

February 19, 2009

Ms. Terri Marceron
Forest Supervisor
Lake Tahoe Basin Management Unit
United States Forest Service
35 College Drive
South Lake Tahoe, CA 96150

RE: TSC review of the SNPLMA Round 10 Lake Tahoe capital project proposals

Dear Ms. Marceron,

The Tahoe Science Consortium (TSC) has completed its review of the SNPLMA Round 10 Lake Tahoe capital project proposals. The TSC comments are both programmatic and specific in nature. These review comments are based on individual proposal reviews by TSC Committee of Scientist members, and on information received during the February 13, 2009 meeting with Lake Tahoe Basin capital project sponsors. Below, I briefly describe the methods used for this review followed by some summary review comments. A CD containing all of the individual proposal reviews is enclosed with this letter.

I. Review Methods:

1. First, I completed an administrative review of all Round 10 capital proposals. This review serves to determine if the proposals provided the written information necessary for evaluation under the Science and Adaptive Management Considerations (see below). A proposal did not receive further review if it was determined to be deficient in the written content (i.e., information addressing one or more consideration was not provided), or if it was determined that the considerations did not apply.

2. TSC reviewers and Round 10 capital project proponents (including Federal and local agencies) met on February 13, 2009 to discuss the individual proposals and results of the administrative review. The main purpose of this meeting was for the reviewers to gain a better understanding of the proposed projects. The reviewers also learned about other sources of information that might be pertinent to the review. This meeting also provided an opportunity to discuss how the project might change due to reductions in funding. In the end we found that 18 of the 24 Round 10 SNPLMA proposals under consideration contained the information necessary for TSC review (Table 1).
3. TSC reviewers then completed a more detailed review of the 18 proposals using the questions in the Science and Adaptive Management 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? Are these descriptions reasonable and well justified?
 - b. Does the proposal accurately describe the estimated environmental risks from unintended consequences of the proposed project? Are these descriptions reasonable and well justified?
 - 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? Are these descriptions complete and well justified?
 - 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?
 - e. Are there opportunities to obtain additional information through collaboration/interaction between science efforts and the proposed capital project?

Table 1. SNPLMA ROUND 10 CAPITAL PROJECT NOMINATIONS

Federal Agency Sponsor	Project Name	Initial Amount Requested	Proposal Number	Review Info Provided	Review Info not Provided	Review not Appropriate
BOR	Restoration of Rosewood Creek, Area A	2,670,730	10_18	X		
BOR	Upper Truckee River, Middle Reaches 1 and 2 SEZ and Wildlife Enhancement Project	1,000,000	10_5	X		
EPA	TIIMS	515,337	10_1			X
EPA	Develop a Lake Tahoe TMDL Management System	588,800	10_21			X
FHWA	Kings Beach Commercial Core Improvements	3,000,000	10_2	X		
FWS	Recovery/Restoration of Lahontan Cutthroat Trout in the Tahoe Basin	860,500	10_24	X		
FWS	Phase 4 - Preventing Aquatic Invasive Species Proliferation in Lake Tahoe using Control, Eradication, Prevention and Public Education Techniques	985,000	10_6	X		
USGS	LiDAR and Multi-spectral Geospatial Data Acquisition and Baseline Threshold Associated Product Development for the Lake Tahoe Basin: Impervious Surface coverage Analysis and Inputs for Fire Hazard, Water Quality, Forest health, Wildlife, and Fisheries Habitat Models.	399,960	10_8			X
FS	Incline Hazardous fuels Reduction & Healthy Forest Restoration Phase 1 of an anticipated 3 Phases	1,000,000	10_7	X		
FS	Carnelian Hazardous fuel Reduction & Healthy Forest Restoration	1,500,000	10_4	X		
FS	South Shore Hazardous Fuel Reduction & Healthy Forest Restoration (Phase 4 of 6)	3,750,000	10_19	X		
FS	Spoooner Hazardous Fuel Reduction & Healthy forest Restoration	1,000,000	10_20	X		
FS	Lake Tahoe Urban Forest Restoration and Fuels Reduction, Phase 4 of 4	2,000,000	10_22	X		
FS	West Shore WUI Hazardous Fuel Reduction & Forest Health Planning Project	750,000	10_23		X	
FS	Aspen Community Restoration	200,000	10_11	X		
FS	Erosion Control Grants	10,000,000	10_13			X
FS	Meeks Creek Ecosystem Restoration	60,000	10_15		X	

Federal Agency Sponsor	Project Name	Initial Amount Requested	Proposal Number	Review Info Provided	Review Info not Provided	Review not Appropriate
FS	NEPA Resource Inventories, Surveys & Analysis	500,000	10_16	X		
FS	Upper Truckee River Restoration Project, Sunset Reach	4,500,000	10_17	X		
FS	Big Meadow Fire Regime Restoration	235,000	10_12	X		
FS	Angora Fire: Meadow Restoration Project	100,000	10_10	X		
FS	Angora fire Long-Term Restoration: Aspen Planting	50,000	10_9	X		
FS	Cold Creek/High Meadow Ecosystem Restoration	200,000	10_14	X		
FS	Basin Wide Trails ATM Phase 3	753,000	10_3	X		
24 Total Projects	TOTAL	36,618,327				

II. Summary Review Comments:

In general, a majority of the project proposals submitted for Round 10 SNPLMA capital project funding consideration made some effort to respond to the Science and Adaptive Management Considerations. However, the reviewers found little direct evidence in the proposals of any science input that was used to develop a project and the associated implementation approaches or assessment techniques (i.e., if science was considered it was not communicated well). Where supporting references were included, the proposals tended to point toward other kinds of documentation (e.g., internal project assessments, plans, or descriptions) to guide their efforts. It was rare for the proposals to reference scientific methodologies or other peer reviewed literature to justify a course of action or to evaluate environmental risks from unintended consequences.

Information related to the monitoring efforts was often insufficient for the reviewer to understand what monitoring tasks would be performed under the proposed project. Nearly all proposals provided inadequate discussion of the monitoring design, sampling methodologies, or sample sizes expected. Therefore, the reviewer was forced to assume that the appropriate methods were going to be used (a critic would assume the reverse). In addition, scientific or technical literature was rarely used to strengthen the case for the selection of a particular monitoring scheme or methodology. Many of the Forest Service projects generally referenced the LTBMU 5-year monitoring plan, but provided no specifics related to monitoring because the NEPA process had not been completed. The LTBMU 5-year monitoring plan generally identifies the categories of monitoring and the questions this monitoring would address, but contains no specifics (either directly or by reference) of the monitoring design or sampling methodologies.

Where monitoring methods were described, the methodologies were fairly generic with no supporting references. This lack of documentation for specifics associated with formal monitoring efforts was troublesome and could seriously affect the ability of the project to quantitatively assess the success of the project. At the February 13th meeting we discussed the idea of having the federal sponsors identify a couple of capital project proposals that project proponents and TSC representatives could work on together to develop the monitoring effort descriptions and consider adaptive management opportunities. We agreed that Joey Keely would take the lead in the initial identification of potential project proposals that could be considered.

Many of the project proposals did a better job of identifying project goals compared to the Round 9 proposals. However, in many cases there is limited evidence that completion of the proposed monitoring efforts will be sufficient to determine if the project is achieving the stated goals. Descriptions of how achieving the project goals would contribute to attaining environmental thresholds varied among the proposals. These issues are especially problematic, given the substantial budgets of many proposals under consideration.

Overall, there is still a high level of concern that a majority of the project proponents do not appear to consider monitoring to be an integral part of the project, or important enough to give it the attention it deserves. As expressed on numerous occasions, the TSC believes that all substantive and ongoing capital improvement projects should be required to submit a more detailed monitoring/evaluation plan before restoration/construction activities commence. Monitoring cannot be an after-thought for the following reasons: (1) more and more, funding agencies and elected officials are requiring documentation of project success. In years past, the documentation of completion appeared to be sufficient, but this is no longer the case. (2) Successful environmental restoration, including water quality improvement, is not a 'turn-key' process. It is guided by science, good engineering/design skills, and a significant amount of best professional judgment. All of these require that the successes and failures from past projects be evaluated in a formalized manner. In addition, as the Lake Tahoe TMDL and other water quality improvement plans emerge, the issue of providing implementers and agencies with credits for successfully completed projects will become significant. Good monitoring of at least some of these SNPLMA capital projects provides an excellent opportunity for agencies and implementers to partner in determining how a future crediting system might work. We do not have sufficient high quality data to currently apply credits for all types of projects. It is reasonable to expect that more of the environmental thresholds will require such information. We are missing a huge opportunity provided by SNPLMA funding to better understand the effects and effectiveness of the Environmental Improvement Program.

Two capital improvement project proposals clearly incorporated the approach of using monitoring and research to support planning and implementation, and we want to highlight them as positive examples. The Kings Beach Commercial Core and the Preventing Aquatic Invasive Species Proliferation proposals included a very good overview of how research contributed to project design or implementation, discussed the importance of monitoring to aid in the adaptive management process, and provided a basin-wide context for the importance of documenting overall project effectiveness.

Thinking about monitoring needs and adaptive management opportunities in terms of capital program categories may provide a more effective way to meet many of the capital project information needs. Under this strategy the various capital projects could be grouped into common programs (e.g., forest management, watershed restoration, living resources [both native and non-native species], and building information capacity [includes projects like TIIMS, TMDL management system, LiDAR data acquisition, and NEPA resource inventories]). Project proponents within each program category could then work together to identify common goals and the monitoring needed to assess how the projects are fulfilling these goals.

The TSC recommends the U.S. Fish and Wildlife Service consider a different strategy for its Tahoe Basin Lahontan Cutthroat Trout (LCT) Restoration/Recovery project. Specifically, the TSC recommends fully pursuing a

'proof of concept' demonstration program in Fallen Leaf Lake prior to funding expansion of LCT reintroduction and monitoring efforts in other locations (e.g., Lake Tahoe or the Upper Truckee River). Further expansion of the LCT program also should rely on the five-year implementation plan, which is expected to be completed in summer 2009.

We did not review the TIIMS and TMDL management system proposals because neither of these projects proposes to use monitoring to assess if they are meeting project goals. However, the TIIMS and TMDL management system proposals describe efforts that would allow the aggregation and synthesis of monitoring data from other individual projects. In this regard, it becomes even more important that monitoring efforts pursued by individual capital projects are sound and well justified.

Many of the comments above are similar to those described in the TSC review of the Round 9 capital project proposals. Further, during our February 13th meeting, there was limited, albeit some evidence that the project sponsors had used the Round 9 review comments in the development of Round 10 proposals. LTBMU staff in particular stated that they did not use the Round 9 reviews in developing their Round 10 proposals. Overall, this suggests our review has little effect on the capital projects. The TSC would be interested in working with the LTBEAC to seriously consider revising the SNPLMA Lake Tahoe program review process. Our goal is to develop a process that would be more beneficial and useful to all parties. The TSC would appreciate hearing from the LTBEAC if and how the results of the Round 10 review are used.

The TSC appreciates the efforts to increase the communication and interaction between the Federal sponsors, project proponents, and the science community. The TSC firmly believes this type of communication and collaboration is the best way to achieve the Federal Vision for Lake Tahoe in a timely and cost-effective manner. Please contact me at (775) 881-7561 if you have any questions about the comments in this letter, or to follow-up on any of the recommendations.

Sincerely,



Zach Hymanson
Executive Director

Cc: Andrew Strain (LTFAC Chair)
Jim Lawrence (TWG Co-chair)
Phil Brozek (TWG Co-chair)
John Singlaub (TRPA)
TSC Committee of Scientists