

Draft Individual Review Form

Proposal number: 2001-C214-3

Short Proposal Title: Sacramento River Floodplain
Acquisition and Restoration

1a) Are the objectives and hypotheses clearly stated?

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

Yes, but see comments below about the degree to which the primary hypothesis will actually be tested.

1b1) Does the conceptual model clearly explain the underlying basis for the proposed work?

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

Reasonably well.

1b2) Is the approach well designed and appropriate for meeting the objectives of the project?

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

I am not qualified to evaluate the economical or engineering feasibility of this study, but the steps to complete the restoration project look reasonable. My biggest concern is that the applicants have not justified why an “active” restoration approach is needed. For example, the Nature Conservancy spent years doing “active” restoration (ie plantings) of riparian forest at their Cosumnes Reserve, but has since abandoned this approach in favor of more successful “passive” methods. The project site already includes 27 acres of high quality riparian habitat—why won’t natural processes allow the conversion of the 95 acres to riparian forest after orchard removal? At the very least, the applicants should test “active” versus “passive” approaches—this seems a good opportunity to do so. Indeed, a comparison between “active” and “passive” approaches is the most justifiable approach to address the primary stated hypothesis (Page 6, Para. 2, Line 1). Unfortunately, this is not part of the proposed design.

Even for the proposed design, I have serious reservations about the study. The major approach is to compare orchard to restored areas over a three year (or less) period. Several variables to be evaluated will not be relevant over that time period. For example, there will be hydraulic measurements (depth/velocity) between the two plots. Yet the riparian vegetation will be relatively poorly established over this time period. As a result, the study will only be measuring the effects of orchard versus a sparsely vegetated site. The hydraulic conclusions are predictable (ie better flood conveyance on the treatment site), but are not meaningful.

In addition, it is unclear how other hypotheses will be tested. A major hypothesis is that riparian habitat will produce more organic matter for aquatic organisms. While substantial monitoring is proposed, none of the monitoring parameters listed appeared appropriate to test this hypothesis. Likewise, it is unclear how the project will test the hypothesis that “wildlife-friendly” farming practices will minimize negative water quality impacts. I see no water quality monitoring in this plan.

1c1) Has the applicant justified the selection of research, pilot or demonstration project, or a full-scale implementation project?

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

The applicant has done a good job explaining why riparian vegetation is important. However, the proposal did not help be to determine why this particular site was superior to other possible locations for the study.

1c2) Is the project likely to generate information that can be used to inform future decision making?

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

Because of the experimental approach, this could be a very important project to guide decision making. My only hesitation is that I was unable to determine what factors would be tested using the experimental block design. It appears that treatments will be split into riparian and orchards, but it is clear whether the blocks will consist of different vegetation types, physical or biological conditions, or some other factors. The usefulness of information from the study will depend largely on the experimental design and its statistical power.

2a) Are the monitoring and information assessment plans adequate to assess the outcome of the project?

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

The variables to be measured are reasonable, but (as stated earlier) the time scale is insufficient to provide a “fair” comparison of the restoration versus the orchard sites.

2b) Are data collection, data management, data analysis, and reporting plans well-described, scientifically sound and adequate to meet the proposed objectives?

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

See previous concerns about the experimental design.

3) Is the proposed work likely to be technically feasible?

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

The feasibility of this study may depend on a finding that the restoration project is “flood neutral”. There are no apparent contingency plans if the study determines that it has negative impacts.

4) Is the proposed project team qualified to efficiently and effectively implement the proposed project?

Provide detailed comments in support of your conclusion [Note: in the electronic version, this will be an expandable field]

For most aspects of the project, I question the team’s qualifications to handle the scientific side of the study—previously described deficiencies in the monitoring plan and hypotheses suggest that science could be one of their weaknesses.

Miscellaneous comments

[Note: in the electronic version, this will be an expandable field]

The study site seems promising for restoration. However, I recommend that the applicants rewrite the proposal to take some of my concerns into consideration. At this point, I think the project is not well thought out. One minor point--a map of the entire project area would have been helpful. The maps provided show only the restoration site (96 acres), not the whole 259 acres.

**Overall Evaluation
Summary Rating**

- Excellent
- Very Good

Provide a brief explanation of your summary rating

[Note: in the electronic version, this will be an expandable field]

- Good
 - Fair
 - Poor
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