

TRI-DAM PROJECT

Of the South San Joaquin & Oakdale Irrigation Districts

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May 6, 2002

Mr. Dan Ray
The CALFED Bay Delta Program
1416 Ninth St
Suite 630
Sacramento, CA 95814

**Re: Comments of the Applicant to CALFED Proposal Reviews
#175: Stanislaus - Lower San Joaquin River Water Temperature Modeling and Analysis**

Dear Mr. Ray:

Thank you for considering our proposal for Stanislaus - Lower San Joaquin River Water Temperature Modeling and Analysis. We also appreciate the opportunity to submit herein our comments to the Technical Panel's review of our proposal and its recommendation that our proposal be revised and resubmitted as a Directed Action in Annual Workplan.

As described in our proposal¹, our proposal is to secure funding for a second phase of an on-going project that was initiated back in December 1998 by a group of stakeholders (cost-sharing partners) on the Stanislaus River who decided to develop a water temperature model for the Stanislaus River. Members of the group include the U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, California Department of Fish and Game, Oakdale Irrigation District, South San Joaquin Irrigation District and Stockton East Water District.

Collectively, the cost-sharing partners have spent over \$300,000 thus far for model development, preliminary operations studies, water temperature and weather data gathering, and database management². In addition, the cost-sharing partners committed over \$160,000 for the next three years for data acquisition and maintenance³.

¹ See A. Project Description: Project Goals and Scope of Work, 1. Problem, paragraph 2

² See D. Cost, 2. Cost-Sharing, paragraph 2

³ Provided on the web form 1. Project Information - Item 17b

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As stated in our proposal, the primary objective of our proposal is to refine the results of the first phase of the study and to develop effective solutions for water temperature improvement on the Stanislaus River⁴.

Therefore, we would like to submit our comments on the Technical Panel's recommendation within the context of the overall project objective, that being, to make demonstrable change in the water temperature regime of the Lower Stanislaus River by evaluating several alternatives using a refined water temperature model for purposes of selecting a preferred alternative in which to initiate a feasibility analysis.

The comments presented herein do not provide any new information but rather provide clarification to information that is either already presented in our proposal or referred to in section G. Literature Cited.

CALFED Recommendation (1):

“ better development of background and review of water temperature literature and expansion of our knowledge of existing models and their efficacy”

Applicant Comment (1):

One of the primary aspects of phase 1 of the project was the selection of the modeling tool for water temperature analysis in the New Melones, Tulloch, Goodwin, and Stanislaus River system.

Early in the project, the cost-sharing partners were presented with several options of modeling tools for this task, among them the two-dimensional CE-QUAL-W2 currently being used on the Kings River, California.

The cost-sharing partners decided to select the HEC-5Q model after reviewing the model application on other river system such as the Russian River, CA; ACT and ACF River Systems, AL, GA, FL; Osage River system, MO; Red River of the North, ND, MN; Lower Russian River, CA; Columbia / Snake River system, OR, WA, ID; Sacramento River system, CA; Alleghney River system, PA⁵

However, the cost-sharing partners made the selection of the model contingent upon the results of model calibration and model appraisal by the independent reviewer, Dr. Michael Deas of Watercourse Engineering Inc. Dr. Deas was selected unanimously by the cost-sharing partners for peer review because of his extensive experience in water temperature and water quality modeling for several reservoirs and rivers in California, including: Shasta Reservoir, Trinity Reservoir, Iron Gate Reservoir, Keswick Reservoir, Sacramento River, Klamath River, and Shasta River. Dr. Deas has also served in the past in the capacity of temperature model reviewer for the Central Valley, CA⁶.

⁴ See A. Project Description, Project Goals and Scope of Work, 1. Problem, paragraph 9

⁵ See C. Qualifications, Mr. Donald Smith – Principal Modeler

⁶ See C. Qualifications, Dr. Michael Deas – Advisor

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In July 2001 Dr. Deas submitted an elaborate 18-page appraisal report of the model to the cost-sharing partners⁷. Dr. Deas examined the system characterization in the model (including special coding for representation of the submerged old Melones Dam inside New Melones Reservoir⁸), model implementation, and model application to the individual reservoirs, Stanislaus River, and the system as a whole.

Dr. Deas concluded that the HEC-5Q, as implemented for this project, is a valid tool for analyzing operational alternatives as they are related to meeting water temperature objectives for Chinook salmon and Steelhead trout in the Stanislaus River.

In August 2001 the cost-sharing partners decided to accept the model for this project after a thorough review of model calibration results and considering Dr. Deas's appraisal report⁹.

It is therefore our belief that the cost-sharing partners have addressed CALFED concerns about model applicability for this project in a diligent manner. Furthermore, we believe that re-initiating the process for model selection and evaluation is unnecessary and would therefore be counterproductive at this stage for the project and would thereby hinder the overall process and timetable for developing effective solutions for water temperature improvement on the Stanislaus and Lower San Joaquin rivers.

