



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

REPLY TO
ATTENTION OF:

OCT 24 2006

CEMP-NAD

SUBJECT: Great Egg Harbor Inlet to Townsends Inlet, New Jersey

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on the study of shore protection opportunities at Great Egg Harbor Inlet to Townsends Inlet. It is accompanied by the report of the district and division engineers. These reports are in partial response to resolutions adopted by the Committee on Public Works and Transportation of the House of Representatives dated 10 December 1987 and the Environment and Public Works of the United States Senate dated 15 December 1987. These resolutions requested review of existing reports of the Chief of Engineers for the entire coast of New Jersey with a view to study, in cooperation with the State of New Jersey, its political subdivisions and agencies and instruments thereof, the changing coastal processes along the coast of New Jersey. Preconstruction engineering and design activities, if funded, would be continued under the study authorities cited above.

2. The plan developed by the district engineer consists of the following elements:

a. The selected plan for South End Ocean City consists of a berm and dune utilizing sand obtained from an offshore borrow source. The dune crest will have a top elevation of +12.8 feet NAVD88, while the berm will extend from the seaward toe of the dune for a distance of 100 feet at an elevation of 7.0 feet NAVD88 before sloping down at 1V:25H to elevation -1.25 feet NAVD88. The remainder of the design template parallels the existing profile slope to the depth of closure. The total width from the seaward toe of the dune to Mean High Water (MHW) is 218 feet.

b. The plan extends from 34th Street to 59th Street for a total length of 14,000 feet or 2.6 miles. Initial sand quantity is estimated at 1,603,000 cubic yards which includes design fill quantity of 1,192,000 cubic yards plus advanced nourishment of 403,000 cubic yards. Periodic nourishment of 403,000 cubic yards is scheduled to occur every three years synchronized with the existing Federal beachfill project at Ocean City (Great Egg Harbor Inlet to 34th Street). Material would be taken from the borrow sources identified in this report as "M8".

c. The selected plan for Ludlam Island consists of a berm and dune utilizing sand obtained from an offshore borrow source. The dune crest will have a top elevation of +14.8 feet NAVD88, while the berm width will extend from the seaward toe for a distance of 50 feet at an elevation of 6.0 feet NAVD88 before sloping down (varying from 1V:30H to 1V:50H) to elevation -1.25 feet NAVD88.

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The remainder of the design template parallels the existing profile slope to the depth of closure. The total width from the seaward toe of the dune to Mean High Water (MHW) varies depending upon location from 190 to 285 feet.

d. The plan extends from 125 feet north of Seaview Avenue in Strathmere to Pleasure Ave (just beyond 93rd Street) in Sea Isle City for a total length of 6.5 miles. In addition, there is a taper of 734 feet into Corson's Inlet State Park and a taper of 66 feet into the terminal groin south of 93rd Street. Total length of beachfill, including tapers, is 6.7 miles. The plan also includes the extension of two stormwater outfall pipes at both 82nd and 86th Street in Sea Isle City by 150 feet.

e. Initial sand quantity is 5,146,000 cubic yards which includes design fill quantity of 3,326,000 cubic yards plus advanced nourishment of 1,820,000 cubic yards. Periodic nourishment of 1,820,000 cubic yards is scheduled to occur every five years.

3. Based on October 2005 price levels, the initial construction costs of the plan is estimated at \$52,153,000. Under cost sharing specified by the Water Resources Development Act (WRDA) of 1986, as amended, the Federal share of this first cost is \$33,645,400 and the non-Federal share is \$18,507,600. Lands Easements, Rights-of-Ways, Relocations and Dredged Material Disposal Areas (LERRD) costs are \$512,000 and will be credited towards the non-Federal sponsor's cash contribution.

4. Periodic nourishment is expected to occur at three-year intervals for the South End Ocean City portion of the project and at five-year intervals for Ludlam Island subsequent to the completion of initial construction (year zero). Over 50-years, the total periodic nourishment cost is estimated to be \$194,282,000 (Oct 2005 price level) and includes engineering and design (E&D) and monitoring during construction. Based on the Water Resources Development Act of 1996, as amended, cost-sharing for the periodic nourishment would be 50%.

5. The ultimate cost of construction which includes initial construction, project monitoring, and fifty years of periodic nourishment is estimated to be \$246,435,000 (Oct 2005 price level), cost-shared 53% Federal, 47% non-Federal, based on WRDA 1999 cost-sharing. All costs also include planning, engineering, and design. Operation, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) is not included in this cost and is a non-Federal responsibility.

6. The analysis of the selected plan is based on an October 2005 price level and the Federal interest rate of 5.125 percent. The selected plan has primary outputs based on hurricane and storm damage reduction. The plan provides average annual net benefits of approximately \$2,631,000 and a benefit-to-cost ratio of 2.1 for South End Ocean City and provides average annual net benefits of approximately \$2,992,000 and a benefit-to-cost ratio of 1.7 for Ludlam Island.

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7. Washington level review indicates that the proposed plan is technically and environmentally sound, justified based on monetary and non-monetary benefits it provides and socially acceptable. The proposed project complies with applicable U.S. Army Corps of Engineers planning procedures and regulations. Also, the views of interested parties, including Federal, State, and local agencies, have been considered.

8. Accordingly, I recommend that improvements for hurricane and storm damage reduction be authorized generally in accordance with the reporting officers recommended plan, subject to the Administration's proposed cost sharing for shore protection projects as enacted by Congress in law, and with such modifications as the Chief of Engineers deems advisable within his discretionary authority. My recommendation is subject to the non-Federal sponsor agreeing to comply with applicable Federal laws and policies, and with the following requirements:

a. Provide 35 percent of initial project costs assigned to hurricane and storm damage reduction plus 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 plus 100 percent of periodic nourishment costs assigned to protecting undeveloped private lands and other private shores which do not provide public benefits and as further specified below:

(1) Enter Provide 25 percent of design costs allocated by the Federal Government to the project in accordance with the terms of a design agreement entered into prior to commencement of design work for the project;

(2) Provide, during the first year of construction, any additional funds needed to cover the Non-Federal Sponsor's share of design costs;

(3) Provide all lands, easements, and rights-of-way, and perform or ensure the performance of any 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 35 percent of initial project costs assigned to hurricane and storm damage reduction plus 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 plus 100 percent of periodic nourishment costs assigned to protecting undeveloped private lands and other private shores which do not provide public benefits;

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b. For so long as the project remains authorized, operate, maintain, repair, replace and rehabilitate the completed project, or functional portion of the project, 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;

c. 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;

d. 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;

e. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 Code of Federal Regulations (CFR) Section 33.20;

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;

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;

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h. Agree, as between the Federal Government and the Non-Federal Sponsor, that 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. Comply with all applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way, required 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;

j. 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 USC 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." Comply with Section 402 of the Water Resources Development Act of 1986, as amended (33USC 701b-12), which requires a non-Federal preparation and implementation of a flood plain management plan;

k. Participate in and comply with applicable Federal floodplain management and flood insurance programs;

l. 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.

m. Prescribe and enforce regulations to prevent obstruction of or encroachment on the project that would reduce the level of protection it affords or that would hinder future periodic nourishment and/or the operation and maintenance of the project;

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

o. 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;

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p. 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;

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

r. Recognize and support the requirements of Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended, and Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, 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; and

s. 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.

9. 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 inherent 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 of New Jersey, interested Federal agencies, and other parties will be advised of any modifications and will be afforded an opportunity to comment further.



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