

Proposal Reviews

#48: Evaluate, Demonstrate, and Promote Management Practices to Reduce Impacts of Irrigation Drainage within the San Joaquin River Watershed

Coalition for Urban/Rural Environmental Stewardship (CURES)

Research and Restoration Technical Panel Review

San Joaquin Regional Review

	#1
External Scientific Review	#2
	#3

Environmental Compliance

Budget

Research and Restoration Technical Panel Review:

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

Proposal Number: 48

Applicant Organization: Coalition for Urban/Rural Environmental Stewardship (CURES)

Proposal Title: Evaluate, Demonstrate, and Promote Management Practices to Reduce Impacts of Irrigation Drainage within the San Joaquin River Watershed

Review:

Please provide an overall evaluation summary rating:

Superior: outstanding in all respects;

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

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

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

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
-Superior	The technical reviews were varied in their rating, ranging from poor to excellent. The panel discussion resulted in not supporting this proposal. In addition, the lack of support from the regional and administrative reviews was an important factor in supporting the panel discussion. Partnering with local agencies considered important for this proposal. A better job at cost-sharing would be a positive in a resubmittal. The panel discussion related to the following: 1) severe concerns in the lack of adequate WQ monitoring -- of the 2.6 mil requested, only 100K are allotted for monitoring, which is insufficient. 2) No QA/QC or identification of appropriate SOPs -- at least the EPA methods should be followed. 3) The proposal lacks a scientific literature review, which is critical. 4) Such a review would have shown the dangers to fish of using polyacrylamides for soil improvement. 5) Only one farmer has been signed up -- inadequate identification of farmer participation. 6) No education/extension model has been proposed. 7) A cursory reference to CAFF made, but not details given. 8) The P.I. doesn't indicate even a passing acquaintance with Biologically Integrated Farming Systems (BIOS) or other volunteer cross-media pollution reduction programs in the San Joaquin Valley.
-Above average	
-Adequate	
XNot recommended	

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

The goals are timely and important to address the highly contaminated irrigation return flows and to address the potential management practices that will likely be legislated. Five objectives were identified that range from evaluation of alternatives to public outreach. Other than demo projects, no implementation of BMPs is part of this project.

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 panel discussion focused on the fact that the approach lacked specific details on the WQ assessments to recommend effective BMPs (see Figure 2). Lack of adequate experimental design presented. The applicants do not explain how they will determine 'effectiveness', and why they focus on pyrethroids. No details given on test organisms, frequency, thresholds for toxic response, etc. Principal Investigator lacks technical background to evaluate analyses.

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 environmental outreach and education products are well described. Continued correspondence with stakeholders is a plus. However, the technical products are not described in sufficient detail.

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

No budget issues were identified in the budget review. One external reviewer questioned the high amount of the budget request. The primary reviewer noted that the hour allocation in the proposal did not match the budget request.

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?

One regional review -- medium rank. It is believed that this proposal duplicates work being done by a number of agencies. The lack of adequate linking with other efforts was noted. The involvement of the CV RWQCB was considered a plus.

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 legal or regulatory issues were not adequately identified in the proposal. Conflicting information was given regarding the link to CEQA. The lack of budget for permitting or other environmental documentation was considered a negative.

Miscellaneous comments:

San Joaquin Regional Review:

Proposal Number: 48

Applicant Organization: Coalition for Urban/Rural Environmental Stewardship (CURES)

Proposal Title: Evaluate, Demonstrate, and Promote Management Practices to Reduce Impacts of Irrigation Drainage within the San Joaquin River Watershed

Overall Ranking: -Low ☒Medium -High

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

The reviewers believe that proposal, to evaluate Best Management Practices and disseminate that information to farmers in the San Joaquin Valley, duplicates work being done by a number of other agencies and organizations.

1. Is the project feasible based on local constraints?

☒Yes -No

How?

While it appears from the proposal, that an organization is to be built from scratch, in fact, one of the subcontractors, the CV CRWQCB, will be monitoring the work. The participation of the Regional Board would lend credibility to any results.

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

☒Yes -No

How?

The priority addressed is the reduction of degradation of water quality by improving the quality of agricultural drainage water flowing into the San Joaquin river.

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?

While no coordinated work with other activities in the region, the proponents are aware of other watershed-wide work and of the potential usefulness of the results of the proposed study to those efforts. The proposal includes a large outreach component to apprise other groups of the results.

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

☒ Yes -No

How?

A most important component of the proposal is the monitoring to be done by the CV RWQCB, which will lend credibility to the results. A farmer, who is active in his local Resource Conservation District, is also involved in the study.

Other Comments:

It is not clear that this proposal offers a unique approach to the development on-farm managment practices. Evidence of coordination with similar efforts would be helpful. Reviewers also pointed out that this type of work has not been done for orchards.

External Scientific: #1

Research and Restoration External Scientific Review Form

Proposal Number: **48**

Applicant Organization: **Coalition for Urban/Rural Environmental Stewardship (CURES)**

Proposal Title: **Evaluate, Demonstrate, and Promote Management Practices to Reduce Impacts of Irrigation Drainage within the San Joaquin River Watershed**

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
X Excellent	Excellent rating because of comprehensive nature of public outreach associated with BMP evaluation and recommendation. Well within proposal that addressed the criteria.
-Good	
-Poor	

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

Rating: Excellent. Five objectives established that include evaluation of problems, establishment of demonstration projects, and public outreach to stakeholders.

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. Inclusion of conceptual model information and flowcharts were helpful to underscore premise of proposed work.

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. Well documented approach. However, public outreach objectives are dependent on adequate response and participation from farmers and other stakeholders. The question is how the applicant is going to ensure an adequate level of participation if the stakeholders are obstinate about participating.

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 project. Objectives are inter-related and approach is consistent with attaining most objectives.

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: Very Good. Performance measures commensurate with objectives and approach. My question of ensuring participation was partially addressed in this section. Efficiency of evaluation is directly related to involvement of stakeholders.

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. Well-documented products. Continued notification and status update through the newsletter might increase stakeholder involvement as project proceeds.

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: Excellent. Complementary skills of applicant and collaborators are excellent to complete this project.

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

Rating: Very Good. Budget seems reasonable for this ambitious project. However, hour allocation in proposal does not match budget request.

Miscellaneous comments:

Good proposal on a project that could become a template for similar projects in other parts of California. The key will be the extent of successful interaction and involvement of local farmers and other stakeholders. Lessons-learned should be part of the products.

External Scientific: #2

Research and Restoration External Scientific Review Form

Proposal Number: **48**

Applicant Organization: **Coalition for Urban/Rural Environmental Stewardship (CURES)**

Proposal Title: **Evaluate, Demonstrate, and Promote Management Practices to Reduce Impacts of Irrigation Drainage within the San Joaquin River Watershed**

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):

I know Mr. Klassen, through the Sacramento River Watershed Program (SRWP) where I am the EPA project officer. He has received a small amount of funding through the OPFG of the SRWP. The contract is executed by the District.

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	Good, however, I have very great concerns about the lack of sufficient water quality monitoring in the proposal (only \$100,000 per year) for all the demonstration sites. It lacks sufficient detail on the QA/QC, sampling, and test methods to be conducted. We have to have faith in the proposal. Also, this project must have correction in the hourly rate of the principal investigator. This rate is inflated compared to other proposals. In addition, the pesticide registrants must be cost sharers in the proposal before funding is to occur. The proposal had a strong list of outreach publications which are great, however, before we can say a practice is doable and improves overall water quality, the proposal must have an effective and clear endpoints to be evaluated to move forward with specific MPs.
XGood	
-Poor	

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

The project goals, objectives and hypotheses are clearly stated.

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 is clear justification and need for this project to reduce pesticide loads to the SJR system, especially since OP TMDLs are under development.

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?

Since, the evaluation and demonstration of sites will be established to evaluate MPs for their efficiency, cost and feasibility. How will this be measured? Also, what about evaluation of enhancing the aquatic ecosystem? See figure 2, the parameters to decide whether to adopt irrigation runoff management considers, proximity to water, soil type, crop type, and economy. There is no consideration of the water quality measurements and improvement as a component of the evaluation of effective BMPs.

The proposal only very briefly discusses the monitoring to take place and only for ~\$100,000 per year out of a ~2.6M dollar project. It is also stated that the regional board will develop the monitoring protocols with input from CURES, CWI and others; however the board has the best expertise for that work. In addition, the proposal states that the evaluation of the monitoring results is to be conducted by CURES, but the PI for CURES clearly lacks the technical expertise to do this evaluation (see qualifications). The proposal lacks sufficient detail on the chemical and biological monitoring to be conducted, this is critical to assess the effectiveness of the BP in addition to the criteria list above (cost and feasibility). Questions to be addressed in the proposal include citations of specific test methods, how often to be tested, what is concerned a toxic response, what QA/QC procedures will be followed. I am concerned that spending only \$20,000 per year on column toxicity tests is not sufficient to assess toxicity and potential chemical interactions (ops + other chemical(s)) that could contribute to water quality impairment.

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?

It takes time to get growers on board. Therefore, the proposal should clearly have the growers on board in the proposal development phase. The feasibility will depend on this effort.

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?

Good list of educational/outreach activities are provided and will be beneficial to the success of obtaining additional grower support. Performance measures must include improved water quality evaluations, this is lacking from the proposal.

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?

Again, the evaluation of effective MPs must include a water quality component. As stated under the hypothesis is to evaluate these MPs in the SJR watershed can help the regional farmers learn of relevant localized economic and management options thereby improving the chances for broader MP adoption in the SJR watershed. This project must have effective measures of this evaluation before the project does the education component.

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

The team has adequate experience and good past performance for the educational and outreach efforts. The regional board has the expertise to conduct the chemical and biological sampling, develop sampling plan, QA/QC plan. However, the proposal would be must stronger with the addition of USDA, UC sustainable agriculture and/or IPM experts.

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

If this project gets funding, I strongly encourage and recommend that the list of potential cost share partners (eg., the pesticide registrants, Makheshim-Agan and Dow AgroSciences) be cost partners at the minimum amount of \$50,000 each. In addition, the hourly rate of Mr. Klassen is very high (\$120/hr) compared all other proposals that I have reviewed. This hourly rate must be reduced and/or hire staff to produce the educational publications, newsletters at a reasonable amount for the project.

Miscellaneous comments:

As discussed under relationship to other ecosystem restoration projects, how will the DO TMDL steering committee benefit from this projects information if this project is to start November 2002 and the DO committee is developing their implementation plan in the fall of 2002?

External Scientific: #3

Research and Restoration External Scientific Review Form

Proposal Number: **48**

Applicant Organization: **Coalition for Urban/Rural Environmental Stewardship (CURES)**

Proposal Title: **Evaluate, Demonstrate, and Promote Management Practices to Reduce Impacts of Irrigation Drainage within the San Joaquin River Watershed**

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
X Excellent	This is a timely and pertinent proposal by an organization capable of meeting the stated goals. The products of this work will serve growers and managers equally in evaluating MPs for surface irrigation return flow. My only criticism is the proposers did not better define 'effectiveness' as stated in goal 1 of the executive summary. I think this part should be rewritten with clearly defined reductions in pollutant loads as criteria for effectiveness of MPs. This work is important for the overall restoration efforts and reduction of pollutant loads in the San Joaquin River Watershed and should be funded.
-Good	
-Poor	

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

The goals are timely and important for two reasons 1) irrigation return flow is highly elevated in nutrients and represents a major source of non-point source nutrients as well as pesticides and heavy metals and 2) management practices (MPs) will likely be legislated in the near future and this type of advanced education and outreach will make the transition easier for growers. Goals, objectives and hypotheses are stated and consistent through the proposal.

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?

Yes, the study is justified relative to existing knowledge. While the science behind the MPs discussed in the proposal is well established, this proposal takes the next step in working with growers to identify the optimal MP for irrigation return flow based on their specific situation. The conceptual model is clearly stated and explains the need and the methods for accomplishing the goals in the proposal.

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 detailed in a logically consistent manner and should meet the objectives of the project. Results from this project will be important to growers seeking to mediate irrigation return flow pollutants and will be useful to environmental managers who need to evaluate the effectiveness of irrigation return flow MPs in reducing pollutant loads. The project will generate useful information for management and planning purposes.

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?

I believe the approach is technically feasible but I worry about the lack of discussion about how results from the demonstration farms will be utilized. It is not clear to me how 'effectiveness' as stated in goal 1 of the Executive Summary will be determined. For example, will reduction of pollutant load be the criteria for 'effectiveness'? How do you compare effectiveness of MPs designed to solve specific problems, e.g. pesticides versus erosion? The proposers need to determine how they will define 'effectiveness'.

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?

See 4 above for some concerns. I don't think these concerns warrant too much concern but the proposers do need to work with the people developing the monitoring protocols to make sure their sample design allows for statistical comparison of the irrigation return flow pollutant loads before and after implementation of the MPs.

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?

There are two separate lines of value from this project.

First, the education outreach portion of the project will be of great benefit to the growers.

Second, the monitoring component should provide valuable information about how well the MPs perform in actual farm settings.

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 applicants are unknown to me professionally or personally so I can't evaluate their past track records. Calfed, though, has recently funded CURES for a different project. I believe the project team has the necessary expertise to implement and complete the project. It might be necessary for them to include a biogeochemist to assist in evaluating the monitoring data and differential fluxes from the irrigation return flows under different MPs.

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

I don't really have a professional basis to answer whether the budget is reasonable because the budgets I routinely work with do not include so much salary. This will be a time/people intensive project, though, so I do understand the necessity for lots of hours. As an academic, however, the budget seems a bit high.

Miscellaneous comments:

Environmental Compliance:

Proposal Number: 48

Applicant Organization: Coalition for Urban/Rural Environmental Stewardship (CURES)

Proposal Title: Evaluate, Demonstrate, and Promote Management Practices to Reduce Impacts of Irrigation Drainage within the San Joaquin River Watershed

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

-Yes ☒No

If no, please explain:

Explanation of why CEQA is not required is unclear. Applicant states that CEQA is not required, but then states that proposal is a "project" under CEQA. This needs to be clarified. If the project does fall under CEQA, it may qualify for a Categorical Exemption. Also, some of the proposed management practices may need additional permits (i.e. grading permits for constructed wetlands, RWQCB approval and/or other local permits for PAM and humic acid application.

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 money is budgeted for permitting or other environmental documentation.

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

-Yes ☒No

If yes, please explain:

If necessary permits are obtained and CEQA documents are filed, this project is feasible.

Other Comments:

Budget:

Proposal Number: 48

Applicant Organization: Coalition for Urban/Rural Environmental Stewardship (CURES)

Proposal Title: Evaluate, Demonstrate, and Promote Management Practices to Reduce Impacts of Irrigation Drainage within the San Joaquin River Watershed

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?

XYes -No

If no, please explain:

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

XYes -No

If no, please explain:

4. Are appropriate project management costs clearly identified?

XYes -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?

XYes -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?

XYes -No

If no, please explain:

7. Are there other budget issues that warrant consideration?

-Yes ☒No

If yes, please explain:

Other Comments: