

Proposal Reviews

#104: Mill Creek Adaptive Management Fish Passage Improvement Project

Orange Cove Irrigation District

Final Selection Panel Review

Research and Restoration Technical Panel Review

Sacramento Regional Review

External Scientific Review #1
#2
#3

Environmental Compliance

Budget

Final Selection Panel Review:

CALFED Bay-Delta 2002 ERP PSP Final Selection Panel Review

Proposal Number: 104

Applicant Organization: Orange Cove Irrigation District

Proposal Title: Mill Creek Adaptive Management Fish Passage Improvement Project

Please provide an overall evaluation rating.

Fund	
As Is	-
In Part	-
With Conditions	-
Consider as Directed Action	-
Not Recommended	X

Amount: \$0

Conditions, if any, of approval (if there are no conditions, please put "None"):

None.

Provide a brief explanation of your rating:

The Selection Panel does not recommend funding this project. The Technical Review recommended against funding it due to a lack of sufficient details on how most of the work would be executed, and a concern about having to assume that the project will deal effectively on its own with the details that must be involved. The Regional Review gave a low rating due not only to an apparent lack of local biological support, but also to lack of specifics on the water acquisition and the expectations for pulse flows relative to base flows. Three external science reviewers rated the proposal poor, good, or excellent.

Comments received from the applicant indicate that local involvement occurred, that there is agency biologist support, and the need to secure passage upstream. However, these comments do not relieve the panel's uncertainties over the lack of study details that are needed for effective execution of the project.

Research and Restoration Technical Panel Review:

CALFED Bay-Delta 2002 ERP PSP Research and Restoration Technical Panel Review Form

Proposal Number: 104

Applicant Organization: Orange Cove Irrigation District

Proposal Title: Mill Creek Adaptive Management Fish Passage Improvement Project

Review:

Please provide an overall evaluation summary rating:

Superior: outstanding in all respects;

Above Average: Quality proposal, medium or high regional value, and no significant administrative concerns;

Adequate: No serious deficiencies, no significant regional impediments, and no significant administrative concerns;

Not Recommended: Serious deficiencies, significant regional impediments or significant administrative concerns.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
-Superior	The project needs to assemble the teams and collaborators for development of a fully explicit plan of testing, measurement and monitoring for the range of goals and hypotheses mentioned in the proposal. Improved coordination with agency biologists would be essential to maximize benefits. The current proposal lacks sufficient details of what, when, where and how the bulk of the work will be done and asks reviewers and CalFed to assume these details will be accomplished during the project operation. The chance to actually increase the flows in this stream to achieve improved conditions is an extremely important opportunity and makes the details of study design all the more important for future funding.
-Above average	
-Adequate	
XNot recommended	

1. **Goals and Justification.** Does the proposal present a clear statement of goals, objectives and hypotheses? Does the proposal present a clear justification and conceptual model for the project?

The goals are appropriate but the hypotheses are incomplete. There was inadequate discussion of any concern with flows except passage. The specific nature of expected tests of increased base flow, pulse flow or riffle modification have not been developed. Given what is presumed a more extensive background of knowledge about this system, a better description of the nature of the conditions and problem identification is expected. The proposal as presently constructed places CalFed and reviewers in the position of approving a large project without knowing any of the details of what specific tests or measures of evaluation will be used.

2. **Likelihood of Success (Approach, Feasibility, Capabilities and Performance Measures).** Is the project likely to succeed based on the approach, feasibility and project team capabilities? Are the proposed performance measures adequate for measuring the project's success?

The project may be too narrowly focused on passage or gave too little information for reviewers to judge this focus. Reviewers consider outmigration of juveniles may also be important but is not addressed. There needed to be better description of verification of accuracy in counting, observing passage. The approach is unclear because it defers decisions about what flow changes and other details of manipulation and monitoring to a period after grant initiation. For example, the proposal acknowledges difficulties in visual observations during high flow, but defers to later consultations how these problems will be resolved while requesting resources now for implementation.

3. **Outcomes and Products.** Will the project advance the state of scientific knowledge in general and/or make an important contribution to the state of knowledge of the Bay-Delta Watershed? For restoration proposals, is the project likely to contribute to ecosystem restoration or species recoveries in a significant way? Will the project produce products useful to decision-makers and scientists?

