

## **Short Term Goals to Ensure the Success of the Tahoe Integrated Information Management System (TIIMS)**

TIIMS is a comprehensive information management system developed to support environmental restoration and planning activities in the Lake Tahoe Basin. Much work has been done to ensure that TIIMS is a valuable resource for Basin stakeholders. An extensive Requirements Analysis was conducted at the onset of the project to identify information resources, information needs, information management systems, and the desired functionality of TIIMS. In January 2004, the TIIMS prototype, which incorporates the highest priority functions, was released.

One of the most important benefits of TIIMS is how it facilitates collaboration and coordination of the many federal, state, and local agencies involved in restoration efforts in the Basin. This makes TIIMS a valuable tool for agencies that use the system. But, the continued development and success of TIIMS depends on the continued support and participation of the Partner Agencies. For TIIMS to move forward in a timely and efficient manner into the production phase (i.e., full development), several key steps need to happen. These steps relate to (1) management needs, (2) systems support and development, and (3) development of system standards and protocols. A commitment of both financial resources and management and personnel support from participating agencies is needed to ensure that these steps happen. A description of these steps and the estimated costs are provided below. For ease of calculation, it is assumed that each hour of labor, fully loaded, would cost approximately \$100, and that there are 2,080 working hours in a year; costs are rounded up to the nearest \$1,000. Therefore, the estimated costs below are an approximation.

### **1.0 Management Needs**

Developing a TIIMS administrative framework is critical to the future success of TIIMS. The existing Project Team provides a good foundation for this structure and has been integral to the development of the prototype. However, as the system moves into full production, the time required to participate and oversee the development of the system will increase. It is anticipated that the following commitment of agency personnel will be needed in the next year to keep TIIMS moving forward in a timely manner.

- A full-time TIIMS Coordinator. Once TIIMS moves into full production, it will require a single person committed full time to oversee its development and implementation. This is critical to the success of TIIMS. The TIIMS Coordinator will be responsible for maintaining the momentum of the system by developing MOUs; actively engaging in public outreach activities; and working closely with the Project Team, Work Groups, and technical staff to coordinate efforts and develop a long-term staff support and resource plan. (\$208K)
- Project Team members will need to commit 16 hours per month to regularly meet, review progress, and develop next steps. (\$288K)
- Work Group members will need to commit a minimum of 24 hours per month to address routine issues assigned to their group. Additional tasks will require additional time for each Work Group member. (\$288K)

### **2.0 System Support and Development**

The prototype incorporates many high priority functions including the ability to search, discover, and access metadata and data, as well as interactive mapping capabilities including the ability to access real-time and historical data. The following specific tasks conducted in the near future will help TIIMS move into the Production Phase.

- Information Needs Coordinator. Continued evaluation of TIIMS information needs against available information resources to develop a content acquisition strategy and continue population of the metadata repository. This person would work closely with the TIIMS Coordinator. Resources: one full-time staff for 1.5 years (\$312K). Each agency that is providing metadata and information content to TIIMS would also need to dedicate 12 hours per month to this effort (\$89K).
- Conduct public outreach activities. Though the TIIMS Coordinator will be tasked with conducting public outreach activities, they cannot do this alone. This is an essential element needed to garner support and users for TIIMS. Public outreach workshops need to be conducted, and outreach materials, including brochures and fact sheets, need to be developed. Resources: \$150K (some of which will be used for contractor support).
- Revise prototype based on user comments and integrate search engines. Contractor support is needed for these two separate, but related, tasks. Resources: 1 to 2 full time equivalents (FTEs) for 10 months (\$260K assuming 1.5 FTEs).
- Enhance workspace portal to provide more functions for document sharing and revision. Additionally, conduct training seminars to review functionality and encourage its use. Contractor support is expected to be needed for this task (\$100K).
- Develop and post electronic materials. This task is of the highest priority. Resources: One full-time staff for 2 weeks, then 2 hours per week for the next year (\$18K)
- Edit all content contained on the TIIMS prototype for consistency in language and format. Develop editorial standards for future content. Resources: One full-time editor for 3 months (\$52K).
- Provide technical support to Partner Agencies to help them establish a node on the TIIMS network within the next year. Resources: one technical staff person 6 months at half time (\$52K). Hardware and software may need to be purchased depending on the agency's current system; costs could run up to \$20K.

### **3.0 Development of System Standards and Protocols**

To ensure that high quality data and information are posted on TIIMS, data standards and protocols need to be developed and implemented. Development of these standards will be overseen by the relevant Work Group, with support from technical staff as needed. Currently, three distinct tasks are the highest priority:

- Develop monitoring protocols and data standards. This task will require first assembling and reviewing existing standards, then conducting research to develop new standards. The Work Group and Project Team members will need to reach a consensus to implement the protocols and standards. Resources: one full-time technical staff member for 6 months (\$104K). Relevant Work Group members will need to commit approximately 8 additional hours per month to help develop the standards (\$96K).
- Develop geographic reporting standards. This task will use the same approach used to develop monitoring protocols and data standards. Resources: one full-time technical staff for 1 month (\$18K) and about 20 hours total for each relevant Work Group member (\$20K; \$2K for each Work Group member).

- Develop and post TIIMS guidance manual. This documentation has been partially developed for the prototype in terms of using TIIMS. Under this task, the preliminary documentation will be augmented to include information on using and supporting TIIMS, and how to become a Partner node. Resources: one person full-time for 2 months (\$35K).

## Resources Required to Move TIIMS into Production Phase

	<b>Costs (thousands of dollars)</b>	<b>Percent of Total</b>
<b>Management Needs for First Year</b>		
TIIMS Coordinator	\$208	
Project Team Involvement (assumes 15 members)	\$288	
Work Group (assumes 10 active members)	\$288	
<b>Total Management Costs</b>	<b>\$784</b>	<b>37%</b>
<b>System Support &amp; Development</b>		
Information Needs - Coordinator (1.5 years)	\$312	
Information Needs - Agency Contribution (assumes 6 agencies)	\$89	
Conduct Public Outreach	\$150	
Revise Prototype & Integrate Search Engines	\$260	
Enhance Workspace Portal	\$100	
Develop & Post Electronic Materials	\$18	
Edit Prototype Content	\$52	
Technical Support to Develop Nodes	\$72	
<b>Total System Support and Development Costs</b>	<b>\$1,053</b>	<b>50%</b>
<b>Development of System Standards and Protocols</b>		
Monitoring Protocols & Standards - Coordinator	\$104	
Monitoring Protocols & Standards - Work Group Participation (assumes 10 active Work Group Members)	\$96	
Geographic Reporting Standards - Coordinator	\$18	
Geographic Reporting Standards - Work Group Participation (assumes 10 active members)	\$20	
Develop & Post TIIMS Guidance Manual	\$35	
<b>Total Development of System Standards and Protocol Costs</b>	<b>\$273</b>	<b>13%</b>
<b>Total Costs to Move Into Production Phase</b>	<b>\$2,110</b>	<b>100%</b>

