



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

REPLY TO
ATTENTION OF:

29 DEC 2000

CECW-PM (10-1-7a)

SUBJECT: Jackson Hole, Snake River, Wyoming

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on environmental restoration along the Snake River, Teton County, Wyoming. It is accompanied by the report of the district and division engineers. These reports are in partial response to a resolution by the Committee on Environment and Public Works of the United States Senate, adopted 12 June 1990. The study resolution requested a review of the report of the Chief of Engineers dated 28 June 1949, printed as House Document 531, Eighty-first Congress, Second Session, and other pertinent reports, with a view of determining the advisability of mitigating for fish and wildlife impacts resulting from construction, operations and maintenance of the Jackson Hole, Snake River, Wyoming, project authorized by Public Law 516, Flood Control Act of 1950 and modified by Section 840 of Public Law 99-662, the Water Resources Development Act of 1986, including levees constructed by non-Federal interests.

2. Section 101(b)(28) of the Water Resources Development Act of 2000 (WRDA 2000) authorized construction of the Jackson Hole, Wyoming, Project for ecosystem restoration subject to the completion of a favorable report of the Chief of Engineers not later than 31 December 2000 and subject to the conditions recommended in that final report. The authorizing language for the Jackson Hole project reflects an earlier project cost estimate of \$52,242,000. The cost estimate for the project has been refined to reflect current information. In accordance with WRDA 2000, the non-Federal share of the ecosystem restoration project may be in the form of cash, in-kind services, or materials, and credit will be afforded for the cost of design and construction carried out by the non-Federal interest before the date of execution of a project cooperation agreement, if the Secretary determines that the work is integral to the project. This report constitutes the final report of the Chief of Engineers required by WRDA 2000.

3. The Jackson Hole feasibility study was conducted as a cost shared effort with Teton County and the Teton Conservation District, Wyoming. The purpose of the study was to determine the feasibility of restoring ecosystem functions and values to aquatic, wetland, and riparian habitats located between the flood control levees. The reporting officers recommend a plan to restore floodplain habitat within the 22-mile-long levee system that protects Teton County. The existing flood damage reduction system would not be compromised by the proposed modifications. The proposed project would consist of excavations to maintain the flood conveyance capacity of the system; construction of

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sediment traps and fisheries habitat; and installation of river training structures (eco-fences, root wads, spur dikes) and a rock grade-control structure to promote and protect island and riparian habitats. Because of the dynamic hydrology, primarily driven by snowmelt events, and the high-gradient, high sediment characteristics of this system, along with the short construction season, the proposed work would be constructed over an extended period of time. The construction sequence provides for a 6-year construction period at the first site, which would be progressively shortened to a 3-year period for the fourth through the twelfth sites. The total annual operation and maintenance costs, which are the responsibility of the non-Federal sponsor, are estimated to be \$1,363,000. The total construction period of all 12 sites that constitute the recommended project is estimated to be 14 years. The recommended plan is the national ecosystem restoration (NER) plan.

4. The project costs are all allocated to the environmental restoration project purpose. Based on October 1999 price levels, the total first cost of the project is \$52,300,000, of which \$33,995,000 would be a Federal cost and \$18,305,000 would be a non-Federal cost. The criteria of environmental effectiveness and economic efficiency were used to evaluate 16 alternative environmental restoration plans. The ecosystem restoration benefits were analyzed using three habitat models: one that was developed as part of the feasibility study for aquatic habitat and two that were developed by the U.S. Fish and Wildlife Service for riparian habitat. Cost effectiveness and incremental cost analysis techniques identified the plans that were the best investments for producing varying levels of aquatic and riparian habitats. Over a 50-year period of analysis, the recommended plan is estimated to create 8,200 average annual aquatic habitat units (an increase of 28 percent compared to the without project condition). The plan would also create an estimated 490 average annual riparian habitat units (137 percent increase). The project would improve fisheries habitat within the project reach by restoring over-wintering and side channel habitat. Additionally, the plan would improve habitat for species listed under the Endangered Species Act (e.g., bald eagle, whooping crane, grizzly bear, Canadian lynx, gray wolf, and Ute-ladies' tresses).

5. A monitoring plan was developed to address project effectiveness. The total monitoring program could extend over a 13-year period. The cost shared monitoring would be conducted on a site-by-site, sequential basis. The initial site construction would be monitored for up to 5 years. As features (sites) are added, the monitoring effort would be decreased and shortened. Based on the monitoring results, remaining elements (as well as operations) could be adapted for the purpose of more effective and efficient project performance. The total cost of the monitoring plan and adaptive management program (1 and 3 percent of total construction cost, respectively) is estimated at \$1,457,000 at October 1999 price levels. Advancements in ecosystem restoration measures would occur as a result of preconstruction engineering and design, as well as lessons learned through monitoring.

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6. Washington level review indicated that the plan recommended by the reporting officers is technically sound, environmentally justified, cost effective and socially acceptable. The plan conforms with 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 administration and legislative policies and guidelines. Also, the views of interested parties, including Federal, State and local agencies, have been considered.

7. I concur in the findings, conclusions, and recommendation 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 necessary and advisable. I recommend cost sharing as required by Section 103 of Public Law 99-662, as amended by Section 210 of Public Law 104-303. Under these laws, costs allocated to environmental restoration require a non-Federal sponsor share of 35 percent and a Federal share of 65 percent. The project sponsor, Teton County, would provide all lands, easements, rights-of-way, including suitable borrow and dredged or excavated material disposal sites, and all relocations. My recommendation is subject to the non-Federal sponsor agreeing to comply with applicable Federal laws and policies, including the following requirements:

a. Provide 35 percent of the project implementation costs (preconstruction, engineering, and design and construction) in keeping with current U.S. Army Corps of Engineers policy as further specified below:

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

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

(3) Provide all lands, easements, and rights-of-way, including suitable borrow and dredged or excavated material disposal areas, and perform or assure the performance of all relocations determined by the Government to be necessary for the construction, operation, and maintenance of the project;

(4) Provide or pay to the Government the cost of providing all retaining dikes, wasteweirs, bulkheads, and embankments, including all monitoring features and stilling basins, that may be required at any dredged or excavated material disposal areas required for the construction, operation, and maintenance of the project; and

(5) Provide, during construction, any additional costs as necessary to make its total contribution equal to 35 percent of the separable project costs allocated to

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environmental restoration, 50 percent of the separable project costs allocated to recreation, and 100 percent of the separable costs exceeding the federally supportable plan.

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 Government, in accordance with applicable Federal and State laws and any specific directions prescribed by the Government.

c. Give the Government a right to enter, at reasonable times and in a reasonable manner, upon land which the local sponsor owns or controls for access to the project for the purpose of inspection, and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the project.

d. Assume responsibility for operating, maintaining, replacing, repairing, and rehabilitating (OMRR&R) the project or completed functional portions of the project, including mitigation features without cost to the Government, in a manner compatible with the project's authorized purpose and in accordance with applicable Federal and State laws and specific directions prescribed by the Government in the OMRR&R manual and any subsequent amendments thereto.

e. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended, and Section 103 of Public Law 99-662, the Water Resources Development Act of 1986, 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.

f. Hold and save the Government 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 Government or the Government's contractors.

g. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project to the extent and in such detail as will properly reflect total project costs.

h. 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), 42 USC 9601-9675, that may exist in, on, or under lands, easements or rights-of-way necessary for the construction, operation, and maintenance of the project; except that the non-Federal sponsor shall not perform such investigations on

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lands, easements, or rights-of-way that the Government determines to be subject to the navigation servitude without prior specific written direction by the Government.

i. Assume 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 Government determines necessary for the construction, operation, or maintenance of the project.

j. 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.

k. Prevent future encroachments on project lands, easements, and rights-of-way, which might interfere with the proper functioning of the project.

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 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, and performing relocations for construction, operation, and maintenance of the project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act.

m. Comply with all applicable Federal and State laws and regulations, including Section 601 of the Civil Rights Act of 1964, Public Law 88-352, 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."

n. Provide the non-Federal share of that portion of the costs of mitigation and data recovery activities associated with historic preservation, that are in excess of 1 percent of the total amount authorized to be appropriated for the project, in accordance with the cost sharing provisions of the agreement.

o. 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.



ROBERT B. FLOWERS
Lieutenant General, U.S. Army
Chief of Engineers