The outcome of determination of critical flows under an actual test of additional water could be of exceptional value. Success to date of collaborative work is notable. The next steps in quantitative testing require a full development of a study design and monitoring in order to realize the full potential.

4. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

Restructuring work to include outmigration is one possible addition to improve the benefits. However, the large issue is making any decision based on little information on how success or outcomes will eventually be judged. A year for review of data, collaboration of groups and technical teams and development of the specifics of these approaches for tests and monitoring is well stated and needed.

5. **Regional Review.** How did the regional panel(s) rank the proposal (High, Medium, Low)? Did the regional panel(s) identify significant benefits (regional priorities, linkages with other activities, local involvement) or impediments (local constraints, conflicts with other activities, lack of local involvement) to this proposal? What were they?

Regional review ranked this project LOW because it currently lacks visible support and coordination with agency biologists. There appear to be historical discussions on the presumed value of pulse flows and there are questions concerning the reliability of assumed water acquisition for changing flows.

6. **Administrative Review.** Were there significant concerns about the proposal with regard to the prior performance, environmental compliance and budget administrative reviews? What were they?

Reviews of environmental compliance and budget found no serious issues and consider the proposal complete.

Miscellaneous comments:

None

Sacramento Regional Review:

Proposal Number: 104

Applicant Organization: Orange Cove Irrigation District

Proposal Title: Mill Creek Adaptive Management Fish Passage Improvement Project

Overall Ranking: Low Medium High

Provide a brief summary explanation of the committee's ranking:

This proposal seems be lacking in local support, specifically agency biologists. Additionally there is insufficient specific information regarding the water acquisition, and therefore its biological and monetary value. Finally, the concept of pulse flows seems questionable, particularly in this watershed.

1. Is the project feasible based on local constraints?

Yes No

How?

The proposed water acquisition needs clarification as to time, volume, priority etc., and seems heavily dependent upon the questionable premise that fish migration can be satisfactorily managed through pulse flows. Proponents list multiple local contacts including agencies, however no names or specifics.

2. Does the project pursue the restoration priorities applicable to the region as outlined in the PSP?

Yes No

How?

Project potentially addresses Restoration Priorities for the Sacramento Region #2, "Restore Fish habitat and fish passage, particularly for spring-run chinook salmon and steelhead trout and conduct passage studies"; and #3, Conduct adaptive management experiments in regard to natural and modified flow regimes to promote ecosystem functions or otherwise supports restoration actions". Project is heavily dependent upon real time pulse flow management for fish migration, particularly spring run chinook.

There is general disagreement among professional biologists as to whether pulse flow management in lieu of managed base flows is effective. A basic assumption of pulse flow management is commitment of an agency in perpetuity on a consistent basis to monitor when pulse flows should applied.

3. Is the project adequately linked with other restoration activities in the region, such as ongoing implementation projects and regional planning efforts?

Yes No

How?

Proponents list multiple restoration plans and entities as being linked, however specific details of the linkage seem to be assumed, including individuals. This project in past versions has been highly criticized by agency biologists knowledgeable of water needs for salmon management. Given the past criticism, the proponents should have addressed the relevant issues. A central issue of the previous effort was the biological value of the water acquired (is it leased or purchased) including time of availability, priority, volume etc.

4. Does the project adequately involve local people and institutions?

Yes -No

How?

The list of local entities and agencies would seem to suggest that there is a large local involvement and support. Based upon previous actions, that involvement and support seems to be somewhat questionable.

Other Comments:

The proposal seems to be based upon the assumption that pulse flows can adequately compensate for inadequate instream base flows. Also questionable is the water acquisition (lease or purchase) relative to time of availability, volume, priority.

External Scientific: #1

Research and Restoration External Scientific Review Form

Proposal Number: **104**

Applicant Organization: **Orange Cove Irrigation District**

Proposal Title: **Mill Creek Adaptive Management Fish Passage Improvement Project**

Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;

Good: quality but some deficiencies;

Poor: serious deficiencies.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
-Excellent	Fair--I was not convinced that this project was worth funding.
-Good	
<input checked="" type="checkbox"/> Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

Rating: Very Good. Six objectives, mistermed as hypotheses, are identified. These include both technical and fiscal objectives.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

Rating: Good. The main justification is based on a report previously issued by CH2Mhill. The applicants could have made a stronger case.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

Rating: Fair. The tasks are rationalized but not described in any detail.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

Rating: Good. Difficult to judge feasibility because of deficient approach and testable hypotheses.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

Rating: Fair. This reviewer could find no articulation of performance measures. More rationale is presented here.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

Rating: Very Good. Providing the other shortcomings of this project can be addressed, the products will be very good.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

Rating: Very Good.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

Rating: no comment.

