



DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

29 JUN 1992

CECW-PM (10-1-7a)

SUBJECT: Sandbridge Beach, Virginia Beach, Virginia

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on Sandbridge Beach, Virginia Beach, Virginia. It is accompanied by the reports of the Board of Engineers for Rivers and Harbors, the reports of the District and Division Engineers, and a special report to support my recommendations. These reports are in final response to Section 1(a) of the Water Resources Development Act of 1974, which authorized the Secretary of the Army, acting through the Chief of Engineers, to undertake the Phase I Design Memorandum stage of advanced engineering and design of a project for hurricane-flood protection at Virginia Beach.
2. The District and Division Engineers, based on a finding that the project is not economically justified, recommended no Federal action. The Board of Engineers for Rivers and Harbors concurred in the reporting officers recommendations contained in the District's 1985 unfavorable report and issued a negative Board Report in December 1986. Prior to issuance of the Chief's report, the local sponsor, the city of Virginia Beach, submitted to the Chief of Engineers a letter indicating that, based on examination of recent dredging bids and refinement of benefit-cost information, a feasible beach restoration project could be developed for Sandbridge Beach. At my request, a brief Supplemental Preauthorization Study was initiated by the District in June 1988 to examine the feasibility of providing beach erosion/hurricane protection. The study was completed in April 1989, and indicated that a beach, 50 feet wide at an elevation of 6 feet National Geodetic Vertical Datum (NGVD), was economically justified. As a result, additional detailed studies were undertaken. The final report completed in March 1992, confirms the economic feasibility of the project. The final report has been reviewed by the Division Engineer and Washington level staff.
3. Based on information contained in the March 1992 final report, I recommend implementation of a plan to provide hurricane and storm damage reduction for Sandbridge Beach. The recommended plan of sand fill provides for a beach berm with a minimum width of 50 feet at an elevation of 6 feet NGVD for the area south of Dam Neck and north of the Back Bay Wildlife Refuge, a distance of

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approximately 5 miles. I also recommend Federal participation in periodic beach nourishment. The proposed plan of improvement is the national economic development plan.

4. Based on October 1991 price levels, the estimated cost of the proposed plan is \$8,850,000 of which \$5,750,000 would be Federal and \$3,100,000 would be non-Federal. Average annual charges, reflecting a 50-year period of economic analysis and an 8-1/2 percent interest rate, are \$3,073,000. Average annual benefits are estimated at \$3,809,000, and the benefit-cost ratio is 1.2. The estimated annual cost of the periodic beach nourishment over the 50 year economic life of the project is \$2,307,000, with an estimated Federal cost of \$1,500,000, and an estimated non-Federal cost of \$807,000.

5. Washington level review of the March 1992 report indicates that the proposed beach fill project, with periodic beach nourishment for Sandbridge Beach is technically sound, economically justified, and environmentally acceptable.

6. The recommendations contained herein reflect the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program nor the perspective of higher review levels within the executive branch. Consequently, the recommendations may be modified before it is transmitted to the Congress as proposals for authorization and implementation funding. However, prior to transmittal to the Congress, interested States, Federal agencies, and other parties will be advised of any modifications and will be afforded an opportunity to comment further.



C. E. EDGAR III
Major General, USA
Acting Chief of Engineers