Given the above-mentioned reasons, we are cordially requesting that CALFED reconsider its recommendation (1) as a pre-requisite condition for project funding.

CALFED Recommendation (2):

“use, early in the project (not Task 7), of a taskforce of experts to evaluate and develop guidance on importance of temperature regimes and temperature models to fish and fish management and their application”

Applicant Comment (2):

As mentioned in our proposal, evaluation of model results is driven by water temperature objectives, which have been developed at critical points in the river system. The biological rationale for these water temperature objectives is to enhance habitat conditions for fall-run Chinook salmon and Steelhead rainbow trout¹⁰.

The temperature objectives were developed by the California Department of Fish and Game using known temperature and physiological response relationships as presented in the literature at the time of water temperature criteria development (i.e., 2000).

⁷ See footnote in 5. Performance Measures, and G. Literature Cited: Appraisal of the Application of HEC-5Q for Temperature Simulation of the Stanislaus River. Watercourse Engineering, Inc. July 20, 2001

⁸ See H. Attachments, A. Stanislaus River Water Temperature Model. Model Representation – New Melones

⁹ See A. Project Description. Project Goals and Scope of Work, 1. Problem, paragraph 5

¹⁰ See A. Project Description. Project Goals and Scope of Work, 1. Problem, paragraph 3

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The CDFG objectives consider the life history of the Chinook salmon and Steelhead trout and the corresponding optimal thermal ranges for immigration/ egg maturation, spawning, egg/ alevin incubation, fry rearing, juvenile rearing, and smoltification/ emigration. The results of the CDFG research were presented to, and accepted by, the cost-sharing partners in the study report cited in our proposal¹¹.

Nevertheless, the cost-sharing partners recognize the need for further refinement of the temperature criteria by employing a taskforce of experts who would help refine, and provide guidance on the use of temperature regimes to evaluate water operation and/or physical hardware change scenarios.

This work, which is described under Task 7, is scheduled to take place early in the project, concurrently with Task 1 (i.e., within the first six months of contract implementation), as illustrated in the Project Schedule in Figure 7 in our proposal.

The purpose of this task is to evaluate the adequacy of existing water temperature criteria, and provide refinements where suitable, so that water operation alternatives can be accurately evaluated using a single focus measurement criterion: water temperature response.

Given the above-mentioned reasons, we are cordially requesting that CALFED reconsider its recommendation (2) as a pre-requisite condition for project funding.

CALFED Recommendation (3):

“development and evaluation of potential scenarios of dam operations that could achieve possible changes in downstream water temperatures”

Applicant Comment (3):

The task of developing potential scenarios of dam operations has already been performed in phase 1 of the project. A list of twelve scenarios has been provided in our proposal¹². We also stated that additional alternatives may be identified and incorporate in the study as necessary.

Furthermore, a careful review of the comments by the individual reviewer does not show that any of the reviewers find our proposal deficient in that matter. To the contrary, the reviewers concur with the fact that the proposed operations scenarios would be, quote: *“beneficial for salmonids and other native fish in the Stanislaus basin and that these operations could then be implemented on other watersheds to manage water temperatures downstream from the dams.”*

It is therefore our belief that CALFED Recommendation (3) was erroneously referenced to our proposal.

Given the above-mentioned reasons, we are cordially requesting that CALFED reconsider its recommendation (3) as a pre-requisite condition for project funding.

¹¹ See A. Project Description, Project Goals and Scope of Work, 1. Problem, paragraph 3; and G. Literature Cited, Stanislaus River Temperature Monitoring/Modeling Project Water Temperature Criteria Development, January 17, 2001, Jason Gurgard, California Department of Fish and Game

¹² See C. Approach, Task 3 Perform operational studies, Table 1 Operational Alternative identified to date

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On a final note, we would like to share with you the fact that the overall success of phase 1 of the project created a very positive atmosphere of cooperation between members of the stakeholders group on the Stanislaus River. The funding of this program would move these cooperative efforts towards the identification of a definitive plan to better utilize the resources of the Stanislaus River in meeting the goals of the Stanislaus stakeholders.

Based upon our comments to the recommendations provided by the CALFED Project Solicitation Package reviewers, we hereby respectfully request that CALFED upgrade our proposal from "Consider as Directed Action" to "Fund As Is".

Thank you again and please feel free to call me if you have any questions or need additional information.

Sincerely Yours,



Steve Felte
General Manager
Tri Dam Project

cc:

Richard Johnson / USBR
Andrew Hamilton / USFWS
Dean Marston / CDFG
Tim O'Laughlin / OID
Steve Emrick / SSJID
Karna Harrigfeld / SEWD
Avry Dotan / ADC