

DAEN (1105-2-10a)

SUBJECT: Hashamomuck Cove, New York, Coastal Storm Risk Management Feasibility Study

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on the study of hurricane and storm damage reduction for Hashamomuck Cove and the neighboring coves in Southold, Suffolk County, New York. It is accompanied by the report of the District Engineer. This report is a response to an authorization by the House of Representatives, Committee on Transportation and Infrastructure, Resolution, Docket Number 2773 (May 2007), and an interim response to Public Law 113-2 (29 Jan 13), the Disaster Relief Appropriations Act of 2013 (the Act). The authorizations requested that the Secretary of the Army review existing reports with a view to identify cost effective measures for storm damage reduction and reduce future flood risk in ways that will support the long-term sustainability of the coastal ecosystem and communities and reduce the economic costs and risks associated with large-scale flood and storm events. I am recommending that the Congress authorize initial construction and periodic nourishment.

2. The reporting officers recommend authorization of the National Economic Development Plan that consists of beach restoration in Hashamomuck Cove and the cove west of it (to the Town Beach) and the cove east of it (to approximately the hotel and restaurant). The total length of the recommended project is 1.5 miles.

a. Beach restoration will include berm construction using sand obtained from upland sources, likely quarries at the discretion of the construction contractor. The recommended plan is a berm 25 feet wide extending approximately 8,500 linear feet (LF) (that is, the 1.5 miles).

b. Periodic nourishment is included in project design to maintain the integrity of the design beach template over the 50 year project period of analysis. A total beach fill quantity of approximately 216,000 cubic yards (cy) is projected for the initial placement, including tolerance and overfill with 9 estimated renourishments over the 50 year period of analyses of approximately 78,300 cy per renourishment. This renourishment volume as well as costs and benefits are based upon the intermediate rate of relative sea level change (RSLC) at the Montauk, NY tide gauge. Renourishments will occur when deemed necessary by inspection of the completed berm.

c. Since the recommended plan would not have any significant adverse effects, no mitigation measures (beyond management practices and avoidance) or compensation measures would be required.

3. The New York State Department of Environmental Conservation (NYSDEC) is the non-federal partner. The total project cost has been estimated at October 2018 price levels. The current estimated cost, which was certified in February 2019 has a first cost of \$17,367,000, and a fully funded cost of \$19,352,000. There are a total of 9 periodic nourishments at an estimated cost of \$46,578,000 in October 2018 price levels, and a fully-funded cost of approximately

\$122,913,000. As this report is scheduled to be signed by the Chief of Engineers in December 2019, these costs will be updated and re-certified using October 2019 price levels and the fiscal year 2020 Federal discount rate.

4. 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; and the provisions of PL113-2, as follows:

a. Initial construction is cost-shared at a rate of 65 percent Federal / 35 percent non-Federal. Thus the Federal share of the project first cost is \$11,289,000 in October 2018 price levels, or \$12,579,000 fully funded. The non-Federal share of the project first cost is \$6,078,000 in October 2018 price levels, or \$6,773,000 fully funded. The non-federal responsibility includes the costs of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas (LERRD). LERRD costs are estimated at about \$2,445,000 in October 2018 price levels. The non-federal sponsor will receive credit for the costs of LERRD toward the non-federal share.

b. Periodic nourishment beyond initial construction will be cost shared 50 percent Federal and 50 percent non-Federal.

c. The NYSDEC would be responsible for the operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of the project after construction, an average annual cost currently estimated at \$14,000 over the 50-year period of analysis. This amount includes an average annual cost estimated at \$2,000 for the non-Federal sponsor to conduct environmental monitoring of the project.

4. Based on a FY19 discount rate of 2.875% and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be \$1,639,000, including monitoring and OMRR&R. All project costs are allocated to the authorized purpose of storm damage reduction and shoreline protection. The recommended plan has average annual benefits of \$1,755,000. The net national economic development (NED) benefits of the project are \$116,000 and the benefit to cost ratio (BCR) is 1.07.

5. Risk and uncertainty has been explicitly factored into the economic analysis of this project. Chapter 6 of ER 1105-2-100, entitled "Risk Based Analysis for Evaluation of Hydrology/Hydraulics and Economics in Shore Protection Studies" specifies the analysis requirements for shore protection projects, the fundamental requirement being that all shore protection analyses adopt a life cycle approach. A risk and uncertainty analysis that incorporated key economic, hydraulic and sea level change parameters was performed for the feasibility study. The annualized residual structure damage for all three coves is estimated at \$2,300,000. These residual risks have been communicated to the NYSDEC.

6. In accordance with ER 1100-2-8126 *Incorporating Sea Level Change in Civil Works Programs*, the study performed a sensitivity analysis to consider the effects that different rates of sea level change would have on the recommended plan. The recommended plan costs and benefits are based upon the intermediate rate of relative sea level change. The beach

nourishment project is naturally adaptable to sea level rise, however; the analysis indicates that under the high rate of RSLC that a project reevaluation would be warranted to identify and implement the appropriate adaptation strategy. Using the best current information from the tide gauge record, and the intermediate and high projections used in the study, this reanalysis could occur between 2037 and 2067. A trigger elevation of 1.17 foot mean sea level based on the five month moving average mean sea level for the Montauk, NY NOAA tide gauge has been established as a trigger that provides the lead time necessary for a reevaluation study.

