

I. EXECUTIVE SUMMARY

DWR WAREHOUSE

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a. Project Title

Tehama-Colusa Canal Storage Feasibility Study

b. Applicant Name

Tehama-Colusa Canal Authority

c. Approach/Tasks/Schedule

The Tehama-Colusa Canal Authority would act as Project manager with the actual study and report preparation being conducted by a recognized Consulting Engineering Firm.

The Project would be composed of an engineering review to develop potential reservoir sites and an economic feasibility analysis to develop costs associated with the alternate sites.

The Study would be initiated upon execution of a funding agreement with CALFED and would be completed within 12 months.

d. Justification for Project and Funding by CALFED

Water to satisfy the Spring agricultural water demands of the 18 districts currently be served by the Tehama-Colusa and the Corning Canals is currently being pumped from the Sacramento River at the Red Bluff Diversion Dam (RBDD). Additional water to augment the limited pumping capacity is supplied, when available, out of Black Butte Reservoir via a redirection in Stony Creek. The Study will determine the feasibility of constructing up to 50,000 acre feet of seasonal water storage along the Tehama-Colusa Canal to minimize the amount of water pumped from the Sacramento River and eliminate the need to redirect water from Stony Creek.

Water from this new storage would provide the following ecological benefits:

- Reduce, if not eliminate, the need for interim lowerings of the gates at the RBDD and that action's attendant impact on the Spring migrating patterns of salmon and other fish in the Sacramento River.
- Increase the amount of water available in the Sacramento River for other uses during the Spring months.
- Eliminate construction of the Spring dam across Stony Creek allowing an unobstructed water path from Black Butte Reservoir to the Sacramento River.
- Make CVP water stored in Black Butte Reservoir available for other uses including environmental releases.

e. Budget Costs and Third Party Impacts

The Project is estimated to cost \$350,000.

The project provides an opportunity to reduce the future frequency of interim gate closures at RBDD which will reduce the barriers to upstream and downstream migrating salmon, with specific benefit to winter-run chinook salmon. The project will also remove barriers to upstream and downstream migrating fish in Stony Creek.

f. Applicant Qualifications

TCCA is under a long-term contract with USBR to operate and maintain the Tehama-Colusa and Corning Canals of the CVP and works in partnership with USBR to operate and maintain facilities the RBDD. The TCCA has played a proactive role in addressing fisheries problems throughout its service area. This partnership has developed and implemented numerous "adaptive management" techniques, which has had benefit to recovery of winter-run chinook salmon and other anadromous fish species. The TCCA maintains liaison and is a participant in public forums and technical work groups associated with fisheries research and has made significant financial and technical contributions to resolution of fisheries concerns, especially at the RBDD. TCCA has considerable experience at the programmatic level to administer the engineering contract required of this project. This project is intended to augment current efforts initiated by state and federal resource agencies and to continue to develop trust and partnership with these entities. TCCA will employ a consultant familiar with area water supply and ecological issues and will utilize in-house expertise to coordinate project administration, implementation, and completion.

g. Monitoring and Data Evaluation

This project will review historic water demands and evaluate existing water demands and water sources as part of the feasibility analysis for siting a new reservoir.

h. Local Support/Coordination With Other Programs/Compatibility with CALFED Objectives

This project is synergistic with the overall objects of CALFED, CVPIA, Biological Opinion for Operation of RBDD, RBDD Research Pumping Plant, RBDD Long Term Fish Passage Program, and Draft Winter-run Salmon Recovery Plan.

II. TITLE PAGE

a. Title of Project

Tehama-Colusa Canal Storage Feasibility Study

b. Name of Applicant/Principal Investigator(s); phone /fax/E-mail; Organizational, Institutional or Corporate Affiliations of Applicant/Principal Investigators(s)

Tehama-Colusa Canal Authority
Mr. Arthur R. Bullock, General Manager
P.O. Box 1025
Willows, CA 95988

Voice: 916-934-2125
Fax: 916-934-2355
E-mail: tcwaterman@aol.com

c. Type of Organization and Tax Status

Public Agency-Non Profit

d. Tax identification Number and or Contractor license, as applicable

68-0139216

e. Technical and Financial Contact person (s), address, phone /fax/E-mail (if different than above) Participants/Collaborators in Implementation

Technical Contact

Mr. Serge Birk, Fisheries Biologist
Central Valley Project Water Association
18750 Drake Road
Red Bluff, CA 96080
Voice: 916-529-4334
Fax: 916-529-5758
E-mail: sergebirk@msn.com

Financial Contact

Ms. Jan Jennings
Tehama-Colusa Canal Authority
P.O. Box 1025
Willows, CA 95988
Voice: 916-934-2125
Fax: 916-934-2355
E-mail: tcwaterman@aol.com

Engineering Consultant – (To be determined)

f. Participants/Collaborators in Implementation

USBR, USFWS, NMFS, CDFG, USFS, USCOE

g. RFP Project Group Type(s) (Construction; Acquisition; Other Services)

“Other Services” (Study to determine feasibility of offsetting current Spring water demands on Sacramento River and Stony Creek with stored water from a new reservoir)

III. PROJECT DESCRIPTION AND APPROACH

a. Project Description and Approach

Water is supplied into the Tehama-Colusa Canal from the Red Bluff Diversion Dam (RBDD) via Lake Red Bluff, which is created when the gates at the RBDD are lowered into the Sacramento River between May 16 and September 15 of each year. RBDD is operated so that gates are out for eight months from September 15th until May 15th annually for protection of migrating winter-run chinook salmon and other species. During the Spring and Fall irrigation periods while the gates are held out of the River, water is pumped into the Canal by two separate, temporary pumping systems. Additional water to meet peak irrigation demands during these "gates up" periods is obtained by diverting releases of CVP water stored in Black Butte Reservoir, when available, into the Canal from Stony Creek. Availability of water in Black Butte Reservoir is a function of seasonal rainfall and runoff and flood control operations of the reservoir and it is easy for little or no water to be available in the year it is most needed. The last recourse for additional water during the "gates up" period is to request an emergency lowering of the Dam gates for up to a 10-day period to refill the Canal.

The Project is a study and feasibility analysis to determine if a storage reservoir with a capacity of up to 50,000 acre feet of water can be constructed along the Tehama-Colusa Canal. The Study would review all potential reservoir sites along the Canal and would develop initial feasibility analyses and construction cost estimates on the more favorable sites. A final Report would be prepared which would be used as a guide for future water supply decisions and would advance CALFED planning and implementation.

The Tehama-Colusa Canal Authority would act as Project Manager and would coordinate and administer all aspects of the Study and Report preparation. A recognized Consulting Engineering Firm with demonstrated expertise in this type of endeavor would conduct the actual investigations and engineering and economic work.

b. Location and Geographic Boundaries of the Project

The Tehama-Colusa and Corning Canal systems currently supply in excess of 250,000 acre feet per year of irrigation water to 18 water districts serving over 140,000 acres of farmland in the western Sacramento Valley. The Canals service area stretches from the City of Red Bluff (Tehama County) in the north in a southerly direction along the I-5 corridor across Glenn and Colusa Counties into Yolo County, ending just north of the City of Woodland. The Study would confine itself generally to this service area and the foothill areas along the westerly side of the Sacramento Valley. The Tehama-Colusa and Corning Canals, Districts served, and surrounding area is shown on the attached map.

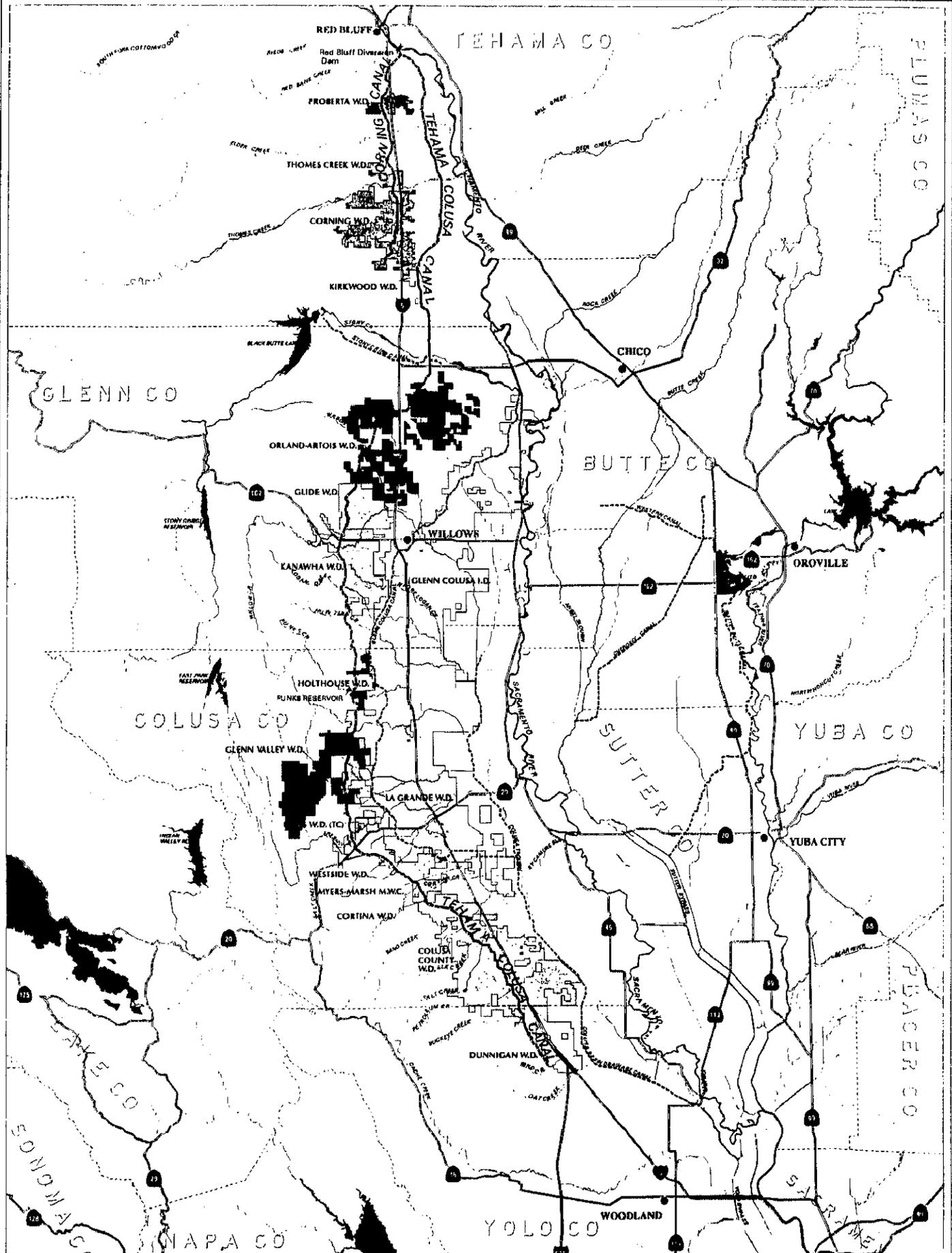
TEHAMA-COLUSA CANAL AUTHORITY and DISTRICTS SERVED



7/96



LOCATION MAP



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I-000987

c. Expected Benefits

This study shall identify operational alternatives at the RBDD that will benefit migrating anadromous salmon, specifically the winter-run salmon. Additional storage capability from winter runoff will reduce seasonal reliance on water supplies from Black Butte Reservoir and Stony Creek and reduce migration barriers at RBDD. This will also allow for fish and wildlife restoration of Stony Creek, which is currently constrained by the Tehama-Colusa Canal service area agricultural water needs in the Spring. If winter water can be stored in a new 50,000 acre foot reservoir, the "gates in" period at RBDD could be reduced. As a result, this project addresses identified CALFED stressors as diversions and would benefit migrating fish.

d. Background and Biological/Technical Justification

RBDD has been identified as a stressor to anadromous migrating salmonids. Time of diversion and predation on salmon smolts has been identified as major stressors at RBDD. This study will identify alternatives that will reduce predation on winter-run salmon. This study will also augment current CVPIA and CALFED efforts at RBDD dealing with long term solutions for fish passage concerns at RBDD.

e. Proposed Scope of Work

The engineering consultant will prepare a report that:

- Identifies water supplies needed for TCCA
- Identifies reservoir alternatives
- Evaluates environmental impacts of proposed alternatives
- Recommends preferred alternative
- Provides a cost analysis for alternative
- Identifies benefits to RBDD and Stony Creek fish and wildlife restoration efforts

f. Monitoring and Data Evaluation

This project will not require monitoring, however, review and evaluation of past studies will be required. The TCCA will work cooperatively with CALFED, USBR, USFWS, USFS, USCOE, CVPIA, and CDFG.

g. Implementability

This project is a feasibility investigation. The engineering consultant and TCCA will identify the appropriate environmental documentation required to implement the preferred alternative selected.

