

# Proposal Reviews

## #83: Support for Fish Passage Program in the Sacramento River Region

HDR Engineering, Inc.

**Initial Selection Panel Review**

**Research and Restoration Technical Panel Review**

**Delta Regional Review**

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**Environmental Compliance**

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## Initial Selection Panel Review:

### CALFED Bay-Delta 2002 ERP PSP Initial Selection Panel Review

**Proposal Number:** 83

**Applicant Organization:** HDR Engineering, Inc.

**Proposal Title:** Support for Fish Passage Program in the Sacramento River Region

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).

<b>Fund</b>	
<b>As Is</b>	-
<b>In Part</b>	-
<b>With Conditions</b>	-
<b>Consider as Directed Action</b>	-
<b>Not Recommended</b>	<b>X</b>

Amount: **\$0**

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

**None**

Provide a brief explanation of your rating:

**This proposal seeks funding to provide support to the California Department of Water Resources Fish Passage Program and Flood Management Division in developing a long-term plan for improving fish passage in the Sacramento River region. The Selection Panel is concerned that the proposal lacks sufficient detail and focus and the project team lacks the necessary expertise to have a high level of confidence that the program will accomplish its objectives. The technical panel raised concerns that the proposal did not sufficiently identify how data would be quantified and how the hydraulic and geomorphological data would be related to fish. The technical panel also noted that the proposal did not adequately describe how fish information would be collected, and expressed concern that the applicant lacked necessary fish expertise. Emphasis on engineering approach versus an ecological approach could be problematic. The Selection Panel is also concerned about the lack of coordination between the Department of Water Resources Fish Passage Program and the Ecosystem Restoration Program.**

# Research and Restoration Technical Panel Review:

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

**Proposal Number:** 83

**Applicant Organization:** HDR Engineering, Inc.

**Proposal Title:** Support for Fish Passage Program in the Sacramento River Region

**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	<b>Identifying areas where fish may stray and become stranded is important but the proposal did not sufficiently identify how data would be quantified and how the hydraulic and geomorphological data would be related to fish.</b>
-Above average	
X 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?

The goals are clearly stated however the hypotheses are actually tasks. No hypotheses are tested. The project has three phases (1) identifying fish passage problems related to flood control and water supply infrastructure; (2) identifying potential solutions; and (3) prioritizing potential actions. Funds are requested for phase 1 which is important. Phase 1 of the project focuses on identifying passage and floodplain stranding problems. The underlying basis of the project is the lack of knowledge of the extent of the stranding. The phase 1 of the project will gather available hydraulic information. This seems a good first step prior to implementation of phase 2 and 3, where actions would be taken. In the justification specific examples are discussed, some are anecdotal, others are GIS based examples of potential problems, such as locations where stranding are known to occur. Seven hypotheses/tasks are discussed involving straying, passage blocks, and various hydraulic mechanisms that could cause stranding. The stepped progression with funds requested for a one year survey is reasonable. The panel does not imply that funding for

**phase I confers support for additional phases.**

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 will identify basic hydraulic and geomorphological issues. However, the project seems inadequate in integrating fish information. Simply stating that seine net studies will be conducted and the permitting will be obtained is inadequate. What is the extent of the sampling, when, where and what types of nets will be used? They also do not indicate how fish passage and stranding problems will be identified from photographs. The likelihood of success characterizing in fish distributions and the responses of the fish to the hydraulic and geomorphological structures is uncertain and therefore must be judged as low. Capabilities in hydraulic and geomorphological aspects are good and the reconnaissance level information that project will collect in Phase I is expected to be of value for identifying where to direct future efforts. The lack of fisheries expertise make it questionable that the HDR is qualified to identify solution that involve knowledge of fish behavior and life-history.**

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?

**An assessment report is valuable and will provide guidance in identifying potential problems for years and will advance the state of knowledge of the location of potential stranding and straying problems. This can be useful to managers in prioritizing area for restoration.**

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

**Budget indirect cost at 44% is reasonable. Hourly rates are reasonable. Since the project has three phases while only the first phase is requested, the total cost and benefits cannot be assessed. The development of the GIS database in phase and evaluation of the information is realistic.**

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 reviewers were split, one low, one high. The high ranking noted value to fish passage improvement program for prioritizing future projects. The low ranking felt the study did not have a scientific approach and was concerned that the field methods may not yield much useful comparative data to evaluate cost-benefit of the projects.**

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?

