Proposal Reviews

#159: Physical modeling experiments to guide river restoration projects

Stillwater Sciences

Final Selection Panel Review	
Initial Selection Panel Review	
Research and Restoration Technical Panel Review	
Delta Regional Review	
San Joaquin Regional Review	
Sacramento Regional Review	
External Scientific Review	#1 #2
Prior Performance/Next Phase Funding	#1 #2 #3 #4
Environmental Compliance	
Budget	

Final Selection Panel Review:

CALFED Bay-Delta 2002 ERP PSP
Final Selection Panel Review

Proposal Number: 159

Applicant Organization: Stillwater Sciences

Proposal Title: Physical modeling experiments to guide river restoration projects

Please provide an overall evaluation rating.

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

Amount: **$2472750**

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

none

Provide a brief explanation of your rating:

In response to the panel's initial review the proposal team attempted to fully explain the proposal. They list channel formation projects where flume experiments would be useful, but still don't demonstrate the actual connection. Their evidence, and the thrust of the proposal, is all future oriented with little or no retrospective aspects tying the work back to existing projects. They propose to upgrade the UCB flumes to address dam removal studies (evidenced only in response comments), and they have addressed questions on dissemination of information and cleared up the budget.

Submitting this information in a comment letter does not provide an adequate basis to recommend funding for the project now. Instead, the proposal should be rewritten to incorporate these comments. In a rewrite, the authors should also more critically address comments of the initial review process.

Initial Selection Panel Review:

CALFED Bay-Delta 2002 ERP PSP
Initial Selection Panel Review

Proposal Number: 159

Applicant Organization: Stillwater Sciences

Proposal Title: Physical modeling experiments to guide river restoration projects

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	**-**
In Part	**-**
With Conditions	**-**
Consider as Directed Action	**X**
Not Recommended	**-**

Amount: **$2,472,750.00**

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

None

Provide a brief explanation of your rating:

This project proposes to build a flume, do flume experiments on gravel augmentation, analyze effects of dam removal, sediment transport, channel meander, etc. and then use this information to quantify fluvial geomorphic models. This is the right team to do this research; however, there is no evidence that the authors of the proposal attempted to show connections of their approaches to ongoing studies by other researchers who are working on geomorphological processes on the rivers under CALFED auspices. These connections are important both to show the significance of the flume studies, and to guide the types of flume studies to be undertaken. The authors should also demonstrate how the type of flume studies and resulting models can be scaled up to actual river processes. This could be done with citation of appropriate literature. They also need to explain what we will learn from the flume studies that havent been learned by years of channel hydraulic studies by academics and agencies. Lastly, the authors should present a properly calculated budget when they submit a reworked proposal for consideration as a directed proposal.

Research and Restoration Technical Panel Review:

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

Proposal Number: 159

Applicant Organization: Stillwater Sciences

Proposal Title: Physical modeling experiments to guide river restoration projects

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
XSuperior	**The science behind this proposal is excellent. This is a very good proposal that has developed relevant, testable hypotheses accompanied by a detailed experimental design. The three external reviewers all rated this proposal as excellent and thought this was a highly relevant and valuable study. Regional review was only medium because of a confusion involving budget. Clarification of budget issues is much needed before funding is approved. The panels extremely positive support of this research might not be so positive if the true requested budget is $2.5 million.**
-Above 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?

   The overall goals of increased understanding of physical processes and their implications for restoration are clearly set forth in three sets of testable, relevant hypotheses. The project would use physical modeling experiments to advance the knowledge of restoration techniques, and the underlying conceptual models are well thought out.

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 reviewers thought the project was technically feasible with a high likelihood of success.

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

   The reviewers thought the products would have great value to the scientific community as well as decision makers and restoration scientists. However, a more specific description of the final guidelines was requested by one reviewer. The three tasks were highly relevant to decision makers. The outcome of the final task, channel and floodplain design, is somewhat speculative and requires construction of a new flume. Nevertheless, this task which would result in a model incorporating lateral erosion rates and meandering dynamics would greatly advance our current limited efforts of modeling river systems in one dimension. Reviewers wanted assurance about the merit of the numerical models. Although peer review of the final product is proposed, some level of peer review at intermediate stages is needed. It is important that the models be user-friendly so that they can be used by a diversity of investigators and decision makers.

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

   The main concern of regional reviewers was that the budget sheet did not jive with the budget summary. Several other applicants had problems with the on-line calculations in the budget sheet, however, so this in itself should not be held against the proposal. There are other budget concerns, though, in that the budget total listed in item 17 ($2,472,750) doesnt match what is shown on the budget justification sheet (on the order of $1.5M). Based on the labor hours listed, salaries and benefits added up to be less than $900,000, with another $330,000 requested for flume construction. The tasks are independent of one another, so the panel could agree to fund one, two or all three of the experiments. The third experiment would require the construction of a new flume, which would cost about $150,000. The modification of an existing flume for the dam removal and gravel augmentation tasks was listed as $180,000. It was unclear whether the laser microtopographic scanner was already available at the lab, or was included in laboratory expenses. The role of graduate students should be clarified. The proposal implies funding two students for three years (12,000 labor hours, or six person-years), but this is not clear. The experiments seem perfectly designed for more student involvement rather than a heavy dependency on consultants. Some of the costs are for salaries of technicians and graduate students, and at $9/hr, these are very reasonable. There was concern that no cost sharing was listed, when the objectives, such as understanding effects of dam removal, apply to an area much larger than just the CALFED region and are of interest to many other agencies. A revised proposal might include some UC Berkeley match for facilities usage. A clear list of costs by task was needed, and costs should be clarified before funding this.

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?

   The Delta, San Joaquin and Sacramento Regional Reviews all rated this proposal as medium. The main concern was that the budget summary was incorrect, but as mentioned before, this was a problem with the software and not necessarily the applicants. The other concern was that Calfed was picking up the full tab and no cost share was listed.

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?

Project management costs were budgeted within all tasks, making it difficult to determine exact costs, rather than identified as a separate task.. The budget summary did not match the budget justification. The contractor fee was included in Indirect Costs, rather than under Services. No comments on compliance or prior performance.

Miscellaneous comments:

Delta Regional Review:

Proposal Number: 159

Proposal Title: Physical modeling experiments to guide river restoration projects

Overall Ranking: **-**Low **X**Medium **-**High

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

This is a solid project, but not essential to the implementation of Delta or east side tributary restoration.

1. Is the project feasible based on local constraints?

   XYes **-**No

   How?

   Applicant team has successfully performed physical and numerical modeling projects and has experience in designing large-scale channel restoration projects. The issue of how to scale up the results of this project to real stream channels must be addressed by the Technical Panel.

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

   XYes **-**No

   How?

   Project would support regional priority #2 (floodplain habitat) and multi-regional priority #6 (Ensure recovery of at-risk species by developing conceptual understanding and models of processes that cross multiple regions.). Project would also further restoration of natural channel and riparian processes as called for by the AFRP and the CVPIA b(13) gravel enhancement program.

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

   XYes **-**No

   How?

   Physical model run results would be used to validate and improve numerical models that are now being used (misused?) to plan and evaluate gravel enhancement, dam removal or large scale channel-floodplain restoration projects.

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

XYes **-**No

How?

X

Other Comments:

The main deliverables (e.g., guidelines for assessing the potential benefits of gravel augmentation) are not adequately described.

San Joaquin Regional Review:

Proposal Number: 159

Applicant Organization: Stillwater Sciences

Proposal Title: Physical modeling experiments to guide river restoration projects

Overall Ranking: **-**Low **X**Medium **-**High

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

Potentially important research project but given the sole reliance on CalFed funding and great applicability to CalFed projects, should solicit more input from those who would benefit from the results. Concern that there is no cost sharing from other sources for this basic research.

1. Is the project feasible based on local constraints?

   XYes **-**No

   How?

   Project requires physical facilities that UCB will provide

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

   XYes **-**No

   How?

   Through the physical modeling the project will advance the theoretical understanding of important restoration strategies and link these to the numerical models used by restorations project practioners

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

   XYes **-**No

   How?

   Qualified yes. The whole purpose of the project is to improve theoretical understanding of ongoing projects but they were not explicit which projects would specifically benefit from the research. Communication and outreach could be better.

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

   -Yes **X**No

How?

Not really relevant This is a research project that would not benefit from local (Central Valley) input unless there were qualified practitioners that could be more closely involved

Other Comments:

Important experiments but there was concern that there is no cost sharing with basic research funding from other sources. Question whether CalFed be bearing sole burden of basic research

Ongoing dissemination of results very important. Should have provided more detail on that part

Sacramento Regional Review:

Proposal Number: 159

Applicant Organization: Stillwater Sciences

Proposal Title: Physical modeling experiments to guide river restoration projects

Overall Ranking: **-**Low **X**Medium **-**High

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

This looks like a highly relevant and valuable study. The team is exceptionally well qualified. Our biggest concern is that the Budget Summary had major errors. We encourage to applicants to resubmit this proposal next year.

1. Is the project feasible based on local constraints?

   XYes **-**No

   How?

   The project would be done in collaboration with UCD, who would provide the experimental facilities. The staff appear to be very well qualified to conduct this study.

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

   XYes **-**No

   How?

   Two of the PSP priorities are listed as:

   1. Conduct adaptive management experiments in regard to natural and modified flow regimes to promote ecosystem functions or otherwise supports restoration actions. 2. Restore geomorphic processes in stream and riparian corridors.

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

   -Yes **X**No

   How?

   The proposal would evaluate three different types of questions that are directly relevant to restoration in the region: 1) gravel augmentation; 2) dam removal; and 3) channel/floodplain design. The results could be an important contribution to our restoration toolbox. However, the Review Panel was interested in specific applications of the results to proposed restoration projects in the region.

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

   -Yes **X**No

   How?

   Like similar research projects, local groups in the watershed are not directly involved with this study. UCD would be a major project partner.

Other Comments:

This looks like a highly relevant and valuable study. The team is exceptionally well qualified and has a good track record on CALFED projects. The Panel's biggest concern is that the budget made no sense. In one area, the total request is 2.4 million, but the Budget Summary requests $53,000/3 years. The latter would be an incredible deal, but we doubt that it is accurate. The former is probably justifiable; however, we would first like to see a more accurate budget breakdown. We encourage to applicants to resubmit this proposal next year.

External Scientific: #1

Research and Restoration External Scientific Review Form

Proposal Number: **159**

Applicant Organization: **Stillwater Sciences**

Proposal Title: **Physical modeling experiments to guide river restoration projects**

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:

<u>Excellent:</u> outstanding in all respects;
<u>Good:</u> quality but some deficiencies;
<u>Poor:</u> serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
XExcellent	**Hypotheses relevant to Calfed restoration activities are presented, and the appropriate tests of these ideas are clearly described. The authors do a good job of integrating new, innovative science with the practical needs of the land manager.**
-Good	
-Poor	

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

   The goals of this project are clearly stated and the project would use physical modeling experiments to advance the knowledge of restoration techniques. Based on my reviews of other Calfed proposals, the hypotheses advanced in this proposal were refreshingly thoughtful, testable concepts of direct concern to Calfed management activities. Three major topics would be investigated: dam removal, gravel augmentation, and channel and floodplain redesign. Although not a major goal, insights on the effects of gravel mining would also be a probable product

2. **<u>Justification.</u>** 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?

Gravel augmentation projects are implemented downstream of dams to improve spawning and rearing habitat. Little is known about what size gravel, how much gravel and how often gravel should be added to achieve the desired conditions, and this proposal would directly address those questions. Dam removal is a restoration option in many areas (but how common in the Calfed region?), but the channel response to the release of sediment behind the dams in unknown. Channels of the Sacramento/San Joaquin river system have been affected by reductions in flood peaks and in coarse sediment supply. This project would elucidate the principles of designing a stable channel geometry given changes in discharge and sediment supply. The conceptual models proposed by the authors clearly extend beyond conventional rhetoric on channel dynamics, and they build upon recent scientific advances. By advancing the understanding of physical processes and their implications for restoration, this project addresses several ERP, Science Program and CVPIA priorities.

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 well designed, and will result in several practical decision tools to be used by land managers. The approach includes physical experiments in a flume at the University of California's Richmond Field Station. Details of the types of flume runs with variable hydrographs and varying sediment supply are clearly stated. Data from the experiments will be used to validate a sediment transport model, which would provide a useful tool for restoration scientists. In the experiments involving dam removal, the effects of reservoir width, reservoir volumes and grain size distribution will be tested. Again, experimental and numerical results will be synthesized to generate a set of guidelines that managers can use to assess expected channel changes. In the third set of experiments, channel and floodplain design will be tested using varying sediment supply, varying discharge, and introducing the confining effect of levees that narrow the floodplain. Existing numerical modeling may be modified based on experimental results, resulting in a set of recommendations for redesigning channel and floodplains in response to changes in discharge and sediment supply.

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 technically feasible, especially because the researchers can use existing laboratory facilities at the Richmond Field Station. The dam removal and gravel augmentation portions of the experiment would use existing flumes with slight modifications. A new flume would have to be constructed to investigate the channel and floodplain design portion of the experiment. The techniques in this portion of the proposal have not been widely tested, but smaller scale experiments suggest that this phase is also feasible.

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 results of the physical and numerical modeling studies will be peer-reviewed. Comments from the peer reviews will be submitted to Calfed as a performance measure. A realistic time frame for the project is listed in Table 8.

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 contributions from these experiments will advance the knowledge of fluvial geomorphology and sediment transport, and will be of interest to the wider scientific community. In addition, several sets of guidelines to help shape Calfed's restoration strategies will be formulated. The authors seem to have a good sense of the type of technical transfer that needs to occur between the science side and the implementation side. For example, in the gravel augmentation phase, the authors will identify the trade-offs between magnitude and frequency of gravel additions while minimizing project costs, and so optimize the cost/benefit ratio for such projects. Information will be disseminated in a variety of ways, including project videos and a website.

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 research team is highly qualified to conduct these studies. They are well respected and considered leaders in their field. They already have experience conduting flume experiments at the Richmond Field Station.

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

   Graduate students and technicians are scheduled to conduct the bulk of the work. Labor hours are the biggest cost item, because flume studies are very labor intensive. However, at $9/hr for the students and technicians, the salaries are a bargain. Lab supplies are $327,000, which includes construction of a flume for Phase 3. The overhead rate is listed as 131.14 (percent?)

Miscellaneous comments:

On p. 3, the proposal refers to work by Hansler, but no reference is listed.

External Scientific: #2

Research and Restoration External Scientific Review Form

Proposal Number: **159**

Applicant Organization: **Stillwater Sciences**

Proposal Title: **Physical modeling experiments to guide river restoration projects**

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:

<u>Excellent:</u> outstanding in all respects;
<u>Good:</u> quality but some deficiencies;
<u>Poor:</u> serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
XExcellent	**This one of the best research proposals that I have reviewed for CalFed. It actually has developed hypotheses and detailed experimental designs for testing. This should advance the science of fluvial geomorphology and be valuable for future restoration efforts.**
-Good	
-Poor	

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

   The overall goal of increased understanding of physical processes and their implications for restoration is clearly set forth via three sets of testable hypotheses. The proposed study is both timely and quite important as it should enhance the scientific theory relative to restoration of alluvial streams.

2. **<u>Justification.</u>** 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?

Conceptual models are clearly provided for each of the three sets of experiments. This proposal is clearly justified as a research projects with stated hypotheses and experimental designs for testing.

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?

   This proposal provides a well documented study design for the three experiments. The project is highly likely to provide novel information and further the scientific understanding of physical processes in streams.

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?

   Well documented and technically feasible and consistent with objectives. Likelihood for success is high.

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 and schedule for reporting is appropriate.

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?

   Products are of high potential value to the scientific community as well as decision-makers and practioners attempting stream restoration.

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 investigators are well qualified and have good track record. Available laboratory and infrastructure is a great complement to the proposed study.

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

   The proposed budget is quite reasonable in as much as the University is providing the laboratory facilities as modest cost.

Miscellaneous comments:

None

Prior Performance/Next Phase Funding: #1

New Proposal Number: 159

New Proposal Title: Physical modeling experiments to guide river restoration projects

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

   98-E09, Merced River Corridor Restoration Plan, Phase II, 2000-E05, Merced River Corridor Restoration Plan, Phase III,

   Ecosystem Restoration

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 contact 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?

   XYes -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 **X**N/A

If no, please explain:

This is not a next phase project.

Other Comments:

Prior Performance/Next Phase Funding: #2

New Proposal Number: 159

New Proposal Title: Physical modeling experiments to guide river restoration projects

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

   I have no knowledge

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

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

   -Yes -No **X**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 **X**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 **X**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:

Prior Performance/Next Phase Funding: #3

New Proposal Number: 159

New Proposal Title: Physical modeling experiments to guide river restoration projects

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

   00-F04, A Mechanistic Approach to Riparian to Riparian Restoration in the San Joaquin Basin; CALFED ERP

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

3. Have negotiations about contracts or contact 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?

   XYes -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 **X**N/A

   If no, please explain:

Other Comments:

Applicant has performed well in implementing previous project.

Prior Performance/Next Phase Funding: #4

New Proposal Number: 159

New Proposal Title: Physical modeling experiments to guide river restoration projects

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*)

   11332-0-MO09 - Stanislaus River: Smolt Survival

3. Have negotiations about contracts or contact 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?

   XYes -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 **X**N/A

   If no, please explain:

Other Comments:

Environmental Compliance:

Proposal Number: 159

Applicant Organization: Stillwater Sciences

Proposal Title: Physical modeling experiments to guide river restoration projects

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

   XYes **-**No

   If no, please explain:

   Modeling only, no permits or environmental documentation necessary.

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

   XYes **-**No

   If no, please explain:

   N/A

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

   -Yes **X**No

   If yes, please explain:

Other Comments:

Budget:

Proposal Number: 159

Applicant Organization: Stillwater Sciences

Proposal Title: Physical modeling experiments to guide river restoration projects

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

   XYes **-**No

   If no, please explain:

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

   -Yes **X**No

   If no, please explain:

   Budget Summary does, but no work schedule included in proposal except Fig 8 which has no data input.

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

   -Yes **X**No

   If no, please explain:

   Contractor fee has been included in Indirect Costs, rather than Services column.

4. Are appropriate project management costs clearly identified?

   -Yes **X**No

   If no, please explain:

   PM costs have been budgeted within all tasks making it difficult to determine exact costs, rather than identified as a separate task.

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

   -Yes **X**No

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

See "Comment" following Grand Total noting difficulty having input total. Requested amount (17a) was $2,472,750; Budget Summary total for all 3 years added and noted as Grand Total is $53,201. Columns and Rows also do not reflect correct totals, some being "0".

6. Does the budget justification adequately explain major expenses?

   -Yes **X**No

   If no, please explain:

   No work schedule data to compare.

7. Are there other budget issues that warrant consideration?

   -Yes **X**No

   If yes, please explain:

Other Comments: