

# CALFED Science Program PSP Grant

## Supplement Proposal

### Technical Selection Panel Review

**Grant Supplement Identification:** *Torres*

**Applicant Organization:** University of South Carolina

**Grant Supplement Title:** A Non-Point Source of Contaminants to the Estuarine Foodweb: Mobile Particles from the Intertidal Zone

**Original Grant (Year):** A Non-Point Source of Contaminants to the Estuarine Foodweb. (2006)

## Review

*The following review form has been broken down into three subsections: (1) technical review criteria, (2) value added review criteria, and (3) funding recommendation. It includes a review and summary rating for each of these subsections using all review criteria. Technical criteria is separated from the value added criteria because these issues will be weighed separately, but with equal importance. No supplement proposals will be funded that are rated inadequate in either criteria.*

### Subsection 1: Technical Review

*Review about the technical merit of the supplement proposal. Criteria for consideration are:*

#### ***Technical Review Criteria***

- ***Purpose:*** *Are the goals, objectives and hypotheses of the supplement proposal clearly stated and internally consistent?*
- ***Background:*** *Is the underlying basis for the supplemental work clearly explained and well documented?*
- ***Approach:*** *Is the approach to the supplemental work well designed and appropriate for meeting the objectives of the supplemental project? Is it clear who will be performing supplemental tasks including management and administration of the project and are resources set aside to do so?*
- ***Feasibility:*** *Is the approach for the supplemental work fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives and within the grasp of authors?*

- **Budget:** *Is it clear how much each aspect of the supplemental work will cost including each task, salaries, equipment, etc.? Is the budget reasonable and adequate for the work proposed?*
- **Qualifications:** *Is the project staff qualified to efficiently and effectively implement the supplemental project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?*
- **Past Performance:** *Unless informed otherwise by CALFED staff, reviewers should assume that the applicants have met the commitments indicated on their existing CALFED grant/contract.*

## **Technical Review Summary**

*The technical review of this supplement proposal is provided in the space below and addresses each of the technical review criteria (above), including strengths, weaknesses, and specific reasons supporting the evaluation.*

**Purpose:** The purpose of this request is to enhance sampling and project oversight that is being done on the current project. Applicant proposes to increase the number of samples being analyzed (reduced in funded grant because of 15% cut in funding) and to increase hydrodynamic data collection and analysis to determine mechanisms of sediment resuspension by wind and rain events and assess fate of suspended sediment. A third part of the request is for additional travel support and funds to “buy out” his teaching obligations so that the PI can reside in California and provide better oversight for the project.

**Background:** Sediments mobilized by wind waves and raindrops in the intertidal are a source of contaminants (metals are what is of interest in this proposal) to the estuary.

**Approach:** The requested funds would double the amount of samples analyzed for Hg (up to what was in the original proposal). Detailed hydrodynamic measures, including turbulence, particle concentrations, and size (equipment proposed to be purchased with these funds) are proposed for a full lunar cycle in a month with likely high wind and one with likely high rainfall.

**Feasibility:** Sites with high metal concentrations in the sediments have been identified. No attempt has been made to assess their representativeness. This project will provide a detailed picture of the role of sediment resuspension in metal contamination at two sites. What it will not provide is an assessment of the significance of this contamination in the estuary as a whole. No attention is being paid to how one might extrapolate these results to the larger system except perhaps as improving capabilities of existing models of nearshore sediment dynamics.

**Budget:** Most of the budget is going toward funding USGS scientists to do the hydrodynamic research. Requesting funding for oversight is not appropriate.

**Qualifications:** The applicants have the skills necessary to do the proposed research.

**Past performance:** The research on the funded grant has just begun with field sites identified and initial sediment chemical analyses completed.

### ***Technical Rating Criteria***

*Rating of the technical merit of the supplement proposal based on the following scale:*

- **Superior:** Outstanding in all respects with no technical concerns. Complete confidence proponents will accomplish the project goals.
- **Above Average:** A very good proposal with no significant technical concerns. Very confident proponents will accomplish the project goals.
- **Sufficient:** A reasonable proposal with some technical deficiencies but nothing critical. Fairly confident proponents will accomplish most of their project goals.
- **Inadequate:** A technically deficient proposal with serious impediments or concerns. Little confidence proponents will accomplish many project goals.

Please **X** the appropriate technical rating:

Superior  
 Above Average  
 Sufficient  
 Inadequate

### ***Explanation of rating and additional comments:***

The proposed research will provide a detailed picture of sediment resuspension at two sites. What is not clear is how representative those sites are or how these results could be extrapolated to the estuary as a whole in a way that would be useful to managers.

The way the study is written, with turbulence sensors, makes the original study sounder. Why was this not part of the original proposal? The motivation for bringing in the additional research is unclear.

## **Subsection 2: Value Added Review**

*Review about the value added of the supplement proposal. Criteria for consideration are:*

### ***Value Added Review Criteria***

- **Purpose:** *Is the new study justified relative to existing knowledge? Are new results likely to add to the base of knowledge? Is the supplemental project likely to generate novel information, methodology, or approaches? Is it clear how the purpose of the supplemental work differs from the work in the existing grant/contract?*

- **Relevancy:** *Is it clear how the supplement proposal evolved from and relates to the existing grant/contract? Does the supplement proposal clearly and directly address one or more of the objectives/priorities in the existing grant/contract? Does the supplement proposal identify new relevancies to CALFED priorities not identified in the existing grant/contract?*
- **Timeliness:** *Does the supplement proposal clearly illustrate the need for immediate funding before the next Science Program PSP cycle (1 to 2 years)?*
- **Approach:** *Is it clear how the approach of the supplemental work differs from and adds to the work in the existing grant/contract?*
- **Products:** *Are products of value likely from the supplemental project that differ from those proposed in the existing grant/contract? Is there a plan for widespread and effective dissemination of information gained from the supplemental project?*
- **Budget:** *Is it clear that supplemental funds are going to new or revised tasks or equipment relative to those proposed in the existing grant/contract? Considering the amount of funding requested in the proposed budget, is there a high value in terms of knowledge gained for the CALFED Program relative to other proposals you are familiar with (i.e. “bang for the buck”)?*

### ***Value Added Review Summary***

*The value added review of this supplement proposal is provided in the space below and addresses each of the value added criteria (above), including strengths, weaknesses, and specific reasons supporting the evaluation.*

**Purpose:** Some of the proposed work simply attempts to make up for sample analysis that could not be done because of previous budget cuts. The hydrodynamic component is new research that will enhance understanding of sediment re-suspension. The enhanced oversight component sounds as though the PI did not adequately assess the effort needed to do the research in the original proposal.

**Relevancy:** The original proposal addressed several issues identified in the original PSP. This supplement builds on that research.

**Timeliness:** This proposal is dependent on the research being done in the funded project; hence, if it is funded, it needs to be funded while that project continues. However, it is not clear that this project is critical to problems currently facing managers in the Delta.

**Products:** No products are mentioned directly although one presumes that peer-reviewed publications will be a result, given the track records of the applicants.

**Budget:** The proposal states that the budget benefits from federal matching funds and contribution of time from federal employees, yet none of that is reflected in the budget that is shown. One wonders if that section is from the original proposal.

## ***Value Added Review Rating***

*Rating of the value added merit of the supplement proposal based on the following scale:*

- ***Superior:*** Outstanding scientific value with a pressing need for immediate funding and expected to add substantial new thinking/concepts to our knowledge/understanding on one or more highly relevant CALFED topics for a very reasonable supplemental cost.
- ***Above Average:*** At least high scientific value and a clear need for rapid funding. Expected to add solid basic new thinking/concepts to our knowledge/understanding on one or more highly relevant CALFED priority research topics for a very reasonable supplemental cost.
- ***Sufficient:*** A supplement proposal with a fair amount of scientific value and need for timely funding and expected to add some basic new thinking/concepts to our knowledge/understanding on one or more adequately relevant CALFED topics for a reasonable supplemental cost.
- ***Inadequate:*** A supplement proposal that has little scientific value or need for timely funding. Not expected to add significant new thinking/concepts to our knowledge/understanding on relevant CALFED topics or the supplemental cost is unreasonable for the knowledge gained.

Please select the appropriate rating with an **X**:

- Superior  
 Above Average  
 Sufficient  
 Inadequate

### ***Explanation of rating and additional comments:***

The research proposed will enhance the contribution of the funded proposal, however it is not clear that it is essential for understanding problems currently facing management of the Delta.

### **Subsection 3: Funding Recommendation and Justification**

*Funding recommendation for this supplement proposal and a justification of this recommendation.*

Select one of the following three funding recommendations with an **X**:

- Fund in Full  
 Fund with modifications  
Suggested Funding Amount \$ \_\_\_\_\_  
 Do not fund

*Justification to recommendation. If the recommendation is to fund with modifications, modifications the applicants must make in order to receive funds are listed.*

The research proposed makes up for previous budget cuts and enhances project oversight, neither of which significantly enhance scientific understanding. The

hydrodynamic research is new, builds on currently funded work, but will provide a detailed picture of sediment resuspension in a couple sites with no mechanism for understanding its contribution to contaminant delivery in the estuary as a whole.