ANDERSON-COTTONWOOD IRRIGATION DISTRICT
2810 Silver Street - Anderson, CA 96007
PHONE: 916-365-7329 FAX: 916-365-7623

F1-191

July 28, 1997

CALFED Bay-Delta Program
1416 Ninth Street Suite 1155
Sacramento, California 95814

Subject: Anderson-Cottonwood Irrigation District Category III Proposal

Ladies and Gentlemen:

We are pleased to submit this proposal for Fish Screen Improvement and Diversion Consolidation Project for CALFED Bay-Delta Program funding consideration. This project directly addresses issues identified as key stressors with regard to all runs of Chinook salmon, as well as steelhead trout. The District plans to use a phased approach and cost sharing by State and Federal agencies to implement this project.

Please give me a call at (916) 365-7329 if you have any questions about the proposed project.

Sincerely,

Dee E. Swearingen

Dee E. Swearingen
General Manager

Enclosures

RDD100163c3.doc

I-004299

Proposal for the
CalFed Bay-Delta Program

Fish Screen Improvement and Diversion Consolidation Project

July 1997

I—004300

I-004300

Executive Summary

Project Title and Applicant Name

Anderson-Cottonwood Irrigation District (ACID) Fish Screen Improvement and Diversion Consolidation Project, submitted by the Anderson-Cottonwood Irrigation District

Project Description and Primary Biological/Ecological Objectives

This project will eliminate a 75 cfs pumped diversion (Bonnyview diversion) on the Sacramento River and correct deficiencies in the existing fish screen at ACID's 450 cfs main diversion on the river. The Bonnyview diversion will be replaced by an inverted siphon or elevated pipeline crossing of the river. Consolidating the District's diversions to a single location, and upgrading and replacing the existing screen at the main diversion to current National Marine Fisheries Service (NMFS) and California Department of Fish and Game (CDFG) screening criteria will provide fisheries benefits consistent with Category III objectives. The proposed project features and location are shown on Figures 1a and 1b in the Project Description section of this proposal.

A separate but related proposal, titled "ACID Fish Passage 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.

This project sites are located within a critically important reach for spawning chinook salmon and steelhead in the upper Sacramento River. All runs of chinook salmon will benefit from the project, including federal and state listed endangered winter-run chinook, in addition to steelhead and resident fish species. The proposed improvements will reduce or eliminate fish entrainment, impingement, and losses associated with screen performance at both diversions.

Approach/Tasks/Schedule

The proposed approach for Phase I includes preliminary design, final design, environmental documentation, and permitting. Construction, construction management, mitigation, monitoring, and salvage of existing equipment would occur 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, construction of the proposed project is expected to be complete by the year 2000. CDFG will provide guidance and review of the fish screen design through an in-kind services agreement.

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 unscreened diversions and diversions not screened to current standards.
- The affected river reach provides habitat for priority species identified by CALFED including all runs of chinook salmon as well as steelhead trout.

- Screen design concepts have been discussed with the regulatory agencies, and the project can be implemented with minimum efforts to gain consensus on design criteria.
- ACID lacks the financial resources to fund the project through other means. CALFED funding will provide justification and incentive for matching funds through other programs, such as the Anadromous Fish Screen Program.

Budget Costs and Third-Party Impacts

The requested funding is $1,640,000 for Phase I. 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 minimal because the majority of the work will be completed within existing ACID right-of-way and/or adjacent to existing facilities. The fish screen improvements and the crossing of the Sacramento River 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 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, 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 Phase II) in coordination with CDFG and NMFS. The effectiveness of the screens will be evaluated through the installation of fish traps and implementation of a screen performance monitoring program.

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

Fish passage and entrainment issues associated with ACID facilities have been documented for all runs of chinook salmon and steelhead identified as priority species by CALFED. The resolution of these issues supports programs administered by CDFG, U.S. Fish Wildlife Service (USFWS), NMFS, U.S. Bureau of Reclamation (USBR), and Natural Resources Conservation Service (NRCS). By removing the Bonnyview diversion, the project directly addresses a key stressor of diversions not screened to current standards. The upgrade of the main diversion screen facility addresses this same stressor, and the unscreened diversions stressor since malfunctions at the main diversion screen can occasionally result in a temporary unscreened condition.

Title Page

Title of Project

Anderson-Cottonwood Irrigation District Fish Screen Improvement and Siphon Project

Name of applicant/principal investigator(s); address; phone/fax/E-mail; organizational, institutional or corporate affiliations of applicant/principal investigator(s)

Anderson-Cottonwood Irrigation District
2810 Silver Street
Anderson, CA 96007
Phone: 916/365-7329, Fax: 916/365-7623
Contact Person: Dee Swearingen, General Manager

Type of Organization and Tax Status

Tax exempt Special District, operating under Division 11 of the California Water Code

Tax Identification Number and/or Contractor License, as applicable

Federal Identification Number: 94-1682332

Technical and Financial Contact Person(s

Same as above

Participants/Collaborators in Implementation

CH2M HILL
P.O. Box 492478
Redding, California 96049-2478
Phone: 916/243-5886; Fax: 916/243-1654
Contact persons: Howard Wilson, P.E., Project Manager, extension 3291, E-mail—hwilson@ch2m.com and Ron Fehringer, P.E., Project Engineer, extension 3382, E-mail—rfehringer@ch2m.com

California Department of Fish and Game
601 Locust Street
Redding, California 96001
Phone: 916/225-2307; Fax: 916/225-2381
Contact person: Phil Warner, Senior Fish Habitat Supervisor, E-mail—107660.1322@compuserve.com

RFP Project Group Types(s) (Construction; Acquisition; Other Services)

Group 1: Public Works/Construction. This proposal requests funding for Phase I, the design and environmental process necessary prior to initiating construction.

Project Description

Project Description and Approach

This project will eliminate a 75 cfs pumped diversion (Bonnyview diversion) on the Sacramento River and correct deficiencies in the existing fish screen at ACID's 450 cfs main diversion on the river. The Bonnyview diversion will be replaced by an inverted siphon or elevated pipeline across the river. Consolidating the District's diversions to a single location and upgrading and replacing the existing screen at the main diversion to current National Marine Fisheries Service (NMFS) and California Department of Fish and Game (CDFG) screening criteria will provide fisheries benefits consistent with Category III objectives.

It is proposed that this project be implemented in two phases. In Phase I, funding secured from CALFED would be used for CH2M HILL, ACID's consultant, to work closely with the affected agencies to establish design criteria, complete preliminary design and final design deliverables, prepare environmental documentation, obtain the required permits, and complete construction bid documents. In Phase II, funding would be secured to construct the facilities, perform environmental mitigation, and establish/conduct the monitoring program. For Phase II, ACID will request matching funds from other sources, such as the federal Anadromous Fish Screen Program. The intent is that the overall split of funding at the conclusion of the project will be approximately 50 percent State and 50 percent Federal.

The design of the main diversion screen will be developed in coordination with CDFG to ensure compliance with current regulatory criteria, and public input will be solicited through the environmental process. The proposed approach will result in the facilities being constructed and fully operational by the year 2000.

Location and/or Geographic Boundaries of Project

The proposed project is located in and adjacent to the Sacramento River in Shasta County and the Sacramento River Watershed Region, as shown on Figures 1a and 1b. The main diversion and screen are located just east of the ACID diversion dam, which is located approximately 3.5 miles south of Keswick Dam (approximately rivermile 299). The Bonnyview pumped diversion, which will be removed, is located approximately 6 miles south of the main diversion near the South Bonnyview Road crossing of the river (approximately rivermile 293).

Expected Benefit(s)

Stressors. Key stressors that will be addressed by the proposed project are unscreened diversion, and diversions not screened to current standards (criteria).

The Bonnyview diversion was retrofitted with a screen in 1992 in response to requirements specified by the NMFS and Corps of Engineers in a Biological Opinion (Opinion) issued in 1992. The screen is not in compliance with current NMFS and CDFG standards. The Opinion states that distribution of winter-run spawning sites in 1991 indicated that 90 percent of the observed spawning sites were located at or above the Bonnyview diversion location.

Accordingly, the diversion is in an area extensively used by winter-run fry that are redistributing in the upper river or migrating downstream during the later part of the irrigation season.

The main diversion screen also is not in compliance with current criteria. The existing system was designed so that the screen panels release from the frame to prevent damage to the screen panels when water pressure becomes excessive. This condition usually results from a buildup of algae and other organic matter on the screens. When such an event occurs, the diversion is partially unscreened, and fish can pass through the unscreened portion of the diversion. These fish are then entrained into the ACID canal system and potentially lost. The potential for panels becoming clogged has increased since the completion of the Shasta Dam temperature control device, because the variability in flows has increased debris flows. The screen would be upgraded to meet current criteria and eliminate the performance problem, and expanded to function under all river and diversion conditions.

Species, Habitats, and Benefits. Actions taken to address the stressors listed above will benefit winter-, spring-, fall- and late-fall-run chinook salmon, as well as steelhead trout. As described above, a large proportion of the habitat typically used by winter-run for spawning and rearing is located between the Bonnyview diversion and the main ACID diversion. This area also is used by the other three chinook runs, steelhead, and other resident species. The removal of the Bonnyview diversion will result in reduced fish entrainment and impingement, and additional undisturbed rearing and/or spawning habitat within the physical influence of the diversion. ACID has discussed the potential to salvage the existing pumps in the Bonnyview diversion and to make them available to CDFG for use on refuge areas, or for a similar beneficial use.

Upgrading the main diversion screen will provide similar benefits, in addition to eliminating the potential for the diversion to be partially unscreened during operation.

Benefits to Third Parties and Other Restoration Programs. The proposed project directly supports other programs such as those being implemented under the Central Valley Project Improvement Act (CVPIA) through the Anadromous Fisheries Restoration Program (AFRP) and the California Salmon, Steelhead Trout and Anadromous Fisheries Program Act of 1988. These actions will benefit all third parties interested in restoration of anadromous fish species in the Sacramento River and Bay-Delta systems. Impacts associated with the pipeline or siphon construction outside the river are anticipated to be minimal since much of the proposed alignment for the crossing of the river is within existing ACID right-of-way.

Background and Biological/Technical Justification

The proposed project represents a substantial net benefit in terms of reduced potential for entrainment and loss of anadromous fish. Spawning surveys have estimated that at least 66 percent of all endangered winter-run chinook spawned between the Sacramento River Bridge at Anderson and the ACID main diversion from 1981-1993 (F. Fisher, CDFG). Most of these fish spawned upstream of the Bonnyview diversion. In addition, spawning surveys have estimated that approximately 75 percent of spring-run chinook salmon that spawned in the river during the years of 1961 and from 1983-1993 (op. cit.) utilized this reach. Fall- and late-fall-run chinook spawning surveys have also identified that approximately 25 percent of fall-run chinook and over 43 percent of late-fall-run chinook salmon spawned in this reach of the river during the years 1967-1990 and 1984-1992, respectively (op. cit.).

The majority of upper Sacramento River chinook salmon spawn upstream of the ACID Bonnyview diversion, and a very large percentage of emergent fry use the river reach between the ACID main diversion and the Bonnyview diversion prior to their emigration from the upper Sacramento River. These newly hatched fry and early stage juvenile chinook salmon are very vulnerable to loss at inadequately screened and unscreened diversions.

Consolidating the ACID diversions into one screened diversion meeting current CDFG and NMFS screening criteria, and at a location upstream of the majority of chinook spawning areas, would greatly reduce the vulnerability of these and other species from entrainment and impingement losses at the existing ACID facilities.