7. In accordance with the Corps of Engineers Circular (EC 1165-2-217) on the review of decision documents, all technical, engineering and scientific work underwent an open, dynamic and rigorous review process to ensure technical quality. This includes a District Quality Control review, an Agency Technical Review (ATR), and a Corps one review for policy and legal compliance. An Independent External Peer Review (Type 1) was waived by Corps Headquarters (3 Aug 2016) for this study because it does not pose a threat to life safety. All comments from the above referenced reviews have been addressed and incorporated into the final documents. Overall, the reviews resulted in improvements to the technical quality of the report.

8. Washington level review indicates that the project recommended by the reporting officers is technically sound, environmentally and socially acceptable, and economically justified. The plan complies with all essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Land related 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. **During the State and Agency (S&A) review, ... [to be filled in upon S&A review]**

9. I generally concur in the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the initial construction and periodic nourishment associated with the project to reduce coastal storm damages for Hashamomuck Cove, Southold, Suffolk County, New York 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 cost sharing, financing, and other applicable requirements of federal laws and policies, including Section 103 of the Water Resources Development Act (WRDA) of 1986, as amended by Section 215 of WRDA 1999. This recommendation is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and policies, including that it will:

a. Provide a minimum of 35 percent of initial project costs assigned to coastal 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 coastal and storm damage reduction, plus 100 percent of periodic nourishment costs assigned to protecting undeveloped private lands and other private shores which do provide public benefits, and as further defined below:

1) Provide, during design, 35 percent of design costs allocated to coastal and storm damage reduction in accordance with the terms of a design agreement

entered into prior to commencement of design work for the project;

2) Provide all lands, easements, rights-of-way, including suitable borrow areas, and perform or assure performance of all relocations, including utility relocations, as determined by the Federal government to be necessary for the initial construction, periodic nourishment or operation and maintenance of the project;

3) Provide, during construction, any additional amounts necessary to make its total contribution equal to 35 percent of initial project costs assigned to coastal 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;

b. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) such as any new developments on project lands, easements, and rights-of-way or the addition of facilities which might reduce the outputs produced by the project, hinder operation and maintenance of the project, or interfere with the project's proper function;

c. Inform affected interests, at least yearly, of the extent of protection afforded by the flood risk management features; participate in and comply with applicable federal floodplain management and flood insurance programs, comply with Section 402 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 701b-12); and publicize floodplain information in the area concerned and provide this information to zoning and other regulatory agencies for their use in adopting regulations, or taking other actions, to prevent unwise future development and to ensure compatibility with protection levels provided by the flood risk management features;

d. 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;

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

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

g. 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;

h. Give the Federal government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal sponsor owns or controls for access to the project for the purpose of completing, inspecting, operating, maintaining, repairing, rehabilitating, or replacing the project;

i. 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, except for damages due to the fault or negligence of the United States or its contractors;

j. 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 are required, to the extent and in such detail as will properly reflect total cost of the project, and 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 CFR, Section 33.20;

k. Perform, or ensure performance of, 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), 42 USC 9601-9675, that may exist 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 and maintenance of the project;

l. Assume, as between the Federal government and the non-Federal sponsor, complete financial responsibility for all necessary cleanup and response costs of any hazardous substances regulated under CERCLA that are located in, on, or under lands, easements, or rights-of-way required for the initial construction, periodic nourishment, or operation and maintenance of the project;

m. 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, repair, replace, and rehabilitate the project in a manner that will not cause liability to arise under CERCLA;

n. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended, (42 US C. 1962d-5b) and Section 101(e) of the WRDA 86, Public Law 99-662, as amended, (33 US.C. 2211(e)) which provide 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;

o. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended, (42 US.C.

4601-4655) and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way necessary for construction, operation, and maintenance of the project including those necessary for relocations, the borrowing of material, or the disposal of dredged or excavated material; and inform all affected persons of applicable benefits, policies, and procedures in connection with said act;

p. 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 US C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto; 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 requirements including, but not limited to, 40 US C. 3141-3148 and 40 US C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 US C. 276a et seq.), the Contract Work Hours and Safety Standards Act (formerly 40 US.C. 327 et seq.), and the Copeland Anti-Kickback Act (formerly 40 US.C. 276c)); and

q. Not use funds from other Federal programs, including any non-Federal contribution required as a matching share therefore, to meet any of the non-Federal sponsor's obligations for the project unless the Federal agency providing the funds verifies in writing that such funds are authorized to be used to carry out the project.

10. The recommendation contained herein reflects the information available at this time and current departmental policies governing the formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to Congress as a proposal for authorization and implementation funding. However, prior to transmittal to 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.

TODD T. SEMONITE
Lieutenant General,
U.S. Army Chief of Engineers