**Environmental compliance review identified legal and regulatory problems. The project requires permits to take fish.**

**Miscellaneous comments:**

**A comprehensive evaluation of the hydraulic aspects that may lead to standing and straying in fish is an excellent idea. This is valuable work that should be useful for future planning for restoration. The proposed phase II and III work is not discussed. Part of the value of the phase I rests in phases II and III. The proposed work is on identifying problems. Developing solutions requires a larger effort and is work that most likely could be carried out by a variety of groups, some of which may have greater experience in fish ecology. HDR has not demonstrated extensive expertise in developing fisheries solutions. As conceived, solutions may be engineered for areas without fish. In fairness, though the proposal is for a reconnaissance of problems and this is valuable and feasible.**

## **Delta Regional Review:**

**Proposal Number:** 83

**Proposal Title:** Support for Fish Passage Program in the Sacramento River Region

Overall Ranking:   -Low   -Medium   **XHigh**

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

**Results from this project could be extremely valuable in efforts to minimize stranding potential in designing the Statten Island, McCormick-Williamson and other restoration projects.**

1. Is the project feasible based on local constraints?

**X**Yes -No

How?

**Project is ambitious for a one-year effort, but feasible given qualifications and experience of applicant team. Panel recommends postponing tasks 10 and 11 (preparation for Phase II) pending results of Phase I. This would reduce Phase I cost by about \$60,000.**

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

**X**Yes -No

How?

**This project directly addresses Strategic goals 1 and 3 by facilitating passage of spring and fall run Chinook salmon and steelhead trout to upstream spawning grounds or to downstream rearing areas. Assuming Phase I results indicate that stranding by the various mechanisms described in the proposal imposes a substantial reduction in successful egg deposition or a substantial loss rate on juveniles, this project would contribute to the AFRP goal to double natural production of anadromous fish.**

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

**X**Yes -No

How?

**Partnership with DWR Fish Passage Improvement Program. Results from this project could be extremely valuable in efforts to minimize stranding potential in designing the Statten Island, McCormick-Williamson and other restoration projects. This study would also help the Fish Passage Improvement Program focus and prioritize future projects. Results from this project would also help inform the Corps of Engineers Comprehensive Plan development.**

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

XYes -No

How?

**Provisions are made to include consultation with agencies and stakeholder groups and to obtain landowner permission to access private land.**

Other Comments:

**(1) To thoroughly document at least two or three examples of each potential stranding mechanism and obtain a statistically defensible estimate of the magnitude of the impact these mechanisms have on fish populations, 20 should probably be the minimum (rather than maximum) number of sites evaluated.**



## **Sacramento Regional Review:**

**Proposal Number:** 83

**Applicant Organization:** HDR Engineering, Inc.

**Proposal Title:** Support for Fish Passage Program in the Sacramento River Region

Overall Ranking: Low Medium High

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

**The Review Panel had several concerns about the feasibility of this project given legal and hydrological constraints. The experimental design was dubious for several tasks.**

1. Is the project feasible based on local constraints?

Yes No

How?

**Legal issues:** While this may be a worthy proposal, its legality should be reviewed. HDR would be doing work for DWR FPIP, who have provided no letter describing the proposed relationship between the two parties. Key questions include: 1) does this arrangement bypass State sole source contracting laws; 2) is this arrangement counter to Gov. Davis order that State agencies should not contract work out as a means to bypass his hiring freeze; and 3) would DWR have any legal management authority if the contract is between CALFED and HDR (ie how would DWR direct the work)?

**Permitting and Local constraints:** The proponents do not yet appear to have the necessary ESA sampling permits and permission to access or sample private lands on the floodplain. The proponents believe that most of the lands in river floodplains is in public ownership, which may not be accurate.

**Hydrology:** What will HDR do if it Year 1 is dry (without overbank flows)?

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

Yes No

How?

**The PSP specifically identifies fish stranding and passage as a key issue: Fish stranding studies. Studied need to focus on developing programs to reduce or eliminate fish stranding in the active stream channels, floodplains, shallow ponds and borrow areas. Field surveys are needed to assess fish stranding under a range of flow conditions. (Strategic Goal 4, fish passage).**

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?

**The linkage with DWR FPIP provides a good linkage with other ongoing regional efforts. However, the Review Panel was surprised that the applicants did not mention potential linkages with other similar projects in the area:**

**1) DWR is already doing a NMFS-mandated stranding survey for the Feather River 2) The CALFED North Delta Program is already working on a project to address upstream fish passage issues at Fremont Weir. 3) Natural Heritage Institute, Yolo Basin Foundation and DWR are already working on habitat projects in Yolo Bypass to improve habitat quality, including the reduction of stranding. This was based on fairly extensive data collected by DWR under a previous CALFED-funded study.**

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

Yes -No

How?

**The project would assist the DWR FPIP, who provide linkages to several organizations. As noted previously, there is no indication that the team has the support of local stakeholders, whose support would be important for field sampling and access.**

Other Comments:

**The proposal was a bit confusing; there were lots of figures, but no figure numbers or explanations of why they were provided.**

**Perhaps the biggest concern about this proposal is that the study is following neither the scientific or adaptive management models. For Hypothesis 3-6, it is clear that the authors have already decided on their conclusion this study is designed to support the conclusion, NOT test a hypothesis. For example, Hypothesis 3 states that: We propose to show (my emphasis) how development causes direct or indirect geomorphologic configuration in the floodplain that leads to fish passage problems**

**The field methods may not yield much in the way of useful comparative data to evaluate cost-benefits of projects. The authors propose to collect data on relative fish abundance and species composition. This is not useful to quantify the number of salmon, splittail or steelhead that could be saved with a particular project.**

# External Scientific: #1

## Research and Restoration External Scientific Review Form

Proposal Number: **83**

Applicant Organization: **HDR Engineering, Inc.**

Proposal Title: **Support for Fish Passage Program in the Sacramento River Region**

### 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.**

<b>Overall Evaluation Summary Rating</b>	<b>Provide a brief explanation of your summary rating</b>
<b>-Excellent</b>	<b>First phase is extremely valuable. Because the second phase lacks details and qualifications on fisheries appears weaker the proposal is rated good instead of excellent.</b>
<b>XGood</b>	
<b>-Poor</b>	

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

**The project has three phases (1)identifying fish passage problems related to flood control and water supply infrastructure; (2)identifying potential solutions; and (3) prioritizing potential actions. Funds are requested for phase 1. Identifying potential stranding areas is important**

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?

**Phase 1 of the project focuses on identifying passage and floodplain stranding problems. The underlying basis of the project is the lack of knowledge of the extent of the stranding. The phase 1 of the project will gather available hydraulic information. This seems a good first step prior to implementation of phase 2 and 3, where actions would be taken. In the justification specific examples are discussed, some are anecdotal others are GIS based examples of potential problems, such as locations where stranding are known to occur. Seven hypotheses are discussed involving straying, passage blocks, and various hydraulic mechanisms that could cause stranding. The hypotheses seem relatively comprehensive and well considered. The stepped progression with funds requested for a one year survey is reasonable.**

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 mostly to consider geomorphological configurations and hydraulic functions of streams and flood plains. For example: straying may be increases by drains within basins that may have the smell of the natal grounds, but not provide passage routes to the grounds; River channel construction produce unnatural scour that hinder or block fish passage. The study will bring existing information into a GIS database. Details of the approach are missing including the temporal information on flows, water levels and velocities. Also missing are discussions of fish characteristics that need to be linked to the hydraulic conditions. For example, potential problems are not put into the context of fishs swimming ability, which seems important to quantify the potential problems. It appears most problems will be based on informal observations of fish stranding and presence. This information should be useful in total however. In phase 1, permits for fish collection will be requested for limited use of seines and traps. Since these approaches are not discussed in detail, and involve major design considerations, the biological aspects of the approach are not defined. Some approaches address hydraulic manipulations without prior knowledge of fish distributions. It seems that the approach will identify major historical hydrology problems. However, a hydraulic approach alone will not be accurate for identifying all problems related to fish and may identify some situations that are not a problem for fish. The iformation will be useful for decisions makers but it will be incomplete.**

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 will identify basic hydraulic and geomorphological issues. However the project seems inadequate in determining fish distributions. Simply stating the seine net studies will be conducted and the permitting will be conducted is inadequate. What is the extent of the sampling, when, where and what types of nets will be used, are they adequate to actually catch fish, what life stages are targeted? These issues are not discussed and so the likelihood of success characterizing fish is uncertain and therefore must be judged as low.**

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 measures criteria are qualitative and not suitable. For example, a measure of the extent and accuracy of information collected in the database is not a suitable measure because there is no mention of how extent and accuracy will be assessed. No other information will be available except that in the database. Other measures have similar problems. Quality and thoroughness of**

**a plan is not a measure, since no standard was identified for comparison.**

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?

**An assessment report is potentially valuable, but it is not clear what value this will be to managers without good information of fish distributions.**

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 group has experience with hydraulics studies, but less experience with the biological aspects of the project. No qualifications are presented for Trevor Kennedy, the fisheries biologist noted in the organization chart. The HDR firm is large and seems to have a suitable ranking nationally. Again the weakness of the proposal is in terms of the biological aspects. The lack of details here may suggest limited experience in identifying biological aspects and developing solutions.**

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

**Budget indirect costs 44% are reasonable. Hourly rates are reasonable. Since the project is a three phases while only the first phase is requested the total cost and benefits can not be assessed. The development of the GIS database in phase and evaluation of the information is realistic.**

**Miscellaneous comments:**

**A comprehensive evaluation of the hydraulic aspects that may lead to standing and straying in fish is an excellent idea. This is valuable work that should be useful for future planning for restoration. The proposed phase II and III work is not discussed. Part of the value of the phase I rests in the phases II and III. The proposed work is on identifying problems. Developing solutions requires a larger effort and is work that most likely could be carried out by a variety of groups some of which may have greater experience in fish ecology. In this proposal the group has not demonstrated extensive expertise in developing engineering solutions or experience in fisheries. As conceived, solutions may be engineered for areas without fish. In fairness, though the proposal is for a reconnaissance of problems and this is valuable and feasible.**

## External Scientific: #2

### Research and Restoration External Scientific Review Form

Proposal Number: 83

Applicant Organization: HDR Engineering, Inc.

Proposal Title: Support for Fish Passage Program in the Sacramento River Region

#### 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 elevated the overall rating to very good because I think this proposal has potential and should receive consideration.
XGood	
-Poor	

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

**Rating: Very Good. Overall goal is good. Applicants do not adequately state hypotheses and objectives. The seven items are tasks and not hypotheses.**

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: Excellent. Applicants describe their conceptual models/hypotheses here. The arguments are sound from a justification perspective.**

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: Very Good. Systematic tasks are identified and described in sufficient detail. I had trouble linking the hypotheses with the tasks.**

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: Very Good. Very feasible. However, because the objectives or hypotheses were not articulated in a way to fully evaluate the feasibility, an excellent rating is not possible.**

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: Good. Qualitative measures identified, but lacks sufficient detail on quantification.**

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: Excellent. Good identification of products and endpoints.**

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. Mostly team credentials and corporate quals given. However, the 3 primary researchers appear to have good credentials. The applicant, Pavetti, is not listed.**

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

**Rating: Very Good. The budget seems adequate. I am curious at the extraordinarily high computer costs.**

**Miscellaneous comments:**

**The applicants follow the objectives of the CALFED ERP program, which strengthens their proposal. However, their own hypotheses are not developed sufficiently to address these broader objectives.**

# External Scientific: #3

## Research and Restoration External Scientific Review Form

Proposal Number: **83**

Applicant Organization: **HDR Engineering, Inc.**

Proposal Title: **Support for Fish Passage Program in the Sacramento River Region**

### 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.**

<b>Overall Evaluation Summary Rating</b>	<b>Provide a brief explanation of your summary rating</b>
<input checked="" type="checkbox"/> Excellent	<b>The proposed work is needed. It describes a systematic approach to identifying and correcting fish passage problems in the Sacramento River basin. It would catalogue these problems in a readily accessed database, and help prioritize remedial actions. Although details of the approach are thin, I believe that this work has a very good chance of generating information that will be useful for many years. The planned coordination with agencies and other interested groups in the basin will help ensure a valid approach to collecting and interpreting data.</b>
<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?

**Yes. The proposal describes a systematic approach to identifying fish passage problems in the Sacramento River and prioritizing potential solutions to these problems. The goals, objectives, and hypotheses are clearly stated, consistent, and very relevant to problems in the region. Although funding for only Phase 1 is requested, the proposal shows the "long view," i.e., how this activity would be used in subsequent R&D, restoration, and monitoring phases.**



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 proposers are cognizant of earlier work and scientific knowledge of passage problems of salmonids in the Central Valley. The proposal is well-integrated with the objectives of CALFED ERP and Science Program goals (p. 12), and, if funded, the work would be well-coordinated with other interest groups in the watershed. The proposed work is well-grounded in existing knowledge, based on the citation of particular passage problems 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?

**Good, clear presentation of seven working hypotheses, but the methods that would be used to test these hypotheses are sketchy. The description of the tasks and uncertainties indicates a good understanding of the numerous problems associated with fish passage in the Sacramento River.**

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 feasibility of this effort (as outlined in p. 9-10) is a bit uncertain. For example the proposers don't provide much indication of how they would identify problems from aerial photos and topographic maps. They allude to sampling fish if given permission, which would help validate their techniques. Despite the lack of details, these are fairly standard techniques, and I believe that this reconnaissance-level work is feasible and can be successfully accomplished.**

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?

**A good, thorough list of performance measures are provided, but not much detail about how performance would be quantified.**

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?

**Page 11 of the proposal lists the products of the Phase 1 effort, including preliminary and final Phase 1 assessment reports, a GIS/ARC View database with new information, a study design and research plan for eventual Phase 2, and environmental documentation for Phase 2. These will be very valuable products that can be used by the agencies long after this project is over.**

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 engineering and ecosystem restoration aspects of the team look very good. Not much information is provided about the fisheries biology expertise of the team, but the planned connection to DWR is a plus.**

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

**Yes**

**Miscellaneous comments:**

**No major flaws in this proposal.**

## External Scientific: #4

### Research and Restoration External Scientific Review Form

Proposal Number: 83

Applicant Organization: HDR Engineering, Inc.

Proposal Title: Support for Fish Passage Program in the Sacramento River Region

#### 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	The proposal is rather broad and at times vague as to what will actually get done. Other than that, I was impressed with the proposal and feel the project will be a valuable contribution toward restoring at-risk fish populations.
XGood	
-Poor	

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

Clearly the concept is timely and important. Several at-risk fish populations migrate through this area, and the stranding of both adults and juveniles may constitute a major threat to the populations viability. Most of the available information seems to be piecemeal, so compiling all the information together would be a first step toward addressing some of the problems. It is hard to comprehend the scale of the project, though, when "Figure X" is missing from the proposal (not a good sign for a group that plans to maintain a large GIS database). The goals are rather broadly defined, and as such, it is somewhat difficult to figure out what the project will encompass. To a certain extent, this is to be expected with a project of this nature. I'm a bit concerned with the lack of emphasis on the biological aspects of the project. For example, phase I includes both assessment of problems and suggestions for fixes, but no monitoring and little or no sampling of fish. How will the problems be

assessed in the absence of this type of information? I understand that phase II will address some of these issues, but I want to emphasize the need for biological monitoring before fixes are implemented. Otherwise, we won't know if we're focusing on key problems or whether the improvements are effective.

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?

**There appears to be strong justification to undertake this project. The Central Valley is an area that has been highly impacted by development, and rectifying some of the impacts on fish populations is long overdue. Clearly, cataloging the existing problem areas will help to understand the extent of the problem and point to possible solutions. One thing that is not clear - how significant is this problem relative to other problems faced by the entire population? Are these stranding events rare or common occurrences?**

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?

**For the most part, the approach seems reasonable. However, much of the information that will be gathered is anecdotal. Thus, compiling a bunch of anecdotal information may miss some information. How are the researchers going to make sure there are no major knowledge gaps? Is the entire stretch of river going to be sampled to perhaps discover problems that were previously not known about? Also, whenever possible, an effort should be made to assess the magnitude of loss attributable to each problem area and which particular species (and life stage) are affected.**

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?

**Completing a large proportion of what is proposed should be quite feasible. However, as mentioned above, the approaches are very broadly defined so I don't think the researchers will be able to determine how much they can get done until they start working on the project.**

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?

**These all seem reasonable.**

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 products are appropriate will likely have considerable value for future studies.**

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 group appears capable of carrying out the project. The main staff has a lot of experience, and they appear to be well supported. It is unclear, though, what the involvement of the fisheries expert will be. I strongly encourage such involvement for many of the reasons stated above. Trevor Kennedy, the fisheries expert, was include in the flow chart but not in the biographical sketches. Why not?**

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

**This appears to be a relative cheap investment to understand the magnitude of problem that is potentially very significant.**

**Miscellaneous comments:**

**This project should be very valuable. The emphasis, though, appears to be on engineering fixes. I strongly encourage the involvement of biologists and the establishment of a thorough monitoring program before any fixes are implemented.**

## **Environmental Compliance:**

**Proposal Number:** 83

**Applicant Organization:** HDR Engineering, Inc.

**Proposal Title:** Support for Fish Passage Program in the Sacramento River Region

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

-Yes No

If no, please explain:

**Although the applicant has checked off the appropriate permits, he must complete NEPA and CEQA documents for the take of federal and state listed species respectively. He must consult with NMFS for take of anadromous fish species.**

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:

**I cannot adequately answer this question. They have budgeted some money for permitting but may need more money and time to complete the NEPA/CEQA documents.**

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

Yes -No

If yes, please explain:

**If they obtain the necessary permits for Phase 1 collection of threatened and endangered species, the project is feasible.**

Other Comments:

## **Budget:**

**Proposal Number:** 83

**Applicant Organization:** HDR Engineering, Inc.

**Proposal Title:** Support for Fish Passage Program in the Sacramento River Region

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:

**Doesn't list specifics just states it is a discounted standard Federal overhead**

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).

**Small difference of \$.06**

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: