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**1997 CALFED BAY-DELTA PROGRAM CATEGORY III
ECOSYSTEM RESTORATION PROJECTS AND PROGRAMS
INQUIRY SUBMITTAL**

a. **Project Title:** San Joaquin River and Tributaries Study

Applicant Name: U.S. Army Corps of Engineers, Sacramento District/Point of Contact:
Walter Yep, Chief, Planning Division, (916) 557-6699

b. **Project Description and Primary Biological/Ecological Objectives:** A comprehensive study is needed to meet environmental restoration goals and address the need to improve flood protection in the San Joaquin River basin. The existing flood control system extending from Fresno on the south to near Stockton on the north has prevented billions of dollars in damages to most of the major urban areas in the San Joaquin Valley and to hundreds of thousands of acres of agricultural land. Levee failures during the severe storms over the 1997 New Years period however demonstrated a great need to reexamine the flood control system and to identify opportunities to incorporate multi-purpose non-structural floodplain management and environmental restoration concepts, as well as reservoir re-operation measures into a comprehensive basin management plan. Declines in fish populations, waterfowl, and species diversity would be addressed, as well as other indicators of biological degradation such as the loss of riverine and flood plain ecosystems along the river. Flow management of the San Joaquin River also aids in maintaining the salinity gradient in the Bay-Delta.

c. **Approach/Tasks/Schedule:** Initial study efforts will include development of a hydrologic/hydraulic model that can predict effects on the system of environmental restoration measures as well as reservoir reoperations, and non-structural and structural modifications to the flood control project. Early efforts will also entail development of restoration targets and objective levels of flood protection. The study will also include a post-flood assessment of system weaknesses and an updating of system hydrology incorporating recent (1986, 1995, 1997) floods. The post-flood assessment, objectives identification, and model development would be completed in 18 months. It is proposed that the CALFED public involvement process be used to coordinate study efforts.

d. **Justification for Project and Funding by CALFED:** See Item h. The Corps of Engineers will provide 50% of the cost of the development of the comprehensive basin management plan.

e. **Budget Costs and Third Party Impacts:** Requested CALFED funds represent up to 50% of the total San Joaquin River Watershed Management Plan development costs as follows: \$1 million for hydrologic/hydraulic model development, \$5 million for environmental restoration and flood damage reduction alternative plan development, and \$1 million for post flood assessment.

f. **Applicant Qualifications:** The Corps of Engineers, Sacramento District, as authorized and directed by Congress, has prepared numerous flood damage reduction and environmental restoration reports for areas throughout the San Joaquin River Basin, including a reconnaissance report in 1994. In response to the damages that resulted from the floods of January 1997, the Executive Office of the President directed the Office of Management and Budget (OMB) and the Council on Environmental Quality (CEQ) to designate the Corps as the lead of an

interagency task force charged with developing a flood disaster recovery plan for the Central Valley. To provide a long-term response to flooding and restoration needs, the San Joaquin River and tributaries comprehensive study will ensure a cost-effective approach to flood damage mitigation and floodplain management and the protection of important environmental and natural resource values that are inherent to the floodplain and adjacent lands. Guidance from OMB and CEQ will ensure that all relevant options, including non-structural alternatives, are considered.

g. Monitoring and Data Evaluation: The predictive hydrologic/hydraulic model will enable the evaluation of effects on the system of restoration and flood damage reduction measures throughout the basin. The model will be a valuable tool for documenting the conditions of the existing flood control system, which will constitute the basis for comparison of alternative watershed management plans. A process for monitoring the effects of restoration over time will be developed as an integral element of the plans.

h. Local Support/Coordination with other Programs/Compatibility with CALFED objectives: The need for developing a comprehensive plan for improving and managing the flooding and related environmental resources in the San Joaquin River basin has long been recognized by the Corps, the State of California, and many other Federal and State agencies and organizations. The multi-agency developed Watershed Management Plan for the San Joaquin River proposed several conceptual long-term options that included set-back levees, re-operation of existing reservoirs, enlarging existing reservoirs, identifying additional reservoir needs, new bypasses, and others. The comprehensive plan would be fully coordinated with the Watershed Management Plan. The plan would also be consistent with the CALFED Ecosystem Restoration Program Plan ecological philosophy on ecological functions, processes, habitats, species, and stressors.