RECORD OF DECISION

BREVARD COUNTY, FLORIDA
(MID-REACH SEGMENT)
PROJECT FOR SHORELINE PROTECTION

The Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement (GRR/SEIS) addresses opportunities for hurricane and storm damage reduction in the Mid-Reach segment of the project for shoreline protection, Brevard County, Florida. The GRR/SEIS was completed in August 2010 and revised in April 2011. An addendum was prepared in April 2014 to bring the project cost data current. Based on all of this information, the concurrence of other Federal, State and local agencies, input from the public, and the review by my staff, I find the plan recommended by the Chief of Engineers to be technically feasible, economically justified, in accordance with environmental statutes, and in the public interest.

The final GRR/SEIS evaluated various structural and non-structural alternatives to address the hurricane and storm damage reduction needs of the Mid-Reach Segment, Brevard County, Florida. The recommended plan is the locally preferred plan and the environmentally preferable alternative. It consists of a small-scale beach fill varying from a 0-foot to a 20-foot extension of the mean high water line with advanced nourishment to maintain the design fill volume. Specific hurricane and storm damage reduction features include:

- A 10-foot extension (seaward) of the mean high water line plus advanced nourishment to maintain that design fill volume in Reach 1 (R-119 to R-109);
- A 20-foot extension (seaward) of the mean high water line plus advanced nourishment to maintain that design fill volume in Reaches 2 and 3 (R-109 to R-99);
- A 10-foot extension (seaward) of the mean high water line plus advanced nourishment to maintain that design fill volume in Reaches 4 and 5 (R-99 to R-83); and
- A dune fill with no added advanced nourishment in Reach 6 (R-83 to R-75.4).

Approximate volumes of sand to be placed within the Mid-Reach are:

- An initial design fill of 445,000 cubic yards plus an advanced nourishment fill of 210,000 cubic yards for a total fill of 655,000 cubic yards at initial construction; and
- Placement of additional fill on the beach at approximately 3-year intervals. The renourishment volume is approximately 210,000 cubic yards.

The plan includes 3.0 acres of environmental impact to the nearshore hardbottom resources following minimization of the impacts as much as possible while still offering maximum storm damage reduction. Mitigation features for unavoidable impacts include:

- 1.6 mitigation acres required for every acre of natural rock impacted, resulting in a mitigation area of 4.8 acres; and
- Mitigation to be accomplished concurrent with the nourishment project, by construction of articulated concrete mats with embedded coquina rock in water depths of 14 to 16 feet mean low water; and
- Monitoring to determine the success of the mitigation.

In addition to a "no action" plan, a large number of alternatives were evaluated through an iterative, multi-step process to select the plan for recommendation. Included in the evaluation were both non-structural and structural alternatives. Non-structural alternatives included: no-action, coastal construction control line, moratorium on construction, establishing a no growth program, relocation of structures, flood proofing structures, condemnation of structures and land acquisition. Structural alternatives included: seawalls, revetments, beach nourishment, groins, submerged artificial reefs, nearshore placement, breakwaters, dunes and vegetation, and feeder beach systems. The final array of alternatives focused on beach nourishment in varying scales seeking to minimize impact to the nearshore hardbottom. Each of these alternatives are identified and discussed in the GRR/SEIS, which is incorporated herein by reference.

All practicable means to avoid or minimize adverse environmental effects have been incorporated into the recommended plan. The proposed project has been fully coordinated with the Florida Department of Environmental Protection, U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Environmental Protection Agency, Florida Fish and Wildlife Conservation Commission, as well as other government agencies. As a result of this coordination, the project was redesigned in order to avoid and minimize adverse impacts to the hardbottom resource while still providing hurricane and storm damage reduction benefits.

Technical and economic criteria used in the formulation of alternative plans were those specified in the Water Resource Council's 1983 Economic and Environmental Principles and Guidelines for Water and Related Land Resource Implementation Studies. All applicable laws, executive orders, regulations and local government plans were considered in the evaluation of alternatives. Based on review of these evaluations, I find that the benefits of this project outweigh the costs and any adverse effects. This Record of Decision completes the National Environmental Policy Act process.

Sept. 8, 2014
Date

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

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MEMORANDUM FOR DEPUTY COMMANDING GENERAL, CIVIL AND EMERGENCY OPERATIONS

SUBJECT: Brevard County, Florida - Mid-Reach Segment -- Final General Reevaluation Report and Supplemental Environmental Impact Statement (GRR/SEIS), August 2010 (Revised April 2011) with Addendum (April 2014)

This responds to the CECW-SAD memoranda dated May 23, 2012 and May 16, 2014, subject: Brevard County, Florida, Hurricane and Storm Damage Reduction Project, Mid-Reach Segment, Final Integrated General Reevaluation Report and Supplemental Environmental Impact Statement, which recommended that I approve the subject report. Section 3045 of the Water Resources Development Act (WRDA) of 2007 modified the Brevard County, Florida, shoreline protection project authorized by section 101(b)(7) of the WRDA of 1996, "*... to authorize the Secretary to include the mid-reach as an element of the project from the Florida department of environmental protection monuments 75.4 to 118.3, a distance of approximately 7.6 miles.*" Section 3045 also stipulated, "*The restoration work shall only be undertaken upon a determination by the Secretary, following completion of the general reevaluation report authorized by section 418 of the Water Resources Development Act of 2000 (114 Stat. 2637), that the shoreline protection is feasible.*" The May 16, 2014 memorandum recommended that I approve the plan recommended, which would complete the contingent authorization provided by section 3045 of the WRDA of 2007.

In response to section 418 of the WRDA of 2000 and section 3045 of WRDA 2007, the U.S. Army Corps of Engineers prepared the GRR/SEIS for the Brevard County, Florida, Mid-Reach Segment, Hurricane and Storm Damage Reduction Project. The GRR/SEIS, dated August 2010, (revised April 2011) and Addendum (April 2014) presents the results of a shoreline protection study for the mid-reach segment of the Brevard County shore protection project (SPP). The December 23, 1996 report of the Chief of Engineers, which was referenced in section 101(b)(7) of WRDA 1996, specifically excluded the mid-reach segment of the Brevard County project due to unresolved environmental considerations.

The recommended project would reduce storm damages for coastal structures along the mid-reach by expanding the berm and stabilizing the dune and bluff features. It consists of a small-scale beach fill with up to a 20-foot extension of the mean high water line over about a 7.8-mile long portion of the beach, advanced nourishment to maintain the design fill volume, and an estimated 16 periodic nourishment cycles, about every 3 years, during the 50-year period of Federal participation. The plan includes rehabilitation of the Poseidon Dredged Material Management Area (DMMA) at Port Canaveral, dredging material at 6-year intervals from Canaveral Shoals with placement

into the Poseidon DMMA, hauling by dump truck to the mid-reach for placement on the beach at approximately 3-year intervals, and mitigation for impacts to about 3 acres of near shore rock hard bottom habitat by constructing about 4.8 acres of artificial substrates. The recommended plan is the locally preferred plan (LPP), which is not substantively different than the national economic development plan (NED). I granted the policy waiver to recommend the LPP in December 2009.

The estimated costs of the NED Plan and the LPP differ by less than one percent. At Fiscal Year (FY) 2014 price levels (October 2013) and the FY 2014 discount rate of 3.5% for a 50-year period, the estimated project first cost of the LPP is $34,023,000 with a Federal share of $18,372,000 (54 percent) and a non-Federal share of $15,651,000 (46 percent) in accordance with section 103 of WRDA 1986, as amended. The cost shares reflect constraints on Federal participation due to public access and parking availability. The total nourishment cost, which includes the project first cost and the periodic nourishment, is $207,849,000 with a Federal cost of $95,204,000 and a non-Federal cost of $112,645,000. The Brevard County Board of County Commissioners supports the project and will fulfill the responsibilities of the non-Federal sponsor.

Based on a 3.5 percent discount rate for Fiscal Year 2014 and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be $4,925,000, including beach profile monitoring, and operation, maintenance, repair, replacement, and rehabilitation (OMRR&R). The equivalent average annual benefits are estimated to be $15,028,000, which include incidental recreation benefits of $1,139,000. The net average annual benefits are approximately $10,103,000 and the benefit cost ratio is 3.1. The LPP benefits are about 3 percent less than the NED Plan's. The cost of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal (LERRD) areas is estimated at $91,000 for initial construction and for each periodic nourishment, all of which is eligible for LERRD credit. The project first cost includes $7,466,000 for environmental mitigation and $818,000 for beach profile monitoring. Brevard County would be responsible for the OMRR&R of the project after construction, a cost currently estimated at about $139,000 per year.

The GRR covers potential in-kind service or credit that the non-Federal sponsor may seek in the future as a result of credit owed from damage to the overall Brevard County SPP attributable to the Canaveral Harbor jetties in accordance with section 3045(b) of WRDA 2007. The Corps has confirmed that non-Federal interests have performed in-kind work and expect to apply about $8.6 million in credit towards the non-Federal cost share. Once I approve the mid-reach segment it will becomes part of the Brevard SPP and available for crediting.

I have determined that the recommended project for the mid-reach segment is feasible, thus it is now authorized pursuant to section 3045 of the WRDA of 2007. I have signed the Record of Decision (ROD) to fulfill the National Environmental Policy

Act requirements. Once construction funding is provided, the Corps will execute an amendment to the Project Cooperation Agreement (PCA) which will include a provision to add the mid-reach segment to the Brevard SPP and a provision on crediting in accordance with section 3045(b) of WRDA 2007.

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)