Mississippi Valley Division,
Regional Planning and Environment Division South

Port Fourchon Belle Pass Channel Deepening Project, Louisiana

Environmental Assessment: Port Fourchon EA #601

January 2025

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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 Environmental Assessment for the Port Fourchon Belle Pass Channel Deepening Project, Louisiana (EA #601). This EA is an evaluation of the potential impacts associated with the Proposed Modified 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, MVN, 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, 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 by Section 1152 of WRDA 2018. Section 203, as amended via the above referenced provisions, allows non-Federal interests, such as the Greater Lafourche Port Commission GLPC, to undertake feasibility studies of proposed navigation projects and submit them to the Assistant Secretary of the Army for Civil Works (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 America (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 USACE completed construction and has maintained the authorized navigation project.

1.2 OVERVIEW OF THE PROPOSED MODIFIED ACTION

The Proposed Modified Action analyzed in this Environmental Assessment is a modification of the proposed project submitted by GLPC to the ASA-CW. It 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 (as described in the original 1994 EIS). The Proposed Modified 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 1-1). The Proposed Modified Action follows the alignment of the existing maintenance project and extends to the newly authorized limits following the natural contour of the Gulf of America. 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 dredged material placement sites are located on the exterior of the existing jetties near the intersection with the existing shoreline. Discharge location would be approximately 200 ft offshore and would extend 300 – 3000 ft from the jetties in the shallow open water and be allowed to flow (Figure 1-1). 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 utility pipelines that have the potential to interfere with the proposed dredge action. The pipeline companies are required to submit a permit application to the Louisiana Department of Natural Resources 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 USACE 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 would 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 would 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 would be provided to USACE 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.

