



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

REPLY TO
ATTENTION OF:

CECW-PC (10-1-7a)

23 DEC 1998

SUBJECT: Reelfoot Lake, Tennessee and Kentucky

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on ecosystem restoration in the vicinity of Reelfoot Lake, Tennessee and Kentucky. It is accompanied by the report of the district engineer and the Mississippi River Commission. These reports are in final response to authority established in resolutions by the United States Senate and United States House of Representatives dated 2 August 1984 and 8 August 1984, respectively. The study resolutions requested review of "the report on the Mississippi River and Tributaries project ... and other pertinent reports with a view to determining whether any modifications of the recommendations contained therein are advisable, with particular reference to the need and feasibility of improvements in the vicinity of Reelfoot Lake, Tennessee, in the interest of flood control, sediment control, water quality, water supply, fish and wildlife preservation and enhancement, recreation, regional development, and allied purposes." The resulting district engineer's report includes project features in the vicinity of Reelfoot Lake, Tennessee and Kentucky. Preconstruction engineering and design activities for the Reelfoot Lake, Tennessee and Kentucky, project will be continued under the authority provided by the resolutions cited above.

2. Section 101(b) of the Water Resources Development Act of 1999 authorizes construction of the Reelfoot Lake, Kentucky and Tennessee, water resources development project, substantially in accordance with the plans and subject to the conditions, recommended in a favorable report of the Chief of Engineers completed not later than 31 December 1999. This report constitutes the final report of the Chief of Engineers in response to this legislation. The authorizing language for the Reelfoot Lake, Kentucky and Tennessee, project reflects an earlier project cost of \$35,287,000, which is based on a fully funded project. The cost estimate for the authorized project has been refined. The current first cost of the project is now estimated to be \$26,329,000 based on October 1998 price levels (\$30,896,000 fully funded). This is the cost estimate that the U.S. Army Corps of Engineers will use as the baseline for calculating the maximum cost of the project, pursuant to Section 902 of Public Law 99-662, the Water Resources Development Act of 1986.

3. The authorized project described by the reporting officers will provide ecosystem restoration in the vicinity of Reelfoot Lake, Tennessee and Kentucky. Reelfoot Lake, with its adjacent wildlife areas, is a nationally significant and unique natural resource. The purpose of the restoration project is to improve water quality and circulation within Reelfoot and Shelby Lakes, and to reduce future sediment deposition in Reelfoot Lake. The project provides for construction

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of a new spillway that will have six 20-foot-wide vertical lift gates, a bridge, inlet and outlet channels; closure of the existing spillway at Reelfoot Lake; three water circulation channels and two small boat access channels in Reelfoot Lake 3.2 miles long in total, requiring excavation of 27,500 cubic yards of material to elevation 278.0 feet; a sediment retention basin on Reelfoot Creek composed of an earthen levee 10,700 feet long with a primary spillway and low-level inlet and outlet structures for a pool with design elevation of 305.0 feet; excavation of the old lake bed to depths between zero and six feet, construction of shallow terraces and habitat plantings for six associated waterfowl management areas at Shelby Lake; a new water level management plan for Reelfoot Lake; and environmental monitoring for up to five years. The project will require numerous relocations including: construction of a bridge and detour road; raising a portion of a highway; and relocating four gas lines, three power lines, one sewer force main, two water lines, three telephone cables, two fiber optic cables, and two television cables. In response to concerns expressed by the Commonwealth of Kentucky relative to lake level impacts on agricultural interests, I recommend the U.S. Fish and Wildlife Service, in concert with the Corps of Engineers, acquire real estate interests in Kentucky, at fair market value, up to elevation 285 feet MSL in accordance with the Record of Decision by the U.S. Fish and Wildlife Service dated 25 September 1989. The Corps will install lake and downstream gauging stations that will provide real time data available to the public for ensuring proper operations. The new water level management plan for Reelfoot Lake will be incorporated into the project operation and maintenance manual and the project will be operated within the new water level management plan. Further, the Corps of Engineers will ensure that the project is operated within the new water level management plan.

4. The State of Tennessee is the non-Federal cost sharing sponsor for all features of the plan. Based on October 1998 price levels, the total first cost of the revised plan is estimated at \$26,329,000, all for ecosystem restoration. The total first cost of the plan would be cost shared \$17,173,000 Federal and \$9,156,000 non-Federal pursuant to Section 210 of the Water Resources Development Act of 1996. Average annual costs are \$2,327,000 based on an interest rate of 7.125 percent and a period of analysis of 50 years. Average annual benefits are terrestrial benefits of 1,290 annualized habitat unit values (AHUVs); aquatic benefits of 4,304 AHUVs; waterfowl benefits of 4,045,800 waterfowl use days; and economic benefits. The economic benefits include savings in OMRR&R; enhancement of land values; recreation and commercial fishing; and agricultural production for a total of \$1,596,800, based on an interest rate of 7.125 percent and a period of analysis of 50 years.

5. I concur in the findings, conclusions, and recommendation of the reporting officers. The plan developed is technically sound, economically justified, and environmentally 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. Accordingly, I recommend implementation of the authorized project with such modifications as in the discretion of the Chief of Engineers may be advisable. Federal

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implementation of the authorized project would be 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 costs allocated to environmental restoration as further specified below:

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

(2) Provide, during construction, any additional funds needed to cover the non-Federal share of project 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 funds as necessary to make its total contribution equal to 35 percent of the project costs allocated to environmental restoration.

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 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.

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e. Comply with 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.

f. Hold and save the Government free from all damages arising from the construction or operation and maintenance 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 U.S.C. 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 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.

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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 35 percent of that portion of total cultural resource preservation mitigation and data recovery costs attributable to environmental restoration that are in excess of 1 percent of the total amount authorized to be appropriated for environmental restoration.

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.



JOE N. BALLARD
Lieutenant General, U.S. Army
Chief of Engineers