



DEPARTMENT OF THE ARMY  
OFFICE OF THE ASSISTANT SECRETARY  
CIVIL WORKS  
108 ARMY PENTAGON  
WASHINGTON DC 20310-0108

APR 13 2011

Honorable John Boehner  
Speaker of the House  
of Representatives  
U.S. Capitol Building, Room H-232  
Washington, D.C. 20515-0001

Dear Mr. Speaker:

This report is in response to two resolutions by the Committee on Transportation and Infrastructure of the U.S. House of Representatives, adopted on February 16, 2000 and April 11, 2000. Coastal storm damage reduction for Surf City and North Topsail Beach were studied by the Corps of Engineers as part of the West Onslow Beach and New River Inlet general investigation study from 1992, and was found not to be economically feasible. However, following a series of hurricanes that damaged Topsail Island between 1996 and 1999, interest in a coastal storm damage reduction project was renewed. This feasibility study is in response to renewed interest by Congress by way of the aforementioned House resolutions. The resolutions requested a review of the report of the Chief of Engineers on West Onslow Beach and New River Inlet, North Carolina, and other pertinent reports, to determine whether any modifications are advisable at the present time in the interest of shore protection for Surf City and North Topsail Beach, North Carolina. The Secretary of the Army recommends authorization of a plan to reduce coastal storm damages by construction of a berm and dune along the Surf City and North Topsail Beach shorelines which is outlined in the current Report of the Chief of Engineers, dated December 30, 2010.

The recommended plan includes a 52,150-foot long dune and berm system to be constructed to an elevation of 15 feet National Geodetic Vertical Datum (NGVD) fronted by a seven-foot NGVD (50-foot wide) beach berm with a main fill length of 52,150 feet, extending from the boundary between Topsail Beach and Surf City to the southern edge of the Coastal Barrier Resources Act (CBRA) Zone in North Topsail Beach. The recommended plan also includes renourishment at six-year intervals. Other associated features of the project are dune vegetation and construction of 60 dune walkover structures. Material for the dune and berm construction and renourishment will be dredged from borrow sites identified between one to six miles off the coast of Topsail Island. The recommended plan also includes post-construction monitoring over the period of Federal participation to ensure project performance and adjust renourishment plans as needed.

At the October 2010 price level, the estimated first cost of initial construction is \$123,135,000. There will be 7 renourishments scheduled over the project lifetime, with a total cost estimated at \$205,539,000. The total project cost which includes initial construction, monitoring, and periodic nourishment is estimated to be

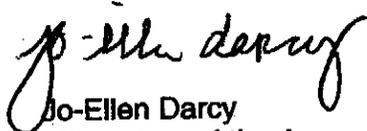


\$353,924,000. Based on a 4.125 percent discount rate and a 50-year period of analysis, average annual costs are estimated at \$10,702,000 while average annual storm damage reduction and recreation benefits are estimated at \$40,129,000. Of the total annual benefits, \$18,097,000 is attributed to coastal storm damage reduction (CSDR) and \$22,032,000 is attributable to recreation. The benefit-to-cost ratio (BCR) based on total annual benefits, is approximately 3.7 and the BCR based solely on CSDR is 1.7. Total project net benefits are estimated at \$29,427,000. The Recommended Plan is the National Economic Development (NED) Plan and is estimated to reduce average annual storm damages by 88%. The recommended plan is the environmentally preferred plan, however, ecosystem restoration benefits were not quantified or presented and no mitigation plan was required.

The towns of Surf City and North Topsail Beach are the non-Federal cost sharing sponsors. Cost sharing is applied in accordance with the provisions of Section 103 of the Water Resources Development Act (WRDA) of 1986, as amended by Section 215 of WRDA 1999. The Federal share of the total first cost of initial construction would be about \$80,038,000 (65 percent) and the non-Federal share would be about \$43,097,000 (35 percent). The cost of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal sites (LERRD) is estimated at \$4,814,000, all of which is eligible for LERRD credit. Based on WRDA 1996, as amended, subject to the availability of funds and conditions of public ownership and use of the shore, the Federal and non-Federal share of the renourishment costs is 50 percent, resulting in a total renourishment cost of about \$102,769,500 each. The Town of Surf City and the Town of North Topsail Beach are legally capable of fulfilling the requirements for being the non-Federal sponsors.

The Office of Management and Budget (OMB) advises that there is no objection to the submission of the report to Congress and concludes that the report recommendation is consistent with the policy and programs of the President. A copy of its letter is enclosed. I am providing a copy of this transmittal and the OMB letter dated, March 25, 2011 to the House Committee on Appropriations Subcommittee on Energy and Water Development, and the House Committee on Transportation and Infrastructure Subcommittee on Water Resources and Environment.

Very truly yours,



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

Enclosures

11 Enclosures

1. Record of Decision, dated, April XX, 2011
2. OMB Clearance Letter, dated, March 25, 2011
3. Report of the Chief of Engineers, Dec 30, 2010
4. DOI letter to USACE, Nov 8, 2010
5. EPA letter to USACE, Nov 8, 2010
6. USDA letter to USACE, dated Nov 4, 2010
7. DOC letter, dated Nov 23, 2010
8. State of North Carolina integrated agency comments, dated Nov 5, 2010
9. Letter from North Topsail Beach, dated July 20, 2010
10. Letter from the Town of Surf City, dated July 19, 2010
11. Surf City and North Topsail Beach, North Carolina Coastal Storm Damage Reduction Report

## RECORD OF DECISION

### Surf City and North Topsail Beach, North Carolina Coastal Storm Damage Reduction Project Pender and Onslow Counties, North Carolina

The Final Integrated Feasibility Report and Environmental Impact Statement (FEIS), dated December 2010, addresses coastal storm damage reduction at Surf City and North Topsail Beach, North Carolina. Based on the report, the reviews 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. Thus, I approve the Surf City and North Topsail Beach project for construction.

The report documents the evaluation of various structural and non-structural alternatives to address the coastal storm damage reduction needs of Surf City and North Topsail Beach, North Carolina. The recommended plan is the National Economic Development plan and consists of a dune and berm system constructed of sand from offshore borrow sites. The selected plan consists of the following major features:

- A sand dune and beach berm system that extends along about 52,150 feet of Atlantic Ocean shorefront.
- Construction of the dune to an elevation of 15 feet above the National Geodetic Vertical Datum (NGVD). The dune will be vegetated and 60 walkover structures will be constructed.
- Construction of the 50-foot wide beach berm waterward of the dune to an elevation of 7 feet above NGVD.
- Renourishment of the system on approximately six-year intervals.
- Material for the initial construction and the renourishment cycles will be dredged from borrow sites located from one to six miles off shore.

In addition to a "no action" alternative, structural and non-structural measures for coastal storm damage reduction as well as borrow material sources were evaluated. The structural measures selected for detailed evaluation and consideration were various configurations of beachfill. Non-structural measures included retreat, relocation and demolition. These measures were considered independently and in combinations with each other to develop alternative plans.

The project is designed to reduce damage mainly from storm waves and storm-induced erosion, two major categories of storm damage. Compared to the future without-project condition, the recommended plan would reduce average annual storm damage by about 88 percent. Some wave and erosion damage would still occur over the 50-year project life. The project would not prevent damage from back bay flooding;

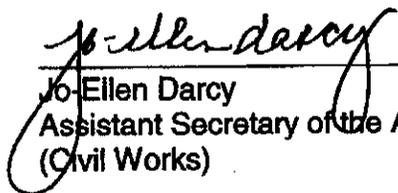
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therefore, any ground-level floors of structures, ground-level floor contents, vehicles, landscaping, and property stored outdoors would remain subject to saltwater flooding from the back bay.

The Draft Feasibility Report and Draft Environmental Impact Statement were circulated for public review for 45 days in January 2010. All comments submitted were responded to in the FEIS. All practicable means to avoid or minimize adverse environmental effects have been incorporated into the recommended plan including future renourishment intervals. No compensatory mitigation is required. The recommended plan is the environmentally preferred alternative.

Technical, environmental, economic, and risk criteria used in the formulation of alternative plans were those specified in the Water Resource Council's 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 the evaluation of alternatives. Based on review of these evaluations, I find that the public interest would be best served by implementing the recommended plan. This Record of Decision completes the National Environmental Policy Act process.

Date: APR 13 2011

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