

ROUND 12 CAPITAL PROJECT NOMINATION FORM
LAKE TAHOE FEDERAL SHARE EIP CAPITAL PROJECTS
APPENDIX K

Project Name:	Tahoe Integrated Information Management System (TIIMS)	EIP Number: <i>(Required)</i>	10154
Federal Agency Sponsor: <i>(Required)</i>	US EPA and TRPA	Contact:	Jack Landy
Threshold:	Across All Thresholds	Phone Number:	(775) 589-5248
Threshold Standard:		Email:	landy.jacques@epa.gov
FUNDING REQUESTED IN THIS ROUND:		\$ 514,093	

Federal Share EIP Consideration

Select "yes" or "no" for each question. If you have a "yes" response, briefly describe. *Projects must meet one or more of these 5 items.*

1. Does the project involve federal land? Yes No
 If yes, is the federal land involved important to successful implementation of the project?

2. Is this project identified in the EIP? If yes, please ensure the EIP number is identified in the above project information box. If no, provide a description of the project's contribution to the EIP program. Yes No

The Tahoe Integrated Information Management System (TIIMS) EIP # is 10154.

3. Does the project involve the conservation of a federal or regional threatened, rare, endangered, or special interest species? If yes, identify. Yes No

4. Does the project involve an identified federal interest such as the detection and eradication of non-native invasive species (aquatic or terrestrial)? If yes, identify. Yes No

This proposal is consistent with page 7 of the June 2006 Federal Vision which states "... the Federal Partnership will utilize existing data management tools including the Tahoe Integrated Information Management System (TIIMS) and the USGS Lake Tahoe Clearinghouse" which supports agencies, organizations and entities with a wide range of web-based collaboration tools.

5. Does the project develop knowledge and/or information to develop future capital projects in the EIP? (such projects that fulfill this function would include technical assistance, data management, and/or resource inventories) Yes No

The Tahoe Integrated Information Management System (TIIMS) provides technical assistance and data management for all agencies, organizations, and entities accomplishing projects for the Environmental Improvement Program in the Lake Tahoe Basin. The collaborative geospatial and tabular data management proposed in this project will create a deeper understanding of environmental successes through the reporting of EIP Performance Measures. The ability to report on and therefore understand EIP accomplishments will inform decision-makers and drive future EIP projects.

Check all Capital Focus Area(s) that apply (as defined in the Federal Vision):

- 1. **Watershed and Habitat Improvement**
- 2. **Forest Health**
- 3. **Air Quality and Transportation**
- 4. **Recreation and Scenic**

Check all that apply (must meet a minimum of one category):

- 1. **Continued emphasis on forest ecosystem health/fuels reduction projects considering the LTBMU Stewardship Fireshed Assessment and Lake Tahoe Basin Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy.**
- 2. **Continued implementation and/or completion of projects approved in Rounds 5 through 11 which implement the EIP. Project proposal should clearly describe the phase/product being produced along with the consequence of not completing the project phase proposed for Round 12.**

List Previously Approved Rounds and funding(provide project titles):

Tahoe Integrated Information Management System (TIIMS) Round 5: Transition TIIMS from prototype to production; Round 9 & 10: Integrate the EIP Tracking & Reporting Tool
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- 3. **Project is consistent with and contributes toward TMDL pollutant reductions within the four source categories (atmospheric, urban & groundwater, forested uplands, and stream channel). NOTE: If “yes”, then please respond to questions in the Accomplishments section of the nomination proposal.**
- 4. **Control of aquatic invasive species and prevention and/or detection of new aquatic invasive species.**

Project Nomination Proposal Outline

Project Summary (a brief summary which clearly describes the proposed project –maximum 200 words)

- Summarize ONLY the Round 12 project (also summarize scaling of funding to be described in more detail in the “Project Description” section below).

Many individuals representing numerous federal, state and local agencies and academic affiliations contributed to development of the Tahoe Integrated Information Management System (TIIMS). Managing the Lake Tahoe Basin’s resources requires the involvement of numerous agencies. Each year, these entities collect, analyze, and publish enormous quantities of environmental data and information to meet their environmental objectives. The restoration and planning objectives of the different agencies within the Basin frequently overlap, and therefore, it is to the agencies’ benefit to share their data and information. Prior to the development of TIIMS, no cultural or technical solution existed to facilitate integration or exchange of existing data or information among organizations.

