



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

REPLY TO
ATTENTION OF:

DEC 19 2006

CECW-SAD (1105-2-10a)

SUBJECT: Pawleys Island, South Carolina

THE SECRETARY OF THE ARMY

1. I submit, for transmission to Congress, my report on the study of hurricane and storm damage reduction for Pawleys Island, South Carolina. It is accompanied by the report of the district and division engineers. These reports are in partial response to a resolution adopted on 22 April 1988 by the Committee on Environment and Public Works of the United States Senate. The resolution requested that the Secretary of the Army, in accordance with the provisions of Section 110 of the River and Harbor Act of 1962, study in cooperation with the State of South Carolina, its political subdivisions, and agencies and instrumentalities thereof, the entire Coast of South Carolina in the interests of beach erosion control, hurricane protection, and related purposes. Preconstruction engineering and design activities for Pawleys Island will be continued under the authority provided by the resolution cited above.
2. A hurricane and storm damage reduction project for Pawleys Island is recommended by the reporting officers in the feasibility report dated May 2004, and addendum dated April 2005. The recommended project provides for a 50-foot-wide berm over a 6,800-foot-long (1.3 miles) reach at elevation +7 feet National Geodetic Vertical Datum (NGVD) with 350-foot-long tapers at each end, for a total length of 7,500-feet (1.4 miles). Additionally, the project includes a 20-foot-wide dune at elevation +10 feet NGVD with side slopes of 1 Vertical to 5 Horizontal. The project is located in the southern reach of the shoreline of Pawleys Island. Periodic nourishment, accomplished via four 9-year re-nourishment intervals and one 5-year re-nourishment interval, would optimize net benefits over the 50-year period of analysis. The estimated volume of fill for initial project construction is 666,400 cubic yards, which includes placement of 305,300 cubic yards for the first nourishment. The source of fill material is an 832-acre borrow area located between 11,000 feet and 17,000 feet offshore of Pawleys Island. The project is designed to avoid and minimize adverse environmental effects such that no mitigation is required.
3. Based on October 2005 price levels, the total first cost for construction of the recommended plan is \$8,980,000. Based upon the requirements of the Water Resources Development Act (WRDA) 1986, as amended, cost sharing for initial construction will be 65 percent Federal and 35 percent non-Federal. Cost sharing percentages are tentative and will be reexamined during preconstruction engineering and design. Final apportionment will be based on conditions of ownership and public use and access at the time of construction and subsequent re-nourishment. The estimated total Federal first cost of construction is \$5,840,000 and the estimated total non-Federal first cost of construction is \$3,140,000.

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4. Total periodic nourishment costs, stated at October 2005 prices, are estimated to be \$21,200,000 over the 50-year period following initiation of construction. The ultimate project cost, including initial construction and periodic nourishment, is estimated to be \$30,180,000 at October 2005 prices. The equivalent annual cost of future periodic nourishment is estimated to be \$390,000 based on a Federal discount rate of 5.125 percent and a 50-year period of analysis. Cost sharing of periodic nourishment would be in accordance with WRDA 1986, as amended, subject to the availability of appropriations. Cost sharing for periodic nourishment is 50 percent Federal and 50 percent non-Federal. All costs for operation, maintenance, repair, rehabilitation, and replacement of the recommended project, estimated as \$50,000 annually, are the responsibility of the non-Federal sponsor.

5. The recommended plan is the National Economic Development plan. Based on October 2005 prices and a Federal discount rate of 5.125 percent, the estimated equivalent annual cost of the recommended plan is \$940,000, equivalent annual benefits are \$1,470,000, and equivalent annual net benefits are \$530,000. The project's benefit-to-cost ratio is 1.6 to 1.0.

6. I concur with the findings, conclusions, and recommendations of the reporting officers. The plan developed is technically sound, economically justified, and environmentally and socially acceptable. The plan conforms to essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and complies with other administrative and legislative policies and guidelines. Also, the views of interested parties, including Federal, State, and local agencies, have been considered.

7. Accordingly, I recommend that the project for hurricane and storm damage reduction for Pawleys Island, South Carolina, be authorized in accordance with the reporting officers' recommended plan, with such modifications as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to the non-Federal sponsor agreeing to comply with cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including the WRDA of 1986, as amended, and in accordance with the following local cooperation requirements which the non-Federal sponsor must agree to prior to project implementation:

a. Provide 35 percent of initial project costs assigned to hurricane and storm damage reduction, 50 percent of initial project costs assigned to protecting undeveloped public lands, 50 percent of initial project costs assigned to recreation, 100 percent of initial project costs assigned to protecting undeveloped private lands and other private shores which do not provide public benefits, and 50 percent of periodic nourishment costs assigned to hurricane and storm damage reduction, and 100 percent of periodic nourishment costs assigned to protecting undeveloped private lands and other private shores which do not provide public benefits.

(1) Enter into an agreement which provides, prior to execution of the project cooperation agreement, 25 percent of design costs;

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(2) Provide, during the first year of construction, any additional funds needed to cover the non-federal share of design costs;

(3) Provide all lands, easements, and rights-of-way, and perform or ensure the performance of all relocations determined by the Federal Government to be necessary for the initial construction, periodic nourishment, operation, and maintenance of the project;

(4) Provide, during construction, any additional amounts as are necessary to make its total contribution equal to the percentage of project costs indicated above based on public use and access;

b. Do not use Federal funds to meet the non-Federal Sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is authorized;

c. Operate, maintain, repair, replace and rehabilitate the project, or functional portion of the project, including mitigation, at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government;

d. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the Non-Federal Sponsor, now or hereafter, owns or controls for access to the project for the purpose of inspecting, operating, maintaining, repairing, replacing, rehabilitating, or completing the project. No completion, operation, maintenance, repair, replacement, or rehabilitation by the Federal Government shall relieve the Non-Federal Sponsor of responsibility to meet the Non-Federal Sponsor's obligations, or to preclude the Federal Government from pursuing any other remedy at law or equity to ensure faithful performance;

e. Hold and save the United States free from all damages arising from the initial construction, periodic nourishment, operation, maintenance, repair, replacement, and rehabilitation of the project and any project-related betterments, except for damages due to the fault or negligence of the United States or its contractors;

f. Perform, or cause to be performed, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 96-510, as amended (42 U.S.C. 9601-9675), that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for the initial construction, periodic nourishment, operation, and maintenance of the project. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such investigations unless the Federal Government provides the Non-Federal Sponsor with prior specific written direction, in which case the Non-Federal Sponsor shall perform such investigations in accordance with such written direction;

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g. Assume, as between the Federal Government and the non-Federal Sponsor, complete financial responsibility for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the initial construction, periodic nourishment, operation, or maintenance of the project;

h. Agree that, as between the Federal Government and the Non-Federal Sponsor, the Non-Federal Sponsor shall be considered the operator of the project for the purpose of CERCLA liability, and to the maximum extent practicable, operate, maintain, and repair the project in a manner that will not cause liability to arise under CERCLA;

i. For so long as the project remains authorized, the Non-Federal Sponsor shall ensure continued conditions of public ownership and use of the shore upon which the amount of Federal participation is based;

j. Provide and maintain access roads, parking areas, and other public use facilities, open and available to all on equal terms;

k. Prevent obstructions of or encroachments on the project (including prescribing and enforcing regulations to prevent such obstruction or encroachments) which might reduce the level of protection it affords, hinder operation and maintenance or future periodic nourishment, or interfere with its proper function, such as any new developments on project lands or the addition of facilities which would degrade the benefits of the project;

l. Publicize floodplain information in the area concerned and provide this information to zoning and other regulatory agencies for their use in preventing unwise future development in the floodplain, and in adopting such regulations as may be necessary to prevent unwise future development and to ensure compatibility with protection levels provided by the project;

m. At least twice annually and after storm events, perform surveillance of the beach to determine losses of nourishment material from the project design section and provide the results of such surveillance to the Federal Government;

n. Not less than once each year, inform affected interests of the extent of protection afforded by the project;

o. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of 3 years after completion of the accounting for which such books, records, documents, and other evidence is required, to the extent and in such detail as will properly reflect total costs of construction of the Project, and in accordance with the standards for financial management systems set forth in the Uniform

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Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 Code of Federal Regulations (CFR) Section 33.20;

p. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5), and Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2213), which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until the non-Federal sponsor has entered into a written agreement to furnish its required cooperation for the project or separable element;

q. Comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army", and all applicable Federal labor standards and requirements, including but not limited to, 40 U.S.C. 3141- 3148 and 40 U.S.C. 3701 – 3708 (revising, codifying and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c *et seq.*);

r. Comply with Section 402 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 701b-12), which requires a Non-Federal interest to participate in and comply with applicable Federal floodplain management and flood insurance programs, prepare a flood plain management plan within one year after the date of signing a Project Cooperation Agreement, and implement the plan not later than one year after completion of construction of the project; and,

s. Comply with all applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended (42 U.S.C. 4601-4655), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way, necessary for the initial construction, periodic nourishment, operation, and maintenance of the project, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

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

A handwritten signature in black ink, appearing to read 'Carl A. Strock', with a long horizontal flourish extending to the right.

CARL A. STROCK
Lieutenant General, US Army
Chief of Engineers