Request for Proposals to Conduct Research in Support of the Lake Tahoe Restoration Act and the Lake Tahoe Environmental Improvement Program

Sponsored by the USDA Forest Service-Pacific Southwest Research Station with funding through the Southern Nevada Public Land Management Act

Full Proposal Deadline:
Monday, November 14, 2011 at 5:00 p.m. Pacific Standard Time

This Request for Proposals solicits research projects that will address the following science themes and subthemes within the Lake Tahoe Basin:

Theme	Subtheme
Forest Health	1a: Informing decisions for multi-objective forest management
	1b: Improving WEPP-based analyses of forest management activities at the watershed scale
	1c: Impact of climate change on ecological communities and the evaluation of adaptation strategies
Water Quality	2a: Understanding the impacts of aquatic invasive species
	2b: Quantifying the benefits of urban storm water management
	2c: Increasing our understanding of special status species and communities
	2d: Technical review of SEZ definition and classification system
Air Quality	3a: Improving the estimates of atmospheric deposition
	3b: Managing air pollutants
Integrating Science	4a: Understanding current and future resource conditions through analysis of remote sensing data
	4b: Identifying environmental indicators and development of approaches for monitoring and evaluation

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I. PROGRAM DESCRIPTION

The Sierra Nevada region, including the Lake Tahoe Basin, is ecologically, socially, and politically complex. These complexities create unique opportunities and challenges for land managers, researchers, policymakers, and a multitude of other stakeholders with regards to natural resources management. Historical land use activities in the Sierra Nevada (e.g., Comstock logging) coupled with more current activities (e.g., fire suppression, urbanization), have created ecosystems that are less resilient and less resistant to disturbances such as wildfire and insect and disease outbreaks. These ecosystems are also potentially vulnerable to climate change and its associated impacts (e.g., changes in hydrologic regimes). There is a need for management strategies aimed at restoring and maintaining the ecological integrity of these systems. However, these strategies must be formulated within a framework that accounts for multiple uses of forest lands and the multiple perspectives and values represented by the diverse group of entities invested in the Sierra Nevada region and the Tahoe Basin (e.g., federal, state, local, and tribal governments, federal and state agencies, nonprofit organizations, and private landowners). The Environmental Improvement Program (EIP) and the Lake Tahoe Restoration Act (LTRA) structured such a framework. Both the EIP and the LTRA identified Lake Tahoe and the surrounding basin as a unique natural resource that requires protection, preservation, and restoration. The EIP and LTRA also highlighted the need for scientific research to inform management goals and actions and identify uncertainties and knowledge gaps as they relate to the overall objectives of conserving and restoring the Lake Tahoe Basin. The Southern Nevada Public Land Management Act (SNPLMA), enacted in 1998, specifically allowed for funding to be set aside in support of LTRA projects through the sale of public lands by the Bureau of Land Management (BLM). This funding supported both capital and agency-sponsored research projects.

In 2006, the USDA Forest Service-Pacific Southwest Research Station (PSW) became the sole federal agency sponsor and assumed the responsibility for administering the SNPLMA funding as it related to research projects in the Lake Tahoe Basin. This resulted in the creation of the Tahoe Science Program, which strives to promote applied, timely, relevant research that addresses natural resource management needs in the basin. Through a competitive grant award program, the Tahoe Science Program identifies and facilitates funding of research projects high in technical merit and relevant to land management and regulatory agencies working in the Tahoe Basin. As part of the grant award program, the Tahoe Science Consortium (TSC) coordinates a competitive review process. The TSC and PSW work closely with one another throughout the review process to ensure that the review process is fair and that the research projects recommended for funding represent high quality science while addressing priority issues indentified by agencies. In addition, PSW and the TSC work to promote outreach, synthesis, and integration activities to ensure that research supported by the Tahoe Science Program addresses key management questions, includes input from agencies, produces tools that are useful and accessible, fosters collaboration and communication, builds on previous research, and ultimately addresses the science needs identified in the EIP.

The environmental goals of the Lake Tahoe EIP are defined using thresholds that were established to protect the natural environment and maintain public health and safety within the basin. The threshold categories are: 1) water quality, 2) wildlife, 3) soil conservation, 4) scenic resources, 5) air quality, 6) recreation, 7) vegetation, 8) noise, and 9) fisheries. For more information about the Lake Tahoe EIP and associated thresholds please visit http://www.trpa.org/default.aspx?tabindex=10&tabid=227.

Science needs are described in *An Integrated Science Plan for the Lake Tahoe Basin: Conceptual Framework and Research Strategies* (http://www.tahoescience.org/tsc_products/Products.aspx). Guided by this plan, the TSC, state, federal, and local government representatives have collaboratively chosen four science themes and eleven subthemes for the Round 12 Request for Proposals in response to needs expressed by agency officials in the basin. Prospective researchers should consult the Science Plan to ensure that their proposed research directly addresses current science needs specific to the Tahoe Basin.

