# Executive Summary

## Project Title and Applicant Name

Anderson-Cottonwood Irrigation District (ACID) Fish Passage Improvement Project, submitted by the Anderson-Cottonwood Irrigation District

## Project Description and Primary Biological/Ecological Objectives

The ACID Fish Passage Project will result in construction of fish passage facilities to correct fish passage problems and allow for annual management of fish passage at the existing ACID main diversion dam, near Redding, California. The project is located within a critically important reach for spawning chinook salmon, especially federal and state listed endangered winter-run chinook salmon in the upper Sacramento River. The construction of fish ladders will result in direct benefits to all anadromous fish species in the Sacramento River including all runs of chinook salmon, steelhead trout, green sturgeon and white sturgeon. The proposed improvements at the ACID dam will not only correct existing passage deficiencies, but also will provide for the management of fish passage as determined appropriate by the California Department of Fish and Game (CDFG), the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS). The proposed project features are shown on Figures 1a and 1b in the Project Description section of this proposal.

A separate but related proposal, titled "ACID Fish Screen Improvement and Diversion Consolidation Project," has also been submitted. It addresses fish passage problems associated with the ACID diversion dam, and complements the proposed modifications described herein. Both projects can be implemented independently; however, completion of both projects would essentially resolve all current issues related to the operation of the ACID system as it affects Sacramento River anadromous fisheries.

## Approach/Tasks/Schedule

The proposed approach provides for the following tasks: preliminary design, final design, environmental documentation, and permitting in Phase I, and construction, construction management, mitigation, and monitoring under Phase II. The grouping and sequencing of tasks are shown on Figure 2 in the Project Description section of this proposal. This proposal requests funding through Phase I only. As shown, the proposed project will be constructed and operational by the year 2000. The CDFG will provide guidance and review of the fish ladder design.

## Justification for Project and Funding by CALFED

Justification for funding the proposed project by CALFED includes:

- The project directly addresses key stressors identified by CALFED, including mitigation barriers or delays caused by physical structures and inadequate attraction flows. The ACID diversion dam is listed as the first example under the CALFED Stressors and Example Restoration Actions table as a desirable project.
- The portion of the river in which the project is located is valuable habitat for priority species including all runs of chinook salmon as well as steelhead trout.

- The ACID lacks the financial resources to fund the project, and no other funds have yet been made available. CALFED funding will provide justification and incentive for matching funds through other programs, such as CVPIA.

## Budget Costs and Third-Party Impacts

The requested funding for the scope of work identified in this proposal is $575,000. This project will benefit all third parties interested in restoration of anadromous fish species in the Sacramento River/Central Valley and Bay-Delta systems. Impacts to third parties will be limited because the majority of the work will be completed within or immediately adjacent to the Sacramento River. Work associated with the project will be implemented in accordance with all required permits and approvals.

## Applicant Qualifications

ACID, under the management of Dee E. Swearingen, has repaired and replaced inverted siphons in: Hooker Creek, Cottonwood Creek, and the South Fork of Cottonwood Creek. These projects required permitting and approvals from the Corps of Engineers (404), Regional Water Quality Control Board (401), and the CDFG (1603). The District is also familiar with state and federal funding as projects were cost-shared by FEMA, OES and the District. Mr. Swearingen, while manager at Western Canal Water District (WCWD), was also instrumental in fish passage work on Butte Creek. The removal of the Point Four Dam and the Western Canal Water District's Butte Creek siphon project were formulated with Mr. Swearingen's oversight. Other project team members, a list of successful representative projects, and a letter of recommendation for the application team are shown in Figures 3, 4, and 5, respectively, in the Project Description section of this proposal.

## Monitoring and Data Evaluation

A monitoring program will be established in coordination with CDFG, USFWS and NMFS to evaluate the effectiveness of the facilities through the installation of fish counting devices and a ladder performance evaluation program.

## Local Support/Coordination with Other Programs/Compatibility with CALFED Objectives

Problems of fish passage and spawning migration at the ACID main diversion dam have been documented through the years. The problems include impedance of migrating adult fall-, spring-, and winter-run chinook salmon and steelhead, all of which are priority species under the CALFED program, into the uppermost reach of the Sacramento River upstream of the ACID dam. Existing fish ladders at the ACID dam are inadequate and do not allow full fish passage past the ACID dam, and they do not provide the flexibility to control the passage of adult salmonids into the Sacramento River reach upstream of ACID. The resolution of this issue supports programs administered by the CDFG, USFWS, NMFS, U.S. Bureau of Reclamation (USBR) and Natural Resources Conservation Service (NRCS). The project directly addresses a key stressor with regard to migration barriers or delays caused by physical structures, and inadequate attraction flows.