



Supplemental Environmental Assessment

166311 – Navarre Beach Restoration

FEMA-DR-4564-FL

Navarre Beach, Santa Rosa County, Florida

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FEMA

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LIST OF ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effects
BFE	Base Flood Elevation
BMP	Best Management Practice
BO	Biological Opinion
BP	British Petroleum
CAA	Clean Air Act
CBIA	Coastal Barrier Improvement Act of 1990
CBRA	Coastal Barrier Resources Act
CBRS	Coastal Barrier Resources System
CCCL	Coastal Construction Control Line
CEQ	Council on Environmental Quality
CFR	<i>Code of Federal Regulations</i>
CRAS	Cultural Resource Assessment Survey
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
CZMP	Coastal Zone Management Plan
DHR	Florida Division of Historical Resources
EA	Environmental Assessment
EFH	Essential Fish Habitat
EO	Executive Order
EFH	Essential Fish Habitat
EPA	Environmental Protection Agency

LIST OF ACRONYMS AND ABBREVIATIONS, CONTINUED

ERP	Environmental Resource Permit
ESA	Endangered Species Act
FAC	Florida Administrative Code
FCMP	Florida Coastal Management Program
FDEM	Florida Division of Emergency Management
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FMFS	Florida Master Site File
FONSI	Finding of No Significant Impact
GHG	Greenhouse Gas
GRBO	Gulf Regional Biological Opinion
IPaC	Information for Planning and Consultation
JCP	Joint Coastal Permit
JD	Jurisdictional Determination
MBTA	Migratory Bird Treaty Act
MHWL	Mean High Water Line
NEPA	National Environmental Policy Act
NHC	National Hurricane Center
NGVD	National Geodetic Vertical Datum
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service

LIST OF ACRONYMS AND ABBREVIATIONS, CONTINUED

NMFS-HCD	National Marine Fisheries Service - Habitat Conservation Division
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
OEHP	Office of Environmental Planning & Historic Preservation
OPA	Otherwise Protected Area
PA	Public Assistance
PBO	Programmatic Biological Opinion
PFAs	Per- and Polyfluoroalkyl substances
PNP	Private Non-Profit
REO	Regional Environmental Officer
SEA	Supplemental Environmental Assessment
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Office or Officer
Stafford Act	Robert T. Stafford Disaster Relief and Emergency Assistance Act
SPBO	Statewide Programmatic Biological Opinion
SWPPP	Stormwater Pollution Prevention Plan
THPO	Tribal Historic Preservation Office or Officer
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WOTUS	Waters of the U.S.

1. Introduction

Hurricane Sally impacted Florida between September 14, 2020, and September 28, 2020, bringing storm surge and strong wave action. President Trump signed a disaster declaration (FEMA-4564-DR-FL) on September 23, 2020, authorizing the Department of Homeland Security's 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.

Santa Rosa County, Florida was designated in Hurricane Sally to receive federal assistance. Santa Rosa County has applied through the PA Program to receive funding to restore the eroded Gulf Coast shoreline along Navarre Beach on Santa Rosa Island, Santa Rosa County, Florida. The area of consideration is approximately 18,528 linear feet (3.5 miles) located between Florida R-192 + 460' and R-210.5 + 138' [GPS Coordinates: (30.371122, -86.918464) to (30.379370, -86.860547)] and was last renourished in 2016 using 1,200,000 cubic yards (CY) of offshore, beach-compatible sand from borrow areas T2-1A and T2-1B [GPS Coordinates: (30.283247176, -86.839156179)]. The westernmost portion of the project area is within an Otherwise Protected Area (OPA), FL-98P, and its eastern limit is adjacent to a Coastal Barrier Resources System (CBRS) System Unit FL-97. The construction, maintenance, and repair of the engineered Navarre Beach project is the legal responsibility of Santa Rosa County. The shoreline is an engineered and maintained beach previously authorized for nourishment and maintenance by the U.S. Army Corps of Engineers (USACE).

The USACE prepared an *Environmental Assessment for the Navarre Beach Restoration Project* in November 2014 and issued a Finding of No Significant Impact (FONSI) on their proposed action. Any federal agency may adopt another federal or state agency's Environmental Assessment (EA) [40 *Code of Federal Regulations* (CFR) §1500.4(n), §1500.5(h), and §1506.3] providing the original document satisfies the agency's National Environmental Policy Act (NEPA) requirements. FEMA has adopted USACE's EA and has also provided supplemental information through the preparation of a Supplemental Environmental Assessment (SEA). USACE's EA and FONSI are included as Appendix B of this document.

2. Purpose and Need

As a result of Hurricane Sally in 2020, the engineered shoreline along Navarre Beach on Santa Rosa Island in Santa Rosa County was heavily eroded. Santa Rosa County, having legal responsibility to maintain Navarre Beach, may be eligible for funding through the FEMA PA Program pursuant to Title 44 of the CFR § 206.223(a)(3). The community has identified the need to restore the capacity of the shoreline to withstand future storm events, reduce erosion, and decrease risk from future events to human life and improved property. Prior to the construction of the engineered beach and subsequent nourishments, the upland areas of Santa Rosa County were significantly impacted by storm impacts

and surge inundation. The proposed action would reduce the risk to improved property landward of the beach, provided additional habitat for sea turtles and shorebirds, and increased recreational values.

Santa Rosa County receives on an average over 900,000 visitors per year, bringing eco-tourism dollars to the county and state including to local businesses. According to an annual survey commissioned by the Santa Rosa County Tourism Department Office, ninety-six (96) percent of visitors to Santa Rosa County selected the destination for leisure rather than business, with eighty-one (81) percent of the polled vacationers citing the beach as the activity they most enjoy. Restoration of the beach and protection of the park facilities will enable this essential economic element to continue.

The objective of FEMA's PA Program is to provide funding assistance to state, tribal and local governments, and certain types of Private Non-Profit (PNP) organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President.

Through the PA Program, FEMA provides supplemental federal disaster assistance for debris removal, emergency protective measures, and the repair, replacement, or restoration of disaster- damaged, publicly owned facilities and the facilities of certain PNP organizations. The PA Program also encourages protection of these damaged facilities from future events by providing funding assistance for hazard mitigation measures during the recovery process.

3. Project Location and Background

The proposed beach renourishment project is planned for the eroded Gulf Coast shoreline along Navarre Beach on Santa Rosa Island, Santa Rosa County, Florida. The project area is comprised of approximately 18,528 linear feet (3.5 miles) of engineered beach, beach berm, and dune system located between Florida R-192 + 460' and R-210.5 + 138' [GPS Coordinates: (30.371122, -86.918464) to (30.379370, -86.860547)]. The westernmost portion of the project area is within an OPA, FL-98P, bordering the Gulf Island National Seashore and its eastern limit is adjacent to a CBRS System Unit, FL-97. Santa Rosa County's Navarre Beach Fishing Pier and associated park are within the eastern portion of the Navarre Beach Restoration project. The segment of Navarre Beach from the Navarre Beach Fishing Pier westward to R-192 is characterized by high-density, multi-family buildings, including hotels, condominiums, and timeshares, while single-family residences constitute the swath of beach from R-192 to R-204. Upland use of Navarre Beach is primarily recreational in nature and encompasses the sandy beach, natural resources, and amenities of the built environment. Santa Rosa County's beach accesses and the Navarre Beach Fishing Pier and park are open to the general public. It is not anticipated that there will be a change in the existing upland uses as a result of the Navarre Beach Restoration project. The source of the high-quality, beach-compatible sand to be utilized in this restoration project is borrow areas T2-1A and T2-1B [GPS Coordinates: (30.283247176, -86.839156179)], which are sand ridges approximately four (4) miles offshore of Navarre Beach in the open waters of the Gulf of Mexico.

Navarre Beach was a natural beach until 2006, at which time Santa Rosa County undertook the Navarre Beach Berm and Restoration Project to address damages to the beach, beach berm, and dune system incurred during Hurricane Ivan in 2004 and Hurricane Dennis in 2005. This project was authorized by the USACE through their issuance of permit SAJ-2003-10496 (IP-EPS) on October 13, 2005. Under the referenced USACE permit, Santa Rosa County placed 2,950,000 CY of beach-compatible sand from borrow areas T2-1A and T2-1B along 4.1 miles of Navarre Beach's beach, beach berm, and dune system and planted salt-tolerant dune vegetation in accordance with an approved construction template. This originally constructed beach template consisted of a two-tiered berm, with beach berms at elevations +9 feet National Geodetic Vertical Datum (NGVD) and +5 feet NGVD. With the completion of the initial beach restoration project, Santa Rosa County established Navarre Beach as an engineered beach, beach berm, and dune system whose construction, maintenance, and repair became the legal responsibility of the county. Navarre Beach is not a federally constructed shoreline under the specific authority of the USACE. In September of 2008, tropical storms Gustav and Ike eroded, but did not breach, a section of the engineered dune. To address the incident-related damages, Santa Rosa County placed 11,811 CY of sand within a 1,600 linear foot segment of impacted dune and installed 21,000 plants along the dune's entire length in 2010. Beach-compatible sand from an upland source was transported via truck haul to the project area.

Navarre Beach was last renourished in 2016 using 1,200,000 CY of offshore, beach-compatible sand from borrow areas T2-1A and T2-1B. The USACE issued Santa Rosa County a 15-year permit, SAJ-2003-10496 (SP-TSH), on January 07, 2014, for a maximum of two maintenance events, the first of which included in its design advanced maintenance fill throughout the project area. The renourishment project utilized dredge material to restore the constructed berm by placing sand and subsequently planting salt-tolerant vegetation on top of the berm and along the dune face. Hopper dredges with pump-out facilities were used to dredge 1,200,000 CY of sandy material from the 378.6-acre borrow area. This beach-compatible sand was placed to establish design elevations consistent with those in the construction template. Additional sand was transferred from the hopper dredge to the beach hydraulically through pipelines that were floated or positioned on the submerged bottom and was subsequently used to construct a 10- to 20-foot-wide dike parallel to the shoreline. This dike was constructed in advance of the pipeline discharge point as the project progressed, containing and confining sand from the pipeline discharge. The discharge of dredge material filled approximately 213 acres of marine waters seaward of the mean high water line (MHWL), as well as 15.7 acres of land situated between the MHWL and high tide line. As a result of the 2016 beach renourishment project, the high tide line was relocated approximately 173 feet seaward along the 4.1 mile stretch of Navarre Beach shoreline.

The current Navarre Beach Restoration project was designed to address damages related to the Presidentially declared major disaster Hurricane Sally, whose incident period was between September 14, 2020, and September 28, 2020. As a result of the storm surge and strong wave action experienced during this storm event, Navarre Beach's engineered and maintained beach, beach berm, and dune system was significantly eroded. Santa Rosa County has applied through the PA Program to receive funding to restore the eroded Gulf Coast shoreline along Navarre Beach on Santa Rosa Island, Santa

Rosa County, Florida. The Navarre Beach Restoration project area lost a total of 254,222 CY of sand from the beach and dune system during the Hurricane Sally incident period. Santa Rosa County's costal engineer compared the post-construction bathymetric surveys following the 2016 maintenance renourishment to the 2019 pre-storm survey and determined that there was no apparent erosion that occurred during this time period. Accordingly, there was no estimated background erosion, and the incident-related sand loss is approximately 254,222 CY. The Navarre Beach Restoration project seeks to renourish the same beach previously nourished in 2006, as authorized by USACE permit SAJ-2003-10496 (IP-EPS) issued on October 13, 2005, and in 2016, as the first of two (2) maintenance events authorized by USACE permit SAJ-2003-10496 (SP-TSH) issued on January 07, 2014. The proposed renourishment project will utilize the same borrow areas, Borrow Area T2-1A and T2-1B, from which sand was previously sourced for Navarre Beach's most-recent renourishment in 2016.

4. Alternatives

Two (2) alternatives are considered in addressing the purpose and need of the Navarre Beach Renourishment Project. Alternative 1 is the No Action Alternative and Alternative 2 would repair the beach to pre-disaster condition plus additional advanced fill to address background erosion (preferred alternative). Reasonable alternatives are those that meet the underlying purpose of, and need for, the Proposed Action; are feasible from both technical and economic standpoints; and meet reasonable screening criteria (selection standards) that are suitable to a particular action. An alternative that was determined to not meet the purpose and need was eliminated from detailed analysis in this SEA and is discussed below.

4.1. Alternative 1: No Action Alternative

Under the No Action Alternative, the Navarre Beach shoreline would remain in its current state and sand would not be placed on the beach. Ongoing erosion would continue along the shoreline, impacting the existing beach, beach berm, and dune system. Consequently, the area would not be protected from future storm events and improved private and public property would be at risk of incident-related damages from storm surge and wave action. Benefits to listed species and recreational value would not occur. Nesting habitat for sea turtles and foraging area for piping plover would be lost. If not renourished, Navarre Beach would erode and become gradually narrower and steeper. A narrower and steeper beach is less desirable for tourists and this erosion would, accordingly, adversely affect the recreational use of the beach and associated tourism. The No Action Alternative would not satisfy the overall project purpose.

4.2. Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion (Preferred Alternative)

Alternative 2 would restore the amount of sand lost from Hurricane Sally and any future declared disasters if applicable, plus sand lost from background erosion up to the full engineered template. Santa Rosa County has submitted applications to FEMA for funding under the PA program to repair

damages as a result of FEMA-4564-DR-FL. The project consists of placing approximately 254,222 CY of engineered beach sand whose loss was attributed to Hurricane Sally along approximately 18,528 linear feet (3.5 miles) of Navarre Beach, between Florida R-192 + 460' and R-210.5 + 138' [GPS Coordinates: (30.371122, -86.918464) to (30.379370, -86.860547)]. Santa Rosa County will place up to 750,000 CY of sand, by excavating up to 1,000,000 CY of sand from the offshore borrow areas T2-1A and T2-1B.

The borrow areas are sand ridges located approximately four (4) miles offshore of Navarre Beach (30.283247176, -86.839156179) and contain high-quality, beach-compatible sand consistent with the "sand rule" in Chapter 62B-41.007(i)(j) 1.-5. Florida Administrative Code (FAC). The sand from borrow areas T2-1A and T1-1B is compatible with the native Navarre Beach sand with respect to the engineering properties, composition, and color. The native beach has an aggregate mean grain size of 0.37 mm with a silt content of 0.0%. Borrow Area 1B has a 0.35 mm grain size with a silt content of 0.19%. When compared to the granular metrics of the native beach, use of Borrow Area 1B will result in an estimated Overfill Factor of 1.15. A maximum dredge elevation of -78.35 feet NAVD (equal to the previous permitted maximum dredge elevation of -78 feet NGVD) is proposed in the borrow area, which contains approximately 1.8 million cubic yards of material. Two (2) anomalies were identified by magnetometer in Borrow Area 1B during a 2003 submerged remote sensing survey. Accordingly, 200-ft buffers around these anomalies will be adhered to during dredging operations. Further, British Petroleum (BP) conducted contaminant testing in May of 2012, with the results indicating that no contaminants were present in Borrow Areas 1A and 1B.

The design fill template for this Alternative remains within the previously permitted and constructed project limits. The originally constructed beach template consisted of a two-tiered berm, with beach berms at elevations +9 feet NGVD and +5 feet NGVD. Sand loss in future Presidentially declared disasters may be included in this Alternative. This Alternative would most immediately increase the level of storm protection to the existing shore, upland habitat, and infrastructure. Under this Alternative, additional sand needed due to address background erosion would be replaced at the same time as the disaster related sand. This Alternative would minimize the need for future renourishments and allow for longer periods between nourishment activities since it would replace sand up to the full engineered template. Longer periods between nourishment activities would likely benefit several of the public interest factors discussed below in sections 4.4 and 5. In their 2014 EA, the USACE noted that the Florida Department of Environmental Protection (FDEP) classified the project shoreline as a "critically eroded" area and asserts that the preferred alternative is consistent with FDEP's Adopted Strategic Beach Management Plan.

4.3. Alternatives Considered and Dismissed

While off-site locations and configurations are generally alternatives to be considered, they are neither practical nor reasonable for a beach renourishment/shore protection project, as off-site alternatives would not satisfy the overall project purpose and need. Accordingly, offsite alternatives were not further considered.

On-site alternatives were also considered prior to the application for and issuance of the USACE permit in 2014. Coastal Tech identified four (4) on-site design fill template alternatives in their Preliminary Design Document, dated June 30, 2011. Using a cross-shore transport model known as LITPROF, each of the four (4) alternatives was evaluated for its physical ability to resist storms for 10- and 25-year return interval storms. Hydrographic storm data utilized for the assessment was obtained primarily from the National Oceanic and Atmospheric Administration (NOAA) and the National Hurricane Center (NHC). All these options would result in similar impacts as all would utilize sandy material dredged from the proposed borrow location and all would involve discharge of the dredged area in the near shore environment to accomplish beach nourishment. Both the straight-slope beach and 9-ft berm alternatives would result in discharge over comparable areas, with the primary difference being increased elevations for the 9-ft berm alternative; the straight-slope beach alternative would utilize 576,302 cubic yards of sandy material and the 9-ft berm alternative would utilize 633,088 cubic yards. The originally constructed beach template and the originally constructed beach template with additional advanced fill would result in discharge over larger areas and would utilize 938,062 cubic yards and 1,019,643 cubic yards of sandy material, respectively. The four following design fill template alternatives were identified and evaluated:

- The “originally constructed beach template” with two-tiered berm [i.e., beach berms at elevations +9 ft NGVD and +5 ft NGVD (note—this alternative is sometimes referenced as the “design beach” in the Preliminary Design Document)]
- A construction template with a single berm at elevation +9 with a 1 vertical to 12 horizontal slope (“9-ft berm alternative”)
- A construction template with a straight sloping beach (i.e., not tiered) with a 1 vertical to 20 horizontal slope (“straight-sloping beach alternative”)
- The originally constructed beach template, but with “additional advanced fill” placed between beach monuments R-199 and R-206.

As stated in the Preliminary Design Document, based on results of the LITPROF analysis the originally constructed design appears to provide the most erosion protection from 10 and 25-year storm events, as compared to the “9-ft berm alternative” and “straight sloping beach alternative.” Neither the 9-ft berm alternative nor the straight sloping beach alternative appeared to provide any significantly greater erosion protection as compared to the existing beach profile, as surveyed in May 2010. The preferred and currently proposed alternative is the originally constructed beach template with additional advanced fill.

At the time of the preparation of its 2014 EA for the Navarre Beach Restoration project and issuance of a corresponding 15-year permit SAJ-2003-10496 (SP-TSH) on January 07, 2014, for a maximum of two maintenance events, the USACE considered an armored shoreline alternative. The standalone armoring of the 4.1-mile project shoreline with a combination of seawalls and/or large stone to halt erosion, as well as the maintenance of the engineered beach berm in tandem with shoreline armoring,

was considered. The USACE determined that armoring the shoreline would not affect special aquatic species. It would, however, result in adverse effects to federal protected species. Armoring the shoreline was expected to result in the loss of intertidal beach due to the deflation of waves and tides that would likely scour the area immediately waterward of the armoring. The intertidal zone is utilized as a foraging area by the piping plover, and, accordingly, armoring the shoreline was anticipated to reduce or eliminate potential utilization of the project area by the piping plover. Similarly, shoreline armoring was expected to limit or eliminate use of the beach by nesting sea turtles, adversely affecting those species as well. Armoring could potentially minimize loss of additional shoreline and afford some level of protection to private and public property. However, shoreline armoring would adversely affect the recreational value and tourism value of the beach due to the potential for scour on the seaside face of structures along Navarre Beach and the probable loss of intertidal zone that is heavily utilized for recreational purposes, such as ingress and egress from the water, skim boarding, shell collecting, fishing, and a play area for children. Armoring the shoreline would not provide for the overall project purpose and would not accommodate Santa Rosa County's stated goals of enhancing recreation and preserving natural resources within the project area.

For the current Navarre Beach Restoration project, an alternative that was considered and subsequently dismissed would entail the repair of Navarre Beach to pre-disaster condition without the additional advanced fill to address background erosion. This alternative would restore only the amount of sand lost from Hurricane Sally and any future federally declared disasters, if applicable, as a stand-alone project rather than combined in the next scheduled renourishment. Restoring the beach to pre-disaster condition without advanced additional fill would likely require future renourishments for background sand loss replacement to fill the engineered template. This alternative is less practicable for the several reasons. As has been observed over the past decade, Navarre Beach will likely continue to erode due to natural processes and may be exacerbated by the effects of tropical storms; the rate at which erosion will occur is more uncertain. Because of the high costs associated with mobilization and demobilization of a dredge operator, it is more economically feasible to accomplish larger scale nourishment on a less frequent basis, as compared to a smaller scale nourishment on a frequent basis. The potential impacts to the aquatic ecosystem are similar for both the repair of Navarre Beach to pre-disaster conditions and the repair of the engineered beach and dune system to pre-disaster condition with the placement of additional advanced fill alternatives. The placement of additional advanced fill would allow for longer periods between nourishment activities, which equates to less frequent disturbance to the beach, in the absence of discrete events such as hurricanes. Longer periods between nourishment activities would likely benefit several of the public interest factors discussed below in sections 4.4 and 5. In their 2014 EA, the USACE noted that the Florida Department of Environmental Protection (FDEP) classified the project shoreline as a "critically eroded" area and asserts that Alternative 2 (the preferred alternative) is consistent with FDEP's Adopted Strategic Beach Management Plan.

Another alternative considered was the repair of Navarre Beach to pre-disaster condition plus placement of additional sand to address possible background erosion resulting from Hurricane Sally. Santa Rosa County's coastal engineer compared the post-construction bathymetric surveys following

the referenced 2016 maintenance renourishment to the 2019 pre-storm survey and determined that there was no apparent erosion that occurred during this time period. As there was no estimated background erosion in the Navarre Beach project area attributed to Hurricane Sally, this alternative was dismissed.

In planning for the current Navarre Beach Restoration project, Santa Rosa County initially proposed sand placement within a CBRS System Unit, FL-97, and an OPA, FL-98P, along the Navarre Beach shoreline. As impacts to a CBRS System Unit and OPA were proposed, FEMA requested consultation with U.S. Fish and Wildlife Service (USFWS) under the Coastal Barrier Resources Act (CBRA) on April 15, 2021. USFWS responded on May 27, 2021, stating that sand placement within OPA FL-98P is not prohibited, but that sand placement within CBRS System Unit FL-97 for the intent of structural protection is not consistent with the three purposes of the CBRA. USFWS found that dune or berm placements often inhibit natural processes such as overwash events on barrier islands, which allows for over-growth of vegetation. Increased vegetation eventually restricts the use of coastal areas by beach nesting birds (least terns, black skimmers, snowy plovers). Sufficient sands remain for nesting sea turtles. Piping plovers prefer the bayside mudflats that form from overwash events. Lacking the needs to any other imperiled species, the USFWS found the Navarre Beach Renourishment Project as inconsistent with the purposes of the CBRA. Accordingly, sand placement within CBRS System Unit FL-97 has been removed from the Navarre Beach Restoration project’s scope of work.

4.4. Impact Evaluation

The Council on Environmental Quality (CEQ) notes: “Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial” (40 CFR 1508.8).

When possible, quantitative information is provided to establish potential impacts; otherwise, the potential qualitative impacts are evaluated based on the criteria listed in Table 4.0.1:

Table 4.0.1: Impact Significance and Context Evaluation Criteria for Potential Impacts

Impact Scale	Criteria
None/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.

Impact Scale	Criteria
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.

The impact analysis in this SEA evaluates the potential environmental direct and indirect impact of the No Action and Proposed Action alternatives. A summary table of the potential impacts of the No Action and Proposed Action alternatives and the corresponding environmental protection measures and permits required is provided here:

Table 4.0.1: Environmental Consequence by Alternative

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
5.1	Physical Resources		
	Geology and Soils	<p>No change – see USACE EA Section 6.1.1</p> <p>Alternative 1 – No impact.</p> <p>Alternative 2 – Minor, short-term impact on the substrate associated with an elevation change and resulting impacts on bottom-dwelling organisms within the nourishment area. No long-term impacts. The proposed borrow site with beach-compatible sand was utilized for the previous beach nourishment project at Navarre Beach and has been tested to comply</p>	<p>FDEP authorized Alternative 2 through JCP number 0220096-006-JC, issued 7 January 2014, which required that beach-compatible sand be utilized. Santa Rosa County is required to obtain any permit modifications as needed.</p> <p>Verification of compliance and any applicable permitting documents will be required during the FEMA closeout review process.</p>

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
		with regulatory standards. Alternative 2 required a Joint Coastal Permit (JCP) from FDEP that required beach compatible sand to be utilized.	
	Air Quality	<p>Updated -- see USACE EA Section 12.1</p> <p>Alternative 1 - No impact.</p> <p>Alternative 2 - Minor short-term impacts due to exhaust from construction equipment. The USACE analyzed the proposed action for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act (CAA), and the activities proposed would not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR, Part 93.153.</p>	Not applicable.
	Visual Quality and Aesthetics	<p>No change -- see USACE EA Section 6.4.4</p> <p>Alternative 1 - Impacts could result from future storm damages along the shoreline.</p> <p>Alternative 2 - Minor short-term adverse impact on the aesthetic qualities of the beach in the vicinity of construction associated with the presence of machinery and noise</p>	Not applicable.

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
		generated during its operation. Longer-term minor, beneficial effect associated with the completion of the proposed action and resulting wider beach.	
	Climate Change	<p>Updated – not included in USACE EA</p> <p>Alternative 1 – Impacts could result from future storm damages along the shoreline associated with fluctuations in weather patterns and sea level dynamics.</p> <p>Alternative 2 – Minor short-term impacts due to exhaust from construction equipment. The USACE analyzed the proposed action for conformity applicability pursuant to regulations implementing Section 176(c) of the CAA, and the activities proposed would not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR, Part 93.153.</p>	Not applicable.
5.2	Water Resources		
	Water Quality	<p>Updated – see USACE EA Sections 7.0.o., 10.1.3.d.(2), and 10.5</p> <p>Alternative 1 – No impact.</p> <p>Alternative 2 – Minor short-term impacts to</p>	FDEP authorized the project through JCP number 0220096-006-JC, issued 7 January 2014. This permit certifies compliance with state water quality standards pursuant to Section 401 of the CWA.

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
		<p>water quality during construction, primarily regarding turbidity. The progressive construction of a berm parallel to the shoreline will contain and confine dredged material pumped into the nourishment area, and any project-related turbidity would be confined the nourishment area within the berm. Additionally, the borrow area was utilized for the previous beach protection project at Navarre Beach and consists of beach compatible sand with very low silt content and, as such, high levels of turbidity are not anticipated. FDEP authorized the project through JCP number 0220096-006-JC, issued 7 January 2014. This permit certifies compliance with state water quality standards pursuant to Section 401 of the Clean Water Act (CWA).</p>	<p>Santa Rosa County is required to obtain any permit modifications as needed.</p> <p>Verification of compliance and any applicable permitting documents will be required during the FEMA closeout review process.</p>
	<p>Floodplains (Executive Order 11988)</p>	<p>Updated – not included in the USACE EA</p> <p>Alternative 1 – No impact. Risk to human life and improved property continues at current level.</p> <p>Alternative 2 – Beneficial impact, as the renourished beach would reduce flood risk to</p>	<p>Not applicable.</p> <p>An 8-step checklist as required by 44 CFR Part 9 was completed, see Appendix A.</p>

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
		adjacent improved property and nearby parks and preserve the floodplain for open space and recreational use, one of the natural and beneficial values of the floodplain.	
	Wetlands (Executive Order 11990)	Updated – see USACE EA Sections 6.3.2, 7.0, 8.3.1, and 10.4 Alternative 1 – No impact. Alternative 2 – Minor short-term impact.	Santa Rosa County has obtained USACE Individual Permit no. SAJ-2003-10496 (SP-TSH). Santa Rosa County is required to obtain any permit modifications as needed. Applicant will have to provide verification that all permitting requirements and conditions were adhered to during and after the construction work. An 8-step checklist as required by 44 CFR Part 9 was completed, see Appendix A.
5.3	Coastal Resources		
	Coastal Zone Management Act (CZMA)	No change – see USACE EA Section 10.6 Alternative 1 - No impact Alternative 2 - Minor beneficial impact due to restoration of the beach dunes and vegetation along the shoreline. FDEP authorized Alternative 2 through JCP number 0220096-006-JC, issued 7 January 2014. This permit constitutes a finding of consistency with Florida's Coastal Zone Management	FDEP authorized Alternative 2 through JCP number 0220096-006-JC, issued 7 January 2014. This permit constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the CZMA. Santa Rosa County is required to obtain any permit modifications as needed. Verification of compliance and any applicable permitting documents will

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
		Program, as required by Section 307 of the Coastal Zone Management Act (CZMA).	be required during the FEMA closeout review process.
	Coastal Barrier Resources Act (CBRA) and Coastal Barrier Improvement Act of 1990 (CBIA)	<p>Updated – not included in USACE EA</p> <p>Alternative 1 - No impact</p> <p>Alternative 2 - The westernmost portion of the Navarre Beach Restoration project area is within an Otherwise Protected Area (OPA), FL-98P, and its eastern limit is adjacent to a Coastal Barrier Resources System (CBRS) System Unit, FL-97.</p>	<p>FEMA requested consultation with USFWS under the CBRA on April 15, 2021. USFWS responded on May 27, 2021, stating that sand placement within OPA FL-98P is not prohibited, but that sand placement within CBRS System Unit FL-97 for the intent of structural protection is not consistent with the three purposes of the CBRA. USFWS found that dune or berm placements often inhibit natural processes such as overwash events on barrier islands, which allows for over-growth of vegetation. Increased vegetation eventually restricts the use of coastal areas by beach nesting birds (least terns, black skimmers, snowy plovers). Sufficient sands remain for nesting sea turtles. Piping plovers prefer the bayside mudflats that form from overwash events. Lacking the needs to any other imperiled species, the USFWS found the Navarre Beach Renourishment Project as inconsistent with the purposes of the CBRA. Alternative 2 has been revised to remove sand placement within CBRS System Unit FL-97 from its scope of work. Per USFWS consultation, no sand shall</p>

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
			be placed in CBRS System Unit FL-97.
5.4	Biological Resources		
	Wildlife and Fish	<p>Updated -- see USACE EA Sections 6.1.2; 6.2.3; 6.7.4; 6.8; 7.0</p> <p>Alternative 1 – Minor impact. Continuing erosion could lead to ongoing habitat loss.</p> <p>Alternative 2 – Long-term beneficial impact, allowing shorebirds and nesting sea turtles to utilize the restored dune and beach profile.</p> <p>Minor, short-term adverse impacts to migratory birds, surf-zone fishes, and aquatic organisms within borrow and nourishment areas are anticipated. Fish, crustaceans, mollusks and other aquatic organisms within the borrow area may be entrained by the hopper dredge and either harmed or killed. Species occupying the intertidal zone and near shore area, particularly benthic organisms such as small crabs, bivalves, and gastropods, may be smothered from the placement of dredged material. Some members of these populations may be able to migrate upwards as the sandy material is dispersed</p>	<p>Alternative 2 would require implementation of FDEP JCP and USACE Individual Permit conditions regarding Essential Fish Habitat (EFH) and the Migratory Bird Treaty Act (MBTA), including provisions in applicable PBOs regarding sea turtles, fish, and shorebirds. The applicant must also follow the latest Florida Fish and Wildlife Conservation Commission (FWC) standard guidelines to protect against impacts to nesting shorebirds during implementation of this project during the periods from February 15 to August 31. Santa Rosa County is required to obtain any permit modifications as needed.</p> <p>Best management practices (BMPs) during construction and after were placed on both the USACE and FDEP permitting requirements.</p> <p>Verification of compliance and any applicable permitting documents will be required during the FEMA closeout review process.</p>

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
		<p>across the nourishment area. A short-term reduction in populations of prey species for various fish and birds is anticipated. Corresponding minor, short-term adverse impacts on the food web and overall productivity of the ecosystem in the vicinity of the project area is expected; however, the preferred alternative is not expected to have a significant impact on the overall populations of these species in the vicinity of the project or within the Gulf of Mexico, as there is greater foraging habitat than that which is available in the immediate vicinity of the project area. After construction, fish and wildlife resources are expected to recover.</p>	
	Vegetation	<p>No change – see USACE EA Sections 10.2; 10.6</p> <p>Alternative 1 – No impact from construction. Continuing erosion could lead to ongoing dune vegetation loss due to escarpment formation.</p> <p>Alternative 2 - No impact to dune vegetation during construction; beneficial impact post-construction due to restoration of the beach dunes and vegetation along the shoreline. Alternative 2 would not affect</p>	<p>Specifications of vegetation planting and other applicable conditions were placed on both the USACE individual and FDEP JCP permitting requirements. Santa Rosa County is required to obtain any permit modifications as needed.</p> <p>Verification of compliance and any applicable permitting documents will be required during the FEMA closeout review process.</p>

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
		wetlands, submerged aquatic vegetation, or emergent marsh.	
	Threatened and Endangered Species	<p>No Change – see USACE EA Sections 6.2 and 10.2</p> <p>Alternative 1 – No impact, possible loss of suitable habitat for listed species.</p> <p>Alternatives 2 – Beneficial impacts due to increased habitat for sea turtles and shorebirds. Potential for incidental take during construction minimized by application of measures set forth in the USFWS and National Marine Fisheries Service (NMFS) Programmatic Biological Opinions (PBOs) with the USACE.</p>	<p>Under Alternative 2, Santa Rosa County must comply with the terms and conditions, including the Special Conditions, of USACE Permit No. SAJ-2003-10496 (SP-TSH) and associated guidance, as well as all conditions in the FDEP JCP and Sovereign Submerged Lands Lease Authorization (No. 0220096-006-JC). The subapplicant must obtain permit modifications as necessary. Failure to comply with these conditions may jeopardize FEMA funding; verification of compliance will be required at project closeout.</p> <p>The applicant must also adhere to the Conservation Measures and Terms and Conditions of the following Biological Opinions: USFWS Programmatic Piping Plover Biological Opinion (Service Log 04EF1000-2013-F-0124, dated May 22, 2013), the USFWS Statewide Programmatic BO for Sand Placement (SPBO)(Service Log 41910-2011-F-0170, dated March 13, 2015), and the NMFS Gulf Atlantic Regional Biological Opinion (GRBO) (Consultation Number F/SER/2000/01287, dated November 19, 2003 and amended on January 09,</p>

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
			<p>2007 with Revision 2). The subrecipient must also adhere to the attached Sea Turtle and Smalltooth Sawfish Construction Conditions (Revised March 23, 2006) and Standard Manatee Conditions for In-Water Work (2011). Failure to comply with these conditions may jeopardize FEMA funding; verification of compliance will be required at project closeout.</p> <p>Verification from the applicant or applicant's representative will be required at closeout proving the agreed upon conditions and requirements in the referenced biological opinions and associated guidance documentation were adhered to.</p> <p>See Appendix C for the applicable biological opinions.</p>
	<p>Essential Fish Habitat</p>	<p>No change – see USACE EA Section 10.2</p> <p>Alternative 1 – No impact.</p> <p>Alternative 2 – Minor, short-term impacts on EFH and/or federally-managed fisheries in the Gulf of Mexico.</p> <p>Alternative 2 would not affect submerged aquatic vegetation, emergent marsh, hard bottom corals, oyster reefs, or similar such resources. Additionally, benthic prey items would be expected</p>	<p>Name of species considered in the USACE EA: Various life stages of 13 shark species (scalped hammerhead, bonnethead, finetooth, blacktip, bull, spinner, Atlantic sharpnose, blacknose, sandbar, great hammerhead, tiger, silky, dusky), four shrimp species (brown, white, pink, Royal red), coastal migratory pelagic species, and 43 species of reef fish. The USACE did not receive comments from the National Marine Fisheries Service - Habitat Conservation</p>

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
		to recover within the borrow area and nourishment area within 1 to 3 years; the areas that would be affected by the project would be minimal compared to similar foraging habitat that is available in the vicinity of the proposed project.	Division (NMFS-HCD) in response to the public notice. Therefore, the USACE is satisfied that the consultation procedures outlined in 50 CFR Section 600.920 of the regulation to implement the EFH provisions of the Magnuson-Stevens Act have been met.
	Bald and Golden Eagles	Updated – not included in USACE EA Alternative 1 - No impact. Alternative 2 – No impact.	Not applicable.
5.5	Cultural Resources	Updated – see USACE EA Sections Alternative 1: No impact. Alternative 2: A cultural resource assessment survey of the Navarre Beach Restoration project area and submerged remote sensing survey of the borrow area were conducted. No cultural resources were identified during the referenced cultural resource assessment survey of the Navarre Beach Restoration project area, while two (2) potential archaeological resources were identified through the submerged remote sensing survey of the proposed borrow area. Anomaly Cluster-A was an area potentially containing shipwreck or	Santa Rosa County shall adhere to the following conditions for Alternative 2: <ul style="list-style-type: none">• 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 shall contact the Florida Division of Historical Resources and

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
		<p>aircraft debris, while Anomaly 8007 was described as a large ferrous object of indeterminate nature. The subapplicant shall establish 200-ft. buffers around Anomaly Cluster-A and Anomaly 8007 during dredging activities. Based upon the continued avoidance of Anomaly Cluster-A and Anomaly 8007 with 200-ft. buffers, FEMA has made a determination of No Historic Properties Affected for the Navarre Beach Restoration project.</p> <p>FEMA consulted with the FL SHPO and eleven (11) Tribes with ancestral interest in Santa Rosa County, Florida: Alabama-Coushatta Tribe of Texas; Alabama-Quassarte Tribal Town; The Choctaw Nation of Oklahoma; Jena Band of Choctaw Indians; Miccosukee Tribe of Indians; Mississippi Band of Choctaw Indians; The Muscogee (Creek) Nation; Poarch Band of Creek Indians; The Seminole Nation of Oklahoma; Seminole Tribe of Florida; and Thlopthlocco Tribal Town. The Choctaw Nation of Oklahoma concurred with FEMA's determination of No Historic Properties Affected on August 12, 2022, while the FL SHPO</p>	<p>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. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately, and the proper authorities notified in accordance with Florida Statutes, Section 872.05.</p> <ul style="list-style-type: none"> • The applicant must avoid Anomaly Cluster-A and Anomaly 8007 with a 200-ft. buffer during dredging and any other project-related activities within the borrow area. • Construction vehicles and equipment will be stored onsite during the project or at existing access points within the Applicant's right-of-way. • Any changes to the approved scope of work will require submission to, and evaluation and approval by, the State and FEMA, prior to initiation of any work, for compliance with Section 106. • Inadvertent discoveries of cultural resources, human remains and related NAGPRA items may occur, even in areas of existing or prior development. Should this occur, The Choctaw Nation of Oklahoma

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
		<p>concurred on May 09, 2023. No objections to the proposed project were expressed by the remaining nine (9) Tribes with ancestral interest in Santa Rosa County. Alternative 2 shall adhere to five (5) NHPA special conditions.</p>	<p>requests that all work cease and our office as well as other appropriate agencies be notified immediately.</p>
	<p>Historic Standing Structures</p>	<p>Alternative 1 – No impact.</p> <p>Alternative 2 – No impact. One (1) historic structure, SR-399/Navarre Relief (SR02169), was identified 1500 ft. north of the 500-ft. buffer established around the proposed project’s APE. Based on its distance from the Navarre Beach Restoration project’s APE, FEMA determined that the proposed beach berm and dune repair would have no effect on this historic structure.</p>	
	<p>Archaeological Resources</p>	<p>Alternative 1 – No impact.</p> <p>Alternative 2 – No impact. Two (2) potential historic archaeological resources, Anomaly Cluster-A and Anomaly 8007, in the borrow area. Based on the continued avoidance of Anomaly Cluster-A and Anomaly 8007 with a 200-ft. buffer during dredging</p>	

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
		activities, the proposed Navarre Beach Restoration project should have no effect on these potential historic archaeological resources.	
5.6	Socioeconomic Resources		
	Land Use and Planning	<p>No change – see USACE EA Section 6.4</p> <p>Alternative 1 – Impacts could result from future storm damages along the shoreline.</p> <p>Alternative 2 – Minor impacts to water related recreation and aesthetics. This area is largely tourism driven but impacts will be minor short-term, and beneficial in the long term by restoring the beach.</p>	Not applicable.
	Noise	<p>No change – see USACE EA Section 6.4.4</p> <p>Alternative 1 – No impact.</p> <p>Alternative 2 – Minor short-term impacts from construction equipment.</p>	Not applicable.
	Transportation	<p>No change – see USACE EA Section 12.2.3</p> <p>Alternative 1 – No impact.</p> <p>Alternative 2 – Negligible to minor, short-term impact on nearshore navigation of small recreational vessels during construction of the project.</p>	Not applicable.

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
	Public Services and Utilities	Updated – not included in USACE EA Alternative 1 – No impact. Alternative 2 – No impact.	Not applicable.
	Public Health and Safety	Updated – not included in USACE EA Alternative 1 – No impact. Alternative 2 – No impact.	Not applicable.
	Environmental Justice (Executive Order 12898)	No change – see USACE EA Section 12.2.3 Alternative 1 – No impact. Alternative 2 – No impact.	Not applicable.
	Hazardous, Toxic, and Radioactive Waste	Updated – See USACE EA, Sections 6.1.2, 6.7.4, and 6.8 Alternative 1 - No impact. Alternative 2 - Minor short-term impact due to potential for spills during construction. There are no brownfield, petroleum, per- and polyfluoroalkyl substances (PFAS), superfund, or other waste cleanup sites under the agency’s cleanup oversight within a one-mile radius of the Navarre Beach Renourishment project area. Based on the location of the borrow site, previous use of the borrow site, sampling of	The potential for spills from construction equipment for Alternative 2 will be minimized and handled in accordance with applicable regulations and state and federal permitting. The contractor shall perform all maintenance of equipment, including but not limited to refueling, filter changes, and replacement of hydraulic lines in a manner so as not to contaminate soils, ground or surface waters, or any other natural resources.

Section	Area of Evaluation	Alternative 1: No Action and Alternative 2: Proposed Action	Environmental Protection Measures and Required Permits
		the borrow site for oil by British Petroleum (BP), and analysis of the sand grains (size, color, carbonate content, silt content), there is no indication that toxic materials (metals or organics) are present in the borrow material.	
5.7	Cumulative Impacts	Updated – See USACE EA Sections 6.1.2, 6.7.4, and 6.8 Alternative 1 – Future storms could result in impacts to the shoreline, reducing buffer between ocean and infrastructure. Alternative 2 – Not expected to have significant adverse cumulative impacts on any resource.	Not applicable.

5. Affected Environment and Potential Impacts

5.1. PHYSICAL RESOURCES

5.1.1. CLIMATE CHANGE

Climate change refers to changes in Earth’s climate caused by a general warming of the atmosphere caused by greenhouse gases (GHGs), which are emitted by both natural processes and human activities, and their accumulation in the atmosphere regulates temperature. GHGs include water vapor, carbon dioxide, methane, nitrous oxides, and other compounds. There are no established thresholds or standards for GHGs. Climate change is capable of affecting species distribution, temperature fluctuations, sea level dynamics, and weather patterns.

Alternative 1: No Action

Under the no action alternative, no construction activities would occur, and, accordingly, no GHGs would be emitted.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

Under the preferred alternative, restoration of an engineered beach would be completed and is anticipated to result in minor, short-term impacts from construction equipment and corresponding temporary air emissions due to fuel usage. The USACE analyzed the proposed action for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act (CAA), and the activities proposed would not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR, Part 93.153. As such, these temporary air emissions will be below the CAA regulatory standards and have minor impacts.

5.2. WATER RESOURCES

5.2.1. WATER QUALITY

Congress enacted the Federal Water Pollution Control Act in 1948, which was later reorganized and expanded in 1972 and became known as the Clean Water Act (CWA) in 1977. The CWA regulates discharge of pollutants into water with sections falling under the jurisdiction of the USACE and the Environmental Protection Agency (EPA). Section 404 of the CWA establishes the USACE permit requirements for discharging dredged or fill materials into Waters of the United States and traditional navigable waterways. USACE regulation of activities within navigable waters is also authorized under the 1899 Rivers and Harbors Act. Under the National Pollutant Discharge Elimination System (NPDES), the EPA regulates both point and non-point pollutant sources, including stormwater and stormwater runoff. Activities that disturb one (1) acre of ground or more are required to apply for an NPDES permit through FDEP as authorized by the EPA. This Section 401 water quality certification is required when obtaining a CWA 404 Permit. As part of this permit, the proponent of the project is required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP), which outlines Best Management Practices (BMPs) and engineering controls to be used to prevent and minimize erosion, sedimentation, and pollution during construction. The threshold level for a significant impact to surface water would be a violation of state water quality criteria, a violation of federal or state discharge permits, or an unpermitted dredge or fill within the boundary of a jurisdictional waterbody or wetland.

Section 1424(e) of the Safe Drinking Water Act of 1974 [Public Law 93-523] authorizes EPA to designate an aquifer for special protection under the sole source aquifer program if the aquifer is the sole or principal drinking water resource for an area (i.e., it supplies 50 percent or more of the drinking water in a particular area) and if its contamination would create a significant hazard to public health. No commitment for federal financial assistance may be provided for any project that EPA determines may contaminate a sole source aquifer such that a significant hazard to public health is created. The primary water sources for Santa Rosa Island are wells operated by public water systems and private

wells. These wells draw from the Floridan Aquifer and from the Sand and Gravel Aquifer. There are no sole source aquifers near this project.

The Navarre Beach Restoration project is located on the Gulf of Mexico, which is an ocean/near coastal waterbody. The EPA assesses the water quality of waterbodies in the United States utilizing compiled state, territorial, and authorized tribal water quality standards. Information about the water quality of each waterbody is made available through the interactive online How's My Waterway? Waterbody Report. According to the EPA's waterbody report for 2020, the Gulf of Mexico is categorized as impaired for fish consumption due to mercury in fish tissue; no probable sources of impairment were identified for this waterbody. The EPA assessed the Gulf of Mexico's water quality as good for both the fish and wildlife propagation and recreational water quality parameters.

Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the no action alternative, there would be no change in water quality.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

Beach nourishment activities are anticipated to have a minor, short-term effect on water quality in the vicinity of active beach nourishment. The discharge of dredged materials in the near shore environment would likely reduce the clarity in the immediate vicinity of active nourishment. The associated discharge may also contribute minor changes in the pH and temperature, chemical content, and dissolved gas levels within the immediate vicinity of active nourishment. Considering the size of the active nourishment area, at any point in time, relative to the dynamic nature of the near shore marine environment, (i.e., tidal change, mixing, etc.) minor, short-term adverse effects to water could occur.

The proposed project could potentially affect water quality, primarily regarding turbidity. It is reasonable to expect that beach nourishment activity would result in re-suspension of fine-grained materials currently trapped in the sediment at the borrow site which will result in a minor short-term effect in the vicinity of the project. Santa Rosa County's proposed construction methodology would incorporate a shore-parallel sand dike constructed progressively, in advance of the nourishment activities, such that the dredged material discharge would be somewhat contained between the existing beach and the sand dike. Fine-grained material that moves back into marine waters would be exposed to tidal action within the near shore environment and would be quickly dispersed into the marine environment. Turbid plumes may develop during active nourishment of the beach, but such plumes would quickly dissipate, as would any other re-suspended fine-grained material. Any turbidity created by the project would be limited to the construction phase and would primarily be confined to the nourishment area within the berm. Additionally, the proposed borrow area was utilized for the previous beach protection project at Navarre Beach and consists of beach compatible sand with very low silt content; as such, high levels of turbidity are not anticipated. FDEP authorized the Navarre

Beach Restoration project through Joint Coastal Permit (JCP) number 0220096-006-JC, issued January 07, 2014. This permit certifies compliance with state water quality standards pursuant to Section 401 of the CWA.

The proposed project would not involve diversion of fresh water or estuarine water and would not restrict such flows. The Navarre Beach Restoration project would not be located in proximity to a river mouth. The translocation of sandy material between the borrow area and the nourishment area is not anticipated to have an effect on salinity gradients within the Gulf of Mexico.

5.2.2. FLOODPLAINS

Executive Order (EO) 11988: Floodplain Management, amended January 29, 2015, and as implemented in 44 CFR 9, requires federal agencies to “avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.” Special Flood Hazard Areas (SFHAs) are areas that have special flood, mudflow, or flood-related erosion hazards and will be inundated with water in the event of a 100-year (base) flood, which is a flood that has a 1 percent chance of being equaled or exceeded in magnitude in any given year. SFHAs are also referred to as the 100-year floodplain. The 500-year floodplain is the area covered by water in the event of a 500-year flood, which is a flood that has a 0.2 percent chance of being equaled or exceeded in magnitude in any given year. Moderate flood hazard areas are those areas between the limits of the 100- and 500-year floodplains. Areas of minimal flood hazard fall outside of the SFHA (100-year floodplain) and are higher than the elevation of the 0.2-percent-chance annual flood (500-year floodplain). SFHAs, moderate flood hazard areas, areas of minimal flood hazard, and both the 100- and 500-year floodplains are mapped on FEMA Flood Insurance Rate Maps (FIRMs).

Existing Conditions

Based on the current FEMA FIRMs, the project area is located within the coastal high hazard area designated as a Zone VE (Appendix A). The VE zone is the coastal area subject to a velocity hazard (wave action) where Base Flood Elevations (BFEs) are provided. As VE zones are SFHAs, they fall within the limits of the 100-year floodplain.

Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the no action alternative, no construction would occur and there would be no effect to the floodplain. Improved property adjacent to the project areas would remain at risk from future flooding events.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

Under the preferred alternative, construction to restore the facility would occur within the floodplain. The reconstructed engineered beach would serve to reduce the flood risk to adjacent improved property. The facility is functionally dependent upon its location within the floodplain and facilitates open space use of the floodplain for recreational value. An 8-step checklist, as required by 44 CFR Part 9, has been completed for this alternative (Appendix A).

5.2.3. WETLANDS

Executive Order (EO) 11990: Protection of Wetlands requires Federal agencies to avoid funding activities that directly or indirectly support occupancy, modification, or development of wetlands, whenever there are practicable alternatives. FEMA uses the 8-step decision-making process to evaluate potential effects on, and mitigate impacts to, wetlands and floodplains in compliance with EO 11990 and EO 11988.

Existing Conditions

Effective December 22, 2020, the EPA delegated to FDEP the authority to issue wetland permits in the state under Section 404 of the CWA. Accordingly, FDEP administers and regulates state jurisdictional and state-assumed wetlands and certain waters of the U.S. (WOTUS) in Florida. The USACE retains jurisdiction and Section 404 permitting authority of wetlands and WOTUS not assumed by FDEP. As part of their two-step Jurisdictional Determination (JD) process, the USACE must identify and locate aquatic resources, including wetlands, on a property prior to determining whether these areas are under its jurisdiction per Section 404 of the CWA and/or Section 10 of the Rivers and Harbors Act. This first step in the JD process is termed delineation. Per the USFWS National Wetlands Inventory, accessed April 20, 2023, the Navarre Beach Restoration project area is located in and adjacent to mapped estuarine and marine wetlands; however, the USACE determined in its November 2014 EA that the Navarre Beach Restoration project area is not located within a wetland. The borrow area for the Navarre Beach Restoration project is approximately six (6) miles offshore and is not in a mapped wetland.

Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the no action alternative, there would not be any FEMA undertaking and no corresponding construction; therefore, FEMA would have no responsibility under EO 11990 for this alternative.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

Under the preferred alternative, minor short-term impacts are anticipated. The action involves obtaining sand from offshore borrow areas, placing the sand along the beach to reconstruct the coastal dunes, and stabilizing the dunes by revegetating the dunes with plantings. Temporary increases to turbidity are likely to occur during both the excavation of sand at the offshore borrow

areas and during the sand placement operations on the beach. Short-term negative impacts to commercial and recreational fisheries near the shoreline may occur, but these impacts are expected to be limited to the construction timeframe. No long-term negative impacts to wetlands within or adjacent to the Navarre Beach Restoration project area are expected to result from the project due to the implementation of BMPs as required by both the obtained USACE Individual Permit and FDEP JCP. Beneficial impacts to estuarine and marine wetlands are expected to persist by a restored beach area providing buffer against coastal erosion preserving habitat and recreational values.

Per the National Wetlands Inventory, accessed April 20, 2023, the Navarre Beach Restoration project area is within estuarine and marine wetland habitat. An 8-step checklist, as required by 44 CFR Part 9, has been completed for this alternative (Appendix A). Santa Rosa County will have to provide verification that all permitting requirements and conditions were adhered to during and after the construction work. This verification will be required at project closeout.

5.3. COASTAL RESOURCES

5.3.1. COASTAL ZONE MANAGEMENT ACT (CZMA)

The Coastal Zone Management Act (CZMA), administered by states with shorelines in coastal zones, requires those states to have a Coastal Zone Management Plan (CZMP) to manage coastal development. Projects falling within designated coastal zones must be evaluated to ensure they are consistent with the CZMP. Projects receiving federal assistance must follow the procedures outlined in 15 CFR 930.90 – 930.101 for federal coastal zone consistency determinations. In order to guide development and resource management within the Florida’s coastal area, substantive policies have been identified and promulgated by FDEP. The Florida Coastal Management Program (FCMP) is a network of statutes that protects Florida’s coastal resources. FDEP implements federal consistency reviews through the Florida State Clearinghouse or its permitting process.

FDEP’s Coastal Construction Control Line (CCCL) Program regulates structures and activities that are seaward of established CCCLs and have the potential to cause beach erosion, dune destabilization, damage to upland properties, and/or interference with public access. CCCLs delineate the limits of beach-dune systems that are subject to severe fluctuations based on a 100-year storm surge, storm waves, or other predictable weather conditions. CCCLs have been established in twenty-five (25) of Florida’s coastal counties that have sandy beaches fronting the Atlantic Ocean, the Gulf of Mexico, the Straits of Florida, or associated inlets. An FDEP JCP is required for activities located on Florida’s natural sandy beaches that extend seaward of the mean high-water line, extend into sovereign submerged lands, and are likely to affect the distribution of sand along the beach. The JCP Program combines the regulatory requirements of the CCCL Program with the Environmental Resource Permit (ERP) Program, enabling activities that would have required both a CCCL permit and ERP permit to be authorized by a JCP.

Existing Conditions

For the purposes of the CZMA, the entire state of Florida is considered a coastal zone. The Navarre Beach Restoration project area is, accordingly, within a coastal zone. FDEP's Coastal Construction Control Line online mapping tool indicates that the Navarre Beach Restoration project area is seaward of the CCCL in Santa Rosa County. As such, the Navarre Beach Restoration project is subject to regulation under FDEP's JCP Program. In their 2014 EA, the USACE noted that FDEP classified the Navarre Beach shoreline as a "critically eroded" area.

Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the no action alternative, no work would occur and there would be no impact to the coastal zone. The critical coastal areas and ecosystems would be unprotected and susceptible to further coastal erosion.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

Under the preferred alternative, activity and construction would occur in the coastal zone and seaward of the CCCL. The project would restore eroded areas of the shore by replacing beach compatible sand to a designed beach profile meant to mimic the natural dune system. FDEP authorized the preferred alternative through FDEP JCP number 0220096-006-JC, issued January 07, 2014. This permit constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the CZMA.

5.3.2. COASTAL BARRIER RESOURCES ACT (CBRA) AND COASTAL BARRIER IMPROVEMENT ACT (CBIA) OF 1990

The Coastal Barrier Resources Act of 1982 created designated areas, Coastal Barrier Resources System Units, under the jurisdiction of the USFWS that are ineligible for both direct and indirect federal expenditures. This act was amended by the Coastal Barrier Improvement Act (CBIA) of 1990, which added a new category of coastal barriers called Otherwise Protected Areas.

Existing Conditions

The westernmost portion of the Navarre Beach Restoration project area is within an Otherwise Protected Area (OPA), FL-98P, and its eastern limit is adjacent to a Coastal Barrier Resources System (CBRS) System Unit, FL-97.

Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the no action alternative, no work would occur and there would be no impact to the coastal zone. The critical coastal areas and ecosystems would be unprotected and susceptible to further coastal erosion.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

FEMA requested consultation with USFWS under the CBRA on April 15, 2021. USFWS responded on May 27, 2021, stating that sand placement within OPA FL-98P is not prohibited, but that sand placement within CBRS System Unit FL-97 for the intent of structural protection is not consistent with the three purposes of the CBRA. USFWS found that dune or berm placements often inhibit natural processes such as overwash events on barrier islands, which allow for over-growth of vegetation. Increased vegetation eventually restricts the use of coastal areas by beach nesting birds (least terns, black skimmers, snowy plovers, etc.). Sufficient sands remain for nesting sea turtles. Piping plovers prefer the bayside mudflats that form from overwash events. Lacking the needs to any other imperiled species, the USFWS found the Navarre Beach Restoration project to be inconsistent with the purposes of the CBRA. Alternative 2 has been revised to remove sand placement within CBRS System Unit FL-97 from its scope of work. Per USFWS consultation, no sand shall be placed in CBRS System Unit FL-97.

5.4. BIOLOGICAL RESOURCES

5.4.1. THREATENED AND ENDANGERED SPECIES

The Endangered Species Act (ESA) of 1973 provides for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The lead Federal agencies for implementing ESA are the USFWS and the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS). The law requires Federal agencies to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. The law also prohibits any action that causes a “taking” of any listed species of endangered fish or wildlife. A “take” includes the following actions: “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.”

Existing Conditions

In accordance with Section 7 of the Endangered Species Act (ESA) of 1973, the Navarre Beach Restoration project was evaluated for the potential impact to federally listed threatened and endangered species that may be present in the project area. In its 2014 EA, the USACE considered the following threatened and endangered species and their corresponding habitats: the endangered West Indian manatee (*Trichechus manatus*), threatened Gulf sturgeon (*Acipenser oxyrinchus desofot*),

threatened piping plover (*Charadrius melodus*), threatened loggerhead turtle (*Caretta caretta*), endangered green turtle (*Chelonia mydas*), endangered leatherback turtle (*Dermochelys coriacea*), endangered Kemp's ridley turtle (*Lepidochelys kempit*), endangered hawksbill turtle (*Eretmochelys imbricata*), endangered smalltooth sawfish (*Pristis pectinata*), and threatened Gulf sturgeon (*Acipenser oxyrinchus desotoi*) designated critical habitat Unit 11. Three (3) additional threatened and endangered species with the potential to be present in the project area were identified by accessing the USFWS Information for Planning and Consultation (IPaC) database on April 14, 2023. As such, the Navarre Beach Restoration project was also evaluated for potential impacts to the threatened eastern black rail (*Laterallus jamaicensis spp. jamaicensis*), threatened eastern indigo snake (*Drymarchon couperi*), and the endangered Florida perforate cladonia (*Cladonia perforata*). The shoreline of the project area is suitable sea turtle nesting habitat for listed sea turtles as well as foraging habitat for the piping plover.

Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Alternative 1 does not include any FEMA undertaking, nor any construction; therefore, there would be no potential impacts and no further responsibility under the ESA. Under the No Action Alternative, the Navarre Beach shoreline would remain in its current state and sand would not be placed on the beach. Ongoing erosion would continue along the shoreline, impacting the existing beach, beach berm, and dune system. Consequently, the area would not be protected from future storm events and improved private and public property would be at risk of incident-related damages from storm surge and wave action. Benefits to listed species and recreational value would not occur. Nesting habitat for sea turtles and foraging area for piping plover would be lost.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

Under the preferred alternative, beneficial impacts to species along the shoreline environment are anticipated to occur due to the sand placement activities and revegetation of the dunes. If the sand placement and dune planting occur during sea turtle nesting season, the action may adversely affect nesting sea turtles and hatchlings. Short-term adverse impacts may be expected to the piping plover due to disruption in foraging habitat during construction.

In preparation of its 2014 EA, the USACE evaluated potential impact to federally listed threatened and endangered species that may be present in the project area using the NMFS' Biological Opinion to the U.S. Army Corps of Engineers for dredging of Gulf of Mexico navigation channels and sand mining ("Borrow") areas using hopper dredges by COE Galveston, New Orleans, Mobile, and Jacksonville Districts, dated November 19, 2003 and subsequent revisions [commonly referred to as the Gulf of Mexico Regional Biological Opinion (GRBO)], and the U.S. Fish and Wildlife Service's Statewide Programmatic Biological Opinion (SPBO) for the U.S. Army Corps of Engineers (Corps) Civil Works and Regulatory sand placement activities in Florida, dated August 22, 2011.

The USACE determined that the preferred alternative would have no effect on the endangered smalltooth sawfish (*Pristis pectinata*) given that the current population distribution of this species is centered off the coast of south Florida. As Santa Rosa County has agreed to follow the 2011 Standard Manatee Construction Conditions and the project area is not located within an Important Manatee Area, the USACE determined that the project may affect, but is not likely to adversely affect the endangered West Indian manatee (*Trichechus manatus*). The USACE also determined that the preferred alternative may affect, but is not likely to adversely affect the threatened Gulf sturgeon (*Acipenser oxyrinchus desotoi*) and designated Gulf sturgeon critical habitat Unit 11. The USACE asserted that individuals of the species are unlikely to be present in the vicinity of the borrow area, but any present may be harassed, harmed, or killed by the hopper dredge. Further, the preferred alternative would have a minor, temporary effect on four (4) Primary Constituent Elements (PCEs), abundant prey items; water quality; sediment quality; and migratory pathway, of designated Gulf sturgeon critical habitat Unit 11 that are considered essential to the conservation of the Gulf sturgeon. The USACE determined that the project may affect, but is not likely to adversely affect the threatened piping plover (*Charadrius melodius*) and its designated critical habitat based on the presence of two (2) nearby critical habitat units, units FL-2 and FL-3, with more favorable habitat for the species and the assumption that any individuals of the species present during construction should readily relocate to these more favorable areas. For the five (5) federally listed sea turtles that could potentially utilize the project area for nesting, the threatened loggerhead turtle (*Caretta caretta*); endangered green turtle (*Chelonia mydas*); endangered leatherback turtle (*Dermochelys coriacea*); endangered Kemp's ridley turtle (*Lepidochelys kempi*); and endangered hawksbill turtle (*Eretmochelys imbricata*), the USACE determined that the project may affect and is likely to adversely affect these species. Santa Rosa County has proposed to implement the Reasonable and Prudent Measures of the SPBO, and the USACE included special permit conditions requiring adherences to the Reasonable and Prudent Measures and Incidental Take Statement of the SPBO. The USACE determined that the project may affect and is likely to adversely affect five (5) federally listed sea turtles that are all known to occur within the coastal waters of Santa Rosa County, the threatened loggerhead turtle; endangered green turtle; endangered leatherback turtle; endangered Kemp's ridley turtle; and endangered hawksbill turtle.

The USACE initiated informal consultation with the NMFS for potential effects on the project may have on the Gulf sturgeon, Gulf sturgeon designated critical habitat Unit 11, loggerhead turtle, green turtle, leatherback turtle, Kemps' ridley turtle, and hawksbill turtle on November 8, 2013. The NMFS responded with a Biological Opinion (BO), consultation number SER-2013-12550, dated 15 September 2014. The NMFS determined that the GRBO "analyzes the potential routes of effects to sea turtles, smalltooth sawfish, and Gulf sturgeon from dredging, relocation trawling, and disposal of dredged materials outside of Gulf sturgeon critical habitat in the Gulf of Mexico". NMFS also concluded that the proposed project action is not likely to destroy or adversely modify designated Gulf sturgeon critical habitat. The NMFS also determined that the proposed project is not likely to adversely affect the PCEs of designated critical habitat for loggerhead turtle, unit LOGG-N-33, which is located approximately 23 miles west of the western limits of the proposed beach nourishment and is slightly further away from the proposed borrow site.

The USACE requested formal consultation with the USFWS for potential effects the project may have on the West Indian manatee, piping plover, loggerhead turtle, green turtle, leatherback turtle, Kemp's ridley turtle, and hawksbill turtle on November 8, 2013. The USFWS responded by letter sent to the USACE and FEMA, USFWS Log. No. 04EF3000-2013-F-0026 mod, on March 12, 2014. The USFWS concurred that the project may affect, but is not likely to adversely affect the West Indian manatee, piping plover, and piping plover critical habitat. The USACE notes that FWS determined that the proposed project may affect, but is not likely to adversely modify piping plover critical habitat unit FL-3, which is located approximately 150 yards northeast of the eastern limits of the project area. The USFWS concurrence with a may affect, not likely to adversely affect determination for the piping plover is based on the implementation of the following conservation measures, which the Santa Rosa County committed to uphold prior to conclusion of consultation:

- (1) Avoidance of sand placement above natural elevation between coastal range monuments R-213 and R-214
- (2) Prohibition of wrack removal from throughout the entire project area, post project
- (3) Incorporation of Standard Construction Conservation Measures for Manatees into the project plans

The USFWS also concurred that the project may affect and is likely to adversely affect the nesting loggerhead turtle, green turtle, leatherback turtle, and Kemp's ridley sea turtle. The USFWS agreed that the USACE's application of the SPBO to the project was appropriate.

Santa Rosa County objected to conservation measure # 1 via email on March 13, 2014. The USFWS and Santa Rosa County agreed upon a revised conservation measure #1. The USFWS provided a second letter on April 07, 2014, dated April 04, 2014, with the revised conservation measure # 1 and original conservation measures # 2 and # 3, assigning the following consultation numbers: FWS Log No. 04EF3000-2013-F-0026 (mod 2) and FWS Log No. 41910-2011-F-0170. Conservation measure #1 was revised to the following:

- (1) Avoidance of sand placement above natural elevation between coastal range monuments 500 feet east of R-213 to the eastern limits of the project (~R-214). Within this area, fill may be placed to restore the historically existing ~170 foot beach width at the natural elevation at approximately 5 feet.

Three (3) additional threatened and endangered species with the potential to be present in the project area not previously considered by the USACE were identified by accessing the USFWS Information for Planning and Consultation (IPaC) database on April 14, 2023. As such, the Navarre Beach Restoration project was also evaluated for potential impacts to the threatened eastern black rail (*Laterallus jamaicensis spp. jamaicensis*), threatened eastern indigo snake (*Drymarchon couperi*), and the endangered Florida perforate cladonia (*Cladonia perforata*). The project is likely to have no effect to

the eastern black rail, eastern indigo snake, and the Florida perforate cladonia, as the Navarre Beach Restoration project area does not provide suitable habitat for these species.

Santa Rosa County's USACE Individual Permit application included a commitment to implement the Reasonable and Prudent Measures and Terms and Conditions of both of the following Biological Opinions:

- The National Marine Fisheries Service (NMFS) Biological Opinion to the USACE for dredging of Gulf of Mexico navigation channels and sand mining ("Borrow") areas using hopper dredges by COE Galveston, New Orleans, Mobile, and Jacksonville Districts, dated 19 November 2003 and subsequent revisions; commonly referred to as the Gulf of Mexico Regional Biological Opinion (GRBO).
- U.S. Fish and Wildlife Service's Statewide Programmatic Biological Opinion (SPBO) for the U.S. Army Corps of Engineers (Corps) Civil Works and Regulatory sand placement activities in Florida dated 22 August 2011. Additionally, Santa Rosa County would implement the Standard Manatee Conditions for In-Water Work and the standard Sea Turtle and Smalltooth Sawfish Construction Conditions that are utilized within the Jacksonville District Corps of Engineers area of responsibility.

The applicant has indicated that relocation trawling would be conducted in advance of hopper dredging and would continue while actively dredging. The USACE permit includes a special condition (#12) that requires relocation trawling to commence following the take of two (2) sea turtles. This condition is not intended to prohibit commencement of relocation trawling prior to taking a sea turtle. The USACE determined that the applicant's intent to trawl in advance of dredging does not appear to be contrary to the Terms and Conditions of the GRBO.

The project will be required to meet the Reasonable and Prudent Measures, Terms and Conditions, Conservation Measures, and Incidental Take Statement of three (3) applicable USACE programmatic biological opinions to minimize impacts to listed species: the USFWS Statewide Sand Placement Biological Opinion (SPBO) (Service Log 41910-2011-F-0170, dated March 13, 2015), the USFWS Programmatic Piping Plover Biological Opinion (Service Log 04EF1000-2013-F-0124, dated May 22, 2013), and the NMFS Gulf Atlantic Regional Biological Opinion (GRBO) (Consultation Number F/SER/2000/01287, dated November 19, 2003). The project will also adhere to the Florida Standard Manatee Conditions for In-Water Work and Sea Turtle and Smalltooth Sawfish Construction Conditions as required by the PBOs.

Upon implementation of the Conservation Measures, Reasonable and Prudent Measures, Terms and Conditions, and Incidental Take Statement included in the USFWS SPBO and NMFS GRBO, as well as adherence to the USACE Individual Permit and FDEP JCP permit conditions, the project is not likely to jeopardize the continued existence of the loggerhead, leatherback, or hawksbill sea turtles; and the action may affect, but is not likely to adversely affect the terrestrial critical habitat of the loggerhead sea turtle population.

5.4.2. ESSENTIAL FISH HABITAT

Federal agencies are required to assess the potential impacts that proposed actions and alternatives may have on Essential Fish Habitat (EFH), in accordance with the Magnuson-Stevens Fishery Conservation and Management Act.

Existing Conditions

In its 2014 EA, the USACE considered potential impacts of the Navarre Beach Restoration project on essential fish habitats for the following federally managed fish and invertebrate species: various life stages of thirteen (13) shark species (scalloped hammerhead, bonnethead, finetooth, blacktip, bull, spinner, Atlantic sharpnose, blacknose, sandbar, great hammerhead, tiger, silky, and dusky); four (4) shrimp species (brown, white, pink, and royal red); coastal migratory pelagic species; and forty-three (43) species of reef fish. The USACE did not receive comments from the National Marine Fisheries Service - Habitat Conservation Division (NMFS-HCD) in response to the corresponding public notice. Therefore, the USACE stated in its 2014 EA that it was satisfied that the consultation procedures outlined in 50 CFR Section 600.920 of the regulation to implement the EFH provisions of the Magnuson-Stevens Act have been met.

Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the no action alternative, no impacts to essential fish habitat would occur.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

Under the preferred alternative, minor, short-term impacts on EFH and/or federally managed fisheries in the Gulf of Mexico are anticipated. The USACE determined in its 2014 EA that the Navarre Beach Restoration project would not affect submerged aquatic vegetation, emergent marsh, hard bottom corals, oyster reefs, or similar such resources. Additionally, the USACE noted that benthic prey items within the borrow area and nourishment area are expected to recover within one (1) to three (3) years following project completion. The USACE asserts that the areas to be affected by the Navarre Beach Restoration project are minimal compared to similar foraging habitat that is available in the vicinity of the proposed project area.

5.5. CULTURAL RESOURCES

As a Federal agency, FEMA must consider the potential effects of its actions upon cultural resources prior to engaging in any undertaking. This obligation is defined in Section 106 of the National Historic Preservation Act (NHPA), as amended and implemented by 36 CFR Part 800. The NHPA of 1966 defines a historic property as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register.” Eligibility criteria for listing a property on the National Register of Historic Places (NRHP) are found at 36 C.F.R. Part 60.

The Florida Division of Historical Resources (DHR) maintains a database of Florida's historic properties, the Florida Master Site File (FMSF). The FMSF is regularly updated, in part, on the basis of reports prepared by cultural resources professionals in advance of construction projects that are subject to review by the State Historic Preservation Officer (SHPO), federal agencies, and FEMA's Office of Environmental Planning & Historic Preservation (OEHP). Requirements for review include the identification of significant cultural resources that may be impacted by the undertaking. Cultural resources are defined as prehistoric and historic sites, structures, districts, buildings, objects, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons.

Only those cultural resources determined to be potentially significant under NHPA are subject to protection from adverse impacts resulting from an undertaking. To be considered significant, a cultural resource must meet one or more of the criteria established by the National Park Service (NPS) that would make that resource eligible for inclusion in the NRHP. The term "eligible for inclusion in the NRHP" includes all properties that meet the NRHP listing criteria, which are specified in the Department of Interior regulations Title 36, Part 60.4 and NRHP Bulletin 15. Sites that have not been evaluated at the time of the undertaking may be considered potentially eligible for inclusion in the NRHP and, as such, are afforded the same regulatory consideration as nominated properties.

Pursuant to 36 CFR 800.4(a)(1), the Area of Potential Effects (APE) is defined as the geographic area(s) within which the undertaking may directly or indirectly affect cultural resources. Within the APE, impacts to cultural resources are evaluated prior to the undertaking for both Standing Structures (above ground resources) and Archaeology (below ground resources).

In preparation for the initial construction of the engineered Navarre Beach in 2006, Dr. Robert Baer of Morgan & Eklund, Inc. conducted the *Submerged Cultural Resources Survey of a Proposed Borrow Area Offshore, Santa Rosa County, FL* (2003; FMSF manuscript #9298) for Coastal Technology Corporation on behalf of Santa Rosa County. Dr. Baer subjected the 378.64-acre offshore borrow area to a submerged remote sensing survey consisting of magnetometry, side-scan sonar, and sub-bottom profiling prior to its first utilization. The results of the investigation indicated that nine (9) magnetic anomalies, 8000-8008, and one (1) side-scan sonar target, 8009, were recorded as part of the survey. Three (3) magnetic anomalies, 8004; 8005; and 8008, were recorded outside of the borrow area, while six (6) magnetic anomalies, 8000-8003; 8006-8007, and one (1) side-scan sonar target, 8009, were recorded within the borrow area's boundaries. Four (4) of these magnetic anomalies, 8000-8003, and one (1) associated side-scan sonar target, 8009, were designated as Anomaly Cluster-A. Based on the pattern and estimated ferrous mass of the individual anomalies and the associated side-scan sonar target, Dr. Baer posited that Anomaly Cluster-A was an area potentially containing shipwreck or aircraft debris, while Anomaly 8007 was described as a large ferrous object of indeterminate nature. Dr. Baer recommended that a 200-ft. dredge buffer be established around Anomaly Cluster-A and Anomaly 8007, while Anomaly 8006 was to be disregarded due to its low ferrous weight and lack of physical association with Anomaly 8007. The resulting survey report was submitted to the Florida SHPO, which concurred with the finding of the survey and Dr. Baer's

recommendation to maintain 200-foot buffers around Anomaly Cluster-A and Anomaly 8007 during dredging of the proposed borrow area.

In its 2014 EA, the USACE utilized *The Jacksonville District Regulatory Division Appendix C/Section 106 Historic Property Key*, March 2013 to determine that the Navarre Beach Restoration permit area had been so extensively modified that little likelihood exists for the proposed project to impinge upon a historic property even if present within the affected area. The USACE also utilized the Jacksonville District Resources at Risk (RAR) tool to assess risks along the then 4.1-mile renourishment area with a minimal buffer area. The generated RAR report indicated that five (5) to six (6) cultural resource assessment surveys or other investigations had been previously conducted within the defined area of interest; no previously recorded historic properties listed or eligible for listing in the NRHP or any other cultural or historic resources were identified within the area of interest. The USACE required that the 200-ft. buffers established around Anomaly Cluster-A and Anomaly 8007 prior to the 2006 dredging of the proposed borrow area be maintained during future permitted Navarre Beach Restoration project dredging, including the most-recent beach renourishment project completed in 2016. The USACE noted that no unanticipated discoveries of historical artifacts were reported during the previous dredging event within the proposed borrow area. Further, the USACE asserted that the beach and berm present in the project area had not eroded back to the state that existed prior to the 2006 berm construction and the beach nourishment; as such, the proposed beach renourishment and berm reconstruction was expected to occur almost exclusively on top of material placed during the initial nourishment project. The USACE published a public notice for the Navarre Beach Restoration project prior to authoring its 2014 EA and provided a copy to the FL SHPO; no comments were received from the SHPO or any Tribal Historic Preservation Offices (THPOs)/Tribes in response to the public notice. Based on the aforementioned reasons, the USACE previously determined that the proposed Navarre Beach Restoration project would have no effect on historic properties.

FEMA, the FL SHPO, the Florida Division of Emergency Management (FDEM), Alabama-Coushatta Tribe of Texas, The Choctaw Nation of Oklahoma, Mississippi Band of Choctaw Indians, and the Advisory Council on Historic Preservation (ACHP) have executed a Statewide Programmatic Agreement dated September 10, 2014, and amended (2) September 9, 2022, to streamline the Section 106 review process. Per the guidelines outlined in the Programmatic Agreement, the undertaking does not meet the allowances agreed upon in Appendix B and, therefore, required consultation with interested parties.

FEMA determined that the APE for the Navarre Beach Restoration project is 18,528 linear feet, from Coastal Markers R-192+460' (30.37112, -86.91846) to R-213.5+500' (30.38111, -86.85039) with a 500-foot (ft.) wide buffer, with two (2) adjacent offshore borrow areas, T2-1A and T2-1B (30.28324, -86.83915). FEMA identified potential cultural resources in the APE utilizing the NPS National Register of Historic Places (NRHP) GIS resource, data from the FMSF, historic aerial imagery and topographic maps, and information from previously conducted cultural resource investigations. FEMA's review found there are no historic properties listed or eligible for listing in the NRHP, National Historic Landmarks (NHLs), or known historic buildings, objects, sites, or districts within the proposed project's

APE. One (1) historic structure, SR-399/Navarre Relief (SR02169), was identified 1500 ft. north of the 500-ft. buffer established around the proposed project's APE. SR-399/Navarre Relief is an actively used historic bridge whose construction was completed in 1960. Comprised of twelve (12) concrete spans each measuring thirty-seven (37) ft. in width, the SR-399 Navarre Relief bridge rests above an open pier with precast pier cap substructure made from concrete. The bridge is 576 ft. in length and its access roadway connecting Navarre Beach to the mainland City of Navarre is 26 ft. in width. Based on its distance from the Navarre Beach Restoration project's APE, FEMA determined that the proposed beach berm and dune repair would have no effect on this historic structure. While heavy equipment (excavators, bulldozers, front loaders, etc.) is expected to be used within the project area for distributing and shaping the sourced sand, it is not expected to result in excavation below the representative beach profile when restoring the beach berm and sand dune profile to its pre-hurricane condition. Further, the replenishment sand will be dredged from two (2) offshore borrow areas, T2-1A and T2-1B, that were surveyed for cultural resources prior to their utilization for initial sand dune placement in 2006 and renourishment in 2016. It will be transported to the project site using a hopper dredge and floating pipeline system designed to hydraulically transfer sand while resting on the ocean floor, requiring no additional ground disturbance other than the dredging and eventual placement of sand on the beach and dune system. Based on these findings, FEMA made the determination of No Historic Properties Affected for this undertaking, in accordance with 36 CFR 800.4(d)(1).

On October 04, 2021, FEMA initiated consultation with the FL SHPO and eleven (11) Tribes with ancestral interest in Navarre Beach, Santa Rosa County, Florida: Alabama-Coushatta Tribe of Texas; Alabama-Quassarte Tribal Town; The Choctaw Nation of Oklahoma; Jena Band of Choctaw Indians; Miccosukee Tribe of Indians; Mississippi Band of Choctaw Indians; The Muscogee (Creek) Nation; Poarch Band of Creek Indians; The Seminole Nation of Oklahoma; Seminole Tribe of Florida; and Thlopthlocco Tribal Town. FEMA received concurrence with the determination of No Historic Properties Affected from The Muscogee (Creek) Nation. The Choctaw Nation of Oklahoma responded to FEMA's consultation letter with the request that a cultural resource assessment survey (CRAS) of the project area be conducted. No objections to the proposed project were expressed by the remaining nine (9) Tribes with ancestral interest in Navarre Beach nor the FL SHPO.

In March of 2022, Dr. Robert Baer conducted a Phase I Cultural Resource Assessment Survey (CRAS), *Cultural Resource Shovel Test Investigation at Navarre Beach, Santa Rosa County, Florida Pursuant to Pending Beach Restoration*, of the approximately four (4)-mile long Navarre Beach Restoration project area for Coastal Technology Corporation on behalf of Santa Rosa County. Archaeological survey methods employed consisted of reconnaissance (pedestrian) survey, systematic shovel testing, and metal detecting. Dr. Baer excavated 223, 40-centimeter diameter shovel tests at 30-meter intervals (where practicable) along a single transect parallel to the mean high tide line and below the elevation of the Navarre Beach dune system. All shovel test pits were negative for pre-contact (prehistoric) and historic period cultural material, while the metal detecting survey yielded limited modern ferrous refuse. The reconnaissance survey recorded contemporary pylons that may have functioned as stilts for residential structures or pier stanchions; however, it does not appear that this material was found *in situ*—in its primary context. Dr. Baer accordingly recommended that no cultural resources eligible for

listing in the NRHP were identified during the Phase I CRAS, and that the Navarre Beach Restoration project be authorized to proceed with no further archaeological investigations. Upon its review of *Cultural Resource Shovel Test Investigation at Navarre Beach, Santa Rosa County, Florida Pursuant to Pending Beach Restoration*, FEMA made a determination of No Historic Properties Affected.

On July 14, 2022, FEMA re-initiated consultation with the FL SHPO and eleven (11) Tribes with ancestral interest in Santa Rosa County, Florida: Alabama-Coushatta Tribe of Texas; Alabama-Quassarte Tribal Town; The Choctaw Nation of Oklahoma; Jena Band of Choctaw Indians; Miccosukee Tribe of Indians; Mississippi Band of Choctaw Indians; The Muscogee (Creek) Nation; Poarch Band of Creek Indians; The Seminole Nation of Oklahoma; Seminole Tribe of Florida; and Thlopthlocco Tribal Town. The Choctaw Nation of Oklahoma concurred with FEMA's determination of No Historic Properties Affected on August 12, 2022, while the FL SHPO requested on August 19, 2022, that select edits be made to the CRAS report. The requested edits were made, and the revised report was submitted to the FL SHPO in April of 2023. On May 09, 2023, the FL SHPO concurred with the findings of the survey, Dr. Baer's recommendations, and FEMA's determination of No Historic Properties Affected. No objections to the proposed project were expressed by the remaining nine (9) Tribes with ancestral interest in Santa Rosa County.

5.5.1. HISTORIC (STANDING) STRUCTURES

Existing Conditions – Historic Standing Structures

FEMA identified potential cultural resources in the APE utilizing the NPS National Register of Historic Places (NRHP) GIS resource, data from the FMSF, historic aerial imagery and topographic maps, and information from previously conducted cultural resource investigations, including the APE-specific *Submerged Cultural Resources Survey of a Proposed Borrow Area Offshore, Santa Rosa County, FL* and *Cultural Resource Shovel Test Investigation at Navarre Beach, Santa Rosa County, Florida Pursuant to Pending Beach Restoration*. FEMA's review identified no historic structures, buildings, objects, or districts within the APE of the Navarre Beach Restoration project area. One (1) historic structure, SR-399/Navarre Relief (SR02169), was identified 1500 ft. north of the 500-ft. buffer established around the proposed project's APE. SR-399/Navarre Relief is an actively used historic bridge whose construction was completed in 1960. Comprised of twelve (12) concrete spans each measuring thirty-seven (37) ft. in width, the SR-399 Navarre Relief bridge rests above an open pier with precast pier cap substructure made from concrete. The bridge is 576 ft. in length and its access roadway connecting Navarre Beach to the mainland City of Navarre is 26 ft. in width.

Potential Impacts and Proposed Mitigation to Standing Historic Structures

Alternative 1: No Action

Under the no action alternative, no impacts to historic structures, buildings, objects, or districts would occur.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

The Navarre Beach Restoration project area and proposed borrow area were previously subjected to a cultural resource assessment survey and submerged remote sensing survey, respectively. No historic structures, buildings, objects, or districts were identified within the APE of the Navarre Beach Restoration project. One (1) historic structure, the SR-399/Navarre Relief (SR02169) bridge, was identified 1500 ft. north of the 500-ft. buffer established around the proposed project's APE. Based on its distance from the Navarre Beach Restoration project's APE, FEMA determined that the proposed beach berm and dune repair would have no effect on this historic structure. FEMA has made a determination of No Historic Properties Affected for the Navarre Beach Restoration project.

5.5.2. ARCHAEOLOGICAL RESOURCES

Existing Conditions

FEMA identified potential cultural resources in the APE utilizing the NPS National Register of Historic Places (NRHP) GIS resource, data from the FMSF, historic aerial imagery and topographic maps, and information from previously conducted cultural resource investigations, including the APE-specific *Submerged Cultural Resources Survey of a Proposed Borrow Area Offshore, Santa Rosa County, FL* and *Cultural Resource Shovel Test Investigation at Navarre Beach, Santa Rosa County, Florida Pursuant to Pending Beach Restoration*. No archaeological resources were identified during the referenced cultural resource assessment survey of the Navarre Beach Restoration project area, while two (2) potential archaeological resources were identified through the submerged remote sensing survey of the proposed borrow area. Anomaly Cluster-A was an area potentially containing shipwreck or aircraft debris, while Anomaly 8007 was described as a large ferrous object of indeterminate nature. The previous surveyor recommended that a 200-ft. dredge buffer be established around Anomaly Cluster-A and Anomaly 8007, while Anomaly 8006 was to be disregarded due to its low ferrous weight and lack of physical association with Anomaly 8007. The USACE required that the 200-ft. buffers established around Anomaly Cluster-A and Anomaly 8007 prior to the 2006 dredging of the proposed borrow area be maintained during future permitted Navarre Beach Restoration project dredging, including the most-recent beach renourishment project completed in 2016.

Prehistoric Archaeological Resources

No pre-contact (prehistoric) archaeological resources were identified within the proposed project's APE.

Historic Archaeological Resources

Two (2) potential historic archaeological resources were identified during the *Submerged Cultural Resources Survey of a Proposed Borrow Area Offshore, Santa Rosa County, FL*. Anomaly Cluster-A was an area potentially containing shipwreck or aircraft debris, while Anomaly 8007 was described as a large ferrous object of indeterminate nature. The previous surveyor recommended that a 200-ft. dredge buffer be established around Anomaly Cluster-A and Anomaly 8007, while Anomaly 8006 was

to be disregarded due to its low ferrous weight and lack of physical association with Anomaly 8007. The USACE required that the 200-ft. buffers established around Anomaly Cluster-A and Anomaly 8007 prior to the 2006 dredging of the proposed borrow area be maintained during future permitted Navarre Beach Restoration project dredging, including the most-recent beach renourishment project completed in 2016.

Potential Impacts and Proposed Mitigation, Archaeological Resources

Alternative 1: No Action

Under the no action alternative, no impacts to archaeological resources would occur.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

Based on the continued avoidance of Anomaly Cluster-A and Anomaly 8007 with a 200-ft. buffer during dredging activities, the proposed Navarre Beach Restoration project should have no effect on these potential historic archaeological resources. FEMA has made a determination of No Historic Properties Affected for the Navarre Beach Restoration project. The following conditions shall be adhered to for Alternative 2:

- 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 shall contact the Florida Division of Historical 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. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately, and the proper authorities notified in accordance with Florida Statutes, Section 872.05.
- The applicant must avoid Anomaly Cluster-A and Anomaly 8007 with a 200-ft. buffer during dredging and any other project-related activities within the borrow area.
- During the project, construction vehicles and equipment will be stored offsite or at existing access points within the applicant's right-of-way.
- Any changes to the approved scope of work will require submission to, and evaluation and approval by, the State and FEMA, prior to initiation of any work, for compliance with Section 106.
- Inadvertent discoveries of cultural resources, human remains and related NAGPRA items may occur, even in areas of existing or prior development. Should this occur, The Choctaw Nation of

Oklahoma requests that all work cease and our office as well as other appropriate agencies be notified immediately.

5.6. SOCIOECONOMIC RESOURCES

5.6.1. TRANSPORTATION

Existing Conditions

Navarre Beach is located on Santa Rosa Island, Santa Rosa County, Florida. Santa Rosa Island fronts the Santa Rosa Sound to the north and the Gulf of Mexico to the south. Navarre Beach is located on the Gulf Coast shoreline of Santa Rosa Island. Navarre Beach Causeway is a concrete bridge spanning the Santa Rosa Sound that separates Santa Rosa Island from the Navarre mainland. It is the sole point of vehicular and pedestrian access to Navarre Beach for those living, working, or visiting the community. This route allows heavy equipment and construction staff to be transported to and from the beach area.

Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the no action alternative, there would not be any construction activities, and, accordingly, this alternative would not have an impact on existing infrastructure.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

Under the preferred alternative, there are anticipated to be negligible to minor short-term impacts from construction equipment and staff entering and leaving the project area. Negligible to minor short-term impacts on nearshore navigation of small recreational vessels during the construction of the beach restoration project are also anticipated. No permanent or adverse effects to the existing infrastructure will occur. For those living on Santa Rosa Island, there may be a noticeable increase in traffic volume after the initial opening of the restored Navarre Beach.

5.6.2. ENVIRONMENTAL JUSTICE

EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires agencies to identify and address disproportionately high and adverse human health or environmental effects its activities may have on minority or low-income populations in the United States.

Existing Conditions

In order to provide context for the EJSscreen Standard Report and the United States Census Bureau QuickFacts reports, a demographic analysis was undertaken. The first step was to define a relevant

Community of Concern. The Community of Concern was determined through what area(s) will be affected by both the No Action and Proposed Action. The total population within a half-mile buffer of the Navarre Beach Study Area is 1763 according to the EJSCREEN Standard Report, accessed April 04, 2023. The area has a people of color population of 17% and a low-income population of 23%, both of which are lower than the State's average of 47% and 33%, respectively. The United States Census Bureau QuickFacts website states that the 2017 to 2021 median income for Navarre, Florida was \$90,139.

Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the no action alternative, no disproportionate impacts on minority or low-income populations are anticipated.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

Under the preferred alternative, no disproportionate impacts, adverse impacts to minority or low-income populations are anticipated. The beach will be restored to its engineered beach profile with no changes to the existing design and footprint. The project benefits would be to all population members.

5.6.3. HAZARDOUS MATERIALS

Existing Conditions

Based on the information available on FDEP's Contamination Locator Map, there are no brownfield, petroleum, per- and polyfluoroalkyl substances (PFAS), superfund, or other waste cleanup sites under the agency's cleanup oversight within a one-mile radius of the Navarre Beach Restoration project area.

Potential Impacts and Proposed Mitigation

Alternative 1: No Action

Under the no action alternative, there would be no construction and no associated potential impacts from hazardous materials.

Alternative 2: Repair the Beach to Pre-Disaster Condition Plus Background Erosion

Under the preferred alternative, minor short-term impacts due to the potential for spills during construction are anticipated. The potential for spills from construction equipment will be minimized and handled in accordance with applicable regulations and state and federal permitting. The contractor shall perform all maintenance of equipment, including but not limited to refueling, filter changes, and replacement of hydraulic lines in a manner so as not to contaminate soils, ground or surface waters, or any other natural resources.

Based on the information available on FDEP's Contamination Locator Map, there are no brownfield, petroleum, per- and polyfluoroalkyl substances (PFAS), superfund, or other waste cleanup sites under the agency's cleanup oversight within a one-mile radius of the Navarre Beach Renourishment project area. The proposed borrow area for the preferred alternative was utilized for the previous nourishment of Navarre Beach, which was completed in 2006. It is located along a sand ridge within the Gulf of Mexico, approximately 4.5 miles south of the proposed nourishment area, and is not proximal to a river mouth or any known point source of pollution. The proposed borrow material is composed primarily of sand, which is a naturally occurring material. Santa Rosa County previously completed an analysis of the sediment size, color, and silt content of material from the borrow area to ensure that the proposed fill would meet the criteria of Florida's "sand rule" for beach management. In May of 2012, British Petroleum (BP) conducted contaminant testing to determine whether oil released from the 2010 Deepwater Horizon Mississippi Canyon (MC252) oil spill was present in the seafloor sediment; oil was not present in any of the samples taken from the borrow site. The USACE noted in its 2014 EA that FDEP authorized the previous restoration of Navarre Beach through permit 0220096-006-JC, issued on January 07, 2014; this determined that the project is consistent with Florida's Coastal Zone Management Program and certifies that the project complies with Section 401 of the CWA. Based on the nature and location of the proposed borrow site, previous use of fill material from this source, sampling of the borrow site for oil by British Petroleum (BP), analysis of the sand grains (size, color, carbonate content, silt content) it contains, and issuance of applicable permits by the USACE and FDEP, there is no indication that toxic materials (metals or organics) or contaminants are present in the borrow material. Accordingly, there are not anticipated to be any impacts from hazardous materials associated with the use of the proposed borrow area under the preferred alternative.

5.7. CUMULATIVE IMPACTS

Per the Council on Environmental Quality (CEQ) regulations, cumulative impacts are the impacts on the environment which "results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7). In accordance with NEPA, this SEA considered the combined effect of the preferred alternative and other actions occurring or proposed in the vicinity of the proposed project site.

The shoreline along Navarre Beach is vulnerable to coastal erosion and expected to be subject to damages from future tropical storms and hurricanes, which may result in presidential declarations. In their 2014 EA, the USACE noted that FDEP classified the Navarre Beach shoreline as a "critically eroded" area. As an engineered and maintained facility, future restorations due to storm or background erosion are expected. The previous USACE EA issued in 2014 identified cumulative impacts from ongoing beach restoration efforts and similar projects that have occurred following the initial engineering of Navarre Beach in 2006. The proposed project is expected to increase the level of storm protection to the improved property along the existing shoreline while also protecting

remaining habitat for numerous floral and faunal species, including nesting sea turtles and shorebirds. It is not expected that that project will increase development along the Navarre Beach shoreline.

The westernmost portion of the Navarre Beach Restoration project area is within an OPA, FL-98P, bordering the Gulf Island National Seashore and its eastern limit is adjacent to a CBRS System Unit, FL-97. As such, these areas are protected from future development and, based on previous CBRA consultation with the USFWS, no federally funded sand placement may occur within CBRS System Unit FL-97. Santa Rosa County's Navarre Beach Fishing Pier and associated park are within the eastern portion of the Navarre Beach Restoration project. The segment of Navarre Beach from the Navarre Beach Fishing Pier westward to R-192 is characterized by high-density, multi-family buildings, including hotels, condominiums, and timeshares, while single-family residences constitute the swath of beach from R-192 to R-204. Upland use of Navarre Beach is primarily recreational in nature and encompasses the sandy beach, natural resources, and amenities of the built environment. Santa Rosa County's beach accesses and the Navarre Beach Fishing Pier and park are open to the general public. It is not anticipated that the proposed project or future maintenance actions will have an impact on the existing upland uses of Navarre Beach or encourage further development in the vicinity due to the nature of the existing area. The continued existence of improved property and redevelopment of that property may be associated with the perpetual maintenance and renourishment of Navarre Beach.

The project and anticipated future actions in the area will likely have short-term impacts to commercial and recreational usage of the shoreline and associated borrow area due to construction efforts. However, it is anticipated there will be no associated long-term impacts to commercial fisheries, and beneficial long-term impacts are expected to occur immediately as a result of the restoration of the engineered beach. The Navarre Beach shoreline generates tourism that contributes significantly to the local and state economy, and continued maintenance of the engineered beach will ensure that tourism and its recreational value persist. Based on the review conducted, when added to past, present, and reasonably foreseeable actions, the proposed action is not expected to have significant adverse cumulative impacts on any resource within the natural and human environment.

6. Permits and Project Conditions

1. Any change to the approved scope of work will require re-evaluation for compliance with NEPA and other Laws and Executive Orders.
2. This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.
3. If ground disturbing activities occur during construction, applicant will monitor ground disturbance and if any potential archeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA.

4. Under Alternative 2, Santa Rosa County would follow the conditions below set forth by the Florida SHPO:
 - 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 shall 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. In the event that unmarked human remains are encountered during permitted activities; all work shall stop immediately, and the proper authorities notified in accordance with Florida Statutes, Section 872.05.
 - b. The applicant must avoid Anomaly Cluster-A and Anomaly 8007 with a 200-ft. buffer during dredging and any other project-related activities within the borrow area.
 - c. Construction vehicles and equipment will be stored onsite during the project or at existing access points within the Applicant's right-of-way.
 - d. Any changes to the approved scope of work will require submission to, and evaluation and approval by, the State and FEMA, prior to initiation of any work, for compliance with Section 106.
 - e. Inadvertent discoveries of cultural resources, human remains and related NAGPRA items may occur, even in areas of existing or prior development. Should this occur, The Choctaw Nation of Oklahoma requests that all work cease and our office as well as other appropriate agencies be notified immediately.
5. 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.
6. Sand placement within OPA FL-98P is not prohibited; however, the applicant shall not place sand within CBRS System Unit FL-97, as the USFWS found sand placement within CBRS System Unit FL-97 to be inconsistent with the three (3) purposes of the CBRA.
7. Under Alternative 2, the applicant must comply with the terms and conditions, including the Special Conditions, of USACE Permit No. SAJ-2003-10496 (SP-TSH) and associated guidance. The subapplicant must obtain permit modifications as necessary. Failure to comply with these conditions may jeopardize FEMA funding; verification of compliance will be required at project closeout.
8. Under Alternative 2, the applicant must comply with all conditions in the FDEP JCP and Sovereign Submerged Lands Lease Authorization (No. 0220096-006-JC), and obtain any additional

modifications as needed. Failure to comply with this condition may jeopardize FEMA funding; verification of compliance will be required at project closeout.

9. Under Alternative 2, Santa Rosa County must adhere to the Nesting Seabird and Shorebird Protection Conditions outlined in FDEP JCP No. 0220096-006-JC.
10. Under Alternative 2, Santa Rosa County must adhere to the Conservation Measures and Terms and Conditions of the following Biological Opinions: USFWS Programmatic Piping Plover Biological Opinion (Service Log 04EF1000-2013-F-0124, dated May 22, 2013), the USFWS Statewide Programmatic BO for Sand Placement (SPBO)(Service Log 41910-2011-F-0170, dated March 13, 2015), and the NMFS Gulf Atlantic Regional Biological Opinion (GRBO) (Consultation Number F/SER/2000/01287, dated November 19, 2003, and amended on January 09, 2007 with Revision 2). The subrecipient must also adhere to the attached Sea Turtle and Smalltooth Sawfish Construction Conditions (Revised March 23, 2006) and Standard Manatee Conditions for In-Water Work (2011). Failure to comply with these conditions may jeopardize FEMA funding; verification of compliance will be required at project closeout.

7. Agency Coordination and Public Involvement

USACE is the lead federal agency that conducted the original NEPA analysis and issued a statement of finding on November 14, 2014. USACE issued the public notice for the Navarre Beach Restoration project on November 8, 2013, with a December 8, 2013, end date for the public notice comment period. Two (2) comments were received during the specified public notice comment period. On November 13, 2013, the Panama City Site Office, Mobile District, U.S. Army Corps of Engineers stated that it had “no objections to the proposed beach nourishment work from a Federal O&M perspective”. The second comment was provided by Ms. Jolene Williams of the Gulf Island National Seashore on November 21, 2013, and stated that Mr. Daniel Brown, superintendent of the Gulf Islands National Seashore, recommended that a “similar sand grain size, texture, and color (sand suitability criteria) as currently exists within the Park be used when selecting final borrow source materials”. In its 2014 EA, the USACE noted that the proposed borrow area is the same borrow site that was utilized for the previous nourishment that was completed in 2006, and that Santa Rosa County indicated that sand from the borrow site complies with the State’s “sand rule,” meaning it would be very similar in grain size, color, and texture to the native beach sand. No public hearing was requested or held for this project.

FEMA issued a disaster-wide initial public notice for Hurricane Sally on September 23, 2020, to notify the public of projects under the Public Assistance program that may be occurring within floodplains. FDEP maintains a list of JCP projects, including beach restoration projects, under construction in the given month at: <https://floridadep.gov/rcp/beaches-inlets-ports/content/jcp-projects-status>. The public was notified that the drafted FEMA SEA was available for review and comment, by posting the public notice on Santa Rosa County’s website and on FEMA’s website. An electronic version of the SEA is posted on FEMA’s website at: <https://www.fema.gov/emergency-managers/practitioners/environmental-historic/region/4>.

Appendices are available for review upon request to: FEMA-R4EHP@fema.dhs.gov.

Several of the findings of the USACE were adopted per Unified Federal Review. The following agencies and organizations were contacted by USACE and/or FEMA:

Table 7.0.1: Agencies and Organizations Contacted by USACE and/or FEMA

Agency or Organization
U.S. Fish and Wildlife Service (USFWS) North Florida Ecological Services Field Office
National Marine Fisheries Service (NMFS)
U.S. Army Corps of Engineers (USACE), Jacksonville District
Florida Division of Historical Resources (DHR), State Historic Preservation Office (SHPO)
Alabama-Coushatta Tribe of Texas
Alabama-Quassarte Tribal Town
The Choctaw Nation of Oklahoma
Jena Band of Choctaw Indians
Miccosukee Tribe of Indians
Mississippi Band of Choctaw Indians
The Muscogee (Creek) Nation
Poarch Band of Creek Indians
The Seminole Nation of Oklahoma
Seminole Tribe of Florida
Thlopthlocco Tribal Town

8. List of Preparers

Table 8.0.1: List of Navarre Beach Restoration Project SEA Preparers

Preparer	Title
Angelika Phillips	Acting Regional Environmental Officer (REO)
Dustin Hill	Senior Environmental Protection Specialist

Preparer	Title
Kristen Hall	Preparer, Environmental Protection Specialist
Tonja Halton	Environmental Protection Specialist
Steve Wirtz	Reviewer, Historic Preservation Specialist Lead
Marc Marino	Reviewer, Historic Preservation Specialist
Amy Weinhouse	Legal Review, Attorney-Advisor

9. References

USACE, 2014. MEMORANDUM FOR RECORD: Department of the Army Environmental Assessment and Statement of Finding for Permit Application SAJ-2003-10496 (SP-TSH).

Appendices available upon request to FEMA Region 4
EHP (FEMA-R4EHP-FLORIDA@fema.dhs.gov)