

Proposal Reviews

#139: Nitrogen Transformations in Restoration of Salt Marshes in the San Francisco Bay Region

San Francisco State University, Romberg Tiburon Center

Initial Selection Panel Review

Research and Restoration Technical Panel Review

Bay Regional Review

External Scientific Review #1
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#3
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Environmental Compliance

Budget

Initial Selection Panel Review:

CALFED Bay-Delta 2002 ERP PSP Initial Selection Panel Review

Proposal Number: 139

Applicant Organization: San Francisco State University, Romberg Tiburon Center

Proposal Title: Nitrogen Transformations in Restoration of Salt Marshes in the San Francisco Bay Region

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:

Connections to the CALFED ERP and the hypotheses are vague, and there is a general lack of detail. Further, the proposal lacks specific objectives interfacing with the ERP. Potential for success is difficult to evaluate. The project also seems extremely expensive. These observations do not support strategic benefits or Implementation Plan priorities being addressed satisfactorily by the current version of this proposal.

Research and Restoration Technical Panel Review:

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

Proposal Number: 139

Applicant Organization: San Francisco State University, Romberg Tiburon Center

Proposal Title: Nitrogen Transformations in Restoration of Salt Marshes in the San Francisco Bay Region

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	Research on the N-cycle deserves global attention for a myriad of scientific and societal reasons, but such basic N-cycle research is not priority research in terms of the CALFED Bay Delta Ecosystem Restoration Program. The authors of this proposal have extensive experience in studying the N-cycle and there is a general need for N-cycling research on a wide diversity of wetland/riverine/estuarine types. However, explicit connections to the CALFED Bay-Delta Ecosystem Restoration Program are vague in this proposal, regardless of the potential contributions to our general understanding of N-cycling. The review panel and one expert external reviewer were concerned with the lack of detail throughout the proposal. The review panel was enthusiastic about the general subject and encourages the authors to provide more thoughtful and detailed integration with the BREACH II Project in a future proposal submission.
-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?

The general, broad goal of this proposal is to investigate nitrogen availability and cycling processes in the restoration of the SF-Bay Marshes. The authors propose to integrate their research on the N-dynamics with the on-going BREACH II Research Program. The general plan is clear enough, but the proposal lacks specific, explicit objectives that would interface with the CALFED Bay Delta Ecosystem's Restoration Program. The stated "hypotheses" and "major questions" are vague. From a global perspective, western U.S. wetlands and estuaries have been poorly studied in regards to N-dynamics relative to east -coast and Gulf

Coast wetlands/rivers/estuaries, and thus the general objectives of this proposal are timely and important. However, in terms of the CALFED restoration program such general objectives are neither timely nor important.

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?

Overall, reviewers thought the proposals approach was vague, and void of the detail needed to interface with the CALFED Restoration goals.

The authors are accomplished N-cycle authorities, so general success is highly likely; but, success in terms of understanding the role and maturation of marsh/wetland ecosystems in terms of supporting critical biota is difficult to evaluate.

CAPABILITIES: Excellent. Highly qualified.

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 BREACH II chrono-sequence provides the framework for a powerful experimental design regarding N-dynamics. Useful products could be generated if the authors would refine their current proposal to interface with the objectives of the CALFED Program.

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

Extremely expensive for the return to CALFED. Funding of 2 post-docs, 2 grad students, and 2 technicians for 3 years would be justifiable only if the work was directly connected to specific questions in direct support of the CALFED Restoration Program.

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?

LOW. There was concern regarding the direct benefits to the CALFED Ecosystem Restoration Program.

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?

Stated concerns regarding detail.

Miscellaneous comments:

None

Bay Regional Review:

Proposal Number: 139

Applicant Organization: San Francisco State University, Romberg Tiburon Center

Proposal Title: Nitrogen Transformations in Restoration of Salt Marshes in the San Francisco Bay Region

Overall Ranking: XLow -Medium -High

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

The proposal has substantial merit as basic academic research, but needs to be realigned to meet the applied research needs for tidal marsh restoration issues in this region.

1. Is the project feasible based on local constraints?

Yes -No

How?

The methods proposed and expertise available in the proposal are more than adequate.

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

-Yes No

How?

The proposal is essentially basic academic research about nitrogen biogeochemistry in the San Francisco Bay estuary. The stated relevance to urgent applied ecological issues such as invasive plant ecology is not well informed about regional conditions. The proposal does not address the fact that much of this estuary is eutrophic, and does not adequately cite research on the significant contribution of wastewater discharges to the estuary's nitrogen budget. There is no evidence that understanding of nitrogen transformations is limiting the effectiveness of tidal marsh restoration in the eutrophic, clay-rich SF Bay estuary, in contrast to strongly nitrogen-limited oligotrophic marine tidal marshes in southern California, where sand-peat sediments prevail.

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

-Yes No

How?

The proposal does not adequately identify specific relevance to tidal marsh restoration in the region, or meaningful specific applications.

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

Yes -No

How?

Other Comments:

External Scientific: #1

Research and Restoration External Scientific Review Form

Proposal Number: **139**

Applicant Organization: **San Francisco State University, Romberg Tiburon Center**

Proposal Title: **Nitrogen Transformations in Restoration of Salt Marshes in the San Francisco Bay Region**

Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

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 study is interesting from a scientific perspective, but the relative importance of nitrogen cycling in successful marsh restoration is open to question. Budget is excessive.
<input checked="" type="checkbox"/> Good	
-Poor	

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

The goal of this research is to evaluate the role of nitrogen availability and cycling in marsh restoration. This is clearly stated and an interesting goal.

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?

Primary productivity is hypothesized to be a limiting factor in marsh restoration. Knowledge of nutrient limitations on productivity would therefore aid in marsh restoration. This study would link with another CalFed funded project - BREACH II a study which is examining geomorphology, sedimentation, channels, vegetation, inverts, fish and birds in restored marshes. I question where nitrogen limitation fits in in importance in comparison with these other factors. If it is minor in comparison, then why fund? Also, how would their results relate to restoration practices? Their task # 4, marsh fertilization, could answer this question at a fraction of the cost.

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?

They do not provide good links between their major questions and the tasks they propose; the linkage between tasks and the budget is good. What does "trophically open" mean, and which task address it? The methods for each task are mostly well described and documented. The relationship of this work to Spartina control is not well supported.

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 scale is consistent with objectives, will be supported by Romberg Tiburon Center and USC.

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 general; a time line is related to each task, but there are no within-task performance measures.

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?

Products are scholarly publications and seminars at management offices.

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

The applicants are well qualified and have the necessary infrastructure to complete the research

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

This is an expensive study - I question whether the benefits outweigh the cost. Also, they have budgeted \$585K for "Services or Consultants" without a word of explanation.

Miscellaneous comments:

External Scientific: #2

Research and Restoration External Scientific Review Form

Proposal Number: **139**

Applicant Organization: **San Francisco State University, Romberg Tiburon Center**

Proposal Title: **Nitrogen Transformations in Restoration of Salt Marshes in the San Francisco Bay Region**

Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

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
<input checked="" type="checkbox"/> Excellent	I give this proposal an excellent rating due to the high marks on all the above review qualifications.
<input type="checkbox"/> -Good	
<input type="checkbox"/> -Poor	

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

Goals of the project are well defined: to measure influences N budget issues and internal N cycling processes on the success of marsh restoration.

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 is a well justified proposal as it addresses topics directly germane to CALFED restoration activities. Combining their experiments with pre-existing sites in the BREACH II program lends support to the proposal as well.

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 scientific approach is efficiently designed and organized into specific tasks. They plan to examine some components of the external N budget as well as most all aspects on internal N cycling in fertilized and non-fertilized marsh plots. Missing to the budget are atmospheric inputs and tidal exchange and groundwater. These omissions are justifiable because they are looking at mostly at treatment vs control differences.

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

I believe the feasibility of performing the work is very high, given the research history and experience of the PIs. The specific hypotheses outlined are experimentally testable and the lab and field facilities are adequate.

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 should be better defined. Saying only that this is research and will be reported in the literature is not enough. However, none of the other scientific proposals I read had much to say about this topic.

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?

