# COW CREEK WATERSHED FISH PASSAGE BARRIER AND HABITAT EVALUATION

**Mary E Schroeder** 

# **Initial Selection Panel Review**

0046

COW CREEK WATERSHED FISH PASSAGE BARRIER AND HABITAT EVALUATION

Western Shasta Resource Conservation District

Applicant amount requested: \$472,229

Fund This Amount: \$0

The Panel finds that this project is not without value. The work being proposed is similar to that in a standard watershed assessment. The link to agriculture exists in that agriculture occurs in the watershed. The panel finds, however, this is not a strong nexus to the goal of this PSP.

The Panel does not recommend this proposal for funding, but does encourage the proponent to continue to seek funding for this type of project through other measures.

Do Not Fund

# **Technical Panel Review**

Proposal Name: COW CREEK WATERSHED FISH PASSAGE BARRIER AND

HABITAT EVALUATION

Applicant Organization: Western Shasta Resource Conservation District

Amount Requested: \$472,229

Panel Rating:

Fair - Lacking in one or more critical aspects

# **Panel Summary**

The panel felt that this proposal had one or more sound or worthy concepts. Based on its technical merits, however, this proposal is lacking in one or more critical aspects and should not be funded in its current form. The panel felt that the information gathered from this planning project would be tangible and potentially useful for implementation but overall the project lacked important details necessary for the project to be successful. For example, the proposal lacks methodological detail for analyzing the vast amount of imagery data the project will generate, and it does not adequately describe its approach for ranking and prioritizing projects. It also does not analyze several limiting factors for anadramous fish. Panelists indicated that direct contact with landowners and research into permitting issues of already-identified barriers may be more appropriate first steps and a more effective and immediate pathway to improving anadromous fish habitat in the Cow Creek Watershed.

**Proposal Number:** 0046

Proposal Name: COW CREEK WATERSHED FISH PASSAGE BARRIER AND

HABITAT EVALUATION

Applicant Organization: Western Shasta Resource Conservation District

Amount Requested: \$472,229

# **Goals**

Rating	very good
	The proposal clearly addresses relevant ecosystem restoration goals; by providing information to potentially maximize effects of restoration activities, the work could provide a benefit to the public, and may facilitate adoption of management solutions agreeable to concerned parties. The project would mainly assist managers and taxpayers and not farmers directly since agriculture stakeholders to do not appear to be responsible financially for resporation activities. The work would promote the sustainable use of river resources.

# **Justification And Conceptual Model**

Rating	good
Comments	The concepaul model is clear and describes some tenable mechansisms by which diversions impact anadromous fishes, and by which their removal may facilitate improvements in populations. The justification is not entirely comprehensive, however, in that it does not consider the role of alternate hypotheses, such as that of sediments from runoff. The project relies on CDFG assessment of diversions and their potential for restoration. Little detail is provided about this process, but much of the project

is premised on the assumption that there is variation in the effect of individual diversions, and that restoration can be prioritized to allow access to the best existing habitat. More information surely must be available on the effects of various diversions than the 1959 study cited must be available (on effects of size, type, position in watershed for example) and if not, it seems like its something that needs to be done. The only study cited (from 1959) indicates low individual impacts of diversions.

# **Approach**

Rating	good
Comments	In general, the proposed work is clearly described but lacks some key details as descibed in part above (ie Justification section). This is likely due to page restrictions and inclusion of other required information. However, more information about the habitat evaluation would have been useful as this is a key product, and considerable investment in time and resources.

# **Feasibility**

Rating	very good
	The project is technically feasible, and seems well planned to accomplish the work that is
	described in the proposed timeframe.

# **Performance Evalutation**

Rating	good
Comments	The proposed work will provide some of the basic information needed to make future decisions about restoration actions. This work will use general tools (e.g. CDFG checklists) to asses the role of diversions on fish movement and assumes that reduction in access to habitat is the primary limitation on salmon and

steelhead in the watershes. Very little recent data exists on salmon populations in these watersheds, and would be needed to test the hypotheses in this proposal should the recommended restorations be undertaken.

# **Proposed Outcomes**

Rating	good
Comments	The database generated will be very useful given the lack of basic information about the Cow Creek watershed, and the potential impact of diversions on the system. The proposed work is high relevant to Cow Creek watershed toward directing limited restoration funds for retrofitting diversions. If the recommendations are adopted and future studies show an improvement in salmon/steelhead populations, the work will provide a model for sustainable management of agricultural lands for fish habitat. It is unclear how much of this knowledge can be applied elsewhere because the proposal doesn't appear to attempt to develop predictive relationships among variables, and doesn't measure many response variables.

# **Capabilities**

Rating	very good
	Project team is diverse and seems very well qualified.
	Group appears to be involved with ongoing CALFED project but not much detail is given about this.

# **Cost-Benefits**

Rating	
Comments	Budget is seems reasonable, although the level of

# **Overall Evaluation Summary Rating**

Rating	good
Comments	The proposed research would provide basic information for future restoration of the watershed, and seems a very reasonable first step toward that goal. While it is clear that this type of work is much needed, its not entirely clear that this watershed is the best place to conduct it in. It seems to me that work of this nature must be done in a watershed with existing or planned population monitoring and a committment to restorations. The latter may be true. However, to rigorously asses the proposed relationships between diversion and habitat use and population size, additional information is needed to monitor responses and consider alternate hypotheses. This could help develop predictive relationships between restoration actions and outcomes that could be applied to other surrounding watersheds. This proposal could provide a first step in this process if there is a long term committment to restoring and monitoring this watershed as a case study to base work in other areas on.

Proposal Number: 0046

Proposal Name: COW CREEK WATERSHED FISH PASSAGE BARRIER AND

HABITAT EVALUATION

Applicant Organization: Western Shasta Resource Conservation District

will take place.

Amount Requested: \$472,229

# Goals

# Rating good Comments The proposal describes the problem the project is designed to address. However the links to the ERP Goals, and the agricultural goals are less clearly developed, and it is not clear how this element fits in to the watershed

The proposal includes the following list of goals for the project.

planning effort, or where the other elements

"The Specific Goals For the Project Include:
1. Identify and survey diversions for fish
passage and entrapment. 2. Identify potential
habitat within the watershed above and below
diversions. 3. Using a Technical Advisory
Committee, rank fish passage projects to
ensure that a concise step-by-step process is
followed to ensure the largest gains per
restoration action over time. 4. TAC
evaluation of natural barriers for fish
passage and prepare summary conclusions on
anadromous fish passage potential under
certain conditions."

Missing is the identification of water sources to maintain a wetted stream course for those species of anadromous fish (spring run chinook salmon and steelhead), which are resident in the upper reaches over the summer. Without habitat for the fish to over summer, there will be little if any benefit from the proposed project.

# Justification And Conceptual Model

Rating	very good
	The proposal presents a clear conceptual model that describes the relationships between the key ecosystem components; it is a little less clear on the agricultural system components.
	The conceptual model is clear on the hypotheses being tested, and appears to support the applicant's choice of project scope.

# **Approach**

Rating	good
Comments	The proposal clearly describes the approach, which appears to be appropriate to the task, and recognizes (and incorporates) the available information.  The results will add to our base of knowledge, and
	summer holding areas for species of interest, it will be incomplete, and will need to be augmented.

# **Feasibility**

Rating	very good
Comments	The proposal is technically feasible, and

# **Performance Evalutation**

Rating	fair
Comments	The proposal is somewhat vague in this area, and is lacking in the development of criteria that will be used for hypothesis testing. The conceptual model is presented in two iterations, one "as is," and one with the "diversion and fish passage" issues resolved. But the criteria upon which the evaluations will be based are unclear.

# **Proposed Outcomes**

Rating	good		
	The proposed work products will certainly be of value to this watershed, but will have limited applicability to other watersheds.		