IV. COST AND SCHEDULE TO IMPLEMENT PROPOSED PROJECT.

a. Budget Costs

Costs of the Study Project are as follows:

Engineering Consultant contract to prepare Feasibility Report and Environmental Documents	\$300,000
Administrative services, Study participation, Other agencies participation	<u>50,000</u>
Total Project Cost	\$350,000

The Project envisions Category III funding in the amount of \$300,000 with the remaining funds and effort provided by the TCCA.

b. Schedule Milestones

Project Start: January, 1998 (or earlier depending on availability of Category III funds)
Project Completion: December, 1998 (or earlier as negotiated)

c. Third Party Impacts

This project has major impacts on restoration of Stony Creek and may result in limiting constraints currently associated with the Creek. If TCCA did not have to rely on Stony Creek for Spring water supply, emergency water diversions from Stony Creek would not be required and barriers for diversion in Stony Creek would be eliminated subsequently reducing this stressor on salmonids.

V. APPLICANT QUALIFICATIONS

TCCA currently operates and maintains the Tehama-Colusa and Corning Canals of the Central Valley Project under a long-term contract with the USBR. It also works in partnership with USBR in the operation of facilities of the RBDD and has played a proactive role in addressing fisheries problems associated with RBDD. This partnership has developed and implemented numerous "adaptive management" techniques that have benefited the recovery of winter-run chinook salmon. The TCCA serves as a liaison and is a participant in all public forums and technical work groups associated with RBDD fisheries research. TCCA has made significant financial and technical contributions to resolution of RBDD fisheries concerns. TCCA has considerable experience at the programmatic level to administer the engineering and biological research required by this project. This project is intended to augment current efforts initiated by state and federal resource agencies and to continue to develop trust and partnership with these entities. TCCA will employ consultants familiar with RBDD and area fisheries and with wildlife, engineering, and hydrological issues associated with project implementation. TCCA will utilize in-house expertise available to coordinate project implementation and the activities of the Consulting Engineering Firm and will also consult with Mr. Serge Birk on this project.

Mr. Birk has served as program manager of numerous CVPIA initiatives: Keswick Fish Trench, Clear Creek Restoration, Coleman National Fish Hatchery Rehabilitation, Butte Creek Restoration (Western Canal Siphon Project), Unscreened Diversion Program as well as preparing environmental documentation for operation of the Klamath Project and construction of the Red Bluff Research Pumping Plant. Mr. Birk administered USBR Spring Run, Coho Salmon and Salmon Stamp Programs and was involved with the implementation Trinity River Fish and Wildlife Restoration Program. He was instrumental in developing partnerships with the fishing industry, agriculture, environmental groups, academia, resource agencies and Indian Tribes.

VI. COMPLIANCE WITH STANDARD TERMS AND CONDITIONS

In accordance with Table D-1 of the Request For Proposals, 1997 Category III, an executed Form Item 8, Non Discrimination Compliance Statement, is attached.

Also in accordance with Table D-1, the other required form, Standard Clauses – Service & Consultant Service Contracts for \$5,000 & Over with NonPublic Entities, will be submitted before or at the signing of the Final Contract.

NONDISCRIMINATION COMPLIANCE STATEMENT

COMPANY NAME

TEHAMA-COLUSA CANAL AUTHORITY

The company named above (hereafter 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.

OFFICIALS NAME

Arthur R. Bullock

DATE EXECUTED

July 23, 1997

EXECUTED IN THE COUNTY OF

Glenn

PROSPECTIVE CONTRACTOR'S SIGNATURE


PROSPECTIVE CONTRACTOR'S TITLE

General Manager

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

Tehama-Colusa Canal Authority