



## APPENDIX I

### LAKE TAHOE CAPITAL PROJECT PROPOSAL

**Project Name:**

NEPA Resource Inventories,  
Surveys, and Analyses

**Capital Focus Area:**

WR/HI-1,3,4,5,6,7,9,10,12

**EIP #:** 667,

10163.48, 10163.5

**Lead Agency:**

Forest Service LTBMU

Sue Norman

**Contact:** LTBMU

**Thresholds:**

Soils, Water Quality,  
Wildlife, Fisheries, and  
Vegetation Thresholds

**Phone Number:** 530-543-2662

**Threshold Standards:**

Soils and Water Quality,  
Special Interest wildlife and  
plant species, unique plant  
communities, habitats of  
significance, stream habitat,  
and lake habitat.; BMP  
effectiveness and adaptive  
management.

**Email Address:** snorman@fs.fed.us

**Is this a multi-year Project?**

Yes (annual)

(If "Yes", describe in the Detailed  
Project Description below number  
of years or phases and which year  
the requested funding will cover)

**Total Project Cost:**

\$7,448,000

**Funding Request in this Round:**

\$1,064,000

**Project Summary (maximum 200 words):**

This project conducts basin-wide natural resource inventories and surveys for NEPA purposes and compliance with ESA requirements. Included are water uses and protection inventories, BMP implementation and effectiveness inventories, and flora and fauna surveys (e.g., for establishment and management of TES species Protected Activity Centers, Home Range Core Areas). Analyses of the information collected in the inventories and surveys will yield key watershed-scale and landscape-level natural resource attributes and species population information. These are essential to putting in perspective the potential natural resource impacts of forest activities at localized sites (e.g., vegetation treatments, construction of roads and trails, motorized and non-motorized recreation). Conducting the comprehensive cumulative effects analyses required by NEPA will then be a relatively simple matter of integrating these inventory/survey analyses with the project-specific information from proposed and previous projects in a watershed.

Additionally, the natural resource inventory and survey results will be evaluated and utilized, together with the BMP implementation and effectiveness inventory results, to adaptively manage the natural resources and forest activities: where evident, impacts to resource conditions that can be associated with forest activities will spur action to mitigate the impacts and to modify the forest activities to minimize impacts of future forest activities.

### **Detailed Project Description:**

This project conducts basin-wide natural resource inventories and surveys for NEPA purposes and compliance with ESA requirements. Included are water uses and protection inventories, BMP implementation and effectiveness inventories, and flora and fauna surveys (e.g., for establishment and management of TES species Protected Activity Centers, Home Range Core Areas). Analyses of the information collected in the inventories and surveys will yield key watershed-scale and landscape-level natural resource attributes and species population information. These are essential to putting in perspective the potential natural resource impacts of forest activities at localized sites (e.g., vegetation treatments, construction of roads and trails, motorized and non-motorized recreation). Conducting the comprehensive cumulative effects analyses required by NEPA will then be a relatively simple matter of integrating these inventory/survey analyses with the project-specific information from proposed and previous projects in a watershed.

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On a more detailed level, this project will provide status and change and cause and effect information on TES and TRPA special interest vertebrates, aquatic warm water invasives, plants and plant communities of concern to provide the necessary information for cumulative effect analysis required by NEPA. Components of this project include: Avian TES species (bald eagle, California spotted owl, northern goshawk, osprey, and willow flycatcher), Terrestrial TES species (American marten, Sierra Nevada red Fox, wolverine, pacific fisher), Amphibian TES species (Mountain yellow legged frog, Yosemite toad), TES Plant Species and Communities of Concern (Tahoe draba (*Draba asterophora* var. *asterophora*) and Cup Lake draba (*D. a.* var. *macrocarpa*) and fen ecosystems together with their associated TES species), Warm water invasive species (Large mouth bass, blue-gill sunfish, bull frog). This information will also be used as components of indices of biological integrity (IBI) which will be used to adaptively manage both the terrestrial and aquatic resources of the forest. These IBI's will be generated for macro-invertebrates, terrestrial vertebrates, herpetofauna and waterbirds. The methodologies that will be used in all of these efforts are a combination of established protocols as well as field and analysis methodologies developed from the 2002 – 2006 Multi-Species Inventory and Monitoring project (partly LTRA funded, partly SNPLMA funded) and the 2006 SNPLMA funded Biological Resources Adaptive Management Project (BRAMP).

### **Describe the goals and objectives of the project: Describe the anticipated project accomplishments:**

The overall goal of this project is to utilize a coordinated approach for inventorying and surveying natural resources in National Forest System lands within Lake Tahoe Basin in a basin-wide context, in order to provide watershed-scale and landscape-level analysis and to quantify effects of various management activities (e.g., vegetation and fuels

reduction treatments, recreation impacts, road decommissioning) and environmental stressors (e.g., air pollution, water quality degradation, exotic species, etc) on soil, water, and biological resources related to desired future conditions or threshold standards in Lake Tahoe Basin, and to establish implementation and effectiveness monitoring guidelines for management/restoration activities that will allow individual projects to evaluate their success at attainment of -- or movement toward -- desired future conditions or threshold standards.

**Describe the “readiness” of this project to move forward (Environmental documentation, etc.):**

This project will be ready for immediate initiation in FY07. As part of the Pathway 2007 process currently underway, a framework for guiding development of monitoring plans on the forest is being established that will aid in the initiation of this project.

Additionally, some portions of the natural resource inventories and surveys are currently under development. Key monitoring methodologies have previously been implemented by testing in the field for effectiveness and feasibility. Efforts relating specifically to some TES species have been ongoing since 1993. Thresholds, standards and indicators are being developed from data collected as part of those efforts. Therefore, a strong foundation is already in place for natural resources inventories, surveys, and analyses.

**Describe partnerships for this project. (Include documentation):**

The work will be conducted primarily by LTBMU staff; though researchers at PSW and various universities will be consulted for assistance with advanced statistical analyses and testing of inventory and survey methodologies. Additionally, we will continue to involve other agencies within Lake Tahoe Basin (e.g., TRPA, State Parks, California Tahoe Conservancy, etc) to accomplish the inventories and surveys.

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

The project is itself acquiring baseline information through [annual] inventories and surveys of the natural resources in National Forest System Lands in Lake Tahoe Basin; there is no separate monitoring activity (the concept is redundant for this project).

**(1) The questions the inventories and surveys are designed to answer**

- a. What are the water uses and protections within and adjacent to the National Forest System lands in Lake Tahoe Basin?
- b. What is the current status and change in TES, MIS and other focal wildlife and plant species populations within the Lake Tahoe Basin?
- c. Are the BMPs used in current and past projects within and adjacent to the National Forest System lands in Lake Tahoe Basin implemented as planned and are they effective in preventing soil losses and water-quality impacts?

**(2) The approach/goals of the inventories and surveys:**

<b>Component Name</b>	<b>Inventory / Survey Approach</b>
Water Uses and Protections	Locate and quantify (if possible) the water uses within National Forest System lands within Lake Tahoe Basin; log all protective measures, including both physical and administrative (including special use permits and water rights permits).
BMP Effectiveness	Utilize BMPEP (Best Management Practices Effectiveness Program) protocols for evaluation of the completeness and correctness of implementations of BMPs at current forest activity (project) sites; utilize the BMPEP protocols to log the effectiveness of BMPs in providing water-quality protection at current and past sites of forest activities.
Avian Wildlife TES Species	Status of population size of TES species with status of demographic variables for some avian TES species.(Owls, Goshawk, Willow Flycatcher, Bald Eagle)
Terrestrial Wildlife TES Species	Status of population size of mammalian TES/MIS species (pine marten, fisher, bear, fox,wolverine)
Amphibian TES Species	Status of population size of amphibian TES species (mountain yellow legged frog, Yosemite toad)
TES Plant Species and Communities of Concern	Status /trend of distribution and abundance of TES plant species. Determine status/trend of community health and to establish if TRPA remains in compliance with non-degradation standard placed on threshold communities. Includes Fens.
Macro-invertebrate Index of Biological Integrity	Determine baseline conditions of stream benthic macroinvertebrate communities, and identify watershed and project level perturbation.
Terrestrial Vertebrate Index of Biological Integrity	Determine baseline conditions of terrestrial vertebrate communities, identify watershed and project level perturbation, and determine status and change in relation to thresholds.
Herpetofauna Index of Biological Integrity	Determine baseline conditions of aquatic herpetofaunal communities, identify watershed and project level perturbation, and determine status and change in relation to thresholds.
Warm water invasive species	Annually assess distribution of warm water invasive fishes, amphibians, and aquatic plants in tributaries immediately adjoining Lake Tahoe. Identify opportunities for and effectiveness of restoration of native fish assemblages.
Water Bird Index of Biological Integrity	Determine baseline conditions of water bird communities, identify watershed and project level perturbation, and determine status and change in relation to thresholds.

**(3) Whether these inventories and surveys fit into a larger monitoring or research program?**

These annual inventories and surveys provide the basin-wide context (baseline) within which to put project-level monitoring results in perspective, for comprehensive cumulative effects analyses and for adaptive management of the natural resources in

National Forest System lands within Lake Tahoe Basin. These are summarized annually in LTBMU's Adaptive Management Program Annual Report.

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

Results of the inventories and surveys, together with analyses of these datasets, will be summarized in LTBMU's Adaptive Management Program Annual Report. Further, the Interpretive Services staff will conduct public outreach at various locations (e.g., visitor centers, schools, public agencies) and during various events to educate the public concerning the principles, practices, and products of this project; an amount equal to two percent of the project costs is dedicated to this effort.

**Include an 8 ½ X 11 map depicting the project.**

Not applicable: The natural resource inventories and surveys are conducted at numerous randomly selected locations throughout Lake Tahoe Basin.