

## Appendix B-8

### LAKE TAHOE RESTORATION PROJECTS ESTIMATED DIRECT COSTS & KEY MILESTONE DATES

Project Name: Tahoe Decision Support System Agency: U.S. Geological Survey  
 Prepared by: Mara Tongue Phone: \_\_\_\_\_ EIP #: 10164  
 SNPLMA Project #: \_\_\_\_\_

**Identify estimated costs of eligible reimbursement expenses:**

|  |                   |               |
|--|-------------------|---------------|
| <p><b>1. Planning, Environmental Assessment and Research Costs</b> (specialist surveys, reports, monitoring, data collection, analysis, NEPA, etc.)</p>  | \$ <u>10,000</u>  | <u>4.0</u> %  |
| <p><b>2. Direct Labor (Payroll) to Perform the Project</b></p>   | \$ <u>189,483</u> | <u>76.0</u> % |
| <p><b>3. Project Equipment</b> (tools, software, specialized equipment, etc.)</p>  | \$ <u>2,464</u>   | <u>1.0</u> %  |
| <p><b>4. Travel</b> (including per diem where official travel status required to carry out project, such as serve as COR, experts to review reports, etc.)</p>   | \$ <u>2,653</u>   | <u>1.0</u> %  |
| <p><b>5. Official Vehicle Use</b> (pro rata cost for use of Official Vehicles when required to carry out project)</p>  | \$ <u>400</u>     | <u>.1</u> %   |
| <p><b>6. Cost of Contracts, Grants and/or Agreements to Perform the Project</b></p>  | \$ <u>20,000</u>  | <u>8.0</u> %  |
| <p><b>7. Other Direct Costs</b> (direct labor for agency personnel to do project procurements; COR; PI; personnel assigned as NEPA lead; personnel assigned to review contracted surveys, designs/drawings, reports, etc.; project manager and/or project supervisor; and contracted costs for project manager and/or project supervisor if contracted separately)</p> | \$ <u>25,000</u>  | <u>10.0</u> % |
| <b>TOTAL*:</b>   | \$ <u>250,000</u> | <u>100</u> %  |

**Estimated Key Milestone Dates:**

| Milestones/Deliverables:               | Date:     |
|--|-----------|
| A "No-project Alternative Analysis"    | Oct 2004  |
| Final Update Report                    | July 2004 |
| Continue working on linkages and model |           |
| Final Completion Date:                 |           |

**COMMENTS:**

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## SCIENCE, RESEARCH & MONITORING TAHOE PROJECT PROPOSAL

**Project Name:** Tahoe Decision Support System

**EIP #** 10164

**Lead Agency:** U.S. Geological Survey  
Western Geographic Science Center

**Contact:** Dave Halsing

**Phone Number:** 650-329-4237

**Threshold:** All

**Email Address:** dhalsing@usgs.gov

**Threshold Standard:**

**Total Project Cost:** \$

**Round 6 Funding requested:** \$250,000

**Is this a multi-year project?** Yes/~~No~~

**Project Description** (Include a specific list of tasks and subtasks to be accomplished that will facilitate Basin agencies in writing a detailed scope of work):

1. Develop a tool to identify alternative management strategies for meeting environmental objectives, subject to constraints on resources.
2. Develop linkage diagrams reflecting a formal system understanding of the environmental processes in the Basin, in support of the update groups
3. Provide analyses of alternative futures in support of stakeholder processes
4. Develop software tools reflecting this emerging system understanding to support the Basin's management systems. These will be GIS-based land planning tools considering socioeconomic and environmental impacts of agency-identified controls aimed at attaining environmental standards. They will use relevant existing economic and environmental research where available to evaluate possible future regulatory, development, environmental and economic alternatives.

**For Science & Research Projects briefly summarize the current state of knowledge of this subject matter:**

The 2000 Lake Tahoe Basin Watershed Assessment identified a need for adaptive management of the Lake Tahoe Basin environment. A wide scale effort, "The Adaptive Management Framework", began in 2003 to understand what that would mean, to develop the necessary system understandings to implement adaptive management, and to provide recommendations to Basin agencies about how to modify their management systems. Working with the results of that first year's effort, TDSS is currently supporting the process in its second year by providing expertise in management systems as well as software and integration support. A "No-project Alternative Analysis" to be released in October uses this incipient system understanding to integrate available understandings of the likely effects in the Basin if management continues on its current course. Plans for FY05 include supporting the Update process by helping its core groups develop linkage diagrams reflecting an integrated system understanding and by providing system insights to the final Update Report in July. We expect to continue supporting the Update process in FY 2006 in whatever ways are needed. We anticipate that will mean analyzing alternative futures generated through the stakeholder process, refining integrated system models, and developing software tools encoding these system models, to support the Basin's evolving management systems.

**Describe the purpose and need for the project:** (For Science & Research Projects describe how this project will guide future management activities. This description should include a **quantitative estimate of the anticipated gain** in management information and describe how the research and/or monitoring project may inform the development and understanding of additional Key Management Questions (one page recommended):

TDSS responds to the needs articulated in the Watershed Assessment for adaptive management

systems and for managers to enhance their general system understandings of the Basin. We expect that it will help P7 agency staff each understand the Basin 3% better, resulting in perhaps one additional KMQ.

**Describe the goals and objective of the project (for Science & Research Projects describe Key Management Questions being addressed (Recommended 2-3 pages):**

1. Objectives: List the objectives of the proposed research being tested during the project, and briefly state why the intended research is important.
  2. Approach: Outline the research design, methods, and techniques that you intend to use in meeting the objectives stated above.
  3. Identify the Key Management Questions being addressed and/or how the project may inform the development and understanding of additional Key Management Questions.
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1. Objective: Support the development of the P7 Regional Plans by creating decision support tools to identify and formalize an integrated system understanding of the mutual influences and feedback among natural and social processes in the Basin, including management actions.
  2. Approach: With the assistance of the P7 core groups, develop an integrated system understanding that can serve as the basis for optimization and other software tools supporting Basin agencies' management systems. We have made the choice to be very responsive to the specific needs identified by Basin agencies, staying flexible rather than continuing on the course that seemed best at the outset.
  3. Key Management questions: This project should shed light on several of the KMQs associated with adaptive management, such as parts of 4.2 ("What role should research play in adaptive management?") and 4.4 ("What role should modeling play in adaptive management?").

**Describe the anticipated project accomplishments** (for Science & Research Projects provide a qualitative description of how the results of each task will reduce the uncertainty of predicting the behavior of the environmental processes being studied and may lead to solutions to environmental problems (one page recommended) to improve the agencies' abilities to protect the environment and achieve the management objectives.):

By compiling understandings of different Basin processes in a single place, and providing context about their inter-relationships and comparative uncertainties, we expect to make it easier for agencies to understand the underlying processes they are managing and the trade-offs that may accompany their choices.

**Describe the "readiness" of this project to move forward (environmental documentation, etc.;** for Science and Research Projects that are a continuation of previous projects, provide a quantitative measure of the actual gain in management information (one to two paragraphs recommended):

TDSS has been an ongoing project since 2003, and the funding sought in this proposal is the second installment of a two-part proposal that SNPLMA approved last year.

**Describe potential partnerships for this project.**

TDSS is eager to partner with all interested Tahoe Basin researchers and agency staff. So far we have worked with the Adaptive Management Framework, the Urban Biodiversity project, TRPA's transportation model update, and are expecting to work with Phase II of the TMDL beginning this fall and winter.

**For Science & Research Projects describe how this project will guide future management activities:**  
TDSS is intended to help managers weigh the factors affecting their decisions by providing some broader context for them.

**Include an 8 ½ X 11 map depicting the project, or research/study area.**

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