Proposed Scope of Work

Task 1—Contract Management and Administration

Manage project cost and schedule, administer grant moneys, develop work plans, coordinate with other initiatives, coordinate and oversee the activities of the project team, communicate with agency staff, and provide financial reports to CALFED or the CALFED contract administrator. The applicant will prepare monthly reports summarizing degree of completion, activities during the reporting period, costs incurred, and project milestones.

Task 2—Preliminary Design

Develop major project components to lay the groundwork for final decision-making and preparation of final plans and specifications. Activities are expected to include:

- Acquire project photography and mapping
- Conduct geotechnical investigations as required
- Support initial phases of environmental documentation
- Develop initial project delivery recommendations, including apparent best construction methods and schedule
- Develop budget cost estimate for construction

The following tasks are specific to each diversion:

Main Diversion Screen Improvement

- Compare the option of replacing the screen at the main diversion with other alternatives that have been identified, on the basis of engineering feasibility, biological benefits, and cost

Bonnyview Diversion Elimination

- Develop general horizontal and vertical alignments for pipeline/siphon
- Conduct a feasibility-level comparison of options for the type of river crossing
- Finalize diameter of pipeline/siphon
- Preliminary design of river crossing

The deliverable from this task will be a Preliminary Design Report (PDR) summarizing the comparison of options, geotechnical findings, preliminary recommendations for construction methods and schedule, and the budget cost estimate. The PDR will also include preliminary

design drawings. It is anticipated that this task is expected to include three to five meetings with agency personnel to finalize design criteria and project concepts.

Task 3—Final Design

Complete construction plans and specifications for distribution to construction contractors. Prepare documents in one or multiple bid packages or schedules as deemed necessary to attract qualified bidders and match funding cycles. Prepare final engineer's cost estimate to verify funding needs and evaluate construction bids.

Task 4—Environmental Documentation

Prepare and certify joint NEPA/CEQA document that discloses all impacts and benefits associated with the proposed project. Activities are expected to include:

- Public scoping
- Prepare administrative draft document for agency review
- Prepare public draft document
- Respond to public comments/prepare draft document
- Prepare findings/decision documents

It is anticipated that this task is expected to include five to seven meetings including public scoping, hearings, and coordination meetings with agency personnel.

Task 5—Permitting

Prepare applications and coordinate acquisition of all environmental permits required to construct the project. Permits and approvals will be required by the following agencies:

- Corps of Engineers (404/Section 10 Permit)
- CDFG (Streambed Alteration Agreement/CESA compliance)
- NMFS (ESA compliance)
- USFWS (ESA compliance)
- State Lands Commission (Land Use Lease)
- Regional Water Quality Control Board (Waste Discharge Requirements/Stormwater)
- State Reclamation Board (Encroachment Permit)

It is anticipated that this task will include 5 to 10 coordination meetings with agency personnel.

Monitoring and Data Evaluation

A monitoring program will be established in coordination with CDFG and NMFS to evaluate the effectiveness of the screens through the installation of fish traps and implementation of a screen performance monitoring program. Screen performance could be monitored during the initial diversion season by fish trapping, using either a combination of rotary screw traps and/or fyke nets placed at strategic locations upstream and downstream within the Sacramento River and behind the ACID screens. A monitoring program involving direct diver observation and/or video monitoring coupled with releases of tagged juvenile salmonids may be desirable to evaluate and document screen performance following construction. In addition, hydraulic performance in meeting screening criteria will be monitored by systematically monitoring screen approach and

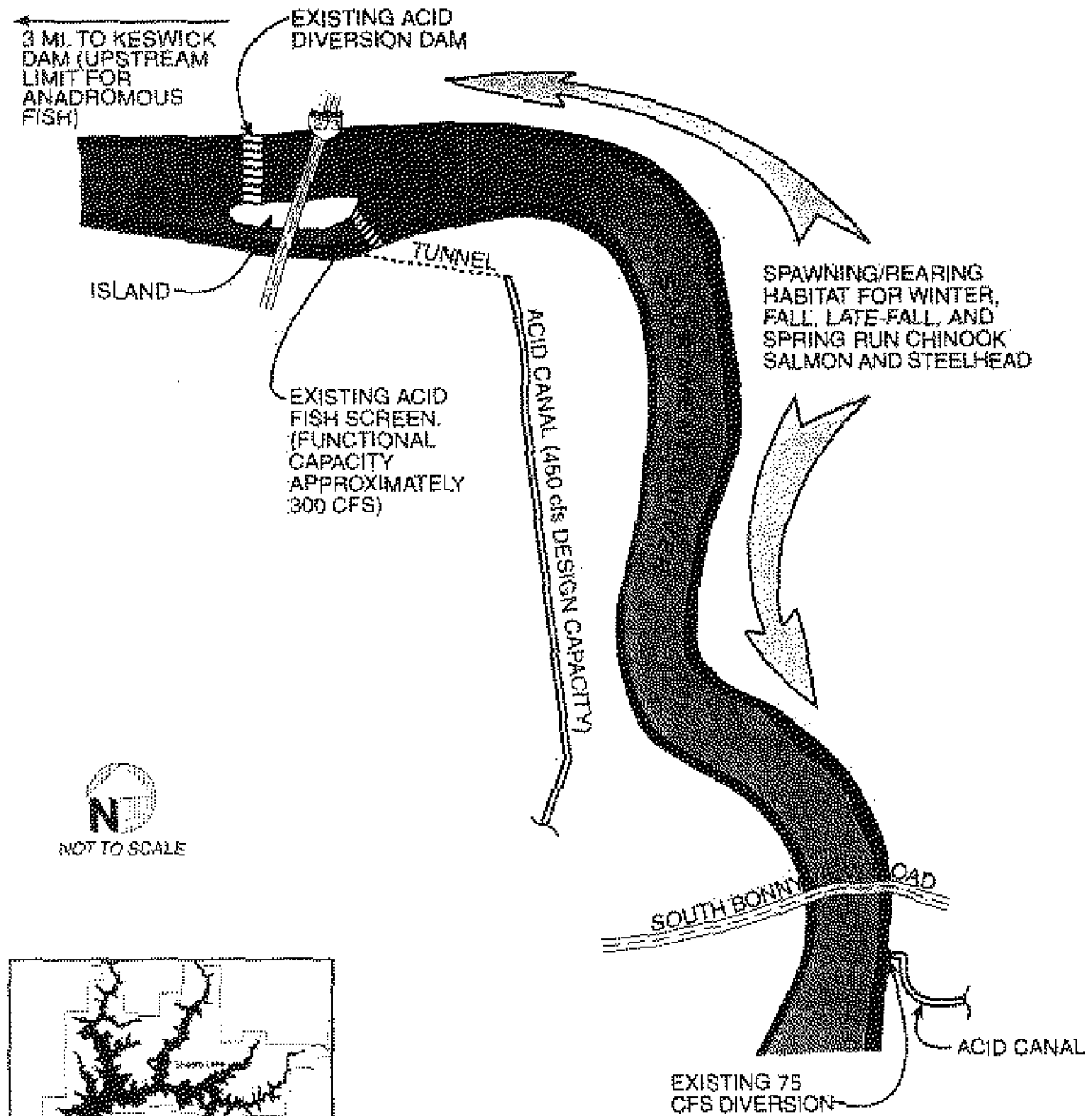
sweeping velocities at a range of diversion flows and Sacramento River discharges. These monitoring activities will be developed, conducted, and reported under the guidance of CDFG, USBR, NMFS , and ACID personnel.