In 2009, the US Army Corps of Engineers (USACE) staff contacted the Environmental Improvement Program’s EIP Working Group members to understand potential modifications that TIIMS would need in order to meet the new reporting requirements identified in the EIP Update. Development of an EIP Reporting tool was the immediate priority. This SNPLMA R12 project will build on SNPLMA R9 and R10 funding efforts by completing the EIP Reporting Tool while simultaneously developing a rapid response system that can be expanded in the future to tie multiple project tracking and reporting needs together into a single Project Reporting System.

Collaborative project tracking and reporting has become a key need for all agencies in the Basin. The USACOE funding for the EIP Reporting effort on TIIMS created a collaborative data management tool for the EIP that will be integrated into TIIMS in the upcoming months. The purpose of the SNPLMA R12 funding will be to complete the EIP Reporting tool integration while also considering the increasing number of project data management efforts either planned or currently in development.

Integration of information will be the focus as TIIMS solidifies the data elements for project tracking that are common and separates out the data elements that are unique. In this way operational efficiencies can be streamlined by reducing the amount of staff time needed to input and maintain potentially redundant data collection efforts resulting in a cost savings for all agencies and better utilization of scarce staff resources.

For project scalability, please see page 11.

Project Description

Introduction

- Provide project background which explains the situation and state the problem and how it will be addressed.

Note: Focus needs to be the project in Round 12 not a history of an ongoing project or program.

The Tahoe Integrated Information Management System (TIIMS) represents a multi-agency investment in web-based Information Technology solutions designed to be flexible and responsive, and to meet the collaborative needs of many entities. It is the ideal system to house and support the USACE-funded EIP Tracking & Reporting tool. The USACE hired a reputable consulting firm, 7Q10, to assist the EIP Working Group to build this tool with

consultation & direction from the Tahoe Interagency Executive (TIE) Steering Committee. 7Q10 was asked by the USACE and by the TIE Steering Committee to conduct an independent analysis of what this tool should do and where it should reside once developed. Upon completion of their research, 7Q10 recommended to both committees that this new multi agency tool should be built using the TIIMS development server and then hosted on TIIMS after testing of the tool. 7Q10 also explained in the cost benefit analysis that by utilizing the tools, development infrastructure and security features on TIIMS, there was approximately \$150,000 to \$250,000 cost savings in developing the EIP Reporting & Tracking Tool, that would not have been achieved if TIIMS was not currently operating or in place.

Through these efforts, however, a pressing need was identified. Multiple sources of funding are often needed to achieve environmental gain on the ground. Tracking these sources of funding and their environmental gain while also addressing the reporting needs for each funding source has forced agencies to create multiple project tracking systems. These multiple and independent project tracking systems (some of them web-based) are creating redundant systems that are now dramatically increasing the staff time needed from each agency/entity to keep redundant data current. Leveraging the existing TIIMS infrastructure, Round 12 funding will complete the integration of the EIP Reporting Tool with TIIMS and complete a rapid response tool that can be expanded to: 1) integrate redundant systems and 2) reduce the staff time required to maintain these redundant systems.

- Describe what Round 12 is specifically funding; list the number of years the requested funding will cover; briefly describe how this project links into previous projects/rounds (identify and describe other round projects and funding received). Show scaling of project (reduced funding request and associated reduction in accomplishments).

NOTE: Focus should be on finishing current/phased projects. If project is new in Round 12, clearly identify if the project is for planning or implementation and how it will be completed with Round 12 funds. Identify if other funds will be needed to complete the project. Please identify total non-SNPLMA funds that are being contributed / dedicated to the proposed Round 12 project and the source of those funds.

The work described in this SNPLMA R12 proposal will be accomplished over an 18 month period starting in October 2012 and extending through the end of April, 2014. This proposal will build on the work being done from SNPLMA R5 through SNPMA R10. Here is a brief history of the SNPLMA funding for the TIIMS program.

SNPLMA R5 funded the Implementation Plan created for the Tahoe Integrated Information Management System (TIIMS). The TIIMS prototype was previously deployed and completing the Implementation Plan moved TIIMS from a prototype web site to a production web site.

SNPLMA R9 funding will be used to upgrade the Content Management System on TIIMS and create an Integration Strategy for the EIP Reporting Tool. Using this Integration Strategy, the SNPLMA R10 funding will move the EIP Reporting Tool, from the TIIMS development site to the production TIIMS web site and integrate these tools to insure the EIP Reporting Tool is taking full advantage of the existing features on TIIMS. For instance, instead of needing to do an agency project search from within the EIP database the integration will automatically flow each agency's project data to their existing page on TIIMS. In this example, selecting the "Projects" button (the button in the lower left hand corner of the left image) will insure all Project data for the California Tahoe Conservancy (CTC) will display as shown in the right hand image below:

Existing agency page for CTC from TIIMS:

Lake Tahoe Agencies



California Tahoe Conservancy (CTC)

Main Address:
1061 Third Street
South Lake Tahoe, CA 96150

Main Phone: 530-542-5580
Fax: 530-542-5591

Web Address: [Link to CTC Website](#)

Email: NONE

Affiliations: NONE

The Conservancy is an independent State agency within the Resources Agency of the State of California. It was established in its present form by State law in 1984 (Chapter 1239, Statutes of 1984). Its jurisdiction extends only to the California side of the Lake Tahoe Basin. The Conservancy is not a regulatory agency. It was established to develop and implement programs through acquisitions and site improvements to improve water quality in Lake Tahoe, preserve the scenic beauty and recreational opportunities of the region, provide public access, preserve wildlife habitat areas, and manage and restore lands to protect the natural environment.

[Documents](#)

[Projects](#)

Project results for CTC:

Related Projects

[<< BACK to California Tahoe Conservancy](#)

Project Name ▲	Start Date
Direct Property Management & Restoration	8/1/1997
EIP #00013: South Y Industrial Tract	8/1/1997
EIP #00025: Snow Creek SEZ Restoration	8/1/1997
EIP #00399: Barton Meadows Acquisition	8/1/1997
EIP #00420: Carnelian Bay SR 28	8/1/1997
EIP #00560.1: Upper Truckee	8/1/1997
EIP #00611: CTC Cove East	8/1/1997
EIP #00618: North Tahoe Lake Access Improvements	8/1/1997

This same integrated and automated data flow will insure EIP projects from 2007 - 2017 will appear on the existing TIIMS Watershed Map Viewer and automatically flow into dedicated web pages that explain the EIP's Action Priorities, Focus Areas, Sectors, and Sources of Funding. The audience for this automated and easily navigated data flow will be: the public, stakeholders, political representatives, and participating agencies.

A key component of the SNPLMA R10 scope of work is *Task 6: TIIMS Inventory and Data Management Strategy*. This task will inventory the growing number of project tracking and reporting systems and create a data management strategy. This task will become the foundation for this SNPLMA R12 project.

Two committees, EIP Working Group and TIIMS Oversight Committee, will be overseeing this inventory effort and considering how these independent project tracking systems can be integrated to reduce redundant data collection.

It is important to note that when the EIP Working Group spearheaded the creation of the USACOE funded EIP Reporting Tool they set forth as one of its goals to create project tools that were specific to the EIP and not create a system that was all things to all people. This focused approach to creating the EIP Reporting Tool was appropriate and needed for this effort.

This same focused approach can be found with each independent project tracking effort currently underway. While this kind of focus is critical in the planning stages of any project tracking tool or system, the cumulative impact each of these independent and focused tracking systems will have on all partnering agency's staff time should not be overlooked. Every effort should be made to integrate information and systems thus reducing redundant data tracking and the staff time needed to maintain these systems while also streamlining and enhancing operational efficiencies for all entities.

This SNPLMA R12 project will therefore build on SNPLMA R9 and R10 scopes of work and completely integrate the EIP Reporting Tool while simultaneously completing a **rapid response system** that can be expanded to tie multiple project tracking and reporting needs together into a single project tracking and reporting system.

A **rapid response system** is a project tracking system that is designed to be easily and quickly expanded as new challenges arise. For instance, the Aquatic Invasive Species

program was no where on the horizon five years ago, but s a vital program today. Breaking the Project Tracking and Reporting system on TIIMS down into small parts that flow seamlessly together insures the Basin has a collaborative project tracking and reporting system that can quickly meet unexpected needs at a minimum cost.

Like the Aquatic Invasive Species program, the Lake Tahoe Restoration Act (LTRA) may have extensive reporting needs. TIIMS is ready when those needs are established. The tools already available are a multi-agency designed project reporting database that can be expanded to meet unique (versus redundant) project reporting needs with the ability to flow data by agency, sector, location, multiple funding sources, categories, performance measures, dates, and watershed. Already built on TIIMS are: tools for charting and graphing data and geospatially displaying data in endless formats. The anchor for all this functionality is the stringent security measures already in-place which can allow or deny users access to the stores of data and documents. TIIMS already houses 1,041 agency personnel user accounts and 139 established “roles” that provide group level access to specific data or reports. (For instance, the EIP Working Group has a role whereby on this group, plus designated guests, can edit or add EIP project data.) At the completion of the SNPLMA R12 project, TIIMS will also have web-based reporting tools the LTRA could utilize to extract and flow data into carefully designed report “templates.” These reports can be tailored to meet the needs of many audiences from the public, political representatives, working groups, or even a specific agency’s needs. To achieve this goal TIIMS will need a couple “wizards” to assist.

Project “Input” Wizard. The TIIMS program proposes a Project Input (or data capture) Wizard. This task will build on the efforts laid down in *Task 6: TIIMS Inventory and Data Management Strategy* from the SNPLMA R10 Scope of Work. This task will create a detailed inventory of potentially redundant project tracking systems currently being planned or developed and create a collaborative data management strategy for Basin project reporting. Using this knowledge, the Integrated Project Tracking system on TIIMS will use the SNPLMA R12 funding to create an easily expandable design that will accommodate additional known and unknown future project tracking or reporting needs. This design will insure that instead of rebuilding project tracking elements multiple times, the focus will be on expanding these tools to incorporate project tracking elements that are unique to each new project tracking or reporting effort.

The current list of systems with perceivably redundant project reporting elements includes, but are not limited to: the Tahoe Transportation District’s project tracking system, Alan Heyvaert’s “Tahoe Watershed and BMP Performance Database,” the Tahoe Fire and Fuels Team’s SharePoint project tracking system, the TMDL Accounting and Tracking Tool, and (as appropriate) the TMDL Management System.

The project tool on TIIMS will be designed to capture data that is common or “core” to many such project reporting efforts. These core project elements will be built into TIIMS and refined during the integration of the EIP Tracking & Reporting Tool (SNPLMA R10) funding.

In this example from the EIP Reporting Tool, the Project Input Wizard will capture core project data once. Research may modify this approach, but currently collected core data includes: Project name, description, project contact information and dates, location, total project cost, status, primary implementer, sources of funding, and collaborative implementers.

EIP Project Page Safety Tools

Please Use The Forms Below To Add A New EIP Project. HOME

General Project Information.

EIP # 736

Project Name Sawmill 1b Bike Path

Project Description Bike Path from Country Club Golf Course to Sawmill Road; Provide a link between the Meyers (Pat Lowe) Bike Trail and the Arapahoe Bike Trail and between the Arapahoe Bike Trail and Sawmill Road. Perform right-of-way acquisitions. This project includes the installation of a pedestrian/bicycle bridge over the Upper Truckee River.

Action Priority Improving Transit and Trails Connections

Total Project Cost: 82000

[More Information>>>](#)

GIS ID

Website

Project Status Completed

Contact Name Donaldo Palaroan

Phone Number 530-573-7920

Email donaldo.palaroan@edcgov.us

Affiliation El Dorado County

Threshold Recreation

Is the data QA'd?:

Project Details

Note Watershed Location Organization Project Phase Funding Performance Measure

Project Funding Information:

Agency	Funding Source	Location	Year	Annual Expenditure (\$)	Is In-kind funding
California Tahoe Conservancy	California Tahoe Conservancy	El Dorado County	2009	\$32,000	<input type="checkbox"/>
Tahoe Regional Planning Agency	Other	El Dorado County	2009	\$50,000	<input type="checkbox"/>
Sum of the Annual Expenditure: \$82,000					

Once the core data has been captured, users will be asked to specify what *other* project tracking and reporting needs apply to the project. This is a conceptual example of the many additional efforts that may need to track and report on a single Basin project. Research will change and refine this list:

- Programs & Projects**
- SNPLMA: Lake Tahoe**
 - SNPLMA: White Pine**
 - Environmental Improvement Program**
 - Tahoe Stormwater and BMP Efficiency**
 - Total Maximum Daily Load**
 - Transportation**
 - Aquatic Invasive Species**
 - Lake Tahoe Restoration Act**

When additional efforts are selected, new data collection screens will appear that capture unique (versus redundant) data for each tracking and reporting effort.

EIP Reporting Wizard: Regardless of which agency, entity, or source of funding is tracking a project there will always be a need to extract data and flow the data into professionally formatted-production ready reports as well as excel spreadsheets of project data. Specifically, the Reporting Wizard will utilize reporting software like Active Reports, Data Dynamics Reports, and Active Analysis by Data Dynamics (Grape City):

<http://www.datadynamics.com/Products/Compare/CompareBusinessNeeds.aspx> that can be programmed to generate PDF documents/reports pulling up-to-date data from the database to create individual project “Fact Sheets” that can be accessed, used, and even customized for any agency and interested stakeholder. Agency and stakeholder input will be used to design the template which will then obtain data and generate these reports. Once the “Generated Report” button is pushed and the project fact sheet is created it can then be printed and distributed, or shared electronically.

