



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

REPLY TO
ATTENTION OF:

CECW-PM (10-1-7a)

29 DEC 2000

SUBJECT: Antelope Creek at Lincoln, Nebraska

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on the study of flood damage reduction and recreation improvements for Antelope Creek at Lincoln, Nebraska. It is accompanied by the report of the district and division engineers. These reports are in partial response to the authority given in a resolution by the Committee on Public Works of the United States Senate dated 9 May 1963 that requested the U.S. Army Corps of Engineers to determine the need to modify the existing Missouri River and tributaries projects for flood control and other allied purposes.
2. Section 101(b)(19) of the Water Resources Development Act of 2000 (WRDA 2000) authorized construction of the Antelope Creek at Lincoln, Nebraska, project for flood damage reduction and recreation 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 Antelope Creek project reflects an earlier project cost estimate of \$46,310,000. The cost estimate for the project has been refined to reflect current information. This report constitutes the final report of the Chief of Engineers required by WRDA 2000.
3. The plan, developed by the U.S. Army Corps of Engineers Omaha District, the Lower Platte South Natural Resources District, the City of Lincoln, and the University of Nebraska-Lincoln, consists of 2 miles of improved channel extending upstream from the mouth of Antelope Creek, a portion of which is a by-pass channel adjacent to a 4,060-foot-long concrete conduit in the downtown area. The project also includes a labyrinth weir control structure, two existing bridge replacements, one bridge modification, five new bridges, one railroad bridge modification, and 2.29 miles of recreation trails along the proposed channel project. The recommended plan will increase the channel capacity to contain the 1-percent design flood with a reliability of about 65 percent, except for minor ponding in low areas near the downstream end. The proposed project is estimated to reduce average annual flood damages of \$5,264,000 by 80 percent. The project does not require mitigation for fish and wildlife resources but does include cultural resources mitigation. The recommended plan is the national economic development (NED) plan. The proposed project is compatible with a proposed Federal Highway Administration and non-Federal transportation project and will share a common right-of-way and retaining wall. The total cost of the retaining wall, which

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will be an integral part of both the flood control project and highway project, is \$1,807,600. As such, 50 percent of the retaining wall cost is allocated to the highway project and will be paid by the non-Federal sponsor. The remaining 50 percent is allocated to the flood control project and will be cost shared as a standard structural flood control feature.

4. Based on May 2000 price levels, the estimated total first costs of the flood control portion of the plan recommended by the reporting officers is \$44,758,000, including construction cost, lands, easements, rights-of-way, relocation, and disposal areas (LERRD). The Federal share of the first costs is \$22,451,000 and the non-Federal share is \$22,307,000. The total first cost of the selected recreation plan is estimated at \$1,172,000. Cost sharing for the recreation portion of the plan would be 50 percent Federal and 50 percent non-Federal. On this basis, the Federal and non-Federal shares would each be \$586,000. The total first cost is estimated to be \$45,930,000. Based upon the requirements of WRDA 1986, as amended by Section 202 of WRDA 1996, the Federal share is \$23,037,000 and the non-Federal share is \$22,893,000. The total annual operation, maintenance, repair, replacement and rehabilitation (OMRR&R) cost for the recommended project, which is the responsibility of the non-Federal sponsor, is estimated to be \$24,000 per year for flood control and \$16,000 per year for recreation.

5. The plan is economically justified, having average annual flood damage reduction benefits of \$4,534,000 and average annual recreation benefits of \$176,000 for a total of \$4,710,000, based on a 50-year period of analysis and 6 5/8 percent interest rate. Average annual costs are \$3,430,000 for flood control and \$98,900 for recreation, for a total of \$3,528,900, including OMRR&R. The resulting benefit-cost ratio is 1.3 for flood control, 1.8 for recreation, and 1.3 overall.

6. Washington level review indicates that the recommended plan is technically sound, economically justified, and environmentally and socially acceptable. The plan conforms to 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' recommended plan and with such modifications as in the discretion of the Chief of Engineers may be advisable in the future. My recommendation is subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including Public Law 99-662 (WRDA 1986), as amended by Section 202 of Public Law 104-303 (WRDA 1996), and in accordance with the following requirements, which the non-Federal sponsor must agree to prior to project implementation:

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a. Provide a minimum of 35 percent, but not to exceed 50 percent, of total project costs allocated to structural flood control, and a minimum of 50 percent of total project costs allocated to recreation as further specified below:

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

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

(3) Provide, during construction, a cash contribution equal to 5 percent of total project costs allocated to structural flood control;

(4) 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;

(5) 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

(6) Provide, during construction, any additional costs as necessary to make its total contribution equal to at least 35 percent of total project costs allocated to structural flood control and 50 percent of total project costs allocated to recreation.

b. Give the Government a right to enter, at reasonable times and in a reasonable manner, upon land that 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.

c. 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 purposes 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.

d. 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

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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.

e. 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.

f. 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.

g. 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.

h. 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.

i. Agree that, 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, 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.

j. 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 operation or maintenance of the project.

k. 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,

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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.

l. 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," and Section 402 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 701b-12), requiring non-Federal preparation and implementation of floodplain management plans.

m. 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.

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

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.

p. Inform affected interests, at least annually, regarding the limitations of the protection afforded by the project.

q. Publicize floodplain information in the area concerned and provide this information to zoning and other regulatory agencies for their guidance and leadership in preventing unwise future development in the floodplain and in adopting such regulations as may be necessary to ensure compatibility between future development and protection levels provided by the project.



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