

Proposal Reviews

#98: A Feasibility Investigation of Reintroduction of Anadromous Salmonids Above Crocker-Huffman Dam on the Merced River

Natural Resource Scientists, Inc.

Initial Selection Panel Review

Research and Restoration Technical Panel Review

San Joaquin Regional Review

External Scientific Review #1
#2

Prior Performance/Next Phase Funding #1
#2
#3

Environmental Compliance

Budget

Initial Selection Panel Review:

CALFED Bay-Delta 2002 ERP PSP Initial Selection Panel Review

Proposal Number: 98

Applicant Organization: Natural Resource Scientists, Inc.

Proposal Title: A Feasibility Investigation of Reintroduction of Anadromous Salmonids Above Crocker-Huffman Dam on the Merced River

Please provide an overall evaluation rating.

Explanation of Recommendation Categories: Fund

- **As Is** (a proposal recommended for funding as proposed)
- **In Part** (a proposal for which partial funding is recommended for selected project phases or components)
- **With Conditions** (a proposal for which funds are recommended if the applicant contractually agrees to meet the specified conditions)

Consider as Directed Action in Annual Workplan (a proposal addressing a high priority action that requires some revision followed by additional review prior to being recommended for funding)

Not Recommended (a proposal not currently recommended for funding-after revision may be considered in the future)

Note on "Amount":

For proposals recommended as Fund As Is, Fund In Part or Fund With Conditions, the dollar amount is the amount recommended by the Selection Panel.

For proposals recommended as Consider as Directed Action in Annual Workplan, the dollar amount is the amount requested by the applicant(s).

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

Amount: **\$160,758**

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

None.

Provide a brief explanation of your rating:

This proposal provides an assessment of the likely benefits of opening up three miles of cold water salmonid habitat within 12 months. It can lead to actions that increase the spawning, abundance and distribution of multiple at risk species. The need and feasibility of the study outweigh not very explicit descriptions of objectives, schedule and hypotheses.

The strategic benefits lie in the likelihood of increasing access to and habitat for spawning, consistent with the Proposal Solicitation Package's priority SJR-3, by a qualified and experienced team. Ecological benefits in terms of new knowledge will help as well, and can lead to restoring natural processes for stream biota, including passage and spawning of salmon and steelhead.

Research and Restoration Technical Panel Review:

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

Proposal Number: 98

Applicant Organization: Natural Resource Scientists, Inc.

Proposal Title: A Feasibility Investigation of Reintroduction of Anadromous Salmonids Above Crocker-Huffman Dam on the Merced River

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	All possible production areas suitable for restoration or reintroduction of salmon should be considered. Why fishery management agencies do not lead projects such as this to reintroduce salmon was not clear to the panel. Objectives and hypotheses were not very explicit. Furthermore, additional information on design and statistical power of sampling would contribute to understanding the overall feasibility of the proposal. Despite these shortcomings, the applicant presents a convincing argument for the need and the overall feasibility of the project. The panel weighed the shortcomings and strengths of the proposal and concluded that it was above average. The timeline for this feasibility study and providing Crocker-Huffman Dam upstream/downstream passage is not clear.
XAbove average	
-Adequate	
-Not 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?

Fair: The role of the unstated goal, objectives, and hypotheses in guiding this research was unclear to the panel. For example, under the Problem statement, primary objectives include biological and physical technical issues. Further on an integral objective is identified as the ongoing and future planned Merced River Hatchery operations. This is confusing because all hypotheses deal with quality of habitat. Further confusion is added because the single task dealing with quantity and quality of habitat does not mention biological issues or the Merced Hatchery operations. The first paragraph under task 1, last sentence: the applicant identifies range of factors likely to be considered. These factors should be grouped in categories and restated in a set of appropriate hypotheses

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?

Fair: A description of the role of the Merced River Hatchery is generally lacking, in detail of current operations and potential management changes. A description of how video camera, substrate, and ADCP sampling will be conducted is generally lacking. For example, what is the sampling density and does it have any statistical basis. . The approach is feasible. The Performance Measures section indicates experimental design, study protocols, a quality assurance program, and others will be provided as performance measures. Some information on these items would have been useful to evaluate this proposal.

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?

Good: The products will advance the state of knowledge for a relatively restricted 3 mile reach of the tailrace.

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

The cost is reasonable and the preliminary nature of this work makes the benefit difficult to estimate at this time.

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 panel ranks were medium and an external rank was good. Regional review also raised issues of how significant the additional spawning area will be if it is made available. Furthermore, would the spawning area justify additional expenditure to provide upstream and downstream passage.

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?

The suction dredge sampling will likely require special permitting (1600 agreement, CEQA) at modest cost.

Miscellaneous comments:

None

San Joaquin Regional Review:

Proposal Number: 98

Applicant Organization: Natural Resource Scientists, Inc.

Proposal Title: A Feasibility Investigation of Reintroduction of Anadromous Salmonids Above Crocker-Huffman Dam on the Merced River

Overall Ranking: -Low Medium -High

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

Even if reintroduction were feasible, the screening of the MID canal would be extremely expensive. The downstream passage of young past the dam would also be extremely problematic. The total amount of spawning habitat below the dam was not addressed clearly, especially considering the projects underway, planned, or proposed to increase spawning habitat below the dam.

1. Is the project feasible based on local constraints?

Yes -No

How?

NRS, Inc has used the proposed survey techniques before on previous projects and seems to have the expertise required to evaluate the upstream habitat. Since there is no construction or other physical impacts to the area, permitting and the such are not required.

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

Yes -No

How?

SJR-3: Improve rearing and spawning habitat and downstream fish passage. Evaluating the potential for increased spawning habitat above Crocker-Huffman could, in the future, increase the amount of spawning habitat. The proponents estimate that there is the potential to increase the available spawning reach length by 13%.

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?

Except for the failure to quantify spawning habitat improvements by projects already in place, underconstruction, or presently planned, and how much habitat they are increasing.

The proponents do note and use as examples the Salmon habitat enhancement projects funded by CALFED such as Ratzlaff and Robinson Reaches, Merced River Corridor Restoration Planning Project, Water Temperature Management Feasibility study as well as a number of proposed projects. These projects have the potential of increasing the population and the need for increased spawning area.

The proposal also addresses AFRP's objective to reduce adverse effects of dams and diversions and increase natural production of anadromous fishes.

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

Yes -No

How?

The proponents are actively involved with projects on the river and serve on the Merced River Technical Advisory Committee and plan to coordinate with this group. They are also involved in CALFED/AFRP sponsored Merced River Stakeholders Group. Merced River ID is a cooperator in this proposed feasibility investigation.

No third party impacts are anticipated

Other Comments:

It is questionable how much spawning habitat is actually available above Crocker-Huffman. The water behind the dam backs up quite a bit and the length of channel that can be utilized for spawning could be minimal and the stream bed quality marginal. But that is the point of the study. The hypotheses they are proposing to test would be useful to know for further possibilities in habitat restoration and utilization of upstream habitat for salmonid spawning.

External Scientific: #1

Research and Restoration External Scientific Review Form

Proposal Number: **98**

Applicant Organization: **Natural Resource Scientists, Inc.**

Proposal Title: **A Feasibility Investigation of Reintroduction of Anadromous Salmonids Above Crocker-Huffman Dam on the Merced River**

Conflict of Interest Statements:

I have no financial interest in this proposal.

XCorrect

-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	I rate proposal good and recommend funding with the requirement that the final report include a comparison with other reaches as noted above.
X Good	
-Poor	

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

Determine feasibility of opening reach for spawning on Merced River between Crocker-huffman and Merced falls dam. Proposal will determine if this reach might support salmons making opening it feasible. The topic is timely and important since it could open new potentially good habitat to salmon.

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 project is justified in determining if the habitat is feasible prior to developing fish passage at C-H dam. This is a feasibility project, which potentially could lead to a full implementation. Hypotheses are listed on the suitability of the site but hypotheses are not related to physical or biological measures that will determine habitat suitability. For example, what is the gravel distribution, is the habitat armored, what measures will be used to determine if water elevation fluctuations will potentially strand the redds.

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?

