



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

REPLY TO  
ATTENTION OF:

CECW-PM

12 DEC 2000

SUBJECT: Tres Rios, Arizona

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on the study of environmental restoration and incidental flood control and recreation opportunities for the Salt, Gila, and Agua Fria Rivers (Tres Rios) west of Phoenix, Arizona. It is accompanied by the report of the district and division engineers. These reports are in partial response to Public Law 761, 75<sup>th</sup> Congress (Section 6 of the Flood Control Act of 1938) and a resolution adopted by the Committee on Public Works and Transportation of the U.S. House of Representatives on 17 May 1994. The resolution requested a review of reports for the State of Arizona to determine whether modifications of the recommendations contained therein are advisable at the present time in the interest of flood damage reduction, environmental protection and restoration, and related purposes. Preconstruction engineering and design activities for this project will be continued under this authority.

2. Section 101(b)(4) of the Water Resources Development Act of 2000 (WRDA 2000), authorized construction of the Tres Rios, Arizona, project for ecosystem restoration subject to completion of a favorable report of Chief of Engineers not later than 31 December 2000 and subject to the conditions recommended in that final report. The authorizing language for this Tres Rios project reflects a total project cost of \$99,320,000, with an estimated Federal cost of \$62,755,000 and an estimated non-Federal cost of \$36,565,000. This report constitutes the final report of the Chief of Engineers required by WRDA 2000.

3. The plan recommended by the reporting officers would provide for environmental restoration to about an 8-mile reach of the Salt River, west of Phoenix, Arizona, including the Salt River's confluence areas with the Gila and Agua Fria Rivers. The recommended plan provides water supply and infrastructure features consisting of a pump station and water distribution system to reestablish and support about 775 acres of native vegetation and wildlife habitat within and along the Salt River. The plan includes constructing a regulating wetland about 184 acres in size to equalize diurnal variations in discharges from the 91<sup>st</sup> Avenue treatment plant; providing for a 300 million gallon per day pump station to convey flow from the treatment plant to the regulating wetland; constructing approximately 128 acres of wetlands along the north bank of the Salt River; providing for a pipeline in the overbank wetland leading to a series of riparian corridors totaling about 38 acres west of El Mirage Road; constructing a series of open water/marsh areas totaling

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about 134 acres within the channel west of El Mirage Road; grading the Salt River to convey surface water to supply about 69 acres of riparian habitat; and distributing, via a series of pipelines, dewatering well water from the treatment plant to a series of large open water/marsh creation areas totaling about 206 acres and about 16 acres of riparian corridors along the south side of the Salt River.

4. The recommended plan also includes construction of about 6 miles of flood control levee on the north bank of the Salt River between the regulating wetland and approximately Dysart Road. The flood control levee, ranging in height from 4 to 10 feet, would provide structures on the north bank protection from a flood having 1 chance in 100 of occurring in any given year. A passive recreation plan consisting of approximately 11 miles of multi-use non-motorized trails, parking lots with kiosks, and other amenities for viewing, picnicking, and exploring the area by foot, bicycle, or horseback is also included in the recommended plan. Finally, at the request of the non-Federal sponsor, the recommended plan includes development of an environmental education interpretive center.

5. Based on October 1999 price levels, the estimated total first cost of the recommended plan is approximately \$99,320,000. This includes initial construction costs of \$98,120,000, plus a 5-year, \$1,200,000 monitoring and adaptive management program to assess and establish the proper functioning of the environmental restoration features. This total first cost of the project includes about \$89,080,000 for environmental restoration, about \$5,380,000 for flood damage reduction, about \$2,360,000 for recreation, and about \$2,500,000 for the environmental education interpretive center. Following the cost sharing provisions of WRDA of 1986, as amended by Sections 202 and 210 of WRDA 1996, the Federal share of the total project costs would be about \$62,760,000 and the non-Federal share would be about \$36,560,000. Cultural resource mitigation costs of \$500,000 are included in the total first cost of the project. Since the cultural mitigation cost is less than 1 percent of the Federal share of project costs, pursuant to Section 7(a) of Public Law 93-291 this cost is a 100 percent Federal cost and is included in the Federal share of total project costs. The non-Federal sponsor would be responsible for the \$2,500,000 cost associated with development of the environmental education interpretive center, which is included in the first cost of the recommended plan and non-Federal share of total project costs. The non-Federal sponsor would also be responsible for the annual cost of water and the operation, maintenance, repair, replacement and rehabilitation of the project after construction, a cost currently estimated at \$2,414,000 per year.

6. The recommended plan is not the combined National Ecosystem Restoration (NER)/National Economic Development (NED) plan. The NER/NED plan is identical to the recommended plan except that it does not include the \$2,500,000 non-Federal environmental education interpretive center. Based on October 1999 price levels, the first cost of the NER/NED plan is estimated at \$96,820,000, of which \$62,760,000 would be

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Federal and \$34,060,000 would be non-Federal. In accordance with policy, the non-Federal sponsor would be responsible for all costs of the recommended plan that are greater than the Federal share of the cost of the NER/NED plan.

7. To ensure that an efficient environmental restoration plan was recommended, cost effectiveness and incremental analysis techniques were used to evaluate alternative restoration plans. The cost of the recommended environmental restoration features is justified by the restoration of about 571 habitat units and provides for achieving habitat increases in the most cost-effective manner. These restored habitats are considered especially valuable due to scarcity and dependence of certain species on these resources.
8. Based on an interest rate of 6-5/8 percent amortized over 50 years and including annual operation, maintenance, repair, replacement and rehabilitation, average annual structural flood control costs are estimated at \$399,300. Average annual flood damage reduction benefits attributable to the plan are estimated at \$661,700, and the flood control benefit to cost ratio is 1.7. The net annual flood control benefits for this plan are \$262,400.
9. Based on an interest rate of 6-5/8 percent amortized over 50 years and including annual operation, maintenance, repair, replacement and rehabilitation, average annual recreation costs are estimated at \$545,000. Average annual recreation benefits attributable to the plan are estimated at \$1,386,000, and the recreation benefit to cost ratio is 2.5.
10. Washington level review indicates that the plan recommended by the reporting officer's is technically sound, economically justified, and environmentally and socially acceptable. The proposed project complies with applicable U.S. Army Corps of Engineers planning procedures and regulations. Also, the views of interested parties, including Federal, State, and local agencies, have been considered.
11. The reporting officers have recommended that the plan described herein, be exempt pursuant to Section 404(r) of the Clean Water Act (CWA), from the requirement to obtain a State water quality certification. Section 404(r) of the CWA provides that discharge of dredged or fill material as part of the construction of a specifically authorized Federal project is not subject to the requirement to obtain State water quality certification "if information on the effects of such discharge... is included in an environmental impact statement for such project... [which] has been submitted to Congress before actual discharge of dredged or fill material in connection with the construction of such project and prior to either authorization of such project or an appropriation of funds for such construction." I intend to invoke the provision of Section 404(r) by submitting to the Congress an environmental impact statement with the required information prior to appropriation of funds for construction of this project.

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12. I concur in the findings, conclusions and recommendations of the reporting officers. Accordingly, I recommend that implementation of the authorized project for environmental restoration, flood damage reduction and recreation for Tres Rios, Arizona, be in accordance with the reporting officers' plan with such modifications as in the discretion of the Chief of Engineers may be necessary and advisable. 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 Sections 202 and 210 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:

a. For the structural flood control features of the project, provide a minimum of 35 percent, but not to exceed 50 percent of the separable project costs allocated to structural flood control 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 separable 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 35 percent of the separable costs allocated to structural flood control.

b. For the environmental restoration features of the project, provide 35 percent of the separable project costs allocated to these features 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;

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(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 environmental restoration.

c. For the recreation features of the project provide 50 percent of the separable project costs allocated to recreation 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 50 percent of the separable project costs allocated to recreation.

d. For the environmental education interpretive center feature of the project, provide 100 percent of the separable project costs allocated to this feature.

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e. For so long as the project remains authorized, operate, repair, replace, rehabilitate and maintain the completed project and hydraulic integrity of the system, along with any required long-term dredged or excavated material disposal areas, 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.

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

g. 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.

h. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended, and Section 103 of Public Law 99-662 (WRDA 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.

i. Hold and save the United States free from all damages arising from the construction, operation, and maintenance of the project and any betterments, 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 to the 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 in 32 CFR Section 33.20.

k. Perform, or cause to be performed, any investigations for hazardous substances as 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 that the Federal Government determines to be necessary 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

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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 directions.

l. Assume complete financial responsibility, as between the Federal Government and the non-Federal sponsor, 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 Federal Government determines to be necessary for the construction, operation, or maintenance of the project.

m. 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. Prevent obstructions of or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) which might reduce the environmental restoration and level of flood protection it affords, or hinder its operation and maintenance, or interfere with its proper functioning, such as any new development on project lands or the addition of facilities which would degrade the benefits of the project.

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 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, required for construction, operation, and maintenance of the project, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act.

p. Comply with all applicable Federal State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), Section 402 of WRDA 1986 requiring non-Federal preparation and implementation of floodplain management plans, 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."

q. Provide 35 percent of that portion of total cultural resource preservation mitigation and data recovery costs attributable to environmental restoration and flood control that are in excess of 1 percent of the total amount authorized to be appropriated for environmental restoration and flood control, and provide 50 percent of that portion of total cultural resource preservation mitigation and data recovery costs attributable to recreation

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that are in excess of 1 percent of the total amount authorized to be appropriated for recreation.

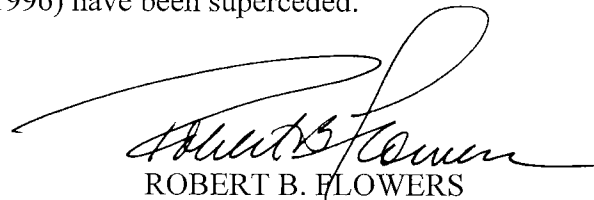
r. For so long as the project remains authorized, provide the quantity of water for such periods that the Government determines is necessary to construct, operate, repair, replace, rehabilitate and otherwise maintain the project.

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

t. 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.

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

13. As a result of the authorization of this project based on the recommendations contained in this report, prior limitations on Federal participation in the Tres Rios, Arizona project found in Section 321 of Public Law 102-580 (WRDA 1992) and Section 301(b)(2) of Public Law 104-303 (WRDA 1996) have been superceded.



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