Proposal Reviews

#149: Cosumnes River Streambed and Riparian Restoration Project

Sloughhouse Resource Conservation District

Research and Restoration Technical Panel Review	
Delta Regional Review	
External Scientific Review	#1 #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: 149

Applicant Organization: Sloughhouse Resource Conservation District

Proposal Title: Cosumnes River Streambed and Riparian Restoration 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 reasons for the negative recommendation are numerous but can be summarized as follows: 1) the uncertainty of maintaining the newly constructed channel and floodplain, 2) high maintenance costs, 3) potential for exacerbating downstream flooding, 4) lack of grade control consideration and 5) the high unit restoration costs.**
-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 and objectives are extensive and well formed. The hypothesis is not. In fact, what is called a hypothesis is merely a statement of what is to be done. The test of this supposition is too vague to serve any useful purpose. The conceptual model appears to have been constructed without acknowledging the extent and nature of the pre-settlement stream and floodplain and the mechanisms of their formation. The justification of the proposed project is reasonable. The authors present some information on the problem and the cause. However, they seem not to recognize that floods are natural events, even though they can be modified by human actions. The justification is too dependent on the assumption the extreme flood events are unnatural and, in the natural world, their effects must be mitigated. No proof of the nature of the offending event or its cause is offered. The restoration area is a reasonable choice based on the goals and objectives.

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 approach to solving the problem, as stated in the proposal, relies on conventional methods and techniques. As such, little new information will be generated and certainly no novel ideas will emerge. The dependence on excavating the channel and armoring the resulting banks will lead to further degradation of the channel. No consideration was given to grade control, although the introduction of woody material is discussed. Monitoring is emphasized, as it should be, but the time frame is too short. The finished project should be monitored for at least five years. Even then, the long-term hydrologic effects may not be manifest.

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 project is certainly feasible. The probability of success (i.e., achieving the goals) is low. The restoration approach does little to dissipate the erosive energy of the stream as it moves through the restoration site. Performance measures are administrative and scientific. The extensive monitoring program should result in sufficient data to determine the morphological and environmental effects of the project. The products include: design and construction documents, implementation plans, monitoring data and reports and restored stream sections. The new channel reaches, immediately after construction, will offer interpretative opportunities.

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

   The budget seems high given the relative small area restored, 50 acres. The unit cost would be $20,000/acre. There must be sites requiring less extensive excavation and grading. Given the lack of grade control, the redesigned channel could be washed away by the next extreme flood event. Less costly construction techniques need to be explored.

5. **Regional Review.** How did the regional panel(s) rank the proposal (High, Medium, Low)? Did the regional panel(s) identify significant benefits (regional priorities, linkages with other activities, local involvement) or impediments (local constraints, conflicts with other activities, lack of local involvement) to this proposal? What were they?

   The Delta Regional Review is low. The reasons for the rating are: 1) the source and character of fouling sediment is unknown, 2) downstream flooding could be increased and 3) existing salmon spawning.

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?

   No administrative problems were identified.

Miscellaneous comments:

None

Delta Regional Review:

Proposal Number: 149

Proposal Title: Cosumnes River Streambed and Riparian Restoration Project

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

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

There are serious constraints to the implementation of this project.

1. Is the project feasible based on local constraints?

   -Yes **X**No

   How?

   The proposal was not funded in FY01 largely because of technical concerns regarding the low-sinuosity channel design and the applicability of the off-the-shelf models used to evaluate sediment transport and channel stability. It is not evident from this FY02 proposal that these concerns have been addressed (the Geographic Review Panel will defer to the Technical Review Panel on these issues). Additional concerns include: (1) lack of data (or any intent to gather data) on the source of the fine sediment that is accumulating in the bedmaterial of the project reach; (2) lack of any evaluation of what effect this project would have on conditions downstream; (3) the fact that the proposed project is in the heart of the fall run Chinook salmon spawning groundsits failure could seriously compromise AFRP and other efforts to increase natural production in the Cosumnes. Another serious concern is the fact that no one on the project team seems to have any previous experience in designing and constructing this kind of large-scale channel restoration project.

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

   XYes **-**No

   How?

   A properly designed and implemented project would help restore natural channel and riparian processes (DR-2) and markedly improve the extent and quality of spawning and rearing habitat for Chinook salmon (DR-4).

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

   -Yes **X**No

   How?