Approach will determine the potential of the reach for supporting salmon spawning in terms of physical characteristics and biological interactions. Physical studies are comprehensive: mapping substrate with video, flow, and temperature characterization. Standard analysis methods for physical properties are referenced. Biological criteria are not detailed. For example habitat conditions is not defined and ecological interactions with resident species are not defined. It is unclear how the physical sampling will provide information on ecological interactions between species. Effect of opening the reach on existing hatchery stock is mentioned but methods to assess biological impacts are not detailed. Also, work will evaluate measures needed to open fishway for salmon passage. Study will provide important base knowledge with direct value to decision makers. However, how the information will be evaluated is not explained, other than mentioning a technical report.

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 approach is not fully documented in particular the biological methods are not detailed. The project scale is modest but should be successful in characterizing the physical properties of the system. Project success on quantifying ecological interactions with resident species will likely be unsuccessful.

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?

Performance measures are not adequately described. Criteria for recommendations on opening reach to fish are not identified. A natural approach would be to compare the reach to the below dam reach where fish are spawning. A correspondence of the two reaches would quantify to some degree the potential of the reach for supporting fish. However, study of the reach below the C-H dam is not part of the project.

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 characterization of the reaches potential for spawning is valuable and has direct link to decisions to peruse fish passage at the C-H dam. Characterizing the physical habitat prior to opening it to spawning will provide a useful background to understand further the significance of physical structure in salmon habitat. It is a good background study of physical properties and will help improve knowledge of factors needed to restore habitat. Again, missing is any attempt to

characterize the finding with reaches supporting salmon.

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?

Team has experience in through similar studies in the region and is fully qualified.

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

Costs are reasonable and adequate. However, details are lacking on the distribution of field studies and report preparation/literature survey.

Miscellaneous comments:

I rate the proposal excellent on its clarity of intent but only good in terms of detailing the biological analysis. The project should drop the pretense of measuring biological factors there is not biological work. In addition, there is thought on what information the managers will need to make a decision on opening the reach to spawning. However, the project does have the capability of achieving its goals if the final report makes an adequate comparison of results to other reaches that support salmon. In particular, the physical habitat above the dam could be compared quantitatively to the habitat below the dam or a similar reach. The final report needs to include a comparison of the study findings with reaches supporting spawning.

External Scientific: #2

Research and Restoration External Scientific Review Form

Proposal Number: **98**

Applicant Organization: **Natural Resource Scientists, Inc.**

Proposal Title: **A Feasibility Investigation of Reintroduction of Anadromous Salmonids Above Crocker-Huffman Dam on the Merced River**

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	Not an impressive proposal, but the goals seem worthy and the PI seems to have decent background in assessments of this nature. I think this proposal is worth funding.
<input checked="" type="checkbox"/> Good	
-Poor	

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

Goals seem worthy

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?

Work is well justified. Having personally spent time at the Merced Fish facility, I had often wondered about merits of creating access to upriver habitat. The "dam" is very low.

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 seemed quite vaguely specified. Although some information was provided regarding how data might be collected, very little attention was devoted to how data would be interpreted or analyzed so as to allow discrimination among alternative hypotheses.

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?

Seems feasible to me and, if preliminary findings were positive, would certainly merit a more detailed followup study.

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?

reports, etc.

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?

reports, etc.

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?

Project staff appear qualified to carry out the tasks described in the proposal. The video-based assessment of riverbed substrate seemed especially neat and has apparently been previously worked out by the PI.

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

Costs (\$160k/1 yr) seem reasonable compared to other CALFED project proposals.

Miscellaneous comments:

Prior Performance/Next Phase Funding: #1

New Proposal Number: 98

New Proposal Title: A Feasibility Investigation of Reintroduction of Anadromous Salmonids Above Crocker-Huffman Dam on the Merced River

1. Prior CALFED project numbers, titles, and programs: *(list only projects for which you are the contract manager)*

01-N48, Juvenile Salmon Migratory Behavior Study in North, Central, and South Delta, ERP.

2. Prior CVPIA project numbers, titles, and programs: *(list only projects for which you are the contract manager)*

N/A

3. Have negotiations about contracts or contract amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

XYes -No -N/A

If no, please explain any difficulties:

4. Are the status, progress, and accomplishments of the applicant's current CALFED or CVPIA project(s) accurately stated?

XYes -No -N/A

If no, please explain any inaccuracies:

5. Is the applicant's progress towards these project(s)' milestones and outcomes to date satisfactory?

XYes -No -N/A

If no, please explain deficiencies:

6. Is the applicant's reporting, records keeping, and financial management of these projects satisfactory?

-Yes -No **X**N/A

If no, please explain deficiencies:

7. Will the project(s) be ready for next phase funding in 2002, based on its current progress and expenditure rates?

-Yes -No **X**N/A

If no, please explain:

Other Comments:

According to the agreed timeline, Natural Resource Scientists, Inc., only recently commenced work on CALFED project #01-N48. N/A on questions 6 & 7 because invoices have not yet been generated. There are no reasons to anticipate there will be any difficulties.

Prior Performance/Next Phase Funding: #2

New Proposal Number: 98

New Proposal Title: A Feasibility Investigation of Reintroduction of Anadromous Salmonids Above Crocker-Huffman Dam on the Merced River

1. Prior CALFED project numbers, titles, and programs: *(list only projects for which you are the contract manager)*

01-N48 Juvenile Salmon Migratory Behavior Study

2. Prior CVPIA project numbers, titles, and programs: *(list only projects for which you are the contract manager)*
3. Have negotiations about contracts or contract amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

Yes -No -N/A

If no, please explain any difficulties:

4. Are the status, progress, and accomplishments of the applicant's current CALFED or CVPIA project(s) accurately stated?

Yes -No -N/A

If no, please explain any inaccuracies:

5. Is the applicant's progress towards these project(s)' milestones and outcomes to date satisfactory?

Yes -No -N/A

If no, please explain deficiencies:

6. Is the applicant's reporting, records keeping, and financial management of these projects satisfactory?

Yes -No -N/A

If no, please explain deficiencies:

7. Will the project(s) be ready for next phase funding in 2002, based on its current progress and expenditure rates?

-Yes -No N/A

If no, please explain:

Other Comments:

This is a relatively new contract that was executed in August 2001.

Prior Performance/Next Phase Funding: #3

New Proposal Number: 98

New Proposal Title: A Feasibility Investigation of Reintroduction of Anadromous Salmonids Above Crocker-Huffman Dam on the Merced River

1. Prior CALFED project numbers, titles, and programs: *(list only projects for which you are the contract manager)*
2. Prior CVPIA project numbers, titles, and programs: *(list only projects for which you are the contract manager)*

Temperature Feasibility Study on the Merced River Contract # 10181-1-Y144

3. Have negotiations about contracts or contract amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

Yes -No -N/A

If no, please explain any difficulties:

4. Are the status, progress, and accomplishments of the applicant's current CALFED or CVPIA project(s) accurately stated?

Yes -No -N/A

If no, please explain any inaccuracies:

5. Is the applicant's progress towards these project(s)' milestones and outcomes to date satisfactory?

Yes -No -N/A

If no, please explain deficiencies:

6. Is the applicant's reporting, records keeping, and financial management of these projects satisfactory?

Yes -No -N/A

If no, please explain deficiencies:

7. Will the project(s) be ready for next phase funding in 2002, based on its current progress and expenditure rates?

-Yes -No N/A

If no, please explain:

Other Comments:

Dave Vogel has been a responsible contractor for the FWs.

Environmental Compliance:

Proposal Number: 98

Applicant Organization: Natural Resource Scientists, Inc.

Proposal Title: A Feasibility Investigation of Reintroduction of Anadromous Salmonids Above Crocker-Huffman Dam on the Merced River

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

Yes No

If no, please explain:

A suction dredge will be used to sample riverbed particle size. A 1600 Agreement will likely be required for this work, as well as CEQA compliance.

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:

No budget or timeline listed because no permits were going to be obtained. Need to allow about 2 months and approximately \$772.72 for a 1600 Agreement.

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

Yes No

If yes, please explain:

1600 Agreement and CEQA compliance for suction dredge work. No other permits or environmental compliance needed.

Other Comments:

Budget:

Proposal Number: 98

Applicant Organization: Natural Resource Scientists, Inc.

Proposal Title: A Feasibility Investigation of Reintroduction of Anadromous Salmonids Above Crocker-Huffman Dam on the Merced River

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: