



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

REPLY TO
ATTENTION OF:

CECW-PE (10-1-7a)

20 May 1998

SUBJECT: Tucson Drainage Area, Arizona

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on the study of flood damage reduction improvements to the drainage area located in the southeast portion of Tucson, Arizona. It is accompanied by the report of the district and division engineers. These reports have been prepared in partial response to the authority given in Section 6 of the Flood Control Act of 1938 for preliminary examinations and surveys for the Gila River and tributaries, Arizona and New Mexico. Preconstruction engineering and design activities for the Tucson drainage area project will be continued under this authority.

2. The reporting officers recommend authorization of a plan to provide flood protection along the Tucson Arroyo/Arroyo Chico in Tucson, Arizona. The plan consists of two large detention basin complexes, one at Randolph Golf Course in the upper watershed and the other upstream of Park Avenue in the center of the basin. The Randolph Golf Course complex consists of a series of interconnected excavated basins which collect flows from Arroyo Chico and Naylor Wash and reduce the outflow to a discharge that the existing stream channel can carry. The Park Avenue complex will collect runoff from areas downstream of Randolph Golf Course and includes three on-line basins and one off-line basin. To ensure inlet control and to minimize breakout of floodwaters, limited channel improvements are provided upstream of the Park Avenue complex and downstream at the High School Wash confluence. The recommended plan provides protection from the one percent exceedance flood. The Park Avenue complex also provides for environmental restoration of approximately 10 acres of desert riparian habitat and includes limited recreation facilities compatible with the flood control and environmental restoration purposes. Mitigation for project construction includes 6.8 acres of riparian habitat and 0.4 acres of upland desert vegetation.

3. The first cost of the recommended plan, based on October 1997 price levels, is estimated at ~~\$28,990,000~~ of which ~~\$18,800,000~~ would be Federal and ~~\$10,190,000~~ would be non-Federal. Average annual benefits and costs based on an interest rate of 7 1/8 percent are estimated at \$3,000,000 and \$2,340,000, respectively, with a resulting benefit-cost ratio of 1.3. The proposed plan is the national economic development plan.

*modified
by ASACen
To correct
problem
WITH 104
Credit/LEAA*

\$ 28,992,000

*\$ 16,258,000 **

*\$ 12,734,000 **

** See ASA (cw) Ltr to OMB dated 7 Aug 98*

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\$ 6,486,000

THIS FIGURE REVISED BY ASA(CW) TO ACCOUNT FOR REVISIONS

4. In accordance with the provisions of Section 104 of Public Law 99-662, the reporting officers recommend the non-Federal sponsor receive credit for work carried out which is compatible with the plan recommended for implementation, an amount currently estimated to be \$8,460,000. The work consists of design and construction of the detention basin complex at Randolph Golf Course, which was completed in April 1996. This credit was approved in concept by the Acting Assistant Secretary of the Army for Civil Works on 21 April 1995, contingent upon determining the actual elements of work eligible for credit under section 104 guidelines and including these elements in the feasibility report.

5. Washington level review indicates that the proposed plan is technically sound, economically justified, and environmentally 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.

6. I concur in the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that improvements for flood damage reduction, environmental restoration, and recreation for the Tucson Drainage Area, Arizona, project be authorized subject to cost sharing as required by Public Law 99-662, as amended by Sections 202 and 210 of Public Law 104-303. I further recommend that the non-Federal sponsor receive credit under Section 104 of Public Law 99-662. My recommendations are subject to the non-Federal sponsor agreeing to comply with applicable Federal laws and policies, including the following requirements:

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

(1) Enter into an agreement which provides, prior to construction, 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 for 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