To echo the above: products should be better defined. Saying only that this is research and will be reported in the literature is not enough. The PIs sell themselves short by taking this way out. In reality, this will provide a very useful study of marsh N cycling for comparison with other marsh ecosystems (such as the Sippewissett).

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 PIs are all highly qualified and have put together an impressive field and research team.

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

The budget is reasonable and adequate for the project. I am not familiar with RTC support services so do not know if buying a boat is justified.

Miscellaneous comments:

None

External Scientific: #3

Research and Restoration External Scientific Review Form

Proposal Number: **139**

Applicant Organization: **San Francisco State University, Romberg Tiburon Center**

Proposal Title: **Nitrogen Transformations in Restoration of Salt Marshes in the San Francisco Bay Region**

Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

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	Research on the N-cycle deserves global attention for a myriad of scientific and societal reasons, but such basic N-cycle research is not priority research in terms of the CALFED Bay Delta Ecosystem Restoration Program. The authors of this proposal have extensive experience in studying the N-cycle and there is a general need for N-cycling research on a wide diversity of wetland/riverine/estuarine types. However, explicit connections to the CALFED Program are vague in this proposal, regardless of the potential contributions to our general understanding of N-cycling.
<input checked="" type="checkbox"/> Good	
-Poor	

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

The general, broad goal of this proposal is to investigate the of nitrogen availability and cycling processes in the restoration of the SF-Bay Marshes. The authors propose to integrate their research on the N-dynamics with the on-going BREACH II Research Program. The general plan is clear enough, but the proposal lacks specific, explicit objectives that would interface with the CALFED Bay Delta Ecosystem's Restoration Program. The stated "hypotheses" and "major questions" are vague. From a global perspective, western U.S.

wetlands and estuaries have been poorly studied in regards to N-dynamics relative to east-coast and Gulf Coast wetlands/rivers/estuaries, and thus the general objectives of this proposal are timely and important. However, in terms of the CALFED restoration program such general objectives are neither timely nor important.

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

Yes, the proposal is justified in terms of our broad knowledge of N-cycling in Pacific coast ecosystems. However, many of the N-cycle driven problems that motivate research in other parts of the world are not central to the objectives of the CALFED Restoration Program. Would N-fertilization enhance the rate of marsh-restoration maturation? Maybe, but that is not the specific focal-point of this proposal. Is estuarine or coastal eutrophication an issue in this system? No. Would this proposal significantly augment the BREACH II's thoughtful connections to the overall CALFED Restoration goals? Not in its present form.

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

The approach is vague, and void of the detail needed to interface with the CALFED Restoration goals.

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 NOT fully documented. The authors are accomplished N-cycle authorities, so general success is highly likely; but, success in terms of understanding the role and maturation of marsh/wetland ecosystems in terms of supporting critical biota seems unlikely.

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?

Vague in terms of the CALFED Program

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?

Vague in terms of the CALFED Program

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. Highly qualified.

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

Extremely expensive for the return to CALFED. Funding of 2 post-docs, 2 grad students, and 2 technicians for 3 years is justifiable only if the work is directly connected to specific questions in direct support of the CALFED Restoration Program

Miscellaneous comments:

The BREACH II provides the framework for a powerful experiental design regarding N-dynamics. Maybe the authors can refine their current proposal to interface with the objectives of the CALFED Program? If not, the authors nshould focus their questions around the chrono-sequence employed by BREACH II and pursue funding from agencies or groups that are interested in our global understanding of the N-cycle.

External Scientific: #4

Research and Restoration External Scientific Review Form

Proposal Number: **139**

Applicant Organization: **San Francisco State University, Romberg Tiburon Center**

Proposal Title: **Nitrogen Transformations in Restoration of Salt Marshes in the San Francisco Bay Region**

Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

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):

some years ago i was joint author on paper by Carpenter

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	see commnets in misc comments.
<input checked="" type="checkbox"/> Good	
-Poor	

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

unclear, see misc comments for details

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?

Insufficinet..see misc comments for details

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?

leaves a bit to be desired in details. See misc comm for items

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?

feasible, but not well documented.

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?

no

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 not clear just how the results will help the restoration projects... I can speculate why it might, but authors do not spell out the issues.

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?

very competent

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

not enough \$\$\$

Miscellaneous comments:

Review of Carpenter et al., NitrogenRegion.

Exec. Summ: too broad-brush. Needs focus on the specific activities proposed, and specific articulation of how they dovetail to restoration efforts.

p. 3. Seem unaware of several papers reporting recent advances in use of isotopic signatures in salt marshes and related environments, such as Wigand et al. (2001 Hum. Ecol. Risk assessment 7:1541-1554), or McKinney et al. (2001 Ecol. Appl. 11:203-214), among others.

p. 5. Goals are a bit too general. The reader has to fill in between the lines, always a bad sign. It is not at all clear how they visualize the work dovetailing with the restoration efforts. And, I really need much more detail re what BREACH II might be, to understand the scope of the work, and the ramifications, as well as the leverage that might be provided by the contact with BREACH II.

p. 6. Why were the sites selected? What questions do these sites answer? Is it just that they span the range of conditions, or is there something more interesting? Just what is the range of salt marsh conditions spanned by these sites, anyway?

p. 8. A would have liked a more carefully wrought out discussion of the methods. The acetylene method for fixation has drawbacks why are they appropriate here? For example, does the acetylene mix evenly through sample, or are they using slurries (which pose more problems)? Denitrification methods also are controversial; at the very least, a citation of the Seitzinger comparisons paper would be nice, plus some discussion.

p. 9. I would need to know much more re the experimental enrichment regimes, areas, plot selection, vegetation exposed to the treatments, etc. The disc. re the competing *Spartina* spp. is far too cursory. Need to discuss what the appropriate controls might be (pairwise removals?), how plots are set out in different sites, diff. elevations (the 2 spp do not have the same vertical ranges in the tidal excursion, so how will this be arranged?).

p. 10. Hard to agree with the assumption this is a real issue. If, as elsewhere, tidal and groundwater N sources are by far the largest inputs, why should we pay for detailed study of the smaller inputs? If the differences in "restorability" observed among the restoration sites is related to, say, tidal supply, why carry out detailed, and expensive work on the minor sources? This seems more an artifact of what microbial processes the authors can measure in their labs rather than be a natural consequence of the scientific question being asked. Moreover, even a small volume of groundwater could deliver a large concentration of N!

In general, I do agree that it is of interest to do the measurements proposed, and in fact, we have spent considerable effort in doing similar work ourselves. I also agree that too few such measurements have been done in the West coast, perhaps as a result of the small acreage of these habitats. In any case, I would have liked to read a more specific, clear statement as to how all these measurements (and in the absence of tidal and groundwater data) are expected to specifically inform restoration being carried out in the Bay area.

Environmental Compliance:

Proposal Number: 139

Applicant Organization: San Francisco State University, Romberg Tiburon Center

Proposal Title: Nitrogen Transformations in Restoration of Salt Marshes in the San Francisco Bay Region

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

-Yes No

If no, please explain:

Proponents need to contact Regional Water Quality Control Board to determine if permits (for example, project may need a 401) are needed for Nitrogen fertilization experiments.

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

-Yes No

If no, please explain:

No money or time allotted for permitting.

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

-Yes No

If yes, please explain:

As long as proper permits are obtained prior to start of work, this project is feasible.

Other Comments:

Budget:

Proposal Number: 139

Applicant Organization: San Francisco State University, Romberg Tiburon Center

Proposal Title: Nitrogen Transformations in Restoration of Salt Marshes in the San Francisco Bay Region

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

Yes -No

If no, please explain:

2. Does the proposal include a detailed budget for each task identified?

Yes -No

If no, please explain:

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

Yes -No

If no, please explain:

4. Are appropriate project management costs clearly identified?

-Yes No

If no, please explain:

No separate task for PM. PM has been estimated as accounting for 20% of the PI salaries under Direct Labor and Salaries.

5. Do the total funds requested (Form I, Question 17A) equal the combined total annual costs in the budget summary?

Yes -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?

-Yes No

If no, please explain:

No separate PM costs.

7. Are there other budget issues that warrant consideration?

-Yes No

If yes, please explain:

Other Comments: