Proposal Reviews

#75: Stony Creek Hydrology and Non-Native Eradication Project

Glenn County Resource Conservation District

Initial Selection Panel Review	
Research and Restoration Technical Panel Review	
Sacramento Regional Review	
External Scientific Review	#1 #2 #3 #4 #5
Prior Performance/Next Phase Funding	
Environmental Compliance	
Budget	

Initial Selection Panel Review:

CALFED Bay-Delta 2002 ERP PSP
Initial Selection Panel Review

Proposal Number: 75

Applicant Organization: Glenn County Resource Conservation District

Proposal Title: Stony Creek Hydrology and Non-Native Eradication Project

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	**-**
Not Recommended	**X**

Amount: **$0**

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

None

Provide a brief explanation of your rating:

This proposal was rated very favorable by the regional panel and the work enjoys considerable local and multi-agency support. However, it was rated as only adequate by the technical panel, with serious questions raised by many of the reviewers concerning research design for the individual components and the linkages between components. The Selection Panel's conclusion is that activities to control invasive and restore native plants, and the study of channel dynamics, are all worthwhile undertakings in Stony Creek, but the proposal needs to make improvements in research design, includng incorporation of adaptive management principles, to be acceptable for funding. The applicants are encouraged to rethink the approach and consider reapplying in future solicitations.

Research and Restoration Technical Panel Review:

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

Proposal Number: 75

Applicant Organization: Glenn County Resource Conservation District

Proposal Title: Stony Creek Hydrology and Non-Native Eradication Project

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 adequate rating would be contingent on a proper lit. review and research design, otherwise this project would not be recommended. There is great local support for this type of project as reflected in the regional reviews. With research science review and adjustments to the research goals and design, this project would have much greater merit.**
-Above average	
XAdequate	
-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?

   A. This proposal had very mixed reviews form poor to excellent with an average of good. Some reviewers felt the goals, objectives and hypotheses were clear others felt they were not. In general, most felt suggested changes could be made to make this an excellent proposal. "hypotheses are not as clear with respect to hydrology and the simple removal of non-natives with a combined effort to remove non-natives and revegetate with native species" B. Some reviewers felt the conceptual model was weak and some felt it was clear. "the conceptual model is clear", "it may have negative impacts on fish or bird habitat", "will removal of non-natives ameliorate the erosion problems if the erratic dam releases continue"

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?

   A. Mixed good to bad reviews - "If the sampling design for the natural revegetation vs. planting is improved and appropriate resources for continuing the research is solidified, meaningful information on addressing invasive species will come from this work", "the group assembled seems to be a definite highlight to this proposal", "CALFED should find out what sensitive spp. this project may or may not impact or benefit", "experimental approach could be clarified", "will continued treatment be required", , "applicants appear fully qualified for this work", "the approach seems very solid and will documented and the mapping component may lead to novel methodologies", "feasibility appears high", "originality seems to be lacking in the design", "monitoring results of treatments and documentation of applied practices are adequate quantifiable measures of success", "UCCE is asking CALFED to invest in their infrastructure with the purchase of a $171,720. digital spectroscopy". B. Mixed - "detailed performance measures are inadequate"

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?

   A. Yes, but mixed B. Yes, but mixed C. Yes/No - treatment of 7 to 12 miles of creek and landowner education is a valuable product. "the mapping component will be a useful product", "it is highly unlikely to produce product value from this program if all the focus is on presentations and education".

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

   A. Yes/No mixed reviews - "proposal request for funding is reasonable", "would be more comfortable funding in full if it was using established techniques".

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?

   A. Sacramento - High -"project is very high in regional importance, components are very complete and clear, results should be applicable statewide"

   B. Yes - The regional reviewers liked this project, "project is very appropriate for the geographic area", "proposal meets PSP Sacramento region restoration priorities 1,2,3,4 and 7 and is linked with many groups"

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?

   Mainly No, a few concerns are NEPA documentation needed, pest permits needed, and leaving arundo cuttings along banks for erosion control.

Miscellaneous comments:

None

Sacramento Regional Review:

Proposal Number: 75

Applicant Organization: Glenn County Resource Conservation District

Proposal Title: Stony Creek Hydrology and Non-Native Eradication Project

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

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

The Panel concurred that this project is very high in regional importance. The project components are very complete and clear. Project results should be applicable statewide.

1. Is the project feasible based on local constraints?

   XYes **-**No

   How?

   This proposed project is very appropriate for the geographic area. It has five (5) cost share partners for $373,000 and has multi-agency support.

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

   XYes **-**No

   How?

   The proposal meets PSP Sacramento Region Restoration Priorities No. 1, 2, 3, 4 and 7.

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?

   It is linked with Arundo del Norte Arundo Eradication Projects, the Tehama County First Phase Team Arundo-Upper Sacramento (TAUS), the Glenn County RCD Projects and the Tehama County Flood Control & Water Conservation District.

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

   XYes **-**No

   How?

Outreach is already underway with landowners. 19 Landowners signed on to date. Additionally, the project has ten (10) county and state participants.

Other Comments:

This pilot project involves non-native species eradication with the following components: Outreach, education, permitting, mapping, eradication, HEC Modeling, environmental bank stabilization, restoration and monitoring.

External Scientific: #1

Research and Restoration External Scientific Review Form

Proposal Number: **75**

Applicant Organization: **Glenn County Resource Conservation District**

Proposal Title: **Stony Creek Hydrology and Non-Native Eradication Project**

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**
-Excellent	**It is obvious that much work has gone into the development of this proposal. I particularly appreciated the layout of the proposal, such that each section in the proposal related to a section in this review. However, I have highlighted a few deficiencies, particularly in the justification, approach, and cost/benefit sections of this review.**
XGood	
-Poor	

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

   The goals and objectives are clearly stated. Removal of Arundo donax and Tamarisk is clearly a timely and important concept.

   The hypotheses are not as clear, however. The hypothesis with respect to hydrology appears to be that removing these non-native species from the center of the stream channel will lower the elevation of the streambed and therefore cause a lower water surface elevation, which it is hoped will reduce bank erosion. However, these non-native species consume three times more water than native plants (p. 3) - might the reduced transpirational losses not offset the reduction in streambed elevation? Also, it is noted that these non-native species occur in the center of the stream channel. Wouldn't their removal allow the water to flow quicker, which

could increase the rate of sediment pickup and therefore erosion?

The second hypothesis relates to revegetation and suggests comparing the results of simple removal of non-natives with a combined effort to remove non-natives and revegetate with native species. This is a good idea, but it is not developed as fully as it could have been (see Approach, below).

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?

   This proposal is the second phase of a project that was funded in 2000 but did not begin until October 2001. The first phase is too young to have results, though the intent appears to be that this proposal builds on the knowledge and techniques generated from the first project. It is noted in the fine print (p. 9) that a project goal is to remove the non-native species from 7-12 miles (30-50%) of the stream reach.

   The hydrologic modelling hypothesis is peripherally related to the rest of the project (p. 12). It would provide interesting information but I wonder how 'new' this knowledge would be given that waterflow in this creek is carefully regulated at the Black Butte Dam.

   The justification of the project with respect to bank erosion seems weak, as the participants in the Lower Stony Creek Scoping Study noted that "the erratic releases from Black Butte Dam are causing flooding and erosion problems" (p. 19). Is the erosion due to the erratic releases or to the non-native species? Will removal of non-natives ameliorate the erosion problems if the erratic releases continue?

   This proposal appears to be a combination of a full-scale implementation project (hoping to treat 7-12 miles of streamlength) and a demonstration project (three plots planted with native species and three plots unplanted). It is unclear to me why these two projects are combined together. Do we need to find out more about how to revegetate these sites with native species, in which case the full-scale implementation project is premature? Or is it an established fact that restoration is more effective if nursery-grown native riparian plants are planted than if natural regeneration is permitted to occur (p.2), in which case the demonstration project is unnecessary?

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 experimental approach could be clarified. A few examples:

   How will the 7-12 miles of stream to be treated be selected? Will treated areas be concentrated in one area or scattered along the length of the stream? Arundo donax spreads as rhizomes are transplanted to downstream locations (p. 5), which suggests that treated areas may be compromised by continued reestablishment of non-native species from upstream propagule sources. Also, I would be very hesitant to use a flail mower (p. 7) for 'biomass reduction' - might the small pieces not become propagules that float downstream and exacerbate the problems there? Are there tributaries of Stony Creek that flow into this reach and could serve as sources of Arundo and tamarisk?

Two methods of eradication are described in the proposal. Different eradication methods could be treated as factors in an experiment to determine which method is most effective.

In the demonstration project, comparisons are to be made between the sites that were treated and left to regenerate naturally and sites that are treated and planted with native species. However, these comparisons would be much more effective if these two treated sites were compared to non-restored sites that contain native species (ie, reference conditions for this ecosystem). What is the size of the proposed sites?

Which native species will be used in the revegetation work?

The proposal notes that the native species of plants that can be self-sustaining will be assessed separately for each of the three regions of the creek (p. 3), which suggests that there are distinct native plant communities along each region of the creek. Wouldn't you expect a native species that responded well in one region to respond similarly in another region (assuming that it is growing on an area that had the same history of non-native removal, etc)?

Another piece of information that would be important to know is the relative importance of seed dispersal for regeneration of native species. Perhaps seed bank studies should be undertaken?

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 aspects of the approach critiqued above may not necessarily affect the success of the project but could reduce the generality of the results to other riparian systems.

   Are the restoration treatments expected to eradicate the non-native species from the creek or to control them temporarily? In other words, will continued treatment be required in the future?

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?

   While several detailed performance measures are provided, I feel they are inadequate to measure the success of the project. Two crucial performance measure that should also be included are an assessment of the native vegetation on treated areas and a minimum permitted regrowth of the non-native species.

   The performance measure for outreach (13% of the budget) is insufficient: it consists only of getting access permission from 100% of the landowners. What about the teacher training that is referred to in the work schedule and on p. 19?

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 main product is the treatment of 7-12 miles of streamlength. Another valuable product is landowner education.

I am glad to see monitoring included in the proposal. The value of the monitoring will depend on the effectiveness of the treatments and the length of time over which monitoring occurs.

I think the results of the project would be more generally applicable if the project had a more explicitly experimental design.

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 appear fully qualified for this work.

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

   Restoration activities on this scale are undoubtedly expensive. My impression from the proposal is that the removal of these non-native species is somewhat of a mystery yet - eg with respect to removal techniques, revegetation methods, etc. I would be more comfortable funding this project in full if it was using established techniques. One option is to consider funding it at a lower level by, for example, eliminating the hydrologic modelling component and reducing the mapping frequency.

Miscellaneous comments:

It would be helpful if the proposal identified the species or species complex of Tamarisk that it relates to.

Techical note: the proposal lists seven endangered 'species' found in the area (p. 12). Five of these seven items are not species but larger taxonomic or ecological groupings.

External Scientific: #2

Research and Restoration External Scientific Review Form

Proposal Number: **75**

Applicant Organization: **Glenn County Resource Conservation District**

Proposal Title: **Stony Creek Hydrology and Non-Native Eradication Project**

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):

The corresponding contact person, Dennis Nay, works for the same agency as I do, USDA-NRCS.

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**
XExcellent	**A well rounded project/study which will lead to improved BMPs. It will educate people in the watershed by workiing with schools and many groups. This project will develop new information from the removal of invasive sp. .**
-Good	
-Poor	

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

   Excellent yes, yes.

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?

   Excellent yes, yes, yes.

This project will provide needed information on natural establishment of native sp. after invasive sp. control.

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?

   Excellent yes, yes, yes, yes.

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?

   Excellent yes, excellent, yes.

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?

   Excellent yes, yes.

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?

   Excellent yes, yes, yes.

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?

   Excellent Excellent, yes, yes.

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

   Excellent yes.

Miscellaneous comments:

External Scientific: #3

Research and Restoration External Scientific Review Form

Proposal Number: **75**

Applicant Organization: **Glenn County Resource Conservation District**

Proposal Title: **Stony Creek Hydrology and Non-Native Eradication Project**

Conflict of Interest Statements:
I have no financial interest in this proposal.
XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;
Good: quality but some deficiencies;
Poor: serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
-Excellent	**I am uncomfortable with this proposal because of the large cost and one-sided presentation of the problem. I would rate it poor but am not familiar enough with the situation in the Central Valley to take this strong a position.**
XGood	
-Poor	

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

   The goals and objectives are clearly stated on p. 2. The hypothesis is awkwardly worded, but as I understand it, the questions is whether the removal of exotic vegetation will increase the flood conveyance capacity of the channel and reduce erosion of stream banks. There are secondary questions related to whether native species will colonize cleared areas and the extent to which planting promotes reestablishment.

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?

I am not familiar with the effects of Arundo and Tamarisk in California. Certainly the proponents are convinced that this vegetation is completely evil based on their language ("choke and kill everything in its path"). The statement that these exotics "are of no use to wildlife for cover, foraging, or nesting" brings into question the objectivity of the proponents. For example, while Tamarisk is not native it provides valuable habitat for many birds in riparian settings in Arizona, including endangered species. My point here is that there may be some negative consequences associated with the proposed removal. What if native vegetation will not re-establish, a possibility given the extreme hydrograph that is described? In this case we will be replacing an exotic but vegetated landscape with a barren one, surely the latter is of less use to fish and wildlife. Based on the proponents use of language and misleading statements, I have no faith that they would point out/monitor these issues.

The conceptual model specified on p. 3 is clear. Exotic vegetation has resulted in island stabilization leading to bank erosion and channel widening. This is in slight conflict with a statement on p. 6, which states that these exotics also stabilize banks. Reducing channel complexity may stabilize banks, but it may have negative impacts on fish or bird habitat. Perhaps these islands act as refuges from nest-raiding predators, or provide low velocity rearing habitat or additional bank cover for juvenile fish. I am not familiar with the situation in the project area so I admit I may be off base here, but the conceptual model seems very one-sided.

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 seems very solid and well documented. The mapping component may lead to novel methodologies. I am a little uncertain about the utility of using a 1D hydraulic model to assess the benefits of removing vegetation. It may be useful tool to assess flood conveyance, but the conceptual model describes a 2D situation in terms of the causes of bank erosion. The 1D model may not be adequate to address this dynamic.

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?

   Feasibility appears high. The question is whether there are unanticipated negative consequences

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 proponents provide a very clear description of the PM's. The detail on the geomorphic and bank stabilization PM's is a bit lacking, so it is hard to evaluate whether this information will be informative. For example, the bank stabilization comparison may require a number of years before a representative picture is obtained. It may require a high flow event to make it comparable with baseline data. How will the monitoring program accommodate this?

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?

Certainly the mapping component will be a useful product as far as documenting existing and modified vegetation patterns.

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?

   Qualified

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

   The budget is extremely large ($2.8 million). Over $710,000 will be spent on hydraulic modeling and bank stabilization studies, yet there are very few details about the survey extent, design, etc.

Miscellaneous comments:

External Scientific: #4

Research and Restoration External Scientific Review Form

Proposal Number: **75**

Applicant Organization: **Glenn County Resource Conservation District**

Proposal Title: **Stony Creek Hydrology and Non-Native Eradication Project**

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**
-Excellent	**The work proposed is necessary and supported by past work and identified priorities related to invasives by CALFED and beyond. The group has a good track record, the team seems to be very talented, the local community is behind and involved in the work.** **However, omission in the design and performance measures regarding the biologic communities and habitat improvement, the lack of sufficient time to test the hypotheses or monitor revegetation prevent me from giving an excellent rating. If these issues were addressed and/or if the project narrowed and was put forth as eradication to control invasives, improve hydrology, and reduce erosion, and that was all, I think 'excellent' may be appropriate. However, if the project were narrowed, the fiscal contribution by CALFED would have to decrease and the biological concerns would still have to be addressed in the NegDec. I would rather see (1) the design improved for the biological components and comparing revegetation and (2) the proponents get firmer assurance that monitoring will continue after year 3.**
XGood	
-Poor	

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

   The goals, objectives, and hypotheses are clearly stated. However, the goals and objectives are not always consistent. The connection to CALFED goals stated in the executive summary appear legitimate, but there is no elaboration or justification for linking the project to ecosystem goals on page 3. One of the important short-comings of the proposal is its stated links to fish and wildlife and no elaboration or methodology to suggest they are actually doing the work for wildland habitat or will collect information to determine if they are successful in either habitat improvement of population status of any native species. Another important inconsistency is that the proposal is for 3 years and testing their stated hypotheses not occur within the period of the project, thus leaving actual determination of success of eradication and facilitated vs. natural revegetation to another effort.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

   The eradication is justified, for the purposes of reducing erosion and improving hydrology of Stony Creek. Testing facilitated vs. natural vegetation may be warrented, but I am not convinced their proposed methodology and sample design will lend knowledge to the question. I would also revisit two components of the proposal- the mapping and the outreach. One, I would ask if the resources for the mapping are necessary for successful eradication. Two, I think outreach to school groups is premature and should not occur until there are 'result' and spending time and resources to do so is not necessary for the eradication or the research. I do agree that outreach to the landowners along Stony Creek is essential.

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?

   I think if the sampling design for the natural revegetation vs. planting is improved and appropriate resources for continuing the research is solidified, meaningful information on addressing invasive species will come from this work. Otherwise, I would probably simply fund the eradication because it will at least give temporal relief to Stony Creek.

   Note that there is nothing in the study design addressing wildlife, habitat, or fishes. So how will the project demonstrate it has accomplished goals listed at the top of page 8 or that it is truly applicable to the biological and habitat restoration aspects of CALFED the proposals presents in part B on page 12? There is some discussion of 'potential' on page 14 with regard to the CVPIA Anadromous Fish Restoration Program, but there is no definitive or committed integration.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

The project is feasible. The temporal scale is not consistent with the objectives. More time is needed to ensure eradication success, revegeation success, and for testing the hypotheses put forth in the proposal.

I also recommend the proponents be asked to address potential failure of (or the rate of success) planting. If establishment of natives is a key to both better hydrology and keeping the invasives out/less abundant, the project should address its likelihood of success and what the proponents will do if plantings fail (and who will pay for subsequent attempts at plantings)

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?

   Again, I think the performance measures for interpretting success of natural revegetation and planting are insufficient. And, I do not believe there are any performance measures to determine if habitat has been improved for terrestrial wildlife or fishes. I think the performance measures for hydrological improvement and eradication are appropriate.

   Note that there is nothing in the project performance evaluation addressing native plants, habitat, wildlife, or fishes.

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?

   I think a discussion of improved hydrology and less invasives as well as improved native riparian communities should be folded into the discussion of products. And that temporal and spatial attributes should be specified.

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

   The group assembled seems to be a definite highlight to this proposal. The only shortcoming is that there is not a member that specializes in either terrestrial riparian wildlife or native fishes. And this omission is another point that suggests to me linking the proposal to the ecosystem/wildlife/fishes goals/objectives is not valid.

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

   I realize that CALFED does not like to scrutinize fiscal numbers too much, but I would take a look at rates. To my untrained eye, they seem 'generous'. Since you will have to deny many more projects than you can adopt, I would investigate if the rates are consistent with similar work in northern California. Also, a closer look at partner contributions suggests that CALFED is really footing almost the entire bill. The cost saving from Chico State Foundation is considerable, and there is in-king service. A question: do all proposals allow for cost share by counting the time spent by community members? If this proposal may, than the others should be allowed to do so as well.

I also wondered about specific costs listed in the budget justification, especially those listed in SUPPLIES and SERVICES. Some seem considerable in an absolute sense or relative to what they are being used for. I would ask the proponents to link the costs to eradication, research, mapping, outreach. This will allow the CALFED committee to decide if one or more components of the project may be fiscally more sound than others, especially if this is primarily an eradication and revegetation project.

<u>Miscellaneous comments:</u>

Permits under CESA and ESA are mentioned under ENIVRONMENTAL PERMITTING AND APPROVALS as being Required; on the previous page, "the Biological Opinion" is referenced under CEQA/NEPA PROCESS. Yet, there is neither further discussion nor are the state or federally listed species specified or discussed. CALFED should find out what sensitive species this project may or may not impact or benefit.

The need for this inquiry is furthered by the discussion of herbicides. The proponents need to at least state that their pesticide application prescription is not an issue for the sensitive species they infer are within the scope of the project.

External Scientific: #5

Research and Restoration External Scientific Review Form

Proposal Number: **75**

Applicant Organization: **Glenn County Resource Conservation District**

Proposal Title: **Stony Creek Hydrology and Non-Native Eradication Project**

Conflict of Interest Statements:
I have no financial interest in this proposal.
XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;
Good: quality but some deficiencies;
Poor: serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
-Excellent	**Poor maybe harse,however delivering a product for dollars invested by the taxpayers is paramount. The universities and the UCCE have forgotten their mission as a instituion of higher "applied" learning and landowner outreach. The landowners were treated as a problem rather than an assesst and the applicants focus was on the contunuation of their research as access to additional funding. Funding of this proposal should include stipulations and strict performance evaluations. Accountablity for dollars invested and clearly defined values must be established prior to any funding.**
-Good	
XPoor	

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

   I have experienced some difficulty following this proposal. It initially starts out as mapping and erradication and transforms itself into habitat resoration and continuation funding for a project that has no merits to base it's request to. The concept seems to be similar to many others ongoing in the state. As a stakeholder in the Salt Cedar bio-control consortium, there are several inconsistancies in which the applicants need to do more research. Jack DeLoach with the USDA ARS in Temple, Texas and Stuart Leon with USFWS in Albuquerque, New Mexico would be a good start. Many of the problems facing the release of bio-control for Salt

Cedar control are directly related to the endangered South Western Willowflycatcher and the recovery plan being developed at this time. I am a member of a committee reviewing the recovery plan and find this proposal at odds with efforts of the USFS and the FWS.

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?

   Replicating ongoing studies in various landscapes is necessary for scientific publications, but of little value to on the ground control efforts. Again the concepts behind the proposal are trendy and opprotunistic. The fact that there is not any work being done on this stretch of watershed does not make it unique. As I look for the factors that justify additional funding I can find more reasons not to fund this proposal than to fund. Soil types, political contribution to soil transfer, actual functioning management applied to the landscape, and regulatory burdens which are disencentives to active management are questions unanswered. 7-12 miles of erradication is a full-scale project and implementation of a project this size, to be effective, cannot be piece-mealed, however the applicants are to willing to offer various alternatives for reductions in the scale of their project.

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 design and approach to control cannot be questioned as there are numerous models of successful projects to duplicate. Originality seems to be lacking in the design of the proposal. If you are in an area where mechanical equipment can be utilitized it seems more appropriate to look for and develop benefical uses for the product removed. All to often we are limited to our methods of treatment and this watershed treatment is designed around mechanical and chemical. Continuing to apply the same proven control techniques will be of little use to future decision makers. Hydrologically we may answer some questions about water transfer and sediment and bank stability, but this is hardly the cutting edge for creative design.

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?

   Documentation is available that documents successful control and mapping techniques consistant with this proposal. The level of success is gauge against a value system that is undefined. This proposal has the necesary componets to meet CALFED objectives without the research hypothesis. My personal values focus on achievable water quality improvements and true reduction and confinement techniques for invasive weed control. Secondary benefits of habitat improvement, plant and animal diversity, utility of the resource, and lower maintenance costs are observeable and quantifiable without the research.

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?

   Monitoring results of treatments and documentation of applied practices are adequate quantifiable measures of success. The forecast of climatic conditions and the timing of restoration activities will be the most illusive to interpet and predict. In this case the proponents seem to have

better than average chances to predict flow rates downstream of the dam during normal years. Very dry or very wet seasons will be problematic to the restoration efforts. As I review the proposed monitoring forms this criteria is vague or completely missing. Data imput relative to the morphology of the stream or water way is not clearly asked of the person monitoring. Assessment of treatments, restoration and recovery will not capable. This is not to mention that the forms supplied for our review only cover Arundo donax.

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?

   It is highly unlikely to produce product value from this program if all the focus is on presentations and education. The private landowners want and will respond, for the long haul, to value returned to the utility of the resource. Cost to produce and dollars invested, albeit time or dollars, are not included or considered in this proposal. Interpetive outcomes form this project, if funded, are sure to focus on the incompleteness of the process and the request for additional funding.

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?

   It is difficult to assess the track record of products produced by the applicants relative to this proposal. One should not assume results with efforts and given the background of the applicants supplied for our review it is impossible to evaluate their qualifications. Case in point, the consulting firm who was responsible for the programmatic EIRs for two State of California Departments, the EIRs have ended up in court or parallized with controversy. It also appears the UCCE is asking CALFED to invest in their infastructure with the purchase of a $171,720.00 digital spectroscopy. In my experience this is not an appropriate expenditure request.

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

   The proposal request for funding as a treatment and control project of this size would be reasonable. I must claify this statement by including mapping, monitoring, and revegetation as a componet of control. Follow-up funding will be required for maintenance of the treated areas and treatments of the remaining 12 to 19 miles of Stoney Creeek which did not receive control applications.

Miscellaneous comments:

The proposal has considerable merits and should be considered for follow-up funding as they mature as a group and deliver a complete and successful project.

Prior Performance/Next Phase Funding:

New Proposal Number: 75

New Proposal Title: Stony Creek Hydrology and Non-Native Eradication Project

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

   ERP 01-N04 - Arundo Donax: Suvey and Eradication

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

   none

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 -N/A

   If no, please explain any difficulties:

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

   -Yes -No -N/A

   If no, please explain any inaccuracies:

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

   -Yes -No -N/A

   If no, please explain deficiencies:

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

   -Yes -No -N/A

   If no, please explain deficiencies:

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

   -Yes -No -N/A

If no, please explain:

N/A

Other Comments:

Applicant does not currently have a CALFED contract managed by our office. Contract 01-N04, Arundo Donax: Survey and Eradication, commenced Fall 2001.

Environmental Compliance:

Proposal Number: 75

Applicant Organization: Glenn County Resource Conservation District

Proposal Title: Stony Creek Hydrology and Non-Native Eradication Project

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

   -Yes **X**No

   If no, please explain:

   NEPA documentation required with FESA and CWA 404 compliance.

   County Agriculture Commission approval and pest control license required for pesticide application, as explained on page 5.

   State Lands Commission lease may be required.

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

   -Yes **X**No

   If no, please explain:

   Yes and No:

   Yes: Budget allocates funding for hours devoted to permitting No: Work schedule does not show permitting/environmental compliance.

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

   -Yes **X**No

   If yes, please explain:

   But the eradication methodology of leaving Arundo donax cuttings along a bank (for erosion control) will contribute to re-establishment downstream if killing is not accomplished (project description, page 6).

Other Comments:

Budget:

Proposal Number: 75

Applicant Organization: Glenn County Resource Conservation District

Proposal Title: Stony Creek Hydrology and Non-Native Eradication Project

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

   XYes **-**No

   If no, please explain:

   For all 3 years

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?

   -Yes **X**No

   If no, please explain:

   A vague answer is made to the justification question, but it is non-detailed. Indirect costs appear as line items.

   Other overgead costs are clearly identified.

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?

   -Yes **X**No

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

MAYBE: 17.a. = $2,944,819.00

Grand Total $2,813,149.00

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 **X**No

   If yes, please explain:

Other Comments: