Draft Supplemental Environmental Assessment

Hunting Island State Park Beach – Beach Restoration

FEMA-DR-4241-SC
FEMA-DR-4286-SC
Beaufort County, South Carolina
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FEMA

U.S. Department of Homeland Security
Region 4 – Atlanta, GA

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ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effect
BO	Biological Opinion
CBRA	Coastal Barrier Resources Act
CBRS	Coastal Barrier Resources System
CEQ	Council on Environmental Quality
CFR	*Code of Federal Regulations*
CSE	Coastal Science Engineering
CWA	Clean Water Act
CY	Cubic Yards
CZMA	Coastal Zone Management Act
DA	Department of Army
DHS	Department of Homeland Security
DR	Disaster Recovery
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
GHG	Greenhouse Gas
IPaC	Information for Planning and Consultation
JCP	Joint Coastal Permit
LF	Linear Feet
MHW	Mean High Water
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory

OCRM	Ocean and Coastal Resource Management (SCDHEC)
PA	Public Assistance
PL	Public Law
PW	Project Worksheet
REC	Record of Environmental Consideration
SARBO	South Atlantic Regional Biological Opinion
SCFO	South Carolina Field Office (U.S. Fish and Wildlife Service)
SEA	Supplemental Environmental Assessment
SHPO	State Historic Preservation Office or Officer
SCDHEC	South Carolina Department of Health and Environmental Control
SCDNR	South Carolina Department of Natural Resources
SOF	Statement of Findings
Stafford Act	Robert T. Stafford Disaster Relief and Emergency Assistance Act
SY	Square Yards
THPO	Tribal Historic Preservation Office or Officer
UFR	United Federal Review
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 INTRODUCTION

Severe storms impacted the State of South Carolina between October 1, 2015 and October 23, 2015, bringing strong winds, storm surge, and flooding. President Obama signed a major disaster declaration (FEMA-4241-DR-SC) on October 5, 2015 authorizing the Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA) to provide federal assistance to the designated areas in South Carolina. Subsequently, Hurricane Matthew impacted the State of South Carolina between October 4, 2016 – October 30, 2016, also bringing strong winds, storm surge, and flooding. President Obama signed a major disaster declaration (FEMA-4286-DR-SC) on October 11, 2016 authorizing federal assistance in South Carolina.

This assistance is provided pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), and Public Law (PL) 93-288, as amended. Section 406 of the Stafford Act authorizes the FEMA's Public Assistance (PA) Program to repair, restore, and replace state, tribal, and local government and certain private nonprofit facilities damaged as a result of a disaster event. Beaufort County, South Carolina was designated in both disasters to receive federal assistance. Beaufort County has applied through the PA Program to receive funding (Federal action) to restore the eroded shoreline along Hunting Island State Park. The project worksheets (PW) ID for the proposed Federal actions are PA-04-SC-4241-PW-00799(0) and PA-04-SC-4286-PW-00966(0). The South Carolina Parks, Recreation and Tourism (SCPRT) has applied through the PA Program to receive funding to restore the eroded shoreline along portions of the Hunting Island State Park. The shoreline is an engineered and maintained beach previously authorized for nourishment and maintenance by the United States Army Corps of Engineers (USACE).

The USACE prepared an Environmental Assessment and Statement of Findings (SOF) titled SAC-2015-01701-REVISED Hunting Island State Park Beach Nourishment and Groin and issued a Finding of No Significant Impact (FONSI) on their permitting authorization on August 19, 2019. See Appendix C for USACE SOF. Any federal agency may adopt another federal or state agency's environmental assessment (EA) (40 CFR §1500.4(n), §1500.5(h), and §1506.3) provided the original document satisfies the agency's National Environmental Policy Act (NEPA) of 1969 requirements. FEMA has adopted USACE's EA and has also provided supplemental information.

This Supplemental Environmental Assessment (SEA) has been prepared in accordance with Stafford Act, NEPA (Public Law 91-190, as amended), the President's Council on Environmental Quality (CEQ) regulations to implement NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and FEMA's directives and instructions implementing NEPA (DHS Directive 023-01, Rev 01, and FEMA Directive 108-1). Recent changes to the CEQ regulations implementing the NEPA (40 CFR Parts 1500 to 1508) became effective on September 14, 2020; 85 Fed. R 43304-76 (July 16, 2020). As stated in 40 CFR § 1506.13, the new regulations apply to any NEPA process begun after September 14, 2020. This SEA commenced prior to that date; therefore, this SEA conforms to the CEQ NEPA implementing regulations that were in place prior to September 14, 2020, and policies issued by the Department of Homeland Security Directive 023-01, Rev 01, and FEMA directive 108-1. FEMA is required to consider potential environmental impacts before funding or approving actions and projects.

2.0 PURPOSE AND NEED

As a result of the severe storms in 2015 and Hurricane Matthew in 2016, the engineered shoreline along Hunting Island State Park in Beaufort County was heavily eroded. SCPRT, having legal responsibility to maintain the Hunting Island State Park, may be eligible for funding through the FEMA PA Grant Program pursuant to Title 44 of the CFR § 206.223(a)(3). The community has identified the need to restore the capacity of the shoreline to withstand future storm events, reduce erosion, and decrease risk from future events to human life and improved property. Prior to the construction of the engineered beach and subsequent nourishments, the upland areas of Hunting Island State Park were significantly impacted by storm impacts and surge inundation. The proposed action reduced the risk to improved property landward of the beach, provided additional habitat for sea turtles and shorebirds, and increased recreational values.

Hunting Island State Park receives on an average over one (1) million visitors a year bringing eco-tourism dollars to the county and state including to local businesses. Restoration of the beach and protection of the park facilities will enable this essential economic element to continue.

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

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

3.0 ALTERNATIVES

The alternatives considered in addressing the stated purpose and need are the No Action Alternative and the Preferred Action Alternative, which is the sand nourishment on portions of the Hunting Island State Park's shoreline.

3.1 Alternative 1 – No Action Alternative

Under the No Action Alternative, the beach restoration project would not have been completed. Consequently, the beach and park facilities would not be protected from future storm events, and ongoing erosion would continue along the shoreline. Improved property would continue to be vulnerable to future storms, and benefits to listed species and recreational value would not have occurred.

3.2 Alternative 2 – Beach Restoration (Proposed Action)

Under the Preferred Alternative, the USACE permitted project at the Hunting Island State Park occurred from January to April 2020. The FEMA federal action of funding the disaster-related sand loss has not occurred but with the USACE permitted project for the beach restoration. The USACE permitted project supports FEMA's mission to help people before, during, and after

disasters by increasing the level of storm protection to the existing shore, upland habitat, and campground facilities. The project will also maintain a viable beach and dune system for nesting habitat for threatened and endangered sea turtles, as well as protect and maintain shorebird nesting and foraging habitat. The project will also provide protection to historic properties such as the Hunting Island Lighthouse and provide enhancement to recreational activities.

The South Carolina Department of Parks, Recreation and Tourism (SCPRT) submitted applications to FEMA for funding under the PA Program to repair damages as a result of FEMA-4241-DR-SC and FEMA-4286-DR-SC. The completed beach restoration (permitted by USACE) resulted in approximately 11,500 linear feet (LF) of ocean shoreline sand renourishment using a cutterhead dredge from a single, offshore borrow area approximately two (2) miles out in the Atlantic. The sand dredged was transported through a pipeline corridor from dredger to shoreline. Additionally, the construction of two (2) new groins was completed during that time. Total nourishment of the permitted areas consisted of 1,170,000 cubic yards of sand. The new groins were installed between two existing groins north of the lighthouse. Once sand nourishment and groin construction were completed sand fencing was installed and dune vegetation planted.

In addition to the USACE permitted project, SCPRT proposed to restore approximately 81,663 CY of lost sand attributable to both storm events at the same time as the nourishment project to the engineered and designed beach template. The sand under review for FEMA funding accounts for seven percent (7%) of the overall sand that was lost and replaced. Furthermore, the sand lost due to the storms fell within the USACE-permitted 11,500 LF of ocean shoreline, utilized the same offshore borrow area, and pumped through the same pipeline. Additional storm-related repairs were for 4,500 LF of sand fencing and 7,012 LF of vegetation. The project is located within three reaches. Reach 1 is from 32.357640, -80.444690 to 32.367440, -80.440490; Reach 2 is from 32.371070, -80.438660 to 32.376930, -80.436150; and Reach 3 is from 32.385470, -80.432180 to 32.387589, -80.431044.

3.3 Alternative 3 – Repair the Shore to Pre-Disaster Condition

Consideration was given to restoring only the amount of sand loss from the severe storms in 2015 and Hurricane Matthew as stand-alone projects rather than combined in the next scheduled nourishment as described in Alternative 2. This alternative was eliminated from detailed analysis as it would not meet the need of the community in reducing risk and protecting life and improved property. The impacts from Alternative 3 would have been identical as those for Alternative 2; however, by combining the storm-related losses in a nourishment to the full beach template as in Alternative 2, the impacts occur with less frequency and provide economic beneficial impacts due to project cost-savings.

4.0 AFFECTED ENVIRONMENTAL AND ENVIRONMENTAL CONSEQUENCES

Hunting Island State Park is on a four (4) mile long, semi-tropical barrier island along the southeast coast of South Carolina and is part of Beaufort County. The island is 16 miles north of Fripp Island and east of the City of Beaufort, South Carolina. Dominated by mostly undeveloped maritime forests, salt marshes, and sandy beaches, the island is about 5,000 acres. It has one of the highest rates of beach erosion in the United States with over 20 feet of sand lost per year. From 1968 to

2005 there were seven nourishment projects including a 2006-2007 restoration project that combined nourishment with the installation of groins. The island is home to the only publicly accessible lighthouse in South Carolina and has approximately one hundred (100) campsites with water and electrical hookups. Finally, there are shower and restroom facilities, education centers, trails for visitors to study and experience the rugged, distinct beach landscape amplified by the resting driftwood. The island's beach sees a varying number of sea turtle nests each year and is a prime loggerhead sea turtle nesting area that is patrolled from May until end of the sea turtle nesting season by a group of volunteers known as the Friends of Hunting Island Sea Turtle Conservation Project (FOHI). In the last decade, 2014 was marked with the lowest number of observed sea turtle nests with 39 and 2019 being the highest number with 153 nests observed (http://seaturtle.org/nestdb/index.shtml?view_beach=66&year=2009).

4.1 Potential Environmental Consequences

The potential environmental consequences and permits required including conditions adhered to as a result of Alternative 1 and 2 are summarized in Table 4.1.

Table 4.1 Environmental Consequences by Alternative

Resource	Environmental Consequence	Environmental Protection Measures and Required Permits
Floodplains	Alternative 1 – No impact. Risk to human life and improved property continues at current level. Alternative 2 – Beneficial impact as the beach will reduce flood risk to adjacent park facilities and associated infrastructure and preserve the floodplain for open space and recreational use.	Not applicable. An 8-step checklist as required by 44 CFR Part 9 was completed, see Appendix B.
Coastal Zone Management	Alternative 1 – No impact. Alternative 2 – Minor beneficial impact due to restoration of the beach dunes and vegetation along the shoreline.	Alternative 2 required an SCDHEC-OCRM Joint Critical Area Permit, which would constitute consistency review under the state's coastal zone management program. SCPRT has obtained SCDHEC-OCRM #2015-01701-1IG.

		Verification of compliance and any applicable permitting documents will be required during the FEMA closeout review process.
Wetlands (Executive Order 11990)	Alternative 1 – No impact. Alternative 2 – Short-term minor impacts from construction but overall, there is short-term beneficial impacts.	SCPRT has obtained USACE individual permit #SAC-2015-01701. Verification of compliance and any applicable permitting documents will be required during the FEMA closeout review process. An 8-step checklist as required by 44 CFR Part 9 was completed, see Appendix B.
Environmental Justice (Executive Order 12898)	Alternative 1 – No impact. Alternative 2 – No impact.	Not applicable.
Climate Change	Alternative 1 – No impact. Alternative 2 – Minor short-term impacts.	Not applicable.
Transportation	Alternative 1 – No impact. Alternative 2 – Minor short-term impacts.	Not applicable.
Threatened and Endangered Species	Alternative 1 – No impact, except possible loss of suitable habitat for listed species. Alternative 2 - Beneficial effects due to increased habitat for sea turtles and shorebirds. Potential for	Under Alternative 2, the applicant adhered to and complied with all the Prudent and Reasonable Measures, Terms and Conditions, and agreed to adhere to the Conservation Measures from the USFWS Biological Opinion #04ES1000-2016-

	impacts and incidental take during construction are minimized by application of measures set forth in U.S. Fish and Wildlife Service (USFWS) Biological Opinion (BO) and the National Marine Fisheries Service (NMFS) South Atlantic Regional Biological Opinion (SARBO).	F-0468-R001, issued to USACE on September 7, 2017. The applicant was also to adhere to and comply with the requirements covered by the 1997 South Atlantic Regional Biological Opinion (SARBO), dated September 25, 1997. Verification from the applicant or applicant's representative will be required at closeout proving the agreed upon conditions and requirements in both biological opinions were adhered to. See Appendix C for the applicable biological opinions.
Cultural Resources	Alternative 1 – No impact. Alternative 2 – FEMA consulted with SHPO and Catawba Indian Nation, Cherokee Nation, Eastern Shawnee Tribe of OK, Muscogee (Creek) Nation, Seminole Nation of OK, Shawnee Tribe, and Thlopthlocco Tribal Town. Responses were received from Muscogee (Creek) Nation on 06/07/2016 and Catawba Indian Nation on 06/16/2016. And received confirmation from SHPO that their office had previously consulted with USACE for the above undertaking. See Appendix E for SHPO correspondences. Per the executed Programmatic Agreement for SC dated October 16, 2014, Stipulation	Verification of compliance and any applicable permitting documents will be required during the FEMA closeout review process.

2005 there were seven nourishment projects including a 2006-2007 restoration project that combined nourishment with the installation of groins. The island is home to the only publicly accessible lighthouse in South Carolina and has approximately one hundred (100) campsites with water and electrical hookups. Finally, there are shower and restroom facilities, education centers, trails for visitors to study and experience the rugged, distinct beach landscape amplified by the resting driftwood. The island's beach sees a varying number of sea turtle nests each year and is a prime loggerhead sea turtle nesting area that is patrolled from May until end of the sea turtle nesting season by a group of volunteers known as the Friends of Hunting Island Sea Turtle Conservation Project (FOHI). In the last decade, 2014 was marked with the lowest number of observed sea turtle nests with 39 and 2019 being the highest number with 153 nests observed (http://seaturtle.org/nestdb/index.shtml?view_beach=66&year=2009).

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	profile. A mixing zone is expected to have occurred but no long- term adverse effects have been reported. Short term impacts to migratory birds and surf-zone fishes are likely to have occurred during construction. After construction, fish and wildlife resources are expected to have recovered.	permitting documents will be required during the FEMA closeout review process.
Socioeconomic	Alternative 1 – Impacts could result from future storm damages along the shoreline. Alternative 2 – Reduction of impact from storm damage along the shoreline resulting in an increase in the local economy from tourism, protecting recreational values, and provided short-term employment from the undertaking resulting in beneficial effects.	Not applicable.
Coastal Barrier Resources	Alternative 1 and 2 – No impact, not located within Coastal Barrier Resource System unit.	Not applicable.
Hazardous, Toxic, and Radioactive Waste	Alternative 1 – No impact. Alternative 2 – Minor short-term impacts due to potential for spills during construction. There are no hazardous, toxic, and radioactive sites or facilities within a one-mile radius of the Hunting Island beach.	Potential for spills from construction equipment for Alternative 2 was minimized and handled in accordance with applicable regulations and state and federal joint coastal permitting.
Air Quality	Alternative 1 – No impact. Alternative 2 – Minor short-term impacts to air quality due to exhaust from construction equipment.	Not applicable.

Noise	Alternative 1 – No impact. Alternative 2 – Minor short-term impacts from construction equipment.	Not applicable.
Solid Waste	Alternative 1 – No impact. Alternative 2 – No impact.	Not applicable.
Drinking Water	Alternative 1 – No impact. Alternative 2 – No impact.	Not applicable.
Cumulative Impacts	Updated from USACE EA (2012) – See Section 5.0 for details Alternative 1 – Future storms could result in impacts to the shoreline, reducing buffer between ocean and infrastructure. Alternative 2 – Not expected to have significant adverse cumulative impacts on any resource.	Not applicable.

4.2 Floodplain Management (Executive Order 11988)

Executive Order (EO) 11988 requires federal agencies to take action to minimize occupancy and modification of the floodplain. Specifically, EO 11988 prohibits federal agencies from funding construction in the 100-year floodplain unless there are no practicable alternatives. FEMA's regulations for complying with EO 11988 are promulgated in 44 CFR Part 9. Based on the current FEMA Flood Insurance Rate Maps (FIRM), the project area is located within the coastal high hazard area designated as a Zone VE (**Appendix A**).

4.2.1 Alternative 1 – No Action Alternative

Under the no action alternative, no construction would have occurred and there would had been no effect to the floodplain. Improved property adjacent to the project areas would have remained at risk from future flooding events.

4.2.2 Alternative 2 – Beach Restoration Project

Under the preferred alternative, reconstruction and revegetation of the coastal dunes and replacement of fencing and signage occurred within the floodplain. The restored dune vegetation and dunes serves to reduce the flood risk to adjacent improved property and maintain a viable

beach habitat for species. The beach dunes are functionally dependent upon their location within the floodplain and facilitate open space use of the floodplain for recreational value. An 8-step checklist, as required by 44 CFR Part 9, has been completed for this alternative (**Appendix B**).

4.3 Coastal Zone Management (CZMA)

The South Carolina Department of Health and Environmental Control (SCDHEC) Office of Ocean and Coastal Resources Management (OCRM) is the designated state coastal management agency and is responsible for the implementation of the South Carolina Coastal Management Program. This program was established under the guidelines of the Coastal Zone Management Act as a state-federal partnership to managed coastal resources. SCDHEC-OCRM responsibilities include the direct regulation of impacts to coastal resources within the coastal ecosystems and the indirect certification authority over federal actions and state permit decisions within South Carolina's eight coastal counties such as in Beaufort County where Hunting Island Beach is located.

4.3.1 Alternative 1 – No Action Alternative

Under the no action alternative, no work would have occurred and there would have been no impact to the coastal zone. The critical coastal areas and ecosystems would have been still unprotected and susceptible to further coastal erosion.

4.3.2 Alternative 2 – Beach Restoration Project

Under the preferred alternative, activity and construction occurred in the coastal zone and within a critical coastal area in South Carolina. The project restored eroded areas of the shore by replacing beach compatible sand to mimic the engineered beach profile. SCPRT obtained a Critical Area Permit/Coastal Zone Management Certification for the beach project on February 26, 2018 designated as 2015-01701 Revised.

4.4 Protection of Wetlands (Executive Order 11990)

EO 11990, Protection of Wetlands, requires federal agencies to take action to minimize the loss of wetlands. The NEPA compliance process requires federal agencies to consider direct and indirect impacts to wetlands, which may result from federally funded actions.

4.4.1 Alternative 1 – No Action Alternative

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

4.4.2 Alternative 2 – Beach Restoration Project

Under the preferred alternative, minor short-term impacts are anticipated to have happened. The action involved obtaining sand from offshore borrow areas, placing the sand along the beach to reconstruct the coastal dunes, and stabilizing the dunes by revegetating the dunes with plantings. Temporary increases to turbidity likely occurred during both the excavation of sand at the offshore borrow areas and during the sand placement operations on the beach. Short-term negative impacts

are expected to have occurred for commercial and recreational fisheries near the shoreline, but impacts are expected to have been limited to the construction timeframe. No long-term negative impacts to nearby wetlands are expected to have resulted due to the completed work due to the best management practices implemented as required by both USACE and SCDHEC-ORCM permitting. Although, beneficial impacts to marine wetlands are expected to persist by a restored beach area providing buffer against coastal erosion preserving habitat and recreational values.

Per the National Wetlands Inventory, accessed June 8, 2021, the beach is located in estuarine and marine wetland habitat. USACE and SCDHEC-OCRM permits were obtained as part of an EA (SAC-2015-01701-REVISED). An 8-step checklist, as required by 44 CFR Part 9, has been completed for this alternative (**Appendix B**). Applicant will have to provide verification that all permitting requirements and conditions were adhered to during and after the construction work. This verification will be required at project closeout.

4.5 Environmental Justice (Executive Order 12898)

On February 11, 1994, President Clinton signed EO 12898, entitled, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations". The EO directs federal agencies, "to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States."

4.5.1 Alternative 1 – No Action Alternative

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

4.5.2 Alternative 2 – Beach Restoration Project

Under the preferred alternative, no disproportionate impacts, adverse impacts to minority or low-income populations are anticipated to have occurred. The coastal dune system was restored to its engineered beach profile with no changes to the existing design and footprint. The project benefits all population members as these areas are accessible to the public.

4.6 Climate Change

Greenhouse gases (GHGs) are emitted by both natural processes and human activities, and their accumulation in the atmosphere regulates temperature. GHGs include water vapor, carbon dioxide, methane, nitrous oxides, and other compounds. There are no established thresholds or standards for GHGs.

4.6.1 Alternative 1 – No Action Alternative

Under the no action alternative, there would have been no construction activities, and thus would not have caused any emissions of GHGs.

4.6.2 Alternative 2 – Beach Restoration Project

Under the preferred alternative, restoration of an engineered beach was completed and resulted in minor, short-term impacts from construction equipment resulting in temporary air emissions due to fuel usage. These temporary emissions would have been below the Clean Air Act regulatory standards and would have had minor impacts.

4.7 Transportation

The scope of work provided doesn't include the construction of any transportation features, as the work will be done using the existing roads. Approximately a mile to the north of the beach action area lies Harbor Island, a private community featuring a variety of vacation rental homes and condominiums with resort-like amenities. The Fripp Island private community is located to the south of Hunting Island. No residential or commercial properties exist on Hunting Island proper. The Sea Island Parkway Bridge goes over Harbor River connecting Harbor Island to the mainland. This is a one way in and one way out for those living in Harbor Island and for those working or visiting Hunting Island. This route allows heavy equipment and construction staff to be transported to and from the beach area. A new bridge was completed and open to the public on April 26,2021. Fripp Island is accessible via Sea Island Parkway located on the western perimeter of Hunting Island and crossing the Tarpon Boulevard Bridge over Fripps Inlet.

4.7.1 Alternative 1 – No Action Alternative

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

4.7.2 Alternative 2 – Beach Restoration Project

Under the preferred alternative, because it involved beach restoration, had minor short-term impacts from construction equipment entering and leaving the project areas transporting sand and construction equipment to the project locations. No permanent or adverse effects occurred to the existing infrastructure. For those living in Harbor Island and Fripp Island, they may see an increase in traffic volume after the initial opening of the restored Hunting Island State Park Beach.

4.8 Threatened and Endangered Species

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

Potential threatened and endangered species that were present in the project area were identified in the USACE EA and the revised USFWS Biological Opinion dated September 7, 2017. The species likely to have occurred in the project area at the time are the green sea turtle (Chelonia mydas), leatherback sea turtle (Dermochelys coriacea), Northwest Atlantic Ocean distinct population segment (DPS) of the loggerhead sea turtle (Caretta caretta) and its designated critical habitat, piping plover (Charadrius melodus), red knot (Calidris canutus rufa), and West Indian manatee (Trichechus manatus). The shoreline of the project area is a suitable sea turtle nesting

habitat for listed sea turtles as well as foraging habitat for the piping plover and red knot.

4.8.1 Alternative 1 – No Action Alternative

Under the no action alternative, no undertaking by FEMA and no construction would have occurred, therefore there would be no potential for effects and no further responsibility under the ESA. Suitable sea turtle nesting habitat and foraging habitat for the piping plover and red knot would have continued to be reduced in the project area due to coastal erosion and future storm events.

4.8.2 Alternative 2 – Beach Restoration Project

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

The project required construction work to strictly adhere to the reasonable and prudent measures and terms and conditions of the USFWS's Revised Biological Opinion dated September 7, 2017, FWS Log Number 04ES1000-2016-F-0468-R001. In addition, the SCPRT agreed to comply with the biological opinion's conservation measures including if work was performed during turtle nesting that additional monitoring, reporting, and conditions as stated in the biological opinion would be followed. Verification from the applicant or applicant's representative will be required at closeout proving the agreed upon conditions and requirements in both biological opinions were adhered to. For species under the jurisdiction of the National Marine Fisheries Service (NMFS), the project was required to meet the requirements covered by the 1997 South Atlantic Regional Biological Opinion (SARBO), dated September 25, 1997. **See Appendix C** for the biological opinions.

4.9 Cultural Resources

As a Federal agency, FEMA must consider the potential effects of its actions upon cultural resources prior to engaging in any undertaking. Cultural resources include historic architectural properties (including buildings, structures, and objects), prehistoric and historic archaeological sites, historic districts, designed landscapes, and traditional cultural properties. The primary federal authorities that apply to cultural resources are NEPA and Section 106 of the National Historic Preservation Act (NHPA). Cultural resources are specifically included under one of the mandates of NEPA: to "preserve important historic, cultural, and natural aspects of our national heritage…." (42 USC 4331). The implementing regulation for the NHPA is the Protection of Historic Properties SCPRT Environmental Assessment (36 CFR Part 800), which defines historic properties as any prehistoric or historic district, site, building, structure, or object that is included in, or eligible for inclusion in, the National Register of Historic Places (NRHP) (36 CFR800.16). Under the NHPA, a property possesses significance if it meets the NRHP criteria listed in 36 CFR 60.4 and retains sufficient integrity to convey that significance. Generally, properties must be at least 50 years old to be eligible for the NRHP, unless they are proven to have exceptional importance.

FEMA, the South Carolina State Historic Preservation Office (SHPO), the South Carolina Emergency Management Division, United Keetoowah Band Of Cherokee Indians, Catawba Indian

Nation, and the Advisory Council on Historic Preservation have executed a Statewide Programmatic Agreement dated October 16, 2014, to streamline the Section 106 review process. Per the guidelines outlined in the Programmatic Agreement, the undertaking does not meet the allowances agreed upon in Appendix B and, therefore, required consultation with interested parties. The APE for the beach renourishment of Hunting Island State Park is located within three (3) reaches: Reach 1 is from 32.357640, -80.444690 to 32.367440, -80.440490; Reach 2 is from 32.371070, -80.438660 to 32.376930, -80.436150; and Reach 3 is from 32.385470, -80.432180 to 32.387589, -80.431044. The offshore borrow area includes six (6) points: 32.345018, -80.419148; 32.353628, -80.408779; 32.351862, -80.406738; 32.353822, -80.404395; 32.351462, -80.401680; and 32.340917, -80.414447.

FEMA evaluated potential resources in the Area of Potential Effects (APE) utilizing the National Park Service (NPS) National Register of Historic Places (NRHP) GIS resource, the South Carolina ArchSite, and previous cultural resource investigations. The review found there are no properties listed in or eligible for listing in the National Register of Historic Places or National Historic Landmarks, no known historic structures, historic cemeteries, or historic bridges within the proposed project's APE.

FEMA adopted U.S. Army Corps of Engineers (USACE) consultation with SHPO per the executed Programmatic Agreement for SC dated October 16, 2014, Stipulation I.A.5, which states: If another Federal program or Federal agency has concluded Section 106 consultation review and approved an Undertaking within the past five years, FEMA has no further requirement for Section 106 review regarding that Undertaking provided that FEMA: (a) adopts the findings and determinations of the previous agency; (b) confirms that the scope and effect [as defined by 36 CFR § 800.16(i)] of its Undertaking are the same as that of the Undertaking reviewed by the previous agency, and; (c) determines that the previous agency complied with Section 106 appropriately. FEMA EHP has confirmed that the scope and effect of this undertaking are the same as that of the Undertaking reviewed by USACE) and, therefore, FEMA is able to adopt the previous findings and determinations for consultation with SHPO. FEMA initiated consultation with the State Historic Preservation Officer (SHPO) on June 5, 2016 utilizing the previous consultation between USACE and SHPO.

Initial coordination between USACE and SHPO began in March 2016 with a determination of no historic properties was conducted in March 2016 for beach renourishment and groin construction under SAC # 2015-01701-1IG. SHPO requested an underground archaeological survey be performed on April 7, 2016. A survey was conducted by the U.S. Army Corps of Engineers of the borrow locations prior to beach re-nourishment activities proceeding with a finding of no potentially significant submerged cultural resources within the APE. However, it was determined by SHPO that resources were identified in the North Pipeline Corridor and a 100-foot buffer zone was requested for all re-nourishment activities that involved the borrow pit near this corridor. FEMA confirmed this condition and was notified by SCPR that the borrow pit near the North Pipeline Corridor was not utilized for any renourishment activities. FEMA sent confirmation to SHPO on June 10, 2021, with response received in acknowledgement from SHPO on June 15, 2021.

Additionally, FEMA consulted with seven (7) Tribes with ancestral interest in Georgetown County, SC: Catawba Indian Nation, Cherokee Nation, Eastern Shawnee Tribe of OK, Muscogee (Creek) Nation, Seminole Nation of OK, Shawnee Tribe, and Thlopthlocco Tribal Town. On June

7, 2016, FEMA received concurrence with finding of No Historic Properties Affected from Muscogee (Creek) Nation. On June 16, 2016, FEMA received concurrence with finding of No Historic Properties Affected from Catawba Indian Nation. Responses were received from Muscogee (Creek) Nation on June 7, 2016 with a concurrence of No Historic Properties Affected.

4.9.1 Alternative 1 – No Action Alternative

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

4.9.2 Alternative 2 – Beach Restoration Project

Under the preferred alternative, the beach would be re-nourished utilizing an offshore sand source. The project is not anticipated to have an impact on any known sites along the shoreline, as the previously recorded sites are all located outside of the APE and re-nourishment activities have occurred previously in this area. The proposed sand placement activities will not disturb previously undisturbed ground along the beach reach or require ground disturbance along the shoreline below the depth where sand has been placed previously. Additionally, a 100-foot buffer zone shall be implemented during all re-nourishment activities will be implemented during all activities near the North Pipeline Corridor.

5.0 CUMULATIVE IMPACTS

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

The shoreline of Hunting Island State Park Beach was vulnerable to coastal erosion and expected to be subject to damages from recent and future tropical storms and hurricanes, which may result in presidential declarations. As an engineered and maintained facility, future restorations due to storm or background erosion are expected. The previous USACE EA/STOF issued in 2019 identified cumulative impacts from ongoing beach restoration efforts and similar projects in the past for decades with the need to nourish to continue on barrier islands as beachfront erosion continues to threaten existing and new manmade structures.

The SCPRT completed the beach restoration that was already in preparation for the background erosion concurrently with the erosion attributable to both disaster events culminating into a single nourishment project that restored the beach to the engineered and designed beach template. The 81,663 CY of sand under review for FEMA funding accounts for seven percent (7%) of the overall sand that was lost and replaced. Total nourishment of the permitted areas consisted of 1,170,000 cubic yards of sand. The sand dredged was transported through a pipeline corridor from dredger to shoreline. Additionally, the construction of two (2) new groins was completed during that time.

The new groins were installed between two existing groins north of the lighthouse. Once sand nourishment and groin construction were completed sand fencing was installed and dune vegetation planted. Continued dredging from the existing borrow areas is expected in future maintenance nourishments of the engineered shoreline.

The areas north and south of Hunting Island State Park Beach consist mostly of undeveloped land with use primarily reserved for camping, hiking, and water recreational activities. The island is flanked by the developed Harbor Island residential community to the north and the heavily developed Fripp Island to the south. There is no evidence of previous or foreseeable beach maintenance projects at these two islands. As noted previously, Hunting Island State Park Beach exhibits one of the highest rates of beach erosion in the United States, therefore it is anticipated with the increasing frequency and growing intensity of tropical storms, coastal surge events, and rising sea levels it is anticipated that the continued existence of the cultural and recreational benefits the beach provides will require similar maintenance and nourishment of sand in the foreseeable future.

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

6.0 PUBLIC INVOLVEMENT

USACE is the lead federal agency that conducted the NEPA analysis and issued a public notice in 2012 and received comments from the USFWS, the United States Coast Guard (USCG), the National Marine Fisheries Service (NMFS), the NC Division of Marine Fisheries (DMF), and the NC Wildlife Resources Commission (WRC). FEMA issued a disaster-wide initial public notice for Hurricane Florence on October 25, 2018, Tropical Storm Michael on February 6, 2019, and Hurricane Dorian on October 18, 2019, to notify the public of projects under the PA Program that may be occurring within floodplains. The disaster-wide initial public notice for Hurricane Florence can be accessed at https://www.ncdps.gov/Florence. The disaster-wide initial public notice for Tropical Storm Michael can be accessed at https://www.ncdps.gov/Michael. The disaster-wide initial public notice for Hurricane Dorian can be accessed at https://www.ncdps.gov/dorian2019. FEMA completed project specific EO 11988 Checklists for Hurricane Florence and Tropical Storm Michael. A public notice was issued for each and no public comments were received.

USACE is the lead federal agency that conducted the NEPA analysis and issued a joint public notice with SCDHEC-OCRM on March 15, 2016. After Hurricane Matthew, a joint public notice containing scope revisions was issued on July 21, 2017. They received twenty-one (21) requests for a public hearing in which the USACE, after reviewing the eleven (11) comments received, per the USACE's NEPA analysis determined "that a public hearing would not result in additional

information necessary to evaluate the proposed project that is not otherwise available…comments on the proposed activity will be considered during our review of the DA (Department of Army) permit application."

FEMA issued a disaster-wide initial public notice for the 2015 Severe Storms on November 7, 2015 and for Hurricane Matthew a notice was provided on December 1, 2016 to notify the public of projects under the PA program that may be occurring within floodplains. SCDEHC-ORCM provides previous beach renourishment project information by year at: https://gis.dhec.sc.gov/renourishment/.

The public will be notified that the FEMA SEA is available for review and comment, by posting the public notice on the Applicant's website, at the project site, and on FEMA's website on TBD (**Appendix D**). An electronic version of the SEA will be posted on FEMA's website at: https://www.fema.gov/emergency-managers/practitioners/environmental-historic/region/4. The public comment period will end after TBD days of posting.

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

7.0 AGENCY COORDINATION

The following agencies and organizations were contacted during the preparation of this SEA:

- Interested Tribal Historic Preservation Offices (THPOs)
- SC State Historic Preservation Office (SHPO - SC Department of Archives and History)
- SC Department of Health and Environmental Control: Ocean and Coastal Resources Management (SCDHEC-OCRM)
- U.S. Army Corps of Engineers (USACE), Charleston District Office
- U.S. Fish and Wildlife Service (USFWS), Charleston Ecological Office

8.0 LIST OF PREPARERS

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9.0 REFERENCES

Seaturtle.org. 2021. Sea Turtle Nest Monitoring System: South Carolina DNR Sea Turtle Conservation Program. Accessed online April 27, 2021 at http://seaturtle.org/nestdb/index.shtml?view_beach=66&year=2009.

USACE, 2019. MEMORANDUM FOR RECORD: Department of Army Environmental Assessment and Statement of Finding for SAC-2015-01701-REVISED Hunting Island State Park Beach Renourishment and Groin.

Appendices are available for review upon request to:

FEMA-R4EHP@fema.dhs.gov.