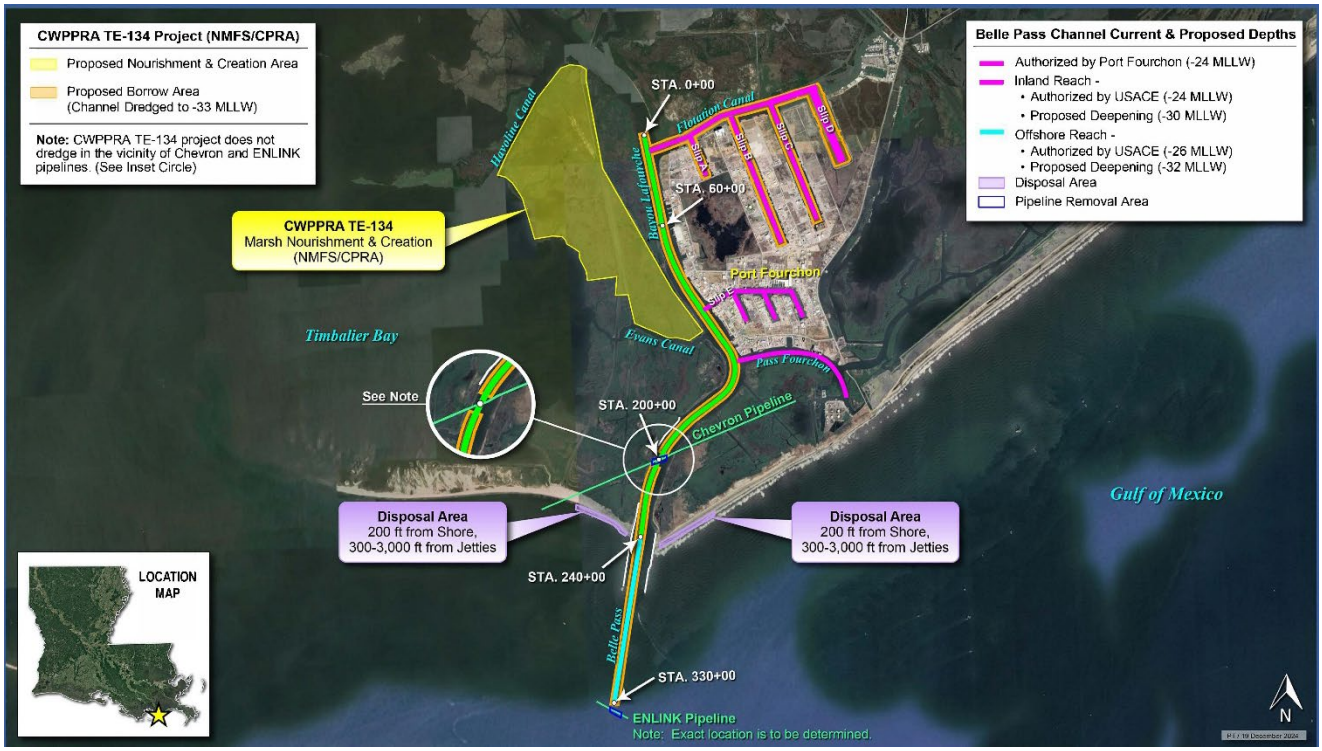

Figure 1-1. Map of the Proposed Modified Action located in Bayou Lafourche in Port Fourchon, Louisiana

1.3 PURPOSE AND NEED

The study's purpose was 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 America at the optimum depth. The objective of the Proposed Modified Action 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 America. 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 the oil and gas industry. Its location on the southeast coast of Louisiana was chosen to minimize the distance required to service the 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	Addendum
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 (Louisiana FEMA-1603-DR-LA)	Draft EA
2007	Beneficial Use of Dredged Material Placement 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 Modified Action

Only the No Action Alternative (Future without Project) and the Proposed Modified Action are being considered in this EA because the Proposed Modified Action was determined to be the only reasonable alternative that 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 Proposed Modified 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 America 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 Modified 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 Proposed Modified 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) (available at https://cims.coastal.la.gov/RecordDetail.aspx?Root=0&&sid=26136) 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) (available at https://cims.coastal.la.gov/RecordDetail.aspx?Root=0&&sid=26135). The TE-134 project would allow for the one-time dredging of all Federal channel sections (see Section 3.3.1) in the 30ft deepening project footprint- starting at Sta. 0+00 and extending out into the Gulf of America to Sta. 330+00. The width of the cut will remain 300ft and the final elevation would be -33ft 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)	CWPPRA TE-134 Post Construction 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 MODIFIED ACTION

The Proposed Modified 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 Modified 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 1-1). The Proposed Modified 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 America. 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 dredged material placement 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. Placement location would be approximately 200 ft offshore and would extend approximately 300 – 3000 ft from the jetties in the shallow open water and be allowed to flow as incidental beneficial use of dredged material (as shown in Figure 1-1). 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.

Pipelines were identified within the Proposed Modified 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 Modified 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 would 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 USACE 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 would 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 would 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 would be provided to USACE 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.

The project schedule includes an estimated 6 months for negotiations between the NFS and utility owners, which has already begun, and an estimated 12 months to compel removal should it become necessary.

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	Heerema Pipelines	31+20 -44+00	N/A	Electrical	-66.0' MLG (-67.26 MLLW)	Abandoned	NO CONFLICT (CONFIRMED)
2	Enlink						Enlink
3	Kinder Morgan	137+50	6"	Natural Gas	-72.0' MLG	Kinder Morgan	137+50
4	Chevron Pipeline	138+11	10"	Crude	-50.0' MLG	Chevron Pipeline	138+11
5	Enlink						Enlink
6	Chevron Pipeline	199+27	10"	Crude	-36.2' MLG	Chevron Pipeline	199+27
7	Chevron Pipeline	214+40 - 215+00					Chevron Pipeline
8	Enlink Pipeline	332+00 - 350+00			Enlink Pipeline	332+00 - 350+00	

Note: ** denotes the same pipeline.

Before the initial construction of the proposed modified action, it is assumed that the majority of the material, up to 2.7 MCY, in the Federal channel would be dredged by the CWPPRA TE-134 marsh creation project and placed beneficially in marsh creation sites as features of the CWPPRA TE-134 project.

The initial proposed action's 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 deepening study dredging contract would be approximately 300 thousand cubic yards (TCY) of sand and silty sand with a mix of clay. These 300 TCY would be placed in the nearshore placement areas shown in Figure 1-1. An analysis of inshore and offshore channel dredging every 4 years for 20 years by USACE resulted in an estimated average quantity of 1.44 MCY of dredged material. It would be anticipated that the offshore channel would be dredged every 2 years for 20 years by USACE, resulting in an estimated average quantity of 720 TCY of dredged material for each maintenance dredging event. The USACE Operation and Maintenance (O&M) quantity could range between 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 temporarily 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 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 ft at Bayou Lafourche; 50x475 ft at Belle Pass; and 52x475 ft 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, USACE 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 modified action, 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.

The Modified Action differs from the GLPC recommended plan in its 2020 Addendum to the 2019 Report and establishes a revised cost estimate. The Proposed Modified Action and the GLPC recommended project are essentially the same, but the Proposed Modified Action revises the plans for managing the dredged material to using only nearshore placement areas. The initial construction for the Proposed Modified Action has a reduced scope and cost, compared to the GLPC plan. Due to a separate federal project CWPPRA TE-134 that will involve the one-time dredging of the channel and beneficial placement of that dredged material, the majority of the Belle Pass Channel will have been dredged to -33 feet MLLW before construction of the Proposed Modified Action commences.

The Letter Report and supporting documentation will be routed for final review assessment by OASACW. Resolution of any concerns, recommendations, and conditions identified therein are subject to modifications and conditions that the Secretary considers appropriate and identifies in a final review assessment. The OASACW may then transmit to Congress,

in writing, the Letter Report and a final review assessment to include any recommendations the OASACW may have concerning the Proposed Modified Action. The GLPC Section 203 Revised Feasibility Report will not be further revised as part of this effort.

SECTION 3
Affected Environment

3.1 DESCRIPTION OF THE PROJECT AREA

Port Fourchon is located on the southern tip of Lafourche Parish, Louisiana, just north of the Gulf of America. 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 are not maintained by USACE (See Figure 3-1). The offshore reach terminates at the downstream end in the Gulf of America at approximately the -32 ft contour at Station 330+00. The channel is protected from excessive sedimentation and the dynamic/turbulent northern Gulf of America 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 1-1 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 3-1. Map of the Existing Conditions at Port Fourchon, Louisiana at the Mouth of Bayou Lafourche, Louisiana.

Note: 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, CHANGING CONDITIONS, 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 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 km2 per year to - 28.01 +/- 16.37 km2 per year (Couvillion et al., 2017). From 1932 to 2016 there has been a net wetland loss of around -4,833 km2 coastwide (Couvillion et al., 2017). Coastal Louisiana is increasingly vulnerable to relative sea-level rise, storm damage, and flood events.

Relative sea level rise (RSLR) estimates were used to predict habitat impacts for the Proposed Modified Action.

3.3 RELEVANT RESOURCES

This section contains a description of relevant resources that could be impacted by the Proposed Modified 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.

The Proposed Modified Action is not expected to impact nearby communities. Placement of the dredged material would be in the surf zone on the east and west side of the jetties at the mouth of Bayou Lafourche transported in a slurry via pipeline. Therefore, dredged material would not be traveling through, or going on, uplands for dredged material placement. 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 Modified Action.

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 public places a high value 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 public places a high priority on the esthetic, recreational, and commercial value of wildlife in the study area.
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 public places a high priority on the esthetic, recreational, and commercial value of aquatic resources and local fisheries.
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.
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.