The EIP Working Group has been asked to create a template of what the EIP Annual Report will contain. Establishing the content of this report will be accomplished before the next Tahoe Summit in August, 2011. These paper-based processes will be the initial test of the annual report’s template. Refinement and adjustments will then be needed. Building on the work of the EIP Working Group, the Report Wizard and dynamic reporting software will then be able to automate in the annual reporting process by creating production-ready annual report templates that will pull the most current data from the database and produce production ready Annual Report features in a PDF format.

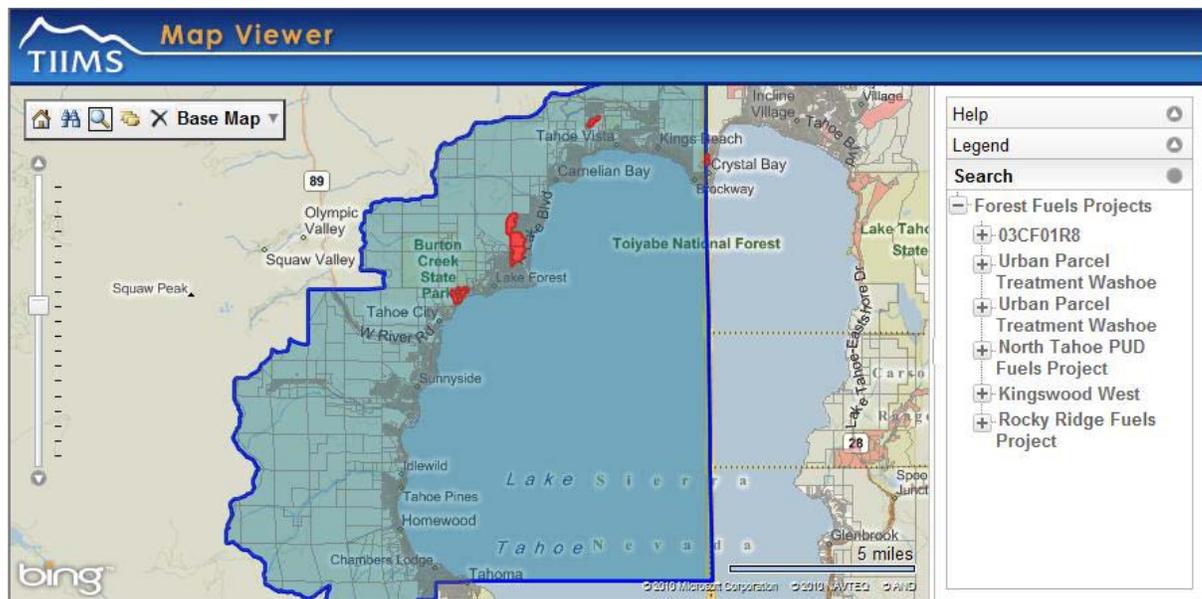
Finally, the Report Wizard will create production ready Overall Reports. The templates used to create these web-based reports will be developed with input from all stakeholders and will cover, but are not limited to, the following reporting needs:

- Program (EIP, SNPLMA, TMDL, etc...);
- Agency, organization, or entity;
- Sector;
- Source of Funding;
- Action Priority;
- Focus Area;
- Performance Measure;
- Project Status;
- Project Stage;
- Threshold;
- Sub-theme;
- Location;
- Watershed.

Integration Efforts with Existing Infrastructure: Leveraging the investments already made in the TIIMS infrastructure, this project will further integrate the EIP Reporting Tool with the existing TIIMS system by associating documents to projects and removing redundant database tables from the EIP Reporting Tool that already reside in the production TIIMS web site. This will more tightly integrate the EIP Reporting Tool with TIIMS.

The existing charting and graphing tool on TIIMS, already deployed for Stream Water Monitoring efforts, will also be integrated into the Project Reporting features, but operate independently of the Reporting Wizard. This is an important feature as the Reporting Wizard will be set up to automatically create production ready PDF documents. Not every situation calls for a pre-formatted report. Instead, this task will insure that TIIMS users can create and save charts and graphs of EIP Project and Performance Measure data and utilize these charts in agency or interested stakeholder generated reports and PowerPoint presentations. This tool will also cut down on the amount of data formatting needed for individual agency reports.

Finally, EIP Projects and Performance Measures will be integrated into an EIP specific Map Viewer. This new Map Viewer will be modeled after the existing and popular Forest Fuels Treatment Map Viewer on TIIMS.



Geospatial display of EIP projects has been a long requested addition to the EIP Reporting Tool. Initial requests of this dedicated Map Viewer include the ability to geospatially view EIP projects through the life of the Environmental Improvement Program. In addition, being able to geospatially view, compare, and understand where work has been done to achieve environmental gain through each performance measure has also been requested. It is important to note that multiple data needs will need to be considered and met through his effort. Agency staff members are interested in acquiring the geospatial layers for building maps on their independent systems, while the public and many of our political partners and community stakeholders want maps available through the world wide web. Leveraging work that is already underway, the EIP Working Group will guide the development of the Map View reporting features as well as break out the geospatial data by audience need.

Maintain & Improve TIIMS Infrastructure: Completing the EIP Tracking & Reporting Tool on TIIMS can not be done without a dedicated staff and the maintenance of the existing infrastructure of software and hardware.

In addition, the existing search features on TIIMS, while compliant with the TIIMS Implementation Plan, have proven to be cumbersome for users to navigate. A Search Wizard will integrate the existing search features on TIIMS making project, document, mapping data, and bibliographic searching intuitive and user-friendly.

Once SNPLMA R9, R10, and R12 projects are completed, TIIMS will need a User's Guide that explains how additional project tracking and reporting efforts can become part of the TIIMS infrastructure and collaborative data collection efforts. The TIIMS staff will create a "How to Guide" that explains "How to Develop and Deploy Tools to TIIMS." This guide will be developed from lessons learned through the TIIMS/SNPLMA rounds of funding and provide agencies and consulting firms with a step-by-step guide on the TIIMS architecture and infrastructure. It will also include considerations that need to be made from the beginning of planning to successfully integrate a new web-based tool into TIIMS.

This grant funding will also address several urgent and outstanding hardware and software issues. TIIMS has one server that needs to be replaced and several outstanding software licensing needs for ESRI, Kentico, Trend Micro, MS SQL Server, and Webinator. In addition, the over 1,000 user accounts need to be updated and maintained, there are on-going requests for TIIMS to house documents, and existing tools need to be maintained.

Statement of Project Scalability:

There are certainly a number of reduced funding scenarios that can be considered, and the list below shows different components and the associated costs that could be used if scaling is necessary. However, although these items could be considered for scaling, the full success of the EIP reporting tool integration will be greatly compromised, and the overall effectiveness of TIIMS reduced in terms of cost savings associated with the provision of hosting the EIP reporting database. Additionally, reducing project costs for maintenance and software will leave a gap in overall needs to maintain the full investment to TIIMS and the EIP database integration until additional funding is secured and/or leveraged.

- **Complete EIP Reporting Tool integration** with the production version of TIIMS. This task addresses concerns that the SNPLMA R9 and R10 funds will not be enough to completely integrate the EIP Reporting Tool with the production TIIMS web site. This task insures that documents uploaded to TIIMS can be properly attached to EIP projects submitted through the EIP Reporting Tool. In addition, project contact information will be integrated with the existing user database. Integral to this activity's success is subcontracting to a consultant plus a high level of testing from the TIIMS Staff. The budget reduction for this item is: **\$61,377**.
- The **Report Wizard** work and **Map Viewer** creation could be removed from this proposal. This would involve removing the production-ready project fact sheets for EIP Projects, the annual report, the ability to do web-based charting, and the dedicated EIP Project Map Viewer. Also removed is 2 years of ESRI software maintenance. The budget reduction would be: **\$162,165**.
- Developing the **Project Input** and **TIIMS Search Wizards**. These tasks involve creating the integrated project input wizard that will reduce redundancy among the many project tracking needs currently being independently developed. The Search Wizard will simplify a user's ability to search documents, bibliographies, projects, and map layers on TIIMS. Removed with this task is 2 years of software maintenance for Kentico, LogMeIn, and Webinator plus installation and reconfiguration cost. The budget reduction for this would be **\$118,601**.

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

Building on efforts currently underway with SNPLMA R9 and R10, this proposal is urgent and represents the next steps toward efficient and effective project and performance measure accomplishment reporting. Creating a collaborative reporting system will better utilize scarce Federal and State funding and resources.

- Describe partnerships for this project. (if applicable, project should identify and describe committed/secured partner funding and/or other partner contributions and how it is integrated into the project).

The TIIMS program enjoys a rich history of partnerships. The role of two working groups will be instrumental to the success of this SNPLMA R12 proposal. Those groups are the EIP Working Group and the TIIMS Oversight Committee.

The EIP Working Group has already played an integral role in the creation and deployment of the EIP Reporting Tool. This group will continue to guide this source of funding and the elements in this proposal that are specific to the EIP’s project reporting efforts. The EIP Working Group includes representatives from: the Tahoe Regional Planning Agency (TRPA), the California Tahoe Conservancy (CTC), the Forest Service (USFS), and the Nevada Division of State Lands (NDSL).

Areas of this proposal that consider the project tracking needs for multiple efforts like the Tahoe Transportation District’s project tracking system, Alan Heyvaert’s “Tahoe Watershed and BMP Performance Database,” the Tahoe Fire and Fuels Team’s SharePoint project tracking system, the TMDL Accounting and Tracking Tool, and (as appropriate) the TMDL Management System will be spearheaded by the TIIMS Oversight Committee. This 15 member committee includes representatives from: TRPA, CTC, USFS, Nevada Division of Environmental Protection (NDEP), the US Environmental Protection Agency (US EPA), the US Geological Survey (USGS), the Tahoe Science Consortium (TSC) and the Tahoe Fire and Fuels Team (TFFT).

***Note:** The form requests information about project goals, objectives, accomplishments, and questions the program is designed to answer across several different sections. These issues are closely linked and your individual responses should provide a cohesive description.*

Goal – Purpose and Need (“larger” statement of future expected outcome – usually not measurable)

Purpose:
 Collaborative data management has reached a pivotal point. The Tahoe Integrated Information Management System (TIIMS) was envisioned, designed and built to “integrate information” for multiple agencies and entities in the Lake Tahoe Basin. This multi-agency approach was designed to transcend the needs of each individual agency and independent effort to create a collaborative data management hub.

In addition, TIIMS was designed to fall outside the bureaucratic red-tape that often encumbers agency specific information technology efforts. This design decision ensures TIIMS does not get bogged down in what can be lengthy procurement processes and makes TIIMS a rapid response system that can meet the ever growing and changing needs for data management. TIIMS has consistently matured and now has years of collaborative data management experience to share.

Need:

Collaborative Project Reporting has become a key need for all agencies in the Basin. Integration of information and systems will be our next focus as we solidify the data elements of project tracking that are common and separate out the data elements that are unique. In this way we can streamline efficiencies by reducing the amount of staff time needed to input and maintain potentially redundant data collection efforts resulting in a cost savings for all agencies and better utilization scarce staff time.

Objectives (specific measurable statements of action – Round 12 only - which when completed will move towards achieving the goal)

The Objectives of this proposal are these:

1. Complete integration of the EIP Reporting Tool.
 2. Streamline processes by identifying both common and unique project reporting elements.
 3. Using the identified common and unique project tracking elements, complete a rapid response project tracking and reporting tool that can be expanded in the future to:
 - a. Integrate redundant project tracking systems and
 - b. Reduce data management staff time for all agencies.
 4. Maintain and improve TIIMS infrastructure and management.
- Describe how fulfilling objectives will contribute to the achievement of one or more environmental thresholds (air quality, water quality, soil conservation, vegetation, fisheries, wildlife, scenic, noise, recreation). Provide measures if applicable. For example: acres treated, miles of stream restored for each objective.

The Environmental Improvement Program is responsible for reporting project level information along with performance measure data that describes and accounts for environmental gain on the ground. The EIP is not the only project tracking effort currently underway. Creating an understanding of environmental gain can be enhanced through collaborative data management. Achieving the objectives as described in this SNPLMA R12 proposal will also create collaborative data collection for all environmental thresholds. The EIP Reporting Wizard will then create the opportunity for all agencies and interested stakeholders to have access to the same project and performance measure data.

- Describe the estimated environmental risks from unintended consequences of the proposed project (if applicable).

This section is not applicable to this project.

Accomplishments

- Describe the anticipated project accomplishments (i.e. products or identifiable environmental benefits being produced or implemented under this project), and how the project results/accomplishments will be communicated and made available to the public.

Note: Differentiate between direct and/or primary project effects and secondary and/or overall watershed effects.

The anticipated project accomplishments will be:

1. Create a user friendly Project Input (or data capture) Wizard that captures core project data and identifies project tracking and reporting needs beyond the Environmental Improvement Program.
2. Create Reporting Tool features that can generate production ready PDF project Fact Sheets. These Fact Sheets can be generated at any time by agency staff members and will contain the most up-to-date project data.
3. Create production ready PDFs of EIP Annual Reports. This Reporting feature will automate the process of creating an up-to-date Annual Report.
4. Create additional production ready PDF reports for other areas of the EIP including Performance Measures, Action Priorities, Sub-categories, etc.
5. Create an EIP project charting tool that is integrated (as needed) with the Fact Sheets and Annual Reports, but can also be accessed and used independently to generate charts for agency staff members to use in agency reports and PowerPoint presentations.
6. Create an EIP specific map viewer for geospatially displaying EIP projects and Performance Measure results.
7. Create “How to Develop and Deploy to TIIMS” technical manual that will guide entities to creating integrated web-based solutions.
8. Integrate the remaining EIP Reporting tools with TIIMS where documents are associated with projects and tighter integration will be achieved with project contact information and entities.
9. Maintain TIIMS infrastructure, existing data collection efforts, plus staffing and management.

- If you checked “yes” for the project being consistent with and contributing to TMDL pollutant reductions, please consider and integrate the following in the project description:

a) Describe whether, and how, the project demonstrates advanced, alternative, or innovative practices.

b) If project includes project level monitoring, describe ability of proposed monitoring strategy to contribute to the state of TMDL knowledge. Also describe if purpose of the capital project is to conduct data collection and/or analysis related to Lake Tahoe clarity.

c) Describe treatment approach for reducing pollutants and/or measures to address connectivity between pollutant sources and Lake Tahoe or its tributaries. Identify target

pollutants, and, to the degree feasible, provide quantitative estimates of project effectiveness at reducing pollutant loads (and/or a commitment to provide post-project estimates).

d) If appropriate, describe whether, and how, the project can be combined or coordinated with other TMDL implementation projects.

Monitoring

- Describe the project monitoring that will be implemented as part of this project including:

- List the questions the monitoring program is designed to answer.

Project monitoring is another element of project tracking data management. Collaborative data management for project monitoring efforts will not be addressed with this source of funding.

- Describe any coordination with, or input from, the science community on monitoring and adaptive management that has occurred on the development of this nomination and what changes (if any) to the project were made as a result of this input.

- 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? (*Note: A detailed monitoring plan and/or research plan is not required, however, enough detail must be provided to allow someone that is unfamiliar with the project to understand and evaluate the proposed methods and strategies.*)

- Describe whether the monitoring or research associated with this project fits into or is part of a larger monitoring or research program.

- Describe how information from the monitoring and/or research will be used to improve the continued performance of the proposed project or future similar projects.

Appendix B-8

LAKE TAHOE RESTORATION PROJECTS ESTIMATED NECESSARY EXPENSES & KEY MILESTONE DATES

Project Name:	TIIMS	Agency:	USEPA & TRPA
Prepared by:	Marie Bledsoe	Phone:	775.589.5208
SNPLMA Project #:		EIP #:	10154

Identify estimated costs of eligible reimbursement expenses:

1. Planning, Environmental Assessment and Research Costs (specialist surveys, reports, monitoring, data collection, analysis, NEPA, etc.)	\$ 0	0 %
2. FWS Consultation – Endangered Species Act	\$ 0	0 %
3. Direct Labor (Payroll) to Perform the Project	\$ 123,310	24 %
4. Project Equipment (tools, software, specialized equipment, etc.)	\$ 72,842	14.1 %
5. Travel (including per diem where official travel status required to carry out project, such as serve as COR, experts to review reports, etc.)	\$ 0	0 %
6. Official Vehicle Use (pro rata cost for use of Official Vehicles when required to carry out project)	\$ 0	0 %
7. Cost of Contracts, Grants and/or Agreements to Perform the Project	\$ 181,000	35.2 %
8. Other Direct and Contracted Labor: Agency payroll for the Contracting Officer to do project procurement, COR, Project Inspector, Sec. 106 Consultation if required, NEPA Lead, Project Manager, Project Supervisor, and subject experts to review contracted surveys, designs/drawings, plans, reports, etc.; Also covered is the cost to contract for a Project Manager and/or Project Supervisor if contracted separately from other project contract(s)	\$ 66,112	12.9 %
9. Other Necessary Expenses (see Appendix B-11): Indirect costs associated with implementing a project, such as support services, budget tracking etc.	\$ 70,829	13.8 %
TOTAL:	\$ 514,093	100 %

Estimated Key Milestone Dates:

Milestones/Deliverables:	Date:
Task 1: Project Management (Project start date: October, 2012)	4/30/2014
Task 2: Integration and Testing	4/30/2014
Task 3: Product Delivery	10/31/2013
Task 4: Upgrades to TIIMS Infrastructure	4/30/2014
Task 5: On-going TIIMS Maintenance	4/30/2014
Final Completion Date: 4/30/2014	

COMMENTS: