



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

REPLY TO  
ATTENTION OF:

CECW-AR (10-1-7a)

SUBJECT: American River Watershed, California

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on flood control protection for the American River Watershed, California. It is accompanied by the report of the district and division engineers. These reports supplement my report of 29 June 1992 for the American River Watershed Investigation, California, for flood control protection in the greater Sacramento area and were prepared in response to Section 9159 of the Department of Defense Appropriations Act of Fiscal Year 1993 (Public Law 102-396). Section 9159 directed a reevaluation of the flood control project for the Sacramento and American Rivers as described in my report of 29 June 1992. Section 9159 also authorized construction of levee modifications recommended for the Natomas area and provided for the non-Federal sponsor to receive credit for work commenced prior to the U.S. Army Corps of Engineers receiving appropriations to initiate such construction.

2. The structural plan previously recommended would have reduced the probability of flooding to less than 1 chance in 200 in any given year to the lower American River floodplain and the Natomas basin. The plan consisted of a 425-foot-high flood control detention dam on the North Fork of the American River near the town of Auburn; levee and channel modifications in the Natomas area of Sacramento; relocation of State Highway 49 and Ponderosa Way bridge crossings; and recreation trails on project features in the Natomas area. Mitigation features included acquisition and management of 280 acres in the Natomas area; acquisition and management of 2,685 acres along the South Fork of the American River; and acquisition of an additional 2,700 acres of land along the South Fork as compensation for impacts to threatened and endangered species habitat.

\* This report contains the proposed recommendation of the Chief of Engineers. The recommendation is subject to change to reflect Washington level review and comments from Federal and State agencies.

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3. The reporting officers have concluded their supplemental studies and reevaluation of the flood control project for the Sacramento and American Rivers and recommend authorization of a plan that, once in place, will meet the National Flood Insurance Program requirements as administered by the Federal Emergency Management Agency. The design project will have a one-half percent chance of being exceeded in any one year within the greater Sacramento area. The plan consists of a flood control detention dam 508-feet-high with a capacity of about 894,000 acre-feet on the North Fork of the American River near Auburn, California; implementation of a telemetered inflow gage system and emergency flood warning system; relocation of State Highway 49; modifications to stabilize approximately 24 miles of existing levees along the lower American River; and modifications to strengthen and raise about 12 miles of levees on the east side of the Sacramento River between the Natomas Cross Canal and the mouth of the American River. There is no permanent storage associated with the detention dam. Mitigation features include acquisition and restoration of approximately 2,962 acres of replacement habitat in the Yuba River basin; implementation of an adaptive management plan for 1,481 acres in the inundation area of the detention dam; and planting of approximately 7,000 elderberry shrubs to mitigate possible impacts to the threatened valley elderberry longhorn beetle. Impacts to cultural resources from temporary inundation would be partially mitigated through data recovery, documentation and structural protection, as appropriate. The recommended plan is the national economic development (NED) plan. The NED plan is supported by resolutions from the Reclamation Board of the State of California and the Sacramento Area Flood Control Agency.

4. The first cost of the recommended plan, based on October 1995 price levels, is estimated at \$948,700,000. Total average annual costs, based on a discount rate of 7-5/8 percent and a 100-year economic life, are estimated at \$95,000,000. Average annual benefits are estimated at \$186,000,000, yielding a benefit-to-cost ratio of 1.9.

5. The Administration has proposed a new cost sharing policy for flood damage reduction projects. Under that policy, the cost of implementing a flood control project would be shared equally between the Federal Government and the non-Federal sponsor. In addition, the non-Federal sponsor would be required to operate, maintain, repair, replace and rehabilitate the project as necessary and to put into place nonstructural flood plain management measures which would complement the project.

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6. The Congress has not had the opportunity to review and respond to the Administration's cost sharing policy proposal, further, under the budgetary constraints expected to prevail in the foreseeable future, Federal resources for implementation of costly new water resources investments will be highly constrained. In light of these uncertainties, I cannot concur fully in the recommendations of the reporting officers to proceed with the project in its entirety, and I am deferring a recommendation regarding the detention dam feature of the NED plan. However, in recognition of the significant flood risk facing the greater Sacramento area, I do believe it is prudent to proceed with several incrementally justified elements common to the final array of candidate plans presented by the reporting officers. Specifically, at this time, I recommended proceeding with modifications to stabilize approximately 24 miles of existing levees along the lower American River; modifications to strengthen and raise about 12 miles of levees on the east side of the Sacramento River; and implementation of the telemetered inflow gage system and emergency flood warning system. With these elements in place and with continued reoperation of Folsom Dam by the non-Federal sponsor, the greater Sacramento area will meet the National Flood Insurance Program requirements as administered by the Federal Emergency Management Agency. The first cost of implementing these three elements, based on October 1995 price level, is estimated at \$57,200,000.

7. Since the non-Federal sponsor has expressed interest in undertaking the design and construction of these three elements in advance of project authorization, I concur with the reporting officers that the non-Federal sponsor be eligible to receive credit for such work. This recommendation is also subject to the non-Federal sponsor agreeing to comply with applicable Federal laws and policies.

8. Upon clarification of the cost sharing policy and better understanding of the availability of Federal resources, I will make further recommendations concerning implementation of a more comprehensive plan for the American River which would provide a substantially higher degree of flood hazard reduction.

9. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. The recommendation may be modified before it is transmitted to the Congress as a

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proposal for authorization and implementation funding. However, prior to transmittal to the Congress, the sponsor, the State of California, interested Federal agencies, and other parties will be advised of any modifications and will be afforded an opportunity to comment further.

ARTHUR E. WILLIAMS  
Lieutenant General, USA  
Chief of Engineers