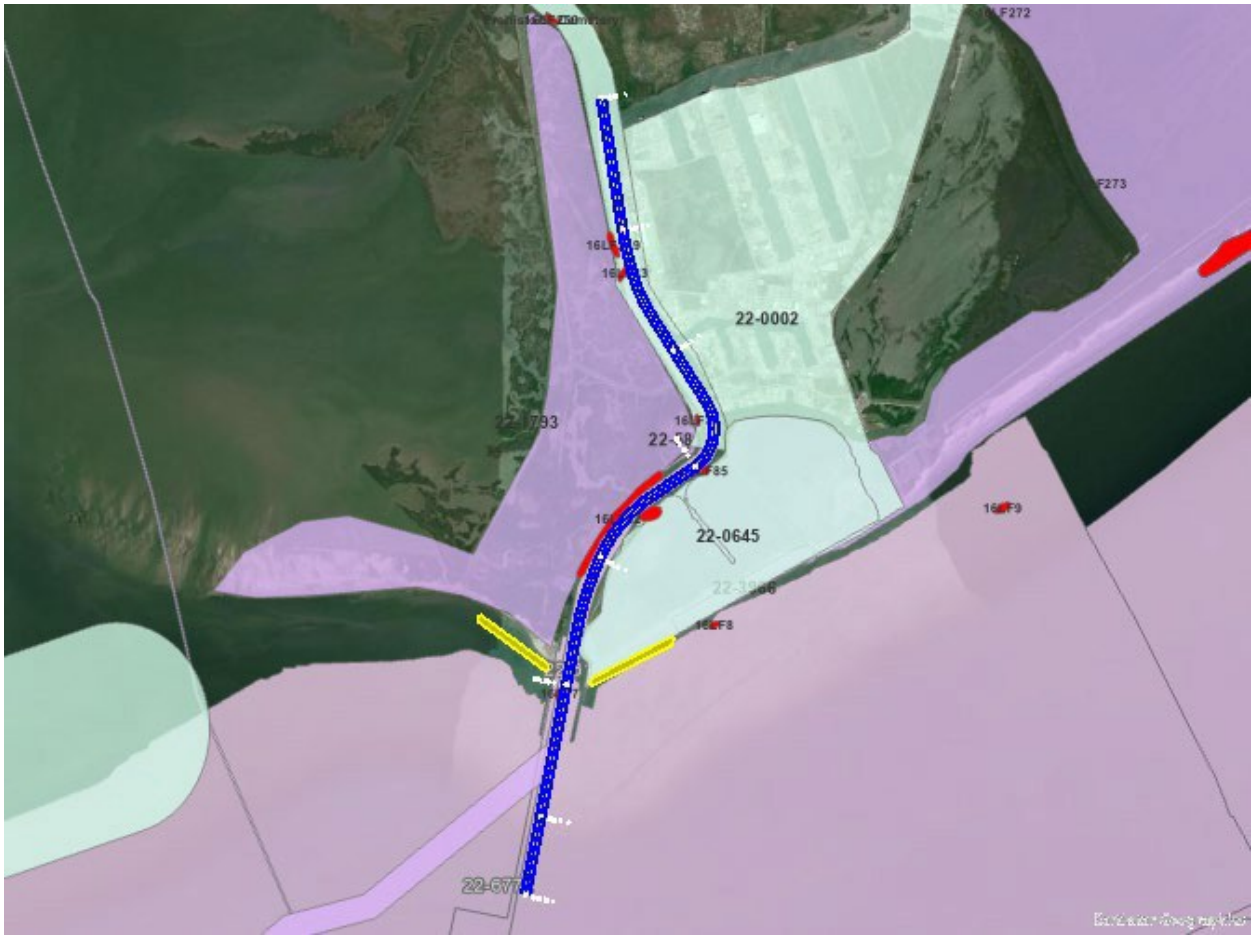

Figure 3. Project APE with Previous Cultural Resources Survey and Previously Identified Archaeological Sites/Shipwrecks Identified.

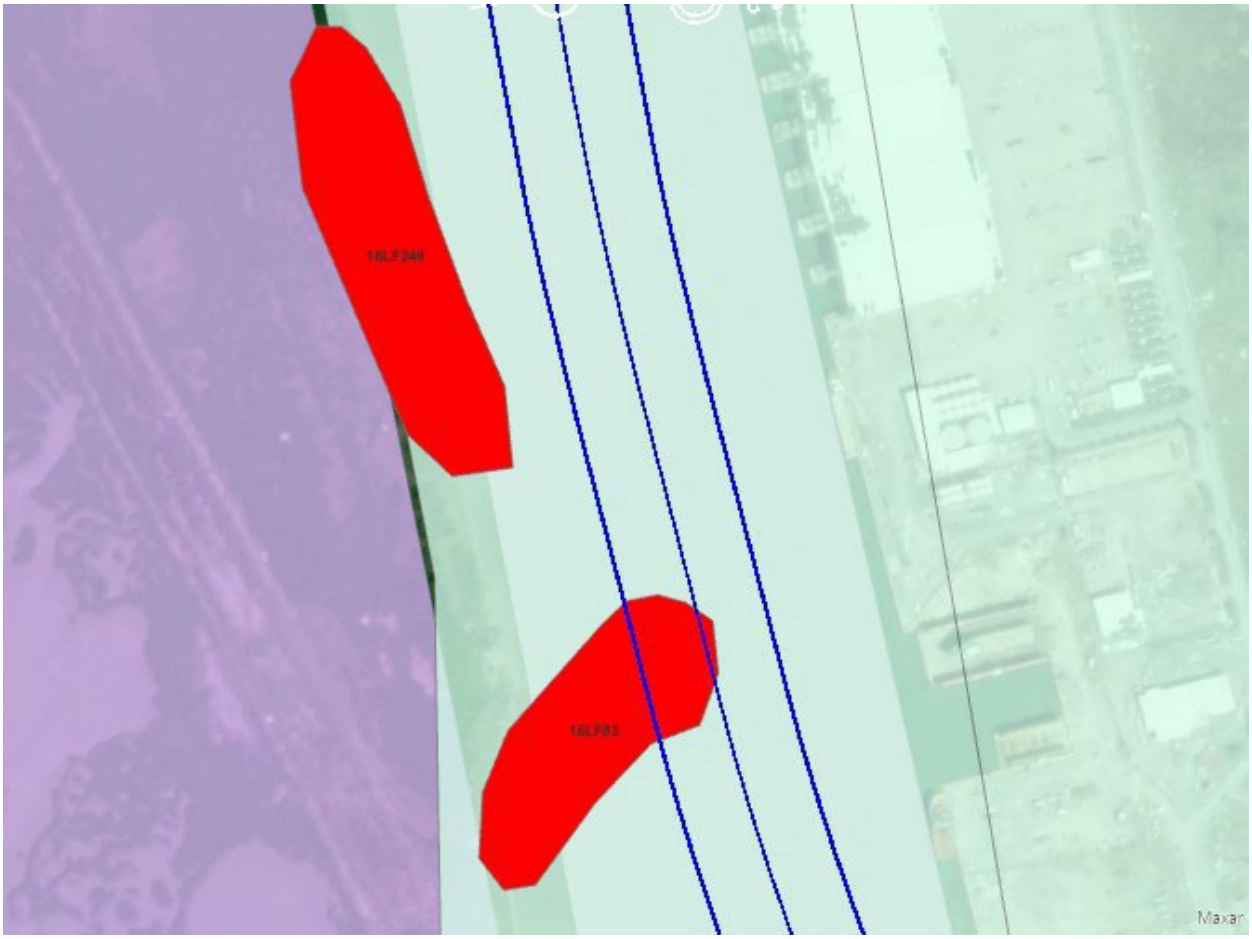

Figure 4. The Northern Portion of the Inland Federal Channel with Archaeological Sites 16LF83 and 16LF249 Identified.

Figure 5. The Southern Portion of the Inland Federal Channel with Archaeological Sites 16LF82, 16LF84, 16LF85, and 16LF86 identified.

Figure 6. The Belle Pass Terminus and Channel Jetties with Archaeological Shipwreck Site 16LF7 indicated within the Project APE. The Proposed Dredge Disposal Sites are Outlined in Yellow.

Figure 7. Proposed Dredge Disposal Areas with Previous Cultural Resources Surveys overlaid on the Belle Pass, LA 7.5" US Topographic Map (1998). The Proposed Dredge Disposal Sites are Outlined in Yellow.

Mississippi Valley Division,
Regional Planning and Environment Division South

Draft Environmental Assessment Port Fourchon Belle Pass Deepening, Lafourche Parish Louisiana

Appendix B: Agency Coordination

May 2024

Annex 1 Draft U.S. Fish and Wildlife Coordination Act Report

Annex 2 Draft Biological Evaluation

Annex 3 Coastal Zone Management Act Determination

Annex 4 Water Quality Certification

Mississippi Valley Division,
Regional Planning and Environment Division South

Draft Environmental Assessment Port Fourchon Belle Pass Deepening, Lafourche Parish Louisiana

Appendix B Annex 1: Draft U.S. Fish and Wildlife Coordination Act Report

May 2024

UNITED STATES DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE
200 Dulles Drive
Lafayette, Louisiana 70506

March 28, 2024

Colonel Cullen Jones
District Commander
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Colonel Jones:

Please reference the Port Fourchon West Belle Pass Channel, Louisiana, Feasibility Study conducted by the U.S. Army Corps of Engineers (USACE), with Port Fourchon acting as the non- federal sponsor. Port Fourchon is located on the southern tip of Lafourche Parish, Louisiana, just north of the Gulf of Mexico. It is the southernmost point of Louisiana accessible by automobile, via Highway 1. The study area is located immediately inside the mouth of Bayou Lafourche. The Fish and Wildlife Service (Services) submits this letter report in accordance with the Fish and Wildlife Coordination Act (FWCA; 48 Stat. 401, as amended; 16 U.S.C. 661 et seq.). This letter report does not constitute the report of the Secretary of the Interior as required by Section 2(b) of the FWCA. A copy of this letter report has been provided to the National Marine Fisheries Service (NMFS) and the Louisiana Department of Wildlife and Fisheries (LDWF); their comments, if any, will be forwarded under separate cover.

The deepening of Port Fourchon was authorized by Section 203 of the Water Resources and Development Act (WRDA) of 1986 (PL 998-662), as modified by Section 1014 of Water Resources and Reform Development Act (WRRDA) 2014, by Section 1126 of the Water Infrastructure Improvements of the Nation Act (Public Law 114-322), and by Section 1152 of WRDS 2018. The project is conditionally authorized by WRDA 2020 Section 403.

Project Description

The proposed action includes the deepening of the Port Fourchon federal navigation channel. Deepening would be achieved by the same dredging operation that is currently used for maintenance. The existing maintenance project was authorized for a navigation channel 300 ft wide with an elevation of -24 ft Mean Low Gulf (MLG) on the inland reach for mile 3.4 to

Mile 0.0 and to an elevation of -26 ft MLG for the offshore reach from Mile 0.0 to Mile -1.3. The Port Fourchon federal navigation channel has been maintained by the USACE within the proposed action dimensions and alignment. The proposed action would dredge the federal navigation channel to an elevation of -30 ft Mean Lower Low Water (MLLW) for the inland reach plus 3 ft of advanced maintenance dredging and to -32 ft MLLW for the offshore reach plus 4 ft of advanced maintenance dredging (see Figure 1 below). The proposed action follows the alignment of the existing maintenance project and extends to the newly authorized limits. Dredging would be accomplished with a hydraulic cutter-head dredge and material excavated would be transported to two sites in a slurry via pipeline. The two dredge material disposal sites are located on the exterior of the existing jetties near the intersection with the existing shoreline. Spoil discharge would be distributed within two active shallow water feeder berms parallel to the east and west port beaches in the longshore transport zone (available for cross-shore and longshore sediment transport to the headlands flanking the jetties). Construction access for dredge, attendant plant, and discharge line is in open water.

Figure 1. Proposed dredging and spoil placement for deepening of the Port Fourchon navigation channel.

Fish and Wildlife Resources

Fish and wildlife habitat found in the area of direct project impacts includes open water. Open water habitats to be directly impacted by the proposed project include the nearshore Gulf of Mexico and Bayou Lafourche. Bayou Lafourche is currently dredged at frequent intervals to maintain access to existing port facilities. No vegetated wetlands would be impacted by the proposed project.

The area of direct project impacts provides minimal fish and wildlife habitat value. Dredging activities are expected to continue either with or without the project. Estuarine and marine fishes occurring in the direct impact project area include bay anchovies, scaled sardine, Gulf menhaden, striped mullet, and Atlantic croaker. Crustaceans expected to occur in this area include white shrimp, brown shrimp, and blue crab. Wildlife species that may be found foraging within the proposed project area include pelicans and various gulls and terns. Species in the project area may be temporarily disturbed by the noise associated with the proposed work, but these impacts are temporary in nature.

Fish and wildlife habitats adjacent to the project area include developed lands, salt marsh, open water, and barrier island/headlands.

Developed habitats adjacent to the project area include Louisiana Highway 1, shipyards, and the Greater Lafourche Port Commission. These habitats do not support significant wildlife use.

Marine processes, with barrier islands, saline marsh, tidal channels, and large bays and lakes, occur adjacent to the project area. Saline marshes adjacent to the project area are dominated by smooth cordgrass, glasswort, salt grass, and mangrove.

Barrier island/headlands adjacent to the project area include the Caminada headland and West Belle Pass Island. Habitat seen on barrier shorelines consists primarily of beach, dune, high marsh (scrub/shrub), and back-barrier saline marsh. Beach vegetation may include sea purslane, marsh hay cordgrass, sea rocket, and seaside heliotrope. Dune plants are dominated by sea oats, but can include marsh hay cordgrass, bitter panicum, and Roseau cane. Shrub/scrub plants often found on high marsh zones typically behind dunes and include sea myrtle, sea oxeye and marsh elder. Black mangrove occurs as a shrub along the flooded marsh edges of the barrier islands and on the banks of tidal streams, ponds, and bays. Saline back barrier marshes species are dominated by smooth cordgrass, glasswort, salt grass, and mangrove.

Open water of various sizes and depths (ponds, lakes, bayous, and canals) are interspersed around the project area. Major open water areas include Bayou Lafourche, Bayou Moreau, the Gulf of Mexico, Timbalier Bay, and Bay Champagne. These open water areas support little or no submerged aquatic vegetation but support a diverse array fish and shellfish. Estuarine and marine fishes occurring in that area include bay anchovies, scaled sardine, Gulf menhaden, striped mullet, red drum, spotted seatrout, sand seatrout, Atlantic croaker, and southern flounder. The dominant crustaceans expected to occur in the area include white shrimp, brown shrimp, and blue crab. Adjacent habitats to the project area provide habitat for a number of songbirds and shorebirds. Neotropical migrants expected in the project area include warblers, vireos, wrens, flycatchers, and many other species. The barrier shoreline, scrub/shrub, ridge, spoil, or bayou bank habitats serve as vital resting, recovering, and foraging habitat for trans-Gulf neotropical migrant birds. Many of these wetlands have been lost in the vicinity of the project area as barrier islands and the few remaining ridges continue to subside below elevations that can support

scrub/shrub habitat and maritime forest. Seabirds using adjacent open water areas and barrier shoreline may include pelicans, gulls, terns, and skimmers.

Mammals known to occur in the adjacent project-area wetlands include muskrat, nutria, raccoon, mink, river otter, swamp rabbit, Seminole bat, northern yellow bat, marsh rice rat, dolphin, and white-tailed deer.

Federally listed threatened and endangered species and/or their designated critical habitat occurring in and adjacent to the study area include the threatened West Indian manatee (*Trichechus manatus)*, the threatened piping plover (*Charadrius melodus)* and its designated critical habitat, and the threatened red knot (*Calidris canutus rufa)* and its proposed critical habitat. Several species of threatened/endangered sea turtles are also known to forage in the coastal waters adjacent to the project area. Those species include the threatened loggerhead sea turtle (*Caretta caretta*), the endangered Kemp's ridley sea turtle (*Lepidochelys kempii*), the threatened green sea turtle (*Chelonia mydas*), the endangered leatherback sea turtle (*Dermochelys coriacea*), and the endangered hawksbill sea turtle (*Eretmochelys imbricate*).

West Indian Manatee

The threatened West Indian manatee is known to regularly occur in Lakes Pontchartrain and Maurepas and their associated coastal waters and streams. It also can be found less regularly in other Louisiana coastal areas, most likely while the average water temperature is warm. Based on data maintained by the Louisiana Wildlife Diversity Program, approximately 84 percent of reported manatee sightings (1990-2019) in Louisiana have occurred from the months of June through December. Manatee occurrences in Louisiana appear to be increasing and they have been regularly reported in the Amite, Blind, Tchefuncte, and Tickfaw Rivers, and in canals within the adjacent coastal marshes of southeastern Louisiana. Manatees may also infrequently be observed in the Mississippi River and coastal areas of southwestern Louisiana. Cold weather and outbreaks of red tide may adversely affect these animals. However, human activity is the primary cause for declines in species number due to collisions with boats and barges, entrapment in flood control structures, poaching, habitat loss, and pollution.

The following are conditions that should be implemented to avoid impacts to manatee. All contract personnel associated with the project shall be informed of the potential presence of manatees and the need to avoid collisions with manatees, which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. All construction personnel are responsible for observing water-related activities for the presence of manatee(s). Temporary signs should be posted prior to and during all construction/dredging activities to remind personnel to be observant for manatees during active construction/dredging operations or within vessel movement zones (i.e., work area), and at least one sign should be placed where it is visible to the vessel operator. Siltation barriers, if used, should be made of material in which manatees could not become entangled, and should be properly secured and monitored. If a manatee is sighted within 100 yards of the active work zone, special operating conditions should

be implemented, including: no operation of moving equipment within 50 feet of a manatee; all vessels shall operate at no wake/idle speeds within 100 yards of the work area; and siltation barriers, if used, should be re- secured and monitored. Once the manatee has left the 100-yard buffer zone around the work area on its own accord, special operating conditions are no longer necessary, but careful observations would be resumed. Any manatee sighting should be immediately reported to the Service (337/291-3100) and the LDWF Wildlife Diversity Program (337/735-8676).

Piping Plover

The piping plover, federally listed as a threatened species, is a small (7 inches long), pale, sand-colored shorebird that winters in coastal Louisiana and may be present for 8 to 10 months annually. Piping plovers arrive from their northern breeding grounds as early as late July and remain until late March or April. They feed on polychaete marine worms, various crustaceans, insects and their larvae, and bivalve mollusks that they peck from the top of or just beneath the sand. Piping plovers forage on intertidal beaches, mudflats, sand flats, algal flats, and wash-over passes with no or very sparse emergent vegetation. They roost in unvegetated or sparsely vegetated areas, which may have debris, detritus, or micro-topographic relief offering refuge to plovers from high winds and cold weather. They also forage and roost in wrack (i.e., seaweed or other marine vegetation) deposited on beaches. In most areas, wintering piping plovers are dependent on a mosaic of sites distributed throughout the landscape, because the suitability of a particular site for foraging or roosting is dependent on local weather and tidal conditions. Plovers move among sites as environmental conditions change, and studies have indicated that they generally remain within a 2-mile area. Major threats to this species include the loss and degradation of habitat due to development, disturbance by humans and pets, and predation.

On July 10, 2001, the Service designated critical habitat for wintering piping plovers (Federal Register Volume 66, No. 132); a map of the seven critical habitat units in Louisiana can be found at http://criticalhabitat.fws.gov/crithab. Their designated critical habitat identifies specific areas that are essential to the conservation of the species. The physical and biological features (PBFs) for piping plover wintering habitat are those habitat components that support foraging, roosting, and sheltering and the physical features necessary for maintaining the natural processes that support those habitat components. The PBFs are found in geologically dynamic coastal areas that contain intertidal beaches and flats (between annual low tide and annual high tide), and associated dune systems and flats above annual high tide. Important components of intertidal flats include sand and/or mud flats with no or very sparse emergent vegetation. Adjacent unvegetated or sparsely vegetated sand, mud, or algal flats above high tide are also important, especially for roosting plovers.

Consultation with this office will be necessary if the proposed action may affect the piping plover or its designated critical habitat directly or indirectly.

Red Knot

The red knot (Calidris canutus rufa), federally listed as a threatened species, is a medium-sized shorebird about 9 to 11 inches in length with a proportionately small head, small eyes, short neck, and short legs. The black bill tapers steadily from a relatively thick base to a relatively fine tip; bill length is not much longer than head length. Legs are typically dark gray to black, but sometimes greenish in juveniles or older birds in non-breeding plumage. Non-breeding plumage is dusky gray above and whitish below. The red knot breeds in the central Canadian arctic but is found in Louisiana during spring and fall migrations and the winter months (generally September through early May).

During migration and on their wintering grounds, red knots forage along sandy beaches, tidal mudflats, salt marshes, and peat banks. Observations along the Texas coast indicate that red knots forage on beaches, oyster reefs, and exposed bay bottoms, and they roost on high sand flats, reefs,

and other sites protected from high tides. In wintering and migration habitats, red knots commonly forage on bivalves, gastropods, and crustaceans. Coquina clams (*Donax variabilis*), a frequent and often important food resource for red knots, are common along many gulf beaches. Major threats to this species along the Gulf of Mexico include the loss and degradation of habitat due to erosion, shoreline stabilization, and development; disturbance by humans and pets; and predation.

On July 15, 2021, the Service proposed to designate 649,066 acres of critical habitat across 13 states for the rufa red knot. The critical habitat proposal reinforces the importance of habitat for recovery and focuses conservation in the areas along the coasts with the most rufa red knot activity. The proposal includes occupied migration and wintering areas of Alabama, Delaware, Florida, Georgia, Louisiana, Massachusetts, Mississippi, New Jersey, New York, North Carolina, South Carolina, Texas and Virginia. About 40 percent of the acres overlap with existing critical habitat for other threatened and endangered species. Detailed information regarding the proposal can be found on the Service's rufa red knot website at https://fws.gov/northeast/red-knot/.

Consultation with this office will be necessary if the proposed action may affect the red knot or its proposed critical habitat directly or indirectly.

Sea Turtles

There are five species of federally listed threatened or endangered sea turtles that forage in the near shore waters, bays, and estuaries of Louisiana. The NMFS is responsible for aquatic marine threatened or endangered species that occur in the marine environment. Please contact Kelly Shotts (727-824-5312) at the NMFS Regional Office in St. Petersburg, Florida, for information concerning those species in the marine environment.

Essential Fish Habitat

The project may be located within an area identified as Essential Fish Habitat (EFH) by the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA, Magnuson-Stevens Act; P.L. 104-297). The USACE should consult with the NMFS regarding EFH.

Service Recommendations

As described above, the area of direct project impacts provides minimal fish and wildlife habitat value; however, incorporating beneficial use of the dredged material, resulting from the construction and maintenance of this project, into the project design would help restore coastal habitats in the area that are in a state of decline.

1. The Service recommends that the following fish and wildlife conservation recommendations are included in the feasibility report and related authorizing documents: The Service recommends that to the extent feasible all dredged material should be used beneficially to restore coastal habitats that are in decline. In doing so, saline wetlands would benefit by providing sediments and nutrients into the system, directly creating marsh, reducing open water, and reducing wave fetch, thus helping to combat wetland loss in the area.

2. The Service recommends that prior to a Finding of No Significant Impact being signed, the USACE prepare a Biological Evaluation to address potential project impacts to threatened and endangered species and their critical habitats and determine whether those impacts would be likely (or not likely) to adversely affect those federally listed species or adversely modify their critical habitats.

In summary, the Service does not object to the implementation of the Port Fourchon West Belle Pass Channel, Louisiana project as currently described since the proposed project would not significantly impact federal trust fish and wildlife resources. We appreciate the opportunity to comment on the proposed project. If your staff have any questions regarding our comments, please have them contact Karen Soileau of this office at (337) 291-3132.

Sincerely,

Brigette D. Firmin BRIGETTE FIRMIN Digitally signed by BRIGETTE FIRMIN Date: 2024.03.28 08:50:43 -05'00'
Field Supervisor
Louisiana Ecological Services Office

cc: Louisiana Department of Wildlife and Fisheries, Baton Rouge, LA National Marine Fisheries Service, Baton Rouge, LA

Mississippi Valley Division,
Regional Planning and Environment Division South

Draft Environmental Assessment Port Fourchon Belle Pass Deepening, Lafourche Parish Louisiana

Appendix B Annex 2: Biological Evaluation

May 2024

05 April 2024

Biological Evaluation

Draft Environmental Assessment Port Fourchon Belle Pass Deepening, Lafourche Parish Louisiana

The U.S. Army Corps of Engineers (USACE), New Orleans District (MVN), is requesting concurrence with our threatened and endangered species determination of "not likely to adversely affect" for the endangered Hawksbill Sea Turtle (*Eretmochelys imbricata*), endangered Kemp's Ridley Sea Turtle (*Lepidochelys kempii*), endangered Leatherback Sea Turtle (*Dermochelys coriacea*), and threatened Loggerhead Sea Turtle (*Caretta caretta*).

Project Description

The proposed action includes deepening of the Port Fourchon Federal navigation channel. Deepening would be achieved by the same dredging operation that is currently used for maintenance. The existing maintenance project was authorized for a navigation channel 300 ft wide with an elevation of -24 ft Mean Low Gulf (MLG) on the inland reach for mile 3.4 to Mile 0.0 and to an elevation of -26 ft MLG for the offshore reach from Mile 0.0 to Mile -1.3. The proposed action would dredge the Federal navigation channel to an elevation of -30 ft Mean Lower Low Water (MLLW) for the inland reach plus 3 ft of advanced maintenance and to -32 ft MLLW for the offshore reach plus 4 ft of advanced maintenance (Figure 1). The proposed action follows the alignment of the existing maintenance project and extends to the newly authorized limits. Dredging would be accomplished with a hydraulic cutter-head dredge and material excavated would be transported to two (2) sites in a slurry via pipeline. The two dredge material disposal sites are located on the exterior of the existing jetties near the intersection with the existing shoreline. Discharge location would be 200 ft offshore and would extend 300 – 3000 ft from the jetties in the shallow open water and be allowed to flow (Figure 1). Construction access for dredge, attendant plant, and discharge line is in open water. No upland areas would be utilized for construction and maintenance of the project.

Figure 1. Map of the proposed action location in Bayou Lafourche in Port Fourchon, Louisiana. The proposed action for dredging is denoted by the blue lines and the proposed dredge material disposal areas are denoted by the pink lines.

Occurrence of Threatened and Endangered (T&E) Species
On 29 February 2024 USACE-MVN conducted an Information for Planning and Consultation (IPaC) search which generated a list of species (attached) that was confirmed by The Service on 28 MARCH 2024. T&E species that are known to occur within the project area are shown in Table 1.

Table 1. Threatened and Endangered Species Considered under the Endangered Species Act

	Common Name	Species	ESA status	*Critical Habitat
Mammals	West Indian Manatee	*Trichechus manatus*	Threatened	No
	Fin Whale	*Balaenoptera physalus*	Endangered	No
	Rice's Whale	*Balaenoptera ricei*	Endangered	No
	Sei Whale	*Balaenoptera borealis*	Endangered	No
	Sperm Whale	*Physeter macrocephalus*	Endangered	No
Birds	Eastern Black Rail	*Laterallus jamaicensis ssp. jamaicensis*	Threatened	No
	Piping Plover	*Charadrius melodus*	Threatened	Yes
	Rufa Red Knot	*Calidris canutus rufa*	Threatened	No
Reptiles	Hawksbill Sea Turtle	*Eretmochelys imbricata*	Endangered	No
	Kemp's Ridley Sea Turtle	*Lepidochelys kempii*	Endangered	No
	Leatherback Sea Turtle	*Dermochelys coriacea*	Endangered	No
	Loggerhead Sea Turtle	*Caretta caretta*	Threatened	No
	Green Turtle	*Chelonia mydas*	Threatened	No
Fishes	Oceanic Whitetip Shark	*Carcharhinus longimanus*	Threatened	No
	Giant Manta Ray	*Manta birostris*	Threatened	No
Insects	Monarch Butterfly	*Danaus plexippus*	Candidate	No

*Critical Habitat in Project Area

Previous Coordination
There has been no previous formal coordination between USACE-CEMVN and USFWS for this effort. The USFWS has been on the PDT for this project as well as being involved in smaller informal meetings about the project and its scope.
As one of the early steps of coordination, the USACE-CEMVN used the Louisiana DKey within the IPaC system which generated a consistency letter (attached) that includes determinations for the species that occur in the area. Table 2 below includes the determinations generated by the DKey.

Table 2. Species, Status and Determination of the Louisiana DKey in the IPaC system generated 29 February 2024.

Species	Listing Status	Determination
Eastern Black Rail (*Laterallus jamaicensis ssp. jamaicensis*)	Threatened	NLAA
Hawksbill Sea Turtle (*Eretmochelys imbricata*)	Endangered	May affect
Kemp's Ridley Sea Turtle (*Lepidochelys kempii*)	Endangered	May affect
Leatherback Sea Turtle (*Dermochelys coriacea*)	Endangered	May affect
Loggerhead Sea Turtle (Caretta caretta)	Threatened	May affect
Piping Plover (Charadrius melodus)	Threatened	NLAA
Rufa Red Knot (Calidris canutus rufa)	Threatened	NLAA
West Indian Manatee (Trichechus manatus)	Threatened	NLAA

According to the consistency letter, further coordination with the Louisiana Ecological Services Office is necessary for those species with a determination of "may affect" listed above. This biological evaluation satisfies that requirement.

Conclusion and Determination

USACE-MVN has determined, and is requesting the Service's concurrence, that the project is not likely to adversely affect nesting Hawksbill Sea Turtles (Eretmochelys imbricata), Kemp's Ridley Sea Turtles (Lepidochelys kempii), Leatherback Sea Turtles (Dermochelys coriacea), or Loggerhead Sea Turtles (Caretta caretta).

Justification for this determination is because all dredge work would be conducted using a cutterhead dredge which is not known to cause take of sea turtles. Also, all dredge and disposal work would occur entirely within the water, and therefore would not impact nesting activities if they were to occur. Additionally, the area to be dredged is already routinely maintained to a depth of -24 ft on the inland reach -26 ft on the offshore reach about every two years with the same dredge material disposal area within the same footprint as this proposed effort would be.

Lastly, this area is already supporting vessel traffic to and from the Port daily, so this effort would simply contribute to the regular disturbance that is already occurring.

Please review the above information and inform us whether or not you agree with our determinations. If you have any questions about the project or need additional information, please contact Jordan Logarbo at Jordan.r.logarbo@usace.army.mil or (504)852-1158.

Sincerely,

SMITH.PATRICK.WILLIAM.1538719672 Digitally signed by SMITH.PATRICK.WILLIAM.1538719672 Date: 2024.05 14:53:04 -05'00'

Patrick W. Smith
on behalf of
Eric M. Williams
Chief, Environmental Planning Branch

Mississippi Valley Division,
Regional Planning and Environment Division South

Draft Environmental Assessment Port Fourchon Belle Pass Deepening, Lafourche Parish Louisiana

Appendix B Annex 3: Coastal Zone Management Act Determination

May 2024

JEFF LANDRY
GOVERNOR

TYLER PATRICK GRAY
SECRETARY

State of Louisiana

DEPARTMENT OF ENERGY AND NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

May 8, 2024

Eric Williams
Chief, Environmental Planning Branch
Corps of Engineers- New Orleans District
7400 Leake Avenue
New Orleans, LA 70118
Via email: [redacted]

RE: **C20240032,** Coastal Zone Consistency
New Orleans District, Corps of Engineers (COE)
Direct Federal Action
Port Fourchon Belle Pass Deepening
Lafourche Parish, Louisiana

Dear Mr. Williams:

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 Jim Bondy of the Consistency Section at [redacted]

Sincerely,

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

CR/MH/jab

cc: Molly Bourgoyne, DOTD
Jordan Logarbo, COE-NOD
Dave Butler, LDWF
Rod Pierce, OCM FI
Megan Dufrene, Lafourche Parish

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Regional Planning and Environment Division South

Draft Environmental Assessment Port Fourchon Belle Pass Deepening, Lafourche Parish Louisiana

Appendix B Annex 4: Water Quality Certification

May 2024

JEFF LANDRY
GOVERNOR

AURELIA S. GIACOMETTO
SECRETARY

STATE OF LOUISIANA

DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL SERVICES

APR 0 6 2024

Ms. Jordan R. Logarbo
US Army Corps of Engineers, New Orleans District
7400 Leake Avenue
New Orleans, LA 70118

AI No.: 116656
Activity No.: CER20240001

RE: Port Fourchon Belle Pass 203 Channel Deepening Project
Water Quality Certification WQC 240404-01
Lafourche Parish

Dear Ms. Logarbo:

The Louisiana Department of Environmental Quality, Water Permits Division (LDEQ), has reviewed the application requesting authorization to dredge and place spoil to investigate increasing the depth of the Bayou Lafourche Waterway Federal navigation channel at Port Fourchon to an engineering, economic, and environmentally feasible depth and to extend the main access channel to the natural contour of the Gulf of Mexico at the optimum depth in Lafourche Parish.

The information provided in the application has been reviewed to assess compliance with State Water Quality Standards, the approved Water Quality Management Plan and applicable state water laws, rules and regulations. LDEQ has complied with its public notice procedures established pursuant to Clean Water Act Section 401(a)(1). 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 US Army Corps of Engineers, New Orleans District – Port Fourchon Belle Pass 203 Channel Deepening Project Water Quality Certification, WQC 240404-01.

Should you have any questions concerning any part of this certification, please contact Elizabeth Hill at (225) [redacted] or by email at [redacted]. Please reference Agency Interest (AI) number 116656 and Water Quality Certification 240404-01 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,

Aurelia S. Giacometto
Secretary

c: IO-W

ec: jordan.r.logarbo@usace.army.mil

Post Office Box 4313 • Baton Rouge, Louisiana 70821-4313 • Phone 225-219-3181 • Fax 225-219-3309
www.deq.louisiana.gov

Mississippi Valley Division,
Regional Planning and Environment Division South

Draft Environmental Assessment Port Fourchon Belle Pass Deepening, Lafourche Parish Louisiana

Appendix C: Hydraulics and Hydrodynamics – Draft Clean Water Act Section 404(b)(1)

May 2024

Port Fourchon Federal Channel Deepening 404(b)(1) Short Form

The following short form 404(b) (1) evaluation follows the format designed by the U.S. Army Corps of Engineers, New Orleans District, Office of the Chief of Engineers (CEMVN-OCE). As a measure to avoid unnecessary paperwork, and to streamline regulation procedures, while fulfilling the spirit and intent of environmental statues, CEMVN is using this format for all proposed project elements requiring a 404(b)(1) evaluation but involving no adverse significant impacts.

PROJECT DESCRIPTION

This 404(b)(1) short form is for the Port Fourchon federal channel deepening project. Deepening would be achieved by the same dredging operation that is currently used for maintenance. The existing maintenance project was authorized for a navigation channel 300 ft wide with an elevation of -24 ft Mean Lower Low Water (MLLW) on the inland reach for mile 3.4 to Mile 0.0 and to an elevation of -26 ft MLLW for the offshore reach from Mile 0.0 to Mile -1.3. The proposed action would dredge the Federal navigation channel to an elevation of -30 ft MLLW for the inland reach plus 3 ft of advanced maintenance and to -32 ft MLLW for the offshore reach plus 4 ft of advanced maintenance (Figure 1). The proposed action follows the alignment of the existing maintenance project and extends to the newly authorized limits following the natural contour of the Gulf of Mexico. Dredging would be accomplished with a hydraulic cutter-head dredge and material excavated would be transported to two (2) sites in a slurry via pipeline. The two dredge material disposal sites are located on the exterior of the existing jetties near the intersection with the existing shoreline. Discharge location would be 200 ft offshore and would extend 300 – 3000 ft from the jetties in the shallow open water and be allowed to flow (Figure 1). Construction access for dredge, attendant plant, and discharge line is in open water. No upland areas would be utilized for construction or maintenance of the project. In addition, there are two pipelines that have the potential to interfere with the proposed dredge action that require removal prior to construction.

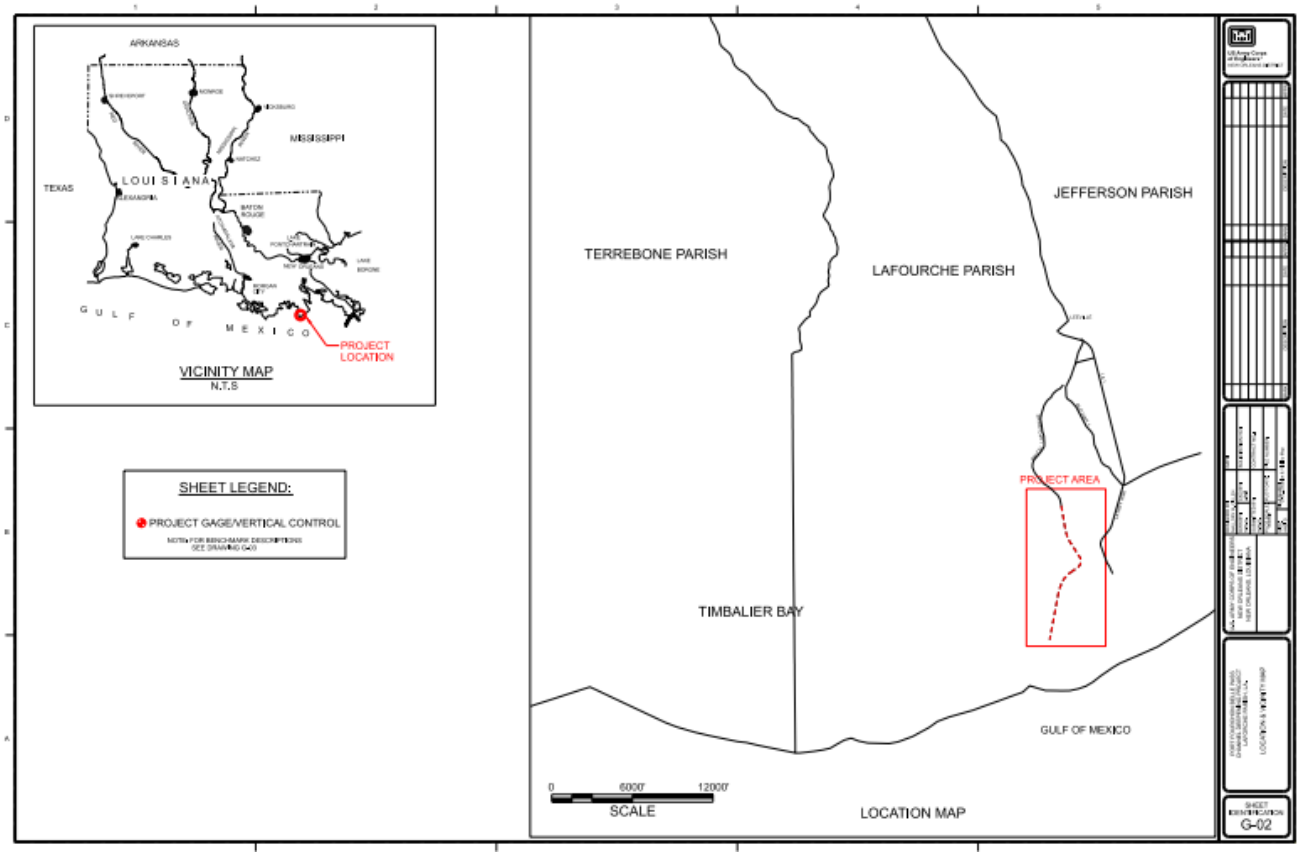

Figure 1: Project Vicinity Map.

Figure 2: Project Area Map, green line is inland reach, purple line is offshore reach.

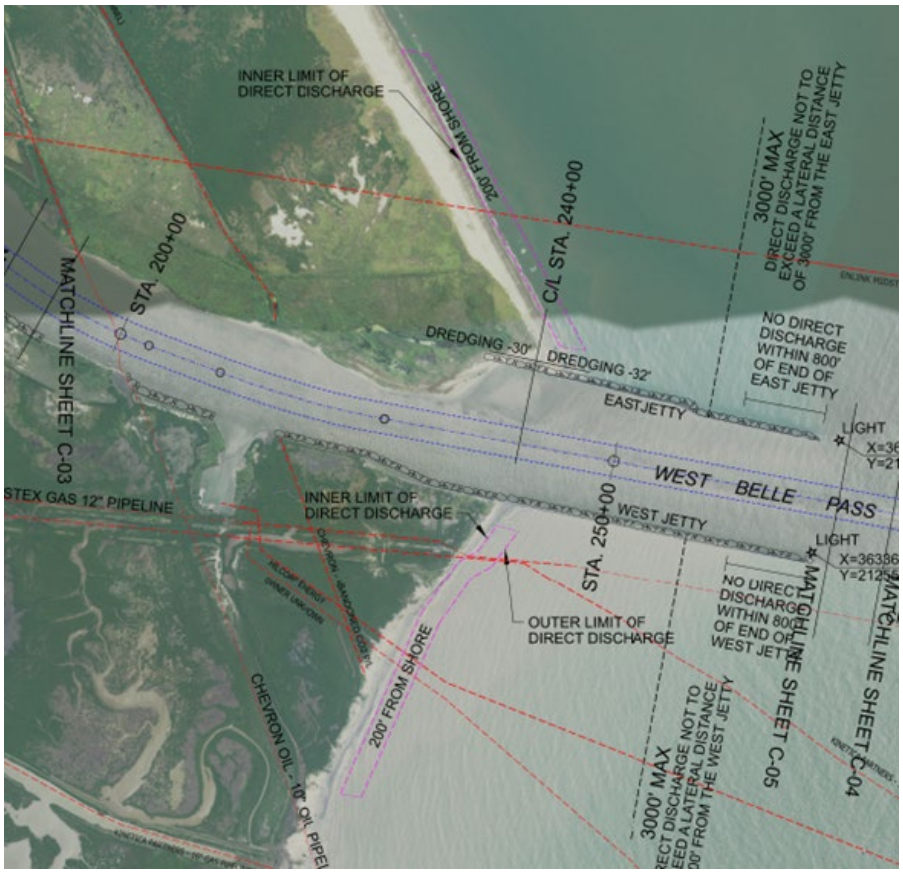

Figure 3: Disposal Area Plan View.

1. Review of Compliance (§230.10 (a)-(d))

A review of this project indicates that:

	Preliminary[1]		Final[2]	
	Yes	No	Yes	No
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)	x			
b. The activity does not appear to: **i.** violate applicable state water quality standards or effluent standards prohibited under Section 307 of the Clean Water Act; **ii.** jeopardize the existence of Federally listed endangered or threatened species or their habitat; and **iii.** violate requirements of any Federally designated marine sanctuary (if no, see Section 2b and check responses from resource and water quality certifying agencies)	x			
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)	x			
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)	x			

2. Technical Evaluation Factors (Subparts C-F)

a. Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C)

	N/A	Not Significant	Significant [3,5]
i. Substrate impacts		X	
ii. Suspended particulates/turbidity impacts.		X	
iii. Water column impacts		X	
iv. Alteration of current patterns and water circulation		X	
v. Alteration of normal water fluctuations/ hydroperiod		X	
vi. Alteration of salinity gradients		X	

b. Biological Characteristics of the Aquatic Ecosystem (Subpart D)

i. Effect on threatened/endangered species and their habitat		x	
ii. Effect on the aquatic food web		x	
iii. Effect on other wildlife (mammals, birds, reptiles, and amphibians)		x	

c. Special Aquatic Sites (Subpart E)

i. Sanctuaries and refuges	x		
ii. Wetlands	x		
iii. Mud flats	x		
iv. Vegetated shallows		x	
v. Coral reefs	x		

vi. Riffle and pool complexes	x		

d. Human Use Characteristics (Subpart F)

i. Effects on municipal and private water supplies	X		
ii. Recreational and commercial fisheries impacts		X	
iii. Effects on water-related recreation.		X	
iv. Esthetic impacts		X	
v. Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves		X	

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

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

i. Physical characteristics	X
ii. Hydrography in relation to known or anticipated sources of contaminants	
iii. Known, significant sources of persistent pesticides from land runoff or percolation	
iv. Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances	X
v. Other public records of significant introduction of contaminants from industries, municipalities, or other sources	X
vi. Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities	

Appropriate references: See Encl 2

	Yes	No[3]
b. An evaluation of the appropriate information in 3.a above indicates that there is reason to believe the proposed dredge or fill material is not a carrier of contaminants, or the material meets the testing exclusion criteria.[6]	X	

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

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

i. Depth of water at disposal site	X
ii. Current velocity, direction, and variability at disposal site	X
iii. Degree of turbulence	X
iv. Water column stratification	X
v. Discharge vessel speed and direction	X
vi. Rate of discharge	X
vii. Dredged or fill material characteristics (constituents, amount, and type of material, settling velocities)	X
viii. Number of discharges per unit of time	
ix. Other factors affecting rates and patterns of mixing (specify)	

Appropriate references: See Encl 2

	Yes	No[3]
b. An evaluation of the appropriate factors in 4a above indicates that the disposal site and/or size of mixing zone are acceptable	X	

5. Actions to Minimize Adverse Effects (Subpart H)

	Yes	No[3]
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	X	

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:

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

[1] 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.

[2] 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.

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

[4] For 1.b., review is for i. only (i.e., The activity does not appear to violate applicable state water quality standards or effluent standards prohibited under Section 307 of the Clean Water Act)

[5] Where a check is placed under the significant category, the preparer has attached explanation.

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

7. Evaluation Responsibility

a. Prepared by:

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November 13, 2023

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December 8, 2023

b. Reviewed by:

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November 27, 2023

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U.S. Army Corps of Engineers, New Orleans District
May 14, 2024

8. Findings

a.	The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines	x
b.	The proposed disposal site for discharge of dredged or fill material does not comply with the Section 404(b)(1) guidelines for the following reason(s):	
	i. There is a less damaging practicable alternative	
	ii. The proposed discharge will result in significant degradation of the aquatic ecosystem	
	iii. The proposed discharge does not include all practicable and appropriate measures to minimize potential harm to the aquatic ecosystem	

Date: _____

_____
Eric M. Williams
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Mississippi Valley Division,
Regional Planning and Environment Division South

Draft Environmental Assessment Port Fourchon Belle Pass Deepening, Lafourche Parish Louisiana

Appendix D: Acronyms and Abbreviations

May 2024

List of Acronyms and Abbreviations

AAHUs	Average Annual Habitat Units
A.D.	Anno Domini
ASA-CW	Assistant Secretary of the Army, Civil Works
APE	Area of Potential Effect
AWOIS	Automated Wreck and Obstruction Information System
BA	Biological Assessment
B.C.	Before Christ
BGEPA	Bald and Golden Eagle Protection Act
BLH	Bottomland Hardwood
BMP	Best Management Practices
BOD	Biological Oxygen Demand
ca.	Circa
CAA	Clean Air Act
CEMVN	Corps of Engineers New Orleans District
CEQ	Council on Environmental Quality CFR Code of Federal Regulations
CEJST	Environmental Justice
CFR	Code of Federal Regulations
CWA	Clean Water Act
CWPPRA	Coastal Wetlands Planning, Protection and Restoration Authority
CZMA	Coastal Zone Management Act
dB	decibel
dBA	a-weighted decibels
DBH	Diameter at Base Height
DOI	Department of the Interior
DNL	Day-night Sound Level
EA	Environmental Assessment
ECCA	Populations Characteristics
EFH	Essential Fish Habitat
EO	Executive Order
EIS	Environmental Impact Statement
EJ	Environmental Justice
ER	Engineer Regulation
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESA	Environmental Site Assessment
ft	Feet

FEMA	Federal Emergency Management Act
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Conservation Act
FWOP	Future without Project
FWP	Future with Project
GLPC	Greater Lafourche Port Commission
GMFMC	The Gulf of Mexico Fisheries Management Council
HTRW	Hazardous, Toxic, and Radioactive Waste
Hz	Hertz
km	Kilometer
LA	Louisiana
LCA	Louisiana Coastal Area
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LDOA	Louisiana Division of Archaeology
LDWF	Louisiana Department of Wildlife and Fisheries
Leq	Equivalent Sound Level
LNG	Liquid to Natural Gas
MBCA	Migratory Bird Conservation Act
MBTA	Migratory Bird Treaty Act
MFCMA	Magnuson Fishery Conservation and Management Act
$\mu g/m^3$	One microgram per cubic meter of air
MLG	Mean Low Gulf
MLLW	Mean Lower Low Water
MMPA	Marine Mammal Protection Act
MSA	Metropolitan Statistical Areas
MVD	Mississippi River Valley Division
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFS	Non-Federal Sponsor
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Ocean and Atmospheric Administration NRHP
	National Register of Historic Places
O&M	Operation and Maintenance
OSVs	Offshore Supply Vessels
PA	Programmatic Agreement
PED	Planning, Engineering and Design
PGM	Policy Guidance Memorandum
ppt	Parts per thousand

ppm	Parts per million
ppb	Parts per billion
REP	Real Estate Plan
RPEDS	Regional Planning and Environment Division South
RSLR	Relative Sea Level Rise
SAV	Submerged Aquatic Vegetation
SHPO	State Historic Preservation Officer
SI	System of Units
STA or Sta.	Station
T&E	Threatened and Endangered
THPO	Tribal Historic Preservation Officer
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WRDA	Water Resources Development Act
WRRDA	Water Resources and Reform Development Act
WRDS	Water Infrastructure Improvements of the Nation Act
WQC	Water Quality Certificate
WVA	Wetland Value Assessment