Miscellaneous comments:

External Scientific: #2

Research and Restoration External Scientific Review Form

Proposal Number: **104**

Applicant Organization: **Orange Cove Irrigation District**

Proposal Title: **Mill Creek Adaptive Management Fish Passage Improvement Project**

Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;

Good: quality but some deficiencies;

Poor: serious deficiencies.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
-Excellent	The proposal currently lacks sufficient details of what, when, where and how the bulk of the work will be done and asks the reviewer and CalFed to assume these details will be accomplished during the project operation. There is obviously an excellent data base to build on in this basin and a strong collaborative network to create the kind of sharply defined study that could be eventually funded.
XGood	
-Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

There is inconsistency with the statement of goals and hypotheses because the specific nature of expected tests of increased base flow, pulse flow or riffle modification have not been developed.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

The Mill Creek program is exceptional in the degree to which it has mobilized collaboration, research and monitoring to date. Much data and understanding of the conditions of stream habitat and water use in the basin has been developed. The opportunity to carry out program alterations in water flow and other actions and test their outcomes is substantial and important. However, the proposal as presently constructed places CalFed and reviewers in the position of approving a large project without knowing any of the details of what specific tests or measures of evaluation will be used. The case is clear and justified that a next step would be to support the TAC and consultants to craft a formal series of flow and channel changes with methods to measure responses of fish, habitat and water balance in the basin

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

The approach is unclear because it defers decisions about what flow changes and other details of manipulation and monitoring to a period after grant initiation. A year for review of data, collaboration of groups and technical teams and development of the specifics of these approaches for tests and monitoring is well stated and needed.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

The current proposal lacks sufficient detail to judge whether the monitoring devices or tests of eventual flow modifications will be feasible. The proposal acknowledges difficulties in visual observations during high flow, for example, but defers to later consultations how these problems will be resolved while requesting resources now for implementation.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

The project is presently vague because the specific tests and monitoring methods have not been decided.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

The potential usefulness of the concepts under study in this basin are quite substantial. Success to date is notable. The next steps in quantitative testing require a full development of a study design and monitoring in order to realize the full potential.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

The team of scientists and collaborators on this project have demonstrated a good track record in the past and have the expertise and familiarity with the social and ecological conditions to ensure success.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

The proposal lacks sufficient development of the tests, actions and methods to justify the full benefits for all elements of the requested support. Partial funding for the development of these elements would be a modest cost for potentially large benefit.

Miscellaneous comments:

There is a good case for funding a one year project to assemble the teams and collaborators for development of a fully explicit plan of testing, measurement and monitoring for the range of goals and hypotheses mentioned in the proposal.

External Scientific: #3

Research and Restoration External Scientific Review Form

Proposal Number: **104**

Applicant Organization: **Orange Cove Irrigation District**

Proposal Title: **Mill Creek Adaptive Management Fish Passage Improvement Project**

Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;

Good: quality but some deficiencies;

Poor: serious deficiencies.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
<input checked="" type="checkbox"/> Excellent	A clear and testable hypothesis and potential for an informative AM experiment. Conceptual model/scope of monitoring slightly limited, but this will probably be addressed as the work continues. FUND.
<input type="checkbox"/> -Good	
<input type="checkbox"/> -Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

The goals and objectives of this project are clearly stated. An adaptive management experiment is proposed to define flows required for upstream passage of Chinook spawners. The conceptual model is dominated by the assumption that low flows reduce upstream passage of spawning chinook that in turn reduces their spawning success. The hypotheses are clearly laid out.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

The concept of manipulating flows experimentally to empirically determine instream flow requirements is very sound. In this sense, the project has strong justification. My only concern relates to the hypotheses for chinook, which focus exclusively on the effects of flow on passage. No data was provided in the proposal regarding other issues, such as incubation/rearing flows, or flows required for downstream passage of juveniles in the event that flows are sufficient to get adults into the system. In this sense the conceptual model is incomplete, but perhaps past research in this system has legitimately led the proponents to this focused set of questions. I recognize that if fish can't get into the system there isn't much point addressing these other issues, but once a migration flow is established, the model will need to be expanded.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

Assuming upstream passage is the key limiting factor for chinook in Mill Ck, the approach is very sound. The empirical Adaptive Management approach will add to the knowledge base on passage issues in this system. The project has potential to be a successful adaptive management experiment, something that is in rare supply. Again, my only concern is that the project may be too narrowly focused on upstream passage issues. The key question is whether more water results in higher juvenile production per spawner. It may be that flow impedes passage, but getting adults into the system does not guarantee that juvenile outmigrants will be produced. For example elevated flows could bring adults in and allow them to spawn at relatively high stages in the stream. When discharge is lowered, any egg deposition could be lost from redd dewatering. An assessment based on both escapement and outmigrant monitoring would be a better evaluation of the benefits of the additional water.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

The project is feasible, the proponents have already secured enough water to double flows for specific periods of the year. Thus the proponents are able to impose a flow regime change of sufficient magnitude to probably have a detectable effect. The proponents provide a good discussion of fish monitoring difficulties but these are surmountable given the fairly extensive monitoring budget. A few suggestions/comments:

· Electronic resistivity counters would likely work in Mill Ck. given its small size and can be installed and operated for reasonable cost. · Snorkel surveys provide a lower-precision approach but may be informative for identifying passage issues upstream of the counter or confluence. Estimates of observer efficiency under a range of discharges and turbidities can be obtained by externally marking/radio tagging fish and determining the fraction observed by divers. As an aside, the restrictions on tagging fish placed by NMFS and CDFG mentioned in the proposal are completely unfounded. This is a common technique used in BC for stock assessment of chinook and steelhead (mortality effects have been evaluated and they are virtually nil). If this is not convincing enough, NMFS and CDFG should be reminded that salmon die after spawning!

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

Yes, the PM's provide documentation of spawning, which apparently does not occur if migration flows are not adequate. Unfortunately, as assessment of outmigrants in years when spawning is documented is not mentioned in the proposal but should be included.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

Yes, determination of critical flows required to trigger upstream movement into Mill Ck.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

Based on discussions in the proposal, the proponents seem very well qualified.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

Yes. The project budget appears well justified and laid out. Costs could be reduced by limiting the scope of Task V. I would take some of this money and use it to fund an assessment of outmigrant run strength.

Miscellaneous comments:

Environmental Compliance:

Proposal Number: 104

Applicant Organization: Orange Cove Irrigation District

Proposal Title: Mill Creek Adaptive Management Fish Passage Improvement Project

1. Are the legal or regulatory issues that affect the proposal identified adequately in the proposal?

-Yes No

If no, please explain:

This project would require compliance with CESA 2080.1.

2. Does the project's timeline and budget reflect adequate planning to address legal and regulatory issues that affect the proposal?

Yes -No

If no, please explain:

If funding and scheduling for outstanding environmental compliance requirements are accounted for under project management/administration

3. Do the legal and regulatory issues that affect the proposal significantly impair the project's feasibility?

-Yes No

If yes, please explain:

Other Comments:

Budget:

Proposal Number: 104

Applicant Organization: Orange Cove Irrigation District

Proposal Title: Mill Creek Adaptive Management Fish Passage Improvement Project

1. Does the proposal include a detailed budget for each year of requested support?

Yes -No

If no, please explain:

2. Does the proposal include a detailed budget for each task identified?

Yes -No

If no, please explain:

3. Does the proposal clearly state the type of expenses encompassed in indirect rates or overhead costs?

Yes -No

If no, please explain:

4. Are appropriate project management costs clearly identified?

Yes -No

If no, please explain:

5. Do the total funds requested (Form I, Question 17A) equal the combined total annual costs in the budget summary?

Yes -No

If no, please explain (for example, are costs to be reimbursed by cost share funds included in the budget summary).

6. Does the budget justification adequately explain major expenses?

Yes -No

If no, please explain:

7. Are there other budget issues that warrant consideration?

-Yes No

If yes, please explain:

Other Comments:

information well defined in the budget justification and summary