# **Capabilities**

Rating	very good
I Ammanic	I have no doubts about the capabilities of this team to provide the work product proposed.

# Cost-Benefits

Rating	good
Comments	This is a large and significant watershed, and the proposal appears to be appropriate to the task at hand.

# **Overall Evaluation Summary Rating**

Rating		good
	ents	On the whole, a worthwhile project if funding is available. The utility of the effort at this time will be entirely dependent on the success of the statement:

"Current action is being taken to address water temperature and increased instream flow for the benefit of salmonids and to increase stream health. These actions may lead to increased likelihood of immigration, spawning, rearing and outmigration in the watershed."

Taken from the proposal's Page 14, Paragraph Number 7.

**Proposal Number:** 0046

Proposal Name: COW CREEK WATERSHED FISH PASSAGE BARRIER AND

HABITAT EVALUATION

Applicant Organization: Western Shasta Resource Conservation District

Amount Requested: \$472,229

# Goals

Rating	poor
Comments	The proposed project aim is to "identify problematic man-made diversions" plus some other things. The project would not remove or correct diversion threat to fish. It is really about documenting diversions that threaten fish in a watershed. I found the goal and objectives vague and too modest for achieving genuine environmental benefits.

# **Justification And Conceptual Model**

Rating	fair
Comments	The proposal coverage of its core concept and approach is a description of a problem. The threat to fish posed by diverting water out of a stream is understood, and how that would be enhanced in this project is not clear.

# **Approach**

Rating	fair
	The description of project activities and methods are weak. It seems the work is mainly collecting information on landowners and their water uses, and forming a technical committee to determine what to do.

Specific methods stated are often just references to California Fish and Game manuals and guides.

# **Feasibility**

Rating	fair
Comments	I believe the project is poorly planned and lacks a clear purpose. Thus I feel the feasibility of real benefits is poor. While the modest aims of the proposed project seem easily achievable, the feasibility of substantially improving an environmental problem may be low.

# **Performance Evalutation**

Rating	poor
Comments	4 lines are given on this topic saying reports

# **Proposed Outcomes**

Rating	poor
Comments	Outcomes are unclear. It seems more information on a problem and a technical committee to identify solutions. Genuine environmental gains are not part of the plan.

# **Capabilities**

	Rating	good	
		I cannot	judge past performance on related projects
Comme	Comments	from the	information presented. the RCD staff CVs look
		fine and	they seem qualified for more ambitious aims.

# **Cost-Benefits**

Rating	fair
Comments	The project cost is relatively low for the proposal I have reviewed. However, the near half million \$ request is still a large sum for the types of benefits to be gained. The proposed work looks much like routine RCD activity and I would think CALFED is not for base organization support.

# **Overall Evaluation Summary Rating**

Rating	poor
Comments	I found the proposal poorly prepared. Errors are easily found on most pages and make reading a chore. The content is unclear and the planning poor. The proposal states it is not result in problem correction but instead is a collection of steps to identify problems and plan what to do. Key section and information are incomplete. Overall, I believe this project would not provide clear benefits or material easily used by landowners or non-CRD managers.

Proposal Number: 0046

Proposal Name: COW CREEK WATERSHED FISH PASSAGE BARRIER AND

HABITAT EVALUATION

Applicant Organization: Western Shasta Resource Conservation District

1. Applicability to ERP goals and regional priorities.

The project will meet the ecosystem restoration goal of CALFED and four of the six ERP goals. This project addresses the MSCS-covered species of Central Valley fall and late-fall run Chinook salmon and California Central Valley steelhead.

This project will inventory and assess the diversions within the Cow Creek drainage. A habitat inventory will also be conducted. Cow Creek is major tributary to the Upper Sacramento River. Steelhead and Chinook salmon are known to use this creek but their distribution is based on very old surveys and incidental observations. Very few of the diversions are screened and it is not known as to what extent the diversions are preventing adult migration to spawning grounds or juvenile out-migration. It is assumed that the number of juvenile salmonids entrained in water diversions is impacting the recovery and maintenance of salmon and steelhead populations in the Cow Creek drainage. This inventory is a first step in being able to prioritize those diversions that have the greatest impact and designing efforts to correct documented problems.

The habitat quality and quantity within the Cow Creek watershed is also an unknown. This inventory will be very useful in determining future watershed restoration projects and will be helpful in establishing a baseline for effectiveness monitoring.

notes:

### 2. Links with other restoration actions.

This project is a key step identified in the Cow Creek Watershed Management Plan. Other projects currently being conducted in the Cow Creek watershed include monitoring water temperature, a tailwater pond study, and five ditch piping feasibility studies. Two fish screens will be installed summer of 2006 on two of the 41 diversions within anadromous fish range.

The success or failure of this project could be used as a model for similar project needs in the Cottonwood Creek watershed. Cottonwood Creek is also a large tributary to the Upper Sacramento River that has a paucity of information regarding salmonid range, habitat quantity and quality, and diversion number and location.

notes:

This project is considered a high priority and the primary "missing link" in the Cow Creek Watershed Plan.

### 3. Local circumstances.

The project is feasible and appropriate for the project site. Landowners have not been approached for access consent to do the inventories. Some of the landowners are involved with the Cow Creek Watershed Management Group or current/past projects. Those landowners not involved with current or past projects are an unknown on whether or not they will give access. Information can still be gathered where access is approved.

notes:

Outreach activities are not outlined in detail. However, access permission would be required from all landowners in the proposed survey area.

### 4. Local involvement.

The project has the support of the Cow Creek Watershed Management Group and the Technical Advisory Committee made up of agencies and landowners. As stated above, some landowners have not yet been approached for creek/diversion access.

Outreach activities include watershed tours, and presentations to the Cow Creek Watershed Management Group community meetings.

notes:

It is not clear how the project links with farming practices other than the connection of farmers with agency officials at the time of site visits.

### 5. Local value.

This project's products will be of high value to the Cow Creek watershed. This information is needed to help quantity and qualify instream habitat as well as prioritize diversion sites for possible remediation. In addition, future watershed restoration activities may be identified based on the habitat inventory. The success or failure of this particular project model may be applicable to Cottonwood Creek where this type of information is also needed.

notes:

The proposal has the potential to identify and reduce

anadromous fish take in Cow Creek.

6. Applicant history.

For those projects funded by the AFRP and administered out of this office, the Western Shasta RCD has performed well.

notes:

# 7. Summary of Overall Panel Discussion and Review

The panel was split on the connection of this project to PSP objectives. The project would address over 41 water diversions for agriculture within anadromous fish ranges and educate farmers who do not understand the impact on traditional diversions on local fish populations. The proposal is focused on enhancing Cow Creek fish populations.

8. Panel Quality Ranking

Very Good

notes:

9. Regional Priority Ranking

High

notes:

# **Environmental Compliance Review**

Proposal Number: 0046

Proposal Name: COW CREEK WATERSHED FISH PASSAGE BARRIER AND

HABITAT EVALUATION

Applicant Organization: Western Shasta Resource Conservation District

1. Is compliance with California Environmental Quality Act (CEQA) required for this project?

No.

- 2. Is compliance with National Environmental Policy Act (NEPA) required for this project?
- 3. Does this project qualify for an Exemption or Exclusion under CEQA and NEPA, respectively?

Does not apply.

4. Did the applicant correctly identify if CEQA/NEPA compliance was required?

Comments

Indicated that a CEQA Categorical Exemption was required for basic data collection but the data being collected will not have any kind of impact on the environment. A categorical exemption should not be necessary.

5. Did the applicant correctly identify the correct CEQA/NEPA document required for the project?

Does not apply.

6. Has the CEQA/NEPA document been completed?

Does not apply.

7. If the document has not been completed, did the applicant allot enough time to complete the document before the project start date?

Does not apply.

### **Environmental Compliance Review**

8. If the document has not been completed, did the applicant allot enough funds to complete it?

Does not apply.

- 9. Did the applicant adequately identify other legal or regulatory compliance issues (Incidental Take permits, Scientific Collecting permits, etc.) that may affect the project? **Does not apply.**
- 10. Does the proposal include written permission from the owners of any private property on which project activities are proposed or, if specific locations for project activities are not yet determined, is it likely that permission for access can be obtained?

  Yes.
- 11. Do any of these issues affect the project's feasibility due to significant deficiencies in planning and/or budgeting for legal and regulatory compliance or access to property?

  No.

Proposal Number: 0046

Proposal Name: COW CREEK WATERSHED FISH PASSAGE BARRIER AND

HABITAT EVALUATION

Applicant Organization: Western Shasta Resource Conservation District

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

### Yes.

2. Does the Budget Form include a detailed budget for each task identified on the Task and Deliverables Form and in the proposal text?

### Yes.

3. Are the costs associated with each task and deliverable reasonable costs for performing the services?

### Yes.

4. Is each person (employee, consultant, subcontractor, etc.) identified on the Personnel Form also included on the Budget Form?

### Yes.

5. Are there estimated hours and an associated hourly rate of compensation for each person identified on the Personnel, Tasks and Deliverables, and Budget forms?

### Yes.

6. Does the budget include the benefit rate for all personnel identified on the Personnel and Budget forms?

### Yes.

7. Are the proposed labor rates comparable to state rates?

### Yes.

8. Is more than 25% of the work proposed to be performed by subcontractors?

### Yes.

If yes, what is the exact percentage to be performed by subcontractors?

62% - \$293,000 - Recommend budget detail for Subcontractors to evaluate if rates are comparable to state rates for services (e.g. Task 4 Aerial Photos and Task 8 ENPLAN - Habitat Evaluation report).

9. Are project management expenses appropriately budgeted?

### Yes.

If no, please explain:

Recommend evaluating subcontractor budget to determine what the total project management cost will be for the project.

10. Does the proposal clearly state the type of expenses encompassed in indirect rates or overhead costs? Are indirect rates, if used, appropriately applied?

### No.

If no, please explain:

No detail provided. However indirect cost rate was reasonable at 15%.

11. Does the proposal adequately explain major expenses? Are the labor rates and other charges proposed reasonable in relation to current state rates?

### No.

If no, please explain:

No major expenses were identified other than subcontractors. Recommend identifying if equipment or other major expenses will be incurred by the Subs.

12. For equipment >=\$5,000, was a separate worksheet filled out? Please note: No overhead or indirect rate charges are allowed on the equipment purchases

No.

13. Is the purpose for all travel clearly represented in either the proposal itself, or in the Tasks and Deliverable Form?

Please note: Recurring travel costs for a specific task or subtask may be combined into one entry on the Budget Form, but the number of trips and cost for each trip must be clearly represented.

### No.

14. Are travel and per diem at <u>rates specified by the California Department of Personnel Administration</u> for similar employees?

### No.

15. Are other agencies contributing or likely to contribute a share of the projects? costs?

### Yes.

If yes, when sufficient information is available, please total the amount of matching funds likely to be provided:

## \$8,400 - Technical Advisory Committee

16. If the applicant identified cost share or matching funds, are they also described in the text of the proposal?

### Yes.

17. Does the applicant take exception to the standard grant agreement's terms and conditions? If yes, are the approaches the applicant proposes to address these issues a reasonable starting point for negotiation a grant agreement?

### No.

18. Are there other budget issues or "red flags" that warrant consideration?

### Yes.

If yes, please explain:

Large % of the contract budget is completed by pre-selected subcontractors. Recommend budget detail review for comparables and qualifications of subcontractors.

244900000000000000000000000000000000000
19. Provide revised amount requested based upon your review: \$