



Draft Environmental Assessment

Mexico Beach Jetty Extension and Repairs FEMA-4399-DR-FL

*City of Mexico Beach, Bay County, Florida
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Prepared for
FEMA Region 4,
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FEMA

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List of Acronyms, Chemical Formulas, and Abbreviations

APE- Area of Potential Effects

BEF- Base Flood Elevation

BGEPA- Bald and Golden Eagle Protection Act

BMP- Best Management Practices

BO- Biological Opinion

CATEX- Categorical Exclusion

CBIA- Coastal Barrier Improvement Act of 1990

CBRA- Coastal Barrier Resource Act

CEQ- Council on Environmental Quality

CERCLA- Comprehensive Environmental Response Compensation and Liability Act of 1980

CFR- Code of Federal Regulations

COMB- City of Mexico Beach

CWA- Clean Water Act

CY- Cubic Yards

CZMA- Coastal Zone Management Act

DHS- Department of Homeland Security

EA- Environmental Assessment

EFH- Essential Fish Habitat

EO- Executive Order

EPA- Environmental Protection Agency

ESA- Endangered Species Act

FDEP- Florida Department of Environmental Protection

FEMA- Federal Emergency Management Agency

FIRM- Flood Insurance Rate Maps

FMSF- Florida Master Site File

FPPA- Farmland Protection Policy Act

FT- Feet

FWC- Fish and Wildlife Conservation Commission

GHG- Greenhouse Gas

JCP- Joint Coastal Permit

LB- Pound MBTA- Migratory Bird Treaty Act

MPH- Miles per Hour

MSA- Magnusson-Stevens Fishery Conservation and Management Act

NEPA- National Environmental Policy Act

NHPA- National Historic Preservation Act

NMFS- National Marine Fisheries Service

NPS- National Park Service

NRHP- National Register of Historic Places

NOAA- National Oceanic and Atmospheric Administration

NRCS- Natural Resource Conservation Service

NTU- Nephelometric Turbidity Unit

NWI- National Wetlands Inventory

OPA- Otherwise Protected Area

PA- Public Assistance

PL- Public Law

RCRA- Resource Conservation and Recovery Act of 1976

RHA- Rivers and Harbors Act

SHPO- State Historic Preservation Office

Stafford Act- Robert T. Stafford Disaster Relief and Emergency Assistance Act

USACE- United States Army Corps of Engineers

USDA- United States Department of Agriculture

USFWS- United States Fish and Wildlife Service

SECTION 1.0: BACKGROUND

1.1 Project Authority

Hurricane Michael impacted the State of Florida between October 7, 2018, and October 19, 2018, bringing strong winds, storm surge, and flooding. Former President Trump signed a disaster declaration (FEMA-4399-DR-FL, Initial Public Notice provided as Appendix A) on October 11, 2018, authorizing the Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA) to provide federal assistance to the designated areas of Florida. This assistance is provided pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), and Public Law (PL) 93-288, as amended. Section 406 of the Stafford Act authorizes FEMA's Public Assistance (PA) Program to repair, restore, and replace state and local government and certain private nonprofit facilities damaged as a result of the event.

The City of Mexico Beach (COMB), Florida was designated as a municipality eligible to receive federal assistance. The COMB (Applicant) has applied through the PA Program to receive funding to repair, enhance, and extend the eastern and western jetties to the Mexico Beach Canal entrance in the COMB. Funding in the amount of \$1,890,677.00 is intended to be provided to the Applicant.

The preferred alternative presented by COMB does not qualify for use of a DHS Categorical Exclusion (CATEX) (N5) for federal assistance for hazard mitigation actions in coastal areas subject to moderate wave action or V zones because the proposed project activities to extend and improve the east jetty; and repair and enhance the west jetty is greater than one-half acre, which is not permitted by the CATEX.

This draft Environmental Assessment (EA) has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, (PL 91-190, as amended), and its implementing regulations at 40 Code of Federal Regulations (CFR) § 1500 to 1508, promulgated by the President's Council on Environmental Quality (CEQ). The Fiscal Responsibility Act of 2023, Public Law 118-5 (June 6, 2023), further amended NEPA. Recent changes to the CEQ regulations (40 CFR § 1500 to 1508) became effective on September 14, 2020; 85 Federal Register 43304-76 (July 16, 2020). As stated in 40 CFR § 1506.13, the new regulations apply to any NEPA process begun after September 14, 2020. FEMA is required to consider potential environmental impacts before funding or approving actions and projects. This draft EA will analyze the potential environmental impacts of the proposed project. FEMA will use the findings in this EA to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

1.2 Project Location

The proposed project is located within the limits of the COMB, which is located in southeastern Bay County, Florida, and is situated on the Gulf of Mexico in the vicinity of the entrance to St. Joseph's Bay (29.950521° N, -85.430399° W). The COMB is located roughly 22 miles to the southeast from Panama City and has an approximate population of 1,060 people (2020 U.S. Census). Appendix B shows the project location at the entrance to the Mexico Beach Canal. The

proposed jetty extension and repairs lie between Florida Department of Environmental Protection (FDEP) reference monuments R-127 and R-128, which are located on either side of the Mexico Beach Canal.

1.3 Purpose and Need

Bay County has been hit by multiples disasters in recent years, including Category 5 Hurricane Michael (2018), Hurricane Sally (2020), Tropical Storm Fred (2021), the Chipola Complex Wildfires (2022), and the COVID-19 pandemic (2020-2023). The COMB has maintained the Mexico Beach Canal and surrounding beaches by periodically dredging material from the western sand trap and inlet and pumping it to the downdrift beaches. Hurricane Michael made landfall in Mexico Beach in October 2018 with maximum sustained winds of 155 miles per hour (mph) and estimated storm surge inundation heights of 8 to 14 feet (ft). Hurricane Michael caused extensive structural damage to the eastern jetty and minor damage to the western jetty. Sediment currently flows naturally back into the inlet from the dredge disposal area located east of the eastern jetty back into the Mexico Beach Canal, doubling the amount of dredging needed COMB crews to keep the canal entrance open and navigable.

The objectives of FEMA's 406 Mitigation and Public Assistance Grant Programs are to reduce the impact of natural disasters on the built environment and to assist the community in recovering from the damage caused by natural disasters. The purpose of the action alternatives presented in this Environmental Assessment (EA) is to restore the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. The need for the project is to minimize sediment transport into the Mexico Beach Canal to reduce frequent dredging and to maintain a safe and navigable channel for residents of and visitors to the COMB.

In accordance with federal laws and FEMA regulations, the EA process for a proposed federal action must include an evaluation of alternatives and a discussion of the potential environmental impacts. This EA was prepared in accordance with FEMA's regulations as required under NEPA. As part of this NEPA review, the requirements of other environmental laws and executive orders are addressed.

1.4 Existing Facility

The COMB has maintained a portion of the Mexico Beach shoreline for over a decade by periodically dredging material from the updrift beaches and within the Mexico Beach Inlet (entrance to the Mexico Beach Canal) and pumping it to the downdrift beach. Due to the impacts of Category 5 Hurricane Michael and other tropical storm events that have caused extensive structural damage to the existing east jetty, and settlement to portions of the western jetty, the COMB has proposed to restore and extend the eastern jetty, as well as repair, enhance, and replace a portion of the western jetty. Prior to the storm, the eastern jetty consisted of undersized stone and overall, the jetty was of insufficient length to prevent the natural flow of sediment back into the inlet that had been manually bypassed by dredging of sand within the inlet and western sand trap.

Net sediment transport flows from west to east within the project area with a significant flow of sediment deposited into the Mexico Beach Inlet and along the eastern (downdrift) beaches. In

addition to natural bypassing, the COMB has conducted mechanical bypassing via a dredge vessel the COMB owns to achieve a 100% bypassing rate to the beaches downdrift of the Mexico Beach Inlet, equal to an amount of the average annual net sediment transport rate of around 60,000 cubic yards (cy) per year. The inlet frequently infills due to a leaky western jetty that has settled and has significant voids due to deteriorating concrete box culverts, in addition to the remains of an eastern jetty that is neither of adequate stone size, sand tight, or extended far enough seaward to match the western jetty head.

Due to the high annual dredge quantities and associated public expenditures, it is the desire of the COMB to implement a more efficient bypassing system to increase the effectiveness of the current dredging protocol and provide for adequate sand bypassing around the Mexico Beach Inlet. In addition to this new plan, the COMB also desires to enhance the effectiveness of both the east and west jetty in order to more efficiently hinder sediment transport back into the Mexico Beach Canal and to consistently provide safe navigation.

SECTION 2.0: ALTERNATIVE ANALYSIS

This section describes the alternatives considered in addressing the stated purpose and need. Alternative 1: No Action, Alternative 2: Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative), and Alternative 3: Repair Eastern and Western Jetties to Pre-Disaster Conditions are carried forward for detailed analysis in this EA. An additional alternative was considered, but ultimately dismissed from consideration. The rationale for eliminating that alternative is included in this section.

2.1 Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties to the Mexico Beach Canal entrance in the COMB. The existing conditions are shown in Sheet 2 of the Permit Drawings, provided as Appendix C. Under this alternative, sediment transport into the Mexico Beach Canal would continue unmitigated, requiring frequent dredging using the COMB's dredge vessel to maintain a safe and navigable channel for residents of and visitors to the COMB. This continued transport of sand back into the channel would also increase shoreline erosion east of the eastern jetty.

2.2 Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. This alternative includes extending the east jetty 152 feet beyond its current condition, for a total length of 339 feet (including 231 feet for the trunk and 108 feet for the head). The proposed east jetty extension, not including the existing jetty footprint, would cover an additional 0.23 acres of sandy substrate where there is no existing seagrass or hardbottom. Additionally, 285 feet of sheet pile will be added to the core of the east jetty to make it sand tight to prevent sand from transporting through the structure from the east and back into the Mexico Beach Canal. The west jetty repairs also include a 42 foot section of sheet pile to make this

section sand tight, similar to other sections in the west jetty to prevent sand from transporting from the west through the structure and into the canal. Refer to Sheet 2 of the Permit Drawings, provided as Appendix C, for more information on the plan view configuration. The proposed design for the east jetty is based on the *East Jetty Extension and West Jetty Repairs, Mexico Beach, Bay County Florida, East Jetty Design Document* (MRD, 2022); a copy of this report is provided as Appendix D. This preferred alternative would restore the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. This alternative would minimize sediment transport into the Mexico Beach Canal to reduce frequent dredging and to maintain a safe and navigable channel for residents of and visitors to the COMB.

The following summarizes the proposed design parameters, followed by additional design details:

Proposed Stone Specifications:

- Stone density shall be a minimum of 165 pounds (lbs) per cubic foot and comprised of Granite stone.
- Proposed East Jetty Head and West Jetty Repair Armor stone W50 is 6,000 lbs (3 tons)
- Proposed East Jetty Trunk Armor stone W50 is 2,000 lbs (1 ton)
- Proposed East Jetty and West Jetty Toe stone W50 is 600 lbs

Proposed East Jetty Specifications:

- Structure Head: 108 feet along centerline
- Structure Trunk: 231 feet along centerline
- Total Length: 339 feet along centerline
- Crest Width: Varies between 7 and 10 feet
- 152 feet seaward extension beyond seaward most extent (visible/aerial) of existing eastern jetty
- Total Sheet pile Length: +/- 285 feet

Proposed West Jetty Specifications:

- Repair Length: 42 feet
- Crest Width: Approximately 10 feet
- Total Sheet Pile Length: +/- 42 feet

The proposed east jetty head and trunk were designed with crest elevations of +6 and +4 feet NAVD88, respectively. The elevations were chosen based upon the existing crest elevation of the western jetty for the proposed head, and the proposed trunk was reduced to match existing grades on the beach as well as taking into consideration the sheltering and wave breaking effects provided by the western jetty. The crest widths were dictated by the average armor unit size and the results provided by the structural module within the Automated Coastal Engineering System (ACES). The crest widths shall be a minimum of 10 feet for the jetty head and 7 feet for the jetty trunk and consist of armor stones for the top layer.

The rock sizes for the armor layer, toe stone, and marine mattress were calculated based on a 15-year storm event. Waves from storm events greater than 15-years will likely be accompanied by

significant storm surge, which would cause the jetty structure to be overtopped, reducing the hydrodynamic forces. The 15-year storm event is when the structure is initially overtopped, resulting in the greatest wave forces on the structure. The calculations include the effects of scour.

This preferred alternative also includes repair and enhancement to the existing west jetty structure. The work includes repairs to a 42 feet portion of the western jetty trunk through the demolition of the existing concrete box culverts and replacing them with a sheet pile core and armor stone that would tie into the existing western jetty head and existing sheet pile core. Additional components include geotextile fabric, marine mattress, sand tightening, and replacing the concrete walkway.

Staging areas and access include the terminus of Canal Parkway and Circle Drive. Staging areas would be limited to the beach immediately adjacent to the jetties. These areas are currently utilized by the COMB to support dredging operations under current permits. No new impacts are proposed. The project construction methodology is assumed and the ultimate methodology would be determined by the contractor selected for the work. However, it is assumed that the project would be constructed in “the-dry” using land/beach-based cranes and excavators. It is expected that the contractor would utilize land-based equipment in the form of off-road dump trucks, excavators, and cranes to transport and place the granite rock armor units and marine mattress base. Temporary sheet piles may be installed immediately seaward of the east jetty project footprint to protect the construction operations from waves and currents. The sheet piles may be arranged to form a temporary cofferdam allowing the contractor to pump the work area dry in order to meet the grades specified in the permit sketches. The west jetty repairs may not need a temporary cofferdam to repair the short section of the jetty, however a potential contractor may elect to do so. Ultimately, the construction methodology utilized would be determined by the contractor selected and would be presented to state and federal regulatory agency staff during the pre-construction meeting, as required by permits.

The proposed project involves work in water, including the excavation and placement of materials, however, the equipment performing the work would be staged on land with access from land-based construction locations. Barges and boats are not expected for this project. Equipment would be staged within the parking area along the Canal Parkway with all access occurring upland. On land work is expected to be confined within the existing jetty footprint and existing rights of way. The contractor would be required to install and maintain turbidity screens to contain any project related turbidity within the work zone area. Turbidity would be monitored during construction in compliance with permit requirements, to ensure turbidity levels do not exceed 29 nephelometric turbidity units (NTUs) above background beyond the authorized 150 meter (m) mixing zone.

2.3 Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

This alternative includes repairing the east and west jetties back to pre-disaster conditions, which are comprised of a mixture of limestone, granite, and concrete rip-rap, and box culverts. No additional construction or impacts would occur beyond the existing footprint. The repair to the east jetty includes replacing rip-rap along the entirety of the jetty. The repair to the west jetty includes repairs to a 42 ft portion of the western jetty trunk through the placement of additional 12-to-36-inch diameter rip-rap around the existing box culverts. Additional components include replacing

the concrete walkway on top of the existing box culverts. Refer to Sheet 2 (existing conditions) of the Permit Drawings, provided as Appendix C, for more information on the plan view configuration and the general footprint location of this alternative.

Under this alternative, sediment transport into the Mexico Beach Canal from the west through the jetty and from the eastern shoreline around the east jetty would continue unmitigated, which would still require frequent dredging using the COMB's dredge vessel to maintain a safe and navigable channel for residents of and visitors to the COMB.

The following summarizes the proposed design parameters, followed by additional design details:

Proposed Stone Specifications:

- Stone density shall be a minimum of 165 pounds (lbs) per cubic foot and comprised of Granite stone. Rebuilding the existing jetties with concrete rip-rap will not be allowed under Florida Statute 62B-33.0051(2)(b)5 and existing permits.
- Proposed East Jetty and West Jetty Repair Armor stone W50 is 2,000 lbs (1 ton)

Proposed East Jetty Specifications:

- Remove and Replace 500 cy of 12-to-36-inch diameter Rip-Rap

Proposed West Jetty Specifications:

- Remove and Replace 373 cy of 12-to-36-inch diameter Rip-Rap
- Repair 819 Square Feet of concrete sidewalk

Staging areas include the terminus of Circle Drive and would be limited to the beach immediately adjacent to the jetties. These areas are currently utilized by the COMB to support dredging operations under current permits. No new impacts are proposed. The project construction methodology is assumed and the ultimate methodology would be determined by the contractor selected for the work. However, it is assumed that the project would be constructed in "the-dry" using land/beach -based cranes and excavators. It is expected that the contractor would utilize land-based equipment in the form of off-road dump trucks, excavators, and cranes. Temporary sheet piles may be installed immediately seaward of the east jetty project footprint to protect the construction operations from waves and currents. The sheet piles may be arranged to form a temporary cofferdam allowing the contractor to pump the work area dry. The west jetty repairs will not need a temporary cofferdam to repair the short section of the jetty. The east and west jetty repairs will use land-based equipment similar to Alternative 2.

This alternative involves work in water, including the excavation and placement of materials, however, the equipment performing the work would be staged on land with access from land-based construction locations. Barges and boats are not expected for this project. On land work is expected to be confined within the existing jetty footprint and existing rights of way. The contractor would be required to install and maintain turbidity screens to contain any project related turbidity within the work zone area. Turbidity would be monitored during construction in compliance with permit requirements, to ensure turbidity levels do not exceed 29 NTUs above background beyond the authorized 150 m mixing zone.

2.4 Alternatives Considered and Eliminated from Further Consideration

An additional alternative for rebuilding the eastern jetty was analyzed including altering the west jetty design to include a curved tip to help direct sand around the western jetty tip. The curved jetty option did not prevent the transport of sediment back into the inlet to a greater extent than the preferred alternative and would cost significantly more to construct. This alternative was eliminated from consideration and is not assessed further in this document.

SECTION 3.0: AFFECTED ENVIRONMENT AND CONSEQUENCES

The following sections assess potential effects of alternatives to the environment.

3.1 Comparison of Alternatives

The impact analysis in this EA evaluates the potential environmental impacts of Alternative 1: No Action, Alternative 2: Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative), and Alternative 3: Repair East and West Jetties to Pre-Disaster Conditions. A summary table of the potential impacts of Alternatives 1, 2 and 3 are provided in Table 1 below.

The potential qualitative impacts to each resource are evaluated based on the following criteria:

- No impact/Negligible - The resource area would not be affected and there would be no impact, OR changes or benefits would either be non-detectable or, if detected, would have effects that would be slight and local. Impacts would be well below regulatory standards, as applicable.
- Minor - Changes to the resource would be measurable, but the changes would be small and localized. Impacts or benefits would be within or below regulatory standards, as applicable. Mitigation measures would reduce any potential adverse effects.
- Moderate - Changes to the resource would be measurable and have either localized or regional scale impacts/benefits. Impacts would be within or below regulatory standards, but historical conditions would be altered on a short-term basis. Mitigation measures would be necessary, and the measures would reduce any potential adverse effects.
- Major - Changes to the resource would be readily measurable and would have substantial consequences/benefits on a local or regional level. Impacts would exceed regulatory standards. Mitigation measures to offset the adverse effects would be required to reduce impacts, though long-term changes to the resource would be expected.

Table 1. Environmental Consequences and Environmental Protection Measures and Required Permits by Environmental Resource

Resource	Environmental Consequence	Environmental Protection Measures and Required Permits
Physical Environment		
Geology, Seismicity and Soils	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	Alternatives 2 and 3 would require compliance with FDEP and USACE permit requirements, including sediment/turbidity control. FDEP issued Permit No. 0416748-001-JC for the Mexico Beach Jetty Extension and Repair (Alternative 2).
Water Resources and Water Quality	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	Alternatives 2 and 3 would require compliance with FDEP and USACE permit requirements, including turbidity control and monitoring. FDEP issued Permit No. 0416748-001-JC for the Mexico Beach Jetty Extension and Repair (Alternative 2). Alternative 2 will result in long term reduction in turbidity and reduced dredging frequency which are expected to have a beneficial effect on water quality.
Floodplain Management (Executive Order 11988)	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	Alternatives 2 and 3 would require compliance with FDEP and USACE permit requirements. FDEP issued Permit No. 0416748-001-JC for the Mexico Beach Jetty Extension and Repair (Alternative 2).
Air Quality	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Negligible</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Negligible</i>	Not applicable.

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Resource	Environmental Consequence	Environmental Protection Measures and Required Permits
Coastal Zone Management	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	Alternatives 2 and 3 would require an FDEP permit, which would constitute consistency review under Florida's Coastal Zone Management (CZM) program. FDEP issued Permit No. 0416748-001-JC for the Mexico Beach Jetty Extension and Repair (Alternative 2).
Coastal Barrier Resources	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>No impact</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>No impact</i>	Not applicable.
Climate Change	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Negligible</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Negligible</i>	Not applicable.
Biological Environment		
Terrestrial and Aquatic Environment	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	Alternatives 2 and 3 would require compliance with FDEP and USACE permit requirements. FDEP issued Permit No. 0416748-001-JC for the Mexico Beach Jetty Extension and Repair (Alternative 2). Alternative 2 would reduce dredging frequency, which is expected to have beneficial effects on impacts to the terrestrial and aquatic environment.

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Resource	Environmental Consequence	Environmental Protection Measures and Required Permits
Magnuson-Stevens Fishery Conservation and Management Act (MSA)	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	A Formal Consultation letter was sent to NOAA for Essential Fish Habitat consultation under MSA for Alternative 2 on August 9, 2023, with concurrence received on August 10, 2023, see section 3.3.2 for project conditions.
Wetlands (Executive Order 11990)	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	Alternatives 2 and 3 would require compliance with FDEP and USACE permit requirements. FDEP issued Permit No. 0416748-001-JC for the Mexico Beach Jetty Extension and Repair (Alternative 2).
Threatened and Endangered Species	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	Alternatives 2 and 3 would require compliance with NMFS Protected Species Construction Conditions (2021), Standard Manatee Conditions for In-Water Work (USFWS, 2011), and NMFS Sea Turtle and Smalltooth Sawfish construction conditions (2006). Alternative 2 would require compliance with USACE permit requirements and FDEP Permit No. 0416748-001-JC. An Informal Consultation letter was sent to NMFS Southeast Regional Office for Alternative 2 on April 10, 2023, with concurrence received on April 18, 2023, see section 3.3.4 for project conditions. An Informal Consultation letter was sent to USFWS South Florida Ecological Services Field Office for Alternative 2 on June 12, 2023. On November 2, 2023, the USFWS concurred with FEMA's determinations, see section 3.3.4 for project conditions.

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Resource	Environmental Consequence	Environmental Protection Measures and Required Permits
		Alternative 2 would reduce dredging frequency, which is expected to have beneficial effects on impacts to T&E species.
Migratory Birds	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	Alternatives 2 and 3 would require compliance with FDEP and USACE requirements and associated USFWS bird protection conditions. FDEP issued Permit No. 0416748-001-JC for the Mexico Beach Jetty Extension and Repair (Alternative 2).
Socioeconomics		
Hazardous Materials/Wastes & Solid Waste	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>No impact</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>No impact</i>	Any hazardous materials discovered, generated, or used during implementation of Alternatives 2 or 3 would be disposed of and handled in accordance with applicable state and federal regulations. Any permits, or authorizations, if required, would be obtained prior to handling and disposal.
Zoning and Land Use	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>No impact</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>No impact</i>	Not applicable.

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Resource	Environmental Consequence	Environmental Protection Measures and Required Permits
Visual Resources	Alt 1 - No Action <i>Minor</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	Alternatives 2 and 3 would result in potential short-term, minor impacts to visual resources due to increased human disturbance and presence of equipment during construction activities. The jetty extension and repairs (Alternative 2) would reduce the frequency of disturbance to visual resources due to reduction in frequency of dredging activity.
Noise	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	Noise generated from construction activities for Alternatives 2 and 3 would be intermittent, heard only during daytime, and only for the duration of the project activities. The jetty extension and repairs (Alternative 2) are likely to result in long-term, beneficial effects from reduced dredging frequency within the inlet and canal, which would reduce the frequency of noise disturbance due to dredging activity.
Public Services and Utilities	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>No impact</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>No impact</i>	Not applicable.

Resource	Environmental Consequence	Environmental Protection Measures and Required Permits
Traffic and Circulation	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	Increased traffic during construction activities for Alternatives 2 and 3 would be temporary, only for the duration of the project activities. The jetty extension and repairs (Alternative 2) are likely to result in long-term, beneficial effects from reduced dredging frequency within the inlet and canal, which would reduce the frequency of required dredge maintenance, thereby reducing the impact from City equipment traversing through residential areas.
Environmental Justice (Executive Order 12898)	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>No impact</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>No impact</i>	Not applicable.
Historic and Cultural Resources	Alt 1 - No Action <i>No impact</i> Alt 2 - Replace/Extend East Jetty, Repair/Enhance West Jetty <i>Minor</i> Alt 3 - Repair East and West Jetties to Pre-Disaster Conditions <i>Minor</i>	FEMA made a determination of <i>No adverse effects to Historic Properties</i> and consultation letters were sent to the Florida State Historic Preservation Office (SHPO) and ten Tribes with vested interest in Bay County, Florida for Alternative 2 on January 5, 2023. Three of the tribes issued their concurrence and the remaining seven tribes did not express any objections to the proposed project; concurrence received from SHPO on 02/08/2023, see section 3.4.8 for project conditions.

3.2 Physical Environment

3.2.1 Geology, Seismicity and Soils

The project area is located entirely along coastal habitat within Bay County and therefore none of the alternatives assessed would convert agricultural land to a non-agricultural use. Bay County does

not contain any areas designated as “prime farmland”. According to the United States Department of Agriculture (USDA) Web Soil Survey Map (<https://websoilsurvey.nrcs.usda.gov/app/>) for the Mexico Beach project area and the USDA Soil Data Access (SDA) Prime and other Important Farmlands database for Bay County (https://efotg.sc.egov.usda.gov/references/public/LA/Prime_and_other_Important_Farmland.html), none of the map units in the County are considered important farmlands.

The Farmland Protection Policy Act (FPPA) (P.L. 97-98, Sec. 1539-1549; 7 U.S.C. 4201, et seq.), which states that federal agencies must “minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses,” was considered in this EA. In support of the proposed Mexico Beach Renourishment and Dune Restoration Project, which is a different project located in the vicinity as the proposed jetty project, Bay County contacted the USDA Natural Resources Conservation Service (NRCS) on May 13, 2023, to determine if any prime or unique soils exist in the project area. In a response dated May 24, 2023, the NRCS indicated that “The area in question meets one or more of the above criteria for exemption since the location is *in non-prime farm ground* according to the Code of Federal Regulation 7CFR 658, Farmland Protection Policy Act, Section 658-2. You are exempt from filling the AD1006 at this time.” A copy of the FPPA Policy Review letter is provided as Appendix E. There are no Prime or Unique Farmlands within the project area or its vicinity; therefore, there would be no impacts on Prime or Unique Farmlands under any alternative.

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties to the Mexico Beach Canal entrance in the COMB. This alternative maintains the status quo of geology, seismicity, and soils from existing conditions. No impacts to these resources are anticipated because there would be no ground disturbance or changes within the project area.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. The preferred alternative would restore the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. This alternative would minimize sediment transport into the Mexico Beach Canal to reduce frequent dredging and to maintain a safe and navigable channel for residents of and visitors to the COMB.

Ground disturbance would be required for the jetty repairs, but there would be no change in geology or existing soil composition. Minor short-term impacts may occur, but the proposed project would not result in any long-term adverse impacts on sediment characteristics to the native beach. No additional fill is proposed for this project.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. Ground disturbance would be required for the jetty repairs within the existing jetty footprints, but there would be no change in geology or existing soil composition. Minor short-term impacts may occur, but this alternative would not result in any long-term adverse impacts on sediment characteristics to the native beach and no additional fill is proposed for this alternative.

3.2.2 Water Resources and Water Quality

The project area is located at the southern end of the Mexico Beach Canal, where it opens to the Gulf of Mexico. The east and west jetties are located to either side of the Mexico Beach Canal, where they are intended to maintain the adjacent beaches and prevent infilling of sand into the canal. According to the EPA, this area of the Gulf is categorized as “ocean/near coastal”, and the Mexico Beach Canal is “stream”, both located within the St. Andrews Bay planning unit (www.epa.gov/surf). Water quality data indicates that this area is “good” for marine fish and wildlife propagation and for recreation and is “impaired” for fish consumption. The project is not located on a sole source aquifer (SSA), as confirmed by the EPA Sole Source Aquifers GIS mapping tool (<https://www.epa.gov/dwssa/map-sole-source-aquifer-locations>). There are no anticipated SSA impacts.

The Safe Water Drinking Act, passed in 1974, authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. According to EPA’s Map of Sole Source Aquifer Locations, accessed October 20, 2023, Bay County is not located within a sole source aquifer.

The USACE Regulatory Program involves the regulating of discharges of dredged or fill material into waters of the United States and structures or work in navigable waters of the United States, under section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act (RHA) of 1899. Discharges of fill material generally include, without limitation: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; dams and dikes; artificial islands; property protection or reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for intake and outfall pipes and subaqueous utility lines; fill associated with the creation of ponds; and any other work involving the discharge of fill or dredged material. A USACE permit is required whether the work is permanent or temporary. Examples of temporary discharges include dewatering of dredged material prior to final disposal, and temporary fills for access roadways, cofferdams, storage, and work areas.

Under Section 401 of the Clean Water Act (CWA), a federal agency may not issue a permit or license to conduct any activity that may result in any discharge into waters of the United States unless a Section 401 water quality certification is issued, or certification is waived. States and authorized tribes where the discharge would originate are generally responsible for issuing water quality certifications.

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties to the Mexico Beach Canal entrance in the COMB. Under this alternative, sediment transport into the Mexico Beach Canal would continue unmitigated, requiring frequent dredging to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to water quality, with turbidity monitored throughout each dredge event in compliance with existing sediment bypassing permit requirements.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. This alternative includes restoring the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. This alternative would minimize sediment transport into the Mexico Beach Canal to reduce frequent dredging and to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to water quality, therefore a reduction in dredging frequency would minimize repeated water quality impacts and have a long-term beneficial effect.

There would be minor short-term increases in turbidity and suspended sediments due to the minimal grading required to meet the elevations specified within the permit sketches. However, levels would be expected to return to background levels rapidly and within 24 hours with a tide change. Furthermore, the project specifications would require the contractor to utilize best management practices to include at a minimum ocean rated floating turbidity screens to contain any project related turbidity within the work zone area. The contractor would be required to contain all turbidity within the confines of the working area. The contractor may even employ a temporary sheet pile cofferdam and construct the proposed jetty in the dry. The methodology selected will ultimately be determined by the contractor in order to comply with permit conditions. Turbidity would be monitored during construction in compliance with permit requirements, to ensure turbidity levels do not exceed 29 NTUs above background beyond the authorized 150 m mixing zone. Best Management Practices (BMP) would be followed at all times including any and all permit requirements.

The COMB submitted permit applications to the USACE in January 2022 and to FDEP in February 2022 for this preferred alternative. On January 26, 2023, FDEP issued Joint Coastal Permit (JCP) No. 0416748-001-JC for the Mexico Beach Jetty Extension and Repair; in addition to providing regulatory and proprietary authorizations, this permit also constitutes certification of compliance with state water quality standards pursuant to Section 401 of the Clean Water Act, 33 U.S.C. 1341. A copy of the FDEP permit is provided in Appendix F. As of preparation of this EA, issuance of the USACE permit is pending.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the damage to the eastern and western jetties would be repaired back to their pre-disaster conditions. Under this alternative, sediment transport into the Mexico Beach Canal from the west through the jetty and from the eastern shoreline around the east jetty would continue unmitigated, which would still require frequent dredging using the COMB's dredge vessel to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to water quality, with turbidity monitored throughout each dredge event in compliance with permit requirements.

During construction of the alternative, there would be minor short-term increases in turbidity and suspended sediments due to the minimal grading required to construct this alternative. However, levels would be expected to return to background levels rapidly and within 24 hours with a tide change. Furthermore, the project specifications would require the contractor to utilize best management practices to include at a minimum ocean rated floating turbidity screens to contain any project related turbidity within the work zone area. The contractor would be required to contain all turbidity within the confines of the working area. The contractor may even employ a temporary sheet pile cofferdam and construct the jetty repairs in the dry. The methodology selected would ultimately be determined by the contractor in order to comply with permit conditions. Turbidity would be monitored during construction in compliance with permit requirements, to ensure turbidity levels do not exceed 29 NTUs above background beyond the authorized 150 m mixing zone. Best Management Practices (BMP) would be followed at all times including any and all permit requirements.

3.2.3 Floodplain Management (Executive Order 11988)

The project area is located within FEMA Flood Insurance Rate Map (FIRM), panel number 12005C0508H, effective on 06/02/2009 (provided as Appendix G). The project area is within a Special Flood Hazard Area (SFHA), which is defined as an area designated by FEMA as having a heightened risk of flooding. The project area falls within multiple Zone VEs (Base Flood Elevation (BFE) 14 ft and 16 ft). A "Coastal High Hazard Area" (CHHA) is identified as Zone V or Zone VE on FEMA flood maps. CHHA are areas along the coasts subject to inundation by the 1% annual chance flood event with additional hazards associated with storm or tidal induced waves.

Executive Order (EO) 11988 requires federal agencies to take action to minimize occupancy and modification of the floodplain. Specifically, EO 11988 prohibits federal agencies from funding construction in the CHHA unless there are no practicable alternatives. FEMA's regulations for complying with EO 11988 are promulgated in 44 CFR Part 9. Per 44 CFR Part 9, FEMA applies the Eight-Step Decision-Making Process to ensure that it funds projects consistent with EO 11988. A copy of the Eight-Step-Decision Making Process as required by 44 CFR Part 9 has been provided in Appendix H.

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties to the Mexico Beach Canal entrance in the COMB. Under this alternative, there would be no buildings,

structures, or fill added to the floodplain; therefore, there would be no changes or impacts on the floodplain.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. The project area falls within multiple Zone VEs (Base Flood Elevation (BFE) 14 ft and 16 ft) and the “Coastal High Hazard Area” (CHHA) on FIRM panel number 12005C0508H with an effective date of 06/02/2009. Under this preferred alternative, the structural improvements to the jetties would occur in the floodplain. Although the proposed project area is located within a CHHA, the canal jetties are functionally dependent on their location along the Gulf of Mexico and provide open space use to the community by allowing recreational boating. The jetty extension and repairs are not expected to result in expansion or increased development. An Eight-Step-Decision Making Process checklist, as required by 44 CFR Part 9 (Appendix H), has been completed for Alternative 2 (Preferred Alternative). Based on the review conducted, Alternative 2 would have minimal impacts on the floodplain.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. The project area falls within multiple Zone VEs (Base Flood Elevation (BFE) 14 ft and 16 ft) and the “Coastal High Hazard Area” (CHHA) on FIRM panel number 12005C0508H with an effective date of 06/02/2009. Under this alternative, the structural repairs to the jetties would occur in the floodplain. Although this alternative is located within a CHHA, the canal jetty is functionally dependent in its location along the Gulf of Mexico and provides open space use to the community by allowing recreational boating. Repairing the eastern and western jetties to pre-disaster conditions would have minimal impacts on the floodplain.

3.2.4 Air Quality

The Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment; the Clean Air Act established two types of national air quality standards; primary standards set limits to protect public health, including the health of “sensitive” populations such as asthmatics, children, and the elderly; secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation and buildings; current criteria pollutants are: Carbon Monoxide (CO), Nitrogen Dioxide (NO₂), Ozone (O₃), Lead (Pb), Particulate Matter (PM₁₀), and Sulfur Dioxide (SO₂).

The project area is located in Bay County, which is not designated by the EPA as a “nonattainment” area (EPA Green Book, <https://www.epa.gov/green-book>).

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties. This alternative maintains the status quo of air quality from existing conditions because there would be no changes within the project area.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the east jetty extension and repair and enhancement to the jetties damaged by Hurricane Michael. Alternative 2 does not include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities or five or more dwelling units. Alternative 2 would generate short-term construction equipment exhaust emissions and short-term fugitive dust emissions. These air emissions would vary daily, depending on the level and type of work conducted, and would be limited to the project construction period. Pollutants that would be emitted from the internal combustion engine exhausts of construction vehicles and equipment include certain criteria pollutants, volatile organic compounds (VOCs), and certain greenhouse gases (GHGs). Annual construction emissions are expected to be less than the federal de minimis be negligible in terms of overall quantity and within the range expected for construction of this type and size. Fugitive dust would be generated by construction vehicles and equipment operations on dirt and sandy surfaces and by wind action on stockpiled materials. Generated fugitive dust would consist primarily of non-toxic particulate matter. Based on the review conducted, Alternative 2 would have a negligible impact on air quality.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. Alternative 3 would generate short-term construction equipment exhaust emissions and short-term fugitive dust emissions. These air emissions would vary daily, depending on the level and type of work conducted, and would be limited to the project construction period. Pollutants that would be emitted from the internal combustion engine exhausts of construction vehicles and equipment include certain criteria pollutants, volatile organic compounds (VOCs), and certain greenhouse gases (GHGs). Annual construction emissions are expected to be less than the federal de minimis be negligible in terms of overall quantity and within the range expected for construction of this type and size. Fugitive dust would be generated by construction vehicles and equipment operations on dirt and sandy surfaces and by wind action on stockpiled materials. Generated fugitive dust would consist primarily of non-toxic particulate matter. Based on the review conducted, Alternative 3 would have a negligible impact on air quality.

3.2.5 Coastal Zone Management

The Coastal Zone Management Act (CZMA) provides for the management of the nation's coastal resources. The CZMA defines the coastal zones where development must be managed to protect areas of natural resources unique to coastal regions. States are required to define the area that will

comprise coastal zone and develop management plans that will protect these unique resources through enforceable policies of state coastal zone management (CZM) programs.

The Florida Coastal Management Program (FCMP) was approved by NOAA in 1981 and is codified at Chapter 380, Part II, Florida Statutes. The federally approved FCMP coordinates a number of coastal management activities with FDEP programs, state agencies, water management districts and local governments that have responsibilities for managing coastal resources. The FCMP has two fundamental goals: protecting coastal resources and helping Floridians maintain vital communities. The FCMP consists of a network of 24 Florida Statutes administered by eight state agencies and five water management districts. This framework allows the state to make integrated, balanced decisions that ensure the wise use and protection of the State's water, property, cultural, historic, and biological resources; protect public health; minimize the state's vulnerability to coastal hazards; ensure orderly, managed growth; protect the state's transportation system; and sustain a vital economy. The State of Florida's coastal zone includes the area encompassed by the state's 67 counties and its territorial seas.

As the designated lead coastal agency for the State, the Florida Department of Environmental Protection (FDEP) communicates the agencies' comments and the State's final consistency decision to federal agencies and applicants for all actions other than permits issued under Clean Water Act Section 404 and Section 10 of the Rivers and Harbors Act. The State's consistency decisions on those permits are made through the approval or denial of the wetland resource or environmental resource permits issued under Chapter 373, Part IV, F.S.

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties and there would be no impact to the coastal zone. Under this alternative, longshore sediment transport would continue to be impeded by the Mexico Beach jetty system, requiring continued mechanical bypassing via a dredge. Sediment transport into the Mexico Beach Canal would continue unmitigated through the western jetty and around the eastern jetty, requiring frequent dredging to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to water quality, with turbidity monitored throughout each dredge event in compliance with existing sediment bypassing permit requirements.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. This preferred alternative would restore the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. Under this alternative, longshore sediment transport would continue to be impeded by the Mexico Beach jetty system requiring continued mechanical bypassing via a dredge; however, this alternative would minimize sediment transport into the Mexico Beach Canal to reduce the frequency of dredging and to maintain a safe and navigable channel for residents of and visitors

to the COMB. This would be accomplished by making the western jetty sand tight to prevent sediment transport through the jetty and extending the eastern jetty to prevent sediment from “back-passing” and traveling around the eastern jetty tip back into the inlet. Each dredge event would cause temporary impacts to water quality, therefore a reduction in dredging frequency would minimize repeated water quality impacts. The contractor would be required to install and maintain turbidity screens to contain any project related turbidity within the work zone area. There will be minor temporary impacts to the coastal zone, but turbidity would be monitored during construction in compliance with permit requirements, to ensure turbidity levels do not exceed 29 NTUs above background.

On January 26, 2023, FDEP issued Permit No. 0416748-001-JC for the Mexico Beach Jetty Extension and Repair; in addition to providing regulatory and proprietary authorizations, this permit also constitutes certification of compliance with state water quality standards pursuant to Section 401 of the Clean Water Act, 33 U.S.C. 1341 and constitutes a finding of consistency with Florida’s Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act. A copy of the FDEP permit (Appendix F).

The FDEP *Strategic Beach Management Plan: Panhandle Gulf Coast Region* (2023) identified strategies to address to the Mexico Beach Inlet (R-127 to R-128). The plan, which includes the recommended strategy of continuing the mechanical bypassing of sand from the west side of the inlet to the east side of the inlet, and also includes: “... replace, sand-tighten, and extend the east jetty to a point comparable with the west jetty ...”. The goal of the proposed project is to restore the eastern jetty from storm damage, enhance it with adequately sized armor stone, and extend it to a point roughly equal with the western jetty head. Thus, the proposed project is consistent with the adopted beach management strategy for the Mexico Beach Inlet as set forth in the FDEP *Strategic Beach Management Plan: Panhandle Gulf Coast Region* document.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. Under this alternative, longshore sediment transport would continue to be impeded by the Mexico Beach Jetty system requiring mechanical bypassing via a dredge. Under this alternative, sediment transport into the Mexico Beach Canal from the west through the jetty and from the eastern shoreline around the east jetty would continue unmitigated, which would still require frequent dredging using the COMB’s dredge vessel to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to water quality, with turbidity monitored throughout dredging in compliance with permit requirements. The contractor would likely be required to install and maintain turbidity screens to contain any project related turbidity within the work zone area. There will be minor temporary impacts to the coastal zone, but turbidity would be monitored during construction in compliance with permit requirements, to ensure turbidity levels do not exceed 29 NTUs above background.

3.2.6 Coastal Barrier Resources

The Coastal Barrier Resource Act (CBRA) of 1982 and subsequent amendments are designed to address problems caused by coastal barrier development by restricting most Federal expenditures and financial assistance that tend to encourage such development. Three important goals of CBRA are to minimize loss of human life by discouraging development in high-risk areas, reduce wasteful expenditure of federal resources, and protect the natural resources associated with coastal barriers. The Coastal Barrier Improvement Act of 1990 (CBIA) reauthorized the CBRA and added new units. The CBIA, an addition to the CBRA, designated a new category of lands known as “otherwise protected areas” (OPAs). OPAs are based on areas established under federal, state, or local law, or held by a qualified organization, primarily for wildlife refuge, sanctuary, recreational, or natural resource conservation purposes. The project is not located within and will not impact a Coastal Barrier Resource System (CBRS) unit. The closest area is CBRS Unit P31 to the west of the project, as shown in the Coastal Barrier Resources Map provided as Appendix I.

Alternative 1 – No Action

Alternative 1 would not result in any construction activities beyond the routine channel dredging; therefore, the No Action Alternative would have no impact to coastal resources or the coastal zone.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 would not involve any construction activities within a CBRS Unit or an OPA; therefore, there would be no impact to coastal resources.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Alternative 3 would not involve any construction activities within a CBRS Unit or an OPA; therefore, there would be no impact to coastal resources.

3.2.7 Climate Change

Greenhouse gases (GHGs) are emitted by both natural processes and human activities, and their accumulation in the atmosphere regulates temperature. GHGs included carbon dioxide, methane, nitrous oxide, and other compounds. There are currently no established thresholds or standards for GHGs. However, according to current guidance from the CEQ, a quantitative analysis and disclosure of GHG emissions is not warranted unless the proposed action’s direct annual emissions would be greater than 25,000 metric tons of carbon dioxide equivalent.

Alternative 1 – No Action

Alternative 1 would not result in any construction activities beyond the routine channel dredging; therefore, this alternative would have no impact on climate change and no GHGs would be emitted.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 would result in minor short-term impacts from temporary air emissions due to fuel usage by the construction equipment. These temporary emissions would be expected to be below regulatory standards and would be negligible.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Alternative 3 would result in minor short-term impacts from temporary air emissions due to fuel usage by the construction equipment. These temporary emissions would be expected to be below regulatory standards and would be negligible.

3.3 Biological Environment

3.3.1 Terrestrial and Aquatic Environment

Mexico Beach is in southeastern Bay County, Florida, and is situated on the Gulf of Mexico and in the vicinity to the entrance to St. Joseph's Bay. Appendix B provides a map of the project location between R-127 and R-128 on either side of the Mexico Beach Canal.

The primary natural community types in the project area include Beach Dune and Marine Unconsolidated Substrate (Dewberry 2018). There has been no known history of seagrass or other submerged aquatic vegetation (SAV), coral, or hardbottom communities within the proposed project area. Located over three miles from the project area, the St. Joseph Bay Aquatic Preserve contains significant seagrass resources.

The following sections provide an overview of the two primary natural community types present in the project area.

Beach Dune

The Beach Dune community includes the swath of land from the vegetated upper beach to the first dune above the beach (or foredune). This community is predominantly made of sea oats (*Uniola paniculate*), which builds up the dune as it traps the sand blown from the beach. Other grasses found in the Beach Dune community include bitter panicgrass (*Panicum amarum*) and saltmeadow cordgrass (*Spartina patens*) in areas with sand burial and camphorweed (*Heterotheca subaxillaris*) in areas with moderate to no sand burial. Seacoast marshelder (*Iva imbricate*) occurs at the seaward base of the foredune, while annuals, trailing species, and salt-tolerant grasses make up the upper beach area seaward at the base of the foredune. In addition to sand burial, the structure of the Beach Dune community is influenced by tides, wind, and salt spray (FNAI 2010).

Rare plants and animals depend on the Beach Dune community. The rare plant species in this community that could occur within the project area include Godfrey's goldenaster (*Chrysopsis godfreyi*) and Gulf coast lupine (*Lupinus westianus*), which are listed as Florida endangered and threatened plants, respectively. Rare animals like the St. Andrews beach mouse, sea turtles, and

shorebirds use the Beach Dune community to forage and/or nest. Refer to Section 3.2.3 Threatened and Endangered Species for more information on these species. Management measures for the Beach Dune community include control of invasive species, use of dune walkovers, planting only native vegetation for dune restoration projects (FNAI 2010).

Marine Unconsolidated Substrate

Marine Unconsolidated Substrates include open areas with low abundance of plants and animals that, as relevant to the project area, are primarily composed of mud, mud/sand, sand, or shell. The communities occur in the subtidal, intertidal, and supratidal zones. Large numbers of burrowing species, plankton, and pelagic organisms may occur in this area and may include tube worms, sand dollars, mollusks, isopods, amphipods, burrowing shrimp, and crabs. These areas support the preferred prey of bottom feeding fish, shorebirds, and invertebrates. The Marine Unconsolidated Substrate community may be impacted by vehicular traffic on beaches, disturbances from dredging and low dissolved oxygen levels, and accumulation of pollutants like heavy metals, oils, and pesticides. Toxic levels have the potential to eliminate the food sources for fish, birds, and invertebrates and impact organisms higher up in the food chain (FNAI 2010).

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties and there would be no impacts to the terrestrial and aquatic environment. Under this alternative, sediment transport into the Mexico Beach Canal would continue unmitigated and require continued frequent dredging to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to water quality, with turbidity monitored throughout dredging activities in compliance with existing sand bypassing permit requirements. While there would be no impacts from jetty rehabilitation, each dredge event would have associated temporary impacts to the marine environment.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. This alternative would restore the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. This alternative would include minor temporary impacts to Beach Dune and Marine Unconsolidated Substrate during construction of the jetty improvements. This alternative would also minimize sediment transport into the Mexico Beach Canal to reduce the frequency of dredging and to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to the marine environment, therefore a reduction in dredging frequency would minimize repeated impacts and have a long-term beneficial effect.

Given the 3.8-mile distance from the site and the localized nature of impacts, the St. Joseph Bay Aquatic Preserve and the seagrasses within it would not be impacted by this alternative. Additionally, the impact associated with occupying 0.23 acres of marine unconsolidated substrate would be negligible as the area is currently dredged via the COMB's floating dredge plant and piped

onto the nearby beach. The sediment in this area is constantly in flux and does not reliably support any long-term and biologically sustainable habitat due to its temporary nature (i.e., the area where the proposed jetty extension would be constructed is currently being dredged on a weekly to monthly basis to keep the canal entrance open).

In the event a temporary sheet pile cofferdam is installed to construct the project, and under typical wave conditions, the sheet pile cofferdam will have minimal to no effect on the shoreline west and updrift of the proposed project. Any shoreline erosion that may occur updrift during adverse weather conditions (west of the canal) will be mitigated by natural processes as the dominant sediment transport for this section of shoreline is primarily from west to east and will fill in naturally. Any adverse impacts to the shoreline downdrift (east) of the canal will be replenished from routine maintenance dredging of the canal as this section of shoreline is included within the permitted disposal area associated with existing maintenance dredging permits.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. Given the 3.8-mile distance from the site and the localized nature of impacts, the St. Joseph Bay Aquatic Preserve and the seagrasses within it would not be impacted by the proposed project

Under this alternative, sediment transport into the Mexico Beach Canal from the west through the jetty and from the eastern shoreline around the east jetty would continue unmitigated, which would still require frequent dredging using the COMB's dredge vessel to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would have associated temporary impacts to the marine environment.

In the event a temporary sheet pile cofferdam is installed to construct the project, and under typical wave conditions, the sheet pile cofferdam will have minimal to no effect on the shoreline west and updrift of the proposed project. Any shoreline erosion that may occur updrift during adverse weather conditions (west of the canal) will be mitigated by natural processes as the dominant sediment transport for this section of shoreline is primarily from west to east and will fill in naturally. Any adverse impacts to the shoreline downdrift (east) of the canal will be replenished from routine maintenance dredging of the canal as this section of shoreline is included within the permitted disposal area associated with existing maintenance dredging permits.

3.3.2 Magnuson-Stevens Fishery Conservation and Management Act (MSA)

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) is the primary law governing marine fisheries management in U.S. federal waters and is meant to foster long-term biological and economic sustainability of our nation's marine fisheries. Key objectives of the MSA are to prevent overfishing, rebuild overfished stocks, increase long-term economic and social benefits, and ensure a safe and sustainable supply of seafood. The NOAA EFH Mapper online tool has identified designated EFH for species in the project area. However, there are no hardbottom habitats, coral reefs, or seagrass habitats near the project location.

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties. Under this alternative, sediment transport into the Mexico Beach Canal would continue unmitigated and require continued frequent dredging to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to water quality, with turbidity monitored throughout dredging activities in compliance with existing sand bypassing permit requirements. While there would be no impacts from jetty rehabilitation, each dredge event would have associated temporary impacts to the marine environment including EFH.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. This alternative would restore the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. This alternative would include minor temporary impacts to EFH during construction of the jetty improvements. This alternative would also minimize sediment transport into the Mexico Beach Canal to reduce the frequency of dredging and to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to the marine environment, therefore a reduction in dredging frequency would minimize repeated impacts to EFH and have a long-term beneficial effect.

Given the 3.8-mile distance from the site and the localized nature of impacts, the St. Joseph Bay Aquatic Preserve and the seagrasses within it would not be impacted by this alternative. Additionally, the impact associated with occupying 0.23 acres of marine unconsolidated substrate would be negligible as the area is currently dredged via the COMB's floating dredge plant and piped onto the nearby beach. The sediment in this area is constantly in flux and does not reliably support any long-term and biologically sustainable habitat due to its temporary nature (i.e., the area where the proposed jetty extension would be constructed is currently being dredged on a weekly to monthly basis to keep the canal entrance open).

FEMA sent an MSA-EFH consultation letter to NOAA on August 9, 2023, requesting concurrence with the determination that Alternative 2 “may adversely affect” EFH. The letter included conservation measures and BMPs to avoid EFH impacts. NOAA concurrence was received on August 10, 2023, in an email that stated “NOAA's National Marine Fisheries Service (NMFS), Southeast Region, Habitat Conservation Division (HCD) has reviewed the information provided and performed a desktop assessment of the project area using Google Earth software and the Florida Fish and Wildlife Conservation Commission's Seagrass Habitat in Florida website. From our evaluation of the project area, we anticipate any adverse effects that might occur on marine and anadromous fishery resources would be minimal. Therefore, the NMFS HCD does not have any EFH conservation recommendations to provide regarding these activities.” As included in FEMA's August 9, 2023, letter to NOAA, the following conditions would be applied to the project:

- 1) Protected Species Sightings—The action agency and any permittee shall ensure that all personnel associated with the project are instructed about the potential presence of species protected under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). All on-site project personnel are responsible for observing water-related activities for the presence of protected species. All personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing listed species and all marine mammals. To determine which protected species and critical habitat may be found in the transit area, please review the relevant marine mammal and ESA-listed species at Find a Species (<https://www.fisheries.noaa.gov/find-species>) and the consultation documents that have been completed for the project.
- 2) Equipment—Turbidity curtains, if used, shall be made of material in which protected species cannot become entangled and be regularly monitored to avoid protected species entrapment. All turbidity curtains and other in-water equipment shall be properly secured with materials that reduce the risk of protected species entanglement and entrapment.
 - a) In-water lines (rope, chain, and cable, including the lines to secure turbidity curtains) shall be stiff, taut, and non-looping. Examples of such lines are heavy metal chains or heavy cables that do not readily loop and tangle. Flexible in-water lines, such as nylon rope or any lines that could loop or tangle, shall be enclosed in a plastic or rubber sleeve/tube to add rigidity and prevent the line from looping and tangling. In all instances, no excess line shall be allowed in the water. All anchoring shall be in areas free from hardbottom and seagrass.
 - b) Turbidity curtains and other in-water equipment shall be placed in a manner that does not entrap protected species within the project area and minimizes the extent and duration of their exclusion from the project area.
 - c) Turbidity barriers shall be positioned in a way that minimizes the extent and duration of protected species exclusion from important habitat (e.g., critical habitat, hardbottom, seagrass) in the project area.
- 3) Operations—For construction work that is generally stationary (e.g., barge-mounted equipment dredging a berth or section of river, or shore-based equipment extending into the water):
 - a) Operations of moving equipment shall cease if a protected species is observed within 150 feet of operations.
 - b) Activities shall not resume until the protected species has departed the project area of its own volition (e.g., species was observed departing or 20 minutes have passed since the animal was last seen in the area).
- 4) Vessels—For projects requiring vessels, the action agency, and any permittee shall ensure conditions in the Vessel Strike Avoidance Measures are implemented as part of the

project/permit issuance
(<https://www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance>).

- 5) Consultation Reporting Requirements– Any interaction with a protected species shall be reported immediately to NOAA Fisheries SERO PRD and the local authorized stranding/rescue organization.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. This alternative would be within EFH and include minor temporary impacts to EFH during repairs; however, there would be a determination of no adverse impact and no consultation with NOAA would be required since all repairs are back in-kind within the existing footprint. Given the 3.8-mile distance from the site and the localized nature of impacts, the St. Joseph Bay Aquatic Preserve and the seagrasses within it would not be impacted by the proposed project.

Under this alternative, sediment transport into the Mexico Beach Canal from the west through the jetty and from the eastern shoreline around the east jetty would continue unmitigated, which would still require frequent dredging using the COMB's dredge vessel to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would have associated temporary impacts to the marine environment including EFH.

3.3.3 Wetlands (Executive Order 11990)

Executive Order (EO) 11990, Protection of Wetlands, requires federal agencies to take action to minimize the loss of wetlands. Refer to the USFWS National Wetlands Inventory (NWI) Map provided as Appendix J, which shows that the project area is located within Estuarine and Marine Deepwater. The NEPA compliance process requires federal agencies to consider direct and indirect impacts to wetlands, which may result from federally funded actions. Application of the Eight-Step Decision-Making Process is required to ensure that federally funded projects are consistent with EO 11990 objectives. A copy of the Eight-Step-Decision Making Process as required by 44 CFR Part 9 has been provided in Appendix H.

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties. Under this alternative, sediment transport into the Mexico Beach Canal would continue unmitigated, requiring frequent dredging to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to Estuarine and Marine Deepwater and water quality, with turbidity monitored throughout dredging activities in compliance with existing sand bypassing permit requirements. While there would be no impacts from jetty rehabilitation, each dredge event would have associated temporary impacts to the Estuarine and Marine Deepwater.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. The preferred alternative would restore the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. This alternative would include minor temporary impacts during construction of the jetty improvements and permanent removal of 0.23 acres Estuarine and Marine Deepwater. This alternative would also minimize sediment transport into the Mexico Beach Canal to reduce the frequency of dredging and to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to the marine environment, therefore a reduction in dredging frequency would minimize repeated impacts.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. Minor temporary impacts would occur in the immediate vicinity of the existing jetty footprint as armor stone is removed and replaced within the existing jetty footprint.

Under this alternative, sediment transport into the Mexico Beach Canal from the west through the jetty and from the eastern shoreline around the east jetty would continue unmitigated, which would still require frequent dredging using the COMB's dredge vessel to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to Estuarine and Marine Deepwater and water quality, with turbidity monitored throughout dredging in compliance with permit requirements.

3.3.4 Threatened and Endangered Species

In accordance with Section 7 of the Endangered Species Act (ESA) of 1973, the project area was evaluated for the potential occurrences of federally listed threatened and endangered species. The ESA requires any federal agency that funds, authorizes, or carries out an action to ensure that their action is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitats.

Based on a desktop review of the Information for Planning and Consultation (IPaC) database (USFWS, 2023) and project coordination with USFWS and National Marine Fisheries (NMFS), it was determined that the following listed species and their designated critical habitat are likely to occur within the project area:

- Green sea turtle (*Chelonia mydas*)
- Loggerhead sea turtle (*Caretta caretta*), Critical Habitat (LOGG-N-32 Unit)
- Kemp's ridley sea turtle (*Lepidochelys kempii*)
- Gulf sturgeon (*Acipenser oxyrinchus desotoi*), Critical Habitat (Unit 11)
- Smalltooth sawfish (*Pristis pectinata*)
- Giant manta ray (*Manta birostris*)

- St. Andrew Beach Mouse (*Peromyscus polionotus peninsularis*)
- West Indian Manatee (*Trichechus manatus*)

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties. Under this alternative, sediment transport into the Mexico Beach Canal would continue unmitigated, requiring frequent dredging to maintain a safe and navigable channel for residents of and visitors to the COMB. This alternative maintains the status quo where Threatened and Endangered species would continue to be temporarily disturbed by continued permitted dredging operations.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. This alternative would restore the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. The proposed jetty extension is primarily within the limits of the existing jetty, and the additional seaward extension is proposed within an area that has constantly been in flux with moving sediment from dredging activities and is located immediately adjacent to the permitted dredge disposal area.

The proposed project is likely to result in short-term, minor, adverse impacts to Threatened and Endangered species at individual level due to increased human disturbance, noise, and temporary turbidity levels. However, there is already an established level of human presence and activity in the area, so wildlife would likely be acclimated to low levels of disturbance. Wildlife may experience minor, adverse impacts; however, the impacts would not be at the population level as individuals in the area would likely temporarily move away from the project area to similar nearby habitats during activities and then return upon completion of the project. The contractor would follow mitigation and conservation measures to avoid impacts to Gulf sturgeon, manatees, shorebirds, sea turtles, and St. Andrews beach mice. The project would incorporate avoidance and minimization measures such as adhering to *Standard Manatee Conditions for In-water Work* (USFWS, 2011) and *Sea Turtle and Smalltooth Sawfish Construction Conditions* (NMFS, 2006), limiting construction and storage to avoid impacts to vegetated dunes, minimizing lighting on the beach during construction, maintaining buffers around sea turtle nests and breeding shorebirds, and conducting pre-, during, and post-construction surveys in compliance with project permits. Construction activities would also be limited to daylight hours to avoid impacts to listed species at night. Use of barriers to contain project-related turbidity would also act to prevent species from entering the work area.

While the project may have short term adverse impacts to listed species, the jetty extension and repairs are likely to result in long-term, beneficial effects from reduced dredging frequency within the inlet and canal, which would, in turn, reduce the potential to impact wildlife. The project would also allow for a wider beach in the vicinity of the inlet, increasing the available habitat for nesting sea turtles and breeding and overwintering shorebirds.

In a letter dated April 10, 2023, FEMA requested the initiation of informal consultation with NMFS for the proposed jetty repair project. This letter stated FEMA's determination that the proposed activity may affect, but is not likely to adversely affect, the green sea turtle, loggerhead sea turtle, Kemp's ridley sea turtle, Gulf sturgeon, smalltooth sawfish, giant manta ray, and/or designated critical habitat for Gulf sturgeon or loggerhead sea turtle (reproductive). On April 18, 2023, NMFS issued a Letter of Concurrence (LOC) with FEMA's conclusions that the proposed action is not likely to adversely affect the NMFS ESA-listed species and/or designated critical habitat. The COMB Canal Jetty's project tracking number in the NMFS Environmental Consultation Organizer (ECO) is SERO-2022-03059. The following conditions would be applied to the project:

- 1) Protected Species Sightings—The action agency and any permittee shall ensure that all personnel associated with the project are instructed about the potential presence of species protected under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). All on-site project personnel are responsible for observing water-related activities for the presence of protected species. All personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing listed species and all marine mammals. To determine which protected species and critical habitat may be found in the transit area, please review the relevant marine mammal and ESA-listed species at Find a Species (<https://www.fisheries.noaa.gov/find-species>) and the consultation documents that have been completed for the project.
- 2) Equipment—Turbidity curtains, if used, shall be made of material in which protected species cannot become entangled and be regularly monitored to avoid protected species entrapment. All turbidity curtains and other in-water equipment shall be properly secured with materials that reduce the risk of protected species entanglement and entrapment.
 - a) In-water lines (rope, chain, and cable, including the lines to secure turbidity curtains) shall be stiff, taut, and non-looping. Examples of such lines are heavy metal chains or heavy cables that do not readily loop and tangle. Flexible in-water lines, such as nylon rope or any lines that could loop or tangle, shall be enclosed in a plastic or rubber sleeve/tube to add rigidity and prevent the line from looping and tangling. In all instances, no excess line shall be allowed in the water. All anchoring shall be in areas free from hardbottom and seagrass.
 - b) Turbidity curtains and other in-water equipment shall be placed in a manner that does not entrap protected species within the project area and minimizes the extent and duration of their exclusion from the project area.
 - c) Turbidity barriers shall be positioned in a way that minimizes the extent and duration of protected species exclusion from important habitat (e.g., critical habitat, hardbottom, seagrass) in the project area.
- 3) Operations—For construction work that is generally stationary (e.g., barge-mounted equipment dredging a berth or section of river, or shore-based equipment extending into the water):

- a) Operations of moving equipment shall cease if a protected species is observed within 150 feet of operations.
 - b) Activities shall not resume until the protected species has departed the project area of its own volition (e.g., species was observed departing or 20 minutes have passed since the animal was last seen in the area).
- 4) Vessels— For projects requiring vessels, the action agency, and any permittee shall ensure conditions in the Vessel Strike Avoidance Measures are implemented as part of the project/permit issuance (<https://www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance>).
- 5) Consultation Reporting Requirements— Any interaction with a protected species shall be reported immediately to NOAA Fisheries SERO PRD and the local authorized stranding/rescue organization.

In a letter dated June 12, 2023, FEMA initiated informal consultation with USFWS for the proposed jetty repair project. In this letter, FEMA stated their determination that the project may affect, but is not likely to adversely affect, the St. Andrew beach mouse, West Indian manatee, green sea turtle, loggerhead sea turtle, Kemp's ridley sea turtle, or Gulf sturgeon nor adversely modify or destroy the existing designated critical habitat for Gulf sturgeon, loggerhead sea turtle and piping plover. In a November 2, 2023, email, USFWS concurred with FEMA's determination and added: "However, if this project is found to cause unexpected impacts to the immediate shoreline to the east or west, we expect FEMA and the City of Mexico Beach to re-engage with us to help find a solution. The parcels to the west (Bonfire Beach, Farmdale (aka Sugar Sands), and Tyndall AFB) all have permits in place to reduce impacts to coastal listed species and their habitat. This project cannot impact those projects or their requirements. We understand this project is expected to benefit the existing sand bypass project in the area that is supposed to facilitate the natural longshore currents of sand to the west." As included in FEMA's June 12, 2023, consultation letter, the following conditions would be applied to the project:

- 1) Beach Mice –The Perdido Key beach mouse occurs in Escambia County, the Choctawhatchee beach mouse occurs in Okaloosa, Walton, and Bay counties, and the St. Andrew beach mouse occurs in Bay and Gulf counties.
 - a) Repair or replacement of structures shall occur in the same location or footprint of the previously permitted structure unless it has been determined to be environmentally better to relocate the structure.
 - b) Construction equipment and vehicle staging/ parking/storage areas should be located on paved surfaces and outside of vegetated areas.
 - c) Movement of equipment and vehicles shall be restricted to roadways and roadbeds or outside of vegetated areas or areas of storm-buried vegetation.

- d) All activity associated with the project shall be confined to daylight hours.
 - e) No excavation of material outside of the previous footprint of the structure.
 - f) Fence shall be installed along the project property boundaries to prevent access into adjacent beach mouse habitat. The fence shall allow movement of beach mice and prevent construction work trespass.
- 2) Sea turtles: Sea turtle nesting surveys in these counties mark all the nests. Thus, it is feasible to implement avoidance and minimization measures to protect the nests. During the sea turtle nesting season (May 1 through October 31) work shall be allowed provided the following measures are implemented.
- a) Repair or replacement of structures shall occur in the same location or footprint of the previously permitted structure unless it has been determined to be environmentally better to relocate the structure.
 - b) Repair work shall be conducted to the greatest extent practicable from landward positions with minimal equipment intrusion on to the beach. c. Use of equipment on the beach shall be allowable provided it is taken off the beach by 8:00 p.m. every night and County/City approved designated beach accesses are used. All driving on the beach shall be restricted to the area waterward of the mean high tide line.
 - c) All activity shall be confined to daylight hours and shall not occur prior to 9:00 a.m. following the completion of all necessary sea turtle surveys and conservation activities.
 - d) Silt fencing shall be installed to designate construction areas and confine all equipment and activities inside these areas.
 - e) All excavations and temporary alteration of beach topography shall be filled, covered, or leveled to the natural beach profile prior to 8:00 p.m. each day.
 - f) No projects may occur within ten (10) feet of a marked sea turtle nest.
 - g) Relocation of sea turtle nests to accommodate construction is not authorized.
- 3) Shorebird surveys should be conducted by trained, dedicated individuals using accepted, appropriate ecological survey procedures (for example, see "Breeding Season Population Census Techniques for Seabirds and Colonial Waterbirds Throughout North America" at URL: <http://www.mp2-pwrc.usgs.gov/cwb/manual/>).
- a) Nesting season surveys should begin on April 1 (or February 15 in snowy plover habitat) or 45 days prior to construction commencement, whichever is later, and be conducted daily throughout the construction period.

- b) Within the project area, a site-specific buffer should be established around any location where shorebirds have been engaged in courtship or nesting behavior, or around areas where piping plovers occur, or winter migrants congregate in significant numbers. Any and all construction activities, including movement of vehicles, should be prohibited in the buffer zone.
 - c) The width of the buffer zone should be increased if birds appear agitated or disturbed by construction or other activities in adjacent areas.
 - d) Designated shorebird buffer zones should be posted with clearly marked signs around the perimeter. These markings should be maintained until nesting is completed or terminated, the chicks fledge, or piping plovers or winter migrants depart.
 - e) No construction activities or stockpiling of equipment should be allowed within the shorebird buffer area.
- 4) If the proposed improvements to the jetties (alternative 2 of the EA) is found to cause unexpected impacts to the immediate shoreline to the east or west the subapplicant shall stop all work and notify FEMA EHP immediately in order to re-engage coordination with the USFWS. This project cannot impact Bonfire Beach, Farmdale (aka Sugar Sands), or Tyndall AFB areas with permits in place to reduce impacts to coastal listed species and their habitat which are located west of the proposed action.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. Under this alternative, sediment transport into the Mexico Beach Canal from the west through the jetty and from the eastern shoreline around the east jetty would continue unmitigated, which would still require frequent dredging using the COMB's dredge vessel to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to listed species and water quality, with turbidity monitored throughout each dredge event in compliance with permit requirements.

This alternative is likely to result in short-term, minor, adverse impacts to Threatened and Endangered species at individual level due to increased human disturbance, noise, and temporary turbidity levels. However, there is already an established level of human presence and activity in the area, so wildlife would likely be acclimated to low levels of disturbance. Wildlife may experience minor, adverse impacts; however, the impacts would not be at the population level as individuals in the area would likely temporarily move away from the project area to similar nearby habitats during activities and then return upon completion of the project. The project would incorporate avoidance and minimization measures such as adhering to Standard Manatee

Conditions for In-water Work (USFWS, 2011) and Sea Turtle and Smalltooth Sawfish Construction Conditions (NMFS, 2006)

3.3.5 Migratory Birds

The Migratory Bird Treaty Act of 1918 (MBTA) protects migratory birds, their parts, nests, and eggs from take, including killing, capture, transport, sale, and several other actions that are detrimental to the species, except when authorized by the USFWS. The MBTA provides protections for a variety of bird species native to the U.S. that are not necessarily listed as threatened or endangered and therefore not protected by the ESA.

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 (16 U.S.C. 668-668d) prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or golden eagles, including their parts (including feathers), nests, or eggs.

In compliance with the MBTA and the BGEPA, searches were conducted using the IPaC database (USFWS, 2023) and the Audubon EagleWatch interactive map (Audubon, 2023). The IPaC database identifies birds of particular concern that may be present in the search area, including species listed under the USFWS Birds of Conservation Concern (BCC) and species that require special attention in the project location. The most common BCC that are likely to be encountered in the coastal habitat of the project area include American oystercatcher (*Haematopus palliatus*), black skimmer (*Rynchops niger*), dunlin (*Calidris alpina arctica*), least tern (*Sterna antillarum*), ruddy turnstone (*Arenaria interpres morinella*), semipalmated sandpiper (*Calidris pusilla*), whimbrel (*Numenius phaeopus*), willet (*Tringa semipalmata*), and Wilson's plover (*Charadrius wilsonia*), most of which breed between April and August. According to the EagleWatch interactive nest locator map, there are no bald eagle (*Haliaeetus leucocephalus*) nests in the project vicinity; the closest nest is located approximately 1.5 miles northeast of the project area. Since there are no bald eagle nests in the project vicinity, there would be no impacts to bald eagles from any of the project alternatives.

Alternative 1 – No Action

Under the No Action Alternative, there would be no changes to the existing habitats within the project area; therefore, there would be no impact to any migratory bird species. Under this alternative, sediment transport into the Mexico Beach Canal would continue unmitigated, requiring continued frequent dredging to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to migratory birds.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. This preferred alternative would restore the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. The proposed jetty extension is primarily within the limits of the existing jetty, and the additional seaward extension is proposed within an area that has constantly been in flux

with moving sediment from dredging activities and is located immediately adjacent to the permitted dredge disposal area.

The proposed project is likely to result in potential short-term, minor, adverse impacts to migratory birds due to increased human disturbance, noise, and temporary turbidity levels that could affect their ability to forage. However, there is already an established level of human presence and activity in the area, so wildlife would likely be acclimated to low levels of disturbance. Migratory bird species are highly mobile and are thus unlikely to be impacted by project activities. In order to protect migratory birds, including eggs and juveniles, the project would incorporate avoidance and minimization measures, such as maintaining buffers around breeding shorebirds, and shorebird surveys would be conducted in compliance with project permits. Construction activities would also be limited to daylight hours to avoid impacts to wildlife at night.

While the project may have short term adverse impacts to migratory birds, the jetty extension and repairs are likely to result in long-term, beneficial impacts from reduced dredging frequency within the inlet and canal, which would, in turn, reduce the potential to impact wildlife. The project would also allow for a wider beach in the vicinity of the inlet, increasing available habitat for breeding and overwintering shorebirds.

In a letter dated June 12, 2023, FEMA initiated informal consultation with USFWS for the proposed jetty repair project. In this letter, FEMA proposed breeding and wintering shorebird surveys and conservation measures. FEMA also determined that migrating and wintering Rufa red knots (*Calidris canutus rufa*) are not expected to be present in the project area and that the project is not likely to adversely modify or destroy the existing designated critical habitat for piping plover (*Charadrius melodus*). In an email dated November 2, 2023, USFWS concurred with FEMA's determinations without any additional required conditions. There are also shorebird breeding surveys and protection measures included in FDEP Permit No. 0416748-001-JC, which is provided as Appendix F.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. Alternative 3 is likely to result in potential short-term, minor, adverse impacts to migratory birds due to increased human disturbance, noise, and temporary turbidity levels that could affect their ability to forage. However, there is already an established level of human presence and activity in the area, so wildlife would likely be acclimated to low levels of disturbance. Migratory bird species are highly mobile and are thus unlikely to be impacted by project activities. In order to protect migratory birds, including eggs and juveniles, the project would incorporate avoidance and minimization measures, such as maintaining buffers around breeding shorebirds, and shorebird surveys would be conducted in compliance with project permits. Temporary impacts would occur in the immediate vicinity of the existing jetty footprint as armor stone is removed and replaced within the existing jetty footprint.

Under this alternative, sediment transport into the Mexico Beach Canal from the west through the jetty and from the eastern shoreline around the east jetty would continue unmitigated, which would

still require frequent dredging using the COMB's dredge vessel to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause temporary impacts to migratory birds.

3.4 Socioeconomics

3.4.1 Hazardous Materials

Two of the main Federal laws that address hazardous and toxic materials issues are the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA; 42 U.S.C. §9601 et seq.) and the Resource Conservation and Recovery Act of 1976 (RCRA; 42 U.S.C. §6901 et seq.). CERCLA, commonly known as Superfund, has the major objectives to identify hazardous and toxic material sites, determine liability, and oversee the cleanup. RCRA is the public law that creates the framework for the proper management of hazardous and non-hazardous solid waste. The law describes the waste management program mandated by Congress that gave EPA authority to develop the RCRA program.

Hazardous waste is regulated by the federal government and can be found in Title 40 of the Code of Federal Regulation (CFR), Parts 260 to 271. The State of Florida has adopted by reference portions of the federal regulations into Chapter 62-730 of the Florida Administrative Code (F.A.C.). This part is also known as the Hazardous Waste Rule or Rule 62-730. Florida hazardous waste rules require that certain information be submitted by facilities that generate hazardous waste, transport hazardous waste, or operate a treatment/storage/disposal facility for hazardous waste. Ensuring that hazardous wastes (HW) are handled in accordance with federal and state rules and laws is the responsibility of the Compliance and Enforcement staff at FDEP. This group interacts with the public and with the RCRA branch of the federal EPA to develop policies and guidance, to provide compliance assistance to the public and the regulated community, and to enforce laws regulating the handling of hazardous waste.

Contaminated and toxic sites were identified in the project vicinity using the EPA NEPAassist mapping tool and the FDEP Contamination Locator Map. See Appendix K, which includes the EPA Facilities Map and the FDEP Contamination Locator Map. No EPA Facilities or FDEP Cleanup sites are located within or in the immediate vicinity of the coastal project area.

Alternative 1 – No Action

The No Action Alternative would not result in any construction activities. No EPA Facilities or FDEP Cleanup sites are located within or in the immediate vicinity of the coastal project area. Therefore, there would be no impacts from hazardous materials from this alternative.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

No EPA Facilities or FDEP Cleanup sites are located within or in the immediate vicinity of the coastal project area. Alternative 2 would result in minor short-term impacts on the beach and nearshore marine environment during construction activities. The handling of hazardous materials

and waste generated during construction would be handled in accordance with applicable RCRA and state regulations for managing solid and hazardous waste materials. Potential for spills from construction equipment would be minimized and handled in accordance with applicable regulations. The project would also adhere to FDEP permit conditions for debris removal. There is no potential for any construction activities related to this project to impact hazardous waste sites designated under CERCLA as there are no Superfund sites at or near the proposed project area.

Alternative 3 – Repair Eastern Jetty to Pre-Disaster Conditions

No EPA Facilities or FDEP Cleanup sites are located within or in the immediate vicinity of the coastal project area. No EPA Facilities or FDEP Cleanup sites are located within or in the immediate vicinity of the coastal project area. Alternative 3 would result in minor short-term impacts on the beach and nearshore marine environment during construction activities. The handling of hazardous materials and waste generated during construction would be handled in accordance with applicable RCRA and state regulations for managing solid and hazardous waste materials. Potential for spills from construction equipment would be minimized and handled in accordance with applicable regulations. There is no potential for any construction activities related to this project to impact hazardous waste sites designated under CERCLA as there are no Superfund sites at or near the proposed project area.

3.4.2 Zoning and Land Use

According to the interactive Bay County zoning database, the project area is zoned as “Preservation” land within the COMB; see Appendix L for the Bay County Zoning Map.

Alternative 1 – No Action

The No Action Alternative would not result in any new construction activities. Alternative 1 is consistent with existing zoning within the project area and there would be no alteration to existing zoning or land use within or adjacent to the project area as a result of this alternative.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 is consistent with existing zoning within the project area and there would be no alteration to existing zoning or land use within or adjacent to the project area as a result of this alternative.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Alternative 3 is consistent with existing zoning within the project area and there would be no alteration to existing zoning or land use within or adjacent to the project area as a result of this alternative.

3.4.3 Visual Resources

Assuring aesthetically pleasing surroundings for all Americans is one of the goals identified in Section 101 of NEPA, and visual impacts are included among environmental effects evaluated by federal agencies prior to making decisions. The project is located at the entrance to the Mexico Beach Canal, where the canal meets the Gulf of Mexico. The COMB has maintained a portion of the Mexico Beach shoreline for over a decade by periodically dredging material from the updrift beaches and within the Mexico Beach Inlet (entrance to the Mexico Beach Canal) and pumping it to the downdrift beach. Due to the impacts of Category 5 Hurricane Michael, and other tropical storm events that have caused extensive structural damage to the existing east jetty and settlement to portions of the western jetty, the COMB has proposed to restore and extend the eastern jetty, as well as repair and replace a portion of the western jetty. Prior to the storm, the eastern jetty was comprised of undersized stone and not of sufficient length to prevent back passing of sediment manually bypassed by dredging of the western sand trap and within the inlet.

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties; therefore, there would be no changes or impacts to the visual resources within the project area. The jetties would continue to exist and function in their damaged state. Under this alternative, sediment transport into the Mexico Beach Canal would continue unmitigated, requiring continued frequent dredging to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause potential short-term, minor, adverse impacts to visual resources due to increased human disturbance and presence of equipment during dredging activities.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. This alternative would restore the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. The proposed jetty extension is primarily within the limits of the existing jetty, and the additional seaward extension is proposed within an area that has constantly been in flux with moving sediment from dredging activities and is located immediately adjacent to the permitted dredge disposal area.

The proposed project is likely to result in potential short-term, minor, adverse impacts to visual resources due to increased human disturbance and presence of equipment during construction activities. However, the jetty extension and repairs are likely to result in long-term, beneficial effects from reduced dredging frequency within the inlet and canal, which would, in turn, reduce the frequency of disturbance to visual resources due to dredging activity. Each dredge event would cause potential short-term, minor, adverse impacts to visual resources due to increased human disturbance and presence of equipment during dredging activities. This preferred alternative would also allow for a wider beach in the vicinity of the inlet, improving visual resources in the area.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. The proposed project is likely to result in potential short-term, minor, adverse impacts to visual resources due to increased human disturbance and presence of equipment during construction activities. Under this alternative, sediment transport into the Mexico Beach Canal from the west through the jetty and from the eastern shoreline around the east jetty would continue unmitigated, which would still require frequent dredging using the COMB's dredge vessel to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause potential short-term, minor, adverse impacts to visual resources due to increased human disturbance and presence of equipment during dredging activities.

3.4.4 Noise

The Noise Control Act (NCA) was enacted in 1972 and established a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. The major sources of noise include transportation vehicles and equipment, machinery, appliances, and other products in commerce, climate, or recreation. Sounds that disrupt normal activities or otherwise diminish the quality of the environment are designated as noise. Noise can be stationary or transient, intermittent, or continuous. Within the project area, noise primarily comes from local vehicular and construction traffic along US Highway 98 and local construction activities associated with rebuilding homes, condos, and other infrastructure improvements. Vessel traffic consisting of recreational and commercial fishing vessels departing the Mexico Beach Canal is another source of noise. The COMB also operates a diesel hydraulic suction head dredge within the canal to maintain vessel navigation, which emits noise while under operation.

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties; therefore, there would be no impacts on noise within the project area. However, under this alternative, sediment transport into the Mexico Beach Canal would continue unmitigated, requiring continued frequent dredging to maintain a safe and navigable channel for residents of and visitors to the COMB. Each dredge event would cause potential short-term, minor, adverse impacts to noise due to increased human disturbance and presence of equipment during dredging activities.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. This alternative would restore the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. The proposed jetty extension is primarily within the limits of the existing jetty, and the additional seaward extension is proposed within an area that has constantly been in flux with moving sediment from dredging activities and is located immediately adjacent to the permitted dredge disposal area.

Minor, adverse impacts may occur due to the increased noise levels from heavy equipment operation in the project area during project construction. These impacts would be minor and short-term in nature. It is anticipated that traditional types of commercial construction equipment would be used for construction of the jetties project, such as earthmoving equipment, small to medium size cranes, and dump trucks. Equipment and machinery utilized at the site would be required to meet all State and Federal noise regulations and all have sound control devices no less effective than those provided on the original equipment (i.e., mufflers or other noise abatement devices that come standard with the equipment from the factory). It is anticipated that 10-20 piles would be installed per day using a vibratory hammer, with approximately 2-5 minutes required for installation of each pile; overall, this translates to an estimated duration of 20-100 minutes of noise resulting from the installation of sheet piles each day. Impacts related to noise would be temporary in nature and would revert to existing conditions following completion of the construction activity. This alternative is not expected to substantially increase use of the project area; therefore, no long-term impacts on noise within the project area would occur.

The jetty extension and repairs are likely to result in long-term, beneficial effects from reduced dredging frequency within the inlet and canal, which would, in turn, reduce the frequency of noise disturbance due to dredging activity.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

This alternative includes repairing the east west jetties back to their pre-disaster conditions, which is comprised of a mixture of limestone, granite, and concrete rip-rap and box culverts. Temporary sheet pile may be installed to support construction activities for the jetty installation and repairs. Minor, adverse impacts may occur due to the increased noise levels from heavy equipment operation in the project area during project construction. It is anticipated that 10-20 piles would be installed per day using a vibratory hammer, with approximately 2-5 minutes required for installation of each pile; overall, this translates to an estimated duration of 20-100 minutes of noise resulting from the installation of sheet piles each day. Impacts related to noise would be temporary in nature and would revert to existing conditions following completion of the construction activity. These impacts would be minor and short-term in nature and would revert to existing conditions following completion of the construction activity. The proposed action is not expected to substantially increase use of the project area; therefore, no long-term impacts on noise within the project area would occur.

It is anticipated that traditional types of commercial construction equipment would be used for construction of the jetties project, such as earthmoving equipment, small to medium size cranes, and dump trucks. Equipment and machinery utilized at the site would be required to meet all State and Federal noise regulations and all have sound control devices no less effective than those provided on the original equipment (i.e., mufflers or other noise abatement devices that come standard with the equipment from the factory).

Under this alternative, sediment transport into the Mexico Beach Canal from the west through the jetty and from the eastern shoreline around the east jetty would continue unmitigated, which would still require frequent dredging using the COMB's dredge vessel to maintain a safe and navigable

channel for residents of and visitors to the COMB. Each dredge event would cause potential short-term, minor, adverse impacts to noise due to increased human disturbance and presence of equipment during dredging activities.

3.4.5 Public Services and Utilities

The project is located at the entrance to the Mexico Beach Canal, where the canal meets the Gulf of Mexico. The canal runs from the Gulf of Mexico north and traverses under US HWY 98, which is the primary road into the COMB and serves as one of the hurricane evacuation routes out of the COMB. The bridge that traverses over the Mexico Beach Canal contains water and sewer connections attached to it. Power, phone and internet service is provided via overhead lines and is located within the right of way of US HWY 98. The COMB also provides Police and Fire service to its citizens. There are no schools or hospitals located within the COMB. Neighboring cities support those services for residents of the COMB.

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties; since the project is not located within the vicinity of any Public Services and Utilities, none would be affected.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. Since this alternative is not located within the vicinity of any Public Services and Utilities, none would be affected.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. Since this alternative is not located within the vicinity of any Public Services and Utilities, none would be affected.

3.4.6 Traffic and Circulation

The project is located at the entrance to the Mexico Beach Canal, where the canal meets the Gulf of Mexico. Access to the site is from US HWY 98, 42nd Street, and Miramar Drive. US HWY 98 is a major throughfare and is the primary access road used to get to Mexico Beach. 42nd Street and Miramar Drive are two residential streets that are currently utilized by the COMB to access the project site and are frequently used by construction companies to transport equipment as homes are being rebuilt in the area. Despite being residential streets, most of the homes and structures in this area were demolished from Hurricane Michael and have not been rebuilt. There is no public transportation available in the COMB and there are limited public sidewalks.

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties. The COMB would be required to continue to service the COMB's dredge plant docked within the Mexico Beach Canal through the neighboring residential areas. With dredging frequencies increasing due to the lack of an eastern jetty, the COMB has to maintain the dredge more frequently, which requires more construction traffic and associated equipment to access the project location on a daily to weekly basis. No road closures or detours are expected and there is adequate room at the site for the COMB's construction equipment to turn around without impacting residences.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. This would temporarily increase construction traffic while armor stone and equipment are delivered to the site, which is estimated to occur over a period of four months. No road closures or detours are expected. There is adequate room at the site for the COMB's construction equipment to turn around without impacting residences. Following the minor temporary impacts to traffic and circulation during construction of the proposed jetties, it is expected that the use of the COMB's dredge would be reduced, therefore reducing the required dredge maintenance, thereby reducing the impact from City equipment traversing through residential areas to weekly or monthly. This alternative would therefore be predicted to result in long-term beneficial effects to traffic and circulation in the area.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. This would temporarily increase construction traffic while armor stone and equipment are delivered to the site. This is estimated to occur over a period of 2.5 months. No road closures or detours are expected. There is adequate room at the site for the COMB's construction equipment to turn around without impacting residences.

Under this alternative, sediment transport into the Mexico Beach Canal from the west through the jetty and from the eastern shoreline around the east jetty would continue unmitigated, which would still require frequent dredging using the COMB's dredge vessel to maintain a safe and navigable channel for residents of and visitors to the COMB. The COMB would be required to continue to service the COMB's dredge plant docked within the Mexico Beach Canal through the neighboring residential areas. Dredging frequencies would slightly reduce when compared to the no action alternative; however, the COMB would need to maintain the dredge as frequently as it currently does, which requires construction traffic and associated equipment to access the project location on a daily to weekly basis. No road closures or detours are expected and there is adequate room at the site for the COMB's construction equipment to turn around without impacting residences.

3.4.7 Environmental Justice (Executive Order 12898)

On February 11, 1994, President Clinton signed Executive Order (EO) 12898, entitled, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations".

The EO directs federal agencies, “to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States...” Its purpose is to focus federal attention on the environmental and human health effects of federal actions on minority and low-income populations with the goal of achieving environmental protection for all communities.

FEMA uses the best available data, including Census Block Group and EPA’s Environmental Justice Screening and Mapping Tool (EJSCREEN) Version 2.2 to identify populations at risk for potential environmental justice concerns. Where there is a potential for disproportionately high or adverse effects based on the Proposed Action Alternative, FEMA consults with EPA and incorporates recommendations for mitigating those effects.

An EJScreen Community Report for the COMB was formulated from the EJSCREEN Version 2.2 and is provided as Appendix M (EPA, 2023). This report includes the demographics of the COMB in comparison to the rest of the state (Florida) and the U.S. According to this report, the population of Mexico Beach is 1,269, comprised of 17% low income and 11% people of color. Based on this report, which designated 0% “Limited English” households, and the 2020 U.S. Census that determined 95.7% of the population speaks English only, it is not necessary to issue a non-English EA or public notice.

The project area where the proposed project would occur does not include any residential areas and is designated as “Preservation” land within the COMB in Appendix L for the Bay County Zoning Map. According to this map, the areas adjacent to and immediately landward of the project area include “Tourist Residential”, “Townhouse District”, and “Tourist Commercial”, with “General Commercial” areas located beyond US HWY 98.

Alternative 1 – No Action

Under the No Action Alternative, no repairs would be made to the eastern and western jetties. The status quo would be maintained and there would be no impacts on Environmental Justice.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 includes the replacement and extension of the east jetty and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. This preferred alternative would restore the extensive structural damage to the eastern jetty and minor damage to the western jetty created by Hurricane Michael. The proposed jetty extension is primarily within the limits of the existing jetty, and the additional seaward extension is proposed within an area that has constantly been in flux with moving sediment from dredging activities and is located immediately adjacent to the permitted dredge disposal area.

The immediate project area does not include any residential areas and is designated as “Preservation” land within the COMB. During project construction, an increase in construction traffic to the project site may temporarily affect areas adjacent to and immediately landward of the

project area designated as “Tourist Residential”, “Townhouse District”, and “Tourist Commercial”, as well as “General Commercial” areas located beyond US HWY 98. This alternative would not disproportionately affect minority or low-income populations and would have no impact on Environmental Justice.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired back to their pre-disaster conditions. The immediate project area does not include any residential areas and is designated as “Preservation” land within the COMB. During project construction, an increase in construction traffic to the project site may temporarily affect areas adjacent to and immediately landward of the project area designated as “Tourist Residential”, “Townhouse District”, and “Tourist Commercial”, as well as “General Commercial” areas located beyond US HWY 98. This alternative would not disproportionately affect minority or low-income populations and would have no impact on Environmental Justice.

3.4.8 Historic and Cultural Resources

Cultural resources include historic architectural properties (including buildings, structures, and objects), prehistoric and historic archaeological sites, historic districts, designed landscapes, and traditional cultural properties. The primary federal statutes that apply to cultural resources are NEPA and Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended. The NHPA created the National Register of Historic Places (NRHP) and criteria to determine if cultural resources are eligible for listing in the NRHP. The NHPA defines historic properties as any prehistoric or historic district, site, building, structure, or object that is listed in, or eligible for listing in, the NRHP (36 CFR 800.16). When NRHP-eligible properties are present, federal agencies must assess the effect of the undertaking on them and consider ways to avoid, minimize, or mitigate potential adverse effects.

The area of potential effect (APE) for cultural resources is limited to the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. A literature review of the National Park Service (NPS) National Register of Historic Places (NRHP) GIS resource and the Florida Master Site Files (FMSF) was conducted. The literature review focused on the APE and included a 1-mile buffer around the APE. Fifteen cultural resource investigations; two archaeological sites listed in the NRHP, 44th Street (Y00938), Salt Creek (BY01088); one above ground historic resources, 120 38th Street (BY02045); and one historical resource group, Mexico Beach Canal (BY02046) were identified within portions of the APE. Work associated with the repairs, replacement and enhancements of the jetties would occur within previously disturbed soils. Moreover, because work associated with the repairs, replacement and enhancements of the jetties would not disrupt the canal or substantially alter its function in any way, the work associated would likely have no effect to historic properties. In addition, because the work being performed would primarily be associated with ancillary non-historic features that do not affect the historic integrity of the canal, work performed to these “non-contributing” elements would likely not alter its eligibility for inclusion on the NRHP.

The Programmatic Agreement between FEMA and the Florida SHPO signed September 10, 2014, and the Duration Amendment, effective September 1, 2023, does not include programmatic allowances addressing the potential new ground disturbance associated with the repairs, replacement, and enhancements of the jetties.

The threshold level for significant impacts to cultural resources under NHPA would be those impacts that adversely affect any historic property that is eligible for or listed in the NRHP under Section 106 or has been identified by a federally recognized tribe as a sacred site or traditional cultural property.

Alternative 1 – No Action

The No Action Alternative would not involve any construction activities and no federal undertaking would occur; therefore, there would be no impact to cultural resources or further responsibility under Section 106.

Alternative 2 – Replace and Extend East Jetty, Repair and Enhance West Jetty (Preferred Alternative)

Alternative 2 would include the repair and extension of the east jetty 152 feet and repair and enhancement to the west jetty adjacent to the Mexico Beach Canal. Ground disturbance would be limited to construction activities and monitoring will be conducted as required by FDEP and USACE permits. The construction of the east jetty extension and west jetty enhancement to prevent sediment buildup in the Mexico Beach Canal in order to maintain its functionality and decrease dredging frequency would serve as an additional layer of protection for any in situ archaeological or historic material, and historic structures.

Based on the results of previous investigations and FEMA's historic property identification efforts, FEMA submitted a formal consultation to the SHPO on January 5, 2023. Concurrence from SHPO was received on February 8, 2023, with a finding of No Adverse Effect to Historic Properties. Additionally, FEMA contacted ten Native American Tribes. Three of the tribes provided concurrence with FEMA's finding of No Adverse Effect to Historic Properties and the seven other tribes did not express any objections to the proposed project. The following conditions would be applied to the project:

- 1) If human remains or intact archaeological deposits are uncovered, work in the vicinity of the discovery will stop immediately and all reasonable measures to avoid or minimize harm to the finds will be taken. The applicant will ensure that archaeological discoveries are secured in place, that access to the sensitive area is restricted, and that all reasonable measures are taken to avoid further disturbance of the discoveries. The applicant's contractor will provide immediate notice of such discoveries to the applicant. The applicant will contact the Florida Division of Historic Resources and FEMA within 24 hours of the discovery. Work in the vicinity of the discovery may not resume until FEMA has completed consultation with SHPO, Tribes, and other consulting parties as necessary. If unmarked human remains are encountered during permitted activities, all work will stop immediately,

and the proper authorities will be notified in accordance with Florida Statutes, Section 872.05.

- 2) Construction vehicles and equipment will be stored onsite during the project or at existing access points within the Applicant's right-of-way. No expansion to previously existing access points or staging areas will occur.

Additional conditions requested by the FL SHPO:

- 3) If prehistoric or historical artifacts such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with the Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activity involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850) 245-6333. Project activities shall not resume without verbal and /or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work will stop immediately, and the proper authorities will be notified in accordance with Florida Statutes, Section 872.05.

Based on the analysis conducted and the conditions required for fortuitous finds or unexpected discoveries, Alternative 2 would have no adverse effects on historic and archaeological resources.

Alternative 3 – Repair East and West Jetties to Pre-Disaster Conditions

Under Alternative 3, the east and west jetties to the Mexico Beach Canal entrance in the COMB would be repaired to their pre-disaster conditions. It is not anticipated for the work along the jetties to have an impact on historic resources as all work associated would occur within previously disturbed soils. Ground disturbance would be limited to construction activities and there would be no excavation below the existing jetty profile. The addition of stone and riprap to slow down sediment buildup in the Mexico Beach Canal in order to maintain its functionality and decrease dredging frequency would serve as an additional layer of protection for any in situ archaeological or historic material, and historic structures.

The first indication of the jetties being built is found in a USDA 1975 aerial photograph, and the 1983 Beacon Hill 1:24000 Scale USGS Topographic Map. Substantial renovations to the jetties occurred in 2010. Repairing of the jetties would meet the criteria in the Programmatic Agreement between FEMA and the Florida SHPO signed September 10, 2014, and the Duration Amendment, effective September 1, 2023, Appendix B: Programmatic Allowances, II.E.1.a, In-kind repairs or replacement to canal systems and associated elements. Therefore, Alternative 3 would have no adverse effects on historic and archaeological resources.

SECTION 4.0: CUMULATIVE IMPACTS

According to NEPA, cumulative impacts 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” (40 CFR 1508.7). Cumulative impacts were evaluated based on general descriptions of past, present, and reasonably foreseeable projects in the vicinity of the project area. Their impacts were considered for both proposed action and the no-action alternative.

Past, Present, and Reasonably Foreseeable Projects

In 2019, the COMB completed the “Mexico Beach Emergency Dune Project”, which consisted of an emergency dune (FEMA Berm) between R-127.6 and R-144 over 16,200 feet. The beginning (west side) of this project was located within the limits of the proposed Jetty repair project. No structures were added as part of that project and 95,000 cy of beach compatible sand was imported from an upland mine. In 2021, the “Mexico Beach Inlet Sand Bypassing and Beach Restoration Project” was constructed using funds from several State of Florida Grants, which including hauling roughly 21,000 cy of stockpiled beach sand dredged from the inlet at R-127.8 into the critically eroded shoreline section (R-132 to R-138).

Two proposed projects were identified that may contribute to cumulative impacts of the proposed jetty repair project. The proposed Mexico Beach Renourishment and Dune Restoration Project will be constructed in the project vicinity using funding from State of Florida Grants along the shoreline immediately east of the east jetty; this project is described below. Additionally, the Mexico Beach Pier that was destroyed during Hurricane Michael is currently in the permitting process and is expected to be built sometime in 2024. These projects are being permitted and constructed independently of each other.

Due to the impacts of Category 5 Hurricane Michael that caused extensive structural damage and beach and dune erosion along the entirety of the Mexico Beach shoreline, Bay County has proposed to restore the entire length of its shoreline and increase the level of storm protection by restoring the dune system. The project consists of the restoration, and subsequent nourishment, of the Mexico Beach shoreline using beach compatible material obtained from an approved offshore borrow area located approximately 2.4 miles offshore and placing up to 1.5 million cy of this sand along approximately 3 miles of Mexico Beach shoreline, including dune restoration only from R-127.8 to R-130 and beach and dune restoration from R130 to R-144. Bay County was issued FDEP Permit No. 0387371-001-JC for the project on December 20, 2022. The USACE permit is a separate permit from the Mexico Beach Jetty project and construction of the Mexico Beach Renourishment and Dune Restoration Project is tentatively anticipated to occur in winter of 2024, pending issuance of the USACE permit.

The proposed Mexico Beach Jetty Extension and Repairs project (Alternative 2 in this EA) was issued FDEP Permit No. 0416748-001-JC on January 26, 2023, and construction would commence once the USACE permit is issued. It is anticipated that the jetty project will take between three to five months to complete depending on the contractor. It is possible this project may be constructed prior to the proposed Mexico Beach Renourishment and Dune Restoration project, but that is currently unknown due to the lack of federal permits for both projects. It is possible both projects could be under construction at the same time, though the projects are independent (i.e., each project would be constructed regardless of whether the other is built). It is not likely that the same contractor

would construct both projects due to the diverse nature of both projects and the requirements for different equipment needed to construct each project are substantially different (i.e., beach nourishment requires an offshore dredge to pump sand on the beach whereas the jetty project will require a land-based crane to place armor stone within a construction template.)

SECTION 5.0: AGENCY COORDINATION AND PUBLIC INVOLVEMENT

The COMB submitted permit applications to the USACE in January 2022 and FDEP in February 2022 for the proposed project (Alternative 2). On January 26, 2023, FDEP issued Permit No. 0416748-001-JC for the Mexico Beach Jetty Extension and Repair; in addition to providing regulatory and proprietary authorizations, this permit also constitutes certification of compliance with state water quality standards pursuant to Section 401 of the Clean Water Act, 33 U.S.C. 1341 and constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act. A copy of the FDEP permit is provided as Appendix F. FEMA has completed Endangered Species Act (ESA) Section 7 Consultation, MSA Consultation, and NHPA Section 106 Consultation described below, and issuance of the USACE permit is pending.

In a letter dated April 10, 2023, FEMA requested the initiation of informal consultation with National Marine Fisheries Service (NMFS). On April 18, 2023, NMFS issued a Letter of Concurrence (LOC) with FEMA's conclusions that the proposed action is not likely to adversely affect the NMFS ESA-listed species and/or designated critical habitat. The COMB Canal Jetty's project tracking number in the NMFS Environmental Consultation Organizer (ECO) is SERO-2022-03059.

In a letter dated June 12, 2023, FEMA initiated informal consultation with U.S. Fish and Wildlife Service (USFWS) for the proposed jetty repair project. In an email dated November 2, 2023, USFWS concurred with FEMA's determinations that the proposed action may affect but is not likely to adversely affect the ESA-listed species and/or designated critical habitat.

In a letter dated August 9, 2023, FEMA initiated formal consultation with NOAA for Essential Fish Habitat (EFH) under MSA Service for the proposed jetty repair project. In an email dated August 10, 2023, NOAA concurred with FEMA's determinations that the proposed action may adversely affect EFH.

In a letter dated January 5, 2023, FEMA initiated Section 106 Consultation with Florida Department of State, Division of Historic Resources (DHR) and ten Tribes with vested interest in Bay County, Florida and requested concurrence with FEMA's determination of "no adverse effect to historic properties". The DHR issued their concurrence letter on February 8, 2023. Additionally, three of the tribes issued their concurrence and the seven other tribes did not express any objections to the proposed project.

SECTION 6.0: PERMIT AND PROJECT CONDITIONS

1. Under Alternative 2, the applicant would comply with all conditions in the USACE permit (pending) and obtain any permit modifications as needed.
2. Under Alternative 2, the applicant would comply with all conditions in FDEP Permit No. 0416748-001-JC (provided in Appendix F) and obtain any additional modifications as needed.
3. Under Alternative 2, consultation letters were sent to the Florida State Historic Preservation Office (SHPO) and ten Tribes with vested interest in Bay County, Florida on January 5, 2023, with the following conditions:
 - a. If human remains or intact archaeological deposits are uncovered, work in the vicinity of the discovery will stop immediately and all reasonable measures to avoid or minimize harm to the finds will be taken. The applicant will ensure that archaeological discoveries are secured in place, that access to the sensitive area is restricted, and that all reasonable measures are taken to avoid further disturbance of the discoveries. The applicant's contractor will provide immediate notice of such discoveries to the applicant. The applicant will contact the Florida Division of Historic Resources and FEMA within 24 hours of the discovery. Work in the vicinity of the discovery may not resume until FEMA has completed consultation with SHPO, Tribes, and other consulting parties as necessary. If unmarked human remains are encountered during permitted activities, all work will stop immediately, and the proper authorities will be notified in accordance with Florida Statutes, Section 872.05.
 - b. Construction vehicles and equipment will be stored onsite during the project or at existing access points within the Applicant's right-of-way. No expansion to previously existing access points or staging areas will occur.

Additional conditions requested by the FL SHPO:

- c. If prehistoric or historical artifacts such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with the Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activity involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850) 245-6333. Project activities shall not resume without verbal and /or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work will stop immediately, and the proper authorities will be notified in accordance with Florida Statutes, Section 872.05.
4. Under Alternative 2, an informal consultation letter was sent to NMFS Southeast Regional Office on April 10, 2023, with concurrence received on April 18, 2023, with the following conditions:

- a. Protected Species Sightings –The action agency and any permittee shall ensure that all personnel associated with the project are instructed about the potential presence of species protected under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). All on-site project personnel are responsible for observing water-related activities for the presence of protected species. All personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing listed species and all marine mammals. To determine which protected species and critical habitat may be found in the transit area, please review the relevant marine mammal and ESA-listed species at Find a Species (<https://www.fisheries.noaa.gov/find-species>) and the consultation documents that have been completed for the project.
- b. Equipment – Turbidity curtains, if used, shall be made of material in which protected species cannot become entangled and be regularly monitored to avoid protected species entrapment. All turbidity curtains and other in-water equipment shall be properly secured with materials that reduce the risk of protected species entanglement and entrapment.
 - 1) In-water lines (rope, chain, and cable, including the lines to secure turbidity curtains) shall be stiff, taut, and non-looping. Examples of such lines are heavy metal chains or heavy cables that do not readily loop and tangle. Flexible in-water lines, such as nylon rope or any lines that could loop or tangle, shall be enclosed in a plastic or rubber sleeve/tube to add rigidity and prevent the line from looping and tangling. In all instances, no excess line shall be allowed in the water. All anchoring shall be in areas free from hardbottom and seagrass.
 - 2) Turbidity curtains and other in-water equipment shall be placed in a manner that does not entrap protected species within the project area and minimizes the extent and duration of their exclusion from the project area.
 - 3) Turbidity barriers shall be positioned in a way that minimizes the extent and duration of protected species exclusion from important habitat (e.g., critical habitat, hardbottom, seagrass) in the project area.
- c. Operations– For construction work that is generally stationary (e.g., barge-mounted equipment dredging a berth or section of river, or shore-based equipment extending into the water):
 - 1) Operations of moving equipment shall cease if a protected species is observed within 150 feet of operations.
 - 2) Activities shall not resume until the protected species has departed the project area of its own volition (e.g., species was observed departing or 20 minutes have passed since the animal was last seen in the area).
- d. Vessels– For projects requiring vessels, the action agency, and any permittee shall ensure conditions in the Vessel Strike Avoidance Measures are implemented as part of the project/permit issuance

(<https://www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance>).

- e. Consultation Reporting Requirements– Any interaction with a protected species shall be reported immediately to NOAA Fisheries SERO PRD and the local authorized stranding/rescue organization.
5. Under Alternative 2, an informal consultation letter was sent to the USFWS on June 12, 2023, with concurrence received on November 2, 2023, with the following conditions:
- a. Beach Mice – The Perdido Key beach mouse occurs in Escambia County, the Choctawhatchee beach mouse occurs in Okaloosa, Walton, and Bay counties, and the St. Andrew beach mouse occurs in Bay and Gulf counties.
 - 1) Repair or replacement of structures shall occur in the same location or footprint of the previously permitted structure unless it has been determined to be environmentally better to relocate the structure.
 - 2) Construction equipment and vehicle staging/ parking/storage areas should be located on paved surfaces and outside of vegetated areas.
 - 3) Movement of equipment and vehicles shall be restricted to roadways and roadbeds or outside of vegetated areas or areas of storm-buried vegetation.
 - 4) All activity associated with the project shall be confined to daylight hours.
 - 5) No excavation of material outside of the previous footprint of the structure.
 - 6) Fence shall be installed along the project property boundaries to prevent access into adjacent beach mouse habitat. The fence shall allow movement of beach mice and prevent construction work trespass.
 - b. Sea turtles: Sea turtle nesting surveys in these counties mark all the nests. Thus, it is feasible to implement avoidance and minimization measures to protect the nests. During the sea turtle nesting season (May 1 through October 31) work shall be allowed provided the following measures are implemented.
 - 1) Repair or replacement of structures shall occur in the same location or footprint of the previously permitted structure unless it has been determined to be environmentally better to relocate the structure.
 - 2) Repair work shall be conducted to the greatest extent practicable from landward positions with minimal equipment intrusion on to the beach. Use of equipment on the beach shall be allowable provided it is taken off the beach by 8:00 p.m. every

night and County/City approved designated beach accesses are used. All driving on the beach shall be restricted to the area waterward of the mean high tide line.

- 3) All activity shall be confined to daylight hours and shall not occur prior to 9:00 a.m. following the completion of all necessary sea turtle surveys and conservation activities.
 - 4) Silt fencing shall be installed to designate construction areas and confine all equipment and activities inside these areas.
 - 5) All excavations and temporary alteration of beach topography shall be filled, covered, or leveled to the natural beach profile prior to 8:00 p.m. each day.
 - 6) No projects may occur within ten (10) feet of a marked sea turtle nest.
 - 7) Relocation of sea turtle nests to accommodate construction is not authorized.
- c. Shorebird surveys should be conducted by trained, dedicated individuals using accepted, appropriate ecological survey procedures (for example, see "Breeding Season Population Census Techniques for Seabirds and Colonial Waterbirds Throughout North America" at URL: <http://www.mp2-pwrc.usgs.gov/cwb/manual/>).
- 1) Nesting season surveys should begin on April 1 (or February 15 in snowy plover habitat) or 45 days prior to construction commencement, whichever is later, and be conducted daily throughout the construction period.
 - 2) Within the project area, a site-specific buffer should be established around any location where shorebirds have been engaged in courtship or nesting behavior, or around areas where piping plovers occur, or winter migrants congregate in significant numbers. Any and all construction activities, including movement of vehicles, should be prohibited in the buffer zone.
 - 3) The width of the buffer zone should be increased if birds appear agitated or disturbed by construction or other activities in adjacent areas.
 - 4) Designated shorebird buffer zones should be posted with clearly marked signs around the perimeter. These markings should be maintained until nesting is completed or terminated, the chicks fledge, or piping plovers or winter migrants depart.
 - 5) No construction activities or stockpiling of equipment should be allowed within the shorebird buffer area.
- d. If the proposed improvements to the jetties (alternative 2 of the EA) is found to cause unexpected impacts to the immediate shoreline to the east or west the subapplicant shall stop all work and notify FEMA EHP immediately in order to re-engage coordination with the USFWS. This project cannot impact Bonfire Beach, Farmdale (aka Sugar Sands), or

Tyndall AFB areas with permits in place to reduce impacts to coastal listed species and their habitat which are located west of the proposed action.

6. Under Alternative 2, a consultation letter was sent to NOAA for Essential Fish Habitat consultation under MSA on August 9, 2023, with concurrence received on August 10, 2023, with the following conditions:
 - a. The Applicant will comply with project conditions outlined in FDEP Permit No. 0416748-001-JC dated January 26, 2023.
 - b. The Applicant will comply with the conditions outlined in the NMFS informal consultation letter and LOC received 4/18/2023.
7. Under Alternatives 2 and 3, the applicant will comply with the following conditions from the Standard Manatee Conditions for In-water Work (USFWS, 2011):
 - a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
 - b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
 - c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
 - d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shut down if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
 - e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at ImperiledSpecies@myFWC.com.

- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads Caution: Boaters must be posted. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shutdown of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at http://www.myfwc.com/WILDLIFEHABITATS/manatee_sign_vendors.htm. Questions concerning these signs can be forwarded to the email address listed above.
8. Under Alternatives 2 and 3, the applicant will comply with the following conditions from the NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions (Revised March 23, 2006):
- a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.
 - b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.
 - c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.
 - d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.
 - e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.
 - f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-

824-5312) and the local authorized sea turtle stranding/rescue organization.

- g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.
9. Handling, storage, and disposal of hazardous materials and waste during construction activities, including measures to prevent releases, must be conducted in accordance with applicable environmental compliance regulations.

SECTION 7.0: LIST OF PREPARERS

Name	Title	Organization
Joseph Morrow, PE	Senior Coastal Engineer	MRD Associates, Inc.
Lauren Floyd	Senior Marine Biologist	Coastal Protection Engineering
Scott Fletcher	Senior Envrm. Protection Specialist	FEMA
Dori Edwards	Environmental Protection Specialist	FEMA PA-EHP TAC
M. Coral Rosado-Tobaschus	Environmental Protection Specialist	FEMA
Ashley Asuncion	Environmental Protection Specialist	FEMA

SECTION 8.0: REFERENCES

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U.S. Fish and Wildlife Service (USFWS). 2023. IPaC Information for Planning and Consultation, Bay County, Florida. Last accessed July 3, 2023, at <https://ipac.ecosphere.fws.gov/>.

**Appendices available upon request to FEMA
Region 4 EHP ([FEMA-R4EHP-
FLORIDA@fema.dhs.gov](mailto:FEMA-R4EHP-FLORIDA@fema.dhs.gov))**