DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
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FINDING OF NO SIGNIFICANT IMPACT

MYRTLE BEACH REACH 3 STORM DAMAGE REDUCTION PROJECT (GARDEN CITY / SURFSIDE BEACH)

AND USE OF OUTER CONTINENTAL SHELF SAND

GEORGETOWN AND HORRY COUNTIES, SOUTH CAROLINA

August 2016

The National Environmental Policy Act (NEPA) requires the U.S. Army Corps of Engineers, Charleston District (USACE), and the Bureau of Ocean Energy Management (BOEM) to evaluate the effect of proposed projects on both the environment and human health and welfare. This Finding of No Significant Impact (FONSI) summarizes the results of the USACE/BOEM evaluation and documents the USACE/BOEM's conclusions.

USACE/BOEM are proposing to perform a beach renourishment project at Garden City and Surfside Beaches, South Carolina using sand from the outer-continental shelf (OCS). This renourishment project is part of a previously-approved USACE Hurricane and Storm Damage Reduction Project. Use of OCS sand requires a non-competitive negotiated agreement between Horry County, the project's non-federal cost share sponsor, and BOEM. This NEPA evaluation supports BOEM's action in executing the agreement. While the conclusions in this FONSI represent the conclusions of both USACE and BOEM, this FONSI is being issued as a USACE document. BOEM will issue a FONSI as a separate document.

The Myrtle Beach Project was authorized for construction by Section 101 of the Water Resources Development Act of 1990, Public Law 101-640, dated November 28, 1990 (WRDA 90). The authorized USACE project required the construction of a protective beach in three separate reaches, North Myrtle Beach (Reach 1), Myrtle Beach (Reach 2), and Garden City/Surfside Beach (Reach 3). The total project reach was 25.3 miles. Periodic nourishment is required every 10 years at Reach 1, and every 8 years with one 10-year effort at Reaches 2 and 3.

In addition to being separable reaches, each reach also has different sponsors. Reach 1 Sponsor is the City of North Myrtle Beach, Reach 2 Sponsor is the City of Myrtle Beach, and Reach 3 Sponsor is Horry County. For the current project, funding is only available for Reach 3 (Garden City/Surfside Beach).

USACE has previously described the affected environment and evaluated environmental effects with the Myrtle Beach Storm Damage Reduction Project in its Feasibility Report on Storm Damage Reduction, Environmental Assessment Beach Erosion Control Study, 1993 Environmental Impact Statement, 1993 General Design Memorandum, and 2007 Environmental Assessment. In 1996, the Marine Minerals Service (now BOEM) also prepared an EA covering the initial nourishment of Surfside Beach using Federal Outer Continental Shelf (OCS) sand from the Surfside borrow area. The 1993 Environmental Impact Statement (EIS) and 2007 EA are incorporated in this document by reference and can be found in their entirety in Appendix 7. Pursuant to NEPA, the EA describes the affected environment and evaluates new information from the previous environmental documentation. Its purpose is to update potential environmental effects resulting from the issuance of a new negotiated lease for sand within the previously identified borrow area, and to determine if the proposed action, in light of new information, would have a significant effect on the human environment and whether an EIS must be prepared.

The proposed project at Reach 3 consists of a protective storm berm and an advanced nourishment construction berm. The protective storm berm reduces damages expected to occur during severe storm events. The advanced nourishment berm acts as a buffer for the protective storm berm against long term erosional forces. The protective storm berm has a top elevation of 6.0 NAVD 88 and a crest width of ten feet. The fore slope of the protective berm is 1 vertical to 20 horizontal down to natural ground. The advance nourishment berm sits adjacent to the protective storm berm. The advance nourishment berm has a top elevation of 6.0 NAVD 88. The fore slope of the advance nourishment is 1 vertical to 5 horizontal down to elevation 2.0 NAVD 88 then a variable fore slope down to the existing beach profile. At select locations, the plan includes dune grass and dune fencing. The length of the dune and beachfill for the project is approximately 40,300 feet.

The project is anticipated to be constructed with a hopper dredge, booster pump, pipeline, and land-based heavy equipment (i.e. bulldozers and front-end loaders); however, the use of a cutterhead dredge remains a possibility. The pipeline will run from the offshore borrow areas onto the beach and then run down the beach. Beach compatible sand from the offshore source will be discharged as slurry. During construction, temporary training dikes of sand will be used to contain the discharge and control the fill placement. Fill sections will be graded by land-based equipment, such as bulldozers, articulated front-end loaders, and other equipment as necessary to achieve the desired beach profile. It is anticipated construction will begin in fall 2016 and will require approximately 4-5 months for completion. This schedule could change due to contractual issues, inclement weather, equipment failure, or other unforeseen difficulties.

The borrow area is located in Federal waters (>3 nautical miles offshore) on the OCS; therefore, BOEM is acting as a cooperating agency on this NEPA document. Five dredge zones are recommended for use to achieve the desired project sand quantities (e.g., >90% sand).

Dredge elevations were selected primarily on basis of allowing continuous dredging operations perpendicular to the shoreline, and in avoiding unsuitable fine-grained material. In general, a buffer of about 1-foot was applied to each dredge cut utilizing the subsurface cross sections.

Since the proposed project is a periodic renourishment of an existing Federal Hurricane and Storm Damage Reduction Project, alternatives were fully evaluated during the 1993 EIS. Along with a No Action alternative, the supplemental EA evaluated alternatives for the source of borrow material within the larger Surfside borrow area. Ultimately, the combination of using material from previously dredged and undredged areas was selected as the preferred alternative to minimize impacts.

USACE and BOEM have determined that the proposed project does not constitute an action significantly affecting both the environment and human health and welfare. Accordingly, preparation of an Environmental Impact Statement is not warranted. The Supplemental Environmental Assessment can be downloaded from the internet (in PDF format) at *http://www.sac.usace.army.mil/Missions/CivilWorks/NEPADocuments.aspx* or a copy may be obtained by contacting Mr. Mark Messersmith (*mark.j.messersmith@usace.army.mil*; (843) 329-8162).

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