Resource	Institutionally Important	Technically Important	Publicly Important
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.
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 America in Louisiana. Segmenting these 39 miles are a number of small channels that 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 (2) 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 America; 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 America 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 1950s, 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 America 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 Modified Action 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 America 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 Modified Action 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 America), 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 Modified Action Area

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

3.3.3 Wetlands

Historic and Existing Conditions

Wetlands in the Proposed Modified Action 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 that 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 Modified 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 America. 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 that 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 1950s as per Louisiana Department of Wildlife and Fisheries (LDWF). They cause livestock and agricultural damages. 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 both mammals are protected under the Marine Mammal Protection Act (MMPA). Both species have been periodically observed along the Gulf of America 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 America shoreline. The Gulf Coast toad species, which also occupies shoreline habitat along the northern Gulf of America, 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 America have been designated as Essential Fish Habitat (EFH) through regulations promulgated by the National Marine Fisheries Service (NMFS) and the Gulf of America Fishery Management Council (GMFMC), 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 America, 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 GMFMC, in cooperation with NMFS, has delineated EFH for Federally managed species identified in Gulf Fishery Management Plans (FMPs) (GMFMC 2016). The estuarine waters in the Proposed Modified Action area include EFH for several Federally managed species as shown in Table 3-3 and Table 3-4.

Table 3-3. Essential Fish Habitat for Life Stages of Species Managed by the Gulf of America 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 America <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 America & 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 America <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 America <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 America 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 America 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 Modified Action area there are 16 species that should be considered. These species can be found in the Table 3-5 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 that 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 America, along the continental shelf break between 100 and about 400 meters depth. They are the only resident baleen whale in the Gulf of America. 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 America. (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 America 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 America, 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. A map can be found at https://ecos.fws.gov/ecp/report/table/critical-habitat.html.

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 America 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 America 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 sighting'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 (66 °F), 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 (66 to 72°F), whereas those off the Yucatan peninsula and Indonesia are commonly found in waters between 25 to 30°C (77 to 86°F). 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 changing conditions.

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 America. It is estimated that the Louisiana coastal area is home to approximately 200 rookeries of wading birds and seabirds. The Proposed Modified 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 17 November 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 10 % 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 Modified Action consists of a dredging, maintenance, and material placement 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 Modified Action 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 placement 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 (Phillips 1970). 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 (Kidder 2002). Typical 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 (Rees and Livingood 2007; Rees 2010; Roe 2007). Regardless of their origin, this culture marks definitive evidence for ranked societies likely organized by chiefdom-level political systems (Rees and Livingood 2007). 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 (Swanton 1946). By the middle to late 1700s, the displaced Houma Indians were documented in Ascension, Lafourche, and Terrebonne Parishes (Kniffen et al 1987). 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 the 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 dredged material placement areas experienced significant shoreline erosion and disturbance within the last 50

years. The eastern placement 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 nearshore placement area as a placement 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 placement 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) regarding 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). 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 Modified 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. However, there are 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). No Federally-recognized Tribes responded within the regulatory consultation timeframe.

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 O3 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/m3 as a calendar quarter average) also remain in effect.
2. The level of the annual NO2 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) O3 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) O3 standards.
4. The previous SO2 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 SO2 standards or is not meeting the requirements of a SIP call under the previous SO2 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 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.

3.3.13 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.

3.3.14 Commercial Navigation

Historic and Existing Conditions

Port Fourchon supports the oil and gas industry in the deeper waters of the Gulf of America, 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 Modified Action Alternative (Future Conditions with the Proposed Modified 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 Modified 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, USACE 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 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 RSLR. The hydrologic condition would likely change due to 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 Modified Action

Direct and Indirect Impacts: Similar impacts to hydrology are expected for the Proposed Modified 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 Modified 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 Modified 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 Modified 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 RSLR. The hydrologic condition would likely change due to 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 America 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 RSLR, which 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 America are likely to have cumulative impacts on water quality as well. 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.

Future Conditions with the Proposed Modified Action

Direct and Indirect Impacts: Immediately following dredging and placement events there would be temporary impacts associated with water quality in the dredging and placement areas. These would be similar to the impacts described for the CWPPRA 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 Modified 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 Modified Action. Slight (< 1 part per thousand) increases in salinity could occur near where Bayou Lafourche meets the Gulf of America. 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:

RSLR could increase salinities and water temperature in the future for the Proposed Modified 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 RSLR. The growing hypoxia zone, and increased salinities in the northern Gulf of America 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 Modified 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 Modified Action 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. 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.

Future Conditions with the Proposed Modified Action

Direct and Indirect Impacts: With implementation of the Proposed Modified Action there would be no direct impacts to wetlands. There could be some indirect benefits to wetlands due to placing of dredged material in the surf zone. This could allow for flow and mixing of dredged 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 Modified 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 Modified 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-134 creating additional marsh habitat.

Future Conditions with the Proposed Modified Action

Direct and Indirect Impacts: With implementation of the Proposed Modified 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 dredged material is placed 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 placing of dredged material in the surf zone. This could allow for flow and mixing of dredged 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 Modified 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-134 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 Modified 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-134 creating additional marsh habitat, which would provide more available nursery habitat for juvenile EFH species.

Future Conditions with the Proposed Modified Action

Direct and Indirect Impacts: With implementation of the Proposed Modified 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 Modified Action.

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-134 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 Modified 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-134 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 Modified Action

Direct and Indirect Impacts: With implementation of the Proposed Modified Action 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 placement 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 Modified 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-134 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-134 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 Modified 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 Annex 2) 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 placement 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 (Table 4-1). However, dredged 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.

Table 4-1. Threatened and Endangered Species Considered under the Endangered Species Act

	Common Name	Species	ESA status	*Critical Habitat	Determination
Mammals	West Indian Manatee	*Trichechus manatus*	Threatened	No	NE
	Fin Whale	*Balaenoptera physalus*	Endangered	No	NE
	Rice's Whale	*Balaenoptera ricei*	Endangered	No	NE
	Sei Whale	*Balaenoptera borealis*	Endangered	No	NE
	Sperm Whale	*Physeter macrocephalus*	Endangered	No	NE
Birds	Eastern Black Rail	*Laterallus jamaicensis ssp. jamaicensis*	Threatened	No	NLAA
	Piping Plover	*Charadrius melodus*	Threatened	Yes	NLAA
	Rufa Red Knot	*Calidris canutus rufa*	Threatened	No	NLAA
Reptiles	Hawksbill Sea Turtle	*Eretmochelys imbricata*	Endangered	No	NLAA
	Kemp's Ridley Sea Turtle	*Lepidochelys kempii*	Endangered	No	NLAA
	Leatherback Sea Turtle	*Dermochelys coriacea*	Endangered	No	NLAA

	Common Name	Species	ESA status	*Critical Habitat	Determination
	Loggerhead Sea Turtle	*Caretta caretta*	Threatened	No	NLAA
	Green Turtle	*Chelonia mydas*	Threatened	No	NLAA
Fishes	Oceanic Whitetip Shark	*Carcharhinu s longimanus*	Threatened	No	NE
	Giant Manta Ray	*Manta birostris*	Threatened	No	NLAA
Insects	Monarch Butterfly	*Danaus plexippus*	Candidate	No	NE

*Critical Habitat in Project Area

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 the monarch butterfly, 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 birds, sea turtle species, and the giant manta ray as all dredge work would be conducted in the water 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 (2) years with the same dredged material placement area within the same footprint as this proposed effort. Additionally, the NMFS issued 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 America. The GRBO requires all non-hopper hydraulic dredges to be used, whenever possible, between 1 April and 30 November in Gulf of America waters and up to one (1) mile into rivers. Construction activities would adhere to the Protected Species Construction Conditions and the Vessel Strike Avoidance Measures found in Appendix B. Importantly, the GRBO provides that non-hopper type dredges are “not known to take turtles.” Since the proposed maintenance activities only plan 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.

On 23 May 2024, USACE initiated 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. On 30 October 2024 NMFS concurred with the USACE’s determinations regarding the Proposed Modified Action (Appendix B Annex 5).

Loggerhead critical habitat is located near the project area, but over 12,000 ft (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 Modified Action 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 Modified Action.

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-134 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-134 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 Modified 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 Modified Action since the purpose of the Proposed Modified Action 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 Modified 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 Modified 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 Modified Action

Direct and Indirect Impacts:

CEMVN has determined 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). No impact to known or unknown cultural resources is expected to occur by the Proposed Modified Action. This project would 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 Modified Action would 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 Modified 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 Modified 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 Modified Action

Direct and Indirect Impacts:

CEMVN has determined 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) . No impact to known or unknown tribal resources is expected to occur by the Proposed Modified 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 Modified Action would 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 would 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 Proposed Modified 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 Modified Action

Direct and Indirect Impacts:

Prior to the Proposed Modified Action, two pipelines located near STA 199 and STA 330 would 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 would occur in open water in the vicinity of Belle Pass. During the removal of the pipelines there would be intermittent channel traffic restrictions. Full closure of the channel is not anticipated; however, Port Fourchon authorities would be available to assist boat traffic should it be necessary. Coordination with the Port and Coast Guard would 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 placement of dredged material in the surf zone parallel to the shoreline east and west of the jetties extending approximately 300 – 3,000 ft in each direction. Beach related activities, especially fishing and swimming, would be temporarily affected in the vicinity of placement. Beach users would benefit in the long-term from the erosion control that the dredged material provides. All recreational opportunities would be expected to return to normal once the Proposed Modified Action is complete.

4.1.11 Air Quality

Future Conditions with No Action

Direct and Indirect Impacts: Without implementation of the Proposed Modified 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 Alternative.

Future Conditions with the Proposed Modified 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 Modified Action.

Cumulative Impacts:

Lafourche Parish is in attainment with NAAQS. There are no expected cumulative impacts to air quality associated with the Proposed Modified Action.

4.1.12 Noise

Future Conditions with No Action

Direct and Indirect Impacts: Without implementation of the Proposed Modified 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 Modified 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 Modified 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 Modified 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 Modified 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 Modified 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 Modified 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.

4.1.13 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 Modified Action

Direct and Indirect Impacts:

There would be no significant direct or indirect impacts to transportation under the Proposed Modified 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 would be no expected cumulative impacts to transportation associated with the Proposed Modified Action.

4.1.14 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 Modified 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 are utilized that are available in the world fleet there could be future benefits to navigation from the Proposed Modified Action.

4.2 CUMULATIVE IMPACTS ANALYSIS

Cumulative effects are defined 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. 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 Modified Action 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 previously in Section 4.1.1 – 4.1.15.

Overall, the cumulative effects of the Proposed Modified 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. There was one public comment received from the EPA Region 6 and that comment, along with MVN's response, can be found in Appendix E.

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
- 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 prior to execution of the associated FONSI.

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 Modified 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 Modified Action 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

was mailed out for the public review and comment period beginning May 17, 2024, and ending June 15, 2024. The final Section 404(b)(1) evaluation is located in Appendix C.

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 Modified Action and was submitted to Louisiana Department of Natural Resources (LDNR) on 18 April 2024, for the Proposed Modified Action, and LDNR concurred via letter dated 8 May 2024 (Appendix B).

6.5 COASTAL BARRIER RESOURCES 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 Modified Action would comply with CBRA because the Port has already been developed and is an active working Port. Additional coordination with USFWS occurred on 12 June 2024 and it was determined there is no further consultation necessary as the Proposed Modified Action does not occur within a CBRA unit. Economic analysis has found the Proposed Modified Action to be of Federal interest. Nearshore placement would not incur any adverse impacts regarding coastal barrier. The Proposed Modified Action could provide benefits to coastal barrier resources by placing of dredged material in the surf zone. This could allow for flow and mixing of dredged 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 Modified 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 or piping plover critical habitat (Appendix B Annex 2).

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. NMFS issued a Gulf Regional Biological Opinion (GRBO) in 2007 that provides that non-hopper type dredges are "not known to take turtles." Since the proposed maintenance activities only plan 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 GRBO requires all non-hopper hydraulic dredges to be used, whenever possible, between 1 April 30 November in Gulf of America waters and up to one (1) mile into rivers. Construction activities would adhere to the Protected Species Construction Conditions and the Vessel Strike Avoidance Measures found in Appendix B.

The USACE initiated informal consultation with NMFS under section 7(a)(2) of the ESA on 23 May 2024 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. On 30 October 2024 NMFS concurred with the USACE's determinations regarding the Proposed Modified Action (Appendix B Annex 5).

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 Modified Action and provided a Final CAR with project specific recommendations on 26 July 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 shoreline adjacent to the east and west jetties is actively eroding. Nearshore placement would be adjacent to the shorelines in this vicinity for the initial construction activities and throughout the maintenance of the Project life. While, the purpose of our placement plan would not be for beneficial use, the addition of dredged material into the nearshore zone could benefit the sediment starved barrier shoreline ecosystems. The Proposed Modified Action would be the same dredged material placement 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 placement plan. The vast majority of material that exists within the proposed authorized dredging limits discussed herein would also be used beneficially by the CWPPRA Program at a coastal marsh creation site prior to the Proposed Modified Action.

2. We recommend that the USACE contact the Service for additional ESA consultation if: 1) the scope or location of the proposed project is changed significantly; 2) new information reveals that the action may affect listed species or designated critical habitat; 3) the action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed, or critical habitat designated. Additional consultation because of any of the above conditions or for changes not covered in the June 10, 2024, consultation should occur before changes are made and or finalized.

   USACE Response: CEMVN has and will continue to coordinate with the USFWS if the Proposed Modified Action changes significantly; new information becomes available that affects listed species or their designated habitat; the action is modified that cause effects to listed species or if new species become listed or their designated critical habitat. ESA consultation with the USFWS will occur before any of these potential changes are made and or finalized.

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 Modified Action would be consistent with the MMPA as there would be no anticipated take of marine mammals.

6.9 SUBMERGED LANDS ACT OF 1953

The Proposed Modified Action will take place in navigable waterways, including marine waters, within the state of Louisiana's boundaries, within three geographical miles (almost exactly 3 nautical miles or 5.6 kilometers) from the coastline of Port Fourchon. The Proposed Modified Action is in compliance with the Submerged Lands Act.

6.10 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 Modified 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.

6.11 MAGNUSON-STEVENS FISHERY CONSERVATION MANAGEMENT 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). The EFH assessment is integrated into this EA and was provided to NMFS on 17 May 2024 at the start of the 30-day public review. In an email dated 12 June 2024, NMFS concurred with the Proposed Modified Action and acknowledged that we have completed consultation under the Magnuson-Stevens Act.

6.12 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 Modified Action is consistent with the MBTA as all construction activities would take place within open water.

6.13 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 and Federally- recognized Tribes on 5 December 2023 for a 30-day review. Tribes consulted for this Undertaking include the Chitimacha Tribe of Louisiana, the Coushatta Tribe of Louisiana, the Jena Band of Choctaw Indians, the Mississippi Band of Choctaw Indians, and the Tunica-Biloxi Tribe of Louisiana 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) (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. 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).

6.14 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 Modified Action would not promote future development within the floodplain that otherwise would not occur. The Proposed Modified Action is compliant with EO 11988.

6.15 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 Modified Action would not occur in wetlands and therefore would have no impacts to wetlands. The Proposed Modified Action is compliant with EO 11990.

SECTION 7
Conclusion

The Proposed Modified 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 Modified Action and has determined that the Proposed Modified Action would have no significant impact on the human and natural environment, as discussed in Section 4 of this EA. Therefore, an EIS is not warranted.

SECTION 8
List of Preparers

This Environmental Assessment was 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.

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SECTION 9
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SECTION 10
List of Acronyms and Abbreviations

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