Implementability

The proposed project will reduce impacts to anadromous species which are 1) currently protected by the Endangered Species Act or proposed for listing, and 2) the subject of restoration efforts including the AFRP as required by the CVPIA. The project supports programs administered by a number of agencies including CDFG, USBR, USFWS, NMFS, and the NRCS. Design and construction of the project will require coordination with each of these agencies, including CDFG in the capacity of recommending design criteria for the proposed upgraded screen on the main diversion. Support from these agencies and the general public is anticipated given the overall fishery benefits associated with the project.

In addition to a NEPA/CEQA document and associated public scoping process, permits and approvals will be required as described in the Scope of Work section of this proposal. No issues that would significantly affect or delay the environmental documentation and permitting process are expected.

The project will not result in any significant land use changes, as the facilities would be located primarily within existing ACID right-of-way. The footprint of the existing Bonnyview diversion structure will revert to aquatic and streambank habitat. The project will not be affected by hydrology or climate because the facilities will be designed to withstand anticipated Sacramento River flows and conditions.



KEY FACTS:

- FIRST MAJOR DIVERSION DOWNSTREAM OF KESWICK DAM
- THIRD LARGEST SETTLEMENT CONTRACT DIVERSION
- FOURTH LARGEST DIVERSION IN SACRAMENTO RIVER

FIGURE 1a
PRE-PROJECT FACILITIES AND CONDITIONS

2249_01

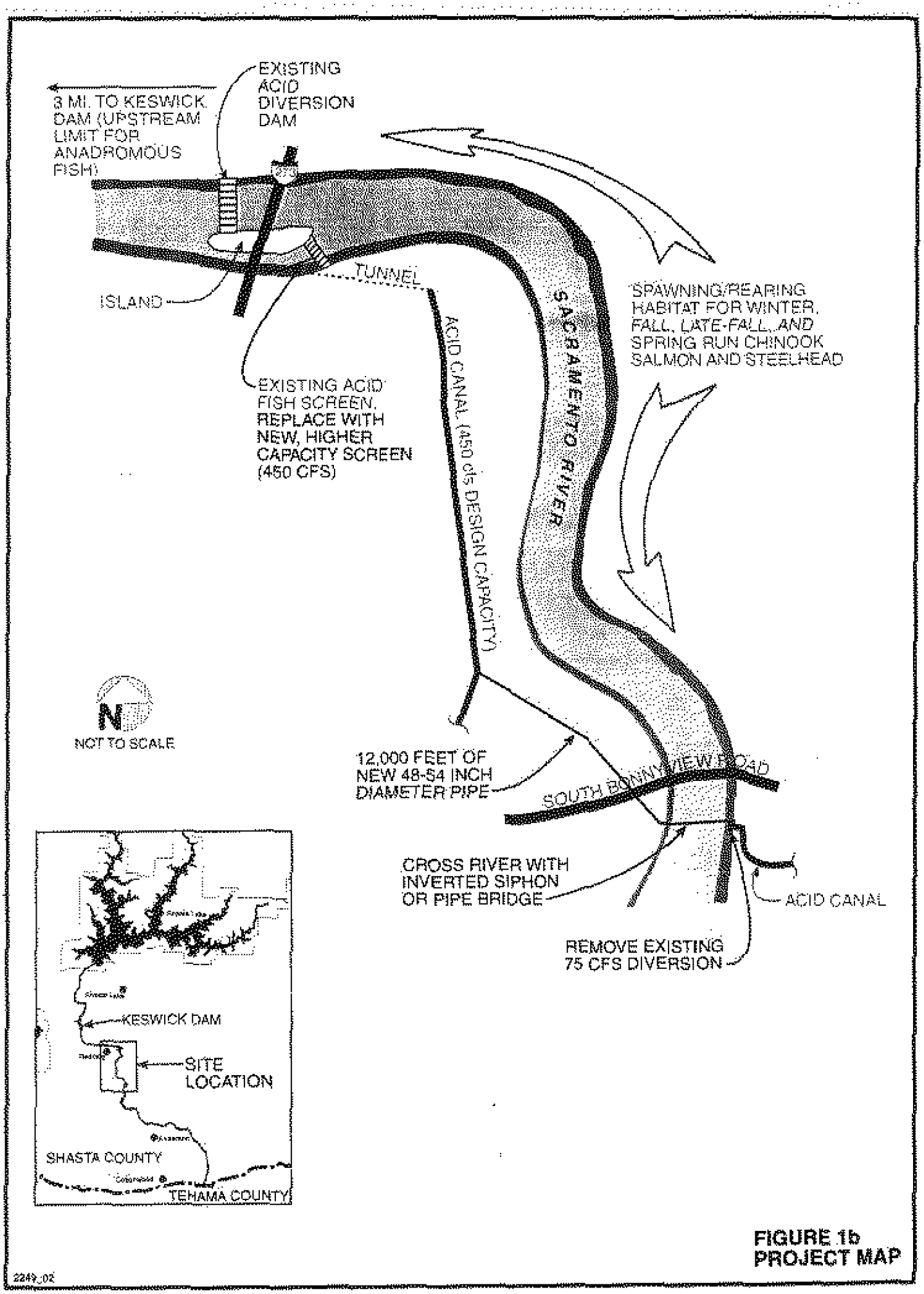


FIGURE 1b
PROJECT MAP

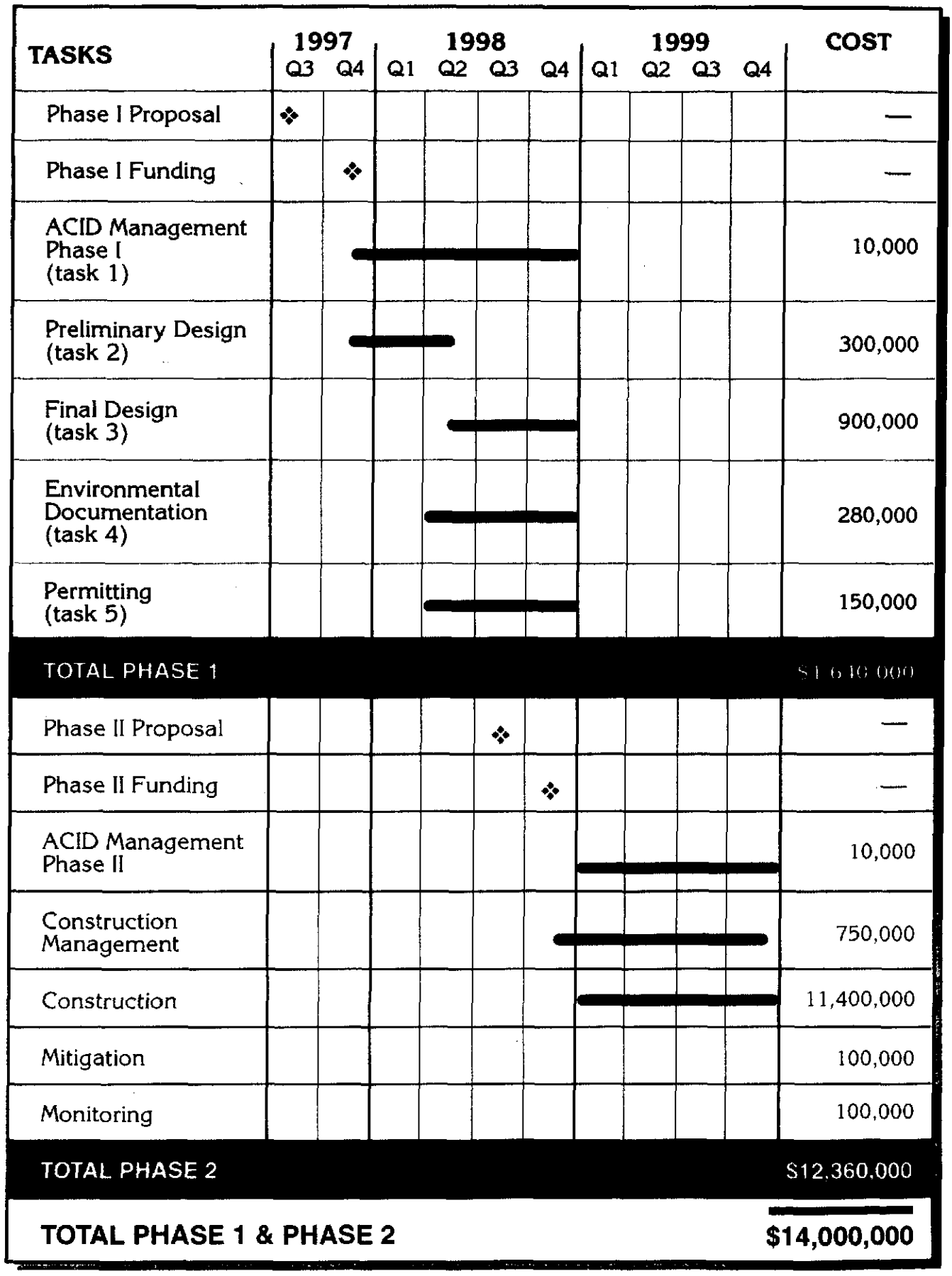


FIGURE 2
PROJECT COST AND TIMELINE

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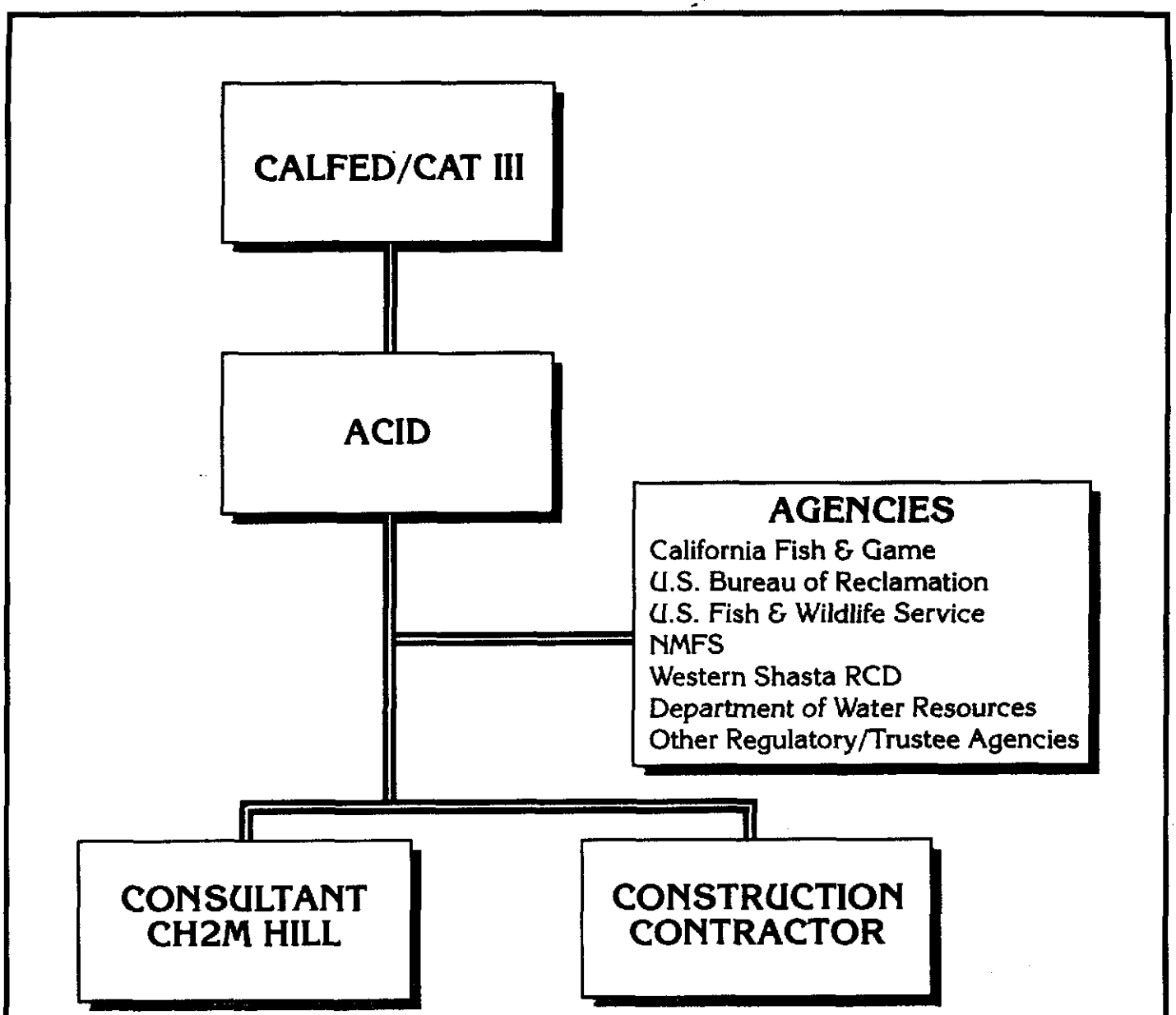

RESPONSIBILITIES/ROLES

ACID	Administration, Owner, Sponsor
AGENCIES	Review, Guidance, Establish Design Criteria
CH2M HILL	Design, Environmental Documentation, Permitting, Construction Services
CONSTRUCTION CONTRACTOR	Build Screen; Build Pipe/Siphon; Remove Diversion

FIGURE 3
PROJECT ORGANIZATION CHART

2249_06

	GCID Diversion, Sacramento River	RD108 Diversion, Sacramento River	WCWD Butte Creek Siphon	Point Four Dam, Butte Creek	ACID Cottonwood Creek, South Fork Cottonwood Creek, and Hooker Creek Siphons
Endangered Species	✔	✔	✔	✔	✔
Instream Construction	✔	✔	✔	✔	✔
Cooperation with Agencies	✔	✔	✔	✔	✔
Grant Funding/ Administration	✔	✔	✔	✔	✔
Project Development	✔		✔	✔	✔
Fish Screen Design	✔	✔			
Pipeline/ Canal Design	✔		✔		✔
Environmental Documentation			✔	✔	✔
Permitting			✔	✔	✔
Construction Management		✔	✔		✔
Sacramento River System	✔	✔	✔	✔	✔

FIGURE 4
PROJECT TEAM EXPERIENCE

2249_04

WESTERN CANAL WATER DISTRICT
P.O. Box 190
RICHVALE, CA 95974

PHONE: (916) 342-5083
FAX: (916) 342-8233

July 18, 1997

To Whom it may concern:

The first manager of Western Canal Water District was Mr. Dee Swearingen. He was hired in 1985 following formation of the District and acquisition of the facilities from the former owner, PG&E. During his tenure as manager, Dee was instrumental in formulating the early engineering studies to improve fish passage in Butte Creek. The District commissioned CH2M HILL Engineers to do the initial feasibility studies.

By the time Mr. Swearingen left the District in 1993, he and the engineers had a project plan for an inverted siphon under Butte Creek, and several associated features to make up for the removal of the District's dams in the creek. The feasibility study put the District in a good position to pursue the project as funding became available. Dee Swearingen is very capable to manage and direct any fish passage improvement project on behalf of his District.

CH2M HILL Engineering in Redding, California, continued on with WCWD to provide preliminary engineering, environmental services, final design, bid assistance, and construction management for the District in construction of the Western Canal Water District Butte Creek Siphon and Dam Removal Project. Their services have been invaluable and professional. I would recommend them for similar work.

The WCWD project is funded in a three way funding partnership of the District, U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, as members of the Department of Interior, and CALFED Category III Restoration Program.

Dee Swearingen, now Manager of Anderson Cottonwood Irrigation District, in collaboration with CH2M HILL Engineering have the knowledge and expertise to direct, manage, design and construct a good project.

Sincerely,

Gary N. Brown
General Manager

FIGURE 5
LETTER OF RECOMMENDATION

2257_08

Costs and Schedule to Implement Proposed Project

Budget Costs

The ACID Fish Screen Improvement and Diversion Consolidation Project will ultimately result in the construction of over $11 million in facilities to improve the fishery. ACID does not currently have the financial resources to implement the project. The Category III/CALFED funding program offers a unique opportunity to implement this important project, and allow shared funding to be secured.

This proposal addresses Phase I of the overall project. Phase I consists of planning, design, management, environmental documentation, and permitting. The majority of the cost associated with this work will be incurred through a subcontract to ACID's consulting engineer, CH2M HILL, in preparing engineering plans and specifications, environmental documents, and permits. This proposal identifies CH2M HILL as the sole-source contractor due to the firm's intimate knowledge of the project area with regard to engineering, fisheries, and environmental issues, and proven experience on fish screen and water conveyance projects (see Applicant Qualifications). The applicant (ACID) will also incur management and administration costs outside normal operations. No materials or acquisition contract costs, or operation and maintenance costs, are expected to be associated with Phase I. O&M costs for this project, once complete, would be funded through normal ACID budgets, and would not require funding assistance. A breakdown of Phase I project costs by task is provided in Table 1. In addition, Figure 2 (shown previously) provides a project timeline that includes funding needs by phase and task.

TABLE 1
Cost Breakdown

Project Phase/ Task	Direct Labor Hours	Direct Salary/ Benefits	Overhead Labor	Service Contracts	Material/ Acquisition Contracts	Misc./Direct Costs	Total
Task 1	392	$8,819	$882	0	0	$300	$10,000
Task 2	96	$2,715	$272	$290,000	0	$1,000	$300,000
Task 3	96	$2,715	$272	$892,000	0	$5,000	$900,000
Task 4	72	$2,036	$204	$277,000	0	$1,000	$280,000
Task 5	72	$2,036	$204	$147,000	0	$1,000	$150,000
						Total	**$1,640,000**

A request will be made to fund 50 percent of the total project costs from Federal funds under the Anadromous Fish Screen Program. This Phase I request for Category III funds represents

approximately 25 percent of CALFED's ultimate 50 percent cost share, assuming an approximately even State/Federal funding split.

The CDFG has $50,000 of Proposition 70 funds to support design and engineering for improvement of fish passage at the main ACID dam and diversion. The focus of this funding is for a new screen and fish ladders. If either or both of the ACID fish screen and fish passage proposals are funded under Category III, the Proposition 70 funds would be contributed as a cost share for CDFG approved design and engineering work.

Schedule Milestones

The proposed schedule is shown on Figure 2 (shown previously).

Third-Party Impacts

As described above, no significant adverse third-party impacts are anticipated. Those parties which support restoration of anadromous species which would benefit from the proposed project would also benefit.

Applicant Qualifications

The project team and participating agencies were shown previously on Figure 3. ACID staff will manage the project and administer the overall budget. The CDFG will provide in-kind design criteria and guidance assistance with respect to the main diversion fish screen. CH2M HILL will support the District by preparing engineering plans and specifications in coordination with CDFG and NMFS, preparing the environmental document, and assisting in permit acquisition. ACID and CH2M HILL will coordinate with each of agencies listed on Figure 3 to obtain guidance through the permit approval and acquisition process.

ACID was formed in July 1914 under Division 11 of the State Water Code and is the oldest such District in the Sacramento Valley. In 1967, ACID entered into a settlement contract with the USBR which established the District's natural flow rights at 165,000 acre-feet per year, plus 10,000 acre-feet of "project water."

CH2M HILL is one of the nation's largest consulting environmental engineering firms, with more than 50 years of experience in water resources engineering, biological sciences, and environmental planning. Nearly 70 percent of the firm's revenues derive from consulting in water resources management. ACID has selected CH2M HILL for providing sole-source consulting services because of the firm's unsurpassed experience with similar projects. The firm has extensive experience in habitat restoration and related projects affecting the Sacramento River watershed and tributary watersheds. Among recent projects are the design of fish screens for Glenn-Colusa Irrigation District and Reclamation District 108 diversions on the Sacramento River, and design of a siphon and associated facilities, as well as environmental documentation and permitting for the Butte Creek Siphon Project. These projects were undertaken in cooperation with the U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, U.S. Army Corps of Engineers, California Department of Fish and Game, California Department of Water Resources, State Reclamation Board, Regional Water Quality Control Board, and National Marine Fisheries Service. Figure 4 (shown previously) summarizes applicable projects successfully completed by he applicant's project team.

The following provides brief biosketches for the key members of the project team:

Dee Swearingen, Project Manager
ACID General Manager

Dee Swearingen has been General Manager of ACID since 1995. He has more than 28 years of experience in water resources management, water agency administration, and water resources consulting. Mr. Swearingen has served as general manager, secretary, and treasurer for water districts in California and Oregon. He has negotiated water contracts with the DWR and the USBR. Mr. Swearingen's expertise in water resources management encompasses district management, budget development, cost analysis, investments, structural design and implementation, water distribution system operation, dam operation and maintenance, liaison, personnel supervision, and public relations. He has been a board member of the Association of California Water Agencies board member, Executive Committee member, Vision 2000 Committee member, and Vice Chairman of the California Water Districts Section. He also has

served on several other water resources boards and committees, including chairing the Northern California Water Association Managers' Committee. Mr. Swearingen has also administered and implemented numerous engineering projects for district facilities, including fish screening and passage structures.

Howard Wilson, P.E., CH2M HILL Project Manager
B.S., Civil Engineering; Registered Professional Engineer in California, Nevada, and Washington

Howard Wilson possesses more than 30 years of engineering experience, including project management and lead design experience on large, riparian water diversions and associated fish screens. He managed the evaluation of options for improving an existing rotary drum fish screen for GCID and led the design team for the successful GCID interim screen. Lower Sacramento River water levels and revised fish screening criteria dictated the need for a new fish screen or modifications to the existing facilities. The construction of the interim screen was completed within the preliminary design estimate, and Mr. Wilson is now managing design of the permanent fish screen for the GCID 3,000 cfs main intake and pump station. Mr. Wilson managed preliminary design of the M&T Ranch pump station relocation and fish screens. Other diversion intake, pump station, and fish screen designs he has managed include the Westpac Utilities Orr Ditch diversion on the Truckee River, Nevada; the Clear Lake intake for the Geysers Water Supply Project, Lake County, California; and the Yakima-Tieton Irrigation District intake screens, Yakima, Washington.

Mark Oliver, Lead Planner
B.S., Environmental Policy Analysis and Planning

Mark Oliver is a senior environmental planner with experience in environmental impact analysis, documentation, and permitting of water resources projects throughout Northern California. He has managed environmental studies and acquired permits on behalf of federal, state, local, and private clients. He managed a joint NEPA/CEQA document for the proposed construction of a siphon and associated water conveyance facilities on Butte Creek for the WCWD and the USFWS. The project is currently under construction and will remove four existing dams to improve chinook salmon fish passage. The project includes a large-scale siphon, as well as irrigation canals, check structures, and pipelines. He also directed the NEPA and CEQA documentation and compliance efforts to install additional water conveyance facilities to seven wildlife refuges and management areas in the Sacramento and San Joaquin Valleys for the USBR and USFWS. Mr. Oliver is also managing a joint EIS/EIR for the proposed restoration of the Trinity River fishery.

Ronald Fehringer, P.E., Lead Engineer
M.S., Agricultural Engineering; B.S., Agricultural Engineering; Registered Professional Engineer in California

Ron Fehringer has managed or served as task manager for a variety of conveyance system design projects. For the Butte Creek Water Supply and Fish Passage Plan, he characterized the water rights associated with Butte Creek and met with water users to assess their existing diversions and future water needs. He developed a conceptual design for alternate means of water delivery to water users as part of a comparison of water supply and fish passage alternatives for

the USBR. Mr. Fehringer served as project manager and lead project engineer for the preliminary design, final design, and construction management inspection for the WCWD's Butte Creek Siphon and Dam Removal project. The dual objectives of this project were to improve fish passage in Butte Creek, while simultaneously improving the reliability of water deliveries to District customers.

Bob Gatton, P.E., Fish Screen Design Manager
M.S., Civil Engineering; M.S., Systems Management; B.S., Civil Engineering; Professional Engineer in Washington

Bob Gatton specializes in designing fish screening, passage, and hatchery facilities. He is a design consultant for the GCID and RD108 fish screening facilities on the districts' Sacramento River diversions. For the Rocky Reach Dam and Hydroelectric Facility on the Columbia River, he managed conceptual design, layout, equipment selection, and agency coordination for the construction 2,000 cfs and 5,000 cfs ganged screens and other fish protection facilities to pass more than 1 million fish around the dam. The project had to be completed in a 10-week period to meet the fish outmigration schedule, while avoiding disruption of power service. Mr. Gatton provided similar services for Yelm Hydropower, North Shore Dalles Hydro, and Dryden Canal, which were all large, flat plat profile wire screens oriented diagonally across the flow. Location, orientation, screen cleaning, and juvenile bypass systems were all design challenges for these projects.

Alice Low, Fishery Biologist
M.S., Ecology; B.S. Biology

Alice Low specializes in fisheries research, management, and impact assessment. She has developed and managed numerous projects involving fishery resources in California. Her experience includes designing research and impact assessment studies, preparing scientific reports, managing field and laboratory staff, and conducting environmental reviews of CEQA and NEPA documents.

Ms. Low is currently working with the NMFS to develop fish screen performance criteria for the Comprehensive Assessment and Monitoring Program under CVPIA. During 11 years as a fishery biologist with CDFG, Ms. Low participated in a research project on young-of-the-year striped bass in the Sacramento-San Joaquin estuary, served as environmental services fishery biologist for the San Joaquin Valley and the Central Sierra Nevada region of California, and coordinated a habitat improvement program and an overall restoration program for fall-run chinook salmon in the San Joaquin River basin.

Compliance with Standard Terms and Conditions

The terms and conditions discussed in Section O of the Request for Proposals are acceptable to the applicant. Forms 8 and 11 are attached.

Item 8

NONDISCRIMINATION COMPLIANCE STATEMENT

COMPANY NAME
ANDERSON-COTTONWOOD IRRIGATION DISTRICT

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME
DEE E. SWEARINGEN

DATE EXECUTED	EXECUTED IN THE COUNTY OF
JULY 23, 1997	SHASTA

PROSPECTIVE CONTRACTOR'S SIGNATURE
Dee E Swearingen

PROSPECTIVE CONTRACTOR'S TITLE
GENERAL MANAGER

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME
ANDERSON - COTTONWOOD IRRIGATION DISTRICT

Item 11

Agreement No. _____

Exhibit _____

NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID FOR PUBLIC WORKS

STATE OF CALIFORNIA)ss

COUNTY OF SHASTA)

DEE E. SWEARINGEN (name), being first duly sworn, deposes and says that he or she is GENERAL MANAGER (position title) of ANDERSON-COTTONWOOD IRRIGATION DISTRICT (the bidder)

the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

DATED: JULY 23, 1997 By Dee E Swearingen
(person signing for bidder)

MARSHA E. KELLEY
Comm. No. 1016964
NOTARY PUBLIC-CALIFORNIA
SHASTA COUNTY
MY COMMISSION EXPIRES
MARCH 11, 1998

(Notarial Seal)

Subscribed and sworn to before me on

JULY 23, 1997

Marsha E Kelley
(Notary Public)