JANUARY 2024

FINAL SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

Flagler County Coastal Storm Risk Management
Flagler County, Florida

US Army Corps of Engineers®
Jacksonville District

BOEM
Bureau of Ocean Energy Management

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U.S. Army Corps of Engineers
JACKSONVILLE DISTRICT

FINDING OF NO SIGNIFICANT IMPACT

FINAL SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT (SEA) FOR FLAGLER COUNTY, FLORIDA COASTAL STORM RISK MANAGEMENT PROJECT IN FLAGLER COUNTY, FLORIDA

The U.S. Army Corps of Engineers, Jacksonville District (Corps) and the Bureau of Ocean Energy Management (BOEM) (cooperating agency) have conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended (NEPA) (Public Law 91-190). The Supplemental Environmental Assessment (SEA) addresses the increase in sand volume and expansion of the constructed berm for the Flagler County, Florida Coastal Storm Risk Management (CSRM) Project in Flagler County, Florida.

The SEA, incorporated herein by reference, evaluated various alternatives for beach nourishment within the Flagler County CSRM Project. The Preferred Alternative consists of both federally owned and non-federally owned components, both of which will be constructed by the Corps. The federal component includes beach nourishment from R-80 to R-94, and the non-federal component includes beach nourishment that takes place in both northern (R-80 to R-77) and southern (R-94 to R-99) extension tapers, along with staging and access areas, and the construction of temporary access ramps within the non-federal sponsor (NFS) owned components. Sand for the beach nourishment of both federal and non-federal tapers will be dredged from an offshore borrow source ("Borrow Area 3A"). Sand for the temporary access ramps will be truck hauled from an approved and permitted upland mine.

In addition to a "No Action" Alternative (Alternative 1), two other alternatives were considered[1]. Alternative 2 includes construction of the Flagler County CSRM with increased sand volumes and expansion of the berm. Alternative 3 includes construction using sand volumes as previously authorized in the 2014 Final Integrated Feasibility Study and Environmental Assessment. These three alternatives were carried forward for detailed evaluation. Section 3 of the SEA contains a full description of the alternatives.

For all alternatives, the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the Preferred Alternative are listed in Table 1:

[1] 40 CFR 1505.2(b) requires a summary of the alternatives considered.

Table 1. Summary of Potential Effects of the Preferred Alternative.

	Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
General setting	X		
Natural environment	X		
Threatened and Endangered (T&E) species and Designated Critical Habitat (DCH)	X		
Essential Fish Habitat (EFH)	X		
Physical environment	X		
Sediment characteristics	X		
Tribal Nations			X
Cultural Resources			X
Unexploded Ordinances/Munitions of Explosive Concern (UXO/MEC)			X
Air Quality	X		
Human Health and Safety	X		
Built Environment			X
Economic Environment			X
Environmental Justice			X

All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the Preferred Alternative. Environmental commitments, as detailed in Table 6-1 of Section 6.1 of the SEA, will be implemented to minimize impacts[2]. The Corps remains committed to reviewing new information as it becomes available, as well as considering the application of new information and applying lessons learned to future projects. No compensatory mitigation is required in any of the alternatives considered for this SEA.

The proposed FONSI, draft SEA, and associated appendices was made available to the public, agencies, and other interested stakeholders via the Corps' Environmental Planning website, under Flagler County, at the following link for a 30-calendar day public and agency review period: https://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/

A copy of the comments received, as well as a summary matrix of the comments and the Corps' responses, will be included in the final document and incorporated, as applicable, in Appendix B ("Public and Agency Comments and Corps Responses").

Pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended, the Corps determined the project meets eligibility criteria for coverage by the National Marine Fisheries Service (NMFS) South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States (SARBO). The project will adhere to the applicable Project Design Criteria (PDCs). The Corps determined this project is also eligible for coverage by the U.S. Fish and Wildlife Service

[2] 40 CFR 1505.2(C) all practicable means to avoid and minimize environmental harm are adopted.

(USFWS) 2015 Revised Statewide Programmatic Biological Opinion (SPBO) and USFWS 2013 Piping Plover Programmatic Biological Opinion (P3BO) for the protection of federally listed and threatened species under USFWS jurisdiction.

The Corps determined that the Preferred Alternative may affect, but is not likely adversely affect, the following federally listed species: Piping plover, Rufa red knot, smalltooth sawfish, Atlantic sturgeon, giant manta ray, various whale species (blue, fin, humpback, right, sei, sperm), and the Florida manatee. The Corps determined that the Preferred Alternative may affect the following federally listed species: swimming sea turtles (green, hawksbill, leatherback, loggerhead, Kemp's ridley). The Corps determined that the Preferred Alternative will not likely adversely modify designated critical habitat (DCH) for the loggerhead sea turtle and North Atlantic right whale. Coordination with the USFWS was conducted concurrently with the release of the draft SEA. In a letter dated January 5, 2024, USFWS concurred with the Corps' determinations stating that "it is appropriate to apply the 2015 SPBO, P3BO, and Standard Manatee Conditions for In-water Work". Pertinent correspondence is included in the SEA's Appendix A, and additional details on environmental compliance with the ESA can be found in Section 6.2 of the SEA.

Pursuant to Section 404 of the Clean Water Act (CWA), a 404(b)(1) Guidelines Evaluation was completed as this project includes dredging from Borrow Area 3A and placing material on the Flagler County shoreline as defined by the CWA. The Corps determined that the project is compliant with Section 404(b)(1) and a copy of the 404(b)(1) Guidelines Evaluation is included as Appendix C. A Section 401 water quality certification was obtained by the City of Flagler Beach (Permit No. 0379716-001-JC) from the State of Florida Department of Environmental Protection (FDEP) and a subsequent permit modification was also obtained (Permit No. 0379716-002-JN). A Section 401 water quality certification was obtained by the Corps (Permit No. 0378136-002-JM), with a minor permit modification pending that will be obtained prior to the onset of construction. All conditions of the water quality certification will be implemented in order to minimize adverse impacts to water quality.

Pursuant to the Coastal Zone Management Act (CZMA), the Corps prepared a Federal Consistency Determination (FCD) and determined that the Preferred Alternative is consistent with the State of Florida's Coastal Zone Management Program (CZMP) to the maximum extent practicable. In an email dated November 29, 2023, the State of Florida concurred stating that based on the information submitted and minimal effects expected, the project is consistent with the CZMP. Final compliance with CZMA will occur when the permit modifications are received from the State of Florida. A copy of the FCD and related correspondence is included in Appendix D.

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended (Public Law 94-265), the project's Essential Fish Habitat (EFH) Assessment is integrated in this SEA consistent with the 1999 guidance provided by the NMFS Southeast Regional Office to the Corps regarding coordination of EFH consultation requirements with NEPA. The Corps initiated consultation with NMFS for

the Preferred Alternative during the draft SEA's public comment period. In an email from NMFS Habitat Conservation Division dated November 30, 2023, NMFS stated that they would not be reviewing the SEA for this project, and the Corps did not receive any EFH Conservation Recommendations. Pertinent correspondence is included in Appendix A of the SEA.

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (Public Law 89-665), the Corps coordinated with the Florida State Historic Preservation Officer (SHPO). The Corps determined that the Preferred Alternative has no adverse effect on historic properties, contingent upon the maintenance of two 100 ft avoidance buffers and one 150 ft avoidance buffer in the borrow area. The Florida SHPO concurred with the Corps' determination of no adverse effect to cultural resources for use of the Flagler County shoreline, including historic properties, in a letter dated September 26, 2019 (DHR Project File No.: 2019-05234). The Seminole Tribe of Florida also provided concurrence with the Corps' determination by letter dated September 25, 2019 (Tribal Historic Preservation Office Compliance Tracking Number: 0031617). Pertinent correspondence is included in Appendix A of the SEA.

All applicable environmental laws have been considered and coordination with appropriate agencies and officials has been completed.

Technical, environmental, economic, and cost effectiveness criteria used in the formulation of alternative plans were those specified in the Water Resources Council's 1983 Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies. All applicable laws, executive orders, regulations, and local government plans were considered in evaluation of alternatives. Based on this report, the reviews by other Federal, state, and local agencies, Tribes, input of the public, and the review by my staff, it is my determination that the recommended plan would not cause significant adverse effects on the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

BOOTH.JAMES.LAFAYETTE.1186925935
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January 9, 2024
Date

James L Booth
Colonel, U.S. Army
District Commander

FINAL SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
Flagler County Coastal Storm Risk Management
Flagler County, Florida

TABLE OF CONTENTS

List of Tables

List of Figures

List of Appendices

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FINAL SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
Flagler County Coastal Storm Risk Management
Flagler Beach, Florida

1 INTRODUCTION

1.1 INTRODUCTION

The U.S. Army Corps of Engineers, Jacksonville District (USACE) is considering a modified construction template and design for the federally authorized Flagler County, Florida Coastal Storm Risk Management (CSRM) Project in Flagler Beach, Florida. The USACE previously selected the existing Flagler County CSRM Project berm and dune design from the 2014 Final Integrated Feasibility Study and Environmental Assessment (IFR/EA) alternatives, and that preferred alternative was approved by the Secretary of the Army in a 2014 Chief of Engineers Report. The Water Resources Development Act of 2016 and Bipartisan Budget Act of 2018 authorize and provide funding to the USACE to construct the same equilibrated beach and dune profile.

Modifications to the construction template and design are now necessary though to mitigate sustained erosional losses that occurred as a result of multiple named storm events from 2014 to 2023 that negatively impacted the shoreline while the federal project was awaiting real estate acquisition by the non-federal sponsor (NFS), Flagler County. In addition, the NFS proposes to build small dune and berm extensions on each end of the federal template to facilitate construction; the NFS proposes to fund construction of the extensions. These NFS components are now critically important to support construction of the rest of the project due to insufficient space to operate and store construction equipment given the significant deterioration of the Flagler County shoreline.

The USACE proposes to oversee construction of the Congressionally authorized CSRM Project and NFS northern and southern extensions. The borrow area volume now required to construct the modified federal project and associated NFS components is much higher than what was previously considered in the 2014 IFR/EA. The increased construction volume in fact necessitated a change in the borrow area identified as preferred in the 2014 IFR/EA and Chief of Engineers Report. The USACE proposes to construct both federal and NFS funded components using an Outer Continental Shelf (OCS) borrow area (Borrow Area 3A) that was previously analyzed, but not selected in the 2014 IFR/EA.

The purpose of this Supplemental Environmental Assessment (SEA) is to evaluate if the changes in the proposed action for the Flagler County, Florida CSRM Project and any other new information would result in new or different effects from those previously disclosed. These changes include: increased dredging and initial construction volume for beach nourishment using Borrow Area 3A, various design and staging modifications to the federal project required to support berm and dune construction, the inclusion of NFS project components, and changes to the existing environment and impacting activities not yet considered in prior National Environmental Policy Act (NEPA) documents. Pursuant to 40 CFR 1506 and 43 CFR 46.120, the existing analyses are still valid and are incorporated by reference. The USACE is the lead federal agency for the NEPA process and associated environmental compliance requirements. Pursuant

to 40 CFR 1501, the Bureau of Ocean Energy Management (BOEM) is serving as a cooperating agency, as the proposed action is to use Borrow Area 3A located on the OCS. The following documents previously prepared by the USACE and/or BOEM are relevant to this analysis and are incorporated by reference:

- Flagler County Hurricane Protection and Storm Damage Reduction Project, Final Integrated Feasibility Study and Environmental Assessment (EA), prepared September 2014, Finding of No Significant Impact (FONSI) signed January 22, 2016. Accessed at: https://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/ (Click "+Flagler" and scroll down to the project name.)

- Flagler County Hurricane Protection and Storm Damage Reduction Project, Chief's Report, dated December 23, 2014. Accessed at: https://planning.erdc.dren.mil/toolbox/library/ChiefReports/FlaglerCounty-Dec2014.pdf

- Finding of No Significant Impact (FONSI) signed November 27, 2019. Issuance of a Negotiated Agreement for Use of Outer Continental Shelf Sand from Borrow Area 3A for the Flagler County Hurricane and Storm Damage Reduction Project in Flagler County, FL. BOEM. Accessed at: https://www.boem.gov/marine-minerals/mmp-your-state/florida-projects

- Environmental Assessment Flagler County Dune and Beach Restoration Project, Flagler County, Florida. Issuance of a Negotiated Agreement for Use of Outer Continental Shelf Sand from Flagler County Borrow Area for the Flagler County Dune and Beach Restoration Project, Flagler County, FL. BOEM. Finding of No Significant Impact (FONSI) signed May 7, 2020. BOEM. Accessed at: https://www.boem.gov/sites/default/files/documents/environment/Flagler_NonFed_FONSI_FINAL.pdf

The effects of dredging, transportation, and placement of sand within the authorized beach template and NFS extensions have been discussed and disclosed in the above-referenced documents. In accordance with 43 CFR 46.120, this SEA will consider and analyze whether (1) new circumstances, (2) new information, (3) changes to the proposed action, or (4) impacts not previously analyzed would result in significantly different environmental effects from what was previously analyzed.

1.2 PROJECT AUTHORITY

The Flagler County CSRM Project was authorized for construction by Section 1401(3)(2) of the Water Resources Development Act of 2016 (Public Law 114-322), in accordance with the Chief of Engineers Report, dated December 23, 2014. The Bipartisan Budget Act of 2018 (Public Law 115-123), enacted February 9, 2018, appropriated funding for the federally authorized segment. The USACE has separate regulatory authority under the Clean Water Act (Public Law 92-500) and Rivers and Harbors Act of 1899 to permit the proposed NFS extensions. In addition, BOEM has jurisdiction over the identified sand resources for this project under the Outer Continental Shelf Lands Act (OCSLA). BOEM's connected action is the issuance of a negotiated agreement for use of OCS sand resources from Borrow Area 3A to construct the project pursuant to its authority under the OCSLA.

1.3 PROJECT LOCATION

Flagler County is located on the northeast coast of Florida approximately midway between the Florida/Georgia state line and Cape Canaveral (Figure 1-1). The county is bounded to the north by St. Johns County and to the south by Volusia County and has approximately 18 miles of sandy shoreline. The authorized federal project consists of an approximately 2.6-mile-long shoreline in Flagler Beach between (Florida Department of Environmental Protection (FDEP) Range Monument (R-Monument)) R-80 and R-94. The non-federal permitted components extend between R-77 to R-80 to the north and R-94 to R-96 to the south of the federal project.

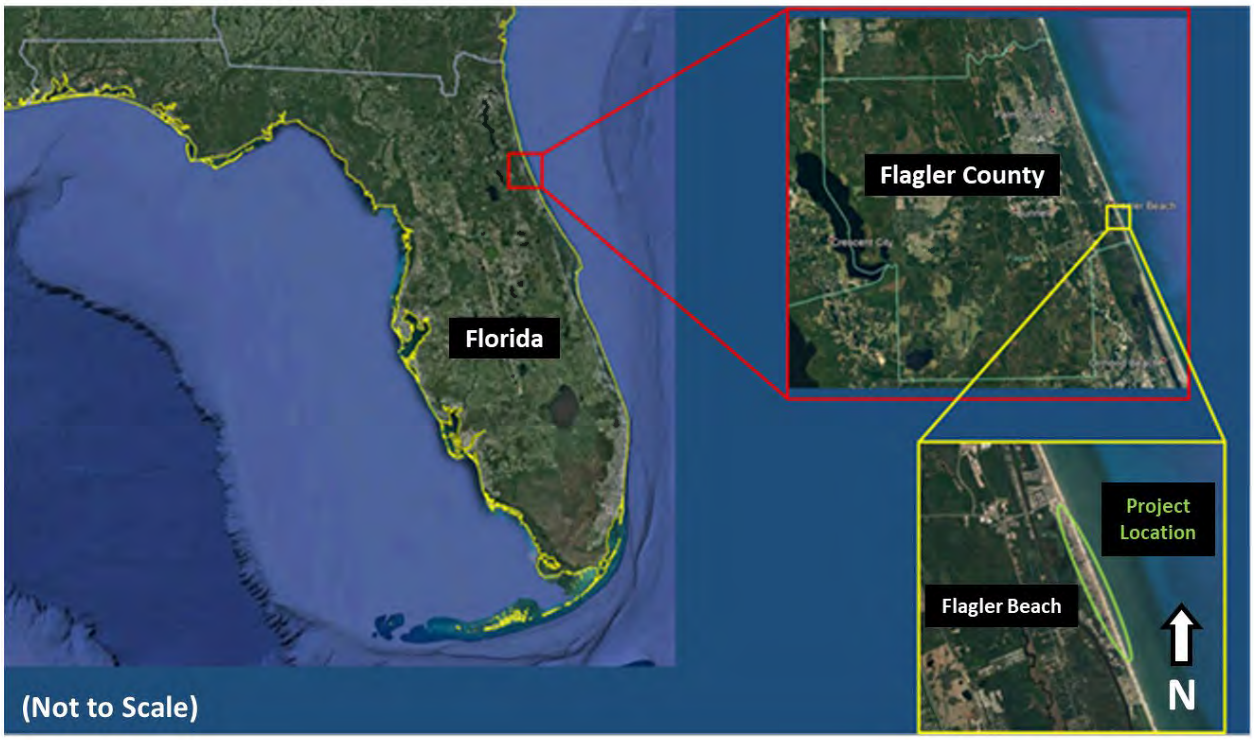

Figure 1-1: General Project Vicinity.

The fill template, consisting of dune and berm placement, is located within the municipality of Flagler Beach (Figure 1-1). In 2014, only 330,000 cubic yards (CY) of sand was projected to be placed on the beach template for initial construction. In support of the 2014 IFR/EA, reconnaissance level data was collected within four offshore borrow areas (2A, 2B, 2C, and 3A) to determine their compatibility for the beach nourishment project (Figure 1-2). At that time, Borrow Areas 2A and 2C were ultimately selected for initial construction due to their compatibility with Flagler Beach's uniquely colored shell-hash sand, proximity (about 7 nautical miles) to the placement area, and sand volume capacities (approximately 3,000,000 CY altogether) that would both fulfill initial nourishment, as well as subsequent 11-year nourishment interval requirements.

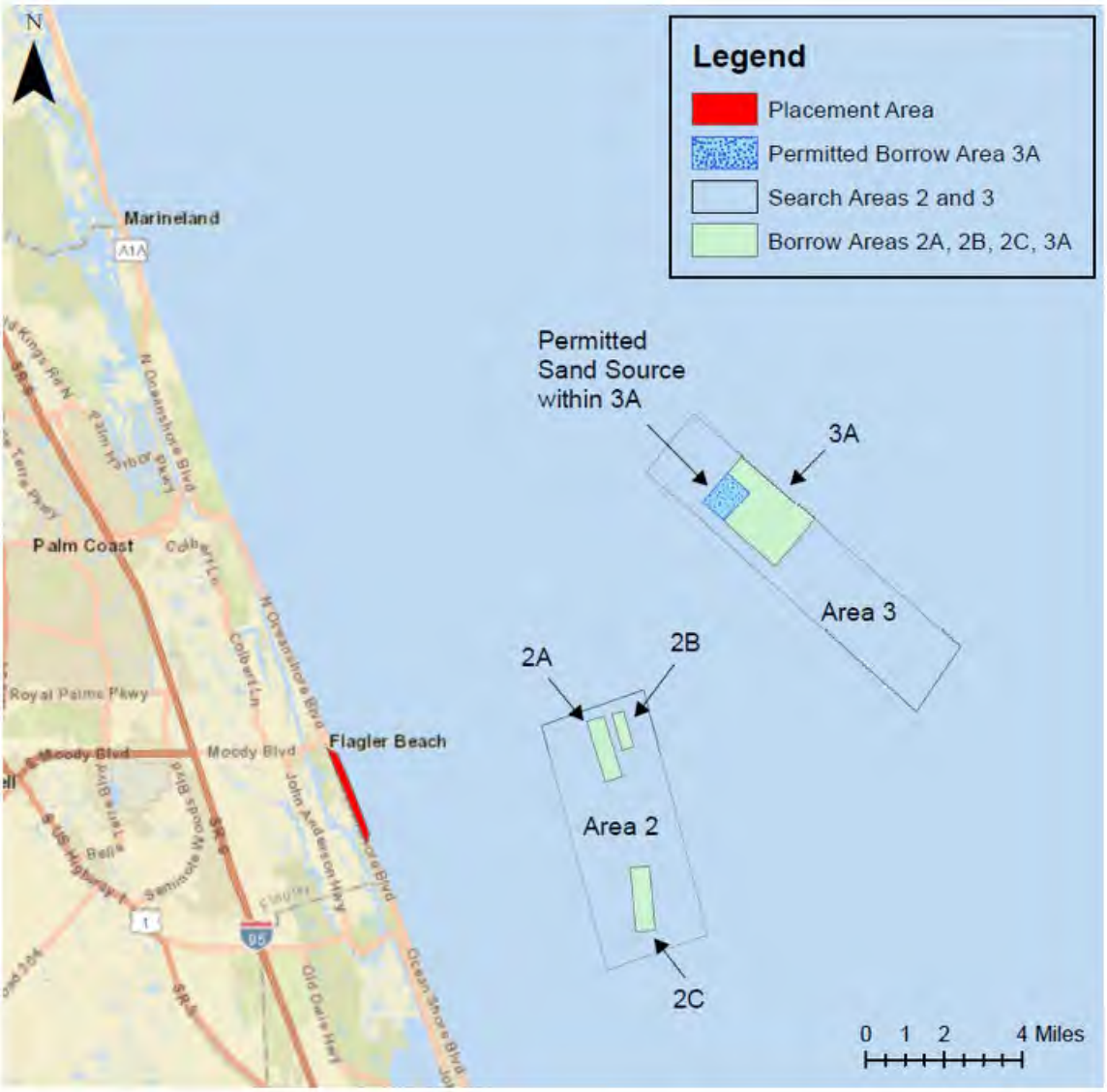

Figure 1-2: Locations of Borrow Areas (2A, 2B, 2C, and 3A) that were evaluated for the Flagler County CSRM in reference to the Flagler County project area.

Considering the erosional losses to the Flagler County shoreline since 2014, three of the borrow areas that were previously considered, evaluated, and analyzed (Borrow Areas 2A, 2B, and 2C) would not be sufficient to support construction of the current project design due to their inability to sustain the larger sand volume requirements. Additionally, recent detailed analysis of all four borrow areas (i.e., the 2019 Flagler County Hydrographic Exam Survey and 2019 Flagler County Permit Plates) show that sand from Borrow Areas 2A, 2B, and 2C does not meet compatibility standards and were further deemed unfit for the proposed project. However, Borrow Area 3A was found to contain beach compatible sand that would also have the dredging capacity to sustain approximately 1,300,000 CY of sand for initial placement, as well as the same future nourishment cycles that were determined in 2014 IFR/EA. A more detailed discussion on the compatibility of Borrow Area 3A for the current project can be found in Section 4.6 of this SEA.

1.4 PROJECT BACKGROUND AND HISTORY

A greater amount of erosion has occurred along the Flagler County shoreline than assumed and analyzed in the 2014 IFR/EA. These changes are due to a delay in initial construction of the project, coupled with multiple named storm events, largely Hurricanes Matthew (2016), Ian (2022), and Nicole (2022) that occurred following completion of the 2014 IFR/EA.

The original National Economic Development (NED) plan described in the 2014 IFR/EA and selected in the 2014 Chief of Engineer's Report included a 10-foot dune extension (a 10-foot sacrificial berm) constructed via a hopper dredge from R-80 to R-94. Average nourishment intervals were estimated to occur approximately every 11 years utilizing an estimated 320,000 CY of sand for each nourishment cycle, with the total volume over the life of the project estimated to be 1,610,000 CY. Figure 1-3 depicts the erosional losses that occurred from 2002 to 2016 due to natural erosional processes (wind, waves, rain, etc.) and additional erosional losses that occurred from 2016 to 2022 while awaiting sponsor acquisition of real estate easements. Further erosion occurred after 2022, mainly as a result of Hurricane Ian and Hurricane Nicole. Overall erosional losses that occurred between 2014 and 2023 were higher than anticipated and thereby require a significant increase in sand volume to meet current project needs in consideration of the changes to the existing environment. While the total volume for the Flagler County CSRM Project has increased, the equilibrated beach profile and template needed to protect the Flagler County shoreline has not changed. The USACE has determined that the construction design and template is consistent with existing authorizations and appropriations based on the same equilibrated profile.

In addition to the modified Flagler CSRM Project, the USACE proposes to construct small extensions for Flagler County outside of the federally authorized template (R-80 to R-94). Beach nourishment work proposed by the NFS include beach taper components that occur both north (R-77 to R-80) and south (R-94 to R-96) of the federally authorized template. Such NFS components will be connective, additive, and tie into the federal component, in which the combined effort will provide the greatest benefits to the Flagler County shoreline. Although the NFS will be funding the work that occurs outside of the federally authorized template, the USACE will be constructing all (both USACE and NFS) components.

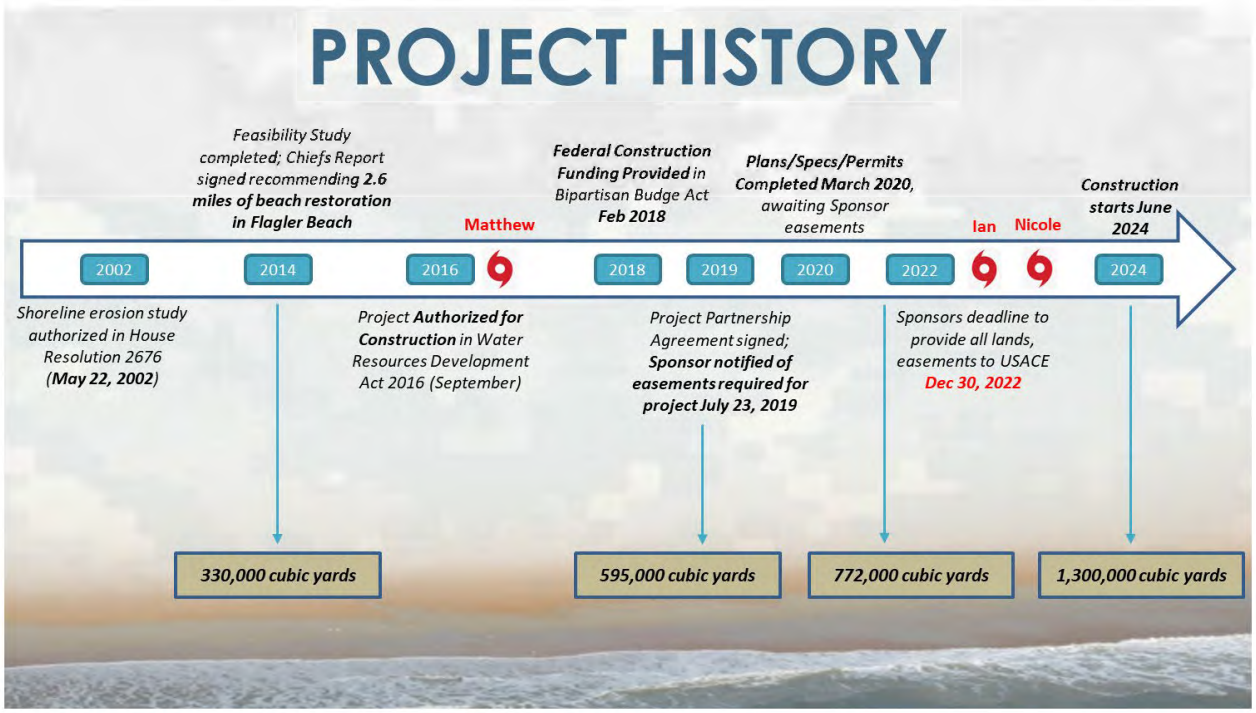

Figure 1-3: Timeline depicting project history of the Flagler County CSRM since its initial shoreline erosion study conducted in 2002, demonstrating that the volume of sand required for the federal project has grown significantly due to multiple storm events.

Additional information regarding project history of the Flagler County shoreline, including ongoing erosional issues and previous costal armoring efforts in Flagler Beach, can be found in the 2014 IFR/EA. The following describes the federal and NFS components of the Flagler County CSRM in greater detail.

1.4.1 FEDERAL TEMPLATE

Figure 1-4 shows the USACE construction design described in the 2014 IFR/EA, which occurs in the federally authorized template R-80 to R-94 (Figure 1-5) and is defined by achieving a 10-foot equilibrated seaward extension of the dune and beach. The term "equilibrated" refers to the berm width that results after natural coastal processes via wave action and erosion and can be used interchangeably with the term "constructed toe of fill" (CTOF). Note that this has remained the designated template of the authorized project based upon its initial approval in the 2014 IFR/EA and 2014 Chief's of Engineers Report. This also applies through the current construction template (based on changes to the existing environment). The constructed berm was initially designed to be 40 feet wide, sloping 1V:40H from +11.0 NAVD88 down to +10.0 NAVD88 with a foreshore slope of 1V:10H to tie into existing grade. Per the 2014 Chief of Engineers Report, initial construction of the dune and berm template would require approximately 330,000 CY of sand, and each periodic nourishment event will require approximately 320,000 CY, assuming initial construction commenced in 2016. This will require approximately 2,000,000 CY of sand to be dredged from Borrow Area 3A, and the volume now required to construct the modified berm and dune construction template is approximately 1,300,000 CY to be placed on the beach, almost one million more than in the 2014 IFR/EA. The modified berm and dune construction template is discussed in Section 3.1.2 and shown in Figure 3-3.

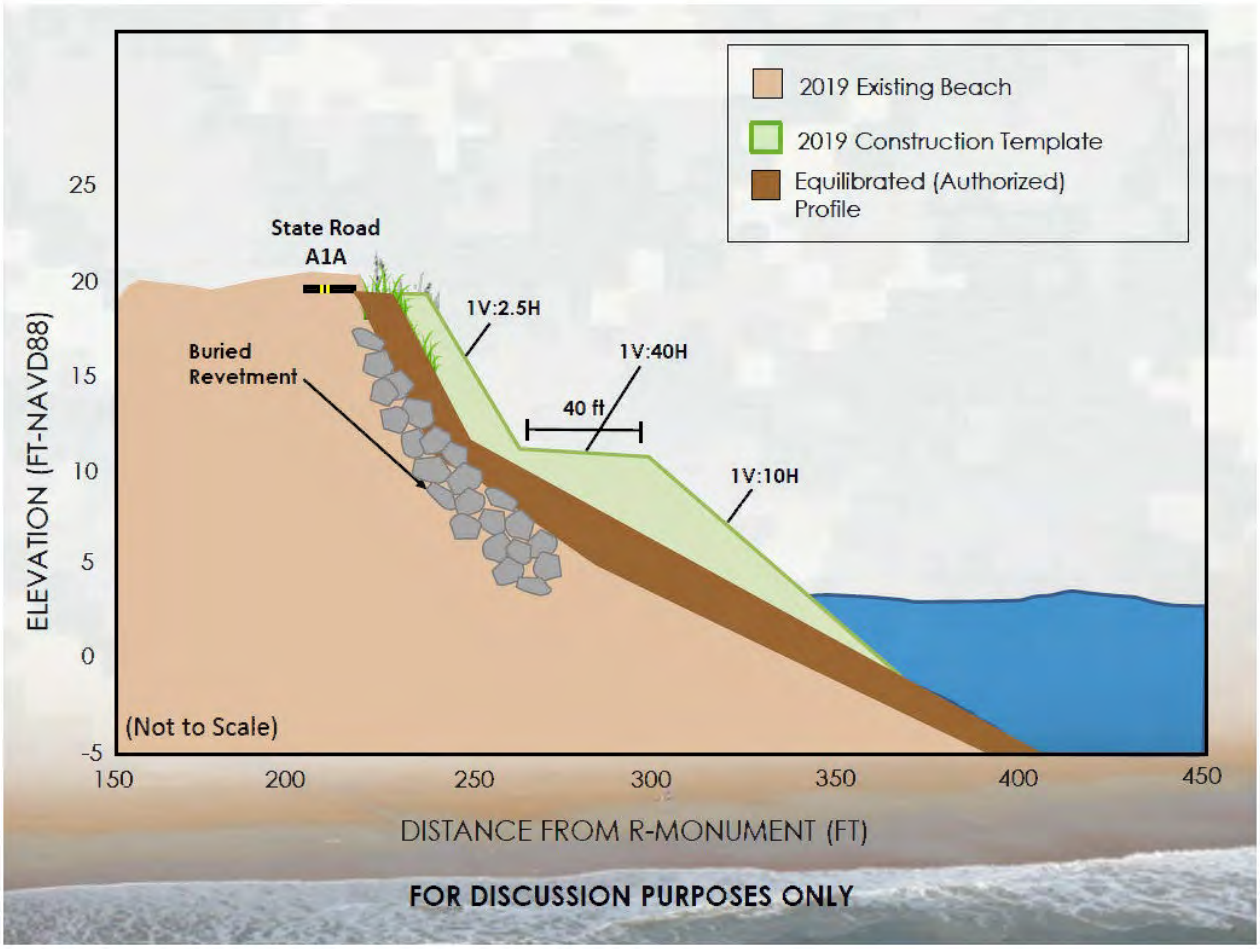

Figure 1-4: Construction template using nourishment volumes and berm width requirements based on existing conditions of Flagler Beach in 2019.

1.4.2 NON-FEDERAL TEMPLATE

The NFS is funding the following components to the Flagler County CSRM based upon the analyses conducted by Olsen and Associates for Coastal Eco-Group, Inc. (2020), but these additions will be fully constructed by the USACE:

- A northern taper between R-77 to R-80 of dune and berm placement that transitions into the federal component CTOF (Figure 1-5). This will require approximately 225,000 CY of sand to be dredged from Borrow Area 3A, with approximately 150,000 CY placed on the beach for nourishment.
- A southern taper between R-94 to R-96 of dune and berm placement that transitions from the federal component CTOF (Figure 1-5). This will require approximately 180,000 CY of sand to be dredged from Borrow Area 3A, with approximately 120,000 CY placed on the beach for nourishment. The southern taper includes a critical beach access point for construction equipment that the USACE will utilize for construction operations of both the federal and non-federal components of the project. The total volume of sand dredged from Borrow Area 3A (for both federal and non-federal tapers) will not exceed the authorized 2,500,000 CY.

- The southern staging and access areas consists of two components: A parcel of land on the west side of State Road (SR) Atlantic 1 Alternate (A1A) which would be used for the staging of construction equipment only, and a parcel of land directly across from this on the east side of A1A for staging and access to the construction area on the beach, in which both parcels are owned by the Pebble Beach Homeowners Association (HOA). The utilization of these lots will require the clearing of vegetation and removal of potential invasive species.
    - The eastward staging and access area (Pebble Beach HOA) will require additional material to be brought in via truck haul from an upland mine sand source to build up the temporary access area located near R-95. Upon completion, beach access will be graded to meet the design requirements of the non-federal project. Placement of additional material to build up access from the existing grade will occur entirely within the NFS permitted footprint. An estimated 500 dump trucks will be used to transport approximately 10,000 CY of sand from the upland sand source to build up the access area. Five upland sand sources (Vulcan-Goldhead; Vulcan-Keuka; Vulcan-Grandin; Cemex-Davenport; and E.R. Jahna-Independent Nor) were approved and permitted by FDEP under the NFS permit on December 13, 2023 (Permit NO. 0379716-001-JC, Flagler County). The exact sand source will be determined at the time of construction and only approved sand sources through FDEP will be utilized. Construction of the federal and non-federal project would not be possible without these new Pebble Beach and city owned staging and access areas located near R-95.
- Staging areas located at Veterans Park and 6th Street South will also be required in order to construct the NFS northern taper. These two staging areas will also require the construction of temporary access ramps directly across SR A1A for the transport of construction equipment onto the beach, in which approximately 7,500 CY of sand will be truck hauled from an approved upland mine source per each staging area (7,500 CY of sand for Veteran's Park temporary access ramp, and 7,500 CY of sand for 6th Street South temporary access ramp). Construction efforts for the new editions of Veterans Park staging area/temporary access ramp will require traffic closures on SR A1A and subsequent reroutes.
- A staging area located near the water tower at South Central Avenue (a public parking lot on the east side of SR A1A) will also be utilized for parking of the Contractor's personnel vehicles. Additional details on the proposed staging areas can be found in the Olsen and Associates for Coastal Eco-Group, Inc. (2020).

The NFS is responsible for obtaining all required authorizations in the NFS components of the project. The NFS will also utilize the same borrow area that is being used to construct the federal project. Hence, sand for beach nourishment efforts within the NFS owned northern and southern extensions to the federal project, as well as the federal project will be acquired from Borrow Area 3A. The NFS has obtained authorization/permit modifications to include new staging and access areas and has also acquired a combined agreement with BOEM to include Borrow Area 3A dredging authority for both federal and NFS components (Permit NO. 0378136-001-JC).

Figure 1-5. Map of the Flagler County project area, including both Federal CSRM and NFS components, as well as staging and access areas.

1.4.3 RELEVANT ISSUES

This SEA supplements the previous NEPA documents listed below. It evaluates whether changes in the current scope, new circumstances not previously analyzed, and information not previously available contribute to a determination of significantly different environmental effects (43 CFR 46.120). The following issues were identified as relevant and are appropriate for further evaluation: new threatened and endangered species per the updated 2020 South Atlantic Region Biological Option for Dredging and Material Placement Activities in the Southeast United States, as amended (SARBO), including the smalltooth sawfish, oceanic whitetip shark, and giant manta ray, increased sand volume, use of Borrow Area 3A, extension of the constructed berm in the federal project, additional staging and access areas required for construction, and new NFS additions to the project that tie in to the federal project.

The following resource categories were identified as relevant to the proposed project modifications, thereby maintaining the focus of analysis in this SEA, and require further evaluation: (1) natural environment; (2) newly listed threatened and endangered (T&E) species (3) essential fish habitat (EFH); (4) bathymetry/sediment characteristics; (5) air quality; (6) cultural and archaeological resources; and (7) Unexploded Ordnances (UXO)/Munitions of Explosive Concern (MEC). The resource categories described in prior documents that are not impacted by these project modifications are herein incorporated by reference as outlined in Section 1.4.4 below.

1.4.4 RELATED ENVIRONMENTAL DOCUMENTS

Previous NEPA documents listed below (USACE, 2014; USACE, 2016; USACE, 2019; BOEM, 2019; BOEM, 2020; USACE, 2022) have described the Affected Environment in detail and evaluated the potential effects on resources of concern, including aesthetics, air quality, benthic resources and habitat, birds and other wildlife, fish and EFH, cultural resources, physical oceanography, non-threatened marine mammals, T&E species, recreation and tourism, water quality, Clean Water Act 404(b)1 discharge of dredged material evaluation, noise, and cumulative effects. The conclusions of the existing effects analyses for most resources, except those resources discussed in more detail herein, have been determined to be valid since the beach template, construction methodologies, and scope of the federal project have remained the same other than changes in sand quantities and berm width. Relevant federal laws have not changed in a manner that would require re-evaluation of these resources, with the exception of newly listed T&E species. Those environmental effects are summarized in Section 7 of the 2014 IFR/EA.

The list below describes the project's related environmental documents, such as previous NEPA, permits, biological opinions (BOs), resource surveys and reports, and other planning and/or design reports. Items denoted with an asterisk are available for download at the USACE's environmental documents website[1]. Other documents are available by request.

- Flagler County Hurricane Protection and Storm Damage Reduction Project, Final Integrated Feasibility Study and Environmental Assessment (EA), Finding of No Significant Impact (FONSI) signed January 22, 2016. *
- Flagler County Hurricane Protection and Storm Damage Reduction Project, Chiefs Report, dated December 23, 2014. Accessed at: https://planning.erdc.dren.mil/toolbox/library/ChiefReports/FlaglerCounty-Dec2014.pdf *
- Final Environmental Assessment: Flagler County Dune/Beach Restoration Project. Olsen Associates Inc. and Coastal Eco-Group Inc. USACE Permit NO. SAJ-2019-02065. FDEP Permit NO. 0379716-001-JC. Flagler County, FL. March 2020.
- Flagler County Shore Protection Project Intensive Cultural Resources Assessment Survey. Wilson, Stephen R. Jr., Erica K. Flagler Beach, Flagler County, Florida. 2019.

[1] USACE's environmental website can be accessed here: Jacksonville District > About > Divisions-Offices > Planning > Environmental Branch > Environmental Documents (army.mil). (Click "+Flagler" and scroll down to the project name for project files. Biological Opinions can be found under "+District Wide".)

- Finding of No Significant Impact (FONSI) signed November 27, 2019. Issuance of a Negotiated Agreement for Use of Outer Continental Shelf Sand from Borrow Area 3A for the Flagler County Hurricane and Storm Damage Reduction Project in Flagler County, FL. BOEM. Accessed at: https://www.boem.gov/sites/default/files/documents/environment/Flagler-FONSI-V2.pdf
- Consolidated Joint Coastal Permit and Sovereign Submerged Lands Authorization. Permit NO. 0379716-001-JC. Flagler County, FL. April 13, 2020.
- Environmental Assessment Flagler County Dune and Beach Restoration Project, Flagler County, Florida. Issuance of a Negotiated Agreement for Use of Outer Continental Shelf Sand from Flagler County Borrow Area for the Flagler County Dune and Beach Restoration Project, Flagler County, FL. BOEM. Finding of No Significant Impact (FONSI) signed May 7, 2020. BOEM. Accessed at: https://www.boem.gov/sites/default/files/documents/environment/Flagler_NonFed_FONSI_FINAL.pdf
- Flagler County CSRM MEC Probability Assessment (PA). November 29, 2022. Signed December 6, 2022.
- Flagler County Hurricane Storm Damage Reduction Project: Sediment Compatibility Analysis for Placement on Flagler Beach Utilizing Offshore Sand Source 3A, September 2019.
- Flagler County, Florida Shore Protection Project Offshore Borrow Area 3A Hydrographic Exam Survey FY19.
- Hurricane and Storm Damage Reduction Project, Flagler Beach, Flagler County Permit Plates, November 2019.
- National Marine Fisheries Service (NMFS) 2020 SARBO[2].*
- U.S. Fish and Wildlife Service (USFWS) 2015 Revised Statewide Programmatic Biological Opinion (SPBO).*
- USFWS 2013 Piping Plover Programmatic Biological Opinion (P3BO).*

1.5 PURPOSE AND NEED

The USACE's proposed action, which in part reflects previous decisions made by USACE and Congress to nourish Flagler County, provides hurricane and storm damage reduction to the shoreline development and critical infrastructure at risk of coastal erosion. In addition, the USACE has permitting authority over the NFS extensions to the federal template. The NFS extensions will facilitate efficient construction and help maximize the effectiveness of the federal template. The proposed NFS extensions also provide for hurricane and storm damage reduction.

[2] The SARBO is also available to be downloaded from the NMFS Southeast Regional Office frequently requested biological opinions website: https://www.fisheries.noaa.gov/content/endangered-species-act-section-7-biological-opinions-southeast.

BOEM is authorized under Public Law 103-426 [43 United States Code (U.S.C.) 1337(k)(2)] to negotiate on a non-competitive basis the rights to OCS sand resources for shore protection projects. The USACE and Flagler County submitted an application to BOEM to use OCS sand resources in the proposed beach nourishment project. BOEM's connected federal action is to issue a non-competitive negotiated agreement (NNA) authorizing use of OCS sand within Borrow Area 3A at the request of the USACE and the city of Flagler Beach. BOEM may respond to the request of applicant(s) to approve, disapprove, or approve with modifications, as warranted.

This SEA, prepared by the USACE (lead agency) and BOEM (cooperating agency) supplements existing analyses and updates potential environmental effects resulting from the modified federal project and NFS components, which now requires an increased volume of sand and further expansion of the berm. This SEA further supports or elaborates on the analyses or information presented in existing NEPA documents, but it does not substantially change the conclusions of any of those analyses. The purpose of this SEA is to determine if changes to federal project specifications from the previous 2014 IFR/EA and NFS components, in light of new information or circumstances could result in different effects and potentially contribute to significant effects on the human environment, which may require a re-evaluation of resources and effects previously analyzed.

1.6 PUBLIC INTEREST FACTORS

While the USACE does not process and issue permits for its own activities, pursuant to 33 C.F.R. 336.1, the USACE authorizes its own discharges of dredged or fill material by applying all applicable substantive legal requirements, including public notice, and opportunity for public hearing. As part of its review, the USACE evaluates the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. All factors which may be relevant to the proposal must be considered, including the cumulative effects thereof. The following factors are relevant to this project and detailed analysis can be found in the sections noted:

- Endangered species (see Sections 4.3; 6.2.12, Table 4-1; and Table 5-1)
- Essential Fish Habitat (see Section 4.4 and Table 2-2)
- Sediment Characteristics and Bathymetry (see Section 4.6)
- Air Quality (see Section 4.12 and Table 4-2)
- Aesthetics (see Section 4.9)

2 EXISTING CONDITIONS

The section succinctly describes the existing environmental resources of the areas that would be affected if any of the alternatives were implemented ("Affected Environment"). The existing conditions provide a description of the human environment, which is subdivided into the natural, physical, economic, and built environments. It does not describe the entire existing environment, but only those environmental resources that would affect (or that would be affected by) the alternatives if they were implemented. This section, in conjunction with consideration of no action being taken, forms the base line conditions for determining the environmental impacts of the proposed action and reasonable alternatives.

2.1 PERIOD OF ANALYSIS

The 2014 IFR/EA describes the period of analysis for the Flagler County CSRM as including an initial beach nourishment event (originally planned for completion in 2018), and subsequent renourishments for a 50-year period (ending in 2068). Therefore, the current period of analysis for this SEA extends to 2068. The renourishment interval is expected to be approximately 11 years, equaling 4 renourishment events in addition to initial construction; however, this interval could vary depending on the timing of erosion and storm events, in which nourishment events may be triggered when specific criteria are met within the design. More details on nourishment intervals and triggers can be found in Section 6.25 of the 2014 IFR/EA. Construction of the NFS components by the USACE are a one-time event.

2.2 GENERAL SETTING

Flagler County is located on the northeast coast of Florida approximately midway between the Florida/Georgia state line and Cape Canaveral. The county is bounded to the north by St. Johns County and to the south by Volusia County and has approximately 18 miles of sandy shoreline. The Flagler County coastline is devoid of inlets or embayments and is part of a barrier island and mainland complex that extends uninterrupted for a length of 50 miles from Matanzas Inlet in the north to Ponce de Leon Inlet in the south. Matanzas Inlet is located approximately 2.4 miles north of Flagler County in St. Johns County, and the Ponce de Leon Inlet is located about 27 miles south of Flagler County in Volusia County. Flagler County's coastal area is bound by the Matanzas River to the north, Smith Creek and the Intracoastal Waterway (IWW) to the west, and Volusia County beaches to the south.

The authorized project consists of an approximately 2.6-mile-long shoreline in Flagler Beach between FDEP Range Monuments R-80 and R-94 (Figure 1-1). Borrow Area 3A (Figure 3-1) is located approximately 10.25 nautical miles offshore of the city of Flagler Beach, Florida in the BOEM South Atlantic Planning Area, Orlando Protraction Area, in which they have sole jurisdiction of the borrow area under the U.S. Department of the Interior, located in OCS waters. The NFS components extend between R-77 to R-80 to the North and R-94 to R-96 to the South of the federal project.

2.3 NATURAL ENVIRONMENT

The beach area includes a series of dunes and upland vegetation, including sea oats (*Uniola paniculata*), bitter panic grass (*Panicum amarum*), saltmeadow cordgrass (*Spartina patens*), and Seacoast marshelder (*Iva imbricata*) that are predominantly found in the foredune areas.

Compacted shell hash hardbottom is present in the offshore Flagler County area, but not within the project footprint. Various fish and wildlife communities are also present within Flagler Beach's supralittoral areas, including small mammals, reptiles, raptors, wading birds, and shorebirds. Forage and game fish, invertebrates, and other infauna are also found in the sublittoral and nearshore ranges of the study area. Gopher tortoises are also known to be present in the project vicinity near SR A1A and are discussed further in Section 4.2. Additional details on the natural environment can be found in Section 2.4 of the 2014 IFR/EA.

2.4 THREATENED AND ENDANGERED (T&E) SPECIES

The list of T&E species developed for this SEA were compiled from the 2014 IFR/EA, National Marine Fisheries Service (NMFS) 2020 SARBO, U.S. Fish and Wildlife Service (USFWS) 2015 SPBO, and USFWS 2013 P3BO. Federally listed T&E species and Designated Critical Habitat (DCH) that may be present in or around the project area, including newly listed species and DCH since the 2014 IFR/EA, are listed below in Table 2-1.

Table 2-1. Federally listed T&E species that may occur in the project area. (Species and DCH listed after the completion of the 2014 IFR/EA are highlighted in bold).

Common Name	Scientific Name	Federal Status	Agency
Birds			
Piping Plover	*Charadrius melodus*	Threatened	USFWS
Rufa Red Knot	*Calidris canutus rufa*	Threatened	USFWS
Sea Turtles			
Green sea turtle[1]	*Chelonia mydas*	Endangered Threatened	USFWS NMFS
Hawksbill sea turtle	*Eretmochelys imbricata*	Endangered	USFWS & NMFS
Leatherback sea turtle	*Dermochelys coriacea*	Endangered	USFWS & NMFS
Loggerhead sea turtle[2]	*Caretta caretta*	Threatened	USFWS & NMFS
Kemp's ridley sea turtle	*Lepidochelys kempii*	Endangered	USFWS & NMFS
Fish and Elasmobranch			
Smalltooth sawfish	***Pristis pectinata***	**Endangered**	**NMFS**
Oceanic whitetip shark	***Carcharhinus longimanus***	**Threatened**	**NMFS**
Atlantic Sturgeon	*Acipenser oxyrinchus*	Endangered	NMFS
Giant manta ray	***Manta birostris***	**Threatened**	**NMFS**
Marine Mammals			
Blue whale	*Balaenoptera musculus*	Endangered	NMFS
Fin whale	*Balaenoptera physalus*	Endangered	NMFS
Humpback whale	*Megaptera novaeangliae*	Endangered	NMFS
North Atlantic Right Whale	*Eubalaena glacialis*	Endangered	NMFS
Sei whale	*Balaenoptera borealis*	Endangered	NMFS
Sperm whale	*Physeter macrocephalus*	Endangered	NMFS
Florida manatee	*Trichechus manatus latirostris*	Threatened	USFWS
Critical Habitats			
Loggerhead sea turtle	***Caretta caretta***	**LOGG-N-15**	**USFWS**
North Atlantic Right Whale	*Eubalaena glacialis*	Southeastern U.S. Calving Unit 2	NMFS

[1] North Atlantic distinct population segment (DPS); [2] Northwest Atlantic DPS

Details on the presence and biology of the above listed species under NMFS jurisdiction that were previously consulted on can be found in Section 2.4.3 of the 2014 IFR/EA and NMFS' 2020 SARBO. Information on the presence and biology of species under USFWS jurisdiction that were previously consulted on can be found in the 2014 IFR/EA and the EA conducted by Olsen and Associates for Coastal Eco-Group, Inc. (2020), as well as this project's consultation documents. (See Appendix A for consultation documents).

Information on the presence and biology of the listed species under U.S. Fish and Wildlife Service (USFWS) or NMFS jurisdiction that were not previously consulted on are provided below. Additional information on the NMFS' species can also be found in the 2020 SARBO whereas additional details on loggerhead sea turtles and their DCH can be found in the 2015 SPBO:

SMALLTOOTH SAWFISH

The smalltooth sawfish (*Pristis pectinata*) is a newly listed species of the 2020 SARBO and is currently listed as endangered by NMFS. This species has become rare along the southeastern Atlantic and northern Gulf of Mexico coasts of the U.S. during the past 30 years. Its known primary range is now reduced to the coastal waters of Everglades National Park in extreme southern Florida, with rare sightings outside of that area. Fishing and habitat degradation have extirpated the smalltooth sawfish from much of this former range.

The smalltooth sawfish is distributed in tropical and subtropical waters worldwide. It normally inhabits shallow waters (33 feet/10 meters (M) or less), often near river mouths or in estuarine lagoons over sandy or muddy substrates but may also occur in deeper waters (66 feet/20 M) of the continental shelf. Shallow water less than 3.3 feet (1 M) deep is an important nursery area for young smalltooth sawfish, and the maintenance and protection of this habitat is an important component of the "Recovery Plan for Smalltooth Sawfish (*Pristis pectinata*)" (NMFS, 2009). Recent studies indicate that key habitat features (particularly for immature individuals) nominally consist of shallow water, proximity to mangroves, and estuarine conditions. Smalltooth sawfish grow slowly and mature at about 10 years of age. Females bear live young, and the litters reportedly range from 15 to 20 embryos requiring a year of gestation. Their diet consists of macroinvertebrates and fishes such as herrings and mullets. The saw is reportedly used to rake surficial sediments in search of crustaceans and benthic fishes or to slash through schools of herrings and mullets (NMFS, 2009). Although NMFS designated critical habitat for the species in 2009, there is no DCH in the project area (Figure 2-1) and its general range of inhabitance makes their potential presence in the Flagler County project area extremely unlikely.

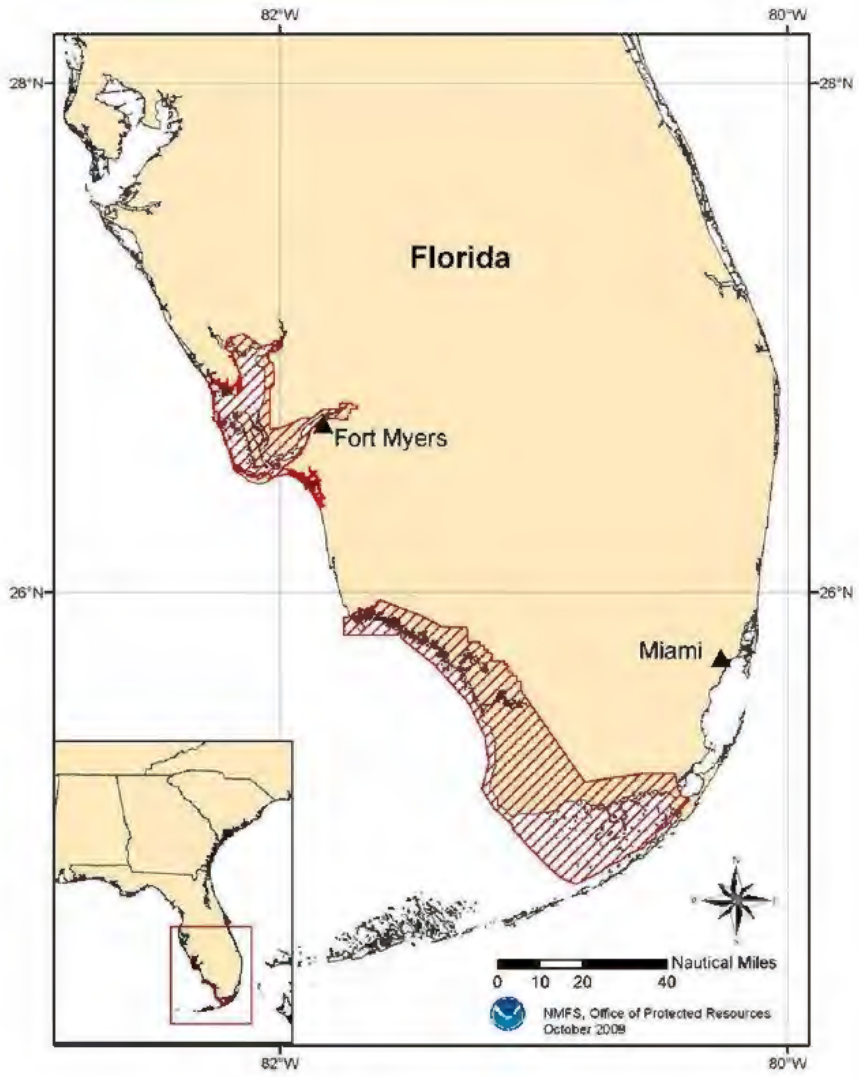

Figure 2-1: Smalltooth Sawfish critical habitat. (Source: http://www.nmfs.noaa.gov/pr/species/fish/smalltooth-sawfish.html)

OCEANIC WHITETIP SHARK

The oceanic whitetip shark (*Carcharhinus longimanus*), named for its distinctive pattern of mottled white markings on the tips of the dorsal, pectoral, and tail fins, was listed as threatened by NMFS in 2018 (81 FR 4153). This newly listed species was not previously consulted on in the 2014 IFR/EA. DCH has not been designated for this species. The oceanic whitetip shark is a highly migratory species that has a worldwide distribution and can be found in tropical and subtropical waters. Generally remaining offshore, oceanic whitetip sharks are considered surface-dwelling, preferring the surface mixed layer of warm waters, but can also be found offshore in the open ocean on the outer continental shelf or around oceanic islands in deep water.

Considered a top predator, their diet is opportunistic and generally consists of cephalopods and ray-finned fish as well as sea birds, marine mammals, other sharks and rays, and crustaceans. The reproductive cycle is thought to be biennial, and females may give birth to litters ranging from

1-14 pups, depending on the female's size. Lifespan is thought to average approximately 19 years, but some individuals may live over 30 years.

GIANT MANTA RAY

Listed as threatened by NMFS in 2018 (83 FR 2916) and included in the 2020 SARBO, the giant manta ray (*Manta birostris*) is the world's largest ray with a 29-foot wingspan. Easily recognizable by their large body and elongated wing-like pectoral fins, this species is a filter feeder and eats large amounts of zooplankton. Although migratory, this species has small, fragmented populations that are distributed sparely across the world and can be found in tropical, subtropical, and temperate waters, commonly offshore in oceanic waters or near productive coastlines.

This species uses a wide range of depths for feeding (10 M to over 1,000 M deep). Generally solitary, giant manta rays will aggregate to feed and mate. Although these rays have been reported to live at least 40 years, this species has one of the lowest reproductive rates at one pup every two to three years.

LOGGERHEAD SEA TURTLE

Loggerheads are long-lived, slow-growing animals that use multiple habitats across entire ocean basins throughout their life history. This complex life history encompasses terrestrial, nearshore, and open ocean habitats. The three basic ecosystems in which loggerheads live are the: terrestrial zone (the nesting beach where both oviposition (egg laying) and embryonic development and hatching occur)), neritic zone (inshore marine environment (from the surface to the sea floor) where water depths do not exceed 656 feet)), neritic zone (generally includes the continental shelf, but in areas where the continental shelf is very narrow or nonexistent, the neritic zone conventionally extends to areas where water depths are less than 656 feet), and oceanic zone (the vast open ocean environment from the surface to the sea floor where water depths are greater than 656 feet). (SPBO, 2015)

The USFWS finalized DCH for the loggerhead sea turtle in 2014 (79 FR 39855-39912), and Flagler County CSRM is located within unit LOGG-N-15 (see Figure 2-2).

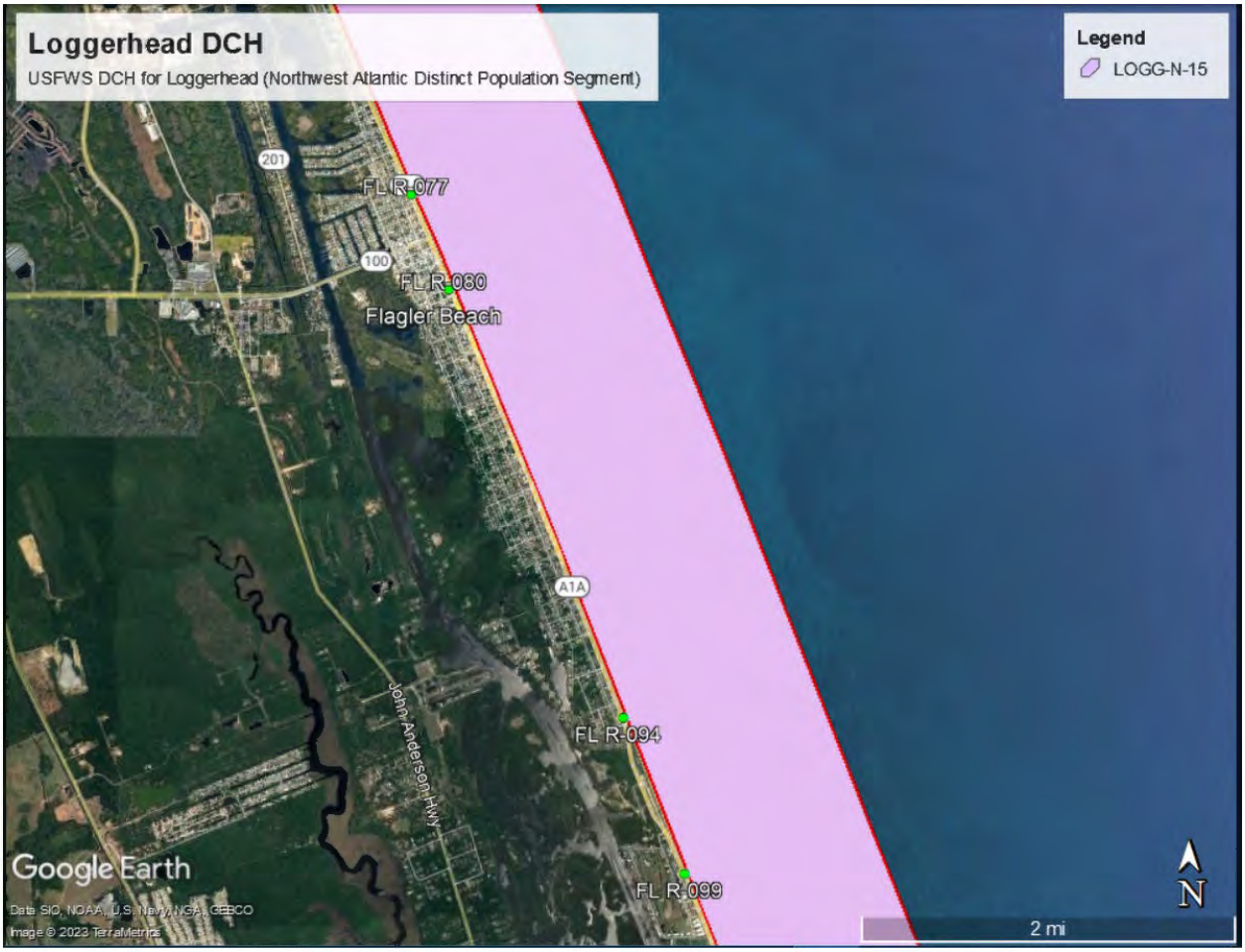

Figure 2-2: Project location and Loggerhead DCH, as defined by USFWS (SPBO, 2015).

2.5 ESSENTIAL FISH HABITAT (EFH)

The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) (Public Law 94-265), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297), requires federal agencies to consult with NMFS on activities that may adversely affect EFH. The South Atlantic Fishery Management Council (SAFMC) defines EFH as "those waters and substrate necessary to fish for spawning, breeding, or growth to maturity" (SAFMC 1998).

The SAFMC designated seagrasses, corals, coral reefs, hardbottom, and unconsolidated sediments as EFH. SAFMC also designated corals, coral reefs, hardbottom and seagrass as Habitat Areas of Particular Concern (HAPCs). HAPCs are a subset of EFH that are either rare, particularly susceptible to human-induced degradation, important ecologically, or located in an environmentally stressed area. In consideration of their designation as EFH-HAPCs and Executive Order (E.O.) 13089 (Coral Reef Protection), NMFS applies greater scrutiny to projects affecting corals, coral reefs, hardbottom, and seagrass to ensure practicable measures to avoid and minimize adverse effects to these habitats are fully explored.

The Flagler County CSRM study area encompasses only marine/offshore habitats, such as soft bottom (open shelf), and the water column with an unconsolidated substrate (shell hash) and high salinity ocean surf zones. Per the 2019 Flagler County Hydrographic Exam Survey, there are

currently no seagrasses or true hardbottom habitat that occur within the Flagler County CSRM study area.

2.5.1 FISHES AND ESSENTIAL FISH HABITAT

The primary environmental factors influencing the fish distribution in eastern Florida is water temperature, in which species with differing ecological and evolutionary histories can be subdivided into several assemblages and habitats. Nearshore waters in Flagler County are highly influenced by warm water transport via the Gulf Stream, as well as periodic upwelling that originates along the shelf break. Many species in the Flagler County study area occur on a seasonal basis. Other environmental factors important to the distribution and abundance of fish include salinity, dissolved oxygen, turbidity, and hydrodynamics. The Flagler County coastal region can be subdivided into three habitats to adequately depict fish assemblages in this area: demersal soft bottom, coastal pelagic, and demersal hardbottom.

2.5.2 Demersal Soft Bottom

According to the 2014 IFR/EA, the demersal soft bottom fish assemblage that inhabits the open shelf off eastern Florida consists of 213 species in 53 families. Species that are managed by the South Atlantic Fishery Management Council (SAFMC) include skates (*Rajidae*), stingrays (*Dasyatidae*), torpedo rays (*Torpedindae*), cusk-eels (*Ophidiidae*), searobins (*Triiglidae*), flounders (*Bothidae*), sand flounders (*Paealichthyidae*), and soles (*Soleidae*) (SAFMC, 1998).

Penaeid shrimp managed by the SAFMC and potentially occurring in the study area include brown shrimp (*Farfantepenaeus aztecus*), pink shrimp (*F. duorarum*), and white shrimp (*Litopenaeus setiferus*) (SAFMC Mapper, 2023). For penaeid shrimp, EFH encompasses a series of habitats used throughout their life history with two basic phases: adult and juvenile benthic phase, and planktonic larval and post-larval phase (SAFMC, 1998). Benthic adults aggregate to spawn in shelf waters over coarse calcareous sediments and feed on zooplankton in the water column as they make their way into inshore waters. For more detailed information on demersal softbottom habitat in the Flagler County study area, see Section 2.4.6 of the 2014 IFR/EA.

2.5.3 Coastal Pelagic

The major coastal pelagic families occurring in nearshore waters of eastern Florida are requiem sharks (*Carcharhinidae*), eagle and cownose rays (*Myliobatidae*), ladyfish (*Elopodae*), tarpon (*Magelapodae*), anchovies (*Engraulidae*), herrings (*Clupeidae*), mackerels (*Scombridae*), jacks and pompanos (*Carangidae*), mullets (*Mugilidae*), bluefish (*Pomatomidae*), and cobia (*Rachycentridae*) (SAFMC, 1998). Species associated with the coastal pelagic environment migrate over shelf waters of the nearshore and surf zone throughout the year, although fall and winter are generally the times of peak activity. Larger predatory species (sharks, tarpon, bluefish, and jack crevalle) may be attracted to aggregations of anchovies, herrings, and mullets that typically occur in nearshore areas in late summer or fall, with their local distribution being highly dependent on water temperature and quality (especially turbidity) that fluctuates seasonally.

Coastal sharks commonly occur in inshore or nearshore waters, and several SAFMC managed species that may occur in the Flagler County study area include the blacknose (*Carcharhinus acronotus*), spinner (*C. brevipinna*), bull (*C. leucas*), dusky (*C. obscurus*), sandbar (*C. plumbeus*), tiger (G*aelocerdo cuvier*), sand tiger (*Carcharias Taurus*), bonnethead (S*pyrna tiburo*), and lemon

(*Negaprion brevirostris*). Ideal EFH identified by NMFS (1999) for shark species include coastal waters within the study area of less than 82-foot (25 M) depths. For more detailed information regarding the reproduction and feeding habits of sharks, rays, and other coastal pelagic fishes, see Section 2.4.6 of the 2014 IFR/EA.

2.5.4 Demersal Hardbottom

The SAFMC reef fish management group (consisting of snapper and grouper) encompasses 73 species from 10 families. The fisheries and adult habitat of most of these species exist well offshore of the study area. A summary table of fish species that may spend part of their life cycle in the study area is presented in Table 2-2.

For more detailed information on demersal hardbottom habitat in Flagler County, see section 2.4.6 of the 2014 IFR/EA.

Table 2-2. Summary of potential fish species in the Flagler County project area. (Source: NOAA EFH Mapper (EFH Mapper (noaa.gov))

Species/Management Unit	Lifestage(s) found at Location	Management Council	Fisheries Management Plan (FMP)
Snapper Grouper	ALL	South Atlantic	Snapper-Grouper Management Plan
Bull Shark	Juvenile/Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
Spinner Shark	Juvenile/Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
Lemon Shark	Adult Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
Sailfish	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
Sandbar Shark	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
Scalloped Hammerhead Shark	Juvenile/Adult Neonate	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH

Tiger Shark	Juvenile/Adult Neonate	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
White Shark	Juvenile/Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
Blacktip Shark (Atlantic Stock)	Juvenile/Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
Blacknose Shark (Atlantic Stock)	Juvenile/Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
Atlantic Sharpnose Shark (Atlantic Stock)	Adult Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
Bonnethead Shark (Atlantic Stock)	Juvenile/Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
Finetooth Shark	ALL	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
Sandtiger Shark	Neonate/Juvenile Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
Bluefish	Larvae; Eggs; Adult; Juvenile	Mid-Atlantic	Bluefish Management Plan
Summer Flounder	Larvae; Juvenile; Adult	Mid-Atlantic	Summer Flounder, Scup, and Black Sea Bass Management Plan

According to the 2014 IFR/EA, a 2011 study conducted by Dial Cordy and Associates, Inc. found what appeared to be hardbottom habitat in the Flagler County study area. Yet, a USACE survey that followed shortly after in 2012 did not identify any hardbottom habitats within the project action limits or within the proposed borrow areas. Although the Technical Surveyor concluded there was no hardbottom habitat in the survey area based on data available at the time, the two surveys remained contradicting in nature. In 2019, a Hydrographic Exam Survey conduct by WHO re-evaluated these previous findings and confirmed this habitat to be defined as unconsolidated shell-hash rather than true hardbottom. For more information on initial hardbottom habitat survey data, see Section 2.4.4 of the 2014 IFR/EA. Section 4.4 of this SEA provides additional information on surveys.

2.6 PHYSICAL ENVIRONMENT

Noise levels in Flagler County are low to moderate and includes anthropogenic sources such as cars, boats, and airplanes. Natural noise, such as wind and waves, are common in the project area. Air quality remains adequate due to ocean generated winds that readily disperse any airborne pollutants caused by motorized vehicles in the vicinity of the project area. Flagler County coastal waters within the study area are categorized as Class III waters (Ch 62-302.400 (1) F.A.C.) and are maintained by the EPA through the Beaches Environmental Assessment and Coastal Health (BEACH) Act of 2000.

Various parks are also present along the Flagler County shorefront, but not within the study reach, including Washington Oaks Gardens State Park, Hammock Park, and Varn Park. The recreational capacity of Flagler Beach for common recreational usage (sunbathing, swimming, surfing, walking, and fishing) is currently being threatened with ongoing erosion. Current erosional losses also inhibit the use of emergency vehicles at high tide, which is a threat to Flagler County residents. Recreational usage is most active during the spring, summer, and fall months, with peak use generally during the summer months, and less frequent use in the winter months.

Additional details on the physical environment can be found in Section 2.4 of the 2014 IFR/EA.

2.7 SEDIMENT CHARACTERISTICS AND BATHYMETRY

The material on Flagler Beach and the proposed sand source of Borrow Area 3A is similar and is composed of fine-to medium-grained sand consisting of quartz and shell fragments with a mean grain size of 0.27 and 0.21 millimeters (mm), respectively. Furthermore, the median of both the beach and the composite calculations are nearly identical, providing further evidence for the bimodal distribution of sediments on Flagler Beach and the compatibility of the sediments within Borrow Area 3A with that of Flagler Beach. The sand naturally found on Flagler beach has a distinctly orange color, and the sand within Borrow Area 3A is light gray to gray in color. It should be noted that due to the unique color of Flagler Beach, there are no potential sand sources that will exactly match the color of the sand on the beach; however, it is anticipated that the shell material which gives the sand an orange hue appearance will naturally return to the beach in time.

Overall sediment samples of the bottom substrate in Borrow Area 3A (including samples from Cut A, B and C) from 2018 (per the 2019 Sediment Compatibility Analysis) indicate the presence of poorly-graded, fine to medium-grained sand sized quartz and shell fragments. The mean sediment grain size is 0.27 mm with a standard deviation of 1.86 phi. The average percentage of fines passing the #230 sieve is 1.55 %. Material retained in the #4 sieve averages 0.49 %. The average visual shell percentage is 21.73 %, with a range from 11 % to 35 %. The typical moist Munsell color is 10Y 6/1. Based on the above analysis, the borrow area material is suitable for beach placement based on the Florida “Sand Rule” (F.A.C. 62B-41.007(2)(j)). Per the 2014 IFR/EA analysis, benthic macroinvertebrates and certain species infauna invertebrates (aquatic animals that live in the substrate of a body of water, such as soft sea bottom) are known to inhabit areas near, and within the benthic zone of Borrow Area 3A, respectively.

Per the 2019 Flagler County Hydrographic Exam Survey and the 2019 Flagler County Permit Plates, the general bathymetric features of Borrow Area 3A include elevation ranges of approximately 56 ft to 60 ft in Cut A, 52 ft to 56 ft in Cut B, and 52 ft to 56 ft in Cut C. Note that sand for both the NFS and federal components of the project are being acquired through the use of Borrow Area 3A as a shared offshore sand source.

2.8 TRIBAL NATIONS

No portion of the proposed action is located within or adjacent to known Native American owned lands, reservation lands, or identified Traditional Cultural Properties. However, Native American groups have lived throughout the region in the past and their descendants continue to live within the State of Florida and throughout the United States.

2.9 CULTURAL, HISTORICAL, AND ARCHAEOLOGICAL RESOURCES

Cultural resources for the USACE template of the Flagler County CSRM have been addressed in the USACE's 2014 IFR/EA. Subsequent to the 2014 Environmental Assessment, USACE conducted a submerged cultural resources assessment survey of Borrow Area 3A and nearshore placement area. This survey, the results of which are presented in the report titled *Flagler County Shore Protection Project Intensive Cultural Resources Assessment Survey* (Wilson et al., 2019), located three potentially culturally significant targets within the nearshore placement area. The USACE maintains 100 ft avoidance buffers around two of these targets, while the third is avoided with a 150 ft buffer.

Additionally, discussions of cultural resources within the NFS template discussed in this SEA are found in the *Final Environmental Assessment: Flagler County Dune/Beach Restoration Project, Flagler County,* FL report prepared by Olsen and Associates for Coastal Eco-Group, Inc. in 2020.

2.10 AESTHETICS

Consideration of aesthetic resources is required by NEPA, as amended and USACE Engineering Regulation (ER) 1105-2-100. The uniquely colored orange sand of Flagler County beaches, as well as the ability to see the beach, dunes, and ocean from SR A1A, is an example of additional aesthetic qualities valued by members of the community. These values are subjective, and as such, the erosional features of the beach and its adverse impact to the area's aesthetic quality cannot be effectively quantified.

2.11 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)

There are currently no identified hazardous, toxic, and radioactive waste (HTRW) producers within or adjacent to the study area that could discharge effluent near the Flagler County shoreline. In the unlikely event that contamination by hazardous and toxic wastes occur during construction, cleanup programs include brownfields, petroleum, superfund sites, and other waste cleanup, such as Dry cleaning, Responsible Party Cleanup, State Funded Cleanup, State Owned Lands Cleanup and Hazardous Waste Cleanup.

2.12 UNEXPLODED ORDNANCES (UXO)/MUNITIONS OF EXPLOSIVE CONCERN (MEC)

A site history and past use review was completed for the Flagler County CSRM, (including Borrow Area 3A) by the USACE Military Munition Response Team (MMRP) in a USACE Munitions of Explosive Concern (MEC) Probability Assessment (PA) (Report Dated November 29, 2022). Through extensive research of records, including Formally Used Defense Sites (FUDS) and USACE archived records, no reports of MEC or Munitions Debris (MD) indicative of MEC were made during any past operations from this location or for the Borrow Area 3A location. Identified FUDS locations in the vicinity of the project area that were reviewed by the USACE MMRP

included: 1) Flagler Beacon Aircraft Warning Service, 2) Flagler Beach Airport, and 3) Bunnell Auxiliary Fighter Field.

Per the 2022 MEC PA, the determination for this project location (both beach fill area and borrow/dredge area) is: “No Probability.” There is no indication of any ordnance being fired at these sites or originating from these sites to the borrow area. As outlined in EM 385-1-97 Change 1, the probability assessment merits a 0 score.

2.13 AIR QUALITY

The Clean Air Act (CAA), as amended (42 U.S.C. 7401 et seq.), requires federal actions to conform to an approved state implementation plan (SIP) designed to achieve or maintain an attainment designation for air pollutants as defined by the National Ambient Air Quality Standard (NAAQS). The NAAQS were designed to protect public health and welfare. The criteria pollutants include carbon monoxide (CO), ozone (O_2), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter ($PM_{2.5}$ and PM_{10}; particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 and 10 microns), volatile organic compounds (VOC), and lead (Pb). The General Conformity Rule (40 CFR Parts 51 and 93) implements these requirements for actions occurring in air quality nonattainment areas. A review of USEPA data indicates that the project area is in attainment status for all the criteria pollutants. USEPA has not established air quality standards for federal waters.

On January 9, 2023, the Council on Environmental Quality (CEQ) issued National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change (CEQ-2022-0005). This guidance is intended to assist agencies in considering, analyzing, and disclosing the effects of greenhouse gas (GHG) emissions and climate change. Consistent with section 102(2)I of NEPA, federal agencies must disclose and consider the reasonably foreseeable effects of their proposed actions including the extent to which a proposed action and its reasonable alternatives (including the no action alternative) would result in reasonably foreseeable GHG emissions that contribute to climate change. CEQ defines GHGs as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, nitrogen trifluoride, and sulfur hexafluoride. CO_2 is the primary GHG emitted from diesel engines. CH_4 is emitted to a lesser extent but, over a 100-year period, the emissions of a ton of methane contribute 28 to 36 times as much global warming as a ton of CO_2.

2.14 HUMAN HEALTH AND SAFETY

The changes in the existing environment that have occurred since 2014 due to significant erosional losses in Flagler County, Florida that are addressed in this SEA include an increased volume of sand (approximately 1,300,000 CY) to be placed on the project template, and subsequent expansion of the berm from 35 feet to 100 feet.

The purpose of the project is to provide hurricane and storm damage reduction to the shoreline development and critical infrastructure via prevention of coastal erosion, thereby enhancing protection of human health and safety. Design of the proposed action will minimize potential harm from storm events that result in flood impacts. Failure to protect critical infrastructure along the Flagler County coastline will likely pose a risk to human health and safety for those in the Flagler County area.

2.15 BUILT ENVIRONMENT

Residential infrastructure in the Flagler Beach area includes both single-family and multi-family homes and their associated amenities (decks, pools, private dune walks, etc.). Commercial infrastructure includes a pier, restaurants, and various shops along/near SR A1A. Additionally, a small portion of the Flagler County area consists of relatively lower value damageable elements (garages, storage buildings, decks, swimming pools, wood shelters, and parking lots), in which many of these structures serve as amenities for single and multi-family residential structures, along with critical infrastructure along the Flagler County coast that currently remains threatened by wind, waves, and storm damage.

Several previous investigations and reports have been completed for the area by both federal and non-federal parties. Prior federal studies relevant to the project area are listed and briefly summarized below:

Flagler County, Florida. Beach Erosion Control and Hurricane Protection Reconnaissance Report, U.S. Army Corps of Engineers, Jacksonville District, August 1980. The report emphasizes continuous erosion and substantial expenditures by both private citizens and local governments for restoration of private and public lands following erosion and storm damage. This federal study was never approved.

Section 14 Study, Flagler Beach, Flagler County, Florida, U.S. Army Corps of Engineers, Jacksonville District, November 1982. Section 14 is a continuing authority for emergency streambank and shore protection. A Section 14 Study was undertaken to investigate the feasibility of building a stone revetment along state road SR A1A in Flagler Beach to protect a 2,200-foot-long section of the road from storm induced erosion. No federal project was adopted due to lack of funds from the NFS.

Flagler County, Florida Shore Protection Study Reconnaissance Report, U.S. Army Corps of Engineers, Jacksonville District, May 1988. This report investigates the practicality of initiating a federal feasibility study on shoreline protection for Flagler County, Florida. The report concluded that such a project was not economically justified at the time.

Reconnaissance Report, Section 905(b) Analysis, Flagler County, Florida, Shore Protection, U.S. Army Corps of Engineers, Jacksonville District, March 2004. This report represents the most recent effort to assess the needs for hurricane and storm damage protection along the coastline of Flagler County and considered the quickly growing population (as well as subsequent development). The study concluded that there is strong federal interest in initiating a feasibility phase study.

Project Inspection Report: Flagler County, Florida Federal Shore Protection Project, U.S. Army Corps of Engineers, Jacksonville District, August 23, 2008. The brief Project Inspection Report summarizes the general conditions of the beaches along the Marineland, Painters Hill, Beverly Beach, and Flagler Beach study reaches after Tropical Storm Fay.

Biological Opinion, United States Fish and Wildlife Service, July 2009. The document provides the USFWS biological opinion of SR A1A Shoreline Stabilization measures proposed by the Florida Department of Transportation for Flagler Beach. The report identifies 11 areas along the roadway where erosion problems are recurring or have recently become problematic. After further investigation of the effects on endangered sea turtles, the report concludes that the erosion control systems are not likely to jeopardize loggerhead, green, or leatherback sea turtles.

Prior non-federal studies relevant to the project area are listed and briefly summarized below:

Shoreline Change Rate Estimates, Flagler County, Florida Department of Environmental Protection (FDEP), July 1999. The report provides shoreline change rate estimates to assist in regulatory programs and beach management planning efforts.

Strategic Beach Management Plan for Northeast Atlantic Coast Region, Florida Department of Environmental Protection, October 2001. The report presents data, analysis, and recommendations for managing the northeast Florida coastline (sea islands, and the beaches and inlets of St. Johns, Flagler, and Volusia counties).

Revetment at Marineland. In 2001, the Town of Marineland completed rejuvenation of a seawall and revetment to protect the town and oceanarium from storm damage. The seawall and revetment were constructed to mitigate against future storm damage. The project also protects a public park and reestablished the beach and dune.

State Road A1A Shore Protection Evaluation Flagler Beach, Flagler County, Florida, Taylor Engineering, Inc., June 2002. The purpose of this study was to determine the most technically feasible and financially acceptable alternatives for protecting "critically eroding" shoreline from R-78 to R-92, which concluded that a seawall and/or some form of beach nourishment plan would be the most logical and ideal.

State Road A1A Shoreline Stabilization Project, Flagler Beach, Florida, FDOT – District 5, April 2006. The report was completed as a technical memorandum in support of FDOT's continuous efforts to protect SR A1A from being undermined by erosion.

Flagler County, State Road A1A PD&E Study, FDOT, January 2010. The Project Development and Environmental (PD&E) Study covers an approximately 5-mile stretch of SR A1A through Flagler and Beverly Beach. The main purpose of this PD&E Study was to comply with NEPA to allow for future work with federal funds and to inform the local officials and citizens of various options available to FDOT regarding shoreline protection.

Critically Eroded Beaches in Florida, Florida Department of Environmental Protection, June 2008. This report was prepared to provide an inventory of Florida's critically and non-critically eroded shoreline areas and designates six critically eroded beach segments (5.7 miles) in Flagler County.

City of Flagler Beach, Coastal Avulsion Mitigation and [Resurection] [sic] Analysis, Holmberg, 2013. This analysis was prepared by Mr. Holmberg, president of Holmberg Technologies, Inc. The analysis includes Mr. Holmberg's evaluation of erosion issues in the study area and recommends installation of the "Holmberg System" (undercurrent stabilizers).

Other NFS sponsored projects (unrelated to the federal and non-federal beach nourishment) that will be conducted within/near the project vicinity in Flagler Beach includes new hotel construction (near Veterans Park), FDOT asphalt resurfacing (8th St. South – 18th St. North), pier rehabilitation, and FDOT secant wall construction (approximately located south near Gamble Rodgers State Park, towards Volusia County).

Adjacent projects relevant to the study include: the Florida Intracoastal Waterway, the Intracoastal Waterway (near Matanzas Inlet), and the St. Johns County, Florida Shore Protection Project. Additional details regarding prior federal and non-federal studies and projects can be found in Section 1.6 of the 2014 IFR/EA.

2.16 ECONOMIC ENVIRONMENT

Details regarding coastal assets were collected via Flagler County mapping resources, site visits, and contractors. Each parcel along the beach was identified as developed or undeveloped, with streets and parks noted. The USACE real estate specialists provided depreciated replacement value of existing structures within the study area. Coastal armor was inventoried, categorized, and valued based on its composition and level of protection afforded.

The Flagler County study area was disaggregated into 4 study reaches, consisting of 13 profiles, 50 model reaches, 1,372 lots, and 1,476 damage elements for economic modeling and reporting purposes. This hierarchical structure is depicted as follows: Study Reaches, Profiles, *Beach-Fx* Model Reaches, Lots, and Damage Elements. Additional details on the economic conditions and economic environment can be found in Section 2.5 (Economic Conditions) of the 2014 IFR/EA. Section 2.5 of the 2014 IFR/EA further describes how critical infrastructure along the coast of Flagler Beach, especially SR A1A, plays a large role in the Flagler County economic environment, and protection (or lack thereof) of such critical infrastructure can pose economic risk.

2.17 ENVIRONMENTAL JUSTICE

On February 11, 1994, the President of the U.S. issued Executive Order (E.O.) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This E.O. mandates that each federal agency make achieving environmental justice (EJ) part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on people of color and low-income populations. Significant thresholds that may be used to evaluate the effects of a proposed action related to EJ are not specifically outlined. The Council on Environmental Quality (CEQ) also issued guidance for agencies on how to consider EJ throughout its review of the proposed action. The USACE evaluated this proposed action in accordance with CEQ's Environmental Justice Guidance under the National Environmental Policy Act, dated December 10, 1997, and E.O. 12898. The USACE determines if a proposed action or its alternatives would result in significant effects related to EJ if the proposed action or an alternative would disproportionately adversely affect an EJ community through its effects on:

- Environmental conditions such as quality of air, water, and other environmental media; degradation of aesthetics, loss of open space, and nuisance concerns such as odor, noise, and dust;
- Human health such as exposure of EJ populations to pathogens;
- Public welfare in terms of social conditions such as reduced access to certain amenities like hospitals, safe drinking water, public transportation, etc.; and
- Public welfare in terms of economic conditions such as changes in employment, income, and the cost of housing, etc.

The USACE conducts an evaluation of EJ impacts using a two-step process. As a first step, the project area is evaluated to determine whether it contains a concentration of people of color and/or low-income populations. The second step includes evaluation to determine whether the proposed action would result in a disproportionately, high adverse effect on these populations.

As defined in E.O. 12898 and the CEQ guidance, a people of color population occurs where one or both of the following conditions are met within a given geographic area:

- The American Indian, Alaskan Native, Asian, Pacific Islander, Black, or Hispanic population of the affected area exceeds 50 percent; or
- The people of color population percentage of the affected area are meaningfully greater than the people of color population percentage in the general population or other appropriate unit of geographic analysis.

An affected geographic area is considered to consist of a low-income population (i.e., below the poverty level for purposes of this analysis) where the percentage of low-income persons:

- is at least 50 percent of the total population; or
- is meaningfully greater than the low-income population percentage in the general population or other appropriate unit of geographic analysis.

Step 1: Study Area's People of Color and Low-Income Population Average Percentages

Using the U.S. Environmental Protection Agency (USEPA) EJScreen Tool (https://ejscreen.epa.gov/mapper), the project area was user-defined (Figure 2-3) and a 1-mile buffer was added to calculate the average percentages for the EJ criteria. Table 2-3 compares the average percentages for the user-defined project area, state of Florida, and U.S.

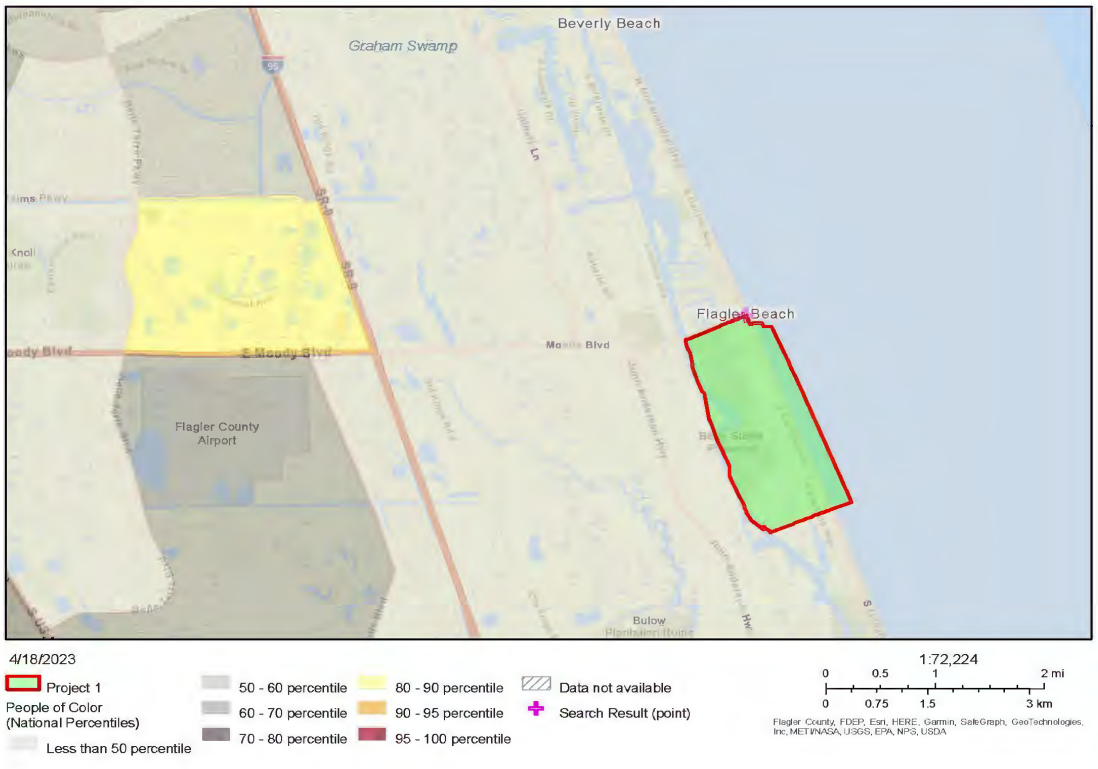

Figure 2-3: User-defined project area used for EJ analysis conducted in USEPA's EJScreen.

Table 2-3. USEPA EJScreen EJ criteria percentages.

	User-Defined Project Area %	Florida Average %	U.S. Average %
People of Color Population	17%	10%	17%
Low Income Population	41%	35%	41%

Based on the information provided by the USEPA EJAssist tool, the average people of color population percentage does not exceed 50% of the affected area but is higher in the project area when compared to the state of Florida percentage. The low-income population percentage is less than 50% of the affected area but is higher in the project area when compared to the state of Florida percentage. However, the percentage of people of color and low-income populations within the project area does not exceed that of average percentages in the U.S. Therefore, the study area, which comprises the project, does not constitute an EJ community because it does not contain a high concentration of people of color and/or low-income communities.

In November 2022, the CEQ released the Climate and Economic Justice Screening Tool Version 1.0 (https://screeningtool.geoplatform.gov/en/#8/0/0). The USACE reviewed the information provided by the CEQ's tool in April 2023. The information provided by CEQ's Climate and Economic Justice Screening Tool supports the analysis completed using the EPA's EJScreen.

2.18 NAVIGATION

Recreational boaters frequently use the areas that will be occupied by construction-based processes near Borrow Area 3A, and there are no federal navigation channels present in Flagler County offshore waters.

2.19 TRANSPORTATION

SR A1A is generally defined as having low to moderate levels of traffic near the Flagler County Project Area and is often occupied by various kinds of motor vehicles (i.e., cars, motorcycles, trucks, etc.) by Flagler County residents and tourists.

3 ALTERNATIVES

The USACE identified, considered, and analyzed a comprehensive suite of structural and non-structural alternatives in the 2014 IFR/EA. The USACE screened alternatives based on contribution to federal planning objectives; five alternatives were carried forward for detailed analysis with the greatest potential to reduce damages to structures and infrastructure in the study area (e.g., no action, geotube with dune, revetment only, dunes, beach nourishment with dune). These alternatives were subsequently compared based on criteria of completeness, effectiveness, efficiency, and acceptability and narrowed to a final array of alternatives consisting of dune and beach nourishment at varying scales. The preferred alternative identified in the 2014 IFR/EA and selected in the 2014 Chief's Report was beach nourishment and included a 10-foot seaward extension of the existing dune and berm using sand from offshore borrow areas. The recommended plan/preferred alternative, as described in the Chief's Report, was subsequently authorized in WRDA of 2016 (Public Law 114-322). The USACE is not revisiting the authorized project but is modifying the scope to accommodate erosional losses from multiple hurricanes as described in Section 1.4. The alternatives described in this SEA consider options relative to the selected dune and beach nourishment plan.

This section describes in detail the No Action alternative and other reasonable alternatives that were evaluated and/or eliminated from further analysis. The beneficial and adverse environmental effects of the alternatives are presented in comparative form. Section 4 (Environmental Effects) compares the alternatives in more detail, providing a clear basis for choice to the decision maker and the public. The project's Preferred Alternative best meets the project's objectives and constraints, is environmentally acceptable, and is economically justified.

The USACE and BOEM considered possible alternatives related to the borrow source, but no other borrow areas were found to be technically or economically feasible based on the modified project template. The 2014 IFR/EA originally considered the use of several different borrow sources in the construction of the smaller preferred alternative, including Borrow Area 3. However, as discussed in Sections 1.3 and 4.6, those other borrow areas were eliminated in 2019 due to compatibility concerns and volume constraints following additional engineering and design level data acquisition. Borrow Area 3A, a subpart of a larger Borrow Area 3, remains the only technically and economically viable sand source for the project. No other technically feasible borrow areas have been discovered or explored. Different subareas within Borrow Area 3 have been identified for use in other Flagler County projects.

3.1 DESCRIPTION OF ALTERNATIVES

3.1.1 ALTERNATIVE 1: NO ACTION ALTERNATIVE

The No Action Alternative is the continuation of existing conditions of the affected environment without implementation of, or in the absence of, a project. 40 CFR § 1502.14 requires an agency to assess the No Action Alternative. Since initial construction of the 2014 IFR/EA project has not occurred, the No Action Alternative is that the Flagler County CSRM Project and NFS extensions would not be constructed. This alternative would leave the Flagler County shoreline vulnerable, allowing the beach to further erode over time. The current state of erosion would result in a significantly increased threat of wave and tidal storm damage to residences, businesses, and critical infrastructure along the shoreline, as well as virtually eliminate oceanfront homes and

recreation for both residents and tourists of Flagler County. Additionally, sea turtle nesting and shorebird foraging habitat would degrade due continued erosion.

3.1.2 ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Alternative 2 would include beach nourishment using Borrow Area 3A and expansion of the constructed berm, which will occur in the federally authorized template from R-80 to R-94.

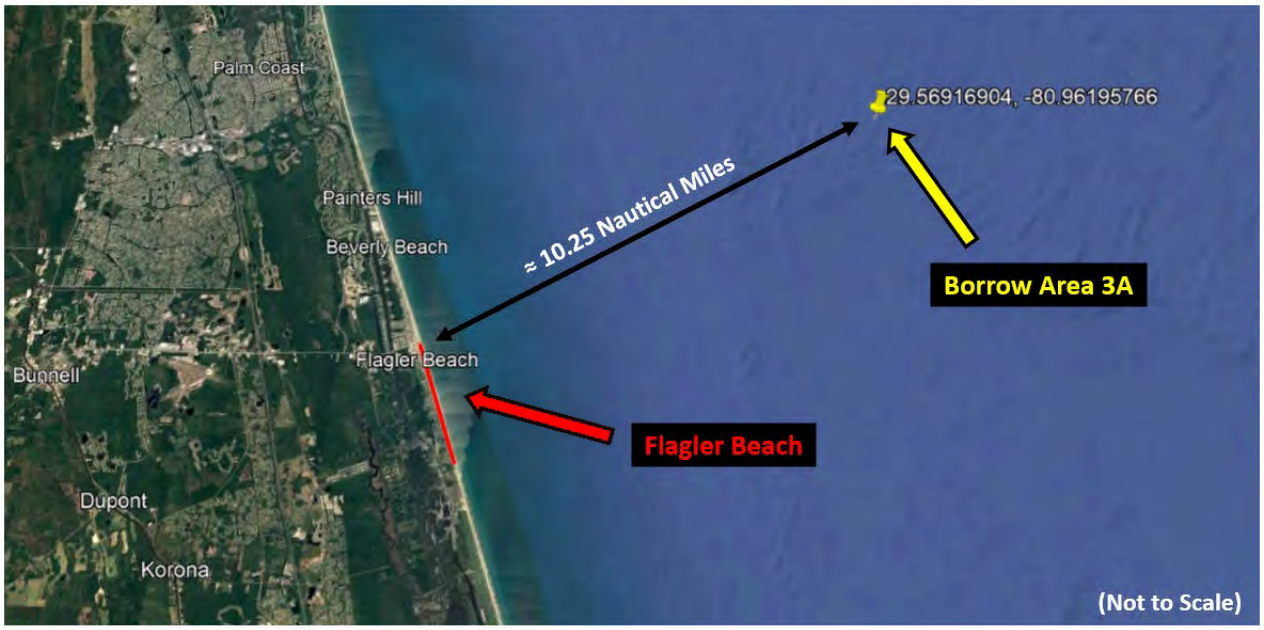

Figure 3-1: Location of Borrow Area 3A in reference to the Flagler County shoreline.

Borrow Area 3A is located approximately 10.25 nautical miles offshore (29.56916904, -80.96195766 DDS) from the city of Flagler Beach, Florida in the BOEM South Atlantic Planning Area, Orlando Protraction Area (Figure 3-1). Sand will be dredged from the borrow area via hopper dredge, then transported to the project area, and subsequent pipeline pump-out, to then be hydraulically pumped from the hopper dredge to the Flagler County shoreline. Figure 3-2 shows Borrow Area 3A in closer detail, depicting the various subcomponents (vibracores) that will be dredged within Cuts A, B, and C.

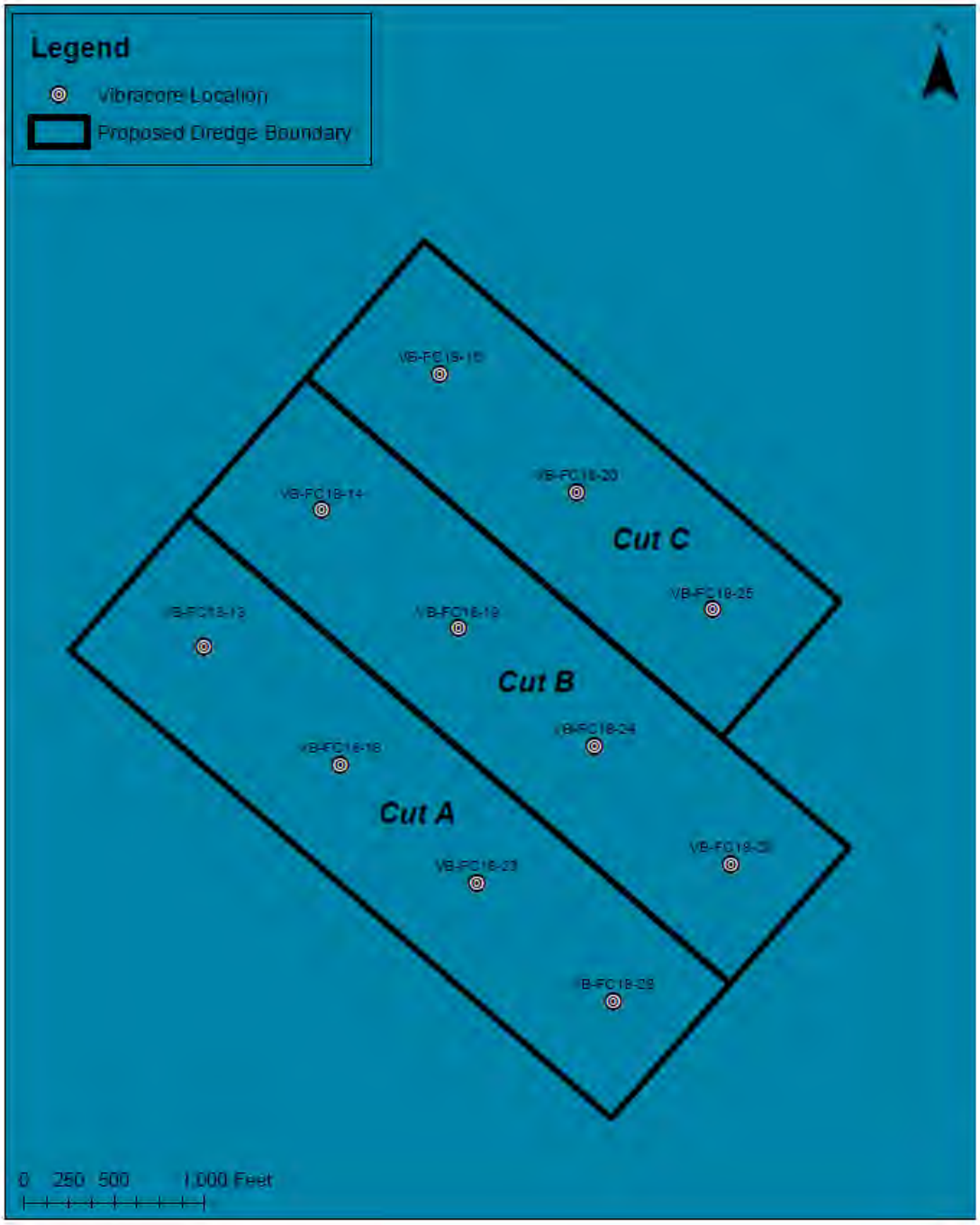

Figure 3-2: Close-up of Borrow Area 3A, depicting vibracore locations in Cuts A, B, and C. (Source: Geotechnical Data Report 2019).

To account for the steady degradation of the Flagler County shoreline within the last decade (while still fulfilling the defined 10-foot seaward extension of the dune and beach as previously approved), the constructed berm will be expanded by 100 feet, for a total constructed berm width of 140 feet, now sloping 1V:35H to create the most ideal habitat for sea turtle nesting (Figure 3-3). This would require approximately 1,300,000 CY of sand to be placed on the project template for the initial construction, an increase from what was previously authorized for initial construction. A total of 320,000 CY would be placed during renourishment cycles as previously authorized. A total

of approximately 2,500,000 CY will be dredged from Borrow Area 3A between Cuts A, B, and C, assuming 40-50% loss of sand during the dredging process. It is estimated that the duration of construction will be 100 days longer due to the increased amount of material that will need to be dredged and placed in the authorized template. New staging and access areas for equipment are also required to construct the federal project, as the original parking lot across from the Flagler County water tower (located at approximately R-98) is no longer viable as an access location due to the degradation of the Flagler County coastline since 2014.

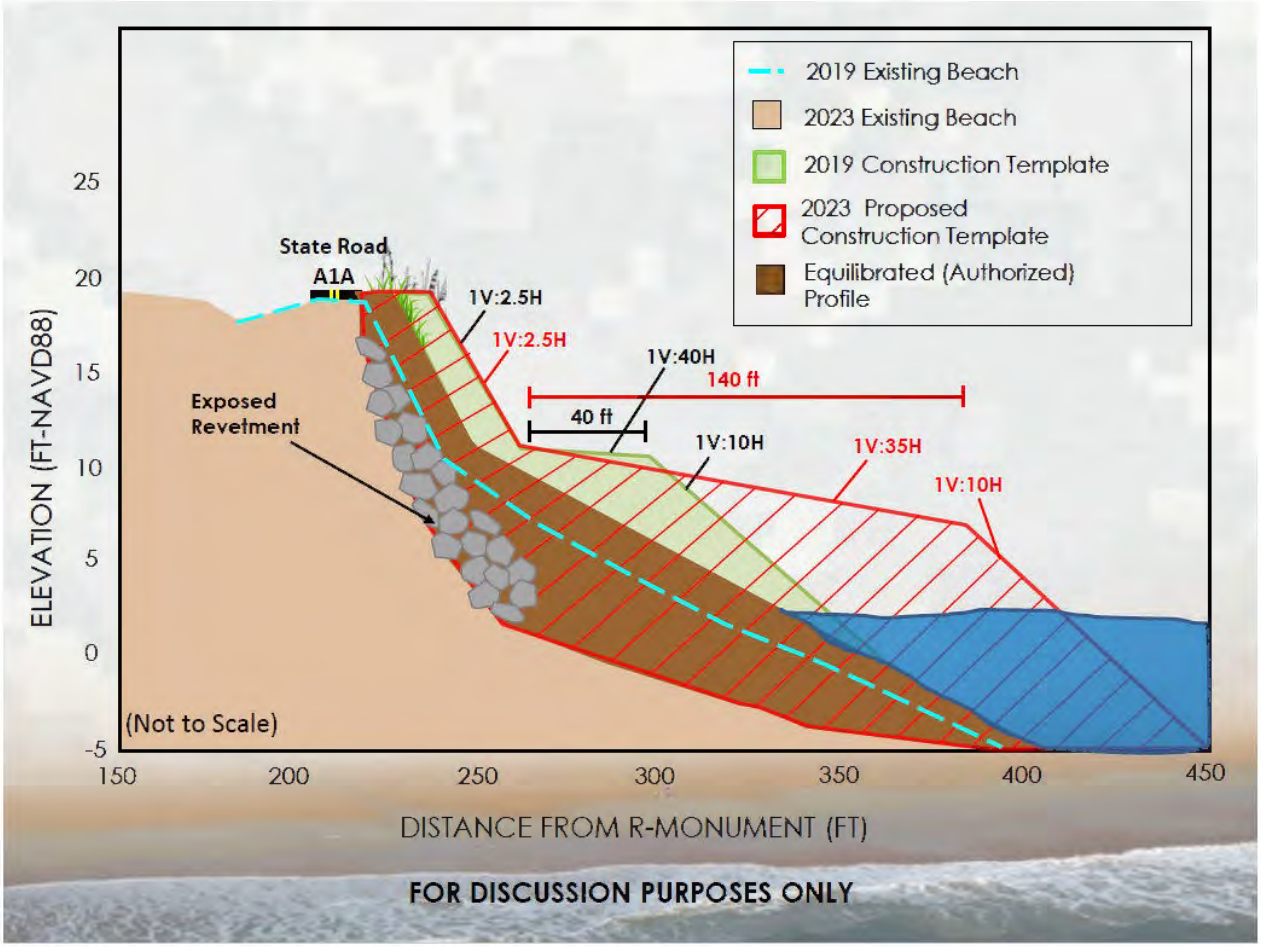

Figure 3-3: Comparison of construction templates using nourishment volumes and berm width requirements based upon existing conditions of Flagler Beach in 2019 to Alternative 2 (2023 Proposed Template) and Alternative 3 (2019 Construction Template).

The construction template of Alternative 2 described above includes a +0.5-foot-high tolerance allowance. The berm taper, or transition from the constructed berm to the existing adjacent berm, for the federal project would extend 200 feet at the north and south ends of the project. Note that sand fencing will be placed parallel to the shore at the rear portion of the dune (directly off the edge of A1A) to prevent sand from being blown onto A1A, as well as nearby homeowners' properties. Sand fencing will run along the full project template, including the federal component and both NFS tapers. Future nourishment processes will be carried out as previously authorized and described in the 2014 IFR/EA. It is also important to note that additional expansion of the berm will not result in new impacts to EFH (see Section 4.4) and/or soft bottom benthics and bathymetry (see Section 4.6). The renourishment interval is expected to be approximately 11 years, equaling 4 renourishment events in addition to initial construction, but frequency of

renourishment is subject to change based upon storm frequency and associated triggers. For more details on renourishment intervals, see Section 6.2.5 of the 2014 IFR/EA.

Alternative 2 would also include the NFS additions to the project, which will be 100% NFS funded and owned, but constructed by the USACE. This includes both northern (R-80 to R-77) and southern (R-94 to R-99) beach and dune extensions that tie into the federal component CTOF, as well as three new staging and access areas and the construction of three temporary access ramps using a maximum of 25,000 CY of sand (via an FDEP approved upland sand source) that will be removed/replaced by renourished dunes and berm. Construction of both the federal project and the non-federal project would not be possible without the Pebble Beach staging and access areas and temporary access ramp. New staging and access areas/ramp components were not included in the NFS 2020 Final Environmental Assessment and DA permit, in which a modification of the DA permit (Permit NO. 0379716-001-JC) was acquired to include these new additions.

As the USACE does not dictate contractor methods to perform the required dredging, the USACE has evaluated a wide range of potential hydraulic or mechanical dredge techniques, equipment, and associated characteristics as described in the USACE's Engineer Manual (EM) 1110-2-5025, Engineering and Design – Dredging and Dredged Material Management, 31 July 2015,[3]. Construction methodology will remain the same as described in Section 6 of the 2014 IFR/EA. The most recent IFR/EA (USACE, 2014) provides a description of potential construction methodology in Sections 5 and 6. This analysis is incorporated by reference into this SEA, as the types of dredges (e.g., hopper dredging) and dredging methodologies are expected to be the same. Typically, the period of performance of the contract is greater than the days of actual construction, allowing for weather delays, contractor start and stops (i.e., contractor leaves and returns to the project within the contract's period of performance), and potential mechanical/equipment issues. Active beach nourishment is dependent on the volume and material of sand that requires placement on the beach and assumes that the work is occurring twenty-four hours per day, seven days per week, which is coordinated with the NFS.

3.1.3 ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Alternative 3 would involve constructing the federal project as previously authorized along the federally authorized template (R-80 to R-94) based on the 2014 IFR/EA, in which project specifications (nourishment volume requirements, berm width extensions, etc.) would be based upon the existing conditions of Flagler Beach from 2019 (Figure 1-4) and would also utilize Borrow Area 3A as a sand source. This would include expansion of the equilibrated berm to 35 feet using a total volume of approximately 330,000 CY of sand, with each periodic nourishment event requiring approximately 320,000 CY of sand. The renourishment interval is expected to be approximately 11 years, equaling 4 renourishment events in addition to initial construction over the 50-year period of federal participation. Frequency of nourishment is subject to change based upon storm frequency and associated triggers. Like Alternative 2, Alternative 3 would not be constructable without new staging and access areas and temporary access ramps. These components are required due to insufficient space to operate and store construction equipment in the project area as a result of the significant deterioration of the Flagler County shoreline.

[3] EM 1110-2-5025 is available to be downloaded from https://www.publications.usace.army.mil/portals/76/publications/engineermanuals/em_1110-2-5025.pdf.

Hence, these new non-federal components are vital to federal beach nourishment construction operations regardless of the volume of sand being placed on the beach.

3.2 ALTERNATIVES ELIMINATED FROM DETAILED EVALUATION

The following alternatives were considered in the original project study but deemed unfit to meet current project needs and were eliminated from detailed evaluation: Relocation of SR A1A, buyout and land acquisition (Painters Hill and Beverly Beach reaches only), seawalls, revetments, sand covered soft structures, groins, submerged artificial reefs, and submerged artificial multi-purpose reefs. A thorough description of the potential environmental effects of each alternative and the reasons for alternative selection and/or dismissal are described in detail in the 2014 IFR/EA, and to some extent, in the 2019 Finding of No Significant Impact.

With consideration of the additional erosion to the Flagler County shoreline since the project's initial authorization in 2014, Alternative 3 would not be sufficient to meet current project needs; thereby leaving residences, businesses, and critical infrastructure vulnerable to further damage.

3.3 FINAL ARRAY OF ALTERNATIVES

Alternatives 1 (No Action), 2 (Beach and Berm Expansion with NFS Extensions), and 3 (Construction as Previously Authorized with NFS Extensions) are carried forward for further analysis. Section 4 (Environmental Effects) compares the alternatives in more detail, providing a clear basis for choice to the decision maker and the public.

4 ENVIRONMENTAL EFFECTS

This section is the scientific and analytic basis for the comparisons of the alternatives carried forward as required by NEPA and cited under the regulations at 40 CFR § 1502.16. This section is organized by resource topic as described in Section 2 (Existing and Future Without Project Conditions) and presents the analysis of potential effects of each alternative described within each resource section. This evaluation includes determining anticipated direct, indirect, and cumulative effects of the alternatives described in Section 3 (Alternatives) on the existing conditions described in Section 2 (Existing and Future Without Project Conditions), relative to the No Action Alternative.

CEQ's NEPA implementing regulations, 40 CFR § 1508.1(g), define effects or impacts as changes to the human environment from the proposed action or alternatives that are reasonably foreseeable and have a reasonably close causal relationship to the alternatives, including those effects that occur at the same time and place as the alternatives and may include effects that are later in time or farther removed in distance from the alternatives. The potential effects of the alternatives are described in this EA using the following terms:

- **Beneficial**: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.
- **Adverse**: A change that moves the resource away from a desired condition or detracts from its appearance or condition.

Intensity, or severity of the potential impact, was rated as follows:

- **Negligible Effect**: Change to the resource or discipline is barely perceptible, not measurable, and confined to a small area.
- **Minor Effect**: Change to the resource or discipline is perceptible, measurable, and localized.
- **Moderate Effect**: Change is clearly detectable and could have appreciable effect on the resource or discipline; or the effect is perceptible and measurable throughout the study area.
- **Major Effect**: Change to the resource or discipline is substantial, highly noticeable, and would occur on a regional scale.

Duration of the potential impact was rated as follows:

- **No Duration**: No effect.
- **Temporary**: Effects generally occur during construction by the end of which the resources recover their pre-construction conditions.
- **Short-term**: Effects generally occur during construction and for a limited time thereafter, generally less than two years, by the end of which the resources recover to their pre-construction conditions.
- **Long-term**: Effects last beyond the construction period, and the resources may not regain their preconstruction conditions for a longer period.

The following issues were identified to be relevant to the proposed action and appropriate for detailed evaluation: (1) natural environment; (2) newly listed threatened and endangered (T&E) species (3) essential fish habitat/hardbottom; (4) bathymetry/sediment characteristics; (5) air quality; (6) cultural and archaeological resources; and (7) Unexploded Ordnances (UXO)/Munitions of Explosive Concern (MEC). Anticipated construction methodology would

remain the same as that which was described in the 2014 IFR/EA and is incorporated by reference.

4.1 GENERAL SETTING

ALTERNATIVE 1: NO ACTION

If the No Action alternative is brought forward, the USACE and Flagler County will not construct any of the federal and non-federal components of the project. Hence, there will be no effect on the general setting in the No Action alternative.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Implementation of Alternative 2 would pose a negligible effect on the Flagler County project area and Borrow Area 3A, both during and post-construction. Beach nourishment will not impact the established location of Flagler Beach with reference to other nearby landmarks (Matanzas Inlet and Ponce Inlet), the length of the Flagler County shoreline and its extension into St. Johns County and Volusia County, and the general location of Borrow Area 3A in reference to the Flagler County shoreline.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

The general setting of the Flagler County project area, both during and post-construction, is not expected to be discernably different from current conditions as seen in Alternative 2. Similarly, beach nourishment will not impact the general location of Flagler Beach and Borrow Area 3A.

4.2 NATURAL ENVIRONMENT

ALTERNATIVE 1: NO ACTION

Implementation of the No Action alternative would result in major adverse and long-term effects to the natural environment along the coastline of Flagler County due to continued beach erosion. Failure to implement beach nourishment processes will leave wildlife (small mammals, reptiles, various species of shorebirds, etc.) present within supralittoral zones of the project area vulnerable to continued degradation. Hence, vulnerability of wildlife stems from erosional damages sustained due to lack of coastal protection. The No Action alternative would not have any beneficial or adverse impacts to Borrow Area 3A.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Beach nourishment and dune/berm expansion would result in temporary and minor adverse effects to dune/upper beach face vegetation and various supralittoral wildlife due to construction activities. Disturbed or removed vegetation will be replanted as a component of the project, which will have major long-term benefits to native species diversity and overall habitat stability. There will be minor and temporary adverse effects to the natural environment at Borrow Area 3A due to

the presence of construction equipment. These effects would only last as long as the duration of construction.

Based on presence-absence surveys conducted in staging and access areas in August 2023, a total of one active and one inactive gopher tortoise borrow was found, along with one active juvenile gopher tortoise burrow. Proper gopher tortoise relocation techniques will be implemented during construction. Additionally, silt fencing will be implemented surrounding the site to ensure that gopher tortoises cannot re-enter this area.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Alternative 3 would also result in temporary and minor adverse effects to the vegetation and supralittoral wildlife within the project area due to interference from construction activities. This would result in short-term benefits to native species diversity rather than long-term benefits, as Alternative 3 does not meet current project needs and likely does not provide nourishment required to maintain habitat stability benefits coupled with natural erosional processes. Impacts to Borrow Are 3A are expected to be similar as described in Alternative 2, but likely more temporary due to a shorter construction duration.

4.3 THREATENED AND ENDANGERED (T&E) SPECIES

ALTERNATIVE 1: NO ACTION

As a result of no construction processes occurring with the No Action alternative, whales (Blue, Fin, Humpback, Right, Sei, and Sperm) and elasmobranchs (smalltooth sawfish, oceanic whitetip sharks, and Giant Manta Rays) will not be beneficially nor adversely impacted in any way. Similarly, there will be no effects to T&E species at or near Borrow Area 3A since the project would not occur and no construction equipment would be present. However, the No Action alternative would result in major adverse and long-term effects to nesting sea turtles due to the decreasing physical presence of their nesting habitat (beach) as a result of a rapidly degrading Flagler County shoreline.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

USACE's effect determinations to T&E species which may be in vicinity of the project and/or borrow area are shown below:

Table 4-1. USACE's effect determinations to federally listed species.

Common Name	Scientific Name	Biological Opinion	USACE's Effect Determination
Birds			
Piping Plover	*Charadrius melodus*	P3BO	MANLAA
Rufa Red Knot	*Calidris canutus rufa*	P3BO	MANLAA
Sea Turtles			
Green sea turtle[1]	*Chelonia mydas*	SPBO & SARBO	May Affect
Hawksbill sea turtle	*Eretmochelys imbricata*	SPBO & SARBO	May Affect
Leatherback sea turtle	*Dermochelys coriacea*	SPBO & SARBO	May Affect
Loggerhead sea turtle[2]	*Caretta caretta*	SPBO & SARBO	May Affect

Common Name	Scientific Name	Biological Opinion	USACE's Effect Determination
Kemp's ridley sea turtle	*Lepidochelys kempii*	SPBO & SARBO	May Affect
Fish and Elasmobranch			
Smalltooth sawfish	*Pristis pectinata*	SARBO	MANLAA (May Affect if relocation trawling is implemented)
Oceanic whitetip shark	*Carcharhinus longimanus*	SARBO	No Effect
Atlantic Sturgeon	*Acipenser oxyrinchus*	SARBO	MANLAA
Giant manta ray	*Manta birostris*	SARBO	MANLAA (May Affect if relocation trawling is implemented)
Marine Mammals			
Blue whale	*Balaenoptera musculus*	SARBO	MANLAA
Fin whale	*Balaenoptera physalus*	SARBO	MANLAA
Humpback whale	*Megaptera novaeangliae*	SARBO	MANLAA
North Atlantic Right Whale	*Eubalaena glacialis*	SARBO	MANLAA
Sei whale	*Balaenoptera borealis*	SARBO	MANLAA
Sperm whale	*Physeter macrocephalus*	SARBO	MANLAA
Florida manatee	*Trichechus manatus latirostris*	SPBO	MANLAA
Critical Habitats			
Loggerhead sea turtle	*Caretta caretta*	SPBO	NLAM
North Atlantic Right Whale	*Eubalaena glacialis*	SARBO	NLAM

MANLAA – May Affect, but Not Likely to Adversely Affect; NLAM – Not Likely to Adversely Modify

Birds

The shoreline in this area is not optimal habitat for piping plover or red knot, therefore, effects (both adverse and beneficial) are minimal. Beach placement of material would temporarily impact wintering piping plover and red knot due to displacement from their foraging and roosting habitat. In addition, the benthic invertebrates on which these species feed will be affected by the placement of sand. Recovery of the benthic infauna should occur with normal seasonal recruitment patterns. During pump-out of the dredged material, there may be some opportunistic feeding at the placement area by shorebirds, including piping plover and red knot. The 2013 USFWS Piping Plover Programmatic Biological Opinion (P3BO) provides additional details on the potential effects of beach nourishment on piping plovers in the "Effects of the Action" section (page 21 -27). These effects would be substantially similar in nature to red knots as well.

Sea Turtles

Alteration of the beach face during construction processes could result in potentially adverse impacts to sea turtle (green, hawksbill, leatherback, loggerhead, kemps) nesting and hatching success (considering affects from grade changes, sediment material, over compaction, escarpment formation, and artificial lighting during construction). Consequently, temporary adverse effects to swimming sea turtles may occur during the dredging of Borrow Area 3A. Risk of entrainment associated with hopper dredge and relocation trawling operations may impact

animals feeding or resting on or near the seafloor (i.e., primarily swimming sea turtles). These animals will be vulnerable to entrainment as this effect is believed to occur primarily when the draghead is operating on the bottom, if suction is created in the draghead while the device is being placed or removed, or when the dredge is operating on an uneven, rocky substrate and rises off the bottom (SARBO, 2020). Entrainment also occurs during relocation trawling, which is a method used during hopper dredging to minimize the lethal take risk of ESA-listed species by towing a net to capture and relocate animals (primarily sea turtles and sturgeon) away from the dredge area. This risk is reduced through implementation of the SARBO Project Design Criteria (PDCs), as described in Section 6.1. If relocation trawling is needed, this action will first be coordinated with the USACE's South Atlantic Division (SAD) and NMFS. There are also risks of vessel strikes to ESA-listed species (including sea turtles), as these species regularly surface to breathe and may spend time at or near the surface of the water. However, this risk is reduced through implementation of the SARBO PDCs, including adherence to reduced vessel speeds as defined in SARBO's Appendix F. These species are highly mobile and, with reduced vessel speeds, will likely be able to avoid equipment working in this area.

In addition, USACE has determined that the presence of a dredge in the nearshore waters and pipeline on the beach could temporarily impact the physical or biological features (PBF) and primary constituent elements (PCE) of loggerhead critical habitat unit LOGG-N-15 during construction. Hatchling egress from the water's edge to open water and nesting female transit back and forth between the open water and the nesting beach during nesting season, could be hindered by the presence of the dredge and pipeline. However, the initial construction phase is anticipated to last approximately 10-12 months with four (4) subsequent renourishment events occurring over the 50-year period of federal participation. The interval for renourishment varies depending on the timing of erosion and storm events. The daily construction activity would occur within only a small area at a time (approximately 500 linear feet per day). Finally, the placement of sand may increase sea turtle nesting habitat if the placed sand is highly compatible (i.e., grain size, shape, color, etc.) with naturally occurring beach sediments in the area, and compaction and escarpment remediation measures are incorporated into the project (i.e., the project complies with the terms and conditions of the SPBO). The SPBO details the potential effects of beach nourishment on sea turtles in the "Effects of the Action" section (page 56 -64).

Adverse effects to sea turtles and sea turtle nesting habitat are temporary, lasting only as long as construction occurs. Longer construction duration allows for a greater potential of direct impacts to these species in comparison to Alternative 3. Major long-term benefits would include a larger beach available for sea turtle nesting habitat post beach nourishment operations.

Marine Mammals

There is equal potential for encounters (such as incidental vessel strikes) with various protected whale species and Florida manatee via dredge and supporting vessels during dredging and transit in the area, as these species regularly surface to breathe and may spend time at or near the surface of the water. Although Florida manatee may be in the vicinity, it is unlikely they would be present in at the beach placement site or in Borrow Area 3A. Other whales (i.e., blue, fin, sei, sperm) generally occur in deeper water than where dredging takes place. Risk of vessel strike to marine mammals is reduced through implementation of the SARBO PDCs, including adherence to reduced vessel speeds as defined in SARBO's Appendix F and implementation of the USFWS 2011 Standard Manatee Conditions for In-water Work. These species are highly mobile and, with reduced vessel speeds, will likely be able to avoid equipment working in this area. Dredging

operations may also present risk of vessel noise-related behavioral disruption to marine animals. Adverse effects to marine mammals are temporary, lasting only as long as construction occurs.

Elasmobranchs

Temporary adverse effects to Elasmobranch T&E Species (i.e., smalltooth sawfish, oceanic whitetip sharks, giant manta rays) would include increased risk of vessel strikes as a result of dredging operations and transit, and displacement due to noise and/or presence of construction equipment in the project area. Section 3.1.1 of the 2020 SARBO (NMFS, 2020) analyzed effects of dredging (i.e., mechanical, hopper, and cutter suction) as well as water quality impacts from dredging and dredged material placement on the giant manta ray, smalltooth sawfish, whales, and sharks and determined these effects to be discountable due to the infrequency of documented take as well as the species' ability to avoid the area. Risk of entrainment associated with hopper dredge and relocation trawling operations exists for these species, however, the project will adhere all to all applicable SARBO PDCs to reduce potential risk. If relocation trawling is needed, this action will first be coordinated with the USACE's South Atlantic Division (SAD) and NMFS. Adverse effects on these species would be temporary and last only as long as the project duration.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Adverse effects to T&E species at or near Borrow Area 3A (swimming sea turtles, marine mammals, elasmobranchs) and on the beach (nesting sea turtles, birds) are expected to be temporary and similar to that of Alternative 2; however, a shorter project duration would result in less opportunities for T&E species to be directly adversely affected. Furthermore, benefits of beach nourishment on nesting sea turtle and shorebird habitats would be short-term, as Alternative 3 does not meet current project needs and is not expected to withstand coastal erosional processes in the long-term.

4.4 ESSENTIAL FISH HABITAT

ALTERNATIVE 1: NO ACTION

There will be no effects to EFH in Flagler County at or near the borrow area with implementation of the No Action alternative, as dredging of offshore Borrow Area 3A would not occur.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Dredging an additional (net) difference of approximately 2,000,000 CY of sand as compared to the original 2014 IFR/EA would result in increased turbidity and sedimentation near Borrow Area 3A due to the increased volume requirements and longer duration of hopper overflow. Although the 2014 IFR/EA had previously identified what appeared to be hardbottom located within the project area in Flagler Beach based on the 2011 study conducted by Dial Cordy and Associates, Inc., a more recent survey (2019 Hydrographic Exam Survey) re-evaluated these previous findings and confirmed this habitat to be defined as unconsolidated shell-hash rather than true hardbottom, thereby clearing the Flagler County project area of any true hardbottom habitat. These findings relieve hardbottom habitat as a potential concern for EFH in this SEA. Hence, overall impacts to EFH associated with the increase in sand volume and subsequent extension of the constructed berm by 100 ft are not expected to be discernably different than what was originally analyzed, considered, and determined in the 2014 IFR/EA, as the equilibrated berm

(and overall project template) will remain the same and was cleared of the presence of true hardbottom in recent analysis.

As described in the 2014 IFR/EA, temporary, minor adverse localized effects on marine species due to dredging processes, which would apply mainly to demersal and/or less mobile species, will be present during construction. Temporary adverse effects may occur to EFH and benthic habitats, as the macrofaunal communities (i.e., worms, clams, etc.) and non-motile infauna invertebrates that inhabit the benthic zone of Borrow Area 3A would be removed during dredging. Relatedly, the macrofaunal communities and non-motile infauna invertebrates in the immediate submerged beach placement would be smothered/buried and experience reduced light during placement activities. However, the effects to EFH are expected to be minor and temporary, lasting only as long as duration of construction, with expected immediate recolonization of lost species at dredged areas from adjacent communities. Other potential adverse effects would include vessel strikes; behavioral alterations due to sound, light, and structures; increased turbidity and sedimentation; changes to soft bottom bathymetry in the borrow area during dredging; and temporary loss of prey items and foraging habitat.

Furthermore, suspended materials may interfere with the diversity and concentration of phytoplankton and zooplankton during the dredging processes, and therefore, could affect foraging success and patterns of schooling fishes and other grazers that comprise prey for managed species. The USACE expects benthic organisms to fully recover and inhabit substrate within Borrow Area 3A over time. Similarly, foraging patterns are expected to return to normal at the end of dredging activities. For more detailed information on the effects to EFH, see Section 7.6.1 of the 2014 IFR/EA.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Adverse effects to EFH are expected to be minor and temporary as seen in Alternative 2; however, a shorter project duration would result in less potential for adverse effects on EFH.

4.5 PHYSICAL ENVIRONMENT

ALTERNATIVE 1: NO ACTION

The No Action alternative would not result in any adverse or beneficiary effects to noise in the Flagler County project area, as construction equipment would not be present to raise noise levels above what typically occurs in the project area due to wind/waves, automobiles, etc. However, it would result in major adverse and long-term effects in the physical presence of the beach due to a rapidly degrading shoreline. This could potentially extend to major adverse and long-term effects on the recreational capacity of the beach with respect to nearby coastal parks and common recreational usage (sunbathing, swimming, surfing, walking, and fishing) for similar reasons. Similarly, there will be no affects to noise at or near Borrow Area 3A, as construction will not occur. Hence, construction equipment will not be present to influence noise levels in these areas.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Temporary, minor adverse effects (increase) in noise at the borrow area and at the placement sites will occur during construction. Direct adverse impacts in air quality will include small, localized, temporary increases in concentrations of nitrogen dioxide (NO_2), sulfide (SO_2), carbon monoxide (CO), volatile organic compounds (VOCs), and particulate matter (PM) mostly

associated with the dredge plant, but also includes emissions associated with truck hauling efforts of upland sand to construct numerous temporary access ramps.

Turbidity will also be a minor to moderate temporary adverse environmental affect during dredging processes. The longer project duration will allow greater potential for adverse effects on noise, air quality, and water quality, but will cease upon completion of construction. Major long-term beneficial effects include a wider beach for recreational usage amongst Flagler County residents and tourists.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Adverse temporary affects in noise, air quality, and turbidity in the Flagler County project area and Borrow Area 3A will also occur in a similar way as described in Alternative 2, but likely not as significant due to a shorter construction duration.

Benefits of a wider beach for recreational usage would be present for the short-term, as the previously authorized project does not support current project needs in consideration of additional erosional losses.

4.6 SEDIMENT CHARACTERISTICS AND BATHYMETRY

ALTERNATIVE 1: NO ACTION

No effects to sediment characteristics and bathymetry would result from the No Action alternative in the Flagler County project area or in offshore Borrow Area 3A, as construction of both federal and non-federal components would not occur.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Temporary adverse effects in aesthetics may occur directly after placement of sand from Borrow Area 3A on Flagler Beach. Although the sand acquired from Borrow Area 3A abides by the requirements of the Florida “Sand Rule” (F.A.C. 62B-41.007(2)(j)) and is beach compatible, Flagler County’s unique orange sand (shell-hash) is impossible to precisely match. Hence, this difference may be noticeable upon initial placement of sand on the beach. These effects are anticipated to be short-term, as the shell material that gives the Flagler Beach’s sand its distinctly orange hue is expected to naturally return to the beach in time.

The borrow area represents bathymetric peaks or ridges on the seascape rather than level sea bottom. They tend to be semi-permanent features that have slowly formed into linear mounds by currents over time. Per the 2019 Flagler County Hydrographic Exam Survey and the 2019 Flagler County Permit Plates, the greatest difference in elevation due to dredging processes would occur in the uppermost corner of Borrow Area 3A, in which there will be a 13-foot bathymetric drop observed between -52 feet to -65 feet. Dredging will create relatively straight cuts to remove the upper sediment layer from this peak, avoiding creation of a deep depression which could accumulate fine materials (CSA et al., 2009). Best management practices (BMP) to minimize impacts to the benthos will also be implemented. These BMPs include limiting dredging depths to avoid deep pits, anoxic conditions, and/or settling of fine sediments, providing a 2 foot-buffer of sand left in place to ensure that post-dredge sediment type is the same as pre-dredge, and avoiding areas that have been recently dredged.

Considering that Borrow Area 3A is located relatively far offshore (<10 miles), wave action is eliminated as a main causation for sediment dispersal post dredging processes. Although bathymetry differences in this area of 3A may be somewhat drastic, they are not expected to be permanent. Offshore currents could potentially alter bathymetry after dredging, further contributing to the presence of a "slope" rather than a harsh "cut" in bathymetry; however, it is important to note that although these bathymetric differences may ease over time to a natural 3:1 slope, dredged areas will likely not fully infill due to the extent of dredging cuts.

Hence, temporary minor to moderate adverse effects also includes bathymetric depressions created at Borrow Area 3A via dredging processes, in which a (maximum) 13-foot bathymetric drop may be observed in the uppermost corner. Effects will be semi-permanent, as the ridges/peaks created from dredging are expected to form mound-like "sloping" structures in time due to natural processes (offshore currents) rather than crating sharp "cuts" in bathymetry. The creation of these mound-like structures (as opposed to significantly abrupt changes to the ocean bottom) are why benthic macroinvertebrates living near Borrow Area 3A are anticipated to recover in time.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Temporary and minor to moderate adverse effects are expected to be similar to that of Alternative 2, with the exception that lower sand volume requirements for a less intensive initial nourishment would likely result in smaller semi-permanent "slopes" in bathymetry over time, as less dredging would be required to construct the project. Hence, there would be fewer impacts to Borrow Area 3A in comparison to Alternative 2.

4.7 TRIBAL NATIONS

ALTERNATIVE 1: NO ACTION

There will be no effects to Native American owned lands, reservation lands, or identified Traditional Cultural Properties in either nearshore Flagler County or Borrow Area 3A with implementation of the No Action alternative, as construction of the project would not occur.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

No portion of the proposed action is located within or adjacent to known Native American owned lands, reservation lands, or identified Traditional Cultural Properties. Therefore, the USACE has determined that the beach and berm expansion alternative poses no effect to Tribal Nations.

Furthermore, the USACE consulted with the Miccosukee Tribe of Indians of Florida (MTIF), the Seminole Nation of Oklahoma (SNO), Seminole Tribe of Florida (STOF), and Thlopthlocco Tribal Town (TTT) in 2019 with a determination of no effects to Tribal Nations from dredging of the borrow area and placement on the beach, as well as the nearshore placement area contingent upon the avoidance of three targets within the nearshore placement area, two of which that have a 100 ft buffer, and the third with a 150 ft buffer. The STOF concurred with this determination by electronic communication dated September 25, 2019 (THPO Compliance Tracking Number: 0031617; Appendix A). While the volume of sand required for this effort has more than doubled

since this 2019 consultation took place, the project footprint has remained the same; therefore, updated effects determinations and consultation are not necessary.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Since the federal project template remains the same as seen in Alternative 2, the effects are also the same. No portion of the proposed action is located within or adjacent to known Native American owned lands, reservation lands, or identified Traditional Cultural Properties. Therefore, the USACE has determined that this alternative poses no effect to Tribal Nations.

4.8 CULTURAL RESOURCES

ALTERNATIVE 1: NO ACTION

Without a project, there will be no placement of sand within the Flagler County CSRM, resulting in the continued erosion of Flagler Beach. This poses potential major, adverse and long-term effects to potentially significant cultural resources that were located in the nearshore during a submerged cultural resources assessment survey conducted in 2019 (Wilson et al., 2019).

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Cultural resources for the beach placement area have been addressed in the USACE's 2014 IFR/EA (see Section 2.10). Subsequent to this 2014 EA, USACE conducted a submerged cultural resources assessment survey of the borrow area and nearshore placement area. Based on the results of that survey, detailed in the report titled *Flagler County Shore Protection Project Intensive Cultural Resources Assessment Survey* (Wilson et al., 2019), the USACE determined that dredging of the borrow area, and placement on the beach and in the nearshore, would have no adverse effects to historic properties contingent upon the avoidance of three targets within the nearshore placement area, two of which that have a 100 ft buffer, and the third with a 150 ft buffer. The Florida State Historic Preservation Officer (SHPO) concurred with this determination by letter dated September 26, 2019 (DHR Project File No.: 2019-05234; Appendix A). While the volume of sand required for this effort has more than doubled since this 2019 consultation took place, the project footprint has remained the same; therefore, updated effects determinations and consultation are not necessary.

As Flagler County is proposing to conduct concurrent beach restoration adjacent to both the north and south extensions of the USACE project, the USACE will add restoration of the County beach segments to its construction template. Effects to cultural resources for the County segments are addressed in the *Final Environmental Assessment: Flagler County Dune/Beach Restoration Project, Flagler County,* FL report prepared by Olsen and Associates for Coastal Eco-Group, Inc. in 2020.

Due to damages caused by hurricanes Ian and Nicole in 2022, the proposed staging for construction of the beach nourishment will also take place in areas not covered by the authorized federal project. Two of these staging areas, Veterans Park and 6th Street South, have been graded in the past, and staging activities will not include intensive subsurface disturbances. The Pebble Beach HOA staging area, being immediately along the dune line, retains little likelihood of

containing intact historic or prehistoric cultural material. Due to these factors, the USACE has determined the use of these additional staging areas has no potential to effect historic properties.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Same as Alternative 2, as construction as previously authorized based on the 2014 IFR/EA would still require the use of new staging and access area (Pebble Beach HOA) and temporary access ramp (at Pebble Beach HOA). This staging area, being immediately along the dune line, retains little likelihood of containing intact historic or prehistoric cultural material. Therefore, the USACE has determined the use of the Pebble Beach HOA staging area has no potential to effect historic properties.

4.9 AESTHETICS

ALTERNATIVE 1: NO ACTION

Although aesthetic values are subjective and hard to quantify as such, failure to implement federal and non-federal beach nourishment projects in Flagler Beach would result in major adverse and long-term effects to the general aesthetic value of the beach due to a rapidly degrading shoreline and diminishing overall beach size. There will be no effects to the aesthetics at or near Borrow Area 3A with implementation of the No Action alternative.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Construction duration for Alternative 2 will take longer than what is considered for Alternative 3, but adverse effects on aesthetic appeal due to construction equipment on/near the beach remain temporary and minor, lasting only as long as construction operations, as the shell material that gives the Flagler Beach's sand its distinctly orange hue is expected to naturally return to the beach in time. It would further result in major long-term benefits to the aesthetic appearance of the beach after project completion due to significant expansion of the berm, thereby creating a larger beach for Flagler County residents and tourists. Use of Borrow Area 3A will have no effect on borrow area aesthetics.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Implementation of Alternative 3 would result in similar temporary and minor adverse effects on aesthetic appeal as described in Alternative 2, as beach nourishment processes and construction methodology are similar between the two alternatives regardless of the volume of sand being placed on the beach; however, benefits to beach aesthetics would be short-term, as Alternative 3 does not sufficiently meet project needs with consideration of additional erosional losses since 2014.

4.10 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)

ALTERNATIVE 1: NO ACTION

The No Action alternative would not pose effects on any potentially unidentified HTRW present in the Flagler County study area or Borrow Area 3A, as construction would not occur.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

The nature of the work involved with the renourishment of beaches is such that contamination by hazardous and toxic wastes is very unlikely. No contamination due to hazardous and toxic waste spills is known to be in any of the in-water sand source locations. Although these variables are predicted to be negligible, it is important to note that a longer project duration provides more potential for accidental spills and releases of waste/fuel to occur. However, the USACE will implement measures to prevent oil, fuel, or other hazardous substances from entering the air or water, accordingly. All wastes and refuse generated by project construction would be removed and properly disposed. The USACE contractor will implement a spill contingency plan for hazardous, toxic, or petroleum material. Compliance with EPA Vessel General Permits would be ensured, as applicable.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Similar effects to Alternative 2 are expected, with the exception that decreased construction duration and nourishment cycles (for a smaller volume of sand and smaller constructed berm) would require less frequent use of offshore sand; hence, decreasing the likelihood for accidental spills to occur.

4.11 UNEXPLODED ORDNANCES (UXO)/MUNITIONS OF EXPLOSIVE CONCERN (MEC)

ALTERNATIVE 1: NO ACTION

The No Action alternative would not pose effects on any potentially unidentified UXO/MEC present in the Flagler County study area or Borrow Area 3A, as construction would not occur.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Since there is a “No Probability” MEC PA determination for both the beach fill area and borrow/dredge area, implementation of Alternative 2 will result in a negligible effect.

However, based upon regulatory definitions, there is an understanding that if MEC, MD, or Material Potentially Presenting an Explosive Hazard (MPPEH) is found on site (beach renourishment area, Borrow Area 3A, hoppers, barge etc.), all work efforts will cease and a new MEC PA will be conducted.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Effects are similar to Alternative 2, as there are currently no UXO/MEC identified in the Flagler County project area and Borrow Area 3A. This alternative abides by the same regulatory definitions.

4.12 AIR QUALITY

ALTERNATIVE 1: NO ACTION

There would be no effects to air quality in the Flagler County area or in offshore Borrow Area 3A under the No Action alternative, as dredging and associated effects (i.e., air emissions) will not occur at any existing sand sources for Flagler County CSRM, and placement will not occur on the beach.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Emissions of criteria pollutants, greenhouse gases, and other hazardous air pollutants will result from operation of the dredge pumps at Borrow Area 3A and coupled pump-out equipment, dredge propulsion engines, tugs, barges, and support vessels used in the placement and relocation of mooring buoys. In addition, air emissions will result from bulldozers, trucks, and other heavy equipment used in the construction of the berm, beach, and dunes, particularly associated with the truck haul portion to construct staging and access areas. Carbon monoxide and particulate emissions at the project site, during construction, may be considered offensive; but are generally not considered far-reaching. The primary emissions will result from the burning of fossil fuels by the dredge plant or dump trucks.

BOEM re-estimated levels for criteria pollutants in addition to greenhouse gases, including carbon monoxide (CO), nitrogen dioxide (NO_2), lead (Pb), sulfur dioxide (SO_2), hydrocarbons (HC) and particulate matter (PM). In cooperation with BOEM, ENVIRON International Corp. and the Woods Hole Group, a Dredging Project Emissions Calculator (DPEC) was developed to estimate the emissions levels that will be generated by proposed beach nourishment and coastal restoration projects (ENVIRON International Corp. and Woods Hole Group, 2013). This program can be used to calculate emissions during multiple phases of a project, from dredging, to pump-out and sand placement, thereby providing a basis to determine conformity with regulations and impacts analysis. The analysis was run for the Flagler County CSRM using a large hopper dredge with 6,540 CY hopper capacity and Borrow Area 3A. The hopper dredge is the likeliest methodology employed for this project. Alternatively, should a cutterhead dredge be utilized to complete this project, the total emissions would likely increase by approximately 20%. An additional analysis was completed to account for the same emissions from the upland truck haul portion of this project.

Estimated emissions levels generated by the DPEC for this project are shown in Table 4-2. The total project emissions are dominated by carbon dioxide (CO_2), followed by NO_x (represents the sum of Nitric Oxide (NO) and nitrogen dioxide (NO_2) emissions). Methane (CH_4) emission factors are 2% of hydrocarbon emission factors (EPA, 2022) and were also calculated as part of this emissions analysis. All CH_4 emissions from diesel engines are considered to be of minor importance (Cooper and Gustafsson, 2004). There would be no long-term accumulation of pollutants, particulates, or greenhouse gases in the project area because offshore sea breezes are likely to disperse pollutants away from the coast and the construction activity is brief and temporary in nature. Exhaust from the construction equipment would have a short-term effect on the immediate air quality around the construction operation but should not impact areas away from the construction area. These emissions would rapidly disperse upon cessation of operation of heavy equipment.

The project is exempt from the Clean Air Act General Conformity regulations because the project is not located in a designated nonattainment area. The State of Florida does not regulate emissions from off-road equipment or marine vessels (FDEP 2012). Construction of the CSRM project

utilizing Borrow Area 3A and the upland truck haul would result in minor, temporary degradation of air quality due to emissions during dredging operations and truck haul. Air quality would be expected to return to background levels immediately following the completion of construction.

Table 4-2: Summary of project emissions by source and location for HC, VOC, CO, Nox, PM, CO2, and CH4 for the Flagler County CSRM.

Type	Mode	Emissions (tons)							
		HC	VOC	CO	NO_x	PM_{10}	$PM_{2.5}$	CO_2	CH_4
Inside State Waters									
Crew Boat		0.06	0.06	0.35	2.16	0.05	0.05	146.66	0.0012
Tender 1		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
Tow Boat		0.12	0.12	0.78	3.97	0.08	0.08	293.32	0.0024
Bulldozer		0.01	0.01	0.01	0.03	0.00	0.00	36.20	0.0002
Bulldozer		0.01	0.01	0.01	0.03	0.00	0.00	36.20	0.0002
Excavator		0.01	0.01	0.01	0.02	0.00	0.00	36.60	0.0002
Dump Trucks		0.12	0.13	0.14	0.27	0.03	0.03	395.15	0.0002
Dredge Vessel Generator	Transit	0.01	0.01	0.07	0.41	0.01	0.01	28.35	0.0002
Dredge Vessel Main	Transit	0.10	0.10	1.84	7.83	0.16	0.15	504.24	0.0020
Dredge Vessel Generator	Pumping	0.02	0.02	0.12	0.73	0.02	0.02	50.81	0.0004
Dredge Vessel Main	Pumping	0.18	0.19	3.30	14.03	0.28	0.27	903.77	0.0036
OCS Waters									
Dredge Vessel Generator	Dredging	0.01	0.01	0.06	0.37	0.01	0.01	25.40	0.0002
Dredge Vessel Main	Dredging	0.09	0.09	1.65	7.02	0.14	0.14	451.88	0.0018
Dredge Vessel Generator	Transit	0.02	0.02	0.10	0.64	0.02	0.01	44.54	0.0004
Dredge Vessel Main	Transit	0.16	0.16	2.89	12.30	0.24	0.24	792.38	0.0032
All Locations and Sources									

Total Emissions (including auxiliary sources)	1.12	1.18	15.42	67.13	1.38	1.34	4851.87	0.021

In addition to the effects to air quality due to dredge/construction machinery, including the additional machinery required to fulfill the truck haul component included in Alternative 2, it should be noted that the urbanization of the beaches within Flagler County has contributed to many motorized vehicles in the vicinity of the study area at any given time. However, because of the sea breezes that are usually present along the shore, air quality is generally regarded as good, as airborne pollutants due to the typical presence and operation of motorized vehicles in the study area are readily dispersed by ocean generated winds.

Truck haul of sand for temporary access ramps located at Pebble Beach, Veterans Park, and 6th Street South may require three separate truck hauling events from upland mines. Alternatively, sand used to construct one temporary access ramp may be removed and re-used to construct the other temporary access ramps. If three separate truck hauling events for the construction of the three separate temporary access ramps are required, the maximum extent of total emissions possible (in tons) would be: HC (0.36), VOC (0.39), CO (0.42), NO_x (0.81), PM_{10} (0.09), $PM_{2.5}$ (0.09), CO_2 (1,185.45), and CH_4 (0.0006). These emissions would not have significant implications on air quality in the Flagler County project area.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Alternative 3 would also include a truck haul component, in which sources of air pollutants at Borrow Area 3A and within the Flagler County project area would stem from typical dredge/construction machinery, as well as emission calculations from truck hauls necessary to construct the temporary access ramp in the NFS southern extension. Construction of Alternative 3 would result in considerably less emissions than estimated for Alternative 2. This is due to the smaller volume of sand that would be transported by dredge and onshore vehicles to the placement areas. The effects from this Alternative would be considered as minor, temporary degradation of air quality and would be expected to return to background levels immediately following the completion of construction. Effects to air quality would also be considered more temporary than what is described in Alternative 2 due to the shorter project duration.

4.13 HUMAN HEALTH AND SAFETY

ALTERNATIVE 1: NO ACTION

The No Action alternative could result in major adverse and long-term effects to the health and safety of Flagler County residents, as failure to protect critical infrastructure along the coast via beach nourishment processes could pose potential health and safety hazards, such as unstable walkways along the beach and various sections of SR A1A, which serves as a hurricane evacuation route to Flagler County residents. There will be no affects to human health and safety in offshore Borrow Area 3A with implementation of the No Action alternative.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Adverse effects on human health and safety as a result of the project and its construction are expected to be negligible. Segments of the beach actively being renourished would be temporarily

closed off to the public for approximately 7-10 days due to safety concerns presented by the construction activities and presence of equipment; however, these areas would be re-opened as construction is completed. Major long-term benefits to human safety include minimizing potential harm from storm events that result in flood impacts.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Adverse effects on human health and safety remain the same as described in Alternative 2. Project benefits on human health and safety include the minimization of potential harm from storm events as described in Alternative 3, but likely in a short-term duration.

4.14 BUILT ENVIRONMENT

ALTERNATIVE 1: NO ACTION

Implementation of the No Action alternative would likely result in major adverse and long-term effects to the built environment within Flagler County, including both residential and commercial infrastructure, as well as lower value damageable elements. These amenities remain increasingly threatened by wind, wave, and storm damage without protection of such critical infrastructure through federal and non-federal beach nourishment.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Overall adverse effects on residential/commercial infrastructure and lower value damageable elements are negligible. Potential removal of public and private dune walkovers prior to construction are minor and short-term, as they will be re-built after construction is complete. Major long-term benefits of re-nourishment includes the enhanced protection of public and private critical infrastructure against erosional damage.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Adverse effects on residential/commercial infrastructure and lower value damageable elements remain negligible, with potential removal of public and private dune walkovers prior to construction acting as the only minor adverse short-term effect. Benefits of re-nourishment on the built environment against erosional forces would serve as short-term, as project needs are not fully met in Alternative 3.

4.15 ECONOMIC ENVIRONMENT

ALTERNATIVE 1: NO ACTION

The No Action alternative would result in major adverse and long-term effects to the socioeconomic environment, as lack of enhanced coastal protection through beach nourishment processes would leave the coast extremely vulnerable to storm damage, and hence, contribute to the continued degradation of the shoreline and pose a high residual economic risk.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Adverse effects to the socioeconomic environment are expected to be minor and temporary as described in the 2014 IFR/EA, as tourism interests at Flagler Beach are anticipated to decrease only for the duration of beach nourishment processes due to the presence of construction equipment and construction operations.

Major long-term benefits would include lower residual risk to the economic environment, as the proposed project would greatly reduce (although it cannot eliminate) future storm damages to critical infrastructure along the coast of Flagler County. Similar major and long-term benefits to tourism are also anticipated after completion of the project, as the beach will be more appealing to tourists due to the extension of the berm (larger beach).

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Any adverse effects to the economic environment are expected to be minor and temporary as described in Alternative 2; however, adverse effects to tourism during construction would be more temporary due to a shorter project duration but would likely result in minor to moderate benefits since this alternative does not meet current project needs.

Beach habitat along the Flagler County coast would not be replenished to the extent needed for renourishment efforts to last long-term and be properly maintained. Critical infrastructure along the Flagler County coast would not have sufficient protection from damage due to wind, waves, storms, and other erosional processes. Hence, benefits to decreasing residual economic risk would be more moderate and short term as compared to Alternative 2.

4.16 ENVIRONMENTAL JUSTICE

ALTERNATIVE 1: NO ACTION

There are no potential adverse or beneficiary effects to people of color populations and/or low-income populations that reside near the project area through the No Action alternative, as construction would not occur.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Beach nourishment under Alternative 2 would not result in adverse human health or environmental effects that would be disproportionately higher towards minority, low-income populations, or people of color.

Per the conclusions of the USEPA EJ Screening Tool, effects on environmental justice are not expected to be discernably different than what was originally analyzed, considered, and determined in the 2014 EA.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Similarly, effects on environmental justice in Alternative 3 are not anticipated to be discernably different than what was originally analyzed, considered, and determined in the 2014 EA.

4.17 NAVIGATION

ALTERNATIVE 1: NO ACTION

The No Action alternative will have no effect on the navigation of recreational boaters, as there would not be dredging equipment present near Borrow Area 3A to cause potential hazards.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

The presence of construction equipment may cause temporary and minor adverse impacts to vessels (for both recreational and commercial usage) utilizing the Atlantic Ocean near Borrow Area 3A, as well as the nearshore areas during sand pump-out. Once the project has been completed, navigation near the borrow area will be unhindered.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Similar temporary and minor adverse impacts to navigation are expected as described in Alternative 2; however, a shorter overall project duration would reflect fewer impacts to navigation at/near Borrow Area 3A that are shorter in duration.

4.18 TRANSPORTATION

ALTERNATIVE 1: NO ACTION

The No Action alternative will have no effect on the general transportation and traffic patterns of Flagler County residents, as trucks for hauling of sand from upland mine sources and general construction equipment will not be present to potentially obstruct typical traffic patterns in the project area. However, without the project, continued erosion and/or storm damages could allow for the flooding or other degradation of SR A1A, which would reduce or prohibit transit along the hurricane evacuation route.

ALTERNATIVE 2: BEACH AND BERM EXPANSION WITH NFS EXTENSIONS

Implementation of Alternative 2 will require various lane closures and traffic reroutes along SR A1A and the adjacent roads in the vicinity of the Veterans Park staging area. Road closures are anticipated to occur between 2nd Street North through 7th Street South and will be minimized to reroute traffic only where the construction is occurring for an approximate 2 week time period. Traffic will be detoured west, likely from SR A1A to Flagler Avenue. A final traffic control plan will be developed by the contractor through coordination with the FDOT and other interested parties, such as Flagler County and the City of Flagler Beach.

Temporary, minor to moderate adverse effects to traffic in the Flagler County project area are anticipated due to trucks bringing in sand from upland mines, lane closures, and reroutes. It is reasonable to assume that effects will vary based on the time of day. For example, closures and reroutes are anticipated to have minor effects on early morning and late evening traffic in the area, but adverse effects will likely be more moderate during late morning to late afternoon, during peak traffic hours. These closures could disrupt access to several businesses during the construction period. Once construction for a particular portion of the project is completed and barricades are

removed in that area, traffic and access in the Flagler County project area will return to previous conditions.

ALTERNATIVE 3: CONSTRUCTION AS PREVIOUSLY AUTHORIZED WITH NFS EXTENSIONS

Similar temporary and minor adverse effects to traffic are expected as described in Alternative 2; however, a shorter overall project duration would result in shorter duration of the effects.

5 PREFFERED ALTERNATIVE

This section compares the alternatives and provides the basis for the selection of the Preferred Alternative.

5.1 COMPARISON OF ALTERNATIVES AND SELECTION

The CEQ regulation, 40 CFR § 1501.3(b)(2), states: "[i]n considering the degree of the effects, agencies should consider the following, as appropriate to the specific action: (i) Both short- and long-term effects; (ii) Both beneficial and adverse effects; (iii) Effects on public health and safety; (iv) Effects that would violate federal, state, tribal, or local law protecting the environment." Table 5-1 summarizes the major features and consequences of the proposed alternatives for comparison purposes, sufficiently addressing items (i) and (ii). Section 4 (Environmental Effects) provides more detailed discussion of effects of the alternatives carried forward for detailed scientific analysis. Effects considerations (iii) and (iv) were used in the formulation and selection of action alternatives and addressed in detail in sections 1.6, 3, and 4. These considerations are also discussed below in Table 5-1 for the relevant resources.

Table 5-1. Summary of direct and indirect effect compared between the project alternatives.

Environmental Factor / Resource	Alternative 1: No Action	Alternative 2: Beach and Berm Expansion	Alternative 3: Construction as Previously Authorized
General Setting	No Effect	Same as No Action	Same as No Action
Natural Environment	Major long-term adverse effects due to degradation of wildlife habitat within the project area	Temporary and minor adverse effects to vegetation/supralittoral wildlife due to construction activities Major long-term benefits to native species diversity and overall habitat stability as a result of habitat (beach/dune) expansion	Same as Alternative 2, but benefits to native species diversity/habitat stability would be short-term, as this does not meet current project needs.
Threatened and Endangered (T&E) Sea turtles: Green (North Atlantic Distinct Population Segment), hawksbill, leatherback, loggerhead, and Kemp's Ridley	Long-term major adverse effects (decreasing nesting habitat due to degrading beach)	Temporary, minor to moderate adverse effects (potential incidental take during hopper dredging operations, displacement due to noise and/or presence of equipment and/or non-lethal relocation trawling, potential incidental vessel strikes) Major long-term benefits to sea turtles by creating a bigger beach with a wider berm, thus providing more space for nesting habitat	Same as Alternative 2, but less potential for adverse effects to T&E species due to shorter project duration. Similarly, benefits to nesting sea turtles and nesting habitat would be more short-term, as this does not meet current project needs for Flagler Beach's critically eroded state
T&E Elasmobranch Species: Smalltooth sawfish, oceanic white tip sharks, giant manta ray	No Effect	Temporary, minor to moderate adverse effects (potential risk of vessel strikes from dredging operations and transit, displacement due to noise and/or presence of equipment and/or non-lethal relocation trawling)	Same as Alternative 2, but a shorter project duration would result in more short-term adverse effects

Environmental Factor / Resource	Alternative 1: No Action	Alternative 2: Beach and Berm Expansion	Alternative 3: Construction as Previously Authorized
EFH	No Effect	Direct adverse impacts via temporary increase in turbidity adjacent to the borrow site and beach fill area. Other potential adverse effects (vessel strikes, behavioral alterations, changes to soft bottom bathymetry, and loss off prey items and foraging habitat) would also be temporary, only lasting as long as construction, or expected to recover (short-term) after construction. Current project demands require larger quantities of sand, which will inherently require longer dredging operations to meet such demands. Longer project duration provides a greater opportunity for turbidity related impacts.	Same as Alternative 2, but less potential for adverse effects on EFH due to shorter project duration
Physical Environment	No effects on noise in the Flagler County area. Major long-term adverse effects to both the physical presence of the beach, as well as various recreational capacities of the beach due to continued beach degradation	Temporary and minor to moderate adverse effects (increase) in noise, air quality, and turbidity at the borrow area/placement sites, and/or near construction activities. Major long-term beneficial effects to Flagler County residents and tourists, as nourishment would provide a wider beach for recreational usage	Same as Alternative 2, but recreational benefits are short term, as this does not meet current project needs

Environmental Factor / Resource	Alternative 1: No Action	Alternative 2: Beach and Berm Expansion	Alternative 3: Construction as Previously Authorized
Sediment Characteristics	No Effect	Temporary minor to moderate adverse effects in aesthetics may occur directly after placement of sand for initial nourishment due to slight differences in sand color. Temporary adverse effects in sediment bathymetry at the Borrow Area 3A dredging site	Same as Alternative 2, but lower sand volume requirements would likely result in smaller semi-permanent “slopes” in bathymetry over time
Tribal Nations	No Effect	Same as the No Action Alternative, as no portion of the proposed project is located within or adjacent to Native American owned/reservation lands or Traditional Cultural Properties	Same as Alternative 2
Cultural Resources	Potential for major adverse and long-term effects to potentially significant cultural resources located in nearshore Flagler Beach due to continued degradation of the shore	No adverse effects to historic properties contingent upon the avoidance of three targets within the nearshore placement area, two of which that have a 100 ft buffer, and the third with a 150 ft buffer.	Same as Alternative 2
Aesthetics	Major long-term adverse effects due to continued beach degradation and overall diminishing beach size	Temporary and minor adverse effects due to the placement of beach equipment on/near the beach during construction Major long-term benefits to aesthetic appearance due to extension of the berm and increased sand volume	Same as Alternative 2, but aesthetic benefits would be more short-term, as this does not meet current project needs

Environmental Factor / Resource	Alternative 1: No Action	Alternative 2: Beach and Berm Expansion	Alternative 3: Construction as Previously Authorized
HTRW	No Effect	Same as No Action Measures will be taken to prevent oil, fuel, or other hazardous substances from entering the air or water. Project generated waste and refuse would be removed and properly disposed	Same as No Action
UXO/MEC	No Effect	Same as No Action	Same as No Action
Air Quality	No Effect	Temporary and minor adverse effects to air quality near Borrow Area 3A and the Flagler County project area (mainly due to dredges and upland truck haul), which will return to normal background levels immediately following the completion of construction	Similar temporary and minor adverse effects to air quality as described in Alternative 2, but likely more short-term due to a shorter project duration
Human Health and Safety	Major long-term adverse effects resulting from unstable critical infrastructure that poses potential hazards to Flagler County residents	Negligible, i.e., not discernably different from current conditions Major long-term benefits to Flagler County residents via minimizing potential harm from storm events that result in flood impacts	Same as Alternative 2, but project benefits would be more short-term, as this does not meet current project needs
Built Environment	Potential for major long-term adverse effects, as the degrading Flagler County shoreline will not provide sufficient protection of public and private critical infrastructure against erosional damage (including typical beach erosional processes, as well as storm events)	Overall negligible adverse impacts. Possible minor short-term adverse effects with potential removal of public and private dune walkovers during construction Major long-term benefits to public and private critical infrastructure through enhanced protection against coastal erosion	Same as Alternative 2, but protection of critical infrastructure would be more short-term, as this does not meet current project needs

Environmental Factor / Resource	Alternative 1: No Action	Alternative 2: Beach and Berm Expansion	Alternative 3: Construction as Previously Authorized
Economic Environment	Major adverse and long-term effects, as continued degradation of the Flagler County shoreline would leave the coast extremely vulnerable to continued storm damage (high residual economic risk)	Adverse effects to the socioeconomic environment are expected to be minor and temporary, as adverse effects to tourism will last only as long as construction operations. Project design would fully carry out project needs, resulting in major long-term benefits by lowering residual risk via sufficient protection of the Flagler County coast. Similar major and long-term benefits to tourism are anticipated by the creation of a larger beach	Adverse effects are similar to Alternative 2, but adverse effects to tourism would be more temporary due to a shorter project duration. Benefits to tourism are minor to moderate in more of a short-term capacity, as this Alternative does not adequately reduce storm damage and meet current project needs. Benefits to the economic environment via lowering of residual risk are minor to moderate and short-term due to similar reasons
Environmental Justice	No Effect	Same as No Action	Same as No Action
Navigation	No Effect	Temporary and minor adverse impacts to vessels in the Atlantic Ocean near the borrow area, as well as nearshore areas, due to the presence of construction equipment	Same as Alternative 2; however, a shorter overall project duration would result in shorter duration of the effects
Transportation	Significant adverse effects to SR A1A could occur due to continued erosion and/or storm damages, which may allow for the flooding or other degradation of SR A1A and reduce or prohibit transit along the hurricane evacuation route	Temporary and minor to moderate adverse impacts to navigation/traffic along SR A1A and nearby roads due to road closures and reroutes as a result of truck haul of sand via upland mine sources	Same as Alternative 2; however, a shorter overall project duration would result in shorter duration of the effects

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5.2 PREFERRED ALTERNATIVE

Alternative 2 (Beach and Berm Expansion) is carried forward as the Preferred Alternative, as this best meets the objectives for the federal project with consideration of additional erosional losses, as well as anticipated need for current and future maintenance events. The Preferred Alternative has the greatest economic benefit, maintains the authorized project purposes, and is the most engineeringly sound alternative while remaining environmentally acceptable. The USACE has determined this proposed plan is not contrary to public interest and is carried forward as the Preferred Alternative. (See Section 3.1 for a detailed description of the Preferred Alternative).

5.3 UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

This section summarizes the potential for adverse environmental effects as discussed through Section 4 for the Preferred Alternative.

Dredging may result in temporary restrictions and/or interruptions to boat traffic (navigation), degradation of air quality, and increases in noise level and turbidity near offshore Borrow Area 3A. Mobile species may temporarily experience increased noise and turbidity associated with dredging. Temporary adverse effects may occur to EFH and benthic habitats, macrofaunal communities (i.e., worms, clams, etc.), and non-motile infauna invertebrates that inhabit the benthic zone of Borrow Area 3A and the immediate submerged beach placement as a result of sediment smothering/burial during dredging processes and reduced light. However, the effects are expected to be minor and temporary, lasting only as long as duration of construction, with expected immediate recolonization of lost species at dredged areas from adjacent communities. Mobile T&E species, fish, and other wildlife may be temporarily displaced, and experience increased noise and turbidity associated with dredging. These effects would cease with the completion of dredging. Incidental take of sea turtles may occur via hopper dredge. There is risk of vessel strikes to marine mammals (i.e., whales) and other marine species (i.e., sea turtles) by the dredge and/or support vessels but this risk is minimized through the implementation of SARBO PDCs, such as adherence to reduced vessel speeds and observation and monitoring by a Protected Species Observer (PSO).

Adverse effects to the built environment, beach aesthetics, and physical/natural environment are minor and temporary during construction processes. These resources will have major-long term benefits after completion of the project.

5.4 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

To move forward with the Preferred Alternative, which would fully satisfy all project needs, the use of sand from the Borrow Area 3A would irreversibly deplete the suitable sand reserves. The sands would not replenish fast enough to be of much value towards future nourishment projects for this reason. Therefore, the use of sand from Borrow Area 3A is an irreversible commitment of resources.

Additionally, existing vegetation at the beach would be irretrievably disturbed during construction activity. However, project construction will also require planting of native coastal vegetation on newly constructed dune areas. Replanting will occur in equivalent density. Therefore, the loss of existing vegetation is irretrievable but also temporary as the vegetation will be replaced upon completion of construction. Similarly, the removal and use of sand from Borrow Area 3A for placement on the beach and nearshore area would also result in irretrievable losses to the benthic fauna; however, natural recruitment from neighboring areas is expected to occur after completion of construction. Therefore, the loss of existing benthic fauna during beach nourishment is irretrievable but also temporary as these areas will repopulate.

5.5 CONFLICTS AND CONTROVERSY

At this time, there is no known conflict or controversy associated with the proposed action. The USACE continually strives to include all interested parties in its decision-making process and will

continue to do so as issues arise. See Appendix A (Pertinent Correspondence) for detailed correspondence with all parties involved in the Flagler County CSRM SEA.

5.6 MITIGATION, MONITORING, AND ADAPTIVE MANGEMENT

Mitigation of environmental impacts would be addressed in terms of avoidance, minimization, and other actions, such as best management practices, that reduce or offset the negative environmental impacts. Implementation of this alternative action is not expected to result in environmental impacts that would require compensatory mitigation.

See Section 6 (Environmental Commitments and Compliance) of this SEA for a full description of the USACE's environmental commitments.

5.7 CUMULATIVE EFFECTS

Cumulative effects can be described as impacts on the environment resulting from the incremental effects of the proposed action when added to other past, present, and reasonably foreseeable future actions (32 CFR § 651.16). Actions by federal, non-federal agencies, and private parties must be considered in the project's NEPA document.

Past, present, and reasonably foreseeable actions and plans include beach nourishment projects, maintenance dredging of navigation channels, and general urbanization. It is expected that the public, State of Florida, and local governments could pursue activities in or around the project area. While the effects of one action may be insignificant, cumulative effects accumulate over time and can result in the degradation of resources. Federal activities are evaluated under NEPA directly for each project. Other projects that include obstructions or alterations of navigable waters of the United States or the discharge of dredged or fill material in retained waters are evaluated by the USACE's Regulatory Division pursuant to its permitting authority under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899.

Reasonably foreseeable future actions and plans include a renourishment interval that is expected to be approximately 11 years, equaling 4 renourishment events (in addition to initial construction) over the 50-year period of federal participation.

As part of the evaluation of cumulative impacts pursuant to CEQ 1997 *Considering Cumulative Effects under the National Environmental Policy Act*, other actions affecting similar resources or ecosystem were considered. There are no other projects in the region that share a similar ecosystem that could have cumulative impacts on similar resources. In Northeast Florida, there are active beach nourishment/maintenance projects in Nassau, Duval, and St. Johns Counties. All these projects have separate sufficient sand resources identified, which will not be impacted by the proposed project. Beach nourishment projects located south of Cape Canaveral, in the southeast region of Florida, will not impact the borrow areas identified for the proposed project. The proposed project will not impact or be impacted by any inlet maintenance project within the region. The closest maintained inlets to the proposed project are the St. Augustine Inlet, located approximately 33 miles north of the project area, and Ponce inlet, locate approximately 29 miles south of the project area.

Without implementation of the proposed action, long-term adverse effects to the natural environment, physical environment, aesthetic qualities, human health and safety, and built environment in the Flagler County area will be observed. These major adverse effects will continue to worsen over time, further jeopardizing the safety of Flagler County residents,

protection of critical infrastructure along the coastline, and the health and well-being of benthic macrofaunal invertebrates and/or sea turtles with respect to critically degrading nesting habitats.

Table 5-2 summarizes the cumulative effects to sand resources, protected species, dune vegetation, water quality, and socioeconomic conditions resulting from past, present, and reasonably foreseeable future actions in combination with the alternatives.

Table 5-2. Summary of Cumulative Effects.

Resource	Past Actions	Present Actions	Alternative 1: No Action Alternative	Alternative 2: Beach and Berm Expansion
Air Quality	Pristine	Air quality throughout the state has become increasingly degraded due to anthropogenic actions	No impacts to air quality would occur	Exhaust from the construction equipment would have minor and temporary effects on the immediate air quality around the construction operation but should not impact areas away from the construction area. These emissions would rapidly disperse upon cessation of operation of heavy equipment
Sand Resources	Offshore sand resources identified for this project (Borrow Area 3A) have never been used for beach nourishment or other purposes	Sufficient offshore sand resources exist for all the beach nourishment projects in Northeast Florida, including the proposed project	Offshore sand resources identified for this project will not likely be utilized for other shore protection activities in other areas of Florida	Offshore sand resources identified for this project will be reduced, but not completely depleted, over the 50-year period of federal participation of this project
Protected Species	More abundant and widespread	Individuals becoming increasingly rare; habitat degradation/shrinkage	Individuals are not acutely affected by dredging; however, beach habitat continues to shrink	Individuals may be affected by dredging and placement activities (incidental vessel strike/take); habitat is sustained for life of project. Temporary loss of private dune access crossovers may temporarily impact dune from foot traffic through vegetation, but the re-building of these dune walkovers will not cause any additional impacts to nesting areas for sea turtles and shorebirds

Resource	Past Actions	Present Actions	Alternative 1: No Action Alternative	Alternative 2: Beach and Berm Expansion
Dune Vegetation	Abundant vegetative cover of appropriate dune species with moderate diversity	Areas of the shoreline have lost dune and associated vegetation from armoring. Existing dunes are subject to erosion, resulting in loss of vegetation	Areas containing vegetated dunes will continue to erode, causing stress to plant species and a subsequent decrease in overall habitat/species diversity	Reconstruction of dunes will stabilize the coastal ecosystem. Replanting with appropriate native species will increase diversity and improve overall dune habitat
Water Quality	Pristine	Water quality throughout the State has become increasingly degraded due to anthropogenic actions	No impacts to water quality would occur	Short-term localized increase in turbidity at the dredge site and in surf zone along the beach placement area. Turbidity would be monitored during project construction, and work would comply with Florida water quality permitting conditions
Socioeconomic	More abundant tourism and property values, fluctuating with national economy	Increasingly degraded beach has negative impact on tourism industry and property values	Loss of revenue from decreased tourism. Property values decline. Boardwalk structures will become undermined and unstable. Businesses along/near SR A1A are at an increasing jeopardy of infrastructure damage and loss of city revenue	Privately owned dune walkovers will be removed, rebuilt, or buried. The NFS is responsible for assisting local residents with any repairs necessary before construction begins

6 ENVIRONMENTAL COMMITMENTS AND COMPLIANCE

This section documents compliance of the Preferred Alternative with NEPA and its implementing regulations.

6.1 ENVIRONMENTAL COMMITMENTS

The USACE will comply with all applicable conditions of the following: BOEM Lease Agreement for the use of Borrow Area 3A, FDEP permits, SARBO, P3BO, and SPBO.

The USACE and its contractors commit to avoiding, minimizing, or mitigating for adverse effects during construction activities. Note that all prior commitments outlined in referenced EA's and other related NEPA documents will also be implemented, and the effects conclusions in this SEA are based on implementation of both prior and new commitments. The commitments described in Table 6-1 includes a consolidated list of both prior and new environmental commitments that will be included in the contract's specifications:

Table 6-1. USACE's environmental commitments.

Resource	USACE's Commitment
Fish and Wildlife Resources (Other than T&E Species)	The contractor will keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and damage of fish and wildlife. Species that require specific attention along with measures for their protection will be listed in the Contractor's Environmental Protection Plan prior to the beginning of construction operations. This project will not result in hardbottom impacts.

Resource	USACE's Commitment
T&E Species	Adverse effects to T&E species will be avoided and/or minimized. USACE will comply with all requirements of any consultation documents associated with this project provided under the ESA from either USFWS or NMFS. Potential impacts to sea turtles, whales, and elasmobranchs could occur via hopper dredge. Contractor personnel training will include instructing personnel about the potential presence of T&E species and marine mammals, the appropriate protocols if they are encountered, and advisement that there are civil and criminal penalties for harming, harassing, or killing T&E species and marine mammals. The USACE will include applicable Terms and Conditions (T&Cs) and PDCs of the SARBO in the project plans and specifications (see SARBO Appendices B, F, G, H, and I). Incidental take of listed species may occur if a hopper dredge and/or capture trawling is used; however, implementation of standard protection conditions, best management practices (BMPs), and SARBO PDCs (especially Appendices H and I) will ensure that the potential adverse effects to these species are reduced to the maximum extent practicable. The Contractor will describe T&E species protection criteria and how it will be implemented during the project in the EPP. To further minimize risk to sea turtles, standard sea turtle protection conditions will be implemented, such as the use of a state-of-the-art rigid deflector draghead at all times, inflow screens, and/or monitoring of the operation. Endangered/Protected Species Observers (ESO/PSO's) would be present at Borrow Area 3A during the dredging operation, and material transport to the project area.

Resource	USACE's Commitment
Dredge and Borrow Area	Electronic positioning information, production, and volume data would be collected. Pre-and post-dredging hydrographic surveys will be conducted to monitor physical changes in the borrow area. The dredge would be equipped with an on-board global positioning system capable of maintaining or recording the location of the dredge, drag arms, and/or draghead. Occurrence of deep depressions during dredging processes will be avoided through creation of relatively straight cuts (CSA et al., 2009). BPM to minimize impacts to the benthos will also be implemented, including limiting dredging depths to avoid deep pits, anoxic conditions, and/or settling of fine sediments, providing a 2 foot-buffer of sand left in place to ensure that post-dredge sediment type is the same as pre-dredge, and avoiding areas that have been recently dredged.
Water Quality	The State of Florida water quality regulations require that water quality standards are not violated during constructions operations. The standards require that turbidity will not exceed 29 NTU's above background. Should turbidity exceed state water quality standards as determined by monitoring, the contractors will be required to cease work until conditions return to normal. Increased turbidity at the borrow site during excavation should be minor. The USACE contractor will prevent oil, fuel, or other hazardous substances from entering the air or water. This will be accomplished by design and procedural controls. All wastes and refuse generated by project construction would be removed and properly disposed. The USACE contractor will implement a spill contingency plan for hazardous, toxic, or petroleum material for the borrow area.

Resource	USACE's Commitment
Cultural Resources	The USACE is committed to avoiding impacts to and protecting cultural resources, including adhering to previously established avoidance buffers within the nearshore placement area. All project specifications include a clause for unanticipated discoveries, consistent with 36 CFR 800.13. This cause states that if, during construction activities, items that may have historic or archaeological origin are observed, such observations are to be reported immediately to the Contracting Officer so that the appropriate USACE staff may be notified. Cease all activities adjacent to the discovery that may result in the destruction of these resources and prevent employees from further removing, or otherwise damaging, such resources. Once reported, USACE staff will initiate coordination with the appropriate federal, tribal, and state agencies to determine if archaeological investigation is required. Additional work in the area of the discovery will be suspended at the site until all federal and state regulations have been successfully complied with, and the USACE staff members provide further directive. Project activities in the vicinity of the discovery may not resume until the Contracting Officer approves work to proceed.

6.2 ENVIRONMENTAL COMPLIANCE

This SEA has been prepared pursuant to NEPA and its implementing regulations. The status of the proposed project's compliance with environmental acts and E.O.s are provided in Table 6-2.

The status of environmental compliance is described as follows:

Compliant: Meets all requirements of the statute for the current stage of planning (either pre-authorization or post-authorization).

In Progress: Not having met some of the requirements that normally are met in the current stage of planning or pending due notice of availability and comment public/agency comment period.

Not Applicable: No requirements for the statute required for the planning/ construction.

Table 6-2. Status of environmental compliance.

Reference	Law, Policy, and Regulations	Status
42 United States Code (U.S.C.) § 4321 *et seq*.	National Environmental Policy Act of 1969, as amended	Compliant
43 U.S.C. 2101-2106	The Abandoned Shipwrecks Act, as amended	Compliant

Reference	Law, Policy, and Regulations	Status
42 U.S.C. §§ 1996 and 1996a	American Indian Religious Freedom Act	Compliant
16 U.S.C. §§ 757A-757G	Anadromous Fish Conservation Act	Not Applicable
54 U.S.C. 320301-320303 and 18 U.S.C. 1866(b)	Antiquities Act of 1906, as amended	Not Applicable
16 U.S.C. 469-469c	Archaeological and Historic Preservation Act	Compliant
54 U.S.C. § 312501-312508	Archaeological Resources Protection Act, as amended	Compliant
42 U.S.C. § 7401 *et seq*.	Clean Air Act of 1972	Not Applicable
33 U.S.C. § 1341 and 33 U.S.C. § 1344(b)	Clean Water Act of 1972, Section 401 and Section 404(b)	Compliant
16 U.S.C. § 3501 *et seq*.	Coastal Barrier Resources Act and Coastal Barrier Improvement Act of 1990	Compliant
16 U.S.C. § 1451 *et seq*.	Coastal Zone Management Act of 1972	Compliant
16 U.S.C. § 1531 *et seq*.	Endangered Species Act of 1973	Compliant
16 U.S.C. §§ 1221-26	Estuary Protection Act of 1968	Not Applicable
16 U.S.C. § 460l-12 *et seq*.	Federal Water Project Recreation Act, as amended	Compliant
16 U.S.C. §§ 661-666c	Fish and Wildlife Coordination Act	Compliant
7 U.S.C. § 4201 *et seq*.	Farmland Protection Policy Act	Not Applicable
16 U.S.C. § 1801 *et seq*.	Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended	Compliant
16 U.S.C. § 1361 *et seq*.	Marine Mammal Protection Act of 1972, as amended	Compliant
33 U.S.C. § 1401 *et seq*.	Marine Protection, Research, and Sanctuaries Act	Not Applicable
16 U.S.C. §§ 703-712, 715	Migratory Bird Treaty Act and Migratory Bird Conservation Act	Compliant
54 U.S.C. § 300101 *et seq.*	National Historic Preservation Act of 1966, as amended	Compliant
25 U.S.C. § 3001 *et seq.*	Native American Graves Repatriation Act	Compliant
33 U.S.C. § 403	Rivers and Harbors Act of 1899, Section 10	Compliant
43 U.S.C. § 1301 *et seq*.	Submerged Lands Act of 1953	Compliant

Reference	Law, Policy, and Regulations	Status
42 U.S.C. § 4601 *et seq*.	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970	Compliant
16 U.S.C. § 1271 *et seq*.	Wild and Scenic River Act of 1968	Not Applicable
E.O. 11593	Protection and Enhancement of the Cultural Environment	Compliant
E.O. 11988	Floodplain Management	Compliant
E.O. 13007	Indian Sacred Sites	Not Applicable
E.O. 11990	Protection of Wetlands	Not Applicable
E.O. 12898	Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations	Compliant
E.O. 13045	Protection of Children from Environmental Health Risks and Safety Risks	Compliant
E.O. 13089	Coral Reef Protection	Not Applicable
E.O. 13112	Invasive Species	Compliant
E.O. 13175	Consultation and Coordination with Indian Tribal Governments	Compliant
E.O. 13186	Responsibilities of Federal Agencies to Protect Migratory Birds	Compliant
Memorandum	Memorandum on Government-to-Government Regulations with Native American Tribal Governments	Compliant

6.2.1 NATIONAL ENVIRONMENTAL POLICY ACT OF 1969, AS AMENDED

This Act requires the opportunity for public participation and comment on federal projects, and requires agencies to cooperate with other federal agencies, State, and local governments, and environmental information on the project has been compiled. The draft SEA was prepared and coordinated for public, state, and federal agency review. The project is fully compliant with the Act.

6.2.2 ABANDONED SHIPWRECK ACT

The Abandoned Shipwreck Act (ASA) of 1987 establishes government ownership over most abandoned shipwrecks located in waters of the United States of America and creates a framework within which shipwrecks are managed. There are no known shipwrecks within the project area for the Preferred Alternative; therefore, the project is in compliance with this Act.

6.2.3 AMERICAN INDIAN RELIGIOUS FREEDOM ACT (42 U.S.C. § 1996 AND 1996A)

The Act requires policies of all governmental agencies to accommodate access to, and use of, Native American religious sites to the extent that the use is practicable and is consistent with an

agency's essential missions. The project does not inhibit access to, and use of, Native American religious sites. The project is in compliance with this Act.

6.2.4 ANADROMOUS FISH CONSERVATION ACT

The Anadromous Fish Conservation Act requires a commitment to the conservation, development, and enhancement of anadromous fishery resources. The project does not occur in an anadromous fish river or stream; therefore, no anadromous fish species are expected to be present. This Act is not applicable.

6.2.5 ANTIQUITIES ACT OF 1906

This Act applies to activities taking place within the boundaries of a national monument. The proposed action does not take place within the boundaries of a national monument. Therefore, this Act is not applicable to this action.

6.2.6 ARCHAEOLOGICAL AND HISTORIC PRESERVATION ACT

This Act requires that federal agencies provide for "…the preservation of historical and archeological data (including relics and specimens) which might otherwise be irreparably lost or destroyed as the result of…any alteration of the terrain caused as a result of any federal construction project of federally licensed activity or program." The USACE has determined that, contingent upon the maintenance of three avoidance buffers within the nearshore placement area, this project poses no adverse effects to historical or archaeological data. The project is in compliance with this Act.

6.2.7 ARCHAEOLOGICAL RESOURCES PROTECTION ACT

This Act applies to federally owned and tribally owned lands, including Reservation lands. The Preferred Alternative does not anticipate the need to excavate, or in any way disturb potentially significant cultural resources existing on federal lands. Any seabed disturbances will take place within Holocene sediments and will not disturb paleo-landforms of tribal interest. The project is in compliance with the Act.

6.2.8 CLEAN AIR ACT OF 1972

The Clean Air Act (CAA) requires federal actions to conform to an approved state implementation plan designed to achieve or maintain an attainment designation for air pollutants as defined by the NAAQS. The NAAQS were designed to protect public health and welfare. The criteria pollutants include carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter ($PM_{2.5}$ and PM_{10}), and lead (Pb).

No air quality permits would be required for this project. This environmental assessment will be coordinated with the U.S. Environmental Protection Agency (EPA) and is compliant with Section 309 of the Act. The State of Florida does not regulate emissions from off-road equipment or marine vessels; however, it can be assumed that insignificant emissions will be produced by the dredge and construction equipment during construction activities. The Preferred Alternative will not cause or contribute to violations of the NAAQS. The project complies with this Act.

6.2.9 CLEAN WATER ACT, SECTION 401 AND SECTION 404(B)

Flagler County is modifying their permits for the NFS components of the project (FDEP permit number: 0379716-001-JC and USACE Department of the Army permit number: SAJ-2019-02065 (SP-TMM)). Final compliance with the CWA will occur when the permit modifications are received from the State of Florida. All State water quality standards would be met. A Section 404(b) evaluation is included in Appendix C. The project is compliant with this Act.

6.2.10 COASTAL BARRIER RESOURCES ACT AND COASTAL BARRIER IMPROVEMENT ACT OF 1990

The Coastal Barrier Resources Act (CBRA) and the Coastal Barrier Improvement Act limits federally-subsidized development within the CBRA Units to limit the loss of human life by discouraging development in high-risk areas, to reduce wasteful expenditures of federal resources, and to protect the natural resources associated with coastal barriers. CBRA provides development goals for undeveloped coastal property held in public ownership, including wildlife refuges, parks, and other lands set aside for conservation ("otherwise protected areas," or OPAs). These public lands are excluded from most of the CBRA restrictions, although they are prohibited from receiving federal flood insurance for new structures.

There are two CBRA OPAs in the project vicinity: Unit FL-06P, Washington Oaks Garden State Park, or Unit FL-P07P, and Gamble Rodgers Memorial State Recreation Area. Although these areas fall within the study area, they are otherwise protected and are not subject to the same restrictions as a "coastal barrier resource unit." Furthermore, they occur outside of the project limits for any proposed shoreline protection activities. The project does not include the construction of structures that would require Federal Flood Insurance in any areas designated as pursuant to the CBRA; therefore, federal expenditures for the proposed project are not restricted in these OPA areas. The activities proposed in the remainder of the CBRA units in the project area are consistent with the intent of the Act. The project is compliant with the Act.

The official USFWS Coastal Barrier Resources System (CBRS) maps were reviewed (https://www.fws.gov/CBRA/Maps/Mapper.html). The closest CBRS unit is Unit FL-P07P, in which the northern portion of this CBRS Unit is approximately 1.20 miles from the southernmost end (28th Street S) of the federal project area (Figure 6-1).

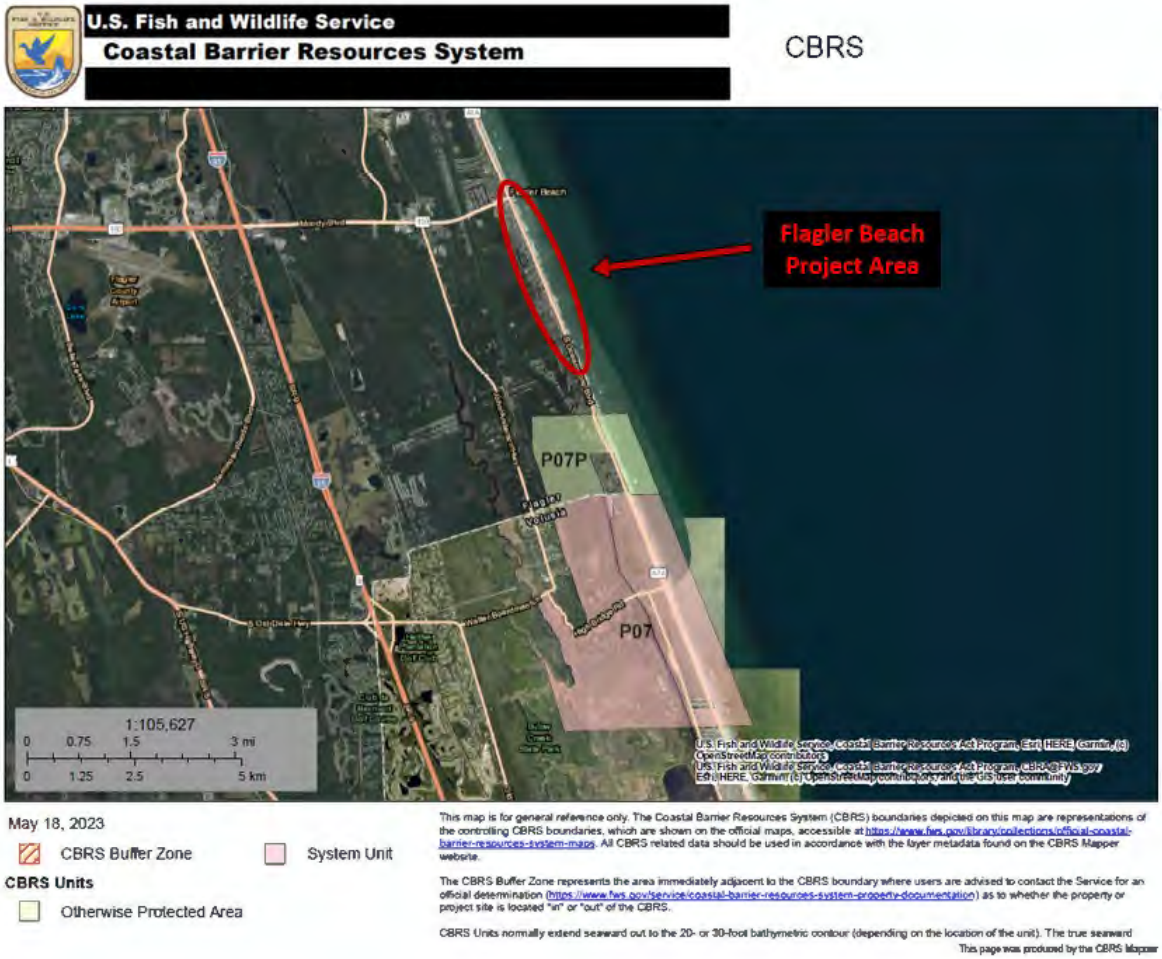

Figure 6-1: Location of CBRS Unit FL-P07P in the vicinity of Flagler County. (Source: https://fwsprimary.wim.usgs.gov/CBRSMapper-v2/)

6.2.11 COASTAL ZONE MANAGEMENT ACT OF 1972

The goal of the Coastal Zone Management Act (CZMA) is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." The CZMA requires that federal actions that are reasonably likely to affect any land or water use or natural resource of the coastal zone be consistent with enforceable policies of a state's federally approved coastal management program.

A Federal Consistency Determination was prepared in accordance with 15 CFR 930 Subpart C is included as Appendix D. Additionally, a Section 401 water quality certification was obtained by the City of Flagler Beach (Permit No. 0379716-001-JC) from FDEP, and a subsequent permit modification was also obtained (Permit No. 0379716-002-JN). A Section 401 water quality certification was obtained by the USACE (Permit No. 0378136-002-JM), with a minor permit modification pending that will be obtained prior to the onset of construction. In an email dated November 29, 2023, the State of Florida concurred stating that based on the information submitted and minimal effects expected, the project is consistent with the CZMP. Final compliance with CZMA will occur when the permit modifications are received from the State of Florida. See Appendix D for CZMA related correspondence.

6.2.12 ENDANGERED SPECIES ACT OF 1973

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, (ESA) USACE determined the project meets eligibility criteria for coverage by the NMFS' SARBO as well as USFWS' P3BO and SPBO. The project will be conducted in accordance with the ESA, as amended, and will adhere to all applicable P3BO and SPBO T&Cs and SARBO PDCs. USACE previously consulted with USFWS and NMFS for Flagler County CSRM through previous NEPA documents (described in Section 1.4.4). The USACE' effect determinations are described in detail for this project in Section 4.

Effect determinations for species under NMFS jurisdiction:

USACE has determined that the project meets the eligibility criteria to be covered by the 2020 SARBO. The SARBO covers dredging (e.g., maintenance, advance maintenance, minor channel modifications, borrow area dredging, and muck dredging), transportation of dredged material, dredged material placement, geotechnical and geophysical surveys, and species handling in the southeast U.S., specifically from North Carolina/Virginia border through and including Key West, Florida and the islands of Puerto Rico and the U.S. Virgin Islands. The following types of dredges and dredging methods are covered by the SARBO: mechanical (e.g., clamshell and backhoe), hydraulic (e.g., cutterhead suction/pipeline dredging and hopper), side-cast/split hull, and agitation (e.g., bed leveling, water injection dredging) as well as dredging pipelines and support vessels. The SARBO also covers ESA-listed species handling and aerial surveys. The project will adhere to applicable SARBO PDCs (as described in Section 6.1). Flagler County is listed in Section 2.8.4 of the SARBO under Jacksonville District as a beach nourishment location that is covered by the SARBO. Additionally, NMFS was provided notification of the availability of the draft SEA. The project complies with this Act.

Effect determinations for species under USFWS jurisdiction:

USACE determined the project meets the eligibility criteria to be covered by the SPBO and P3BO. The project will implement applicable Terms and Conditions (T&Cs) and Reasonable and Prudent Measures (RPMs) from the SPBO and P3BO as well as the 2011 Standard Manatee Conditions for In-water Work. Coordination with USFWS was conducted concurrently with the release of the draft SEA. In a letter dated January 5, 2024, the USFWS concurred with the USACE's determinations stating that "it is appropriate to apply the 2015 SPBO, P3BO, and Standard Manatee Conditions for In-water Work". Pertinent correspondence is included in Appendix A. The project complies with this Act.

6.2.13 ESTUARY PROTECTION ACT OF 1968

The Estuary Protection Act requires federal agencies to consider estuaries and their natural resources when planning for the development of water and land resources. No designated estuary would be affected by project activities; therefore, the Act is not applicable.

6.2.14 FEDERAL WATER PROJECT RECREATION ACT, AS AMENDED

This Act requires full consideration of recreation and fish and wildlife enhancement in federal water development projects.

Recreational opportunities as well as the effects of the Preferred Alternative on outdoor recreation have been described in Sections 3.1 and 4.5. The project complies with this Act.

6.2.15 FISH AND WILDLIFE COORDINATION ACT

The central objective of the Fish and Wildlife Coordination Act (FWCA) is to allow for equal consideration of wildlife resources.

USACE has and will continue to maintain continuous coordination with the USFWS. USACE previously consulted with the USFWS pursuant to the FWCA, NEPA, and the ESA during the development of the 2014 IFR/EA. A Memorandum for Record (MFR) (dated October 16, 2023), documents an agreement between USFWS and the USACE to use the NEPA process to meet coordination responsibilities under the FWCA. This document can be found in Appendix A. This project is in full compliance with the Act.

6.2.16 FARMLAND PROTECTION POLICY ACT

The Farmland Protection Policy Act is intended to minimize the impact of the conversion of farmland to nonagricultural uses. No farmland exists in the project area; therefore, the Act is not applicable.

6.2.17 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT OF 1976, AS AMENDED

The MSFCMA reflects the Secretary of Commerce and Fishery Management Council authority and responsibilities for the protection of EFH. Federal agencies that fund, permit, or carry out activities that may adversely affect EFH are required to consult with the NMFS Habitat Conservation Division (HCD) regarding the potential effects of their actions on EFH. Per the January 22, 2019, and October 2, 2018, EFH Findings between NMFS' Southeast Regional Office and South Atlantic Division, U.S. Army Corps of Engineers and Jacksonville District, respectively, the EFH Assessment for the project was integrated within the draft 2014 EA.

The USACE initiated consultation with NMFS for the Preferred Alternative during the draft SEA's public comment period. In an email from NMFS HCD, dated November 30, 2023, NMFS stated that they would not be reviewing the SEA for this project, and USACE did not receive any EFH Conservation Recommendations. Pertinent correspondence is included in Appendix A. This project is compliance with the Act.

6.2.18 MARINE MAMMAL PROTECTION ACT OF 1972, AS AMENDED

The Marine Mammal Protection Act prohibits harassing, feeding, hunting, capturing, and/or killing (referred to as "take") and importing of marine mammals and marine mammal products. The project area is accessible to marine mammals, such as the Florida manatee and whales. Noise associated with dredging and vessel strikes in transit areas are known to cause impacts. The USFWS 2011 Standard Manatee Conditions for In-water Work will be included in the projects' plans and specifications to ensure that the potential adverse effects to these species are reduced to the maximum extent practicable. Implementation of the safeguards used to protect T&E species during construction and operation would extend protections to marine mammals within the area. No take of marine mammals is anticipated. The project is in compliance with the goals of this Act and will be in full compliance with the Act at the time of construction through implementation of referenced safeguards.

6.2.19 MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT

The Marine Protection, Research, and Sanctuaries Act regulates the placement of dredged material into the ODMDS. Ocean disposal of dredge material is not proposed as part of the Preferred Alternative; therefore, the Act is not applicable.

6.2.20 MIGRATORY BIRD TREATY ACT AND MIGRATORY BIRD CONSERVATION ACT

These Acts prohibit the take (e.g., killing, capturing, selling, or trading) and/or transporting of protected migratory bird species without prior authorization by USFWS. Migratory and resident bird species have been observed within the study area and are likely to use available habitat for foraging, nesting, and breeding. The Preferred Alternative is not expected to destroy migratory birds, their active nests, their eggs, or their hatchlings. The Preferred Alternative will not pursue, hunt, take, capture, kill or sell migratory birds. Dune and beach construction activities at the placement site will be monitored at dawn or dusk daily during the nesting season to protect nesting migratory birds. If nesting activities occur within the construction area, appropriate buffers will be placed around nests to ensure their protection. The Preferred Alternative is in compliance with these Acts.

6.2.21 NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED

USACE determined that dredging of the borrow area, and placement on the beach and in the nearshore would have no adverse effects to historic properties contingent upon the avoidance of three targets within the nearshore placement area, two of which will maintain a buffer of 100 ft, and the third with a 150 ft buffer. The Florida SHPO concurred with this determination by letter dated September 26, 2019 (DHR Project File No.: 2019-05234; Appendix A). Additionally, USACE consulted with the Miccosukee Tribe of Indians of Florida (MTIF), the Seminole Nation of Oklahoma (SNO), Seminole Tribe of Florida (STOF), and Thlopthlocco Tribal Town (TTT) in 2019 with a determination of no effects to Tribal Nations from dredging of the borrow area and placement on the beach as well as the nearshore placement area contingent upon the avoidance of three targets within the nearshore placement area, two of which will maintain a buffer of 100 ft, and the third with a 150 ft buffer. The STOF concurred with this determination by electronic communication dated September 25, 2019 (THPO Compliance Tracking Number: 0031617; Appendix A). No comments were received from the MTIF, SNO, or TTT. The project is in compliance with this Act.

6.2.22 NATIVE AMERICAN GRAVES REPATRIATION ACT

This Act applies to federally owned and tribally owned lands, including Reservation lands. The Preferred Alternative proposes impacts to federally owned lands; however, archaeological surveys of those lands do not indicate the presence of Native American graves or other burial resources. This project is in compliance with this Act.

6.2.23 RIVERS AND HARBORS ACT OF 1899

Section 10 of the Rivers and Harbors Act of 1899 prohibits obstruction to navigation of the waterway, unless recommended by the Chief of Engineers and authorized by the Secretary of the Army. The Preferred Alternative could temporarily obstruct navigable waters of the U.S. during construction. The proposed action will be subject to the public notice, public hearing, and other

evaluations normally conducted for activities subject to the Act. The project is in compliance with this Act.

6.2.24 SUBMERGED LANDS ACT OF 1953

According to the Submerged Lands Act, the state holds ownership to submerged lands within three nautical miles of the coastline.

The project will occur on submerged lands of the State of Florida. This project was coordinated with the State of Florida through the NEPA review process and is in compliance with the Act.

6.2.25 UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION POLICIES ACT OF 1970 (PUBLIC LAW 91-646)

The purpose of this Act is to ensure that owners of real property to be acquired for federal and federally assisted projects area treated fairly and consistently, and that person displaced as a result of such acquisition will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

The project involves real property acquisition in the form of easements. The NFS has acquired the project lands in compliance with the Act.

6.2.26 WILD AND SCENIC RIVER ACT OF 1968

This Act requires that selected wild and scenic rivers be preserved in free-flowing condition with the immediate environment be protected for the benefit and enjoyment of future generations. There are no designated wild and scenic river located within the project area. This Act is not applicable.

6.2.27 E.O. 11593, PROTECTION AND ENHANCEMENT OF THE CULTURAL ENVIRONMENT

This E.O. applies to federally and non-federally owned sites, structures, and objects of historical, architectural, or archaeological significance. There are no effects to sites, structures, and objects of known historical, architectural, or archaeological significance. Therefore, the project is in compliance with this E.O.

6.2.28 E.O. 11988, FLOODPLAIN MANAGEMENT

E.O. 11988 directs federal agencies to avoid siting projects in floodplains and to avoid inducing further development of flood-prone areas. To comply with E.O. 11988, the policy of the USACE is to formulate projects that, to the extent possible, avoid or minimize adverse effects associated with the use of the floodplain and avoid inducing development in the floodplain unless there is no practicable alternative.

Per guidance provided in E.O. 11988, the following factors were evaluated:

1. *Determine if a proposed action is in the base flood (defined by E.O. 11988 as a flood "which has a one percent or greater chance of occurrence in any given year").*

Most of the land area near the project is within the 100-year flood zone as mapped by the Federal Emergency Management Agency (FEMA 2021).

2. *Conduct early public review, including public notice.*
   Public and agency coordination is described in Sections 1.6 and 5. This SEA was coordinated with interested stakeholders and the public via the NEPA process.

3. *Identify and evaluate practicable alternatives to locating in the base floodplain, including alternative sites outside of the floodplain.*
   The Preferred Alternative occurs on submerged lands and will not occur within a floodplain.

4. *Identify impacts of the proposed action.*
   Because the Preferred Alternative occurs on submerged lands and will not occur within a floodplain, no impacts to the floodplain are expected. Impacts of the proposed action to the physical, natural, and socioeconomic environment are described in Section 4 and include short-term adverse effects to aesthetics, fish and wildlife, recreation, safety, and water quality. These short-term adverse effects will cease with the completion of construction. Long-term beneficial effects associated with the action are expected to safety, economics, protection of critical infrastructure, and the needs and welfare of the people. These long-term benefits would be expected to remain for years following construction.

5. *Minimize threats to life and property and to natural and beneficial floodplain values. Restore and preserve natural and beneficial floodplain values.*
   Beach nourishment will reduce risk of coastal storm damages to critical infrastructure along the Flagler County coastline, thereby minimizing threats to life and property while maintaining socioeconomic benefits (e.g., tourism, revenue coastal businesses, etc.). More details on the project's purpose and need are included in Section 1. Details on the environmental commitments are included in Section 6.1.

6. *Reevaluate alternatives.*
   Alternatives are described in Section 3. The Preferred Alternative, described in detail in Section 3.1, best meets the purpose and need of the project.

7. *Issue findings and a public explanation.*
   This SEA provides a proposed action and describes the Preferred Alternative in Section 3.1. Public and agency coordination is described in Sections 1.6 and 6.3.

8. *Implement the action.*
   Construction will occur after all appropriate documentation (e.g., agreements, permitting, etc.) is completed and funds are received.

The USACE concludes that the Preferred Alternative will not result in harm to people, property, and floodplain values; will not induce development in the floodplain; and that the project is in the public interest. For the reasons stated above, the project complies with this E.O.

6.2.29 E.O. 13007, INDIAN SACRED SITES

This E.O. applies to Indian sacred sites. The project does not involve Indian sacred sites; therefore this E.O. in not applicable.

6.2.30 E.O. 11990, PROTECTION OF WETLANDS

The objective of this E.O. is to avoid long and short-term adverse impacts associated with the destruction of modification of wetlands. Wetlands are not located within the proposed project footprint. This E.O. is not applicable.

6.2.31 E.O. 12898, FEDERAL ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS

On February 11, 1994, the President of the U.S. issued E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This E.O. mandates that each federal agency make achieving environmental justice (EJ) part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of the programs and policies on people of color and low-income populations. Significance thresholds that may be used to evaluate the effects of a proposed action related to EJ are not specifically outlined. The USACE also evaluated this proposed action in accordance with CEQ's Environmental Justice Guidance under the National Environmental Policy Act, dated December 10, 1997, and E.O. 12898. The USACE determines if a proposed action or its alternatives would result in significant effects related to EJ if the proposed action or an alternative would disproportionately adversely affect an EJ community through its effects on environmental, social, and economic conditions.

The USACE determined that the project would not result in adverse human health or long-term environmental effects. The project would not disproportionately adversely affect any people of color or low-income population. The proposed activity would not (a) exclude persons from participation in, (b) deny persons the benefits of, or (c) subject persons to discrimination because of their race, color, or national origin, nor would the proposed action adversely impact "subsistence consumption of fish and wildlife." Detailed analysis on EJ can be found in Section 2.17, and the Preferred Alternative's effects can be found in Section 4.16. The project is in compliance with this E.O.

6.2.32 E.O. 13045, PROTECTION OF CHILDREN FROM ENVIRONMENTAL HEALTH AND SAFETY RISKS

E.O. 13045 requires each federal agency to "make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children" and "ensure that its policies, programs, activities, and standards address disproportionate risks to children that results from environmental health risks or safety risks."

The Preferred Alternative does not affect children disproportionately from other members of the population and would not increase any environmental health or safety risks to children. The project is in compliance with this E.O.

6.2.33 E.O. 13089, CORAL REEF PROTECTION

The objective of E.O. 13089 is to preserve and protect the biodiversity, health, heritage, social and economic value of U.S. coral reef ecosystems and the marine environment. This E.O. directs federal agencies to expand their research, preservation, monitoring and restoration efforts with respect to actions that affect coral reef ecosystems. No coral reefs would be impacted by the Proposed Action. This E.O. does not apply.

6.2.34 E.O. 13112, INVASIVE SPECIES

E.O. 13122 is aimed to prevent the introduction of invasive species and requires that federal agencies provide for their control and minimize the economic, ecological, and human health impacts that invasive species can cause.

The project's plans and specifications will include conditions to avoid the introduction and/or promotion of non-native species to the region. Conditions will include thoroughly cleaning all equipment prior to the start of work and reporting all sightings of invasive and nuisance species (not identified in pre-construction conditions) within 24-hours. The USACE will require the Contractor to abide by those requirements, as well as submit a plan describing the protection measures (e.g., transfer prevention procedures, designated cleaning sites/locations, etc.) to be implemented by the Contractor. This SEA will be coordinated with the Invasive Species Council and is consistent with the Florida Invasive Species Strategic Plan. The project is in compliance with the goals of this E.O.

6.2.35 E.O. 13175, CONSULTATION AND COORDINATION WITH INDIAN TRIBAL GOVERNMENTS

E.O. 13175 sets forth fundamental principles to guide agencies in formulating and implementing policies that have tribal implications. Consultation with members and representatives of the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, the Seminole Nation of Oklahoma, the Thlopthlocco Tribal Town, and the Muscogee Creek Nation have been ongoing. (Pertinent correspondence can be found in Appendix A). The preferred alternative in this SEA does not formulate policy with implications on Tribal Trust Resources or sovereignty. Pursuant to E.O. 13175, U.S. Army Corps of Engineers, Headquarters developed the November 1, 2012, Tribal Policy Memorandum, which dictates federal responsibilities, including Trust Responsibilities, to federally recognized Tribes. The USACE will continue to consult as required by the E.O. and as specified by the November 1, 2012, Tribal Policy Memorandum. The project is in compliance with this E.O.

6.2.36 E.O. 13186, RESPONSIBILITIES OF FEDERAL AGENCIES TO PROTECT MIGRATORY BIRDS

E.O. 13186 requires federal agencies taking actions which have or are likely to have a measurable negative effect on migratory bird populations to take certain actions which promote the conservation of migratory bird populations.

Migratory and resident bird species have been observed within the study area and are likely to use available habitat for foraging, nesting, breeding, and transit. The action is not expected to destroy migratory birds, their active nests, their eggs, or their hatchlings. USACE will include our standard migratory bird protection requirements in the project plans and specifications and will

require the contractor to abide by those requirements. Measures to avoid the destruction of migratory birds and their eggs or hatchlings are described in the section above on the Migratory Bird Treaty Act. The project is in compliance with the goals of this E.O.

6.2.37 MEMORANDUM ON GOVERNMENT-TO-GOVERNMENT REGULATIONS WITH NATIVE AMERICAN TRIBAL GOVERNMENTS

Memorandum signed by President Clinton April 29, 1994 directs the heads of executive departments and agencies to operate within a government-to-government relationship with federally recognized tribal governments; consult, to the greatest extent practicable and to the extent permitted by law, with tribal governments prior to taking actions that affect federally recognized tribal governments; assess the impact of Federal Government plans, projects, programs, and activities on tribal trust resources and assure that tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities; take appropriate steps to remove any procedural impediments to working directly and effectively with tribal governments on activities that affect the trust property and/or governmental rights of the tribes; and work cooperatively with other federal departments and agencies to enlist their interest and support in cooperative efforts, where appropriate, to accomplish the goals of this memorandum. The project does not affect federally recognized tribal governments or tribal trust resources. The project is in compliance with this memorandum.

6.3 PUBLIC AND AGENCY COORDINATION

The following describes public involvement during development of the SEA.

6.3.1 SCOPING

This SEA updates prior NEPA; therefore, a scoping period was not completed for this document.

6.3.2 AGENCY AND STAKEHOLDER COORDINATION

The draft SEA was released for a 30-day public and agency review and comment from October 16, 2023 through November 15, 2023. A Notice of Availability was provided to pertinent Tribal Nations, federal, state, and local agencies, and other interested stakeholders to notify them of the start of the 30-day review and comment period for the proposed FONSI, draft SEA, and associated appendices. The documents were made available via the USACE environmental website:

Jacksonville District > About > Divisions-Offices > Planning > Environmental Branch > Environmental Documents (army.mil)

(Click “+[Flagler]” and scroll down to the project name.)

6.3.3 TRIBAL CONSULTATION

Tribal consultation was initiated on August 24, 2010, and was updated in 2019. The USACE consulted with the Miccosukee Tribe of Indians of Florida (MTIF), the Seminole Nation of Oklahoma (SNO), Seminole Tribe of Florida (STOF), and Thlopthlocco Tribal Town (TTT) in 2019 with a determination of no effects to Tribal Nations from dredging of the borrow area and placement on the beach, as well as the nearshore placement area contingent upon the avoidance of three targets within the nearshore placement area, two of which that have a 100 ft buffer, and

the third with a 150 ft buffer. The STOF concurred with this determination by electronic communication dated September 25, 2019 (THPO Compliance Tracking Number: 0031617; Appendix A). While the volume of sand required for this effort has more than doubled since this 2019 consultation took place, the project footprint has remained the same; therefore, updated effects determinations and consultation are not necessary. No portion of this project will affect tribal lands located in the State of Florida.

6.3.4 PUBLIC COMMENTS RECEIVED AND RESPONSES

Comments on the draft SEA were received from a Flagler County resident, USEPA, and FWC. Public comments requested clarification on construction timing and potential effects to dune walkovers and beach access. Agency comments generally recommended continued coordination with pertinent Federal and state agencies regarding the project's potential effects to water quality and protected species.

A copy of all comments received during the public and agency review and comment period, as well as a summary matrix of the comments and USACE's responses to substantive comments, is included in this SEA's Appendix B (Public and Agency Comments and USACE Responses).

7 PREPARERS

Table 7-1. List of preparers and reviewers.

Name and Title	Organization	Discipline/Expertise
Julia Lombardo, Coastal Biologist	USACE	NEPA
Kristen Donofrio, Coastal NEPA Lead Biologist	USACE	NEPA
Trisston Brown, Coastal NEPA Section Chief	USACE	NEPA
Brian Seymour, Archeologist	USACE	Cultural and Native American Resources
Meredith Moreno, Archeologist, Environmental Branch Deputy	USACE	Cultural and Native American Resources
Danielle D'Amato, Water Quality Specialist	USACE	Water Quality / Environmental Compliance
Michael Hollinsworth, Water Quality Team Lead	USACE	Water Quality / Environmental Compliance
Jason Spinning, Water Quality and Environmental Compliance Section Chief	USACE	Water Quality / Environmental Compliance
Jennifer L. Coor, Ph.D., P.G., Unit Chief, Geologist and Exploration Section	USACE	Geology
Rosemarie Pinto, P.E, Engineering Technical Lead	USACE	Coastal / Civil Engineer
Jason Harrah, Project Manager	USACE	Project Management
Gretchen Ehlinger, Ph.D Environmental Branch Chief	USACE	NEPA
Douglas Piatkowski, Marine Biologist	BOEM	NEPA
Jennifer Bucatari, Oceanographer	BOEM	NEPA / Air Quality

8 ACRONYM LIST

Acronym	Definition
A1A	Atlantic 1 Alternate
APE	Area of Potential Effect
BBA 2018	Bipartisan Budget Act of 2018
CBRA	Coastal Barrier Resources Act
CBRS	Coastal Barrier Resource System
CCCL	Coastal Construction Control Line
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
USACE	U.S. Army Corps of Engineers, Jacksonville District
CSRM	Coastal Storm Risk Management
CWA	Clean Water Act
CY	Cubic Yard
CZMA	Coastal Zone Management Act
EA	Environmental Assessment
ECL	Erosion Control Line
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
ER	Engineering Regulation
ESA	Endangered Species Act
ETOF	Equilibrated Toe of Fill
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FWC	Florida Fish and Wildlife Conservation Commission
FONSI	Finding of No Significant Impact
FY	Fiscal Year
HAPC	Habitat Areas of Particular Concern
HOA	Homeowners Association
HTRW	Hazardous, Toxic, and Radioactive Waste
LAA	Likely to Adversely Affect
MANLAA	May Affect, Not Likely to Adversely Affect
MBTA	Migratory Bird Treaty Act
MHW	Mean High Water
MHWL	Mean High Water Line
MLW	Mean Low Water
MLWL	Mean Low Water Line
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
NAVD88	North American Vertical Datum of 1988
NE	No Effect
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OCS	Outer Continental Shelf
OFW	Outstanding Florida Waters
OPA	Otherwise Protected Area

PA	Programmatic Assessment
PDC	Project Design Criteria
PDT	Project Delivery Team
PED	Preconstruction Engineering and Design
P3BO	Programmatic Piping Plover Biological Opinion for Shore Protection Activities in the Geographical Region of the North and South Florida Ecological Services Field Offices
RPM	Reasonable and Prudent Measure
SAFMC	South Atlantic Fish Management Council
SAD	U.S. Army Corps of Engineers, South Atlantic Division
SARBO	South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States
SCTLD	Stony Coral Tissue Loss Disease
SLC	Sea Level Change
SLR	Sea Level Rise
SPBO	Statewide Programmatic Biological Opinion for Shore Protection Activities along the Coast of Florida
SPP	Shore Protection Project
SR	State Road
T&E	Threatened and Endangered
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WRDA	Water Resources Development Act

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APPENDIX A

Pertinent Correspondence

Supplemental Environmental Assessment
Flagler County Coastal Storm Risk Management Project in Flagler County, Florida

U.S. Army Corps of Engineers
JACKSONVILLE DISTRICT

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DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8175

16 October 2023

Planning and Policy Division
Environmental Branch

To Whom It May Concern:

Pursuant to the National Environmental Policy Act, as amended, (NEPA) and U.S. Army Corps of Engineers Regulation (33 CFR 230.11), this letter constitutes the Jacksonville District, U.S. Army Corps of Engineers (Corps) Notice of Availability of the proposed Finding of No Significant Impact (FONSI), draft Supplemental Environmental Assessment (SEA), and associated appendices for the Flagler County Coastal Storm Risk Management Project in Flagler County, Florida. The SEA was prepared by both the Corps, the lead agency, and the Bureau of Ocean and Energy Management (BOEM), the cooperating agency.

The draft SEA evaluated various alternatives that would reduce coastal storm risk damages in the project area. The Preferred Alternative consists of both federally owned and non-federally owned components, in which both will be constructed by the Corps. The federal component includes dredging up to approximately 2.1 million cubic yards of sand for a total of 1.3 million cubic yards to be placed on Flagler Beach from Florida Department of Environmental Protection (FDEP) Range or Reference (R) Monuments R-80 to R-94. The non-federal component includes beach nourishment that takes place in both northern (R-77 to R-80) and southern (R-94 to R-99) extension tapers, along with staging and access areas, and the construction of temporary access ramps within the non-federal sponsor (NFS) owned components. The non-federal component includes dredging up to approximately 405,000 cubic yards of sand for a total of approximately 270,000 cubic yards to be placed on Flagler Beach. Sand for both the federal and non-federal components will be sourced from an offshore borrow area (“Borrow Area 3A”). Sand for the temporary access ramps will be truck hauled from an approved and permitted upland mine.

Additional details on the TSP can be found in the draft SEA, which is available for your review on the Jacksonville District’s Environmental planning website, under Flagler County: http://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/ (On that page, click on the “+” next to “Flagler”. Scroll down to the project name.)

The Corps requests questions or comments regarding the draft SEA be submitted in writing via email to Julia.B.Lombardo@usace.army.mil or by U.S. mail to the letterhead address (attn. Environmental Branch, Coastal Section) within 30 days from the date of this Notice of Availability. Thank you for your assistance.

Sincerely,

EHLINGER.GRETCHEN.SARAH.1286927234

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Date: 2023.10.12 11:54:14 -04'00'

Gretchen S. Ehlinger, Ph.D.
Chief, Environmental Branch

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8175

16 October 2023

Planning and Policy Division
Environmental Branch

Ms. Virginia Fay
NOAA National Marine Fisheries
Assistant Regional Administrator
Habitat Conservation Division
263 13th Ave South
St. Petersburg, Florida 33701

Dear Ms. Fay:

Pursuant to the National Environmental Policy Act and the U.S. Army Corps of Engineers Regulation (33 CFR 230.11), this letter constitutes the Notice of Availability of the proposed Finding of No Significant Impact (FONSI) and Draft Supplemental Environmental Assessment (SEA) dated October 2023, for the Flagler County, Coastal Storm Risk Management (CSRM) Project in Flagler County, Florida.

The SEA was prepared by both the Jacksonville District, U.S. Army Corps of Engineers (Corps), the lead agency, and the Bureau of Ocean and Energy Management (BOEM), the cooperating agency. The Preferred Alternative consists of both federally owned and non-federally owned components, in which both will be constructed by the Corps. The federal component includes dredging up to approximately 2.1 million cubic yards of sand for a total of 1.3 million cubic yards to be placed on Flagler Beach from Florida Department of Environmental Protection (FDEP) Range or Reference (R) Monuments R-80 to R-94. The non-federal component includes beach nourishment that takes place in both northern (R-77 to R-80) and southern (R-94 to R-99) extension tapers, along with staging and access areas, and the construction of temporary access ramps within the non-federal sponsor (NFS) owned components. The non-federal component includes dredging up to approximately 405,000 cubic yards of sand for a total of approximately 270,000 cubic yards to be placed on Flagler Beach. Sand for both the federal and non-federal components will be sourced from an offshore borrow area ("Borrow Area 3A"). Sand for the temporary access ramps will be truck hauled from an approved and permitted upland mine.

The Corps is initiating coordination with the National Marine Fisheries Service (NMFS) under the essential fish habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). Per the 2 October 2019 EFH Findings between NMFS' Southeast Regional Office and Corps' South Atlantic Division,

the EFH Assessment for the project is integrated within the draft SEA. Per the 2019 Findings, the February 2004 "Preparing Essential Fish Habitat Assessments: A Guide for Federal Action Agencies" document, and 50 CFR 600.920(e)(3), an EFH Assessment must include specific items. Each item will be addressed in the table below with a reference to where the information is located in the draft SEA.

EFH Required Item	**Draft SEA Location(s)**
Description of the Proposed Action	What is the action? - *Section 3.1.2 Alternative 2* What is the purpose of the action? - *Section 1 Introduction* - *Section 1.2 Project Authority* - *Section 1.4 Project Background and History* How, when, and where will it be undertaken? - *Section 3.1 Description of Alternatives* - *Section 5.1 Comparison of Alternatives and Selection* - *Section 5.2 Preferred Alternative* What will be the result of the action? - *Section 4 Environmental Effects*
Analysis of the potential adverse effects (individual and cumulative) of the action on EFH and the management species	What EFH will be affected by the action? - *Section 2.5 Essential Fish Habitat* What are the adverse effects to EFH that could occur as a result of this action? / How would they impact managed species? / What would be the magnitude of effects? / What would the duration be? - *Section 4.4 Essential Fish Habitat* - *Section 5.7 Cumulative Effects*
Proposed Compensatory Mitigation	- *Not Applicable (See Section 5.6)*
Avoidance and Minimization	- *Section 6.1 (Environmental Commitments)* - *Section 6.2 (Environmental Compliance)*

Additionally, the guidance states that for projects that may have substantial impacts on EFH, additional information may be necessary. The following additional items are considered and addressed throughout the draft SEA:

EFH Additional Information Item	Draft SEA Location(s)
Results of on-site studies to evaluate the habitat and/or site-specific effects of the project	- *Section 1.4.4 (Related Environmental Documents)*
Review of pertinent literature and related information	- *Literature cited throughout draft SEA*

The Corps has determined that the potential effects of the Preferred Alternative would have minimal, adverse effects on EFH and no adverse effects on federally managed fisheries. The magnitude of the potential impacts are minor and insignificant. Additional details on the Preferred Alternative are contained in the draft SEA, which is available for your review on the Jacksonville District's Environmental planning website, under Flagler County: https://www.saj.usace.army.mil/About/DivisionsOffices/Planning/Environmental-Branch/Environmental-Documents/. (On that page, click on the "+" next to "Flagler". Scroll down to the project name.)

The Corps respectfully requests all comments under NEPA and the MSFCMA for the draft SEA are submitted within 30 days of the receipt of this letter. Questions, requests for additional information, or comments should be submitted in writing to the Corps Environmental Branch, Coastal Section at the letterhead address or via email to Julia.B.Lombardo@usace.army.mil. Thank you for your assistance.

Sincerely,

EHLINGER.GRETCHEN.SARAH.1286927234

Digitally signed by EHLINGER.GRETCHEN.SARAH.1286927234
Date: 2023.10.12 11:53:30 -04'00'

Gretchen S. Ehlinger, Ph.D.
Chief, Environmental Branch

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8175

16 October 2023

Planning and Policy Division
Environmental Branch

Robert L. Carey
Division Manager, Environmental Review Florida
Ecological Services Field Office
U.S. Fish and Wildlife Service
Florida Ecological Services Field Office
Gainesville, Florida

Dear Mr. Carey:

Pursuant to the National Environmental Policy Act of 1969, as amended, (NEPA) and U.S. Army Corps of Engineers Regulation (33 CFR 230.11), this letter constitutes the Notice of Availability of the proposed Finding of No Significant Impact (FONSI) and Draft Supplemental Environmental Assessment (SEA) for the Flagler County, Coastal Storm Risk Management Project in Flagler County, Florida.

The SEA was prepared by both the Jacksonville District, U.S. Army Corps of Engineers (Corps), the lead agency, and the Bureau of Ocean and Energy Management (BOEM), the cooperating agency. In order to comply with Section 7 of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the Corps respectfully requests concurrence from the U.S. Fish and Wildlife Service (USFWS) on the effect determinations for the project.

The draft SEA evaluated various alternatives that would reduce coastal storm risk damages in the project area. The Preferred Alternative consists of both federally owned and non-federally owned components, in which both will be constructed by the Corps. The federal component includes dredging up to approximately 2.1 million cubic yards of sand for a total of 1.3 million cubic yards to be placed on Flagler Beach from Florida Department of Environmental Protection (FDEP) Range or Reference (R) Monuments R-80 to R-94. The non-federal component includes beach nourishment that takes place in both northern (R-77 to R-80) and southern (R-94 to R-99) extension tapers, along with staging and access areas, and the construction of temporary access ramps within the non-federal sponsor (NFS) owned components. The non-federal component includes dredging up to approximately 405,000 cubic yards of sand for a total of approximately 270,000 cubic yards to be placed on Flagler Beach. Sand for both the federal and non-federal components will be sourced from an offshore borrow area

("Borrow Area 3A"). Sand for the temporary access ramps will be truck hauled from an approved and permitted upland mine.

Details on the Preferred Alternative can be found in the draft SEA, which is available for your review on the Jacksonville District's Environmental planning website, under Flagler County:http://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/
(On that page, click on the "+" next to "Flagler". Scroll down to the project name.)

Listed species and/or designated critical habitat (DCH) which may occur in the vicinity of the proposed work and are under the jurisdiction of the USFWS include:

Common Name	Scientific Name	Status/DCH	USACE's Effect Determination
Birds			
Piping Plover	Charadrius melodus	Threatened	MANLAA
Rufa Red Knot	Calidris canutus rufa	Threatened	MANLAA
Sea Turtles			
Green sea turtle[1]	Chelonia mydas	Endangered	May Affect
Hawksbill sea turtle	Eretmochelys imbricata	Endangered	May Affect
Leatherback sea turtle	Dermochelys coriacea	Endangered	May Affect
Loggerhead sea turtle[2]	Caretta caretta	Threatened	May Affect
Kemp's ridley sea turtle	Lepidochelys kempii	Endangered	May Affect
Marine Mammals			
Florida manatee	Trichechus manatus latirostris	Threatened	MANLAA
Critical Habitats			
Loggerhead sea turtle	Caretta caretta	LOGG-N-15	NLAM

[1] North Atlantic distinct population segment (DPS); [2] Northwest Atlantic DPS
MANLAA = May Affect, Not Likely to Adversely Affect; NLAM = Not Likely to Adversely Modify

The Corps previously consulted with USFWS (FWS Log Number: 41910-2014-F-0038) for effects to these species during the development of the 2014 Integrated Feasibility Report/Environmental Assessment (IFR/EA). USFWS concurred with the Corps effect determinations in a letter dated 30 May 2014. The Corps determined that the 2023 Preferred Alternative meets eligibility criteria to be covered by the SPBO and P3BO. The Corps requests concurrence from the USFWS on Corps MANLAA determination for the Florida manatee and NLAM determination for loggerhead sea turtle critical habitat. Included with this letter is additional information describing the

project background, project location and proposed action, potential effects, as well as efforts to eliminate/avoid effects to listed species and/or critical habitat.

In addition to notifying USFWS of the draft documents and requesting concurrence with the effect determinations, the Corps respectfully submits the enclosed Memorandum for the Record (MFR) for USFWS consideration and signature. The MFR documents an informal understanding between the two agencies to utilize the project's ESA and NEPA review process to complete coordination responsibilities under the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq., 10 March 1934, as amended 1946, 1958, 1978, and 1995) (FWCA). This agreement will avoid duplicate analysis and documentation as authorized under 40 CFR sections 1500.4 (k), 1502.25, 1506.4.

The Corps respectfully requests that USFWS provide concurrence that the project's effects are consistent with those analyzed in the SPBO and P3BO, concurrence on the Corps effects determinations for Florida manatee and loggerhead critical habitat and sign the enclosed MFR for compliance with FWCA within 30 days of the receipt of this letter. Questions or comments on the project's proposed FONSI, draft SEA, and associated appendices may be submitted to the Environmental Branch, Coastal Section at the letterhead address or via email to Julia.B.Lombardo@usace.army.mil. Thank you for your assistance.

Sincerely,

EHLINGER.GRETCHEN.SARAH.1286927234

Digitally signed by EHLINGER.GRETCHEN.SARAH.1286927234
Date: 2023.10.12 11:54:57 -04'00'

Gretchen S. Ehlinger, Ph.D.
Chief, Environmental Branch

Enclosures

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8175

CESAJ-PD-E (ER 200-2-2) 16 October 2023

MEMORANDUM FOR THE RECORD

SUBJECT: Compliance with the Fish and Wildlife Coordination Act for the Flagler County Coastal Storm Risk Management (CSRM) Project Draft Supplemental Environmental Assessment (SEA).

PURPOSE: To document an informal understanding between the U.S. Army Corps of Engineers, Jacksonville District (Corps) and the U.S. Fish and Wildlife Service (USFWS).

BACKGROUND. The project area is located along the shoreline of Flagler County, Florida. The Preferred Alternative consists of both federally owned and non-federally owned components, in which both will be constructed by the Corps. The federal component includes dredging up to approximately 2.1 million cubic yards of sand for a total of 1.3 million cubic yards to be placed on Flagler Beach from Florida Department of Environmental Protection (FDEP) Range or Reference (R) Monuments R-80 to R-94. The non-federal component includes beach nourishment that takes place in both northern (R-77 to R-80) and southern (R-94 to R-99) extension tapers, along with staging and access areas, and the construction of temporary access ramps within the non-federal sponsor (NFS) owned components. The non-federal component includes dredging up to approximately 405,000 cubic yards of sand for a total of approximately 270,000 cubic yards to be placed on Flagler Beach. Sand for both the federal and non-federal components will be sourced from an offshore borrow area (“Borrow Area 3A”). Sand for the temporary access ramps will be truck hauled from an approved and permitted upland mine.

The purpose of the Flagler County Coastal Storm Risk Management (CSRM) project is to reduce the risk of potential damages from waves, erosion, and storm surge caused by coastal storms to structures and critical infrastructure along the Flagler County shoreline. The need of the project is to address coastal storm risks that threaten structures and infrastructure from the Atlantic Ocean shoreline. This is driven by storm damages due to erosion and inundation, loss of natural habitat and recreational opportunities, and loss of regional income associated with tourism. Construction of the project, as described in detail in Section 3 of the project’s Supplemental Environmental Assessment (SEA), will provide protection to structures and critical infrastructure, as well as ensure the continuation of benefits (e.g., recreation, tourism, etc.).

The Corps determined that the proposed project may affect nesting sea turtles (green sea turtle (*Chelonia mydas*), hawksbill sea turtle (*Eretmochelys imbricata*), loggerhead sea turtle (*Caretta caretta*), Kemp’s Ridley’s sea turtle (*Lepidochelys kempii*), and

leatherback sea turtle (*Dermochelys coriacea*)). The Corps determined that the project may affect, but is not likely to adversely affect (MANLAA), Florida manatees (*Trichechus manatus latirostris*), piping plover (*Charadrius melodus*), and rufa red knot (*Calidris canutus rufa*).

Details on the Preferred Alternative are contained in the draft SEA, which is available for your review on the Jacksonville District's Environmental planning website, under Flagler County: http://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/ (On that page, click on the "+" next to "Flagler". Scroll down to the project name.)

COORDINATION**.** The Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.,10 March 1934, as amended 1946, 1958, 1978, and 1995) (FWCA) requires Federal agencies to consult with USFWS regarding the impacts to fish and wildlife resources and the proposed measures to mitigate these impacts. Additional coordination authorities exist through the review process of the National Environmental Policy Act (NEPA; 42 U.S.C. 4321-4347, 1 January 1970, as amended 1975 and 1982) and the Endangered Species Act of 1973 (ESA; 7 U.S.C. 136, 16 U.S.C. 1531 et seq. 28 December 1973). USFWS continues to coordinate and consult with the Corps through NEPA and the ESA in which impacts to fish, and wildlife resources are adequately addressed via these two authorities. USFWS will include comments relevant to FWCA in the USFWS review and response to this project's draft NEPA document.

AGREEMENT**.** The undersigned, Corps and USFWS, agree to utilize the project's NEPA review process to complete coordination responsibilities under the FWCA. This agreement will avoid duplicate analysis and documentation as authorized under 40 CFR section 1500.4 (k), 1502.25, 1506.4, and is consistent with Presidential Executive Order for Improving Regulation and Regulatory Review, released 18 January 2011.

EHLINGER.GRETCHEN.SARAH.1286927234
Digitally signed by EHLINGER.GRETCHEN.SARAH.1286927234
Date: 2023.10.12 11:55:42 -04'00'

ROBERT L. CAREY
Division Manager, Environmental Review
North Florida Ecological Services Field Office

GRETCHEN S. EHLINGER, Ph.D.
Chief, Environmental Branch

Flagler County Coastal Storm Risk Management Project
Flagler County, Florida
Draft Supplemental Environmental Assessment
Endangered Species Act Consultation Enclosure

October 2023

In order to comply with Section 7 of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the U.S. Army Corps of Engineers, Jacksonville District (USACE) respectfully requests a letter of concurrence from the U.S. Fish and Wildlife Service (USFWS) on the effect determinations for the Flagler County Coastal Storm Risk Management (CSRM) Supplemental Environmental Assessment (SEA) .

USACE previously consulted with USFWS (FWS Log Number: 41910-2014-F-0038) on the project during the development of the 2014 Integrated Feasibility Report/Environmental Assessment (IFR/EA). In a letter dated October 8, 2013, USACE determined that_that the proposed project may affect nesting sea turtles. In addition, USACE determined that the proposed project may affect, but is not likely to adversely affect the Florida manatee *(Trichechus manatus latirostris)* as well as the piping plover *(Charadrius melodus).* In a letter dated May 30, 2014, USFWS concurred with USACE's effect determinations and concluded consultation. See Attachment 1 for the 2014 consultation letters.

The purpose of the 2023 SEA, prepared by USACE, the lead agency and BOEM, the cooperating agency, is to determine if changes to the project since the 2014 IFR/EA could result in different effects and potentially contribute to significant effects on the human environment. The 2023 SEA supplements existing analyses and updates potential environmental effects resulting from renourishment of the beach, which now requires an increased volume of sand and further expansion of the berm. The USACE and BOEM have identified and reviewed new information to determine if any resources and effects previously analyzed should be re-evaluated, or if the new information could alter previous effects determinations.

USACE determined that the proposed project may affect nesting sea turtles (green sea turtle (*Chelonia mydas*), hawksbill sea turtle (*Eretmochelys imbricata*), loggerhead sea turtle (*Caretta caretta*), leatherback sea turtle (*Dermochelys coriacea*), Kemp's ridley sea turtle (*Lepidochelys kempii*)). The proposed project may affect, but is not likely to adversely affect (MANLAA) Florida manatees (*Trichechus manatus latirostris*), piping plover (*Charadrius melodus*), and rufa red knot (*Calidris canutus rufa*). The proposed project is not likely to adversely modify loggerhead sea turtle designated critical habitat (DCH) unit LOGG-N-15.

Pursuant to the concurrence request, USACE is providing the following information:

- Description of the Project Background;
- Description of the Project Location and Proposed Action;

- Listed Species Under USFWS Jurisdiction;
- Potential Effects to Listed Species and Efforts to Eliminate/Avoid Impacts; and
- USACE Effect Determination.

Description of the Project Background

The purpose of the Flagler Beach CSRM project is to reduce the risk of potential damages from waves, erosion, and storm surge caused by coastal storms to structures and critical infrastructure along Flagler County shorelines. The need for the project is to address coastal storm risks that threaten structures and critical infrastructure from the Atlantic Ocean shoreline. This is driven by storm damages due to erosion and inundation, loss of natural habitat and recreational opportunities, and loss of regional income associated with tourism. Construction of the Preferred Alternative, as described in detail in Section 3.1.2 of the study's SEA, will provide protection to structures and critical infrastructure as well as ensure the continuation of benefits to resources (e.g. recreation, tourism, etc.).

Pursuant to the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA), the SEA includes consultation with USFWS for potential effects to listed species. USACE determined that implementation of the Preferred Alternative may affect some federally-listed species under USFWS jurisdiction.

Description of the Project Location and Preferred Alternative

Flagler County is located on the northeast coast of Florida approximately midway between the Florida/Georgia state line and Cape Canaveral (**Figure 1**). The county is bounded to the north by St. Johns County and to the south by Volusia County and has approximately 18 miles of sandy shoreline. The Preferred Alternative and study area are located along approximately 2.6-mile-long shoreline in Flagler Beach between (Florida Department of Environmental Quality Range Monument (R-Monument)) R-80 and R-94, and utilizes offshore Borrow Area 3A, located approximately 10.25 nautical miles of the Coast of Flagler Beach (see **Figure 2**).

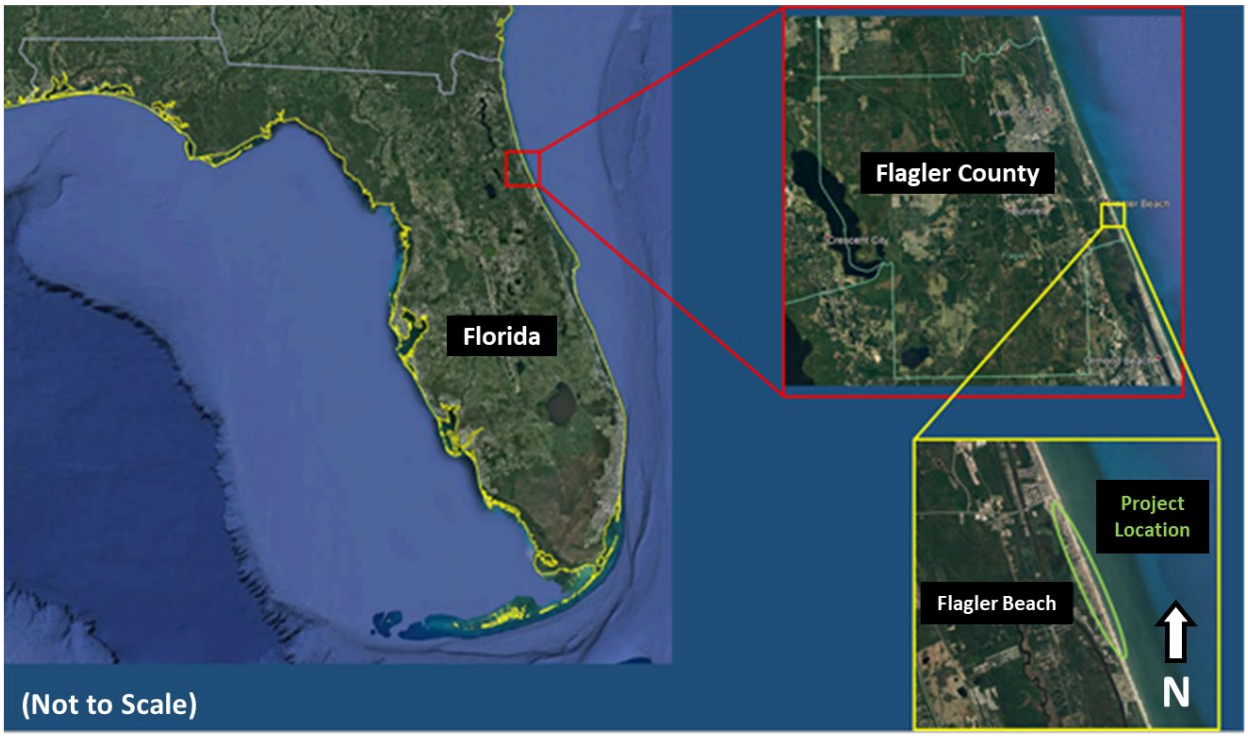

Figure 1. Study area and Preferred Alternative Location.

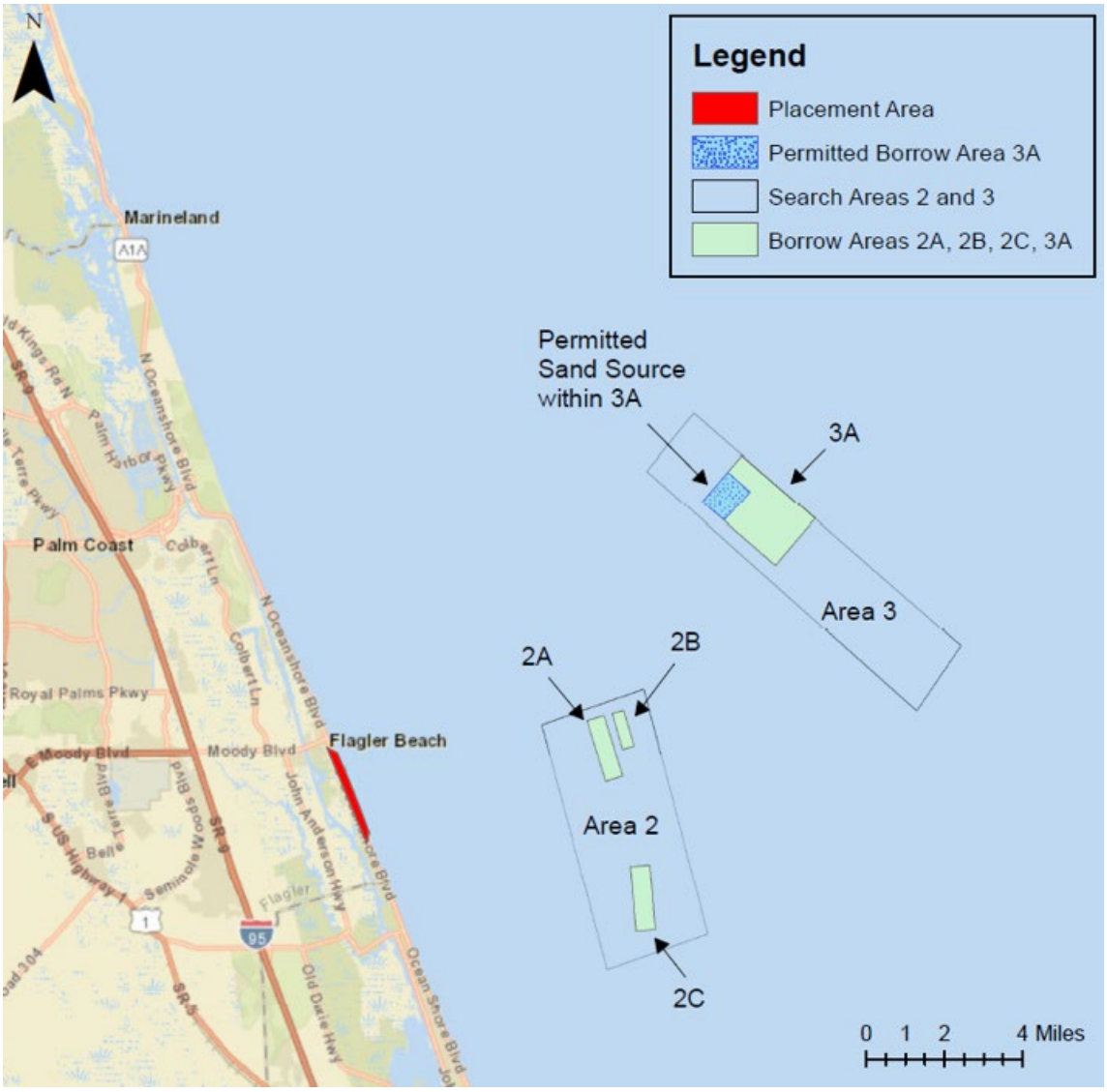

Figure 2. Preferred Alternative Offshore Sand Borrow Area 3A Location in Reference to the Flagler County Shoreline.

The Draft SEA evaluated various alternatives that would reduce coastal storm risk damages in the study area. The Preferred Alternative consists of both federally owned and non-federally owned components, in which both will be constructed by the USACE. The federal component includes dredging up to approximately 2.1 million cubic yards of sand for a total of 1.3 million cubic yards to be placed on Flagler Beach from Florida Department of Environmental Protection (FDEP) Range or Reference (R) Monuments R-80 to R-94. The non-federal component includes beach nourishment that takes place in both northern (R-77 to R-80) and southern (R-94 to R-99) extension tapers, along with staging and access areas, and the construction of temporary access ramps within the non-federal sponsor (NFS) owned components. The non-federal component includes dredging up to approximately 405,000 cubic yards of sand for a total of approximately 270,000 cubic yards to be placed on Flagler Beach. Sand for both the federal and non-

federal components will be sourced from an offshore borrow area ("Borrow Area 3A"). Sand for the temporary access ramps will be truck hauled from an approved and permitted upland mine.

In addition to initial construction, the Preferred Alternative is expected to use Borrow Area 3A for subsequent renourishment events. The renourishment interval is expected to be approximately 11 years, equaling 4 renourishment events in addition to initial construction; however, this interval could vary depending on the timing of erosion and storm events. The beach nourishment template includes a 10-foot seaward extension of the dune and beach, and expansion of the constructed berm by 100 feet, for a total constructed berm width of 140 feet that slopes 1V:35H. Hopper dredging, transport, and placement is expected to occur for approximately 10-12 months to obtain the necessary volumes. Sand will be dredged from the borrow area via hopper dredge, then transported to the project area, and subsequent pipeline pump-out, to then be hydraulically pumped from the hopper dredge to the Flagler County shoreline.

Listed Species under USFWS Jurisdiction
Listed species which may occur in the vicinity of the proposed work and are under the jurisdiction of the USFWS include the following:

Common Name	Scientific Name	Status/DCH	USACE's Effect Determination
Birds			
Piping Plover	*Charadrius melodus*	Threatened	MANLAA
Rufa Red Knot	*Calidris canutus rufa*	Threatened	MANLAA
Sea Turtles			
Green sea turtle[1]	*Chelonia mydas*	Endangered	May Affect
Hawksbill sea turtle	*Eretmochelys imbricata*	Endangered	May Affect
Leatherback sea turtle	*Dermochelys coriacea*	Endangered	May Affect
Loggerhead sea turtle[2]	*Caretta caretta*	Threatened	May Affect
Kemp's ridley sea turtle	*Lepidochelys kempii*	Endangered	May Affect
Marine Mammals			
Florida manatee	*Trichechus manatus latirostris*	Threatened	MANLAA
Critical Habitats			
Loggerhead sea turtle	*Caretta caretta*	LOGG-N-15	NLAM

[1] North Atlantic distinct population segment (DPS); [2] Northwest Atlantic DPS
MANLAA = May Affect, Not Likely to Adversely Affect; NLAM = Not Likely to Adversely Modify

USACE Analysis and Effect Determinations on Listed Species under USFWS Jurisdiction:
Nesting Sea Turtles (Green sea turtle, hawksbill sea turtle, leatherback sea turtle, loggerhead sea turtle, Kemp's ridley sea turtles)
Flagler County is within the nesting range of five species of sea turtles; the loggerhead (*Caretta caretta*), the North Atlantic Distinct Population Segment (DPS) of green sea turtle (*Chelonia mydas*) (80 FR 15272), Kemp's ridley sea turtle (*Lepidochelys kempii*), hawksbill sea turtle (*Eretmochelys imbricata*), and leatherback sea turtle (*Dermochelys coriacea*). The leatherback sea turtle and hawksbill sea turtle are listed as endangered

under the ESA. The loggerhead sea turtle and the North Atlantic DPS of the green sea turtle are listed as threatened. Additionally, the waters offshore of Flagler County are used for foraging and shelter for the five species listed above.

Three species of sea turtles, the loggerheads, greens, and leatherbacks, are known to regularly nest on Flagler County beaches. Peak sea turtle nesting and hatching period is from May through October. The Volusia-Flagler Turtle Patrol is a non-profit organization that patrols 18 miles of beach in Flagler County looking for sea turtle crawls, marking nests, and monitoring and evaluating nests for success (http://www.turtlepatrol.com/about-us.html).

While beach renourishment can be beneficial in restoring nesting sea turtle habitat, it also has the potential to adversely impact nesting and hatchling sea turtles in a number of ways and is considered a primary threat that may impact proposed critical habitat for nesting loggerhead sea turtles (78 FR 17999-18082). There have been mixed results reported in studies measuring sea turtle hatchling success for nourished versus non-nourished beaches:

- Placement activities on nesting beaches may affect sea turtles;
- Escarpment formations and resulting impediments to nesting females as well as potential losses to the beach equilibration process;
- Sediment density (compaction), shear resistance (hardness), sediment moisture content, beach slope, sediment color, sediment grain size, sediment grain shape, and sediment grain mineral content can be altered potentially affecting the nesting and incubating environment;
- Hard sediment can prevent a female turtle from digging a nest or result in a poorly constructed nest cavity;
- Changes in sediment properties and color could alter the temperature of the beach and incubating nests, thus influencing sex ratios.

The USFWS biological opinions for similar projects acknowledge that placement of sand on a critically eroded beach can enhance sea turtle nesting habitat if the sand placed is highly compatible (*i.e.*, grain size, shape, color, etc.) with naturally occurring beach sediments at the recipient site, and compaction and escarpment remediation measures are properly adopted (USFWS 2015). Effects to sea turtles from placement of sand on the beach as well as dune and groin construction activities include risk of injury from interaction with heavy equipment during construction as well as avoidance of construction activities, related noise, and physical exclusion from areas blocked by equipment (e.g., fencing). Placing sand from upland mines would require a truck haul approach, which would not use dredges or other vessels. This approach would minimize in-water work, reducing the potential for entanglement, entrainment, or strikes by in-water equipment and/or vessels. These effects are determined to be insignificant as direct, physical injury is not anticipated since sea turtles are highly mobile and able to easily avoid the area.

USACE Effect Determination: May Affect.
USACE determined that construction of the Preferred Alternative is consistent with the Statewide Programmatic Biological Opinion for Shore Protection Activities along the

Coast of Florida (SPBO) and the beach nourishment activities are likely to adversely affect nesting sea turtles but not likely to jeopardize the continued existence of the species. USACE will minimize potential effects to nesting sea turtles in the project area by adhering to the applicable Reasonable and Prudent Measures (RPMs) and Terms and Conditions (T&Cs) of the SPBO.

Loggerhead DCH (LOGG-N-15)

The USFWS designated critical habitat (DCH) for the loggerhead sea turtle in 2014 (79 FR 39855-39912), and Flagler County CSRM is located within unit LOGG-N-15 (see Figure 3).

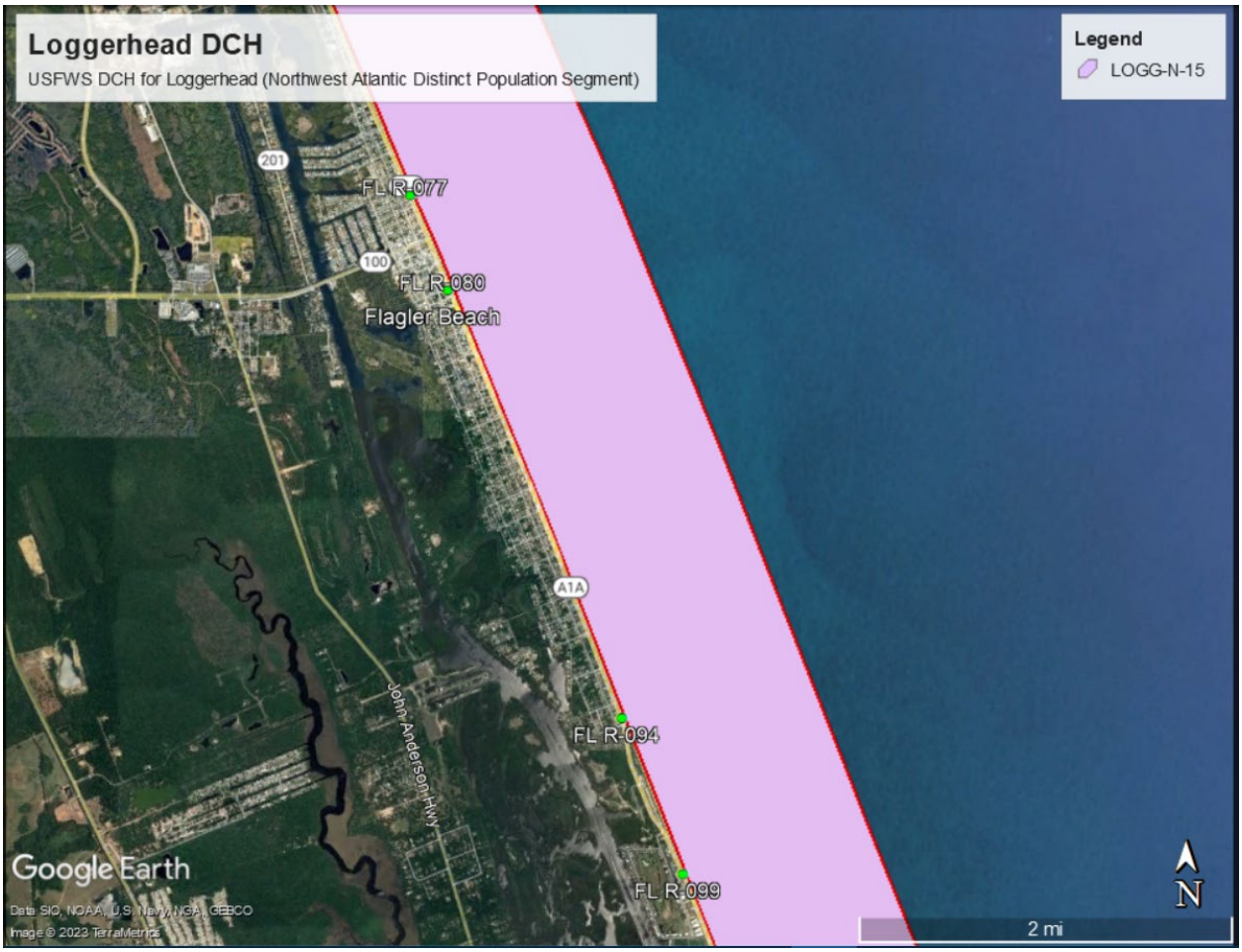

Figure 3. Project location and Loggerhead DCH.

Hatchling egress from the water's edge to open water and nesting female transit back and forth between the open water and the nesting beach during nesting season could be hindered by the presence of the dredge and pipeline. However, the initial construction phase is anticipated to last approximately 10-12 months with four (4) subsequent renourishment events occurring over the 50-year period of Federal participation. The interval for renourishment is anticipated to be 11 years; however, the interval may vary

depending on the timing of erosion and storm events. The daily construction activity would occur within only a small area at a time (approximately 500 linear feet per day).

The placement of sand may increase sea turtle nesting habitat if the placed sand is highly compatible (i.e., grain size, shape, color, etc.) with naturally occurring beach sediments in the area, and compaction and escarpment remediation measures are incorporated into the project (i.e., the project complies with the T&Cs of the SPBO).

USACE Effect Determination: Not Likely to Adversely Modify
USACE has determined that the presence of a dredge in the nearshore waters and pipeline on the beach could temporarily impact the physical or biological features (PBF) and primary constituent elements (PCE) of loggerhead critical habitat unit LOGG-N-15 during construction; however, long term benefits are anticipated as the initial construction and subsequent renourishment events would increase available nesting habitat.

Piping Plover & Rufa Red Knot
The piping plover (*Charadrius melodus*) Atlantic Coast and Northern Great Plains populations were listed as threatened in 1985 (50 FR 50726). Piping plovers are generally found on sandy beaches on the Atlantic Coast and Great Lakes as well as sandbars along major rivers on the northern Great Plains. While most shorebirds have a wide distribution, the piping plover barely extends into Mexico during the winter (Audubon 2018). The rufa subspecies of the red knot (*Calidris canutus rufa*), is listed as threatened, and is a small shorebird that can occur along the Atlantic and Gulf coasts during its migration. It is also known to overwinter in low numbers along both the Atlantic and Gulf coasts. Florida is home to the largest concentration of wintering rufa in the U.S. (A.C. Schwarzer et al. 2012). In migration and winter, it prefers coastal mudflats, tidal zones, and sometimes open sandy beaches.

Both the piping plover and rufa red knot are foragers and feed on prey such as insects, marine worms, and crustaceans. The rufa red knot feeds particularly on horseshoe crabs (Kaufman 1996), and the rufa red knot population has declined primarily due to reduced food availability from increased harvests of horseshoe crabs (USFWS 2015). The piping plover populations have declined primarily due to human disturbance on nesting areas, especially in competition for beach use. Although critical habitat was designated for the piping plover in 2001 (66 FR 36038), there is no DCH in the project area. Critical habitat for the rufa red knot was proposed in April 2023 (88 FR 22530); however, there is no proposed DCH in the project area.

Implementation of the Preferred Alternative would increase habitat that could be used by the piping plover and/or rufa red knot; however, it is not considered optimal habitat. Direct effects to the birds from project construction are expected to be minimal as birds are motile and can avoid construction activities. Placement of sand on the beach may temporarily displace foraging and resting birds. This interruption is limited to the immediate area and duration of construction. Habitat exists outside of the beach placement areas with similar characteristics that may be used by displaced species while renourishment activities are underway. The prey base, which includes the benthic

organisms, may be temporarily reduced in the proposed beach placement areas. This effect would be short-term as recovery of beach infauna is expected to occur quickly.

USACE Effect Determination: MANLAA.
USACE determined that the project's beach placement activities may affect but are not likely to adversely affect rufa red knot and/or piping plovers. The project's beach placement activities and its effects on the birds are consistent with those analyzed in the Piping Plover Programmatic Biological Opinion (P3BO). USACE will abide by all applicable minimization measures, Reasonable and Prudent Measures (RPMs), and T&Cs in the P3BO to ensure the protection of any rufa red knot and/or piping plovers that may be in the project area. If the species are found in the project footprint, the protective conditions developed for migratory birds will be utilized as well as conditions of the P3BO. Compliance with the reasonable and prudent measures and T&Cs listed in the P3BO will provide sufficient protection for piping plovers and rufa red knots.

West Indian (Florida) Manatee
The Florida manatee is a subspecies of the West Indian manatee (*Trichechus manatus*) and can be found throughout the southeastern United States. The manatee is a large, plant-eating aquatic mammal that move between freshwater and saltwater environments. They can be found in shallow coastal waters, rivers, and springs. Adult manatees are approximately 10 feet long, weighing between 800 – 1200 pounds, and consume approximately 4-9% of their body weight each day. Although manatees feed underwater, they frequently rest just below the water surface with only the snout above water. Manatees were listed as endangered throughout its range for both the Florida and Antillean subspecies (*Trichechus manatus latirostris* and *Trichechus manatus manatus*) in 1967 (32 FR 4001). In May 2017, the USFWS reclassified the manatee from endangered to threatened.

Federal law, specifically the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973, protects manatees. Critical habitat is defined under the Endangered Species Act as specific areas within and/or outside a geographical area that are occupied by a species at the time of listing, that contain physical or biological features essential to the conservation of the species and therefore require special management considerations or protection for the benefit of the species. Critical habitat for the Florida manatee was described in 1976 in 50 CFR 17.95 for Florida. The project area is not located within USFWS DCH (*see* **Figure 3**). Flagler County is designated as a Florida Fish and Wildlife Conservation Commission Manatee Protection Zone (**Figure 4)**; however, it is unlikely that manatees would be located at the beach placement area or within Borrow Area A.

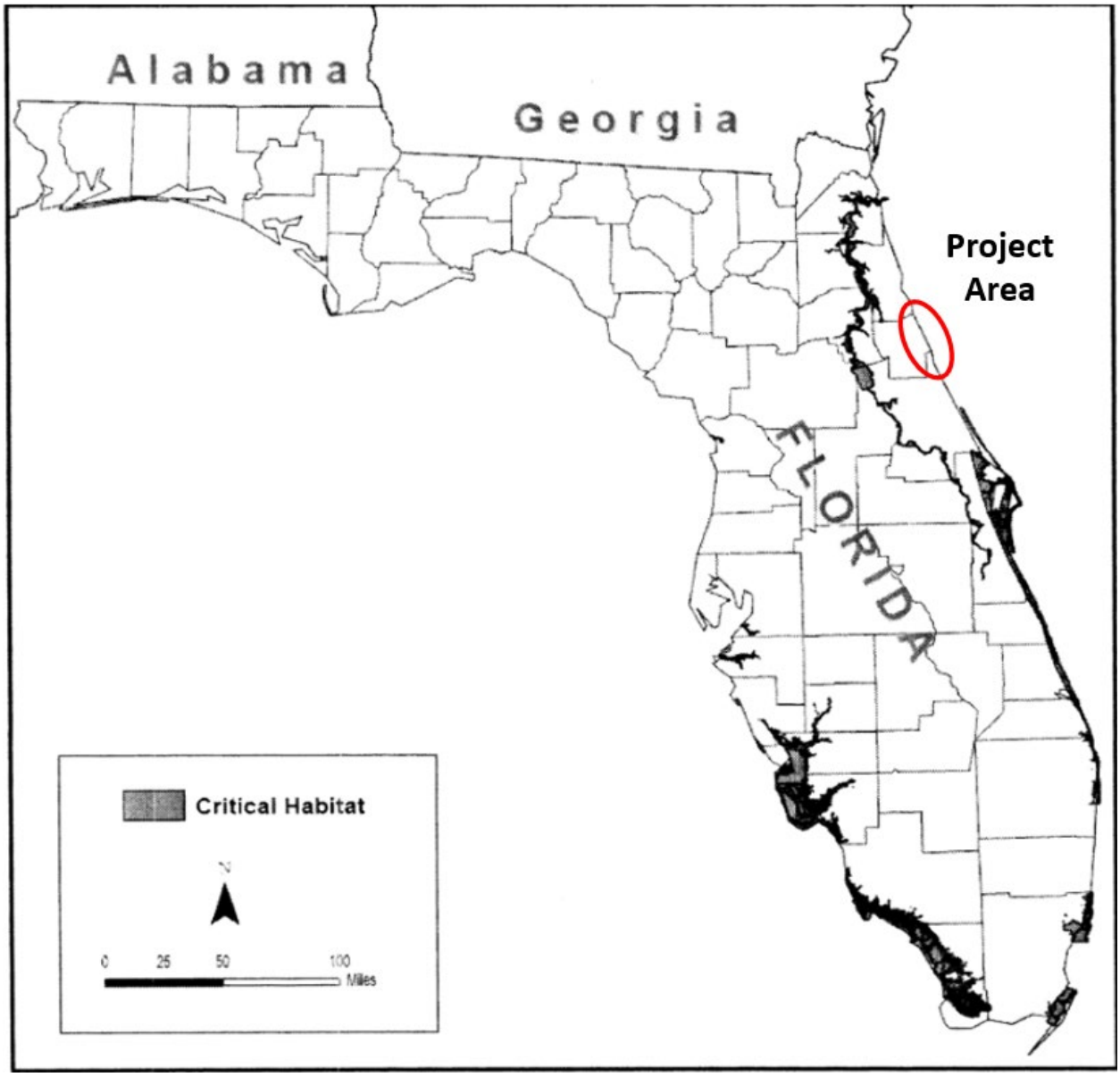

Figure 3. USFWS Florida Manatee DCH.

(Source: https://www.federalregister.gov/documents/2010/01/12/2010-325/endangered-and-threatened-wildlife-and-plants-12-month-finding-on-a-petition-to-revise-critical)

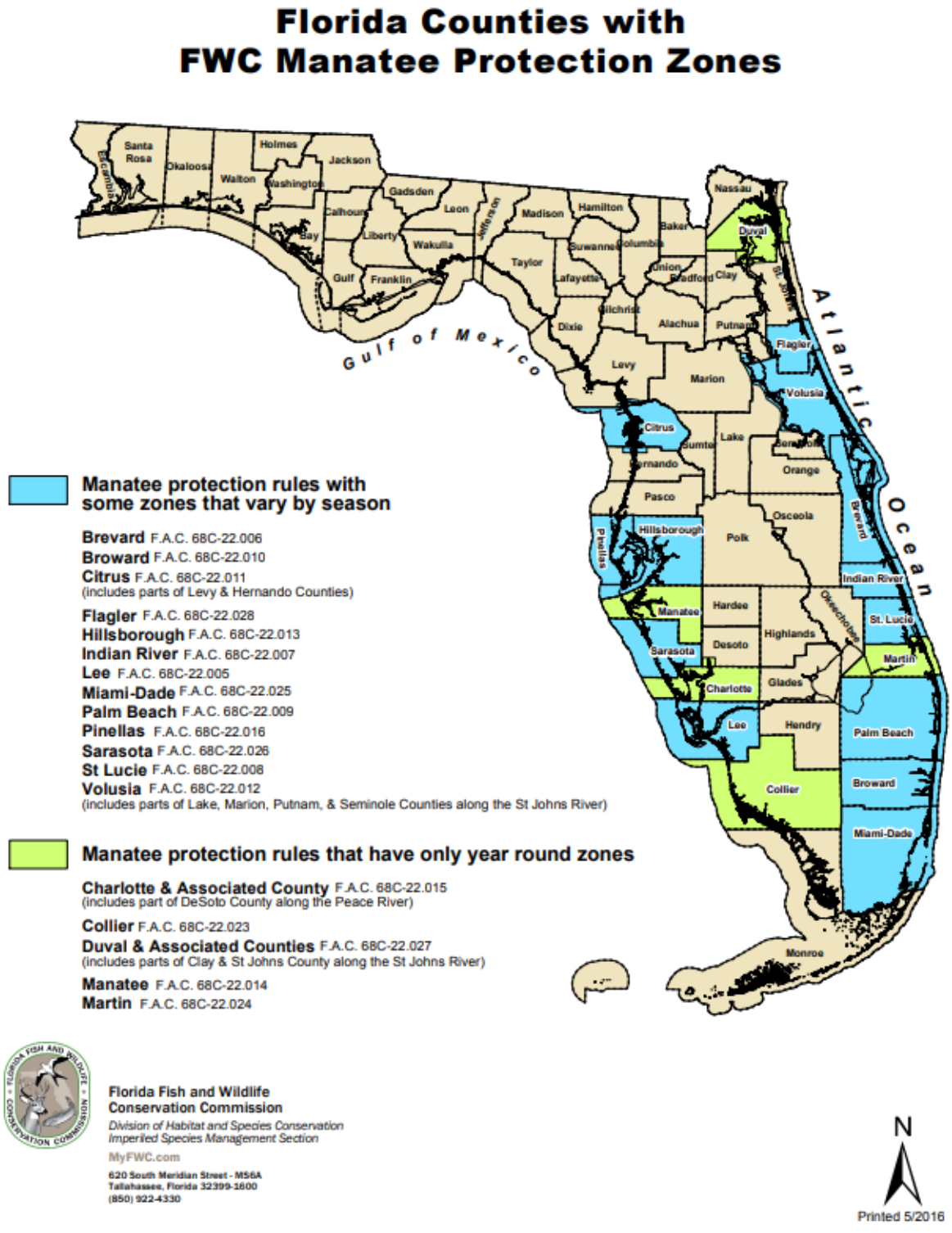

Figure 4. Florida Fish and Wildlife Conservation Commission (FWC) Manatee Protection Zones.

(Source: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://myfwc.com/media/7313/mpzstatewidemap.pdf)

USACE Effect Determination: MANLAA.

USACE determined that the proposed project may affect, but is not likely to adversely affect, Florida manatees. Direct, physical injury effects to this species are not anticipated from construction operations, machinery, or materials as the species are unlikely to be found at the beach placement area or within Borrow Area A. Additionally, this species is highly mobile and able to easily avoid the area; however, USACE will include the 2011 USFWS' Standard Manatee Conditions for In-Water Work (see Attachment 2) in the project plans and specifications to ensure protection of the species.

References:

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USFWS. 2015. Shore Protection Activities along the Coast of Florida. Statewide Programmatic Biological Opinion (Revised). Service Log Number: 41910-2011-F-0170. March 13, 2015.

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USFWS. 2011. Standard manatee conditions for in-water work. Retrieved from chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.fws.gov/sites/default/files/documents/standard-manatee-conditions.pdf. Website accessed 16 August 2023.

Attachment 1

2014 Flagler County CSRM Project IFR/EA
USFWS ESA Consultation Letters

Attachment 2

USFWS 2011 Standard Manatee Conditions for In-Water Work

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO ATTENTION OF

Planning Division
Environmental Branch

3 OCT 20[illegible]

Ms. Teresa Calleson, Acting Director
U. S. Fish & Wildlife Service
North Florida Ecological Services Office
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517

Dear Director:

This letter initiates the 30-day coordination with your office under the Statewide Programmatic Biological Opinion (SPBO) for beach placement and shore protection for the Flagler County Hurricane and Storm Damage Reduction (HSDR) project located in Flagler County, Florida. The Corps proposes to reduce damage from extreme storms and hurricanes through the shoreline protection measure of rebuilding a natural dune system that includes planting native dune-type vegetation for a section of Flagler Beach from FDEP monument R-80 to R-92. The proposed project consists of a 10-foot seaward extension of the existing dune; construction of the dune extension will extend the existing berm and entire active profile seaward. The attached figure provides a summary of the plan.

There are no identified terms and conditions, or other criteria that would not be followed. Standard Manatee protection measures would be imposed on activities in the water. With respect to sea turtles, all other terms and conditions of the SPBO would be followed. The proposed activity may affect nesting sea turtles and is not likely to adversely affect Manatees. The activity is unlikely to affect beach mice as none are known to be present within the project footprint.

This letter also notifies your office with respect to the Programmatic Piping Plover Biological Opinion (P3BO). The activity will not occur in "optimal" Piping Plover habitat and is not likely to adversely affect the Piping Plover (see enclosed information sheet). Although no optimal Piping Plover habitat is present within the project area, this species has been documented as occurring within the Gamble Rodgers State Recreational Area to the south of the project limits (R-94). It is for this reason that a P3BO informational sheet is being submitted with this document.

Should you determine that the proposed activity is not within the scope of the SPBO or the P3BO, please consider this letter initiation of consultation pursuant to Section 7 of the Endangered Species Act. If you have any questions, please contact me at 904 232-1665 or the technical point of contact. The technical point of contact for this action is Kathleen McConnell who can be reached at 904 232-3607.

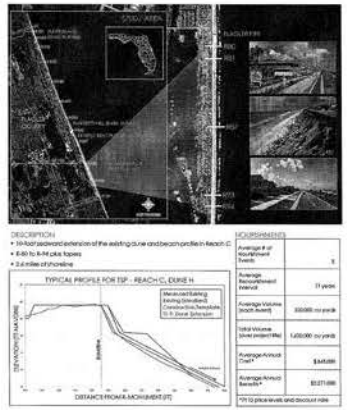
Sincerely,

Kenneth R Dugger for
Eric P. Summa
Chief, Environmental Branch

Enclosures

McConnell/CESAJ-PD-EC/3607/
Spinning/CESAJ-PD-EC
Harrah/CESAJ-DP-C
Dugger/CESAJ-PD-E
Summa/CESAJ-PD-E

Flagler County HSDR Proposed Project



Piping Plover Project Information and Checklist

☐ Seasonal Window, Beach Work Limited to May 16 through July 14

If not, why? Construction activities may extend beyond the May through July window due to contracting constraints.

Surveys Start How Many Months before Construction: as needed

Who Conducts Surveys Before/During Contruction: Qualified bird monitor per contract specifications

Habitat Avoided by Pipeline: ■ Foraging ☐ Sheltering ☐ Roosting

High Value Habitat Affected: ☐ Washover Fan ☐ Emerging Spit ☐ Sand Bar(s) ■ Intertidal Flats

Habitat Evaluation Method/Source: ☐ Aerial Photo ■ Site Visit/Survey

Two or more Adjacent Beach Segments or Inlets Affected the Same Year ☐

If so, Desclbe and Why?

All Material Placed in the Nearshore ☐

If not, Why? Project description is the construction of dune extension 10-ft from the top of dune face. Material to be placed landward of nearshore.

OPTIMAL HABITAT DETERMINATION (any of the following 3 categories)

1. Designated Critical Habitat Affected

2. Affected public lands ☐ within 1 mile of an inlet ☐ washover fan(s)

■ emergent nearshore sandbar(s) ☐ emergent shoal(s) or sandbar(s)

☐ Bayside mud flat(s), sand flat(s), algal flat(s) ☐ Bay/Lagoon Shoreline

3. Other Optimal Habitat

☐ Charley Pass, south of Critical Habitat Unit FL-23 on North Captiva Island, Lee County (R-75.5 and R-83)

☐ Stump Pass and the beaches adjacent to it, Charlotte County (R-15.5 to R-33)

☐ Palmer Point Park, Sarasota County (R-77 to R-83)

☐ St. Lucie Inlet and associated shoals, Martin County (R-42 to R-78)

☐ Crandon Park, Miami-Dade County (R-89 to R-101)

☐ Sanibel Island, Lee County (R-109 to R-174)

If Optimal Habitat, Complete the Following

Piping Plover Project Information and Checklist

Habitat Outside the Placement Footprint to be avoided to the maximum extent practicable

■ Intertidal Beach ☐ Ephemeral Pools ☐ Washover Area(s)

☐ Wrack Line

☐ other Describe: Placement of material onto existing dune system will include pipeline route across intertidal beach but no material is to be placed on the lower beach or into the nearshore.

■ Driving on beach minimum necessary and above or below wrack line only

☐ Predator proof trash recepticals at beach access point for project construction

■ Brief Workers on Piping Plover

☐ Educational Signs at Public Access Points

☐ Piping Plover monitoring a full migration and wintering season prior to construction

■ Piping Plover monitoring during construction

☐ Piping Plover monitoring for 2 years after construction

If any of the above for optimal habitat are not followed, provide explination and/or alternatives

Names (if known) and qualifications of individuals conducting Piping Plover Surveys

Construction contractors will directly hire bird monitors with qualification for piping plover observation. However, all oversight for bird monitor activities and hiring approval remains with the Corps Planning Division Environmental Branch and the project Sponsor, Flagler County.

Statewide Programmatic Biological Opinion (SPBO)
Beach Placement and Shore Protection
Coast of Florida
U.S. Fish and Wildlife Service (FWS)

New Record | Save Record | Print Record | Close

Record # 69
Prepared by:
Date Entered: 10/9/2013

Project Name:
Project Event:
Project Number: 113166 Application #:
Sponsor/ Applicant: Flagler County
Quantity (CY): Length (Feet): 13728
County(ies): Flagler Location R-Monuments: R-80 to R-92
Lat °: 30 Lat': 0 Lat" Long° -80 Long': Long":
Borrow or Dredge Site(s): Offshore Borrow Area

Beach Placement from Navigation Dredging: ☐ O and M ☐ Deepen, Widen, or Expand
Beach Nourishment/Shore Protection Project: ☐ Initial Nourishment ☐ Renourishment
Nature of Activity: ☐ Beach Placement ☐ Beach Placement Below MLW
☑ Dune Placement or Planting ☐ Nearshore Placement (material remains below MLW)
☐ Sand Bypassing ☐ Sand Back-Passing ☐ Sand Transfer ☐ Groin Repair or Replacement
☐ Jetty Repair or Replacement ☐ *Other Activity (list in comment Box)
Area with Sea Turtle Window: ☐ SE Florida (Broward through Brevard) ☐ Manasota Key
☐ Gulf Co (St Joe Peninsula St Pk, St. Joe Peninsula, Cape San Blas) ☐ Franklin Co (St George Is)
*Piping Plover Critical Habitat ☑ *Other Piping Plover Habitat ☑ *30-day Coordination Still Pending
PP Crit Hab 1: No critical habitat but piping plover observed on beach south of project area.
PP Crit Hab 2:
☐ *No Pre-Project Survey for Actual or Potential Washover Fan
Beach Mouse Habitat (use drop-down box below) ☐ Other Beach Mouse Habitat (list in comment box)
Beach Mouse Habitat:
☐ *Important Manatee Area ☐ *Beach Jacquemontia Habitat (including pipeline, access, storage, staging, etc.)
☐ *Roseate Term Colon, May-June (Pelican Shoal, Vaca Rock, Truman Annex, Marathon Gov Center)
☐ *Snowy Plover Breeding Area, Mar-Sep (Gulf Coast: Caladesi Is, Fort DeSoto Park, Cayo Costa, isolated peninsulas)
*These items may be outside the scope of the SPBO and/or require additional coordination w/FWS (see next page)

Page 1 of 2

Responsible for Post Construction Monitoring/Corrective Measures (Compaction/Escarpments, 3 yrs post constructio
Sponsor
Responsible for Post Contruction Monitoring (Sea Turtle Nesting, 2-yrs post construction)
Sponsor
Responsible for Post Construction Monitoring (2 Beach Lighting Surveys, early May and late July):
Sponsor
☐ *Any Other Term and Condition not Followed Describe Other TC:
Comment, Habitat:
Comment, Other: Degraded beach and dune habitat along high recreational usage beach. Sea Turtle nesting at toe of dune.

-Instructions-

General: Text fields are limited to 255 characters to accommodate a consolidated report in which the form's data is exported to an Excel spreadsheet. There are 2 "Comment" fields to allow about 500 characters total.
Project Name: Use official project name from P2 for Corps projects.
Project Activity/Event: Identify the dredging or renourishment event (e.g., reach, segment, year, sequence)
Project Number: Use project number from P2 for Corps projects.
Application #: Use Corps permit application number where applicable.
Quantity/Length: Normally use cubic yards and linear feet for beach placement.
Location and R-monuments: Brief phrase for location. Use state R-monuments.
Latitude and Longitude: Enter for approximate center of shoreline project/activity (not for the borrow/dredge site). For example, Jacksonville District Office would be Latitude 30° 19' 04.91" Longitude -81° 39' 36.48".
Borrow or Dredge Sites: Brief phrase or name for borrow area or dredge site.
Piping Plover Critical Habitat: Use the 2 drop-down boxes (only one critical habitat unit per drop-down box). See PBO or Federal Register of July 10, 2001, pages 36070 to 36073 for additional details on Piping Plover critical habitat.
Other Piping Plover Habitat: List in the comment box any additional critical habitat units and any other important Piping Plover habitat. Refer to SPBO for additional information.

1. For projects located: (a) in piping plover critical habitat, initiation of formal consultation is necessary. (b) In or within one mile of a critical habitat unit, the Corps shall contact the Service with the project description. The Service will aid the Corps in determining potential indirect effects to biological constituent elements within a critical habitat unit. The Service will respond within 30 days. Previous consultations in these areas have ended informally but depending on the latest information, formal consultation may be likely. (c) In or within one mile of an inlet, the Corps shall contact the Service with the project description. The Service will aid the Corps in determining whether there will be any effects to the piping plover. The Service will respond within 30 days. Previous consultations in these areas have resulted in formal consultation. (d) On or adjacent to public lands (county, state, federal, etc), the Corps shall contact the Service with the project description. The Service will aid the Corps in determining whether there will be any effects to the piping plover. The Service will respond within 30 days. Previous consultations in these areas have ended informally but depending on the latest information, formal consultation may be likely.
2. For jetty and groin repairs/replacement project, the Corps shall contact the Service with the project description. The Service will aid the Corps in determining whether there will be any effects to the piping plover. The Service will respond within 30 days. Previous consultations in these areas have resulted in informal consultation.
3. In all other areas, the Corps shall contact the Service with the project description and location. The Service will be the Corps' key source of information to provide technical assistance, including known locations or the latest survey information on piping plovers within 30 days. Previous consultations in these areas have resulted in informal consultation.

Beach Mouse Habitat: Geographic range of species is shown in drop-down box. Note that species is limited to areas of suitable habitat within that range. Refer to the SPBO for additional information.
Important Manatee Areas (IMA): Activities within IMAs are not within the scope of the SPBO and require separate consultation.
Beach Jacquemontia Habitat: Impacts to this species are not within the scope of the SPBO. Within the range of this species a survey and avoidance is required (see SPBO for additional information).
Roseate Tern Nesting Colony, May-June: Activities affecting such colonies during nesting season are not within the scope of the SPBO.
Snowy Plover: In addition to migratory bird protection, is a candidate for listing as threatened. Breeding occurs along Gulf Coast at indicated parks and on isolated coastal peninsulas. If listing is imminent, Section 7 consultation may be appropriate.
Responsible for Post Construction Monitoring and Corrective Measures: The activity is not within the scope of the SPBO if there is no formal acceptance of responsibility for post-construction monitoring and corrective measures. A separate consultation with FWS is required. L:\group\pde\dugger\PBO\Proj\nfoSheet4.pdf

Page 2 of 2

United States Department of the Interior

U. S. FISH AND WILDLIFE SERVICE

7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:
FWS Log No. 41910-2014-F-0038

May 30, 2014

Colonel Alan M. Dodd
District Commander
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019
(Attn: Kathleen McConnell)

Dear Colonel Dodd:

This document transmits the U.S. Fish and Wildlife Service's (Service) decision regarding the application of the proposed Flagler County Hurricane and Storm Reduction project located in Flagler County, Florida, to the August 22, 2011, Statewide Programmatic Biological Opinion (SPBO) (Service, 2011) and the May 22, 2013, Programmatic Piping Plover Biological Opinion (P^3BO) (Service, 2013). The U.S. Army Corps of Engineers (Corps) determined on October 8, 2013, that the proposed project "may affect" the threatened North Atlantic population of the loggerhead sea turtle (*Caretta caretta*), the endangered green sea turtle (*Chelonia mydas*), and the endangered leatherback sea turtle (*Dermochelys coriacea*). In addition, the Corps determined that the proposed project "may affect, but was not likely to adversely affect" the endangered West Indian (Florida) manatee (*Trichechus manatus latirostris*) and the piping plover (*Charadrius melodus*), because it was not located in optimal Piping Plover Habitat. This document is provided in accordance with Section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*), the Marine Mammal Protection Act of 1972, as amended (MMPA) (16 U.S.C. 1361 *et seq.*), and the provisions of the Fish and Wildlife Coordination Act of 1958, as amended (FWCA) (48 Stat. 401; 16 U.S.C. 661 *et seq.*).

PROJECT DESCRIPTION

The Corps is proposing to perform shoreline protection activities from Florida Department of Environmental Protection monuments R-80 to R-94 in Flagler Beach in order to rebuild a natural dune system by adding a10-foot seaward extension of the existing dune (Figure 1). In the event of future storms, the work should result in a significant reduction in storm damage along State Road A1A. The proposed construction will result in 330,000 cubic yards of sand placement followed by periodic nourishment events of 320,000 cubic yards. The sand will be mined from a borrow area located seven miles offshore of the placement area and delivered to the project site using a hydraulic dredge. The proposed project is expected to take 30 days for the mobilization/ demobilization activities and approximately 123 days for construction. The expected interval between renourishment events would be 11 years. Additional work associated with the project will include the planting of native shoreline vegetation on the constructed dune and on the

existing dune disturbed by the proposed construction. We consider the action area for this project to include approximately 2.6 miles of linear shoreline.

The action area is defined as all areas to be affected directly or indirectly by the action and not merely the immediate area involved in the action. The Service identifies the action area to include the staging and discharge areas, pipeline corridor, beach access corridor, and the area of the sand placement. The project is located along the Atlantic Ocean, Flagler County, between R-80 and R-94.

THREATENED AND ENDANGERED SPECIES

Sea Turtles

The Service and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) share Federal jurisdiction for sea turtles under the Act. The Service has the responsibility for sea turtles on the nesting beach and the NOAA Fisheries has jurisdiction for sea turtles in the marine environment. As a result, our analysis will only address activities that may impact nesting sea turtles, their nests and eggs, and hatchlings as they emerge from the nest and crawl to the sea.

Please note the provisions of this consultation do not apply to sea turtles in the marine environment, such as swimming juvenile and adult sea turtles. If applicable, you are required to consult with the NOAA Fisheries on your project. For further information on Act compliance with the NOAA Fisheries, please contact Ms. Cathy Tortorici, Chief of the Interagency Cooperation Branch, by e-mail at cathy.tortorici@noaa.gov or by phone at 727-209-5953.

The applicant has agreed to implement SPBO's Reasonable and Prudent Measures and Terms and Conditions, which apply to sand placement projects constructed during the sea turtle nesting season. The Service has determined that the proposed project is appropriate to apply to the SPBO as it concerns sand replacement activities along the coast of Florida. The minimization measures, Reasonable and Prudent Measures, and Terms and Conditions in the SPBO are applicable to the proposed project and must be followed for the loggerhead, green, and leatherback sea turtles. We have assigned log number 2014-F-0038 to this individual consultation. Please submit a report for the proposed project as described in the SPBO Term and Condition A22 following completion of the proposed work.

Piping Plover

The proposed project is located in non-optimal piping plover habitat and, therefore, consistent with the P^3BO, we conclude that a determination of "may affect, but is not likely to adversely affect" is appropriate, provided that conservation measures agreed to by the Corps for all projects that may affect the piping plover are followed. The applicant has agreed to implement the conservation measures outlined in the P^3BO that apply to projects in non-optimal habitat, including implementing the survey guidelines for non-breeding shorebirds.

Wintering shorebird surveys as described in the P^3BO are intended to document shorebird use of project sites before and after construction and thereby monitor project impacts to the piping plover. Reasonable and Prudent Measure 5 and Terms and Conditions 8 and 9 in the P^3BO describe the monitoring requirement. Term and Condition 8 stipulates that for one full piping plover migration and winter season (July 15 to May 15) prior to construction and 2 seasons following construction, bimonthly (twice-monthly) surveys for piping plovers shall be conducted in any intertidal or shoreline areas within or affected by the project. Term and Condition 9 outlines information to be collected. For projects in non-optimal habitat, such as this project, the Service has modified winter shorebird survey requirements as deemed appropriate based on specifics of the project.

If piping plovers are documented in the project area during the preconstruction surveys, the Service will be contacted for potential implementation of additional conservation measures prior to commencing construction. All shorebird survey data will be forwarded to the Service annually by July 31 of each year in which monitoring is conducted, as described in Term and Condition 9 of the P^3BO. The person(s) conducting the surveys must demonstrate the qualifications and ability to identify shorebird species and be able to provide the information outlined in the P^3BO.

West Indian (Florida) Manatee

Provided that the Florida Fish and Wildlife Conservation Commission's (FWC's) 2011 Standard Manatee Conditions for In-Water Work and minimization measures outlined in the SPBO are implemented to avoid potential impacts to manatees, the Service concurs with the determination of "may affect, but not likely to adversely affect" for the manatee.

This letter fulfills the requirements of the Act and no further action is required. If modifications are made to the project, if additional information involving potential effects to listed species becomes available, or if a new species is listed, reinitiation of consultation may be necessary.

FISH AND WILDLIFE RESOURCES

This section is provided in accordance with the FWCA of 1958, as amended (48 Stat. 401; 16 U.S.C. 661 *et seq.*) to address other fish and wildlife resources in the project area.

In accordance with the Migratory Bird section of the SPBO, the Corps should follow the FWC standard guidelines (see attached guidelines) to protect against impacts to nesting shorebirds as a result of the proposed project. With the protection measures from the guidelines, the SPBO, and the P3BO implemented, the proposed work should not result in significant impacts to those resources.

The Corps should continue to consult with NOAA Fisheries regarding the dredge and sand placement templates as well as the downdrift areas. In addition, the Corps will assess and consult with NOAA Fisheries concerning potential impacts to foraging and swimming sea turtles, and all other marine species under their jurisdiction within the action area.

REINITIATION NOTICE

This concludes formal consultation on the action outlined in the request. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if:

1. The amount or extent of incidental take outlined in the SPBO and/or P3BO is exceeded. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation;
2. New information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion;
3. The agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or
4. A new species is listed or critical habitat designated that may be affected by the action.

Thank you for your cooperation in the effort to conserve fish and wildlife resources. Should you have additional questions or require clarification regarding this letter, please contact Terri Calleson at 904-731-3286.

Sincerely,

Jay B. Herrington
Field Supervisor

cc: Corps, Jacksonville, Florida (Kathleen McConnell)
DEP, Tallahassee, Florida (Lanie Edwards)
FWC, Tallahassee, Florida (Robbin Trindell)
NOAA Fisheries, St. Petersburg, Florida (Kathy Tortorici)

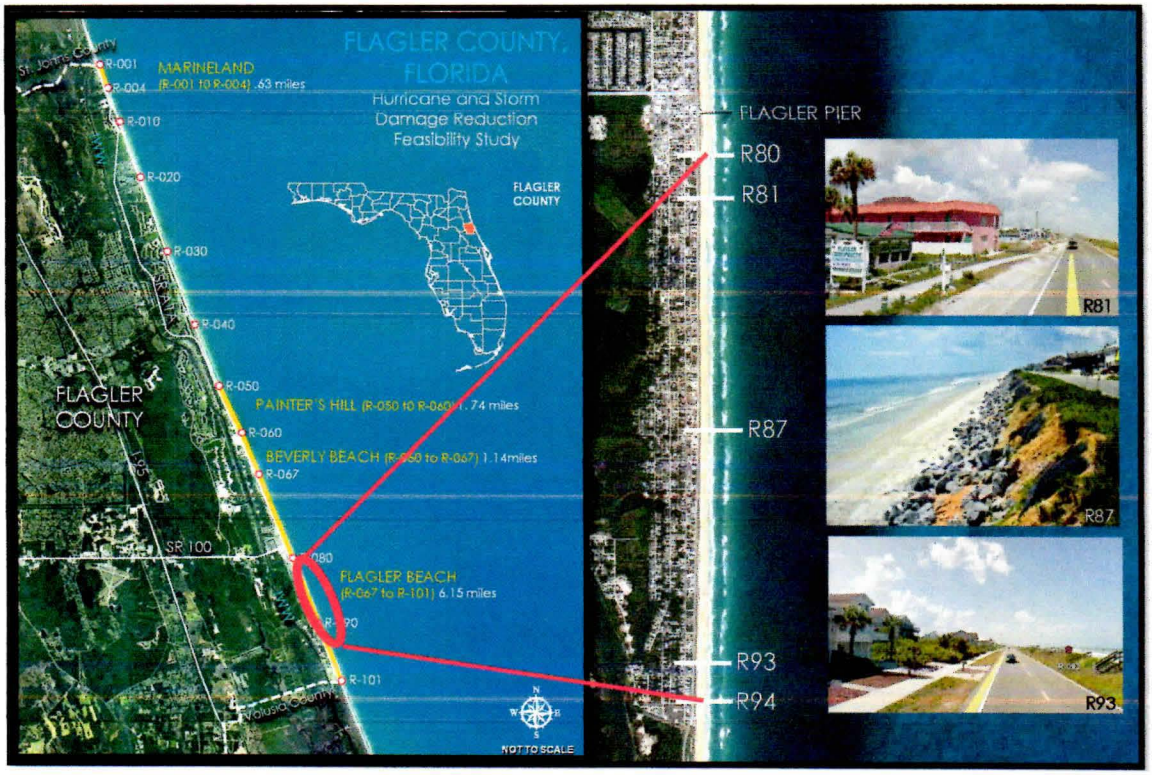


Figure 1. Specific location of proposed work

LITERATURE CITED

Florida Fish and Wildlife Conservation Commission. 2011. Standard Manatee Conditions for In-Water Work 2011. Tallahassee, Florida. Available from: http://myfwc.com/wildlifehabitats/managed/manatee/permit-review/#Main

U.S. Fish and Wildlife Service (Service). 2011. Statewide programmatic biological opinion to the U.S. Army Corps of Engineers (FWS Log No. 41910-2011-F-0170) for shore protection activities along the coast of Florida (August 22, 2011). Jacksonville, Panama City, and Vero Beach Field Offices, Florida.

U.S. Fish and Wildlife Service (Service). 2013. Programmatic piping plover biological opinion to the U.S. Army Corps of Engineers (Service Consultation Code 04EF1000-2013-F-0124) for shore protection activities in the geographical region of the north and south Florida Ecological Services Field Offices (May 22, 2013). Jacksonville and Vero Beach Field Offices, Florida.

Attachment

Standard Conditions for Placement of Dredged Material at Seabird and Shorebird Nesting Sites

1. ***Selection of Bird Monitors.*** The permittee or designated representative ("Permittee") shall hire one or more Bird Monitors, depending on the size of the area to be affected, who will monitor shorebird activity before, during, and after construction. Bird Monitors should have proven seabird and shorebird identification skills and avian survey experience. Before hiring any Bird Monitors, the Representative shall provide a list of candidate Bird Monitors with (1) their contact information and (2) a summary of their qualifications, including bird identification skills and avian survey experience, to the FWC Regional Species Conservation Biologist (contact information attached) for FWC approval before the Permittee hires the Bird Monitor(s).

2. ***Pre-Construction Meeting.*** The Permittee is responsible for arranging a meeting with the U.S. Fish and Wildlife Service (USFWS), the Florida Fish and Wildlife Conservation Commission (FWC), and the Bird Monitor(s) before any work begins. The Permittee shall notify the USFWS, the FWC Regional Species Conservation Biologist (**contact information attached**), and the Bird Monitor(s) at least 10 business days before the date of that meeting. The purpose of this meeting is to ensure that the Permittee and Bird Monitor(s) fully understand and agree with the protection measures and any additional site-specific measures that need to be taken before, during, and after construction.

3. ***Nesting Seabird and Shorebird Protection Conditions:*** Bird Monitors shall use the following survey protocols:

    a. The Bird Monitor(s) shall review and become familiar with the general information on the FWC's Florida Shorebird Database (FSD) website (www.FLShorebirdDatabase.org). They shall use the data-collection protocol and implement data-entry procedures as outlined in that website. An outline of data to be collected, including downloadable field data sheets, is available on the website.

    b. Breeding season varies by species. Most species have completed the breeding cycle by September 1, but flightless young may be present through September. The following dates are based on the best available information regarding ranges and habitat use by species around the state:

        - All Gulf Coast counties: February 15 until September 1 except:
            - Spoil islands in Hillsborough County: March 1 until September 1
            - Citrus and Levy counties: March 15 until September 1
            - Dixie and Taylor counties: April 1 until September 1

- St. Lucie, Martin, and Palm Beach counties:
  - Spoil islands and estuaries: March 15 until September 1
  - Coastal beaches: April 1until September 1
- Broward and Miami-Dade counties: April 1 until September 1
- All other Atlantic Coast counties: March 15 until September 1

Surveys during the breeding season shall begin on the first day of the breeding season or 10 days before any site work begins, whichever is later. Surveys shall be conducted through August 31 or until all breeding activity has concluded, whichever is later.

c. During the breeding season, the Bird Monitor(s) shall survey all potential beach-nesting bird habitats that may be affected by construction or pre-construction activities. The Bird Monitor(s) shall establish one or more shorebird survey routes into the FSD website to cover these areas.

d. During the pre-construction and construction phases of the project, the Bird Monitor(s) shall complete surveys on a daily basis to detecting breeding activity and the presence of flightless chicks before (1) equipment is moved to the area, (2) vehicles are operated in the area, or (3) any other activities occur that have the potential to disrupt breeding behavior or cause harm to the birds or their eggs or young.

e. The Bird Monitor(s) shall survey the project area by walking and looking for evidence of (1) shorebirds exhibiting breeding behavior, (2) shorebird chicks, or (3) shorebird juveniles, as outlined in the FSD's *Breeding Bird Protocol for Shorebirds and Seabirds*. The Bird Monitor(s) must use binoculars for these surveys.

If an ATV or other vehicle is needed to cover large project areas, operators shall adhere to the FWC's Best Management Practices for Operating Vehicles on the Beach (http://myfwc.com/conservation/you-conserve/wildlife/beach-driving/). Specifically, the vehicle must be operated at a speed under 6 mph and only on beaches at or below the high-tide line. The Bird Monitor(s) will stop at no greater than 200-meter intervals to look for breeding activity.

f. Once the Bird Monitor(s) confirms that birds are breeding, as evidenced by the presence of a scrape, eggs, or young, the Bird Monitor(s) shall notify the FWC Regional Species Conservation Biologist (**contact information attached**) within 24 hours. The Bird Monitor(s) must report all breeding activity to the FSD website within one week of data collection.

4. ***Seabird and Shorebird Buffer Zones and Travel Corridors.*** The Bird Monitor(s) shall establish a disturbance-free buffer zone around any location within the project area where

shorebirds have been engaged in breeding behavior, including territory defense. The FWC considers a 300-foot-wide buffer to be adequate based on published studies; however, a smaller, site-specific buffer may be established if approved by the FWC Regional Species Conservation Biologist (**contact information attached**). All sources of human disturbance (including pedestrians, pets, and vehicles) shall be prohibited in the buffer zone.

a. The Bird Monitor(s) shall keep breeding sites under sufficient surveillance to determine if birds appear agitated or disturbed by construction or other activities in adjacent areas. If birds do appear to be agitated or disturbed by these activities, then the Bird Monitor(s) shall widen of the buffer zone immediately to a sufficient size to protect breeding birds.

b. The Bird Monitor(s) shall ensure that reasonable and traditional pedestrian access is not blocked situations under which breeding birds will tolerate pedestrian traffic. Breeding birds may tolerate pedestrian traffic within 300 feet of an established pathway. The Bird Monitor(s) shall work with the FWC Regional Species Conservation Biologist to determine if pedestrian access can be accommodated without compromising nesting success.

c. The Bird Monitor(s) shall ensure that the perimeters of designated buffer zones are marked with posts, twine, and signs stating "Do Not Enter, Important Nesting Area" or similar language. The signs shall include the name and a phone number of the entity responsible for posting. Posts should not be higher than 3 inches once installed. "Symbolic fencing" (i.e., twine, string, or rope) shall be placed between all posts and be clearly visible to pedestrians. In areas where marine turtles nest, the ropes shall be at least 2.5 feet above the ground. If pedestrian pathways are approved by the FWC Regional Species Conservation Biologist within the 300-foot buffer zone, these should be clearly marked. The Bird Monitor(s) shall ensure that the posting is maintained in good repair until breeding is completed or terminated. Although solitary nesters may leave the buffer zone with their chicks, the posted area continues to provide a potential refuge for the family until breeding is complete. Breeding is not considered to be completed until all chicks have fledged.

d. The Bird Monitor(s) shall ensure that no construction activities, pedestrians, moving vehicles, or stockpiled equipment are allowed within the buffer area.

e. The Bird Monitor(s) shall designate and mark travel corridors outside the buffer areas so as not to cause disturbance to breeding birds. Heavy equipment, other vehicles, or pedestrians may go past breeding areas in these corridors. However, other activities such as stopping or turning heavy equipment and vehicles shall be prohibited within the designated travel corridors adjacent to the breeding site. When flightless chicks are present within or next to travel corridors, the Bird Monitor(s) shall accompany moving vehicles to ensure that no chicks are in the path of the moving vehicle and no tracks are left that could trap flightless chicks.

f. The FWC recommends that the Bird Monitor(s) ensure that some activity in the travel corridor is maintained on a daily basis in order to discourage birds from nesting within the travel corridor. These activities should not be allowed to disturb shorebirds nesting on site or interfere with marine turtle nesting, especially if the corridors are established before construction has started.

g. Flooding or flagging potential breeding sites shall be the only passive methods for modifying their suitability in upland placement areas before breeding starts unless the FWC Regional Species Conservation Biologist has approved alternative methods. The Bird Monitor(s) shall survey these areas for shorebird activity before these areas are flooded or flagged.

5. ***Seabird and Shorebird Notification.*** If the Bird Monitor(s) find that shorebirds are breeding within the project area, he or she shall ensure that an informational bulletin board is placed and maintained in the construction staging area. This bulletin board shall display the location map of the construction site, depict the location(s) of the bird breeding areas, and include a clearly visible warning stating: "NESTING BIRDS ARE PROTECTED BY LAW INCLUDING THE FLORIDA ENDANGERED AND THREATENED SPECIES ACT AND THE STATE AND FEDERAL MIGRATORY BIRD ACTS".

6. ***Equipment Storage and Placement.*** The Bird Monitor(s) shall ensure that staging areas for construction equipment are located off the shoreline whenever possible. Equipment not in use or left overnight shall be stored away from the shoreline in order to minimize disturbance to nesting shorebirds. In addition, all construction pipes that are placed on the shoreline shall be located as far landward as possible. Pipes that are stored temporarily shall be placed off the shoreline to the maximum extent possible. If it will be necessary to extend construction pipes past a known shorebird nesting site or an over-wintering area for piping plovers, then those pipes should be placed landward of the site whenever possible before birds are active in that area. No pipe or sand shall be placed seaward of a shorebird nesting site during the shorebird nesting season.

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK

2011

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.

b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.

d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.

e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or in Vero Beach (1-772-562-3909) for south Florida, and emailed to FWC at ImperiledSpecies@myFWC.com.

f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8½ " by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at http://www.myfwc.com/WILDLIFEHABITATS/manatee_sign_vendors.htm. Questions concerning these signs can be forwarded to the email address listed above.

CAUTION: MANATEE HABITAT

All project vessels

IDLE SPEED / NO WAKE

When a manatee is within 50 feet of work
all in-water activities must

SHUT DOWN

Report any collision with or injury to a manatee:

Wildlife Alert:

1-888-404-FWCC(3922)

cell *FWC or #FWC

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

LAUREL M. LEE
Secretary of State

Angela E. Dunn
Planning and Policy Division
Chief, Environmental Branch
701 San Marco Blvd.
Jacksonville, Florida 32207

September 26, 2019

RE: DHR Project File No.: 2019-5234, Received by DHR: August 29, 2019
Draft Flagler County Shore Protection Project Intensive Cultural Resources Assessment Survey

To Whom It May Concern:

The Florida State Historic Preservation Officer reviewed the referenced project for possible effects on historic properties listed, or eligible for listing, on the *National Register of Historic Places.* The review was conducted in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties.*

In June and July of 2019, Panamerican Consultants, Inc., (PCI) conducted the above referenced cultural resource assessment survey (CRAS) on behalf of the U.S. Army Corps of Engineers (Corps) in support of the *Flagler County Shore Protection Project*. The terrestrial fieldwork consisted of a magnetometer survey and subsequent shovel testing of the Beach Placement Area. PCI encountered no cultural material during the terrestrial survey. The submerged cultural resource survey consisted of a comprehensive remote sensing survey of the both the Nearshore Placement Area and Borrow Area 3A. PCI identified three (3) targets in the Nearshore Placement Area which have the potential to represent significant historic cultural resources. PCI recommended avoidance of the identified targets by any adverse project activities and stated that if avoidance is not possible, the targets should be further investigated by archaeological divers.

Based on the results of the cultural resources survey, the Corps determined that the proposed undertaking will have no effect to historic properties, contingent upon the maintained avoidance of Target USACE-0130 with a 150 foot buffer, and the avoidance of Target UASCE-0131 and Target USACE-0132 with a 100 foot buffer.

Based on the information provided, our office concurs with the Corps' determination that the proposed project will have no adverse effect to historic properties listed, eligible, or potentially eligible for listing in the NRHP contingent upon the continued avoidance of Target USACE-0130 with a 150 foot buffer, and Targets USACE-0131 and USACE-0132 with a 100 foot buffer. If avoidance of these three (3) targets is not feasible, additional investigation to identify and evaluate the significance of these

targets and additional consultation with our office is needed. We find the submitted report complete and sufficient in accordance with Chapter 1A-46, *Florida Administrative Code*.

If you have any questions, please contact Kelly L. Chase, Historic Sites Specialist, by email at *Kelly.Chase@dos.myflorida.com*, or by telephone at 850.245.6425 or 800.847.7278.

Sincerely,

Jason Aldridge
For

Timothy A Parsons, Ph.D.
Director, Division of Historical Resources
& State Historic Preservation Officer

From:	Bradley Mueller
To:	Dunn, Angela E CIV USARMY CESAJ (USA)
Cc:	Clark, Ryan N CIV USARMY CESAJ (USA); David Echeverry
Subject:	[Non-DoD Source] Flagler County Shore Protection Project, Florida
Date:	Wednesday, September 25, 2019 10:51:13 AM
Attachments:	image005.png

September 25, 2019

Ms. Angela E. Dunn

Chief, Environmental Branch

Planning and Policy Division

Department of the Army

Corps of Engineers, Jacksonville District

701 San Marco Boulevard

Jacksonville, FL 32207-8915

Subject: Flagler County Shore Protection Project, Florida

THPO Compliance Tracking Number: 0031617

Dear Ms. Dunn,

Thank you for contacting the Seminole Tribe of Florida – Tribal Historic Preservation Office (STOF-THPO), Compliance Section regarding the Flagler County Shore Protection Project, Florida. The proposed undertaking does fall within the STOF Area of Interest. We have reviewed the documents you provided and have no objections at this time provided the target buffers for anomalies USACE-0130, 0131, and 0132 are maintained. Please notify us if any archaeological, historical, or burial resources are inadvertently discovered during project implementation and feel free to contact us with any questions or concerns.

Respectfully,

Bradley M. Mueller, MA, Compliance Specialist

STOF-THPO, Compliance Review Section

30290 Josie Billie Hwy, PMB 1004

Clewiston, FL 33440

Office: 863-983-6549 ext 12245

Fax: 863-902-1117

Email: bradleymueller@semtribe.com <mailto:bradleymueller@semtribe.com>

Web: Blockedwww.stofthpo.com

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8915

AUG 2 3 2019

Planning and Policy Division
Environmental Branch

Mr. Kevin Donaldson, Tribal Representative
NAGPRA, Section 106
Miccosukee Tribe of Indians of Florida
P.O. Box 44021
Tamiami Station
Miami, Florida 33144

Re: Draft Flagler County Shore Protection Project Intensive Cultural Resources Assessment Survey

Dear Mr. Donaldson:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) and the Bureau of Ocean Energy Management are proposing to dredge from the offshore borrow area (Borrow Area 3A) and construct a nine foot dune and beach profile extension along 2.6 miles of shoreline in Flagler Beach, which prevents damage to State Road A1A (SR A1A) in Flagler County, Florida (Figure 1). The project would extend the dune to a height of nine feet, and extend the beach profile seaward from, SR A1A along approximately 2.6 miles of shoreline from survey monuments R80 to R94 extending northeast from A1A approximately 2296 feet seaward of the mean low water line. The Borrow Area 3A is located in open water approximately 11 miles east from the Flagler Beach shoreline.

The project area has experienced few cultural resource surveys over the last decade. Current reviews indicated that no submerged cultural resources investigations had been conducted within or near the Flagler Beach Nearshore Placement Area or Borrow Area 3A. Four nearby archaeological and architectural surveys have been performed east of the shoreline survey, but were not concerned with submerged cultural resources. In 2009, Brockington and Associates, Inc. conducted a Phase I cultural resource investigation of 10.2 miles of highly eroded shoreline along Flagler County which included a portion of the current project area. The survey utilized background research, shovel tests (a total of 656 at 25-meter intervals), and metal detector sweeps along the coastline searching for archaeological and architectural resources. Based on the results of that survey, the Corps had determined that placement of dredged material on the beach posed no effect to historic properties listed or eligible for listing in the National Register of Historic Places. The Florida State Historic Preservation Officer concurred with the Corps' determination in a letter dated 28 February, 2012 (DHR 2012-03934-C).

Due to the updated Borrow Area 3A, Nearshore Placement Area and several known submerged cultural resources in proximity to, but outside of the project area, the current project was determined to have a moderate potential for containing intact cultural resources. As such, the Corps contracted Panamerican Consultants, Inc. (Panamerican) to identify historic properties that may be located within the project area. This survey is documented in the enclosed draft report: *Flagler County Shore Protection Project Intensive Cultural Resources Assessment Survey*. Panamerican conducted a comprehensive remote sensing survey of both the Nearshore Placement Area and Borrow Area 3A, as well as a terrestrial magnetometer survey of the Nearshore Placement Area. Panamerican completed the fieldwork on 21 July 2019. While findings were negative for the terrestrial survey of the Nearshore Placement Area and remote sensing survey of Borrow Area 3A, comprehensive analysis of the remote sensing data indicates three targets (Corps-0130, Corps-0131, Corps-0132) consisting of anomaly clusters within the Nearshore Placement Area, are considered to have the potential to represent significant historic cultural resources. The Corps has since buffered these areas from the center of each target, to ensure adequate resource protection and where no spudding or anchoring will be permitted.

Table 1. Potentially Significant Targets and Avoidance Area Center Coordinates.

Target	USACE No. Anomalies	Anomalies	Easting	Northing	Avoidance Radius (feet)
1	USACE-0130	BPM06, BPM07	616949	1869172	150
2	USACE-0131	BPM19, BPM20	618346	1865680	100
3	USACE-0132	BPM23, BPM24	619674	1864020	100

Based on the above stated information, the Corps and BOEM are making a determination of no effect to historic properties contingent on maintaining all target buffers (Table 1). Pursuant to Section 106 of the National Historic Preservation Act (16 USC 470), as amended and it's implementing regulations (36 CFR 800), the Corps kindly requests your comments on the determination of no effect within 30 days from receipt of this letter. If there are any questions or comments, please contact Mr. Ryan Clark at (904) 232-3634 or by e-mail at Ryan.N.Clark@usace.army.mil.

Sincerely,

Angela E. Dunn
Chief, Environmental Branch

Enclosure

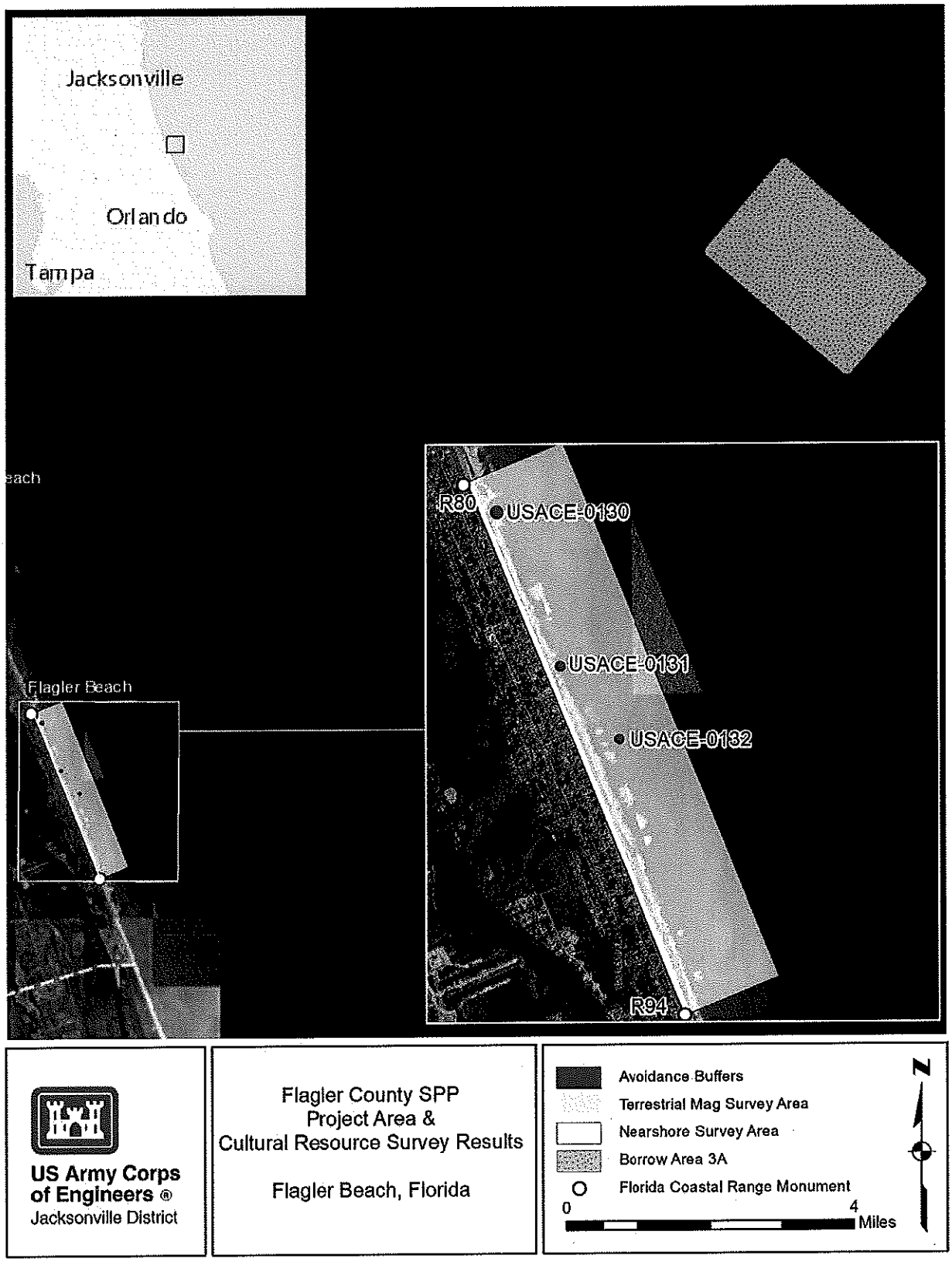


Figure 1. Map of the project area for Flagler County SPP

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FL 32207-8175

Planning and Policy Division
Environmental Branch

AUG 2 8 2019

Tim Parsons, Ph.D.
State Historic Preservation Officer
Division of Historical Resources
500 South Bronough Street
Tallahassee, Florida 32399-0250

Re: Draft Flagler County Shore Protection Project Intensive Cultural Resources Assessment Survey

Dear Dr. Parsons:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) and the Bureau of Ocean Energy Management are proposing to dredge from the offshore borrow area (Borrow Area 3A) and construct a nine foot dune and beach profile extension along 2.6 miles of shoreline in Flagler Beach, which prevents damage to State Road A1A (SR A1A) in Flagler County, Florida (Figure 1). The project would extend the dune to a height of nine feet, and extend the beach profile seaward from, SR A1A along approximately 2.6 miles of shoreline from survey monuments R80 to R94 extending northeast from A1A approximately 2296 feet seaward of the mean low water line. The Borrow Area 3A is located in open water approximately 11 miles east from the Flagler Beach shoreline.

The project area has experienced few cultural resource surveys over the last decade. Current reviews indicated that no submerged cultural resources investigations had been conducted within or near the Flagler Beach Nearshore Placement Area or Borrow Area 3A. Four nearby archaeological and architectural surveys have been performed east of the shoreline survey, but were not concerned with submerged cultural resources. In 2009, Brockington and Associates, Inc. conducted a Phase I cultural resource investigation of 10.2 miles of highly eroded shoreline along Flagler County which included a portion of the current project area. The survey utilized background research, shovel tests (a total of 656 at 25-meter intervals), and metal detector sweeps along the coastline searching for archaeological and architectural resources. Based on the results of that survey, the Corps had determined that placement of dredged material on the beach posed no effect to historic properties listed or eligible for listing in the National Register of Historic Places. The Florida State Historic Preservation Officer

Due to the updated Borrow Area 3A, Nearshore Placement Area and several known submerged cultural resources in proximity to, but outside of the project area, the current project was determined to have a moderate potential for containing intact cultural resources. As such, the Corps contracted Panamerican Consultants, Inc. (Panamerican) to identify historic properties that may be located within the project area. This survey is documented in the enclosed draft report: *Flagler County Shore Protection Project Intensive Cultural Resources Assessment Survey*. Panamerican conducted a comprehensive remote sensing survey of both the Nearshore Placement Area and Borrow Area 3A, as well as a terrestrial magnetometer survey of the Nearshore Placement Area. Panamerican completed the fieldwork on 21 July 2019. While findings were negative for the terrestrial survey of the Nearshore Placement Area and remote sensing survey of Borrow Area 3A, comprehensive analysis of the remote sensing data indicates three targets (Corps-0130, Corps-0131, Corps-0132) consisting of anomaly clusters within the Nearshore Placement Area, are considered to have the potential to represent significant historic cultural resources. The Corps has since buffered these areas from the center of each target, to ensure adequate resource protection and where no spudding or anchoring will be permitted.

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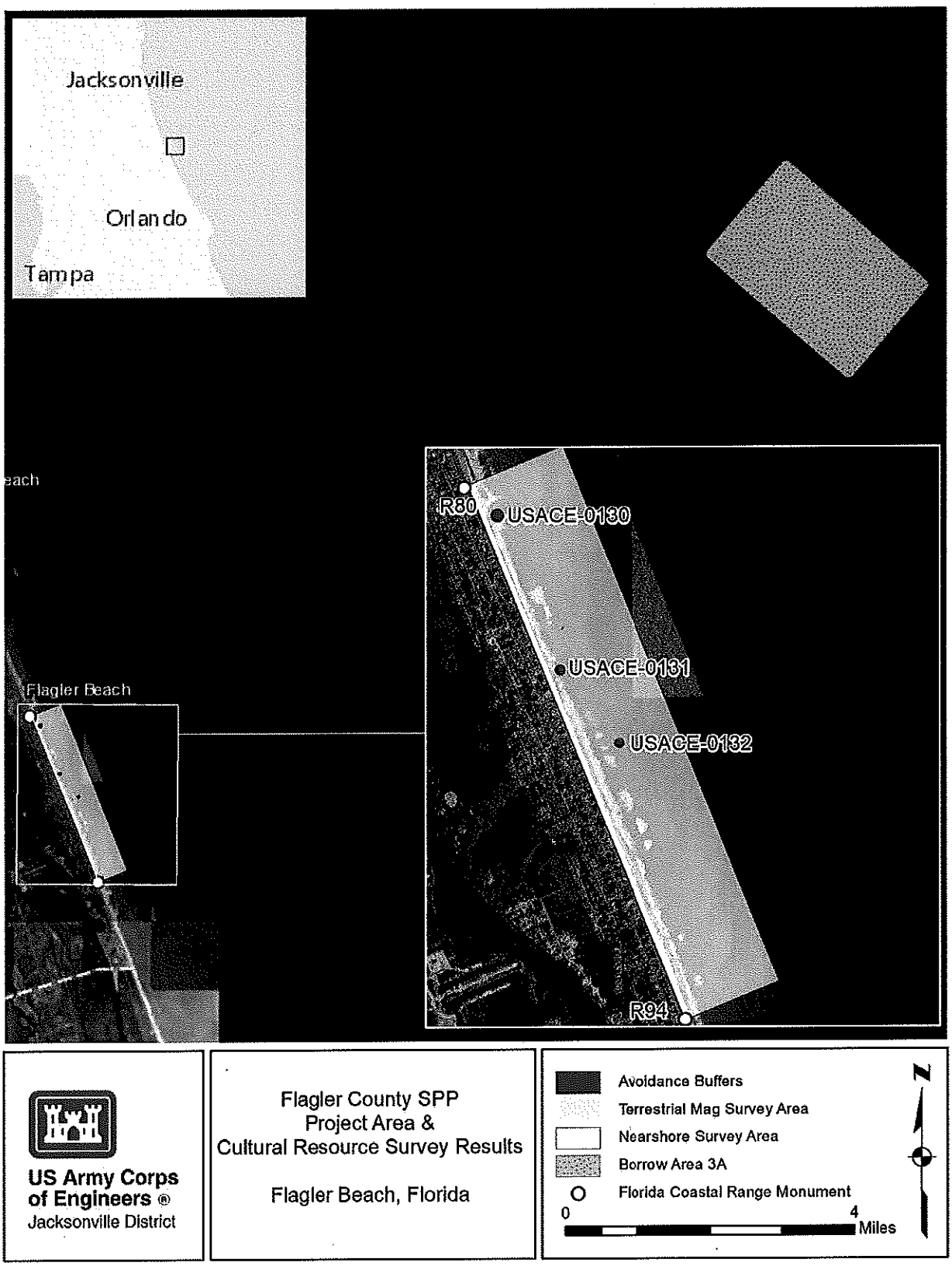
Sincerely,

Angela E. Dunn
Chief, Environmental Branch

Enclosure



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DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8915

Planning and Policy Division
Environmental Branch

AUG 28 2019

Mr. Theodore Isham
Historic Preservation Officer
Seminole Nation of Oklahoma
PO Box 1498
Wewoka, Ok 74884

Re: Draft Flagler County Shore Protection Project Intensive Cultural Resources Assessment Survey

Dear Mr. Isham:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) and the Bureau of Ocean Energy Management are proposing to dredge from the offshore borrow area (Borrow Area 3A) and construct a nine foot dune and beach profile extension along 2.6 miles of shoreline in Flagler Beach, which prevents damage to State Road A1A (SR A1A) in Flagler County, Florida (Figure 1). The project would extend the dune to a height of nine feet, and extend the beach profile seaward from, SR A1A along approximately 2.6 miles of shoreline from survey monuments R80 to R94 extending northeast from A1A approximately 2296 feet seaward of the mean low water line. The Borrow Area 3A is located in open water approximately 11 miles east from the Flagler Beach shoreline.

The project area has experienced few cultural resource surveys over the last decade. Current reviews indicated that no submerged cultural resources investigations had been conducted within or near the Flagler Beach Nearshore Placement Area or Borrow Area 3A. Four nearby archaeological and architectural surveys have been performed east of the shoreline survey, but were not concerned with submerged cultural resources. In 2009, Brockington and Associates, Inc. conducted a Phase I cultural resource investigation of 10.2 miles of highly eroded shoreline along Flagler County which included a portion of the current project area. The survey utilized background research, shovel tests (a total of 656 at 25-meter intervals), and metal detector sweeps along the coastline searching for archaeological and architectural resources. Based on the results of that survey, the Corps had determined that placement of dredged material on the beach posed no effect to historic properties listed or eligible for listing in the National Register of Historic Places.

The Florida State Historic Preservation Officer concurred with the Corps' determination in a letter dated 28 February, 2012 (DHR 2012-03934-C).

Due to the updated Borrow Area 3A, Nearshore Placement Area and several known submerged cultural resources in proximity to, but outside of the project area, the current project was determined to have a moderate potential for containing intact cultural resources. As such, the Corps contracted Panamerican Consultants, Inc. (Panamerican) to identify historic properties that may be located within the project area. This survey is documented in the enclosed draft report: *Flagler County Shore Protection Project Intensive Cultural Resources Assessment Survey*. Panamerican conducted a comprehensive remote sensing survey of both the Nearshore Placement Area and Borrow Area 3A, as well as a terrestrial magnetometer survey of the Nearshore Placement Area. Panamerican completed the fieldwork on 21 July 2019. While findings were negative for the terrestrial survey of the Nearshore Placement Area and remote sensing survey of Borrow Area 3A, comprehensive analysis of the remote sensing data indicates three targets (Corps-0130, Corps-0131, Corps-0132) consisting of anomaly clusters within the Nearshore Placement Area, are considered to have the potential to represent significant historic cultural resources. The Corps has since buffered these areas from the center of each target, to ensure adequate resource protection and where no spudding or anchoring will be permitted.

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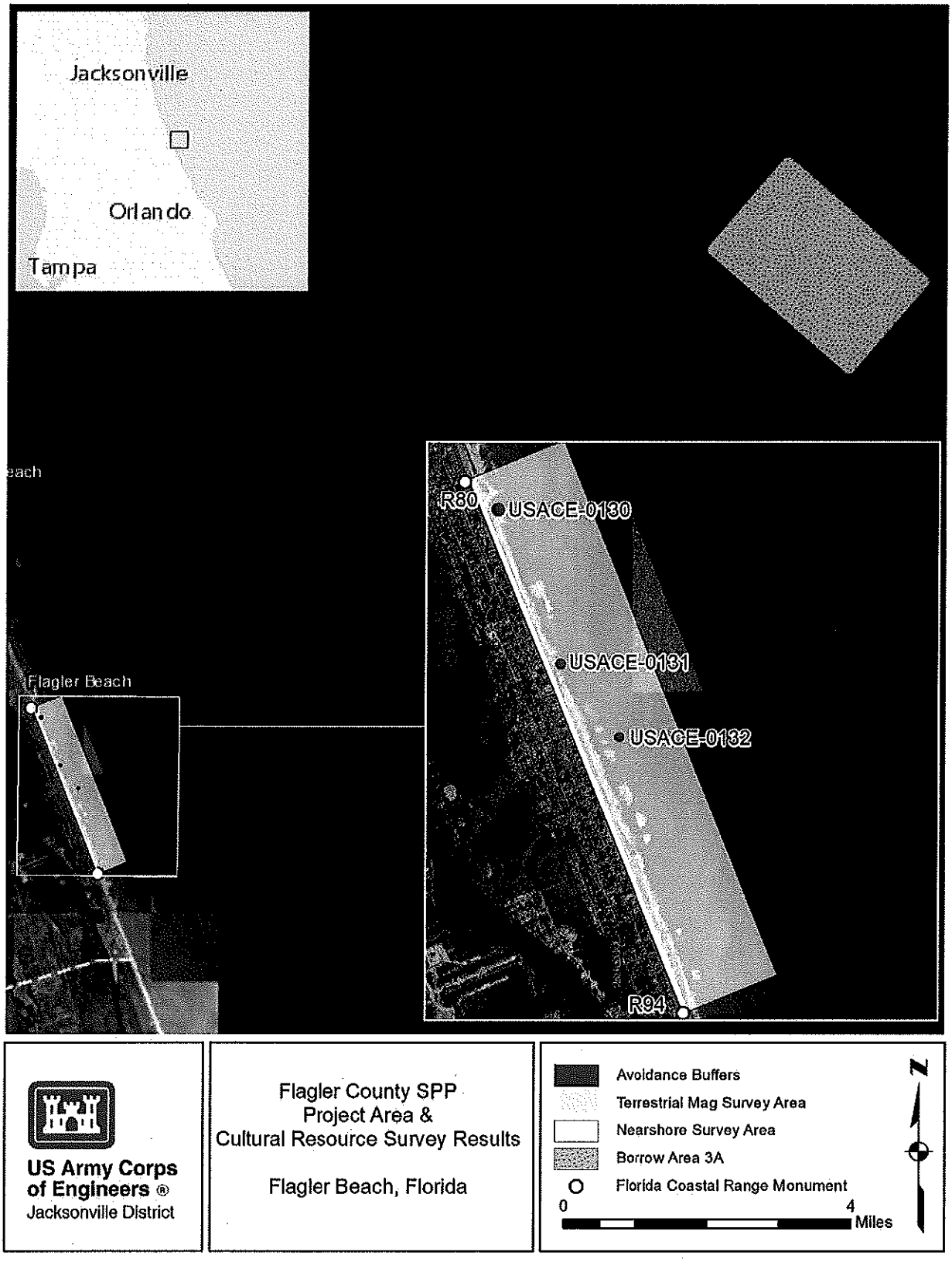
Based on the above stated information, the Corps and BOEM are making a determination of no effect to historic properties contingent on maintaining all target buffers (Table 1). Pursuant to Section 106 of the National Historic Preservation Act (16 USC 470), as amended and it's implementing regulations (36 CFR 800), the Corps kindly requests your comments on the determination of no effect within 30 days from receipt of this letter. If there are any questions or comments, please contact Mr. Ryan Clark at (904) 232-3634 or by e-mail at Ryan.N.Clark@usace.army.mil.

Sincerely,

Angela E. Dunn
Chief, Environmental Branch

Enclosure



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DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8915

AUG 28 2019

Planning and Policy Division
Environmental Branch

Dr. Paul Backhouse, THPO
Seminole Tribe of Florida
Tribal Historic Preservation Office
30290 Josie Billie Highway, PMP 1004
Clewiston, FL 33440

Re: Draft Flagler County Shore Protection Project Intensive Cultural Resources Assessment Survey

Dear Dr. Backhouse:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) and the Bureau of Ocean Energy Management are proposing to dredge from the offshore borrow area (Borrow Area 3A) and construct a nine foot dune and beach profile extension along 2.6 miles of shoreline in Flagler Beach, which prevents damage to State Road A1A (SR A1A) in Flagler County, Florida (Figure 1). The project would extend the dune to a height of nine feet, and extend the beach profile seaward from, SR A1A along approximately 2.6 miles of shoreline from survey monuments R80 to R94 extending northeast from A1A approximately 2296 feet seaward of the mean low water line. The Borrow Area 3A is located in open water approximately 11 miles east from the Flagler Beach shoreline.

The project area has experienced few cultural resource surveys over the last decade. Current reviews indicated that no submerged cultural resources investigations had been conducted within or near the Flagler Beach Nearshore Placement Area or Borrow Area 3A. Four nearby archaeological and architectural surveys have been performed east of the shoreline survey, but were not concerned with submerged cultural resources. In 2009, Brockington and Associates, Inc. conducted a Phase I cultural resource investigation of 10.2 miles of highly eroded shoreline along Flagler County which included a portion of the current project area. The survey utilized background research, shovel tests (a total of 656 at 25-meter intervals), and metal detector sweeps along the coastline searching for archaeological and architectural resources. Based on the results of that survey, the Corps had determined that placement of dredged material on the beach posed no effect to historic properties listed or eligible for listing in the National Register of Historic Places. The Florida State Historic Preservation Officer concurred with the Corps' determination in a letter dated 28 February, 2012 (DHR 2012-03934-C).

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Based on the above stated information, the Corps and BOEM are making a determination of no effect to historic properties contingent on maintaining all target buffers (Table 1). Pursuant to Section 106 of the National Historic Preservation Act (16 USC 470), as amended and it's implementing regulations (36 CFR 800), the Corps kindly requests your comments on the determination of no effect within 30 days from receipt of this letter. If there are any questions or comments, please contact Mr. Ryan Clark at (904) 232-3634 or by e-mail at Ryan.N.Clark@usace.army.mil.

Sincerely,

Angela E. Dunn
Chief, Environmental Branch

Enclosure

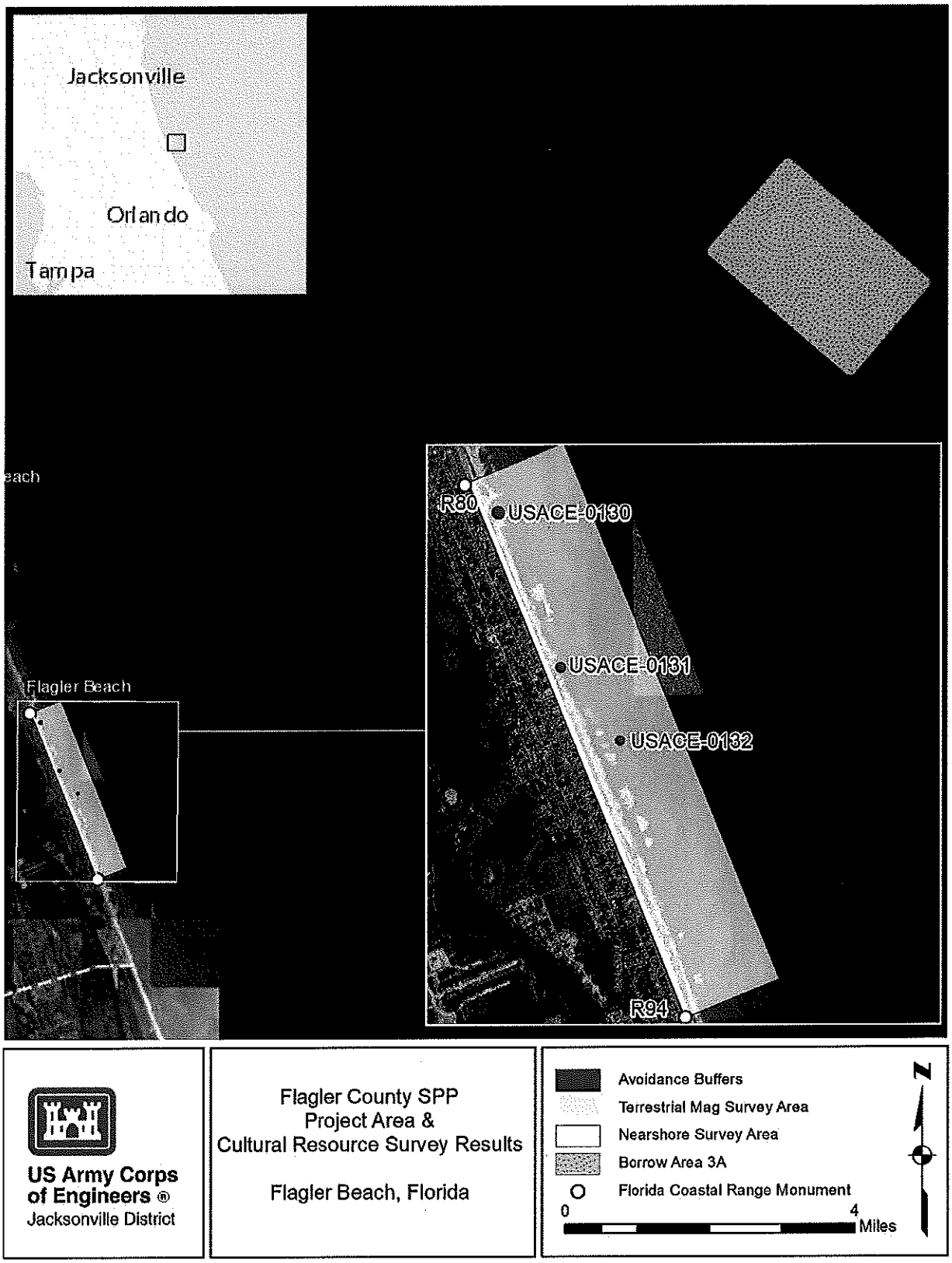

Figure 1. Map of the project area for Flagler County SPP

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8915

AUG 2 6 2019

Planning and Policy Division
Environmental Branch

Ms. Janet Maylen, THPO
Thlopthlocco Tribal Town
P.O. Box 188
Okemah, OK 74859

Re: Draft Flagler County Shore Protection Project Intensive Cultural Resources Assessment Survey

Dear Ms. Maylen:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) and the Bureau of Ocean Energy Management are proposing to dredge from the offshore borrow area (Borrow Area 3A) and construct a nine foot dune and beach profile extension along 2.6 miles of shoreline in Flagler Beach, which prevents damage to State Road A1A (SR A1A) in Flagler County, Florida (Figure 1). The project would extend the dune to a height of nine feet, and extend the beach profile seaward from, SR A1A along approximately 2.6 miles of shoreline from survey monuments R80 to R94 extending northeast from A1A approximately 2296 feet seaward of the mean low water line. The Borrow Area 3A is located in open water approximately 11 miles east from the Flagler Beach shoreline.

The project area has experienced few cultural resource surveys over the last decade. Current reviews indicated that no submerged cultural resources investigations had been conducted within or near the Flagler Beach Nearshore Placement Area or Borrow Area 3A. Four nearby archaeological and architectural surveys have been performed east of the shoreline survey, but were not concerned with submerged cultural resources. In 2009, Brockington and Associates, Inc. conducted a Phase I cultural resource investigation of 10.2 miles of highly eroded shoreline along Flagler County which included a portion of the current project area. The survey utilized background research, shovel tests (a total of 656 at 25-meter intervals), and metal detector sweeps along the coastline searching for archaeological and architectural resources. Based on the results of that survey, the Corps had determined that placement of dredged material on the beach posed no effect to historic properties listed or eligible for listing in the National Register of Historic Places. The Florida State Historic Preservation Officer concurred with the Corps' determination in a letter dated 28 February, 2012 (DHR 2012-03934-C).

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2	USACE-0131	BPM19, BPM20	618346	1865680	100
3	USACE-0132	BPM23, BPM24	619674	1864020	100

Based on the above stated information, the Corps and BOEM are making a determination of no effect to historic properties contingent on maintaining all target buffers (Table 1). Pursuant to Section 106 of the National Historic Preservation Act (16 USC 470), as amended and it's implementing regulations (36 CFR 800), the Corps kindly requests your comments on the determination of no effect within 30 days from receipt of this letter. If there are any questions or comments, please contact Mr. Ryan Clark at (904) 232-3634 or by e-mail at Ryan.N.Clark@usace.army.mil.

Sincerely,

Angela E. Dunn
Chief, Environmental Branch

Enclosure

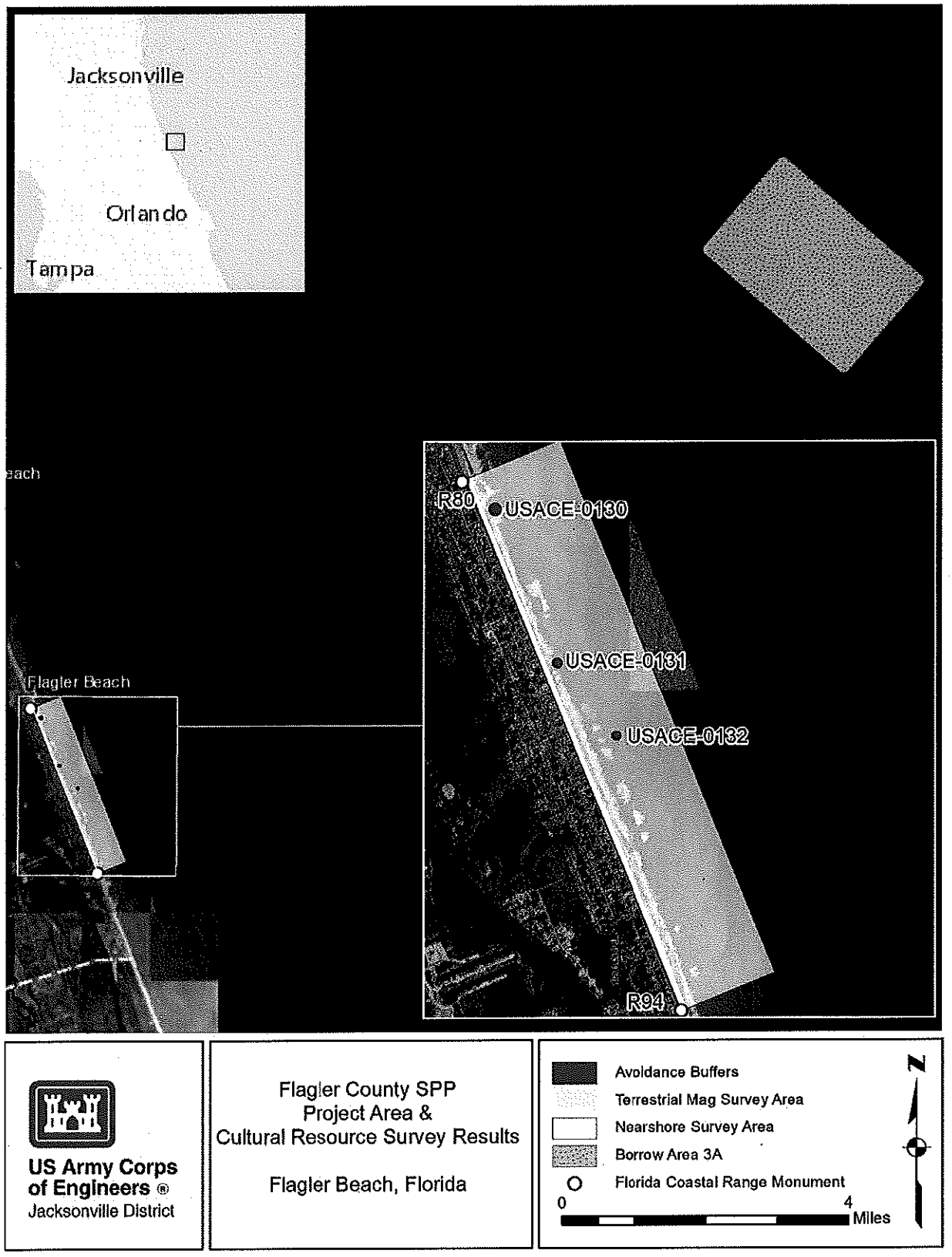

Figure 1. Map of the project area for Flagler County SPP

APPENDIX B

Public and Agency Comments and USACE Responses

Supplemental Environmental Assessment
Flagler County Coastal Storm Risk Management Project in Flagler County, Florida

US Army Corps of Engineers
JACKSONVILLE DISTRICT

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Table 1. Summary of U.S. Army Corps of Engineers, Jacksonville District (USACE) responses to comments received during the 30-day agency and public review and comment period (October 16, 2023 through November 15, 2023) of the proposed Finding of No Significant Impact (FONSI) and draft Supplemental Environmental Assessment (SEA) for the Flagler County Coastal Storm Risk Management (CSRM) Project in Flagler County, Florida.

#	Commenter	Comment	Response
1	Chris Stahl, Florida State Clearinghouse, Florida Department of Environmental Protection (FDEP)	The Florida Department of State has noted that in table 6-1 for Cultural Resources they could not find any avoidance buffers for Borrow Area 3A, although they did find avoidance buffers for Borrow Area 2 and sensitive areas within the potential sand Placement Area.	Table 6-1 of the draft SEA incorrectly stated the location of buffers. It has been corrected to reflect that the avoidance buffers are located within the nearshore placement area.
2	Chris Stahl, Florida State Clearinghouse, FDEP	Also, the USACE has determined that additional information from the County's modified Department of Army permit is needed to determine effects to sites, structures, and objects of known historical, architectural, or archaeological significance. They would like to be updated once the USACE has processed that additional information.	Language has been updated in the Final SEA to reflect USACE's determination that Flagler County's project components poses no effect to cultural resources.
3	Josh Cucinella, Land Use Planning Program Administrator, Florida Fish and Wildlife Conservation Commission (FWC)	FWC staff recommends that the dune crest height be a minimum of 18 inches below the elevation of State Road A1A and that a barrier be installed between the road and the dune to restrict marine turtles from potentially accessing the road.	Sand fencing will be placed parallel to the shore at the rear portion of the dune (directly off the edge of A1A) along the full project template (including both NFS and federal components) to prevent sand from blowing onto State Road A1A, as well as nearby homeowners' properties. This structure may act as a deterrent for marine turtles, and further restrict their access to the road.
4	Josh Cucinella, Land Use Planning Program Administrator, FWC	The placement of sand over the exposed revetment may present an entrapment risk, contribute to obstructed nesting attempts, and potentially increase disorientations for marine turtles. FWC staff are available to discuss these potential hazards and can be contacted at marineturtle@myfwc.com.	The project includes daily monitoring for nesting sea turtles. Additionally, USACE is implementing applicable Reasonable and Prudent Measures (RPMs) and Terms and Conditions (T&Cs) of the 2015 Shore Protection Activities along the Coast of Florida State Programmatic Biological Opinion (SPBO). Adhering to these requirements will minimize risks to nesting sea turtles and hatchlings. USACE will continue to coordinate with U.S. Fish and Wildlife Service as well as FWC staff to ensure best management practices are being implemented.

#	Commenter	Comment	Response
5	Josh Cucinella, Land Use Planning Program Administrator, FWC	FWC staff concur with the intentions of USACE to follow the terms of all BOs that apply to the proposed project activities. FWC staff anticipates providing recommended conditions for listed species and habitat protection to the state regulatory agency during the state permitting process for this project.	Thank you for your support. USACE will adhere to required permitting conditions.
6	Josh Cucinella, Land Use Planning Program Administrator, FWC	FWC staff recommend construction activities occur outside of the breeding season (April 1 through September 1). The *Species Conservation Measures and Permitting Guidelines for American Oystercatcher, Snowy Plover, Black Skimmer, and Least Tern* (https://myfwc.com/media/29766/ibnb-guidelines.pdf) can be referenced for additional biological information, measures for avoiding impacts, and conservation practices. If construction activities must occur during the breeding season, if the measures outlined in the *Guidelines* are not feasible, or imperiled beach nesting birds are observed on the subject property at any time throughout the duration of the project activities, the USACE may contact the FWC Regional Shorebird Biologist.	Due to duration, timing, and ordering of construction of the Flagler County CSRM, work must occur during the breeding season. USACE reviewed the measures outlined in the *Guidelines* and determined that the environmental commitments included in the project capture the recommended measures in the *Guidelines*. USACE appreciates FWC's recommendations to reference the *Guidelines* and coordinate sightings of imperiled beach nesting birds the FWC Regional Shorebird Biologist.
7	Josh Cucinella, Land Use Planning Program Administrator, FWC	This site may also contain habitat suitable for the federally listed species. FWC staff recommends coordination with USFWS North Florida Ecological Services Office (ESO) as necessary for information regarding potential impacts to these species.	USACE will maintain coordination with the USFWS North Florida ESO as necessary for information regarding potential impacts to federally listed species throughout project construction.

#	Commenter	Comment	Response
9	Roxane Dow, Office of Resiliency and Coastal Protection, FDEP	The Beaches, Inlets and Ports Program has already modified the Corps permit and is in the process of modifying the Flagler County permit to reflect these changes. We agree with the Corps finding that this project as currently designed is consistent with the Florida Coastal Zone Management Program. We look forward to its successful construction.	Thank you for your continued efforts and support.
10	Alya Singh-White, U.S. Environmental Protection Agency (USEPA)	The USEPA recommends continued consultation with Florida Department of Environmental Protection (FDEP) regarding potential water quality impacts from the proposed project and the implementation of turbidity monitoring.	USACE will ensure requirements are incorporated into the project's plans and specifications and will continue to coordinate with FDEP to ensure all turbidity monitoring required by the permits is appropriately implemented.
11	Alya Singh-White, USEPA	The USEPA defers to the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) on Endangered Species Act (ESA) compliance and encourages continued coordination through the project's duration including ongoing maintenance and operations.	USACE will continue to coordinate with NMFS and USFWS to ensure compliance with ESA throughout the project.
12	Chris Maiocco, Flagler County resident	What is the proposed timing for the sand replenishment?	The contractor will mobilize early July 2024, and USACE anticipates sand placement to begin in late July 2024. The contractor will most likely move north to south along the beach (starting 2nd St. North heading towards Gamble Rodgers State Park as the end point).
13	Chris Maiocco, Flagler County resident	Will my current walkover be disturbed in any way?	The contractor will place sand around, underneath, and carefully on the stairs of the walkway to create the dune feature. This helps avoid any weak spots for water to penetrate during a major storm event. It is important to keep the dune at a consistent height along the footprint. Over a few weeks, the sand will naturally blow off the walkway with wind and wave action.

#	Commenter	Comment	Response
14	Chris Maiocco, Flagler County resident	Will our access to the beach in front of our house be limited only when the sand replenishment is in front of our house or during the entire project?	The contractor will close approximately 1,500 feet segments at a time during beach construction. Once these sections are completed (approximately 7-10 days), the fencing is removed, and that section is re-opened to the public. The contractor is required to produce a weekly progress map so residents can see when the contractor anticipates working in each area. This information will be posted on USACE Jacksonville District's social media pages (e.g., Facebook, Instagram, LinkedIn) as well as various Flagler County/City of Flagler Beach public websites.
15	Pace Wilber, National Oceanic and Atmospheric Administration (NOAA) – National Marine Fisheries Service (NMFS)	NMFS elected to not comment on the EA.	Thank you for the notification.

FLORIDA DEPARTMENT OF Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

November 29, 2023

Julia Lombardo
U.S. Army Corps of Engineers
Environmental Branch
Jacksonville District
701 San Marco Boulevard
Jacksonville, Florida 32207-8175

RE: Department of the Army, Jacksonville District Corps of Engineers -Draft Supplemental Environmental Assessment Flagler County Coastal Storm Risk Management Flagler County, Florida
SAI# FL202310179931C

Dear Julia:
Florida State Clearinghouse staff has reviewed the proposal under the following authorities: Presidential Executive Order 12372; § 403.061(42), Florida Statutes; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended and concurs that it appropriately outlines the information that will be developed after implementation of the deviation for submittal to the State.

The Florida Department of Environmental Protection and the Florida Fish and Wildlife Conservation Commission have reviewed the proposed action and submitted comments. As a courtesy, these have been attached to this letter and are incorporated hereto.

The Florida Department of State has noted that in table 6-1 for Cultural Resources: they could not find any avoidance buffers for Borrow Area 3A, although they did find avoidance buffers for Borrow Area 2 and sensitive areas within the potential sand Placement Area. Also, the USACE has determined that additional information from the County's modified Department of Army permit is needed to determine effects to sites, structures, and objects of known historical, architectural, or archaeological significance. They would like to be updated once

the USACE has processed that additional information. Please let Michael DuBose Michael.DuBose@DOS.MyFlorida.Com know if there are any questions or concerns.

Based on the information submitted and minimal project impacts, the project is consistent with the Florida Coastal Management program (FCMP) thus far.

Thank you for the opportunity to review the proposed project. If you have any questions or need further assistance, please don't hesitate to contact me at (850) 717-9076.

Sincerely,

Chris Stahl

Chris Stahl, Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3900 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400
ph. (850) 717-9076
State.Clearinghouse@floridadep.gov

Florida Fish and Wildlife Conservation Commission

Commissioners
Rodney Barreto
Chairman
Coral Gables

Steven Hudson
Vice Chairman
Fort Lauderdale

Preston Farrior
Tampa

Gary Lester
Oxford

Albert Maury
Coral Gables

Gary Nicklaus
Jupiter

Sonya Rood
St. Augustine

Office of the Executive Director
Roger A. Young
Executive Director

Jessica Crawford
Chief of Staff

850-487-3796
850-921-5786 FAX

Managing fish and wildlife resources for their long-term well-being and the benefit of people.

620 South Meridian Street
Tallahassee, Florida
32399-1600
Voice: 850-488-4676

Hearing/speech-impaired:
800-955-8771 (T)
800 955-8770 (V)

MyFWC.com

November 16, 2023

Chris Stahl
Florida State Clearinghouse
Florida Department of Environmental Protection
3800 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400
Chris.Stahl@dep.state.fl.us
State.Clearinghouse@dep.state.fl.us

RE: Flagler County Coastal Storm Risk Management Draft Supplemental Environmental Assessment, (SAI # FL202310179931)

Dear Mr. Stahl:

Florida Fish and Wildlife Conservation Commission (FWC) staff reviewed the Flagler County Coastal Storm Risk Management (CSRM) Draft Supplemental Environmental Assessment (SEA) and provides the following comments and recommendations for consideration in accordance with Chapter 379, Florida Statutes, and pursuant to the federal National Environmental Policy Act (NEPA), the federal Coastal Zone Management Act, and the State of Florida Coastal Management Program.

Project Description

The U.S. Army Corps of Engineers (USACE) and the Bureau of Ocean Energy Management (BOEM) have conducted an SEA which addresses the increase in sand volume and expansion of the constructed berm for the Flagler County CSRM Project. The proposed project includes beach nourishment along approximately 2.6 miles of the Flagler County shoreline from R-77 to R-99, staging and access areas, and the construction of temporary access ramps. Sand for the beach nourishment will be dredged from Borrow Area 3A located approximately 10.25 miles from shore. Sand for the temporary access ramps will be truck hauled from an approved and permitted upland mine.

The project was previously authorized in 2014 for 330,000 cubic yards (cy) of sand dredged from Borrow Areas 2A and 2C. Since 2014, the Flagler County shoreline has been impacted by several hurricanes causing a greater amount of erosion than was previously assumed and analyzed in 2014. The project is now estimated to dredge approximately 2.1 million cy of sand utilizing Borrow Area 3A. Borrow Areas 2A and 2C no longer meet the compatibility standards of sand volume capacity to fulfill the initial nourishment, as well as the subsequent 11-year nourishment interval requirements. This SEA evaluates whether changes in the current scope, new circumstances not previously analyzed, and information not previously available contribute to a determination of significantly different environmental effects.

Potentially Affected Resources

The SEA identifies suitable habitat for multiple listed and managed species that have the potential to occur within the areas of the shoreline nourishment project and Borrow Area 3A, and notes that the project areas are located within designated critical habitat for the loggerhead sea turtle (*Caretta caretta*, Federally Threatened [FT]) and North Atlantic right whale (*Eubalaena glacialis*, Federally Endangered [FE]). During presence-absence surveys conducted in staging and access areas in August 2023, two active and one inactive gopher tortoise (*Gopherus polyphemus*, State

Threatened [ST]) burrows were observed and proper gopher tortoise relocation techniques will be implemented during construction.

The USACE has determined that the project "may affect and is likely to adversely affect" marine turtles and will follow the appropriate Biological Opinions (BO) for these species. The USACE will also follow appropriate BOs for marine mammals and sharks and rays as well as the U.S. Fish and Wildlife Service's *Standard Manatee Conditions for In-Water Work (2011)*. Therefore, the USACE has determined the proposed project "may affect but is not likely to adversely affect" (MANLAA) marine mammals and sharks and rays. The shoreline in the area is not considered optimal for rufa red knot (*Calidris canutus rufa*, FT) or piping plover (*Charadrius melodus*, FT); therefore, the USACE has determined the proposed project is MANLAA for both species.

Comments and Recommendations

Marine Turtles

The beaches in Flagler County provide important habitat for the loggerhead, green (*Chelonia mydas*, FE), and leatherback sea turtles (*Dermochelys coriacea*, FE). FWC staff recommends that the dune crest height be a minimum of 18 inches below the elevation of State Road A1A and that a barrier be installed between the road and the dune to restrict marine turtles from potentially accessing the road. The placement of sand over the exposed revetment may present an entrapment risk, contribute to obstructed nesting attempts, and potentially increase disorientations for marine turtles. FWC staff are available to discuss these potential hazards and can be contacted at marineturtle@myfwc.com. FWC staff concur with the intentions of USACE to follow the terms of all BOs that apply to the proposed project activities. FWC staff anticipates providing recommended conditions for listed species and habitat protection to the state regulatory agency during the state permitting process for this project.

Least Terns

The Flagler County CSRM project is within 12 miles of recent breeding sites for least terns (*Sternula antillarum*, ST). Additionally, during the 2023 season, least terns nested at Gamble Rogers which is immediately south of the project boundary. The project site may also provide available food resources for this species. Since nesting shorebird and seabird colonies move from year to year as available habitat changes, there is a chance that imperiled seabirds (and potentially shorebirds) may be attracted to the open/re-nourished area of the proposed project site. For this reason, FWC staff recommends construction activities occur outside of the breeding season (April 1 through September 1). The *Species Conservation Measures and Permitting Guidelines for American Oystercatcher, Snowy Plover, Black Skimmer, and Least Tern* (https://myfwc.com/media/29766/ibnb-guidelines.pdf) can be referenced for additional biological information, measures for avoiding impacts, and conservation practices. If construction activities must occur during the breeding season, if the measures outlined in the *Guidelines* are not feasible, or imperiled beach nesting birds are observed on the subject property at any time throughout the duration of the project activities, the USACE may contact the FWC Regional Shorebird Biologist, Hailey Dedmon, at 352-644-3539 or by email at Hailey.Dedmon@MyFWC.com.

Federal Species

This site may also contain habitat suitable for the federally listed species identified above. FWC staff recommends coordination with USFWS North Florida Ecological Services Office (ESO) as necessary for information regarding potential impacts to these species. The USFWS North Florida ESO can be contacted at (904) 731-3336.

FWC staff appreciates the opportunity to provide input on this project and looks forward to working with the applicant throughout the project life cycle. The project as described in the Draft SEA is consistent with FWC's authorities under the Coastal Zone Management Act/Florida's Coastal Management Program. For specific technical questions regarding the content of this letter, please contact Michelle Sempsrott at (407) 452-1995 or by email at Michelle.Sempsrott@MyFWC.com. All other inquiries may be sent to ConservationPlanningServices@MyFWC.com.

Sincerely,

Josh Cucinella
Land Use Planning Program Administrator
Office of Conservation Planning Services

jc/ms
Flagler County CSRM Draft SEA_57319_11162023

cc: Julia Lombardo, USACE, Julia.B.Lombardo@usace.army.mil

Florida Department of
Environmental Protection

Memorandum

TO: Chris Stahl, Coordinator, Florida State Clearinghouse

FROM: Roxane Dow, Office of Resiliency and Coastal Protection

DATE: October 23, 2023

SUBJECT: DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT FOR FLAGLER COUNTY COASTAL STORM RISK MANAGEMENT PROJECT
SAI: Fl202310179931C

The U.S. Army Corps of Engineers, Jacksonville District (Corps) is considering a newly modified design for the federally authorized Flagler County, Florida Coastal Storm Risk Management (CSRM) Project in Flagler Beach, Florida. These design modifications are necessary to mitigate the sustained erosional losses that occurred due to multiple named storm events from 2014 to 2023 that negatively impacted the shoreline while the federal project was awaiting real estate acquisition by the non-federal sponsor (NFS), Flagler County.

These erosional losses are much higher than what was previously considered in the 2014 Final Integrated Feasibility Study and Environmental Assessment (IFR/EA). The purpose of this Supplemental Environmental Assessment (SEA) is to evaluate new information and the related changes to the proposed action for the Flagler County, Florida CSRM Project. These changes will include increased initial construction volume for beach nourishment, as well as various design and staging modifications required to support revised beach nourishment efforts and changes to the existing environment since the 2014 IFR/EA.

The Beaches, Inlets and Ports Program has already modified the Corps permit and is in the process of modifying the Flagler County permit to reflect these changes. We agree with the Corps finding that this project as currently designed is consistent with the Florida Coastal Zone Management Program. We look forward to its successful construction.

cc. Lainie Edwards
Greg Garis
Sean Green
Kaylee Rose
Shamim Murshid
Ann Lazar

From: Singh-White, Alya
To: Lombardo, Julia CIV USARMY CESAJ (USA)
Cc: Kajumba, Ntale
Subject: [Non-DoD Source] EPA Comments on the Flagler County CSRM Project Draft Supplemental EA
Date: Wednesday, November 15, 2023 1:07:30 PM

Ms. Julia Lombardo
U.S. Army Corps of Engineers
Jacksonville District
701 San Marco Boulevard
Jacksonville, FL 32207-8175

Re: EPA Comments on the Draft Supplemental Environmental Assessment for the Flagler County Coastal Storm Risk Management Project in Flagler County, Florida

Dear Ms. Lombardo,

The U. S. Environmental Protection Agency (EPA) reviewed the Draft Supplemental Environmental Assessment (SEA) for the Flagler County Coastal Storm Risk Management (CSRM) Project and Draft Finding of No Significant Impact (FONSI), in accordance with Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The U.S Army Corps of Engineers (USACE), Jacksonville District is considering a newly modified design for the Flagler County CSRM project to mitigate erosional losses resulting from multiple storm events that occurred between 2014 and 2023 that negatively impacted the shoreline. These losses are much higher than previously considered in the 2014 Environmental Assessment (EA); therefore, the purpose of the draft SEA is to evaluate whether this new information and related changes to the proposed action for the Flagler County CSRM Project would result in new or different effects from those previously disclosed in the 2014 EA.

The Draft SEA examines two Action Alternatives and a "No Action" Alternative and are as follows:

- Alternative 1 - the No Action Alternative – The Flagler County CSRM project would not be constructed.
- Alternative 2, the Preferred Alternative – Involves dredging sand from an offshore borrow area to be used for beach nourishment and expansion of the constructed berm at Flagler Beach, new staging and access areas, and construction of temporary access ramps.
- Alternative 3 – Involves constructing the project as previously authorized in the 2014 EA.

Based on our review of the Draft SEA, the EPA has the following comments for your consideration.

- Water Quality: The project may impact water quality due to increased turbidity and sedimentation near the borrow area and beach fill areas. According to Section 4.4 of the draft SEA, "*Dredging an additional (net) difference of approximately 2,000,000 CY of sand as compared to the original 2014 IFR/EA would result in increased turbidity and sedimentation near Borrow Area 3A due to the increased volume requirements and longer duration of hopper overflow*." The EPA understands that a Section 401 water quality certification was obtained by the City of Flagler Beach from the Florida Department of Environmental Protection (FDEP) and will be modified prior to the start of construction.
  Recommendation: The EPA recommends continued consultation with FDEP

regarding potential water quality impacts from the proposed project and the implementation of turbidity monitoring.

- Threatened and Endangered Species: Section 4.3 of the document identifies threatened and endangered species that may be located within the project area and includes several species of birds, sea turtles, fish and elasmobranch, and marine mammals. The USACE determined that project activities will have "*no effect*" or "*may affect but are not likely to adversely affect*" all species except sea turtles. The project may result in adverse impacts to sea turtles nesting and hatching as well as entrainment associated with the hopper dredge and vessel strikes.
  The USACE determined the project meets eligibility criteria for coverage by the National Marine Fisheries Service's South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States (SARBO). USACE intends to adhere to all applicable project design criteria per the SARBO. The project is also eligible for coverage by the U.S. Fish and Wildlife Service (USFWS) 2015 Revised Statewide Programmatic Biological Opinion and USFWS 2013 Piping Plover Programmatic Biological Opinion for the protection of federally listed and threatened species under USFWS jurisdiction.
  Recommendation: The EPA defers to the NMFS and FWS on this matter and encourages continued coordination through the project's duration including ongoing maintenance and operations.

Thank you for the opportunity to review and provide comments on the Flagler County CSRM project. Upon completion of the Final SEA, please submit an electronic copy to the EPA. If you have any questions regarding the EPA's comments, please contact me by phone at 404-562-9339 or via email at Singh-White.Alya@epa.gov.

Sincerely,

Alya Singh-White
Biologist | NEPA Section

U.S. EPA, Region 4
Office of the Regional Administrator
Strategic Programs Office
61 Forsyth St SW
Atlanta, GA 30303
(404)-562-9339 | singh-white.alya@epa.gov

From: [redacted]
To: Lombardo, Julia CIV USARMY CESAJ (USA); C M
Subject: [Non-DoD Source] Draft SEA, Flagler Beach
Date: Friday, October 20, 2023 9:18:56 AM

Julia
I received your contact info relative to questions for the SEA project along Flagler Beach. I am the homeowner at [redacted] in Flagler Beach, FL. I have these 3 questions

1. What is the proposed timing for the sand replenishment?
2. Will my current walkover be disturbed in any way?
3. Will our access to the beach in front of our house be limited only when the sand replenishment is in front of our house or during the entire project?

thanks
[redacted]

From: Pace Wilber - NOAA Federal
To: Lombardo, Julia CIV USARMY CESAJ (USA)
Cc: virginia.fay@noaa.gov; Donofrio, Kristen L CIV USARMY CESAJ (USA)
Subject: [Non-DoD Source] Re: EFH Consultation for Draft Flagler County CSRM SEA
Date: Thursday, November 30, 2023 12:33:47 PM
Attachments: image001.png
image002.png

Hello Julia. NMFS elected to not comment on the EA. Pace

On Thu, Nov 30, 2023 at 11:18 AM Lombardo, Julia CIV USARMY CESAJ (USA) <Julia.B.Lombardo@usace.army.mil> wrote:

> Good morning,
>
> I am writing to check in on the current status of the EFH consultation for the Draft Flagler County CSRM SEA. The Corps requested feedback be provided within 30 days on 16-OCT-23 (NMFS stated that they would provide comments if needed - see attached email), and it has now been 45 days since the request. Could you please provide an updated status on this consultation? Could you also please confirm whether NMFS will be providing comments as well?
>
> Thanks so much!
>
> *Julia Lombardo*
>
> Biologist, Coastal NEPA Section
>
> Environmental Branch
>
> Planning & Policy Division
>
> Jacksonville District, U.S. Army Corps of Engineers
>
> julia.b.lombardo@usace.army.mil
>
> (O) 904-858-5118

--
Pace Wilber, Ph.D.
South Atlantic and Caribbean Branch Chief
Habitat Conservation Division
NOAA Fisheries Service
331 Ft Johnson Road
Charleston, SC 29412

843-592-3024 (NOAA Google Voice)
Pace.Wilber@noaa.gov

APPENDIX C

Clean Water Act 404(b)(1) Guidelines Evaluation

Supplemental Environmental Assessment
Flagler County Florida Coastal Storm Risk Management Project in Flagler County, Florida

U.S. Army Corps of Engineers
JACKSONVILLE DISTRICT

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Clean Water Act 404(b)(1) Guidelines Evaluation

Flagler County Coastal Storm Risk Management Project in Flagler County, Florida Supplemental Environmental Assessment

January 2024

Project Description

The Flagler County Coastal Storm Risk Management (CSRM) Project consists of beach and sand dune nourishment along approximately 2.6 miles of the Flagler County shoreline. The Preferred Alternative consists of both federally owned and non-federally owned components, in which both will be constructed by the U.S. Army Corps of Engineers (USACE). The federal component includes dredging up to approximately 2.4 million cubic yards of sand for a total of approximately 1.3 million cubic yards to be placed on Flagler Beach from Florida Department of Environmental Protection (FDEP) Range or Reference (R) Monuments R-80 to R-94. The non-federal component includes beach nourishment that takes place in both northern (R-77 to R-80) and southern (R-94 to R-99) extension tapers, along with staging and access areas, and the construction of temporary access ramps within the non-federal sponsor (NFS) owned components. The non-federal component includes dredging up to approximately 405,000 cubic yards of sand for a total of approximately 270,000 cubic yards to be placed on Flagler Beach. Sand for both the federal and non-federal components will be sourced from an offshore borrow area ("Borrow Area 3A"). Sand for the temporary access ramps will be truck hauled from an approved and permitted upland mine. Details on the project can be found in the 2024 Supplemental Environmental Assessment (SEA) Sections 1.2 (project authority), 1.3 (project location), and 1.4 (project background and history).

The effects of incorporating resiliency design refinements (i.e., dune incorporation with vegetation, vehicle access modifications, and pedestrian access modifications with sand fencing) and dredging the borrow area (including transporting and placing sand on the Flagler County shoreline) have been evaluated in previous Environmental Assessments, which are listed in Section 1.4.4 of the 2024 SEA. The previously completed analysis (including 404(b)(1) Guideline Evaluations) remains valid and is hereby incorporated by reference. However, beach nourishment was initially determined prior to major storm events within the last decade, in which only 330,000 cubic yards of sand was required to fully fulfil the authorized template; therefore, the 2024 SEA and this evaluation addresses only those effects associated specifically with the increased sand volume requirements and extension of the constructed berm in the Flagler County CSRM. (Additional details can be found in Sections 3.1.2 and 5.2 of the 2024 SEA.)

1. Technical Evaluation Factors

    a. Physical and Chemical Characteristics of the Aquatic Ecosystem (40 CFR §§ 230.20-230.25)(Subpart C)

	N/A	Not Significant	Significant
(1) Substrate impacts	☐	☒	☐
(2) Suspended particulates/turbidity impacts	☐	☒	☐
(3) Water Quality Control	☐	☒	☐
(4) Alteration of current patterns and water circulation	☒	☐	☐
(5) Alteration of normal water fluctuations/hydroperiod	☒	☐	☐
(6) Alteration of salinity gradients	☒	☐	☐

The 2024 SEA's Preferred Alternative is the placement of approximately 1.3 million cubic yards (cy) of sand on the federal project template in Flagler Beach, with an estimated 2.4 million cy to be dredged from Borrow Area 3A, assuming 40-50%% loss of sand during the dredging process. The anticipated renourishment interval for the federal project will include a total of 4 renourishment events over the course of 11 years in addition to initial construction over the 50-year period of Federal participation; however, this interval could vary depending on the timing of erosion and storm events, in which nourishment events may be triggered when specific criteria are met within the design. Detailed information on the Preferred Alternative is included in Section 5.2 of the 2024 SEA.

The Preferred Alternative will also incorporate the NFS additions to the project, which will be 100% NFS funded and owned, but constructed by USACE. The non-federal component includes beach nourishment that takes place in both northern (R-77 to R-80) and southern (R-94 to R-99) extension tapers, along with staging and access areas, and the construction of temporary access ramps within the non-federal sponsor (NFS) owned components. The non-federal component includes dredging up to approximately 405,000 cubic yards of sand for a total of approximately 270,000 cubic yards to be placed on Flagler Beach. Sand for both the federal and non-federal components will be sourced from an offshore borrow area ("Borrow Area 3A").

All sand to be used for beach renourishment will meet the design, siting, and other requirements of FDEP's Sand Rule (Florida Administrative Code 62B-41.007). All work associated with the dredging of sand from the borrow area will be conducted in compliance with applicable project design criteria (PDCs) from the National Marine Fisheries (NMFS) South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States (SARBO). Environmental commitments and compliance is discussed in Sections 6.1 and 6.2 of the SEA.

b. Biological Characteristics of the Aquatic Ecosystem (40 CFR §§ 230.30-230.32) (Subpart D)

	N/A	Not Significant	Significant
(1) Effect on threatened/endangered species and their habitat	☐	☒	☐
(2) Effect on the aquatic food web	☐	☒	☐

(3) Effect on other wildlife (mammals, birds, reptiles, and amphibians)	☐	☒	☐

The use of Borrow Area 3A for placement of sand and expansion of the constructed berm on Flagler Beach will result in temporary increases in turbidity and noise as well as the removal and burial of benthic species and short-term displacement of fish and other marine wildlife at the borrow area. Direct effects to birds, fish, and other wildlife from project construction are expected to be minimal as these animals are motile and can avoid dredging activities. Fish and other marine wildlife (i.e., sharks, rays, marine mammals, etc.) could experience displacement during dredging operations, although the operation of the dredge is not expected to affect these species any more than other vessels operating within the area. These effects are expected to be minor and temporary, as a result of the duration and limited extent of the dredging operations relative to the abundance of similar adjacent habitat and the mobility of these resources. There is also risk of entrainment associated with hopper dredge operations to fish and other marine wildlife. Additionally, dredging in the borrow area would remove unvegetated, open sandy substrate as well as non-motile benthic invertebrates, which will result in a localized, short-term adverse reduction in the abundance, diversity, and biomass of the immediate fauna. Analysis conducted in the prior NEPA (2014 Final Integrated Feasibility Study and EA) for natural environment resource factors, such as fish and other wildlife, T&E species, and EFH, remains valid and is incorporated herein. Further analysis is conducted in the 2024 SEA to address potential effects on the aquatic food web and fish and other wildlife (Section 5.3), T&E species (Section 4.3) and EFH (Section 4.4).

c. Special Aquatic Site (40 CFR §§ 230.40-230.45) (Subpart E)

	N/A	Not Significant	Significant
(1) Sanctuaries and refuges	☒	☐	☐
(2) Wetlands	☒	☐	☐
(3) Mud flats	☒	☐	☐
(4) Vegetated shallows	☒	☐	☐
(5) Coral reefs	☒	☐	☐
(6) Riffle and pool complexes	☒	☐	☐

d. Human Use Characteristics (40 CFR §§ 230.50-230.54) (Subpart F)

	N/A	Not Significant	Significant
(1) Effects on municipal and private water supplies	☒	☐	☐
(2) Recreational and Commercial fisheries impacts	☐	☒	☐
(3) Effects on water-related recreation	☐	☒	☐
(4) Aesthetic impacts	☐	☒	☐
(5) Effects on parks, national and historical monuments, national	☒	☐	☐

seashores, wilderness areas,
research sites, and similar preserves

Use of Borrow Area 3A will have no effect on borrow area aesthetics. While there may be some minor effects on recreation, navigation, and commercial fishing in the borrow area because of the dredge activity, this effect will be negligible and temporary in nature given the short duration of dredging events and availability of alternate transit routes and fishing areas. Additional details on potential effects from the use of Borrow Area 3A in the Preferred Alternative can be found in Section 4 of the 2024 SEA.

2. Evaluation of Dredged or Fill Material (40 CFR § 230.60) (Subpart G)

a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. (**Check only those appropriate**)
   - ☒ (1) Physical characteristics
   - ☒ (2) Hydrography in relation to known or anticipated sources of contaminants
   - ☒ (3) Results from previous testing of the material in the vicinity of the project
   - ☐ (4) Known, significant, sources of persistent pesticides from land runoff or percolation
   - ☐ (5) Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances
   - ☐ (6) Other public records of significant introduction of contaminants from industries, municipalities or other sources
   - ☐ (7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge/fill
   - ☐ (8) Other sources (specify)

Although Borrow Area 3A has not previously been dredged in the past, there are no known sources of hazardous and toxic wastes (HTRW) in the borrow area, as evidenced by the 2019 Flagler County Hydrographic Exam Survey and the 2019 Flagler County Permit Plates, which is hereby incorporated by reference in this 2024 SEA. The borrow area sand used for nourishment of the Flagler County shoreline contains particles with large grain sizes that do not normally absorb contaminants. Material used for beach nourishment will be beach-quality sand with a very small percentage of fines (<5%) to meet the design, siting, and other requirements of FDEP's Sand Rule (Florida Administrative Code 62B-41.007). Additional details on the physical environment and potential effects from continued use of the borrow area can be found in Sections 2.6 and 4.5 of the 2024 SEA.

b. An evaluation of the appropriate information in 2a above indicated that there is reason to believe the proposed dredged or fill material is not a carrier of

contaminants, of that levels of contaminants are substantively similar at extraction and disposal sites and not likely to exceed constraints. The material meets the testing exclusion criteria.

YES ☒ NO ☐

3. Disposal/Borrow Site Delineation (40 CFR § 230.11(f))

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

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

Dredging Borrow Area 3A may result in short-term increases in turbidity during dredging of the borrow area. Elevated turbidity levels will be short-term, lasting during dredging operations and shortly thereafter while turbidity dissipates. Turbidity effects are not expected to be significant, and no long-term adverse effects to water quality are expected. (See Section 4.5 of the 2024 SEA for additional details.)

Flagler County is modifying their permits for the NFS components of the project (FDEP permit number: 0379716-001-JC and USACE Department of the Army permit number: SAJ-2019-02065 (SP-TMM)). Final compliance with the CWA will occur when the permit modifications are received from the State of Florida. All State water quality standards would be met.

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

YES ☒ NO ☐

4. Actions to Minimize Adverse Effects (40 CFR §§ 230.70-230.77)(Subpart H)

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

YES ☒ NO ☐

5. Factual Determination (40 CFR § 230.11)

A review of appropriate information as identified in items 1-4 above indicates that there is minimal potential for short or long-term environmental effects of the proposed discharge/fill as related to:

☒ a. Physical substrate at the disposal site (review sections 2a, 3, 4, & 5)
☒ b. Water circulation, fluctuation & salinity (review sections 2a 3, 4, & 5)
☒ c. Suspended particulates/turbidity (review sections 2a, 3, 4, & 5)
☒ d. Contaminant availability (review sections 2a, 3, & 4)
☒ e. Aquatic ecosystem structure and function (review sections 2b, c; 3, & 5)
☒ f. Disposal site (review sections 2, 4, & 5)
☒ g. Cumulative impact on the aquatic ecosystem
☒ h. Secondary impacts on the aquatic ecosystem

6. Review of Compliance (40 CFR § 230.10(a)-(d) (Subpart B)

A review of the permit application indicates that:

a. The discharge/fill represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge/fill must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose (if no, see section 2 and information gathered for EA alternative);
YES ☒ NO ☐

b. The activity does not appear to 1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the CWA; 2) jeopardize the existence of Federally designated marine sanctuary (if no, see section 2b and check responses from resource and water quality certifying agencies; YES ☒ NO ☐

c. The activity will not cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values (if no, see section 2); YES ☒ NO ☐

d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge/fill on the aquatic ecosystem (if no, see section 5);
YES ☒ NO ☐

7. Findings

☒ a. The proposed disposal site for discharge of dredged or fill material complies with the Section 404 (b)(1) guidelines

☐ b. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines with the inclusion of the following conditions:

c. The proposed disposal site for discharge of dredged or fill material does not comply with the Section 404(b)(1) guidelines for the following reason(s):

☐ (1) There is a less damaging practicable alternative

☐ (2) The proposed discharge/fill will result in significant degradation of the aquatic ecosystem

☐ (3) The proposed discharge/fill does not include all practicable and appropriate measures to minimize potential harm to the aquatic ecosystem

APPENDIX D

Coastal Zone Management Act (CZMA)
Federal Consistency Determination (FCD)

Supplemental Environmental Assessment for
Flagler County Coastal Storm Risk Management
Flagler County, Florida

U.S. Army Corps of Engineers
JACKSONVILLE DISTRICT

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FLORIDA DEPARTMENT OF Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

November 29, 2023

Julia Lombardo
U.S. Army Corps of Engineers
Environmental Branch
Jacksonville District
701 San Marco Boulevard
Jacksonville, Florida 32207-8175

RE: Department of the Army, Jacksonville District Corps of Engineers -Draft Supplemental Environmental Assessment Flagler County Coastal Storm Risk Management Flagler County, Florida
SAI# FL202310179931C

Dear Julia:
Florida State Clearinghouse staff has reviewed the proposal under the following authorities: Presidential Executive Order 12372; § 403.061(42), Florida Statutes; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended and concurs that it appropriately outlines the information that will be developed after implementation of the deviation for submittal to the State.

The Florida Department of Environmental Protection and the Florida Fish and Wildlife Conservation Commission have reviewed the proposed action and submitted comments. As a courtesy, these have been attached to this letter and are incorporated hereto.

The Florida Department of State has noted that in table 6-1 for Cultural Resources: they could not find any avoidance buffers for Borrow Area 3A, although they did find avoidance buffers for Borrow Area 2 and sensitive areas within the potential sand Placement Area. Also, the USACE has determined that additional information from the County's modified Department of Army permit is needed to determine effects to sites, structures, and objects of known historical, architectural, or archaeological significance. They would like to be updated once

the USACE has processed that additional information. Please let Michael DuBose Michael.DuBose@DOS.MyFlorida.Com know if there are any questions or concerns.

Based on the information submitted and minimal project impacts, the project is consistent with the Florida Coastal Management program (FCMP) thus far.

Thank you for the opportunity to review the proposed project. If you have any questions or need further assistance, please don't hesitate to contact me at (850) 717-9076.

Sincerely,

Chris Stahl

Chris Stahl, Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3900 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400
ph. (850) 717-9076
State.Clearinghouse@floridadep.gov

Florida Fish and Wildlife Conservation Commission

Commissioners
Rodney Barreto
Chairman
Coral Gables

Steven Hudson
Vice Chairman
Fort Lauderdale

Preston Farrior
Tampa

Gary Lester
Oxford

Albert Maury
Coral Gables

Gary Nicklaus
Jupiter

Sonya Rood
St. Augustine

Office of the Executive Director
Roger A. Young
Executive Director

Jessica Crawford
Chief of Staff

850-487-3796
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Managing fish and wildlife resources for their long-term well-being and the benefit of people.

620 South Meridian Street
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32399-1600
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MyFWC.com

November 16, 2023

Chris Stahl
Florida State Clearinghouse
Florida Department of Environmental Protection
3800 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400
Chris.Stahl@dep.state.fl.us
State.Clearinghouse@dep.state.fl.us

RE: Flagler County Coastal Storm Risk Management Draft Supplemental Environmental Assessment, (SAI # FL202310179931)

Dear Mr. Stahl:

Florida Fish and Wildlife Conservation Commission (FWC) staff reviewed the Flagler County Coastal Storm Risk Management (CSRM) Draft Supplemental Environmental Assessment (SEA) and provides the following comments and recommendations for consideration in accordance with Chapter 379, Florida Statutes, and pursuant to the federal National Environmental Policy Act (NEPA), the federal Coastal Zone Management Act, and the State of Florida Coastal Management Program.

Project Description

The U.S. Army Corps of Engineers (USACE) and the Bureau of Ocean Energy Management (BOEM) have conducted an SEA which addresses the increase in sand volume and expansion of the constructed berm for the Flagler County CSRM Project. The proposed project includes beach nourishment along approximately 2.6 miles of the Flagler County shoreline from R-77 to R-99, staging and access areas, and the construction of temporary access ramps. Sand for the beach nourishment will be dredged from Borrow Area 3A located approximately 10.25 miles from shore. Sand for the temporary access ramps will be truck hauled from an approved and permitted upland mine.

The project was previously authorized in 2014 for 330,000 cubic yards (cy) of sand dredged from Borrow Areas 2A and 2C. Since 2014, the Flagler County shoreline has been impacted by several hurricanes causing a greater amount of erosion than was previously assumed and analyzed in 2014. The project is now estimated to dredge approximately 2.1 million cy of sand utilizing Borrow Area 3A. Borrow Areas 2A and 2C no longer meet the compatibility standards of sand volume capacity to fulfill the initial nourishment, as well as the subsequent 11-year nourishment interval requirements. This SEA evaluates whether changes in the current scope, new circumstances not previously analyzed, and information not previously available contribute to a determination of significantly different environmental effects.

Potentially Affected Resources

The SEA identifies suitable habitat for multiple listed and managed species that have the potential to occur within the areas of the shoreline nourishment project and Borrow Area 3A, and notes that the project areas are located within designated critical habitat for the loggerhead sea turtle (*Caretta caretta*, Federally Threatened [FT]) and North Atlantic right whale (*Eubalaena glacialis*, Federally Endangered [FE]). During presence-absence surveys conducted in staging and access areas in August 2023, two active and one inactive gopher tortoise (*Gopherus polyphemus*, State

Threatened [ST]) burrows were observed and proper gopher tortoise relocation techniques will be implemented during construction.

The USACE has determined that the project "may affect and is likely to adversely affect" marine turtles and will follow the appropriate Biological Opinions (BO) for these species. The USACE will also follow appropriate BOs for marine mammals and sharks and rays as well as the U.S. Fish and Wildlife Service's *Standard Manatee Conditions for In-Water Work (2011)*. Therefore, the USACE has determined the proposed project "may affect but is not likely to adversely affect" (MANLAA) marine mammals and sharks and rays. The shoreline in the area is not considered optimal for rufa red knot (*Calidris canutus rufa*, FT) or piping plover (*Charadrius melodus*, FT); therefore, the USACE has determined the proposed project is MANLAA for both species.

Comments and Recommendations

Marine Turtles

The beaches in Flagler County provide important habitat for the loggerhead, green (*Chelonia mydas*, FE), and leatherback sea turtles (*Dermochelys coriacea*, FE). FWC staff recommends that the dune crest height be a minimum of 18 inches below the elevation of State Road A1A and that a barrier be installed between the road and the dune to restrict marine turtles from potentially accessing the road. The placement of sand over the exposed revetment may present an entrapment risk, contribute to obstructed nesting attempts, and potentially increase disorientations for marine turtles. FWC staff are available to discuss these potential hazards and can be contacted at marineturtle@myfwc.com. FWC staff concur with the intentions of USACE to follow the terms of all BOs that apply to the proposed project activities. FWC staff anticipates providing recommended conditions for listed species and habitat protection to the state regulatory agency during the state permitting process for this project.

Least Terns

The Flagler County CSRM project is within 12 miles of recent breeding sites for least terns (*Sternula antillarum*, ST). Additionally, during the 2023 season, least terns nested at Gamble Rogers which is immediately south of the project boundary. The project site may also provide available food resources for this species. Since nesting shorebird and seabird colonies move from year to year as available habitat changes, there is a chance that imperiled seabirds (and potentially shorebirds) may be attracted to the open/re-nourished area of the proposed project site. For this reason, FWC staff recommends construction activities occur outside of the breeding season (April 1 through September 1). The *Species Conservation Measures and Permitting Guidelines for American Oystercatcher, Snowy Plover, Black Skimmer, and Least Tern* (https://myfwc.com/media/29766/ibnb-guidelines.pdf) can be referenced for additional biological information, measures for avoiding impacts, and conservation practices. If construction activities must occur during the breeding season, if the measures outlined in the *Guidelines* are not feasible, or imperiled beach nesting birds are observed on the subject property at any time throughout the duration of the project activities, the USACE may contact the FWC Regional Shorebird Biologist, Hailey Dedmon, at 352-644-3539 or by email at Hailey.Dedmon@MyFWC.com.

Federal Species

This site may also contain habitat suitable for the federally listed species identified above. FWC staff recommends coordination with USFWS North Florida Ecological Services Office (ESO) as necessary for information regarding potential impacts to these species. The USFWS North Florida ESO can be contacted at (904) 731-3336.

FWC staff appreciates the opportunity to provide input on this project and looks forward to working with the applicant throughout the project life cycle. The project as described in the Draft SEA is consistent with FWC's authorities under the Coastal Zone Management Act/Florida's Coastal Management Program. For specific technical questions regarding the content of this letter, please contact Michelle Sempsrott at (407) 452-1995 or by email at Michelle.Sempsrott@MyFWC.com. All other inquiries may be sent to ConservationPlanningServices@MyFWC.com.

Sincerely,

Josh Cucinella
Land Use Planning Program Administrator
Office of Conservation Planning Services

jc/ms
Flagler County CSRM Draft SEA_57319_11162023

cc: Julia Lombardo, USACE, Julia.B.Lombardo@usace.army.mil

Florida Department of
Environmental Protection

Memorandum

TO: Chris Stahl, Coordinator, Florida State Clearinghouse

FROM: Roxane Dow, Office of Resiliency and Coastal Protection

DATE: October 23, 2023

SUBJECT: DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT FOR FLAGLER COUNTY COASTAL STORM RISK MANAGEMENT PROJECT
SAI: Fl202310179931C

The U.S. Army Corps of Engineers, Jacksonville District (Corps) is considering a newly modified design for the federally authorized Flagler County, Florida Coastal Storm Risk Management (CSRM) Project in Flagler Beach, Florida. These design modifications are necessary to mitigate the sustained erosional losses that occurred due to multiple named storm events from 2014 to 2023 that negatively impacted the shoreline while the federal project was awaiting real estate acquisition by the non-federal sponsor (NFS), Flagler County.

These erosional losses are much higher than what was previously considered in the 2014 Final Integrated Feasibility Study and Environmental Assessment (IFR/EA). The purpose of this Supplemental Environmental Assessment (SEA) is to evaluate new information and the related changes to the proposed action for the Flagler County, Florida CSRM Project. These changes will include increased initial construction volume for beach nourishment, as well as various design and staging modifications required to support revised beach nourishment efforts and changes to the existing environment since the 2014 IFR/EA.

The Beaches, Inlets and Ports Program has already modified the Corps permit and is in the process of modifying the Flagler County permit to reflect these changes. We agree with the Corps finding that this project as currently designed is consistent with the Florida Coastal Zone Management Program. We look forward to its successful construction.

cc. Lainie Edwards
Greg Garis
Sean Green
Kaylee Rose
Shamim Murshid
Ann Lazar

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8175

16 October 2023

Planning and Policy Division
Environmental Branch

Chris Stahl
Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
2600 Blair Stone Road, M.S. 47
Tallahassee, Florida 32399

Dear Mr. Stahl:

Pursuant to the National Environmental Policy Act, as amended, (NEPA) and U.S. Army Corps of Engineers Regulation (33 CFR 230.11), this letter constitutes the Jacksonville District, U.S. Army Corps of Engineers (Corps), Notice of Availability of the proposed Finding of No Significant Impact (FONSI), draft Supplemental Environmental Assessment (SEA), and associated appendices, including the Federal Consistency Determination (FCD), for the Flagler County Coastal Storm Risk Management Project. The SEA was prepared by both the Corps, the lead agency, and the Bureau of Ocean and Energy Management (BOEM), the cooperating agency.

The draft SEA evaluated various alternatives that would reduce coastal storm risk damages in the project area. The Preferred Alternative consists of both federally owned and non-federally owned components, in which both will be constructed by the Corps. The federal component includes dredging up to approximately 2.1 million cubic yards of sand for a total of 1.3 million cubic yards to be placed on Flagler Beach from Florida Department of Environmental Protection (FDEP) Range or Reference (R) Monuments R-80 to R-94. The non-federal component includes beach nourishment that takes place in both northern (R-77 to R-80) and southern (R-94 to R-99) extension tapers, along with staging and access areas, and the construction of temporary access ramps within the non-federal sponsor (NFS) owned components. The non-federal component includes dredging up to approximately 405,000 cubic yards of sand for a total of approximately 270,000 cubic yards to be placed on Flagler Beach. Sand for both the federal and non-federal components will be sourced from an offshore borrow area (“Borrow Area 3A”). Sand for the temporary access ramps will be truck hauled from an approved and permitted upland mine.

Details on the Preferred Alternative are contained in the draft SEA, which is available for your review on the Jacksonville District's Environmental planning website, under Flagler County: http://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/ (On that page, click on the "+" next to "Flagler". Scroll down to the project name.)

The Corps determined that the proposed project is consistent with Florida's approved Coastal Zone Management Program. The Corps respectfully requests concurrence on this FCD within 45 days of receipt of this letter and attached documentation. Any questions concerning the project or FCD should be submitted to the Environmental Branch, Coastal Section at the letter head address or via email to Julia.B.Lombardo@usace.army.mil within 45 days from the date of this letter.

Sincerely,

EHLINGER.GRETCHEN.SARAH.1286927234

Digitally signed by EHLINGER.GRETCHEN.SARAH.1286927234
Date: 2023.10.12 11:56:21 -04'00'

Gretchen S. Ehlinger, Ph.D.
Chief, Environmental Branch

Enclosure

Florida Coastal Zone Management Program Evaluation Procedures
Federal Consistency Determination (FCD)

Supplemental Environmental Assessment for
Flagler County Coastal Storm Risk Management (CSRM)
Flagler County, Florida

October 2023

Enforceable Policy. Florida Statutes considers "enforceable policy" under the Coastal Zone Management Act (www.dep.state.fl.us/cmp/federal/24_statutes.htm).

Applicability of the Coastal Zone Management Act. The following table summarizes the process and procedures under the Coastal Zone Management Act for federal actions and for non-federal applicants*.

Item	Non-federal Applicant (15 CFR 930, subpart D)	Federal Action (15 CFR 930, subpart C)
Enforceable Policies	Reviewed and approved by NOAA (in FL www.dep.state.fl.us/cmp/federal/24_statutes.htm)	Same
Effects Test	Direct, Indirect (cumulative, secondary), adverse or beneficial	Same
Review Time	6 months from state receipt of Consistency Certification (30-days for completeness notice) Can be altered by written agreement between state and applicant	60 Days, extendable (or contractible) by mutual agreement
Consistency	Must be Fully Consistent	To Maximum Extent Practicable**
Procedure Initiation	Applicant provides Consistency Certification to state	Federal Agency provides "Consistency Statement" to state
Appealable	Yes, applicant can appeal to Secretary (NOAA)	No (NOAA can "mediate")
Activities	Listed activities with their geographic location (State can request additional listing within 30 days)	Listed or Unlisted Activities in State Program
Activities in Another State	Must have approval for interstate reviews from NOAA	Interstate review approval NOT required
Activities in Federal Waters	Yes, if activity affects state waters	Same

* There are separate requirements for activities on the Outer Continental Shelf (subpart E) and for "assistance to an applicant agency" (subpart F).
** Must be fully consistent except for items prohibited by applicable law (generally does not count lack of funding as prohibited by law, 15 CFR 930.32).

Coastal Zone Consistency Statement by Statute/Enforceable Policy

1. CHAPTER 161, F.S., BEACH AND SHORE PRESERVATION.

Coastal areas are among the state's most valuable natural, aesthetic, and economic resources. The state is required to protect coastal areas from imprudent activities that could jeopardize the stability of the beach-dune system, accelerate erosion, provide inadequate protection to upland structures, endanger adjacent properties, or interfere with public beach access. Coastal areas used, or likely to be used, by sea turtles are designated for nesting, and the removal of vegetative cover that binds sand is prohibited. This statute provides policy for the regulation of construction, reconstruction, and other physical activities related to the beaches and shores of the state. Additionally, this statute requires the restoration and maintenance of critically eroding beaches.

RESPONSE: The proposed plans and information will be submitted to the state in compliance with this chapter. The purpose of the Flagler County Coastal Storm Risk Management (CSRM) project is to reduce the risk of potential damages from waves, erosion, and storm surge caused by coastal storms to structures and infrastructure along the Flagler County shoreline. The need of the project is to address coastal storm risks that threaten structures and infrastructure from the Atlantic Ocean shoreline. This is driven by storm damages due to erosion and inundation, loss of natural habitat and recreational opportunities, and loss of regional income associated with tourism. Construction of the project, as described in detail in Section 3 of the project's Supplemental Environmental Assessment (SEA), will provide protection to structures and infrastructure, as well as ensure the continuation of benefits (e.g., recreation, tourism, etc.).

The SEA was prepared by both USACE, the lead agency, and the Bureau of Ocean and Energy Management (BOEM), the cooperating agency. The Preferred Alternative consists of both federally owned and non-federally owned components, in which both will be constructed by the U.S. Army Corps of Engineers, Jacksonville District (USACE). The federal component includes beach nourishment from R-80 to R-94, and the non-federal component includes beach nourishment that takes place in both northern (R-80 to R-77) and southern (R-94 to R-99) extension tapers, along with new staging and access areas, and the construction of temporary access ramps within the non-federal sponsor (NFS) owned components. Sand for both the federal and non-federal components will be sourced from an offshore borrow area ("Borrow Area 3A"). Sand for the temporary access ramps will be truck hauled from an approved and permitted upland mine.

2. CHAPTER 163, PART II, F.S., INTERGOVERNMENTAL PROGRAMS: GROWTH POLICY; COUNTY AND MUNICIPAL PLANNING: LAND DEVELOPMENT REGULATION

The purpose of this statute is to provide for the implementation of comprehensive planning programs to guide and control future development in the state. The comprehensive planning process encourages units of local government to preserve, promote, protect, and improve the public health, safety, comfort, good order, appearance, convenience, law enforcement and fire prevention, and general welfare; prevent the

overcrowding of land and avoid undue concentration of population; facilitate the adequate and efficient provision of public facilities and services; and conserve, develop, utilize, and protect natural resources within their jurisdictions.

RESPONSE: Pursuant to the National Environmental Protection Act (NEPA), the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The proposed project is consistent with the goals of this chapter.

3. CHAPTER 186, F.S., STATE AND REGIONAL PLANNING

The state comprehensive plan provides basic policy direction to all levels of government regarding the orderly social, economic, and physical growth of the state. The goals, objectives, and policies of the state comprehensive plan are statewide in scope and are consistent and compatible with each other. The statute provides direction for the delivery of governmental services, a means for defining and achieving the specific goals of the state, and a method for evaluating the accomplishment of those goals.

RESPONSE: Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The proposed project is consistent with the goals of this chapter.

4. CHAPTER 252, F.S., EMERGENCY MANAGEMENT

The state of Florida is vulnerable to a wide range of emergencies, including natural, technological, and manmade disasters. This vulnerability is exacerbated by the tremendous growth in the state's population. This statute directs the state to reduce the vulnerability of its people and property to natural and manmade disasters; prepare for, respond to and reduce the impacts of disasters; and decrease the time and resources needed to recover from disasters.

Disaster mitigation is necessary to ensure the common defense of Floridians' lives and to protect the public peace, health, and safety. The policies provide the means to assist in the prevention or mitigation of emergencies that may be caused or aggravated by the inadequate planning or regulation. State agencies are directed to keep land uses and facility construction under continuing study and identify areas that are particularly susceptible to natural or manmade catastrophic occurrences.

RESPONSE: The proposed plans and information will be submitted to the state in compliance with this chapter. The purpose of the Flagler County CSRM project is to reduce the risk of potential damages from waves, erosion, and storm surge caused by coastal storms to structures and infrastructure along the Flagler County shoreline. The need of the project is to address coastal storm risks that threaten structures and infrastructure from the Atlantic Ocean shoreline. This is driven by storm damages due to erosion and inundation, loss of natural habitat and recreational opportunities, and loss of regional income associated with tourism. Construction of the project, as described in detail in Section 3 of the project's SEA, will provide protection to structures and infrastructure, as well as ensure the continuation of benefits (e.g., recreation, tourism,

etc.). Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The project is consistent with the goals of this chapter.

5. CHAPTER 253, F.S., STATE LANDS

The Board of Trustees of the Internal Improvement Trust Fund (Trustees) is vested and charged with the acquisition, administration, management, control, supervision, conservation, protection, and disposition of all lands owned by the state. Lands acquired for preservation, conservation and recreation serve the public interest by contributing to the public health, welfare and economy. In carrying out the requirements of this statute, the Trustees are directed to take necessary action to fully: conserve and protect state lands; maintain natural conditions; protect and enhance natural areas and ecosystems; prevent damage and depredation; and preserve archaeological and historical resources.

All submerged lands are considered single-use lands to be maintained in natural condition for the propagation of fish and wildlife and public recreation. Where multiple-uses are permitted, ecosystem integrity, recreational benefits and wildlife values are conserved and protected.

RESPONSE: The Preferred Alternative consists of both federally owned and non-federally owned components, in which both will be constructed by USACE. The federal component includes beach nourishment from R-80 to R-94, and the non-federal component includes beach nourishment that takes place in both northern (R-80 to R-77) and southern (R-94 to R-99) extension tapers, along with new staging and access areas, and the construction of temporary access ramps within the non-federal sponsor (NFS) owned components. Sand for both the federal and non-federal components will be sourced from an offshore borrow area ("Borrow Area 3A"). Sand for the temporary access ramps will be truck hauled from an approved and permitted upland mine. Details on the Preferred Alternative can be found in Sections 3 and 5 of the project's SEA.

Portions of the project (e.g., dredging of borrow areas) will occur on submerged lands of the State of Florida. USACE will coordinate the project with the State of Florida through the Federal Consistency Determination (FCD) review and the review process of the draft SEA.

Environmental protection measures, as described in detail in Section 6 of the SEA, will be implemented to minimize adverse effects to the maximum extent practicable to fish and other wildlife resources, threatened and endangered (T&E) species, water quality, air quality, or other environmental resources. Consultation on the Preferred Alternative with the Florida State Historic Preservation Office (SHPO) and appropriate federally-recognized tribes for compliance with Section 106 of the National Historic Preservation Act for the Federal portions of the project was completed in 2019. Details on the consultation can be found in Section 6 of the project's SEA.

Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The proposed project is consistent with the goals of this chapter.

6. CHAPTER 258, F.S., STATE PARKS AND PRESERVES

The statute addresses the state's administration of state parks, aquatic preserves, and recreation areas, which are acquired to emblemize the state's natural values and to ensure that these values are conserved for all time. Parks and preserves are managed for the non-depleting use, enjoyment, and benefit of Floridians and visitors and to contribute to the state's tourist appeal.

Aquatic Preserves are recognized as having exceptional biological, aesthetic, and scientific value and are set aside for the benefit of future generations. Disruptive physical activities and polluting discharges are highly restricted in aquatic preserves. State managed wild and scenic rivers possess exceptionally remarkable and unique ecological, fish and wildlife, and recreational values. These rivers are also designated for permanent preservation and enhancement for both the present and future.

RESPONSE: Placement of sand along the shoreline would renourish the beach, maintaining opportunities for recreational use and habitat for nesting sea turtles and other wildlife. The proposed project complies with the goals of this chapter.

7. CHAPTER 259, F.S., LAND ACQUISITION FOR CONSERVATION OR RECREATION

The statute addresses public ownership of natural areas for purposes of maintaining the state's unique natural resources; protecting air, land, and water quality; promoting water resource development to meet the needs of natural systems and citizens of this state; promoting restoration activities on public lands; and providing lands for natural resource based recreation. Lands are managed to protect or restore their natural resource values, and provide the greatest benefit, including public access, to the citizens of this state.

RESPONSE: Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. Environmental protection measures, as described in detail in Section 6 of the SEA, will be implemented to minimize adverse effects to the maximum extent practicable to fish and other wildlife resources, T&E species, water quality, air quality, or other environmental resources. Placement of sand would renourish the beach, maintaining opportunities for recreational use and habitat for nesting sea turtles and other wildlife. Portions of the project (e.g., dredging of borrow areas) will occur on submerged lands of the State of Florida. USACE will coordinate the project with the State of Florida through the FCD review and the review process of the draft SEA. The proposed project complies with the goals of this chapter.

8. CHAPTER 260, F.S., FLORIDA GREENWAYS AND TRAILS ACT

A statewide system of greenways and trails is established in order to conserve, develop, and use the natural resources of Florida for healthful and recreational purposes. These greenways and trails provide open space benefiting environmentally sensitive lands and wildlife and provide people with access to healthful outdoor activities. The greenways and trails serve to implement the concepts of ecosystem management while providing recreational opportunities such as horseback riding, hiking, bicycling, canoeing, jogging, and historical and archaeological interpretation. As of August 29th, 2016, Chapter 260, F.S., does not contain any enforceable policies for federal consistency purposes.

RESPONSE: No Florida greenways or trails exist in the project area or will be affected by the project.

9. CHAPTER 267, F.S., HISTORICAL RESOURCES

The management and preservation of the state's archaeological and historical resources are addressed by this statute. This statute recognizes the state's rich and unique heritage of historic resources and directs the state to locate, acquire, protect, preserve, operate and interpret historic and archeological resources for the benefit of current and future generations of Floridians.

Objects or artifacts with intrinsic historic or archeological value located on, or abandoned on, state-owned lands or state-owned submerged lands belong to the citizens of the state. The state historic preservation program operates in conjunction with the National Historic Preservation Act of 1966 to require state and federal agencies to consider the effect of their direct or indirect actions on historic and archeological resources. These resources cannot be destroyed or altered unless no prudent alternative exists. Unavoidable impacts must be mitigated.

RESPONSE: In 2019, USACE conducted a submerged cultural resources assessment survey of the borrow area and nearshore placement area. Based on the results of that survey, USACE determined that dredging of the borrow area, and placement on the beach and in the nearshore would have no adverse effects to historic properties contingent upon the avoidance of three targets within the nearshore placement area, two of which with a buffer of 100ft, and the third with a 150 ft buffer. The Florida SHPO concurred with this determination by letter dated September 26, 2019 (DHR Project File No.: 2019-05234). Additionally, USACE consulted with the Miccosukee Tribe of Indians of Florida (MTIF), the Seminole Nation of Oklahoma (SNO), Seminole Tribe of Florida (STOF), and Thlopthlocco Tribal Town (TTT) in 2019 with a determination of no effects to Tribal Nations from dredging of the borrow area and placement on the beach as well as the nearshore placement area contingent upon the avoidance of three targets within the nearshore placement area, two of which with a buffer of 100 ft, and the third with a 150 ft buffer. The STOF concurred with this determination by electronic communication dated September 25, 2019 (THPO Compliance Tracking Number: 0031617). No comments were received from the MTIF, SNO, or TTT. The proposed project is consistent with the goals of this chapter.

10. CHAPTER 288, F.S., COMMERCIAL DEVELOPMENT AND CAPITAL IMPROVEMENTS

The framework to promote and develop general business, trade, and tourism components of the state economy are established in this statute. The statute includes requirements to protect and promote the natural, coastal, historical, and cultural tourism assets of the state; foster the development of nature-based tourism and recreation; and upgrade the image of Florida as a quality destination. Natural resource-based tourism and recreational activities are critical sectors of Florida's economy. The needs of the environment must be balanced with the need for growth and economic development.

RESPONSE: Construction of the Preferred Alternative, as described in detail in Section 3 of the SEA, will ensure the continuation of benefits to socioeconomic resources (e.g., recreation, tourism, etc.). Environmental protection measures, as described in detail in Section 6 of the SEA, will be implemented to minimize adverse effects to the maximum extent practicable to fish and other wildlife resources, T&E species, water quality, air quality, or other environmental resources. The proposed project is consistent with the goals of this chapter.

11. CHAPTER 334, F.S., TRANSPORTATION ADMINISTRATION

The statute addresses the state's policy concerning transportation administration. It establishes the responsibilities of the state, the counties, and the municipalities in the planning and development of the transportation systems; and the development of an integrated, balanced statewide transportation system. This is necessary for the protection of public safety and general welfare and for the preservation of all transportation facilities in the state. As of October 9th, 2017, Chapter 334, F.S., does not contain any enforceable policies for federal consistency purposes.

RESPONSE: Public transportation systems are not being planned or developed as a part of this project; however, this project will temporarily impact public transportation systems (i.e., State Road A1A) by providing detours around the construction areas in the vicinity of the Veteran's Park staging and access areas.

12. CHAPTER 339, F.S., TRANSPORTATION FINANCE AND PLANNING

The statute addresses the finance and planning needs of the state's transportation system.

RESPONSE: Public transportation systems will not be affected by the proposed project.

13. CHAPTER 373, F.S., WATER RESOURCES

The waters in the state of Florida are managed and protected to conserve and preserve water resources, water quality, and environmental quality. This statute addresses sustainable water management; the conservation of surface and ground waters for full beneficial use; the preservation of natural resources, fish, and wildlife; protecting public land; and promoting the health and general welfare of Floridians. The state manages and conserves water and related natural resources by determining whether activities will unreasonably consume water; degrade water quality; or adversely

affect environmental values such as protected species habitat, recreational pursuits, and marine productivity.

Specifically, under Part IV of Chapter 373, the Department of Environmental Protection, water management districts, and delegated local governments review and take agency action on wetland resource, environmental resource, and stormwater permit applications. These permits address the construction, alteration, operation, maintenance, abandonment, and removal of any stormwater management system, dam, impoundment, reservoir, or appurtenant work or works (including dredging, filling and construction activities in, on, and over wetlands and other surface waters).

RESPONSE: Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. Environmental protection measures, as described in detail in the SEA, will be implemented to minimize adverse effects to the maximum extent practicable to water resources. USACE will coordinate the project with the State of Florida through the FCD review and the review process of draft SEA. The proposed project complies with the goals of this chapter.

14. CHAPTER 375, F.S., OUTDOOR RECREATION AND CONSERVATION LANDS

The statute addresses the development of a comprehensive outdoor recreation plan. The purpose of the plan is to document recreational supply and demand, describe current recreational opportunities, estimate the need for additional recreational opportunities, and propose the means to meet the identified needs.

RESPONSE: Placement of sand along the shoreline would renourish the beach, maintaining opportunities for recreational use. The proposed project complies with the goals of this chapter.

15. CHAPTER 376, F.S., POLLUTANT DISCHARGE PREVENTION AND REMOVAL

egulating the transfer, storage, and transportation of pollutants, and the cleanup of pollutant discharges is essential for maintaining coastal resources (specifically the coastal waters, estuaries, tidal flats, beaches, and public lands adjoining the seacoast) in as close to a pristine condition as possible. The preservation of the seacoast as a source of public and private recreation, along with the preservation of water and certain lands are matters of the highest urgency and priority.

This statute provides a framework for the protection of the state's coastline from spills, discharges, and releases of pollutants. The discharge of pollutants into or upon any coastal waters, estuaries, tidal flats, beaches, and lands adjoining the seacoast of the state is prohibited. The statute provides for hazards and threats of danger and damages resulting from any pollutant discharge to be evaluated; requires the prompt containment and removal of pollution; provides penalties for violations; and ensures the prompt payment of reasonable damages from a discharge.

Portions of Chapter 376, F.S., serve as a complement to the national contingency plan portions of the federal Water Pollution Control Act.

RESPONSE: The proposed project does not involve the transportation or discharge of pollutants. The contract specifications will prohibit the contractor from dumping oil, fuel, or hazardous wastes in the work area and will include conditions on how to handle inadvertent spills of pollutants, such as vehicle fuels. A spill prevention plan will be required of the contractor. The proposed project is consistent with the goals of this chapter.

16. CHAPTER 377, F.S., ENERGY RESOURCES

The statute addresses the regulation, planning, and development of the energy resources of the state. The statute provides policy to conserve and control the oil and gas resources in the state, including products made therefrom and to safeguard the health, property and welfare of Floridians. The Department of Environmental Protection (DEP) is authorized to regulate all phases of exploration, drilling, and production of oil, gas, and other petroleum products in the state.

The statute describes the permitting requirements and criteria necessary to drill and develop for oil and gas. DEP rules ensure that all precautions are taken to prevent the spillage of oil or any other pollutant in all phases of extraction and transportation. The state explicitly prohibits pollution resulting from drilling and production activities. No person drilling for or producing oil, gas, or other petroleum products may pollute land or water; damage aquatic or marine life, wildlife, birds, or public or private property; or allow any extraneous matter to enter or damage any mineral or freshwater-bearing formation.

Penalties for violations of any provisions of this chapter are detailed.

RESPONSE: The proposed project does not involve the development of energy resources.

17. CHAPTER 379, F.S., FISH AND WILDLIFE CONSERVATION

The framework for the management and protection of the state of Florida's wide diversity of fish and wildlife resources are established in this statute. It is the policy of the state to conserve and wisely manage these resources. Particular attention is given to those species defined as being endangered or threatened. This includes the acquisition or management of lands important to the conservation of fish and wildlife.

This statute contains specific provisions for the conservation and management of marine fisheries resources. These conservation and management measures permit reasonable means and quantities of annual harvest (consistent with maximum practicable sustainable stock abundance) as well as ensure the proper quality control of marine resources that enter commerce.

Additionally, this statute supports and promotes hunting, fishing and the taking of game opportunities in the State. Hunting, fishing, and the taking of game are considered

an important part in the state's economy and in the conservation, preservation, and management of the state's natural areas and resources.

RESPONSE: The project will be in compliance with Section 7 of the ESA. To address potential effects from the project's activities to federally-listed T&E species under the National Marine Fisheries Service (NMFS) jurisdiction, the project adheres to the Project Design Criteria (PDCs) as described in the NMFS South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States (SARBO), dated March 27, 2020. The project will comply with all applicable PDCs of the SARBO. The use of equipment and/or methods not covered by the SARBO may require additional coordination and/or consultation with NMFS.

For potential effects to federally-listed T&E species under the U.S. Fish and Wildlife Service (USFWS) jurisdiction, USACE determined that the project meets the criteria to be eligible for coverage of potential effects through the USFWS Statewide Programmatic Biological Opinion (SPBO) and the Piping Plover Programmatic Biological Opinion (P3BO). The project will adhere to all applicable Terms and Conditions of the SPBO and P3BO. Consultation with USFWS on the USACE's "may affect, but not likely to adversely affect" (MANLAA) and "may affect" determinations is ongoing.

Detailed analysis of USACE effect determinations are in Section 4 of the SEA, and details of the consultations with USFWS and NMFS are included in Section 6.

Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. Environmental protection measures, as described in detail in Section 6 of the SEA, will be implemented to minimize adverse effects to the maximum extent practicable to T&E species as well as fish and other wildlife resources. The project is consistent with the goals of this chapter.

18. CHAPTER 380, F.S., LAND AND WATER MANAGEMENT

Land and water management policies are established to protect natural resources and the environment; and to guide and coordinate local decisions relating to growth and development. The statute provides that state land and water management policies be implemented by local governments through existing processes for the guidance of growth and development. The statute also provides that all the existing rights of private property be preserved in accord with constitutions of this state and of the United States.

The chapter establishes the Areas of Critical State Concern designation, the Florida Communities Trust as well as the Florida Coastal Management Act. The Florida Coastal Management Act provides the basis for the Florida Coastal Management Program which seeks to protect the natural, commercial, recreational, ecological, industrial, and aesthetic resources of Florida's coast.

RESPONSE: The purpose of the Flagler County CSRM project is to reduce the risk of potential damages from waves, erosion, and storm surge caused by coastal storms to

structures and infrastructure along the Flagler County shoreline. The need of the project is to address coastal storm risks that threaten structures and infrastructure from the Atlantic Ocean shoreline. This is driven by storm damages due to erosion and inundation, loss of natural habitat and recreational opportunities, and loss of regional income associated with tourism. Construction of the project, as described in detail in Section 3 of the project's SEA, will provide protection to structures and infrastructure, as well as ensure the continuation of benefits (e.g., recreation, tourism, etc.). Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. The project is consistent with the goals of this chapter.

19. CHAPTER 381, F.S., PUBLIC HEALTH: GENERAL PROVISIONS

The statute establishes public policy concerning the state's public health system, which is designated to promote, protect, and improve the health of all people in the state.

RESPONSE: The state's public health system will not be affected by the proposed project.

20. CHAPTER 388, F.S., MOSQUITO CONTROL

Mosquito control efforts of the state are to achieve and maintain such levels of arthropod control as will protect human health and safety; promote the economic development of the state; and facilitate the enjoyment of its natural attractions by reducing the number of pestiferous and disease-carrying arthropods.

It is the policy of the state to conduct arthropod control in a manner consistent with protection of the environmental and ecological integrity of all lands and waters throughout the state.

RESPONSE: The proposed project will not further the propagation of mosquitoes or other pest arthropods. The proposed project is consistent with the goals of this chapter.

21. CHAPTER 403, F.S., ENVIRONMENTAL CONTROL

Environmental control policies conserve state waters; protect and improve water quality; and maintain air quality. This statute provides wide-ranging authority to address various environmental control concerns, including air and water pollution; electrical power plant and transmission line siting; the Interstate Environmental Control Compact; resource recovery and management; solid and hazardous waste management; drinking water protection; pollution prevention; ecosystem management; and natural gas transmission pipeline siting.

RESPONSE: Pursuant to NEPA, the proposed project will be coordinated with federal, state, federally-recognized Native American tribes, local agencies, and other interested parties. Environmental protection measures, as described in detail in Section 6 of the SEA, will be implemented to minimize adverse effects to the maximum extent practicable to fish and other wildlife resources, T&E species, water quality, air quality, or other environmental resources. The proposed project complies with the goals of this chapter.

22. CHAPTER 553, F.S., BUILDING AND CONSTRUCTION STANDARDS

The statute addresses building construction standards and provides for a unified Florida Building Code.

RESPONSE: The proposed project does not include building construction.

23. CHAPTER 582, F.S., SOIL AND WATER CONSERVATION

It is the state's policy to preserve natural resources; control and prevent soil erosion, prevent floodwater and sediment damages; and to further the conservation, development and use of soil and water resources.

Farm, forest, and grazing lands are among the basic assets of the state; and the preservation of these lands is necessary to protect and promote the health, safety, and general welfare of its people.

These measures help to preserve state and private lands, control floods, maintain water quality, prevent impairment of dams and reservoirs, assist in maintaining the navigability of rivers and harbors, preserve wildlife and protect wildlife habitat, protect the tax base, protect public lands, and protect and promote the health, safety, and general welfare of the people of this state.

RESPONSE: The project is not located on or near agricultural lands. The proposed project will include appropriate erosion control plans and measures where applicable. The proposed project is consistent with the goals of this chapter.

24. CHAPTER 597, F.S., AQUACULTURE

The statute establishes public policy concerning the cultivation of aquatic organisms in the state. The intent is to enhance the growth of aquaculture, while protecting Florida's environment. This includes a requirement for a state aquaculture plan which provides for: the coordination and prioritization of state aquaculture efforts; the conservation and enhancement of aquatic resources; and mechanisms for increasing aquaculture production.

RESPONSE: The proposed project does not include aquaculture.