



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

REPLY TO
ATTENTION OF

CEMP-NAD (1105-2-10a)

AUG 24 2009

SUBJECT: Mid-Chesapeake Bay Island Ecosystem Restoration Project, Chesapeake Bay,
Dorchester County, Maryland

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on ecosystem restoration in the Middle Chesapeake Bay at James and Barren Islands. It is accompanied by the report of the Baltimore District Engineer and the North Atlantic Division Engineer. These reports are a partial response to a resolution by the Senate Committee on Environment and Public Works, adopted 5 June 1997. The resolution requested that the Secretary review the report of the Chief of Engineers on the Chesapeake Bay, Maryland and Virginia, published as House Document 176, Eighty-eighth Congress, First Session, and other pertinent reports with a view to conducting watershed management studies, in cooperation with other Federal agencies, the State of Maryland and the State of Delaware, their political subdivisions and agencies and instrumentalities thereof, of water resources improvements in the interest of navigation, flood control, hurricane protection, erosion control, environmental restoration, wetlands protection, and other allied purposes in watersheds of the Eastern Shore, Maryland and Delaware. The Eastern Shore, Maryland (MD) and Delaware (DE) Section 905(b) analysis concluded that a Federal interest existed to assess the needs and opportunities within the study area and recommended a variety of potential projects for further study. The Mid-Chesapeake Bay Island Ecosystem Restoration Study was initiated specifically to evaluate protecting and/or restoring island habitat loss because of erosion and subsidence through the beneficial use of dredged material, as recommended in the Section 905(b) analysis.

2. Land subsidence, rising sea level, and wave action are causing valuable remote island habitats to be lost throughout the Chesapeake Bay. Approximately 10,500 acres of island habitat has been lost in middle-eastern portion of Chesapeake Bay in the last 150 years, and should present island loss rates continue in the future, it is estimated that most remote island habitats will disappear from the Mid-Chesapeake Bay region within 20 years. The Mid-Chesapeake Bay Island Ecosystem Restoration Project consists of constructing environmental restoration projects at both James and Barren Islands. The reporting officers recommend authorizing a plan that will restore 2,144 acres of remote island habitat (2,072 acres at James Island and 72 acres at Barren Island), while also protecting approximately 1,325 acres of submerged aquatic vegetation (SAV) habitat adjacent to Barren Island and providing approximately 90 to 95 million cubic yards, or approximately 28 to 30 years, of dredged material placement capacity. Through the beneficial use of dredged material, the Mid-Chesapeake Bay Island Ecosystem Restoration Project would replace hundreds of acres of lost wetland and upland remote island habitat. This habitat would



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improve productivity in the surrounding area, while providing an environmentally sound method for the use of dredged material from the Chesapeake Bay approach channels to the Port of Baltimore. Cost effectiveness and incremental cost analysis techniques were used to evaluate alternative ecosystem restoration plans. 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. The recommended plan is the most efficient and cost-effective of the alternatives considered and provides substantial environmental benefits. The recommended plan is the national ecosystem restoration plan (the NER plan).

3. The incremental cost of the disposal of dredged material for ecosystem restoration purposes over the least cost, environmentally acceptable method of disposal is shared in accordance with Section 210 of WRDA 1996 (PL 104-303). Project cost sharing for ecosystem restoration requires that the non-Federal sponsor provide 35 percent of the cost associated with construction of the project for the protection, restoration, and creation of aquatic and ecologically related habitats, including provision of all lands, easements, rights-of-way, and necessary relocations. Cost sharing for recreation features requires that the non-Federal sponsor provide 50 percent of the cost associated with construction cost. Recreation facilities will be constructed on existing project lands required for the environmental restoration. Further, the non-Federal project sponsor must pay 100 percent of the operation, maintenance, repair, replacement, and rehabilitation costs associated with the project.

4. The Maryland Port Administration, under the auspices of the Maryland Department of Transportation is the non-Federal sponsor for the project. The estimated total first cost including contingencies for the Mid-Chesapeake Bay Island Ecosystem Restoration Project is \$1.612 billion based on October 2008 price levels. The Federal share of the total project costs would be \$1.045 billion for the Federal government (65 percent) and \$567 million for the non-Federal sponsor (35 percent). Operations, maintenance, repair, rehabilitation, and replacement (OMRR&R) costs for the completed project are projected to be less than 2 percent of the total project cost and would be a non-Federal responsibility. The first costs of the recommended recreation facilities are estimated at \$210,000. The Federal Government and the non-Federal sponsor would each share 50 percent of the cost or \$105,000. Since the recreation features are not planned to be constructed until the project is largely complete, OMRR&R costs would be incurred beyond to period of analysis for the project and so are not included in the project cost.

5. The cost of the recommended environmental restoration plan is justified by the restoration of 2,144 acres of remote island habitat (2,072 acres at James Island and 72 acres at Barren Island), the protection of approximately 1,325 acres of SAV habitat adjacent to Barren Island, and achieving habitat increases in the most cost-effective manner. The habitats constructed as part of the Mid-Bay Ecosystem Restoration Project will restore additional remote island habitat, a scarce and rapidly vanishing ecosystem niche within the Chesapeake Bay region that provide a vital

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connection for avian species between open-water and mainland terrestrial habitats within the region and provide valuable nesting habitat for a variety of colonial nesting and wading bird species. Protection of the extensive SAV beds east of Barren Island will provide nursery habitat for blue crabs and many species of commercially important finfish species, while also providing foraging habitat for waterfowl. The restoration projects at James and Barren Islands would contribute to the goals of the Chesapeake Bay Program watershed partnership through its habitat and ecosystem recovery and preservation efforts. Both James and Barren Islands would contribute to the Chesapeake 2000 Agreement goals to restore tidal and non-tidal wetlands, to protect and restore submerged aquatic vegetation, and to develop strategies to address water clarity in areas of critical importance for submerged aquatic vegetation.

6. The Corps of Engineers uses a Campaign Plan to establish priorities, focus transformation initiatives, measure and guide progress, and adapt to the needs of the future. The second of four goals of the Campaign Plan is to deliver enduring and essential water resource solutions through collaboration with partners and stakeholders. In developing this project, the Corps of Engineers has focused its talents and energy on a comprehensive, sustainable and integrated solution to the one of the Chesapeake Bay's greatest water resources and related challenges, and has accomplished this through collaboration with a diverse group of organizations and individuals, ranging from large government agencies to local watermen making their living on the Chesapeake Bay in the vicinity of James and Barren Islands. They included numerous local, State, and Federal agencies; defined groups such as watermen's, fishermen's, and boating associations; and private citizens. Through this substantial network of stakeholders and the beneficial use of dredged material, this project is an integrated and holistic solution that not only sustains one of the Nation's most productive ports, but ensures that the invaluable remote island habitat that the project is restoring in the Nation's largest estuary is equally sustainable.

7. The plan as developed is technically sound, economically efficient, and environmentally and socially acceptable. The plan conforms with essential elements of the U.S. Water Resources Council's 1983 Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and complies with other administration and legislative policies and guidelines. The development of this project benefited from an extensive review process that included the District Quality Control by the Baltimore District, Agency Technical Review by the Philadelphia District, and an Independent External Peer Review. District Quality Control reviewed basic science and engineering products. The Agency Technical Review was an in-depth review by senior Corps personnel to ensure the proper application of clearly established criteria, regulations, laws, codes, principles, and professional practices. In addition, the primary benefit model, the Island Community Units Model, was reviewed by the Corps of Engineers National Ecosystem Planning Center of Expertise and the Engineer Research and Development Center. Approval of the application of the Island Community Units model was recommended for the Mid-Chesapeake Bay Island Ecosystem Restoration Project. It was also determined that

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use of the model for future projects would require additional documentation supporting model assumptions, justification of guild weightings, and a sensitivity analysis of individual guild models and guild weighting.

8. The Independent External Peer Review (IEPR) was managed by an outside eligible organization that assembled a panel of four experts in the fields of engineering, estuarine ecology, economics and plan formulation, and hydrology. Ultimately, the panel identified and documented 14 comments. Four were classified as low significance and included comments about the influence of climate change on design, the addition of figures to the main body of the report, citations for restoration literature, and clarification of the location for dredged material in the most probable future without project condition. These comments were addressed with minor modifications to the feasibility report. Eight of the comments were classified as medium significance. They included the level of rigor/review of the preferred alternative; the use of a sensitivity analysis and the documentation of risk and uncertainty; the schedule for establishment of a fully functioning marsh; further discussion of the link between the need and scale of the project with the target volume of dredged material; description of the environmental monitoring; connectivity between the salt marsh and the estuary; inclusion of climate change, sea level rise, and invasive species in the Adaptive Management Plan; and potential discounting of environmental outcomes over the project lifetime. As a result, clarification was added to the report, a cost and schedule risk assessment was conducted, and a detailed monitoring plan and Adaptive Management Plan are being developed with the assistance of the panel's recommendations. The remaining two panel comments were determined to be of high significance. One concern was that the analysis of environmental benefits was biased by the failure to subtract quantitative habitat injuries, making the selection process and justification of the preferred alignment unreliable. In response, the team worked with fishery managers to quantify adverse impacts from filling the water column and benthic habitat and provided a discussion to support the conclusions produced by the plan formulation selection process using net benefits. The second concern was that water quality impacts associated with construction and the potential negative impacts of resettled suspended sediment were not addressed. As suggested by the IEPR reviewers, the team prepared an assessment that considered sediment re-suspension, transport, and deposition, and oyster and submerged aquatic vegetation requirements to assess construction impacts for Barren and James Islands. Federal and State resource agencies were involved in the planning and assessment of impacts. The team concluded that there will be no significant turbidity or environmental impacts to the oyster bars or submerged aquatic vegetation from construction at Barren or James Islands.

9. The views of interested parties, including Federal, State and local agencies, have been considered. Specific requests have been made for additional coordination with U.S. Fish and Wildlife Service and the National Marine Fisheries Service as detailed designs proceed on the

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project. USACE has agreed to continue close coordination with these agencies and other affected parties as the design and construction process continues.

10. I concur in the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend implementation of the authorized project in accordance with the reporting officers' 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 WRDA 1986, as amended. The non-Federal sponsor would provide the non-Federal cost share and all LERRD. Further, the non-Federal sponsor would be responsible for all OMRR&R. This recommendation is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and policies, including the following requirements:

a. Provide a minimum of 35 percent of total ecosystem restoration costs as further specified below:

1) Provide 25 percent of design costs allocated by the Government to ecosystem restoration 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 necessary to pay the full non-Federal share of design costs allocated by the Government to ecosystem restoration;

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

4) Provide all improvements required on lands, easements, and rights-of-way to enable the proper placement of dredged or excavated material associated with the construction, operation, and maintenance of the project;

5) Provide, during construction, any additional amounts as are necessary to make its total contribution at least 35 percent of ecosystem restoration costs.

b. Provide 50 percent of total recreation costs as further specified below:

1) Provide 25 percent of design costs allocated by the Government to recreation 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 necessary to pay the non-Federal share of design costs allocated by the Government to recreation;

3) Provide all lands, easements, and rights-of-way, including those required for relocations, and borrowing of material, and the disposal of dredged or excavated material;

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perform or ensure the performance of all relocations; and construct all of the improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated materials all as determined by the Government to be required or to be necessary for the construction, operation, and maintenance of the recreation features;

4) Provide, during construction, any funds necessary to make its total contribution for recreation equal to 50 percent of the recreation costs;

5) Provide during construction, 100 percent of the total recreation costs that exceed an amount equal to 10 percent of the Federal share of total ecosystem restoration costs.

c. For so long as the project remains authorized, operate, maintain, repair, replace, and rehabilitate the 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.

d. Shall not use the project or project lands, easements, and rights-of-way as a wetland bank or mitigation credit required for another project.

e. Provide and maintain recreation features and public use facilities open and available to all on equal terms.

f. 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 inspection, and, if necessary after failure to perform by the non-Federal sponsor, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the project. No completion, operation, maintenance, repair, replacement, or rehabilitation by the Federal Government shall operate to 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.

g. Hold and save the United States free from all damages arising from the construction, 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.

h. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of three years after completion of the accounting for which such books, records, documents, or other evidence are required, to the

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extent and in such detail as will properly reflect total project costs, 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.

i. 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), PL 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 construction, 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.

j. 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 substances located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction, operation, or maintenance of the project.

k. Agree, 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. 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.

l. 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 U.S.C. 4601 - 4655), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way, required for the construction, operation, and maintenance of the project, including those necessary for relocations, the borrowing of materials, or the placement of dredged or excavated material, and inform all affected persons of applicable benefits, policies, and procedures under said Act.

m. Comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, PL 88-352 (42 U.S.C. 2000d); Department of Defense Directive 5500.1 1 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 including,

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but not limited to, 40 U.S.C. 3141-48 and 40 U.S.C. 3701-08 (reversing, codifying, and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 267a 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.),

11. 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 sponsors, the State, 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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