This project needs to be coordinated with the Corps of Engineers Comprehensive Planning effort for the Mokelumne-Cosumnes watersheds, which is scheduled to commence January 2002.

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

   XYes **-**No

   How?

   Cosumnes River Task Force participation.

   Letters of support from Sacramento County Board of Supervisors, Sacramento County Regional Parks Department, Rancho Murietta Community Services District and The Nature Conservancy

Other Comments:

(1) Proposal uses Rosgen terminology to define the desired channel form and function (i.e., C-3), but fails to incorporate anything else from Rosgens methods.

External Scientific: #1

Research and Restoration External Scientific Review Form

Proposal Number: **149**

Applicant Organization: **Sloughhouse Resource Conservation District**

Proposal Title: **Cosumnes River Streambed and Riparian Restoration 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 proposed project seems to offer few possibilities of garnering new information of restoration methodologies and techniques. The risk of not accomplishing the restoration goals is substantial. A better understanding of the original geomorphology is necessary.**
-Good	
XPoor	

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

   The goals and objective are extensive and well formed. The hypothesis is not. In fact, what is called a hypothesis is merely a statement that what they propose will do what they intend. The test of this supposition is too vague to serve any useful purpose. The statements have been made in the apparent lack of knowledge about the extent and nature of the pre-settlement stream and floodplain and the mechanisms of there formation.

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

The justification of the proposed project is reasonable. The authors present some information of the problem and the causes. However, they seem not to recognize that flood events do what they do and that they are natural causes. The justification appears to be too dependent on the assumption the extreme flood events are unnatural without proof of the nature of the offending event. The restoration area is a reasonable choice based on the goals and objectives.

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 to solving the problem, as stated in the proposal, relies on conventional methods and techniques. As such, little new information will be generated and certainly no novel ideas will emerge. The dependence on excavating the channel and armoring the resulting banks will lead to further degradation of the channel. No consideration was given to grade control, although the introduction of woody material is discussed. Monitoring is emphasized, as it should be, but the time frame is too short. The finished project should be monitored for at least five years. Even then, the long-term hydrologic effects may not be manifest.

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 certainly feasible. The probability of success (i.e., achieving the goals) is low. The restoration approach does little to dissipate the erosive energy of the stream as it moves through the restoration site.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

   Performance measures are administrative and scientific. The extensive monitoring program should result in sufficient data to determine the morphological and environmental effects of the project.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

   The products include: design and construction documents, implementation plans, monitoring data and reports and restored stream sections. The new channel reaches, immediately after construction, will offer interpretative opportunities.

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 staff seem will qualified and have the necessary equipment and facilities.

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

The budget seems high given the relative small area restored, 50 acres. The unit cost would be $20,000/acre. There must be sites requiring less extensive excavation and grading. Given the lack of grade control, the redesigned channel could be washed away by the next extreme flood event.

Miscellaneous comments:

External Scientific: #2

Research and Restoration External Scientific Review Form

Proposal Number: **149**

Applicant Organization: **Sloughhouse Resource Conservation District**

Proposal Title: **Cosumnes River Streambed and Riparian Restoration 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	**The reasons for not rating this proposal as outstanding in all aspects include: (1) lack of scientific documentation regarding the models used as the basis for the design; (2) lack of consideration of other available models that specifically deal with sediment balance; (3) the mundane product deliverables that will not reach a wide audience.**
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 but not necessarily internally consistent. The inconsistency appears to be in what is the primary motivation for the project and the role of the levees along the Cosumnes River. For example, the historic floods of 1997 are cited as the single most disruptive event to damage the reach. This flood was greated than the 100-year event, and was evidently "exacerbated" by poor land-use practices. No evidence is given to justify the verb "exacerbated." The damage done by the flood was described mostly in terms of monetary damage to homes, levees, and crops. Is the goal of the project to restore the broken levees, maintain flood protection for homes and crops? What is the role of the levees? They are described as "minimum earthen levees" rather than armored levee walls. It appears that the future failure of the levees is a secondary concern,

but that the damage from the 1997 flood was quoted as being attributable to the failure of the levees. It appears that the damage from the 1997 flood was quoted as a basis for justifying the channel restoration project, but in so doing, it appears to draw attention toward levee restoration and away from channel and habitat restoration. The concept is very timely and important. If it can be shown that "off the shelf" models are adequate to guide restoration projects, we have then made common tools available to many that do not require additional research before implementation.

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 basis for the design of the channel restoration rests in two computer models: HEC-RAS and CHANSTAB. References are not included for either model. HEC-RAS is a one-dimensional model but was applied for a meandering channel that would have root wads added later. No analysis of local scour or streambank instability due to root wads was discussed. The simulated channel was described as typical of a "C-3" channel. No reference is given to explain "C-3," nor are there any data included that describe the Cosumnes River as a "C-3" channel. A "low meander" alternative was selected for design based upon CHANSTAB and justified by comparison to historic photos. A paper written by Rinaldi and Johnson supports using empirical local channel alignments for restoration design. The paper was not included in the references. Other available models to assess channel stability were not used, such as the SAM model, (Stable Channel Analytical Method), which balances sediment inflow and outflow to test channel stability criteria. These issues make it difficult for a reviewer to assess the adequacy of the proposed models as the underlying basis for the proposed work. The role of the bridge which establishes the upstream boundary of the project is not addressed. Does the bridge constrict the natural width of the river channel? Is the bridge responsible for concentrating flows into the downstream reach where channel incision has occurred? What is the geomorphic impact of the bridge? If the bridge significantly constricts flows, how does the restoration activity protect the channel from future impacts due to the bridge? It is time to perform channel restoration in this reach from the description found in the proposal, so an implementation/pilot project is fully justified.

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?

   Information for decision makers will take longer to develop than the 3-year scope of the project. This is not the fault of the proposers but is inherent in the nature of restoration projects. Decision makers may find information useful about the PROCESS used to restore the channel and the MODELS used to guide restoration. The project is not likely to generate novel information or methodology, but that in itself is a positive aspect: if the project is successful using off the shelf technology, then it demonstrates that we have sufficient tools available NOW to perform successful restoration projects. The approach appears to be well-designed for the project.

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?

As stated under "justification," the approach does NOT appear to be fully justified. References to the key models and paper are not included, and consideration of other available models is not apparent in the proposal. However, the combination of disciplines is usually more important than model selection, and the design of the channel restoration has been modified from the model output based upon reason, discussion, and interdisciplinary cooperation. The project is technically feasible. There is a good chance for success. The scale of the project is consistent with the 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?

   The proposers recognize that a three-year funding window will make it impossible to truly assess long-term performance. They pledge to seek future funding to continue monitoring. The proposed data collection activities during the pre- and post-construction activities should document to a great exent the success or failure of the project within the funding window. I found it curious that measures of spawning, redd counts, or similar anadromous fish metrics were not proposed. With the exception of a lack of fish-related metrics, the proposed data collection will be adequate.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

   The products from the project (deliverables) include 2 master of science theses, presentations at CALFED conferences, a report to the "IEP" newsletter and a technical talk at a national meeting. Possible future products may include a journal paper. I recommend that the project establish a website so all can follow progress from pre-construction through construction and post-construction. This may be more meaningful than any of the deliverables identified because it would allow a broader audience real-time access to the project. Any products from the monitoring component would be delivered after funding has ceased. That is the nature of reporting on monitoring projects (see 'miscellaneous comments' below.

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 have done a very good job of coordinating across agencies and jurisdictions to make the project possible. The applicants' track record appears to be adequate for the job. It appears that Cornwell will fill the role of geomorphologist on the project. It was not clear from the proposal that groundwater/surface water is important enough to require the services of Dr. Horner. A Corps of Engineers report was cited that stated groundwater levels have dropped in the reach area and have encouraged sediment deposition, but no details were given. Project coordination appears to be excellent.

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

   The cost of this project is $1 million for 1 mile of stream restoration. Of this amount, approximately 60% is allocated for gravel cleaning and floodplain bench work. Other budget monies support graduate students and two faculty members and support professional staff. I recommend that the budget for the professional civil engineer be increased to allow more

consultation during the 3-year period. It appers to this reviewer that the role of Dr. Horner is over-emphasized and that of Cornwell is underemphasized. I recommend adjusting the budget to recognize the central role of geomorphology in this project as opposed to groundwater/surface water interactions.

<u>Miscellaneous comments:</u>

I recommend that the funding agency HOLD BACK some of its funding and put it into a long-term "monitoring endowment" account that can be tapped for future monitoring efforts. The cost of this specific project is $1 million. If another $1 million were held back overall and used as an endowment, the annual divident may well be in the $40,000 to $100,000 range. Year 3 monitoring on this project is projected to be $46,000 and could be funded by such an endowment. Required local matching could spread future monitoring efforts much farther.

External Scientific: #3

Research and Restoration External Scientific Review Form

Proposal Number: **149**

Applicant Organization: **Sloughhouse Resource Conservation District**

Proposal Title: **Cosumnes River Streambed and Riparian Restoration 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	**This proposal is focused on a channel reconfiguration project in conjunction with replantingof vegetation. The PIs have an engineering focus and do not look carefully at the broader spatial context of the site they plan to rehabilitate. They also do not adequately moniter the biological response of the system to their manipulations.**
-Good	
XPoor	

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

   The goal is to restore and rehabilitate a one-mile stretch along the Cosumnes River by reconfiguring the channel to a more natural meander, regrade the banks, and revegetate. Since this area has experienced excessive erosion (with downcut, narrow channels) the PIs propose to reshape the channel to create stable banks. These goals are clearly stated and they do develop a plan to attempt this i.e., the proposal is internally consistent. The hypothesis that is stated (page 2) is trivial really a restatement of the objectives and did not involved discrete and more specific hypotheses (i.e., specific hypotheses on the effect of channel reconfiguration on sediment transport, particle size distribution, etc.)

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 convinced that the study is justified based on existing knowledge. The reason is that they do not provide a regional context. I.e., we are told much about the 1mile stretch but little about what is upstream, about the surrounding land use i.e., we are not provided information that will help assess whether the reconfiguration is a wise move given its position within the watershed and within the landscape. If the stream was damaged by two previous storms, the last one being 1997, then I suspect it may be blown out again. Land use change sounds as if it has been significant enough a one mile restored reach may or may not be stable.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

   This is a classic Rosgen-style type restoration project and relies heavily on re-engineering the channel. As pointed out in 2) the larger scale context of this reach is not considered in the proposal. The decreased water flow due to agricultural and urban development may continue and suggests a much larger problem that reconfiguration of one mile of stream. I am not implying we should not try to restore sections but simply that such an invasive channel reconfiguration approach is not well justified in this proposal

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

   The approach is outlined and the well know HEC-RAS will be used to help determine how best to reconstruct channel geometry. I am not familiar with the CHANSTAB program and yet it seems critical to the success of this project. It is not described. Does it take into account sediment loading to this reach? Watershed context? etc. They will monitor sediment load prior to, during, and after the project (page 5) so I wonder how these data will be used (in the models?) to maximize design.

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 project includes extensive monitoring of flow, streambed permeability, etc. (page 5) They will also assess plant survival and general health although we were not told at how many plots or what data would be collected to assess health. They do not mention any plans to look at fish use of the stretch and dismiss the need to look at benthics since they say they the grant period is not long enough for a benthic community to return. The latter is simply not true. Benthic populations typically start recolonizing disturbed streams in days to weeks. Within a year, they should see some significant response.

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 do not think this will provide much that is new. They rely on off the shelf models. They may or may not be successful locally (i.e., their 1 mile stretch may or may remain stable) but I do not see any methods that are novel or likely to be of broad use.

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?

   well qualified as far as I can see

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

   The budget is far too high for the new science or information that will come out of this

Miscellaneous comments:

Environmental Compliance:

Proposal Number: 149

Applicant Organization: Sloughhouse Resource Conservation District

Proposal Title: Cosumnes River Streambed and Riparian Restoration Project

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

   XYes **-**No

   If no, please explain:

   May need a State Lands Commission Land Use Lease.

   May need a 2081/Incidental Take Permit and/or Scientific Collecting Permit if any of the species listed on page 4 of the proposal will be collected or potentially "taken" during project activities.

   Start with a Section 7 Consultation and let USFWS determine if a Section 10 Permit is necessary. If a Section 10 Permit is necessary for incidental take, a Habitat Conservation Plan is also required.

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

   XYes **-**No

   If no, please explain:

   Budget and timeline for obtaining permits and complying with CEQA/NEPA adequate.

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

   -Yes **X**No

   If yes, please explain:

   Look into CESA Compliance (2081 permit) and Scientific Collecting Permit, as well as State Lands Commission Land Use Lease. All other permits and Environmental Documentation will be obtained and filed.

Other Comments:

Budget:

Proposal Number: 149

Applicant Organization: Sloughhouse Resource Conservation District

Proposal Title: Cosumnes River Streambed and Riparian Restoration Project

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 **X**No

If yes, please explain:

Other Comments:

well defined in both budget summary/justification