

Biotechnical Streambank Stabilization, Assessment and Demonstration on the Lower Merced River

Gwen M Huff

Initial Selection Panel Review

0061

Biotechnical Streambank Stabilization, Assessment and Demonstration on the Lower Merced River

Resource Conservation District, East Merced

Applicant amount requested: \$1,035,430

Fund This Amount: \$0

The selection panel recommendation is to not fund the proposal. Although the proposal has merits from an engineering standpoint, it has a weak nexus to the agricultural lands and therefore, is not as responsive to this solicitation as other proposals.

The proposal does not specify that the streambank stabilization project has specific connectivity to agricultural lands. The proposal includes only one demonstration site, and would have benefitted from including a number of sites representing, for example, different sediment types. It is not clear if the applicant has engaged the agricultural community, which is essential to ensuring their participation. Furthermore, the proposal does not do a good job of demonstrating the likelihood of success (i.e., it is unclear if the farmers would express interest in participating). The monitoring plan would not be developed until after the project has been funded.

Do Not Fund

Technical Panel Review

Proposal Name: Biotechnical Streambank Stabilization, Assessment and Demonstration on the Lower Merced River

Applicant Organization: Resource Conservation District, East Merced

Amount Requested: \$1,035,430

Panel Rating:

Fair - Lacking in one or more critical aspects

Panel Summary

The panel felt that this proposal had one or more sound or worthy concepts. Based on its technical merits, however, this proposal is lacking in one or more critical aspects and should not be funded in its current form. The panel recognized this as an important geographic area to conduct work; however, they found the proposed project's study design and monitoring approach to be inadequate. For example, the panel noted that the proposal's monitoring plan will not be developed until after the project was funded and will only cover a one-year time period. The panel also had concerns regarding: (1) farmers being an outreach target, rather than actual partners, (2) the cost to implement the project, which the panel believes could be much lower, and (3) the lack of an assessment as to how and why habitat created represents an improvement over what existed prior to the project. The panel would have liked to have seen a discussion of other potential funding sources for this work. It would also like to see the project's design and monitoring protocols strengthened to better test and document streambank treatments, and funds devoted to longer term monitoring. The panel noted that the highest value of implementing this project was in its demonstration of the benefits of restoration efforts, and its function as a marketing tool to other farmers in the area. This benefit could be greatly improved by modifying the design to incorporate effectiveness testing of different vegetation buffer combinations or by putting demonstration projects in more than one location where stream reaches with a range of

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Technical Panel Review

characteristics are selected.

External Technical Review #1

Proposal Number: 0061

Proposal Name: Biotechnical Streambank Stabilization, Assessment and Demonstration on the Lower Merced River

Applicant Organization: Resource Conservation District, East Merced

Amount Requested: \$1,035,430

Goals

Rating	fair
Comments	<p>The proposal is very well written and describes the problem, and ecosystem goals are identified and linked to ERP goals. Objectives are well understood and clearly stated.</p> <p>However, no agricultural goals are mentioned, and neither farmers nor farmland are involved in any of the project activities.</p>

Justification And Conceptual Model

Rating	fair
Comments	<p>Agricultural systems are not identified or discussed as being a part of the proposed work.</p> <p>However, the authors explain the model and the hypothesis very clearly. It just doesn't have anything to do with agriculture.</p> <p>The proposed demonstration project seems to be well justified, if only it had something to do with agriculture....</p>

External Technical Review #1

Approach

Rating	fair
Comments	See previous comments. Again, everything is well written and described, and a good deal of information could probably be learned if the project were completed, but the link between the project and agricultural systems is completely lacking.

Feasibility

Rating	excellent
Comments	The project seems to be very feasible within the timeline given.

Performance Evaluation

Rating	very good
Comments	Monitoring and performance evaluation techniques are very well described, and would likely help demonstrate the efficacy of the restoration efforts.

Proposed Outcomes

Rating	fair
Comments	Because agricultural systems are not a part of the proposed work, it is highly unlikely that results will be useful to farmers or farm-related agencies, although the information would certainly be valuable to those working on river restoration, particularly the Merced River itself.

Capabilities

Rating	excellent
Comments	All project participants seem eminently well qualified for their project tasks.

External Technical Review #1

Cost-Benefits

Rating	fair
Comments	The costs of the project seem way too high for the level of effort that I believe will be necessary, especially the number of hours for salaries for RCD staff members (Tasks 1 and 2). Likewise, the subcontractor costs seem to be higher than the work would warrant.

Overall Evaluation Summary Rating

Rating	fair
Comments	The proposal received a low rating because, although it was very clearly written and all scientific and informational bases were covered, it did not involve farms or farming activities.

External Technical Review #2

Proposal Number: 0061

Proposal Name: Biotechnical Streambank Stabilization, Assessment and Demonstration on the Lower Merced River

Applicant Organization: Resource Conservation District, East Merced

Amount Requested: \$1,035,430

Goals

Rating	very good
Comments	<p>The goals of the project are laid out clearly in the proposal and clearly tied to improving agricultural and environmental conditions in the lower Merced River. The demonstration project is called for in a restoration plan. A broadscale outreach program is designed to bring additional landowners to implement bio-technical bank stabilization projects.</p> <p>The objective for decreasing sediment delivery to the Merced may not be satisfactorily measurable or detectable right away given the size of the demonstration project (400 feet) and the methods proposed (turbidity measurements) for the project. Otherwise an extensive physical monitoring program is proposed at the site and reach level that can be replicated over time.</p>

Justification And Conceptual Model

Rating	good
Comments	The proposal doesn't completely discuss the rationale behind choosing a demonstration project over a more extensive restoration project. The applicant mentioned there were already additional landowners interested and

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External Technical Review #2

	<p>available to participate. Additional sites could make the project and relevance of the monitoring more justifiable.</p> <p>The proposal illustrates the benefit of demonstrating success of bank stabilization with bio-engineering techniques to landowners prior to additional implementation, but a few more and larger sites would help in this regard. Unsure how the scale of the project effect will be detectable and therefore extrapolated to the remainder of this reach of the Merced River.</p>
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Approach

Rating	fair
Comments	<p>It would have helped to seen information from other bank stabilization projects such as on the Sacramento incorporated into the design, monitoring and outreach efforts. This is not a new project type it is only new on the lower Merced. There shoud be a significant amount of information to draw from for project and monitoring design and citizen outreach.</p> <p>The overall methods and approach are generally well laid out, but the level of detail for data collection, analysis and site selection is limited. It was hard to determine if information on erosion reduction, specifically, will be collected at the right scale and with statistical significance. In addition, there was no information provided on how the demonstartion and control sites will be selected . The demo site appears to already be selected based on landowner agreement? Will all of the sites be of the same type e.g. outerbend, unvegetated, therefore camparable?</p>

Feasibility

Rating	very good
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External Technical Review #2

Comments	<p>There is high confidence that the proponent can implement the project as proposed. They already have baseline information for the area and a working relationship with stakeholders in the area.</p> <p>There is a question about the feasibility of achieving the ecosystem restoration goals given the large amount of existing rip rap and the high cost of projects of this type. More information about how much change can reasonably be expected would be helpful in evaluating the feasibility and value of the project in the long run.</p>
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Performance Evaluation

Rating	excellent
Comments	The majority of the project is a monitoring plan with clear performance goals laid out. In addition the proponent provided performance measures for the outreach and implementation tasks as well.

Proposed Outcomes

Rating	good
Comments	<p>If outreach goals are achieved and significant funding is available, the potential value could be high if many landowners sign up to make changes to their bank protection activities.</p> <p>The primary value of this project is to the Merced stakeholders. Activities of this type are ongoing in many other areas already so this is not groundbreaking work. All results will be useful in comparing regionally especially through the conservation district system.</p>

Capabilities

Rating	excellent
Comments	A good team approach is presented. Proponents are involved locally and have over 5 years experience working in the basin. The Conservaton District is drawing on outside expertise where necessary through the National Sediment Lab.

Cost-Benefits

Rating	good
Comments	<p>On the surface, the overall cost of this project is quite high, given that only 400 feet of bank will be treated and there are many more miles of bank that need treatment in order to significantly effect bank erosion is this area of the Merced. However, the actual cost of the construction implementation is in line with typical construction costs.</p> <p>Much of the cost of the project is for collecting baseline information for a monitoring system and implementation monitoring of the demonstraton site. Monitoring is often expensive, but it would be useful to see some cost projections for future bank stabilization and monitoring needs. Even if this was a fairly rough estimate, it would provide better cost benefit information for the long term goals of the project. Maybe this could be one of the tasks?</p> <p>The outreach portion of the project has a high potential benefit to cost ratio.</p>

Overall Evaluation Summary Rating

Rating	good
Comments	The proposal is generally well laid out with clear goals and workplan.

External Technical Review #2

The two main concerns are the scale of the demonstration site relative to detecting instream effects of erosion control in such a large reach and system; And the scale in relation to the overall need in the study reach. There was also no discussion about how the team will take upstream conditions and erosion factors into consideration when monitoring and interpreting the results.

Additionally little information was provided on the parameters for site selection and comparison against one another and as indicators for the reach.

External Technical Review #3

Proposal Number: 0061

Proposal Name: Biotechnical Streambank Stabilization, Assessment and Demonstration on the Lower Merced River

Applicant Organization: Resource Conservation District, East Merced

Amount Requested: \$1,035,430

Goals

Rating	good
Comments	The proposal adequately links to the ERP goals as well as the agricultural goals. An extensive outreach program is proposed to communicate project results to the landowners.

Justification And Conceptual Model

Rating	fair
Comments	A clear conceptual model is advanced, but the proposal is highly unlikely to produce new scientific findings. The entire proposal is based on applying known biotechnical bank protection technology to an already selected site on the Merced River.

Approach

Rating	poor
Comments	Emphasis is placed on reach-scale surveys (Task 3), but no criteria are presented for site classification or site selection. The site for the project has already been selected. Very little information is provided on the details of the data to be collected, the analyses to be conducted (Task 4) and how these will be used to develop a bank protection design for

External Technical Review #3

	<p>the selected site (Task 5). There appears to be little effort incorporated into the project to identify costs associated with implementation of the bank protection, which presumably will be an item of real interest to landowners, co-operating agencies and decision makers (Task 6). There appears to be an assumption of self-mitigation for environmental impacts of the project (Task 6). It is highly unlikely that project impacts can be assessed with a single year of monitoring (Task 7), and longer term monitoring depends on as yet unsecured funding.</p>
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Feasibility

Rating	good
Comments	<p>Using existing technology and knowledge, fitted to the site, the project can be implemented. Given the sand bed nature of the river and the potential for high local scour depths at the base of the bank during high flows, it is highly likely that an extensive below-water toe will have to be constructed for the bank stabilization to succeed. Therefore, the real comparison between existing revetments and the biotechnical design will be on the above-water portion of the bank. Are the physical characteristics of the proposed project site similar to the already revetted site and the natural control site -- this will be critical for extrapolation of the results. Is the project self-mitigating, or will additional work and cost be required off-site for environmental mitigation purposes.</p>

Performance Evaluation

Rating	good
Comments	<p>Performance evaluation and monitoring are included in the proposal, but I'm sceptical that a 1-year monitoring period will be sufficient to evaluate the project either on-site or off-site.</p>

External Technical Review #3

Proposed Outcomes

Rating	good
Comments	It is likely that products of value will be generated from the project. However, project costs will need to be carefully recorded and analysed if the technology is to be accepted by farmers and landowners. For example, it is unusual for a coffer dam to be constructed when bank protection is being installed. Post-construction O costs will need to be tracked carefully.

Capabilities

Rating	very good
Comments	The team members have the expertise and experience to conduct the project.

Cost-Benefits

Rating	fair
Comments	With the level of information provided for the individual Tasks it is not really possible to assess the adequacy of the budget.

Overall Evaluation Summary Rating

Rating	fair
Comments	The project is primarily application of existing science and technology to a new location. I doubt that any new scientific advances will be made from the project, but if the project is properly designed and implmented, and is successfull, I think that there will be some outreach benefits. Very little detail is provided within the Tasks to identify what will actually be done. With more information, a higher ranking might eventuate.

San Joaquin Regional Panel Review

Proposal Number: 0061

Proposal Name: Biotechnical Streambank Stabilization, Assessment and Demonstration on the Lower Merced River

Applicant Organization: Resource Conservation District, East Merced

1. Applicability to ERP goals and regional priorities.

Yes, this project has merit on several fronts: 1) Streambank stabilization, 2) Non-native plant removal (invasive species) and habitat restoration, 3) Reduce sediment deposition in Merced River, and 4) Recovery of Endangered Species and other at risk species.

notes:

The proposal clearly is linked to ERP PSP priorities. While this technique is not new, it will be innovative on the Merced River and used for some additional modification. The proposal is limited to this region.

2. Links with other restoration actions.

This model is expected to show successful treatment of erosive streambanks and restoration of plant and animal habitats at selected reaches of the Merced River allowing for reproduction of similar type treatments on other reaches. This project expands upon similar work began by East Merced RCD and Merced River Stakeholders. Some of the work by these two groups will streamline the time required to get necessary permits for this work. This project will also benefit from EMRCD's hosting of several educational workshops on this and similar related topics.

San Joaquin Regional Panel Review

notes:

Due to the involvement of the proponents, it seems like this proposal will be tied into other restoration planning and implementation efforts ongoing on the Merced River. It is implementation of a locally adopted plan.

3. Local circumstances.

This project will demonstrate treatment on areas of the Merced River that have severe erosion and bank stabilization concerns. There is some concern that only one site will be treated while 3 others will be monitored (unsure if this is enough replication). Project is feasible and most likely will be successful in treating bank erosion. Uncertain about the economics of duplicating this intensive treatment. No major concerns about local constraints other than getting permits which is already being worked on.

notes:

The proposal seems to be cutting through "red" tape as the proponents are working on a blanket permit for restoration activity in the basin. Many landowners are involved in the Stakeholder Group and their involvement will contribute to the success of linking landowners with positive restoration measures.

4. Local involvement.

Yes. EMRCD and Merced River Stakeholders have already been working on issues related to this proposal. This will further their causes. Four outreach/info sharing community workshops, press releases to media, landowner assistance and updates at Merced River Stakeholders meetings planned.

San Joaquin Regional Panel Review

notes:

The proposal identifies and works with multiple local stakeholders who have developed and done watershed planning explicitly requesting this type of education. Sediment and bank stability is a large issue on the lower Merced River and people are very interested in the development of methods for what they can do.

5. Local value.

The project will have great value in the sense that it will demo a solution to many resource problems that currently exist on the Merced River. This sort of problem also exists on many other streams in the Central Valley and, as such, will also serve to benefit those water courses. It will likely only make a small contribution in and of itself to the current erosion, sedimentation, water quality, and degraded habitat situations.

notes:

While there was concern over the long term cost-benefit analysis, bioengineering is very expensive and it may be difficult to replicate over time. However, many local folks are interested in this and this proposal is likely tied in to the Merced River Stakeholders desire to broaden their education in different useful conservation and restoration measures.

6. Applicant history.

Applicant and supporting staff have very strong knowledge of the problems that exist and successful ways of treating them. Credentials provided in application show strong qualifications.

San Joaquin Regional Panel Review

notes:

Proponent from inside and outside the region are all well qualified.

7. Summary of Overall Panel Discussion and Review

The panel's overall discussion found overarching support of this proposal technically, fiscally, and building upon Merced River watershed planning. In particular, the broad support and involvement of stakeholders should contribute to the success of this proposal, which primarily is of educational benefit because the size of the treatment area is small compared to the entire river. Also, it proposes some innovative bioengineering approaches in the region, which could provide new information about protecting and restoring T species.

8. Panel Quality Ranking

Very Good

notes:

The proposal is technically and fiscally sound, and the panel ranked it very good. The proposal raised concern that it outlined and committed agency personnel, time, and involvement without showing committal of agencies for their participation. Although the stated benefits to T species may be overstated given the size of the project, the education and outreach may lead to successful implication over time on more landowners' properties.

9. Regional Priority Ranking

Very High

notes:

San Joaquin Regional Panel Review

The panel ranked this proposal's regional priority very high. It has broad support in the watershed with many landowner organizations involved. It likely is the result of locally-adopted watershed planning.

Environmental Compliance Review

Proposal Number: 0061

Proposal Name: Biotechnical Streambank Stabilization, Assessment and Demonstration on the Lower Merced River

Applicant Organization: Resource Conservation District, East Merced

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

Yes.

2. Is compliance with National Environmental Policy Act (NEPA) required for this project?

Yes.

3. Does this project qualify for an Exemption or Exclusion under CEQA and NEPA, respectively?

No.

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

Yes.

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

No.

Comments:

It was not clearly stated in the proposal. The applicant appears to be aware that a CEQA document will be needed. They are relying on a Programmatic Document which will require that they complete a tiered Mitigated NegDec. It is not clear if they plan on doing a tiered document.

6. Has the CEQA/NEPA document been completed?

No.

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

Yes.

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Environmental Compliance Review

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

Yes.

9. Did the applicant adequately identify other legal or regulatory compliance issues (Incidental Take permits, Scientific Collecting permits, etc.) that may affect the project?

Yes.

Comments:

Applicant identified the federal permits but if there are state listed species in the area a MOU or Scientific Collecting permit may be required. Consult with DFG for state listed species.

Identify those additional permits that may be needed by this project:

As stated above, MOU/SCP

10. Does the proposal include written permission from the owners of any private property on which project activities are proposed or, if specific locations for project activities are not yet determined, is it likely that permission for access can be obtained?

Yes.

Comments:

The applicant states that landowner permission is required but a letter from the landowner was not attached.

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

No.

Budget Review

Proposal Number: 0061

Proposal Name: Biotechnical Streambank Stabilization, Assessment and Demonstration on the Lower Merced River

Applicant Organization: Resource Conservation District, East Merced

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

Yes.

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

Yes.

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

Yes.

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

No.

If no, please explain:

Classification for each staff person should be identified in the budget to complete budget analysis.

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

Yes.

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

No.

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Budget Review

If no, please explain:

Staff benefits rates were not identified on the budget form.

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

No.

If no, please explain:

Difficult to compare rates since classifications were not identified.

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

Yes.

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

The proposal consists of approximately 65% of the total proposal performed primarily by preselected subcontractors. Recommend detailed budget from subcontractors to ensure labor rates are comparable or market rate information is available for comparables.

9. Are project management expenses appropriately budgeted?

Yes.

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

No.

If no, please explain:

Overhead rate is only 3%. After personnel costs and benefits rates are identified, possible adjustments may need to be made.

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

No.

Budget Review

If no, please explain:

Budget line item is \$30,000. However, no major equipment over \$5,000 was identified. However, if awarded a list of equipment purchased over \$500 and a useful life value will need to be identified for equipment tracking and auditing purposes.

12. For equipment \geq \$5,000, was a separate worksheet filled out?

Please note: No overhead or indirect rate charges are allowed on the equipment purchases

No.

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

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

No.

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

Yes.

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

Yes.

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

Approximately \$72,700 is identified as cost share for the proposal.

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

Yes.

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

Budget Review

point for negotiation a grant agreement?

Yes.

If no, please explain:

The proposed grantee is proposing that we make adjustments to the budget flexibility and task retention clauses. We are currently researching this issue.

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

Yes.

If yes, please explain:

Recommend more detail for personnel charges to complete rate comparables

19. Provide revised amount requested based upon your review:

\$

Other comments:

Complete budget narrative was not provided.