

Project Name:	Tahoe Integrated Information Management System (TIIMS)	EIP #: 10154
Lead Agency:	US EPA	Contact: Jack Landy
Threshold:	Across All Thresholds	Phone Number: (775) 589-5248
Threshold Standard:		Email Address: landy.jacques@epa.gov
Funding Requested in this Round:	\$282,425 \$60,000	Total Project Cost: \$282,425 \$60,000

Is this a multi-year Project? No.

Project Summary (maximum 200 words): (applicable ONLY to this Round 9 project):

This proposal supports an adaptive management approach to facilitate management activities and encourage Basin-wide reporting for projects and programs. This proposed project will help facilitate the Environmental Improvement Program's (EIP) program-wide effectiveness and help initiate the TMDL implementation by utilizing an existing data management tool: the Tahoe Integrated Information Management System (TIIMS).

Building on efforts currently underway, this project proposes to enhance the web-based processes and infrastructure to make EIP project information available to partners, the public and congressional representatives while also enhancing the reporting which is essential to tracking EIP implementation and outcomes. These efforts will be extended to the TMDL implementation which will also require a similar on-line data management, project monitoring, tracking and reporting system. This project will:

- Building on efforts currently underway, this project proposes to enhance the web-based processes and infrastructure to make EIP project information available.
- Finally web-enable the EIP project reporting process.
- Create search and reporting capabilities across all projects.
- Help insure that Lake Tahoe's TMDL data management efforts are aligned with similar efforts nationally.

Detailed Project Description (focuses on what Round 9 is funding; list the number of years or phases the Round 9 requested funding will cover; if phased, briefly describe how this project links into previously phased projects including what remains for Rounds 10 and beyond).

The Tahoe Integrated Information Management System (TIIMS) prototype web site was created with funding from multiple Lake Tahoe basin agencies from 2000 – 2003. Its creation came from an identified and challenging need to manage the Lake Tahoe basin's extensive, diverse, and diffuse information. Each year, dozens of entities generate and use enormous quantities of information to accomplish a wide range of goals. Presently there are several information efforts associated with the Pathway and EIP update effort spurring the need to organize, collaborate, and share large volumes of information. Providing quick and easy access to this information and other management tools like web-based group calendars, password protected document collaboration workspaces, and on-the-fly mapping capabilities were identified by many partnering agencies as necessary for advancing their coordinated efforts. In January 2006, a full time staff was hired and efforts are underway to move the TIIMS web site from prototype to production.

The SNPLMA Round 5 funding for the Tahoe Integrated Information Management System (TIIMS) is moving this web environment from prototype to production by upgrading, enhancing, and further integrating all databases and processes to streamline information entered on the web site. These enhanced databases and processes will lay the groundwork for a comprehensive EIP web presence that is easy to use and accessible to all partners.

Current data management efforts on TIIMS are being aligned with state and national efforts in preparation for also aligning TMDL data in the same way. These efforts are also preparing us for EIP project display considerations. Right now, the TIIMS Team is working with citizen based stream monitoring groups and their data from multiple efforts around the Basin. This data is being integrated into a single database on TIIMS. The database being created will accommodate the needs of each group's individual efforts and is being carefully aligned with the web-enabled California Storm Water Ambient Monitoring Program (SWAMP) database as well as US EPA's on-line database. When complete, this new TIIMS database will be in a position to push Lake Tahoe Basin monitoring data to both state and national databases ensuring Basin data meets these standards. These efforts create the opportunity to take this process one step further and align Lake Tahoe basin TMDL data with similar national US EPA TMDL database efforts. In addition, the efforts being made to display citizen monitoring data on a stream-by-stream and monitoring site basis is preparing the TIIMS Team for creating the necessary SQL database needed to house and pull up EIP data on a project-by-project basis.

The TMDL Technical report will be used in a new document publishing tool being created on TIIMS. This new tool will have a public comment feature and database back-end. Using this tool, agency personnel will work with the TIIMS staff to "publish" their strategic documents. Each page of the web-published document will have an area where the public can enter their comments using a web based tool. The public's comments will go directly into a fully searchable and integrated database. This process will stream-line the comment process and decrease the time required for agency personnel to manually enter comments into reports and spreadsheets. The document selected to kick-off this new tool is the TMDL Technical Report.

TIIMS is also playing a role with other EIP and regional projects underway:

- 10146: USGS Tahoe Decision Support System
- 10166: Tahoe Science Consortium: web presence hosted by TIIMS
- PSW Research Station: Project Administration
- EIP Update: secure document collaboration area
- Nevada Fire Safe Council: secure document collaboration work area.
- Community Enhancement Program: secure document collaboration work area.
- TRPA's Region Plan Update: secure document collaboration work area and updated TIIMS public web presence.

As part of the overall EIP update strategy, it was envisioned the process for developing and implementing the programs and projects would be dynamic as conditions change. Regular updating of the EIP ensures that the documentation remains relevant and the program meets its stated objectives. In addition, assisting with the efforts described is demonstrating that having a centralized repository for project information can bring internal and external project teams together to coordinate on scoping/design issues, collaborate on project goals and report out accomplishments. This web-enabled, centralized data management system already provides the Tahoe basin with the tools necessary to collaborate, assign tasks, and share documents on all aspects of their projects in a password protected area accessible only to agency personnel.

A current shortfall of the EIP program is a lack of comprehensive and easily accessible, publicly facing project data concerning EIP planning, design, implementation and effectiveness. This limits the ability for agencies to track what has been done and estimate what the effects have been at different scales. Within this SNPLMA proposal we are requesting funding to enhance the current development of a centralized data management system with web enabled databases that support all EIP tracking and reporting information. This data management and reporting system dovetails with existing efforts to develop estimates of project effectiveness and crediting. The funding being requested is for one year.

Describe the goals and objectives of the project (those applicable ONLY to this Round 9 project):

1. Enhance On-Line Project Data and Information Efforts

TIIMS is the target site for a web-enabled version of a project tracking system called Primavera. This software's database has not been fully populated with EIP information and still needs to be geospatially linked making limited project information available via a map viewer. Primavera allows partnering agencies to enter and store:

- EIP Project #
- Project description
- Schedule information
- Funding dollars
- A more detailed project proposal summary
- List of project benefits

In addition, the current effort can provide links to PDF generated reports pulled from TRPA's internal permit tracking program called Accela. The reports may include:

- Information about permit applications submitted for the specific EIP project

- Permit application coordination information
- When implemented and recorded, “Measures of Performance” (MOPs) or Project Accomplishment Units can also be tracked in Accela.

Contractual dollars will be used to create a new, web-enabled cross-project search tool. In its current form, the web-enabled EIP Update will only be available on a project-by-project basis. There is no proposed way to pull information from across all projects or show information for the entire program. The ability to generate cross-program reports will be explored as part of this project and coordinated with results of current and future EIP reporting projects.

2. TIIMS Data Repository

As work progresses on each project, agency personnel can upload and/or link to the TIIMS web site datasets, reports, publications, photos, and information created over the life span of a project. All of this information can be linked to the project specific web pages or will be searchable via the TIIMS robust search tools.

Describe the anticipated project accomplishments (i.e. products or identifiable environmental benefits being produced or implemented under this project):

The TIIMS staff will utilize the current five year EIP project list as the established priority to track the most current EIP projects. Working with TRPA’s EIP Team, partner agencies, and contractors responsible for each project the TIIMS Team staff will storyboard and inventory each EIP project. This will help to determine what monitoring data are being collected for each project and what reports, datasets, information, and web content will need to be accommodated. The TIIMS Staff will also insure web pages are generated for each project on the 5-year plan.

Project Accomplishments:

- Web enabled and publicly available project information for all projects currently on the EIP five-year list.
- Real-time project information pulled from existing datasets:
 - Primavera
 - Accela
- Integrating this EIP information into existing TIIMS databases:
 - Insuring all EIP project information is available using the TIIMS search capabilities
 - Insuring all EIP projects can be accessed via the TIIMS Map Viewer
 - Insuring complete project metadata

Describe the “readiness” of this project to move forward (urgency, capacity, capability, environmental documentation etc.):

In May and June of each year, multiple agencies are contacted by state and federal senators and congressmen as they prepare for the annual “August Event” celebrating the 1997 Presidential visit and the official start of the EIP. Staff members at each agency scramble as they pull together data and information about the last year’s accomplishments. Centralizing this information on a web site will make it publicly available minimizing the annual need to reinvent and recompile project reports.

The TIIMS web site with its dedicated Map Viewer and SQL databases has already been selected to house work being done for the EIP Update. In June, 2008, the updated and enhanced TIIMS web site will be launched. This new site will offer updated and enhanced versions of all its current tools:

- Enhanced Map Viewer
- Enhanced document repository for: reports, spreadsheets, PowerPoint presentations, etc.
- Enhanced Metadata database
- Password protected and secure document sharing portal

New to the TIIMS web site will be:

- Fully integrated search capabilities
- Integrated databases to prevent duplication of data entry efforts
- Document publishing and Public Comment tracking tool for all partner agencies
- Citizen Stream Monitoring database with stream data presented on a stream by stream basis.
- Content management system available to agencies who want to update their own web information.

The TIIMS Team will complete our current efforts to move TIIMS from a prototype to a production web environment by October, 2008 creating the opportunity for the TIIMS staff to turn its full attention toward this project tracking effort for the EIP Update and TMDL implementation.

Describe partnerships for this project (if applicable, project should identify partner funding [committed/secured] and how it is integrated into the project):

This proposal is being submitted as a partnership with the TRPA. The TIIMS Program is administered through a Project Team that includes representatives from: TRPA, US EPA, USGS, USDA Forest Service, Nevada Division of Environmental Protection, California Tahoe Conservancy and the Tahoe Science Consortium. In addition, the Pathway 2007 Executives signed an agreement to work cooperatively to develop and use TIIMS as a means of supporting the Pathway 2007 planning process.

Describe how the project results will be communicated and made available to the public.

One of the major accomplishments of this project is to make all EIP project information available via the public facing capabilities available on TIIMS. This will require working with the EIP staff and all partner agencies to insure complete project information is posted to TIIMS.

TSC Considerations:

a. Does the proposal identify the specific goals and objectives of the project and describe how fulfilling those objectives will contribute to the achievement of one or more environmental thresholds?

The goals and accomplishments for this proposal are detailed in pages 4-5. Using TRPA's Accela program, this project proposes to track each EIP projects MOPs or AUs and display those accomplishments along with each project's set of information.

b. Does the proposal accurately describe the estimated environmental risks from failure of the proposed project? i.e If the project fails what is the environmental consequence?

Providing EIP Project information via a web-based solution was the number one most requested upgrade to TIIMS during a recent survey conducted for TIIMS by a contracting agency. The environmental consequences will continue to be lost data, time, and resources. Coordinating efforts, resources, and information facilitate informed decisions.

c. Does the proposal describe the methods and strategies (i.e. monitoring, research, or both) that will be used to verify whether the project goals and objectives have been met?

There will be two pieces to the revised TIIMS proposal. An initial \$10K will be used to complete the EIP work Gerry Dion started. This will insure that developed solutions for displaying project information entered into TRPA's Primavera and Accela programs can be pulled from their respective databases and displayed via the Map Viewer for partners, the public and congressional members to access.

d. Does the proposal describe how information from the monitoring and research will be used to improve the continued performance of the proposed project or future similar projects?

This project will finally set a baseline for collecting project level information and display it via TIIMS. This opens the door for capturing and displaying additional information as this tool evolves. Using a SQL database backend, as TIIMS does, creates the opportunity to build on existing efforts without having to re-invent them.