The 2011 Tahoe Science Update Report, which documents completed and ongoing science efforts in the basin, is available on the PSW website (http://www.fs.fed.us/psw/partnerships/tahoescience/). The report also lists recent relevant publications and contact information for agency representatives who can identify current science priorities for management agencies within the basin.

Any questions regarding the Tahoe Science Program and the Round 12 Request for Proposals should be directed to:

Tiff van Huysen
Ecologist & Tahoe Science Program Coordinator
USDA Forest Service-Pacific Southwest Research
TCES Suite 320
291 Country Club Dr.
Incline Village, NV 89451
775-881-7560 ext. 7482
tlvanhuysen@fs.fed.us

II. EXPECTATIONS FOR PROPOSED RESEARCH

In addition to addressing current science needs in the Lake Tahoe Basin, it is expected that proposed research projects will:

1. **Produce meaningful results within set timeframes**.
    - **A.** Proposal budgets should be capable of supporting the project for its entire duration. If a proposed project spans more than one year, funding for all years should be requested in the initial proposal.
    - **B.** Proposed projects should extend no more than 3 years.
    - **C.** The expected start date should be no earlier than June 2012. Actual start dates will be dependent upon funding transfers and establishment of funding agreements.
    - **D.** All projects must be capable of producing meaningful scientific results given the funding provided.
2. **Explain relationships between the proposed research and other relevant research, monitoring, and environmental improvement efforts in the Lake Tahoe Basin.**
    - **A.** Prospective researchers should review the Science Plan for the Lake Tahoe Basin and Tahoe Science Update Report (discussed above) to make sure that they have considered previous and current research projects in developing their proposals.
    - **B.** Researchers are encouraged to identify current projects or pending grant proposals to clarify linkages or overlap between projects. If overlap is identified, researchers should have a plan to resolve this overlap.
    - **C.** Proposals should leverage existing datasets, models, model elements, and other efforts to the extent possible. Existing data can be analyzed and synthesized to

further understand environmental processes, conditions and trends; in particular, these analyses should aim to extract possibly unknown, yet critical, information from existing data sets.

D. Proposals seeking to build new models or refine existing ones should explain how they expand upon or are distinct from relevant models, monitoring, or other research projects that have been or are being developed.

E. Prospective researchers should explain how their results could be used to evaluate environmental improvement efforts or advance management strategies and policies in the Tahoe Basin.

3. **Engage agency and other stakeholder representatives**.

A. Proposals should include provisions to ensure that relevant stakeholders in the Lake Tahoe Basin will be engaged early and throughout the project. Prospective researchers are encouraged to contact agency representatives during the preparation of their proposals (contact information for agency representatives may be found in the Tahoe Science Update Report and in this document).

B. Letters of recommendation from agency representatives are **NOT REQUIRED** to be submitted with the proposal. However, if agency representatives are identified as collaborators or contacts, this information will be verified during the proposal review process.

C. Proposals should discuss how the project is designed to respond to agency needs, and how products will be delivered to improve agency restoration efforts.

D. Proposals should explain how and when necessary permits and permissions will be obtained for land and data access. Details about permitting and landowner permissions are available in the "Guidance for Researchers" document available at http://www.fs.fed.us/psw/partnerships/tahoescience/documents/Guidance_for_Researchers_10_1.pdf. The PSW Tahoe Science Program Coordinator can assist with permitting processes as needed.

4. **Facilitate reporting to managers and the public.**

A. PSW will work with funded researchers to share their findings with managers, other researchers, and the public in the Lake Tahoe Basin through workshops, conferences, reports, publications, and other media.

B. Successful applicants will be expected to provide information regarding their projects to facilitate understanding of their research objectives and progress.

C. Each funded project will be featured on the PSW website including the proposal, project summary, photos, progress reports, and final products.

D. Prospective researchers can identify and request redaction of portions of their proposal that contain confidential or proprietary information which they do not want to have published.

5. **Review of data and publications**.

A. To ensure technical quality and relevancy of scientific products associated with the Tahoe Science Program, prospective researchers are encouraged to include plans for technical peer review and agency review of work products in their proposal.

B. Peer-review expectations may be met by delivering final products that include manuscripts for publication in peer-review journals.

C. Where appropriate, draft products may be released to agencies and the public for review and comment. Project schedules should allow for at least three months between the submission of draft products and the submission of final products based on review comments prior to project close-out.

D. Proposals should incorporate a data management plan and an appropriate timetable and budget for publishing data when the project is completed. Researchers are encouraged to use publicly accessible platforms, such as the Tahoe Integrated Information Management System (TIIMS, www.tiims.org), for housing and disseminating data and findings.

Prospective researchers should consider these expectations in preparing their proposals. In addition, the PSW Tahoe Science Program webpage has a "Guidelines for Researchers" section that provides more details about permitting, landowner permissions, reporting, and financial management for funded projects. Please review these guidelines for more information.

II. ELIGIBILTY

Organization Limit: None
Principal Investigator Limit: None
Limit on Number of Proposal per Organization: None
Limit on Number of Principal Investigators per Proposal: None

Principal Investigator Eligibility
Proposals will be accepted from prospective researchers who are permitted to serve as Principal Investigators under the authority of their home institution or organization. Please consult the regulations governing Principal Investigator status of your home institution or organization to determine if you are eligible to serve as a Principal Investigator. Postdoctoral researchers and graduate students should pay particular attention to Principal Investigator eligibility regulations as often they are different from those of professors.

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II. SCIENCE THEMES, SUBTHEMES, AND FUNDING ALLOCATIONS

Prospective researchers should submit proposals within the four science themes described below. **The order of subthemes within the themes does not reflect priorities.** A total of $3.75 million has been identified for applied science research in the 2012 round of funding. Part of the funding for the Integrating Science theme has been reserved to support the Tahoe Science Consortium. In addition, a small portion of each theme's target funding level will be reserved to cover PSW administrative costs for the Tahoe Science Program. The target level of funding for each theme is indicated below. Funding levels for each theme may vary from target levels depending on the proposals received.

FOREST HEALTH THEME

(Target: $750,000)

Subtheme 1a: Informing decisions for multi-objective forest management

Management and/or Policy Need

The Tahoe Fire Commission Report (2008) identified a need for resource managers and regulators to obtain tools that help them to better evaluate alternative strategies for reducing fire risk to public safety, property, and the environment. Current and future forest management activities may include hand thinning, cut-to-length harvest, whole tree removal, cable logging, mastication, chipping, understory and/or pile burning, road management, and defensible space practices. Well-designed decision support tools and systems can help to improve the planning and evaluation of forest treatment projects across diverse landscapes. Effective tools and systems also can generate shared understanding between implementers and regulators regarding risks, costs, and benefits of treatment alternatives. Innovative tools are needed to help design projects that meet all relevant forest management objectives including reducing wildfire risk, improving forest health and wildlife habitat, conserving native biodiversity, and protecting or improving of air quality, soil quality, and water quality (especially reducing fine sediment and nutrient loads that threaten lake clarity).

Description

Research should refine, and/or validate tools, models, or sampling methods designed to improve forest management decision-making, which includes: 1) strategic planning; 2) project-level environmental impact analyses; 3) estimating the effects of treatment programs; and 4) implementation of the Lake Tahoe Total Maximum Daily Load (TMDL). To improve broad-scale long-term planning, research is particularly encouraged that will create linkages among existing decision support tools and result in integrated products that will aid in planning and evaluating forest management projects or programs to best achieve multiple relevant management objectives while meeting applicable constraints. Research also is encouraged that leads to tools and decision support systems to better evaluate the economics of alternative strategies for managing forest vegetation, considering factors such as access, transportation routes and impacts, regulatory constraints, and potential ecological impacts unique to the Tahoe Basin. To improve project-level environmental impact analysis, or to estimate the effects of treatment programs, existing research could be synthesized and/or new field research conducted to validate and improve the accuracy of model outputs used to evaluate project or program effects. Research to improve TMDL implementation should help to better account for the potential impacts of forest management activities and wildfire on lake clarity. Research proposals should include efforts to collaborate with agency representatives and/or other research teams to ensure the products are well-supported and useful.

Subtheme 1b: Improving WEPP-based analyses of forest management activities at the watershed scale

Management and/or Policy Need

Current and future forest management activities may include hand thinning, cut-to-length harvest, whole tree removal, cable logging, mastication, chipping, understory and/or pile burning, road management, and defensible space practices. Well-designed analytical tools, such as the Water Erosion Prediction Project (WEPP) suite of computer models, can be used to improve the planning and evaluation of forest treatment projects across diverse landscapes, and generate shared understanding between implementers and regulators regarding risks, costs, and benefits of treatment alternatives, particularly with regard to water quality impacts. At present, the WEPP suite of computer models is sufficiently robust to allow relatively rapid completion of complex evaluations of individual hillslopes, but not multiple hillslopes and features forming a complex watershed including roads and landings; the latter can be accomplished only by expert modelers using a research-grade version of WEPP. The management need is to produce and validate a user-friendly, web-based, Basin-specific, watershed version of WEPP. It must be sufficiently robust to help design and evaluate projects to ensure that they meet all relevant forest management and regulatory objectives related to water quality (e.g., fine sediment and nutrients).

Description

Research should produce and validate a user-friendly, web-based, Tahoe Basin-specific, watershed version of WEPP. It must be sufficiently robust to help design and evaluate projects to ensure that they meet all relevant forest management and regulatory objectives related to water quality (i.e., fine sediment and nutrients). Proposals under this subtheme must include time and resources to support direct collaboration with both the Forest Service Lake Tahoe Basin Management Unit) and regulatory agencies throughout development of the specific products proposed. Proposals should specifically include tasks to support model validation using existing data, and to run a variety of simulations aimed at informing agencies of model sensitivity and limitations. Any existing data used for model validation or calibration must have been collected using ASTM methodologies, or shown through peer-reviewed studies to have been collected using valid and broadly accepted scientific methodologies. Integration of existing WEPP models, existing and emerging datasets, and other recognized building-blocks are strongly encouraged.

Note: Science work under this subtheme will be pursued as a "directed action." Appropriate agencies will need to dedicate technical staff time to work in collaboration with the selected researchers to complete the projects. The intent of this approach is to maximize agency-researcher interactions needed to achieve the products desired by agency representatives in an efficient and timely manner.

Subtheme 1c: Impact of climate change on ecological communities and the evaluation of adaptation strategies

Management and/or Policy Need

Climate change is expected to broadly affect the Sierra Nevada in coming decades. Management agencies want to understand how ecological communities within the Lake Tahoe Basin, including forest communities, alpine communities, subalpine wetlands and other sensitive communities, will respond to these changing conditions over the next several decades. Current science emphasizes that adaptation strategies should be site-specific. Adaptation strategies could include thinning of forests to increase tolerance to drought and resistance to wildfire or insects, planting species or genotypes that may be more resilient to changing climate, genetic conservation of certain species, preservation of refugial habitats (including wetlands and riparian areas), assisted migration of species to suitable habitat, and develop-

ment of wildlife corridors to facilitate migration. Such actions could be taken in anticipation of future changes or opportunistically following disturbances such as wildfires.

Description

Proposed projects should conduct new research and/or synthesize previous research to address one or more of the following issues: 1) establish the potential range of key climate conditions relevant to ecological processes and biological communities in the Tahoe Basin; 2) identify which ecological processes and biological communities in the Tahoe Basin are most vulnerable to the effects of climate change; 3) evaluate the effects of basin-specific adaptation strategies and treatments to conserve particular ecological processes and biological communities; and/or 4) guide the temporal and spatial design of forest treatments to avoid unacceptable ecological impacts while promoting long-term desired conditions (particularly in the Jeffrey pine, mixed-conifer, and lodgepole forest community types).

WATERSHED, WATER QUALITY, AND HABITAT RESTORATION THEME

(Target: $1,300,000)

Subtheme 2a: Understanding the impacts of aquatic invasive species

Management and/or Policy Need

The prevention of new introductions of aquatic invasive species (AIS) and the control of established invasive species is a high priority for Tahoe Basin resource management and regulatory agencies. Agencies have a need for ongoing quantitative information and clear recommendations to manage established invasive species and minimize their impacts. Information related to prevention is required to assess risks from individual species and to track environmental conditions that may facilitate new invasions. Information related to control of invasive species is needed to assess the effectiveness and potential environmental effects of various control strategies. Long-term status and trend monitoring of priority invasive species' abundance and distribution in nearshore habitats and streams in the Tahoe Basin and their environmental effects is needed for strategic planning efforts, and for assessment of their potential influence in meeting environmental quality targets.

Description

Proposals are requested that address one or more of the following issues: 1) synthesize and review existing data and develop a plan to monitor the effectiveness of control and prevention strategies in Lake Tahoe's near shore environment, tributary streams, and other lakes of the region; 2) develop a predictive model/decision tool to assess the risk of priority invasive species introductions and establishment in the Tahoe Basin to inform AIS prevention program policies and management strategies; 3) determine the ability of quagga and zebra mussels to complete their lifecycle in the waters of the Lake Tahoe Basin; 4) assess the net economic impact and benefit of the Lake Tahoe aquatic invasive species prevention program; and/or 5) research control techniques and strategies for extant species (e.g., treatment of satellite populations vs. source populations) to improve control program effectiveness, improve techniques to increase treatment efficiency and reduce recolonization rates, mitigating or avoiding the short-term effects of control measures on near shore water quality and aesthetic indicators (biological, chemical, and physical), or mitigating the adverse legacy effects of aquatic invasive species (e.g., removal of Asian clam shells). Researchers should plan to collaborate with agency representatives and other research teams to ensure the products will meet agency information and evaluation needs.

Subtheme 2b: Quantifying the benefits of urban storm water management

Management and/or Policy Need

Research associated with the Lake Tahoe Total Maximum Daily Load (TMDL) indicates that stormwater from urban land uses is the largest contributor and presents the greatest opportunity to reduce fine sediment particle (< 16 µm) and total phosphorous loads to streams and Lake Tahoe. Roadways are a land use of primary concern, as these have the greatest pollutant yield potential. Improved characterization of urban stormwater is needed for the purposes of modeling both baseline loads and expected load reductions and for linking stormwater management actions to expected water quality benefits. In particular, there is a need to evaluate the effectiveness of roadway operations and maintenance practices (i.e., abrasive application and recovery methods) and enhance the ability to rapidly assess maintenance needs.

Description

Research proposals are requested to address one or more of the following issue areas: 1) improve and/or validate existing tools, models and methods to estimate urban stormwater load reductions, including quantifying the effects of actions to reduce sediments and nutrient loads using stream environment zones (SEZs); 2) investigate the relationship between operations and maintenance activities, road composition, and estimated pollutant loading or load reduction, particularly roadway traction abrasive application and recovery practices; 3) improve the design of pollutant control/treatment technologies; 4) test and evaluate the application of innovative or advanced storm water pollution controls within the Tahoe Basin.

Subtheme 2c: Increasing our understanding of special status species and communities

Management and/or Policy Need

The Tahoe Basin has several special status species and communities that are a focus of agency conservation and restoration efforts locally and also nationwide. Management agencies need applied research to help guide and evaluate conservation, restoration, protection, and control measures to conserve and/or restore special status species and communities, including an understanding of the mechanisms contributing to maintenance or decline of these species and communities over the long term. Special status species in the Tahoe basin can serve as indicators of ecosystem health and associated improvements or declines, but this function requires a thorough understanding of their biology and the ecological processes affecting them. Research under this subtheme will aim to identify strategies, techniques, and standards that will best conserve and restore species and communities of special concern for which information is lacking.

Description

Research should focus on sensitive native species and habitats in the Tahoe Basin for which little is known, including deepwater plant communities, cushion plan communities, endemic invertebrates (i.e., the Tahoe stone fly and the blind amphipod), and the native freshwater mussel (*Margaritifera falcata*). Proposed research should address one or more of the following: 1) evaluate mechanisms maintaining or contributing to the decline of native species and communities; and 2) evaluate approaches to conserve or restore special status plant and animal species, communities of concern, or habitats threatened by invasive species or climate change. Research may incorporate conventional hypothesis driven investigations or synthesis and review. Research on potential indicators should include analyses to assess how the proposed new indicators compare to existing applicable indicators. Researchers should plan to collaborate with agency representatives and other research teams to ensure that agencies can apply the results.

Subtheme 2d: Technical review of SEZ definition and classification system

Management and/or Policy Need

Agencies are reviewing the region's stream environment zone (SEZ) policies and updating the SEZ conservation program to improve its consistency with the EPA's Wetland Program core elements (in response to state initiatives) to incorporate new scientific information and to ensure management actions and policies are protective of desired SEZ functions. A need that underlies the update of all SEZ policies and program elements is the development and adoption of a SEZ classification system that assures the protection and conservation of desired SEZ functions. SEZ functions that agencies are interested in protecting and conserving, include but are not limited to: 1) providing habitat for native, special status, and riparian/wetland associated wildlife, fish and plant species and communities; 2) flood attenuation; 3) sustaining water quantity through groundwater recharge; 4) protecting surface and groundwater quality through buffering from conflicting land uses and activities; 5) providing water filtering/treatment services (particularly treatment of fine sediment and nutrients); 6) enhancing scenic quality; and 7) providing for high quality low-impact recreation experiences. A classification system would aid agencies in refining the definition of SEZ and the resource criteria used to delineate SEZ for mapping and field verification.

Description

Proposed research should answer the following question: What hydrogeomorphic, vegetation or soils classification system (or combination of classification systems) is most appropriate for protecting and conserving desired functions identified for stream environment zones (SEZs) in the Lake Tahoe Basin? Agencies are particularly interested in science-informed efforts and products that lead to the selection of a SEZ classification system, including: 1) conceptual models that illustrate the linkages among desired SEZ functions and SEZ structure, geomorphic setting, vegetation species composition and watershed position; 2) GIS mapping and modeling approaches and data and field verification methods that can be used to map the distribution, functions, relative condition and extent of identified SEZ types; and 3) an empirically-based identification of hydrogeomorphic, vegetation and soil field indicators of different SEZ types that can be used for on-the-ground SEZ delineation. Ultimately, agencies need: 1) maps that depict the aerial extent of different SEZ types and their associated condition across the Lake Tahoe Basin; and 2) scientifically-defensible documentation that supports a field SEZ delineation approach, mapping approaches and products, and selected classification system. Research is expected to be conducted in collaboration with agency representatives to ensure products meet agency needs. Research should utilize all existing data and information. Proposals should include time and effort to revise final products based on comments from independent peer review.

AIR QUALITY THEME

(Target: $600,000)

Subtheme 3a: Improving the estimates of atmospheric deposition

Management and/or Policy Need

Atmospheric deposition to the lake is the major source of nitrogen and a substantial source of phosphorous and particulate matter. There is, however, significant uncertainty in deposition flux estimates. Further, the current estimates of atmospheric deposition loads only consider what falls directly onto the lake and do not consider what falls onto the surrounding watershed and then is subsequently transported to the lake by wind and water. To reduce this uncertainty, focused studies (i.e., gradient or eddy-correlation studies, along with measurements of key chemical species) should be conducted to determine the sources and pathways of particle deposition. These results will better inform models used to assess future conditions, and will help to inform the prioritization of restoration efforts.

Description

Proposals should focus one of the following issues, although integrated proposals addressing all issues are encouraged: 1) focused studies of the sources and pathways of particle deposition as well as improved estimates of deposition flux (i.e., gradient or eddy-correlation studies along with measurements of key chemical species). Research should evaluate particulate matter deposition rates in relation to surrounding land-uses and proximity to the Lake. Study results should aim to better inform models, restoration efforts, and load reduction efforts, and provide methodologies to quantify estimates from actions to reduce loading of fine sediment particles and nitrogen to the lake; 2) synthesize existing data and information to develop improved estimates of atmospheric deposition in the Lake Tahoe Basin; or 3) review the existing atmospheric deposition monitoring approach and develop a revised sampling and analysis plan that will facilitate estimating total atmospheric deposition loads of key pollutants onto the Lake coupled with the flux of pollutants from the watershed to the lake.

Subtheme 3b: Managing air pollutants

Management and/or Policy Need

Exceedances of the ozone standards have been measured in the Lake Tahoe Basin, particularly when measured against California state standards. Local emissions due to burning and vehicle transport are known to reduce visibility and impact local air quality. In addition, out of basin transport of greenhouse gases, particulates, organic aerosols, and other airborne pollutants impact both air quality and lake clarity. Understanding these processes requires validated atmospheric models. Validating these models requires compiling an inventory of available emissions and meteorology data, and incorporating information from ongoing monitoring and focused research. Using Sparse Matrix Operator Kernel Emissions (SMOKE) or other emissions tools, an emissions file should be created for ready input into a Lake Tahoe Air Quality Modeling System (LTAQMS), to include an emissions processing model, mesoscale meteorology model (MMM), and an air quality model (AQM). The LTAQMS needs to be designed to support regional regulation of air quality.

Description

Studies should focus on one or more of the following issues: 1) inventory available emissions and meteorology data and identify and prioritize monitoring and research data needed to construct and validate a Lake Tahoe Air Quality Monitoring System (LTAQMS). Any proposed sampling plan should consider integration with other atmospheric monitoring needs (e.g., meteorology, visibility, and criteria pollutants); or 2) review existing management and regulatory reduction strategies (e.g., the Tahoe Regional Planning Agency's [TRPA] Blue Boating Program, federal and state emission standards for watercraft, automobiles, buses and trucks), and use an air quality model to quantify viable alternative strategies for the reduction of ozone and other pollutants in the Lake Tahoe Basin; studies should provide comparisons of the cost effectiveness of each viable strategy and incorporate these actions in the LTAQMS.

INTEGRATING SCIENCE THEME

(Target: $750,000)

Subtheme 4a: Understanding current and future resource conditions through analysis of remote sensing data

Management and/or Policy Need

The Round 10 Lake Tahoe SNPLMA capital program included funding to acquire high-resolution LiDAR data and multispectral imagery for the Tahoe Basin. Analyses of these datasets and images are needed to develop information that agencies can use in the future planning of capital projects, to characterize

current natural resource conditions, and to provide a baseline for comparison of future conditions resulting from the ongoing implementation of forest management and habitat restoration projects. Agencies especially need research results that integrate high-resolution LiDAR and multispectral imagery to further our understanding of land use patterns and current and future natural resource conditions, and elucidate management options.

Description

Research proposals are requested that address one or more of the following objectives: 1) provide a spatially explicit determination of current forest structural classes across topographic features and model forest structure restoration strategies that include a range of tree density reductions and creation of openings based on (a) a range of opening sizes, (b) frequency distributions of opening sizes on the landscape, (c) rate of application of openings (e.g., number of openings by size per year), and (d) differences between intensity versus extent of openings; 2) analyze datasets and develop derivative products to (a) reveal landscape-scale indicators of environmental condition and document remote sensing analysis methodologies to derive indicators (b) evaluate fire risk and the extent and distribution of defensible space in the urban intermix and Wildland Urban Interface, (c) map hydrologic networks to inform fine sediment and nutrient pollutant load reduction project planning and/or floodplain management, or (d) assess the extent, type, and condition of stream environment zones and wetlands to guide environmental improvement restoration opportunities; and/or 3) develop spatial models and maps of habitat suitability for special status plant and wildlife species or communities of concern.

Subtheme 4b: Identifying environmental indicators and development of approaches for monitoring and evaluation

Management and/or Policy Need

Land management and regulatory agencies need to evaluate whether their actions are effective at meeting environmental targets through the implementation of agency land use and management plans. Credible evaluations require meaningful indicators of appropriate standards, and require development and implementation of monitoring plans to evaluate and report the status and trends of environmental indicators relative to established targets. Credible evaluations also require tools and protocols for consistent and comprehensive data management, analysis and reporting.

Description

Proposed projects should address one of the following topic areas: i) greenhouse gases emissions, ii) small lakes, iii) aquatic special status species and communities, iv) stream hydrology and sediment/nutrient loading, v) terrestrial rare plants and special communities, vi) atmospheric particulate and nutrient lake deposition, vii) forest ozone impacts, or viii) noxious weeds. Research proposals should address all of the following tasks: 1) synthesize and review previous and ongoing research efforts and available data to identify scientifically supported environmental condition indicators and reference conditions for a topic area identified above; 2) use the synthesized results to develop a topic area specific conceptual model that describes the contemporary understanding of factors and activities that affect the region's ability to achieve environmental and socioeconomic goals and targets; 3) prepare a monitoring and evaluation plan that can be implemented to measure the identified indicators and report on long-term status and trends of identified indicators relative to existing or proposed environmental or socioeconomic standards; 4) conduct pilot implementation of field, data management, evaluation and reporting protocols and procedures documented in the monitoring plan to maximize their utility; and 5) conduct and document technical analyses that compare and contrast proposed indicators with existing indicators, and identified reference conditions with existing standards. Proposals should include time

and resources for the scientists to work collaboratively with agency representatives to ensure the products will meet agency information and evaluation needs.

III. PROPOSAL PREPARATION AND SUBMISSION

A. Proposal Content and Format

The proposal must clearly state the science theme and primary subtheme addressed. Proposals will be evaluated in the context of the primary subtheme identified, although proposals may address more than one subtheme.

Each proposal must specify methodologies, strategies for interacting with agencies, and deliverables in sufficient detail to allow an informed reader to assess the proposal's validity in addressing the science subtheme(s). The title of each proposal received will be published. Applicants should identify portions of their proposal that contain confidential or proprietary information that they do not want made public. Applicants are advised to use the proposal template, which is available at www.grants.gov.

Where necessary or anticipated, applicants should provide documentation to demonstrate that they have or will be obtaining state and federal regulatory permits and private or public landowner written approval to meet the needs of the proposal with respect to land and/or data access.

The required format for all proposals is described in the table below, including page requirements. All pages must have a **minimum of 10 point font size and 1" margins**. Applicants should strictly follow these requirements in developing their proposal. Deviations from the required format may exclude proposals from further consideration.

Title and Content	Page Requirements
I. Title Page	**1 page**
a. Project Title (the title of each proposal received will be published)	
b. Primary theme & subtheme addressed by the proposal (**choose one subtheme**)	
c. Principal Investigator(s) and institution(s): name, institution (to which the primary award or any subcontracts will be made), address, phone, fax, and email. The first Principal Investigator listed should be from the receiving institution.	
d. Collaborators and their institutional affiliations; include agency personnel who have been contacted and will be directly involved in the project	
e. Grants contact person: name, phone, fax, and email	
f. Total funding requested	
g. Total cost share (value of financial and in-kind contributions)	
II. Proposal Narrative	**Maximum of 7 single-spaced pages; longer proposals will not be reviewed**
a. Project abstract (1 paragraph summary addressing the scope of the proposal)	
b. Justification statement explaining the relationship between the proposal and the subtheme(s)	
c. Concise background and problem statement	
d. Goals, objectives, and hypotheses to be tested	
e. Approach, methodology and location of research	
f. Relationship of the research to previous and current relevant research, monitoring, and/or environmental improvement efforts	
g. Strategy for engaging with managers and obtaining permits	
h. Description of deliverables; include a data plan and a description of how deliverables will be reviewed and made available to end users	
III. Schedule of major milestones/deliverables in a table with estimated start and end dates (include quarterly progress reports and annual reports)	**1 page**
IV. Literature cited	**Maximum of 2 pages**
V. Figures for locations, schematics, sample outputs, etc. Figures are optional and do not count toward page limits unless they are embedded in the narrative.	**Maximum of 6 figures**
VI. Budget (Requested and contributed funds)	Provide an overall budget including: 1. Cost breakdowns for each project year 2. Detailed budgets for all sub-awards or contracts 3. A narrative budget justification as needed to explain all project costs.
a. Personnel: **salaries/wages and time allocations** for Principal Investigator(s), associates, students, technicians, etc.	
b. Fringe Benefits for the personnel listed in above	
c. Travel (list domestic and international travel separately)	
d. Equipment; purchase of nonexpendable equipment above $5,000 is discouraged; leasing may be considered for equipment over $5,000	
e. Supplies (provide itemized list)	
f. Contractual	
h. Other	
i. Total Direct Costs	
j. Indirect Costs (Facilities and Administration Costs, see page 15 under Budget Information); indirect costs must be shown as a separate line item	
k. Total Budget Requested and Contributed	
VII. Abbreviated *Curriculum Vita* (CV) for investigator(s) summarizing qualifications that are most relevant to the research proposal; **include CVs for all investigators receiving at least 10% of the total personnel costs**	**Maximum of 2 pages for each investigator**
VIII. Summary of Current and Pending Support for each investigator; **include forms for all investigators receiving at least 10% of the total personnel costs**	**Use standard form**

B. Budgetary Information and Funding Instruments

Budget Information
Budgets must conform to the format of Standard Form 424 (SF 424) available at: http://apply07.grants.gov/apply/FormLinks?family=15. Budgets should adhere to the following guidelines:

1. The budget categories on the SF 424 form must be used. For example, costs associated with personnel, including overhead, must be separated among salary/wages, fringe benefits, and indirect costs (Facilities and Administrative Costs).
2. The budget should display time allocations for key personnel for whom funding is requested.
3. Detailed budgets must be included for any subcontracts.
4. PSW discourages requests for purchases of equipment. Equipment is defined as non-expendable, tangible personal property with a unit cost of $5,000 or more and a useful life of more than one year. Tangible property that does not meet the definition of equipment may be included in supplies.

PSW intends to provide for as much applied science as possible with the limited amount funding available. Accordingly, applicants are encouraged to minimize indirect costs to the extent possible. All awardees and sub-awardees seeking reimbursement of indirect costs will be required to ensure that their budgets comply with a current indirect cost rate determination issued by the cognizant audit agency (i.e., Health and Human Services). However, please note that some institutions may be restricted from being reimbursed for indirect costs under cooperative agreements (explained below under Funding Instruments). **Copies of the indirect cost rate determinations will have to be provided prior to approval of the award agreement**.

For entities that do not have such determinations (e.g., for-profit organizations), budgets must include details of proposed facilities and administrative or indirect costs. These costs must be reasonable (no more than 49% as an absolute maximum rate of modified total direct costs), allocable, and allowable. No profit or fee will be provided to a for-profit organization. Such entities will be also required to submit a written description of their policy for indirect costs (Facilities and Administrative Costs) and documentation of historical actual indirect cost rates, certified by an accountant, with their award application.

To determine allocable and allowable costs, consult the appropriate guidelines:
FAR Part 31 Contract Cost Principles and Procedures
OMB Circular A-21 Cost Principles for Educational Institutions
OMB Circular A-102 Grants and Cooperative Agreements with State and Local Governments
OMB Circular A-122 Cost Principles for Non-Profit Organizations

Funding Instruments
PSW may use grants or cooperative agreements to fund selected projects, depending on policies and interests of the PSW and the Tahoe Science Program. USDA Forest Service policy requires use of a cooperative agreement for assistance awards that substantially involve Forest Service personnel after the award has been made, or if the proposed research requires coordination with other projects sponsored by the Forest Service. Under the terms of a cooperative agreement, cooperators have to contribute a cost share amounting to a minimum of 20% of total project costs; in addition, state cooperative institutions cannot be reimbursed for tuition remission and indirect costs. All cooperators can meet cost share by contributing direct costs, indirect costs, or a combination of both. Applicants who cannot meet these

requirements may still apply, but they are advised that the cost-effectiveness of proposals will be considered as part of the review process. In addition, PSW reserves the right to negotiate all budget elements and to refuse proposals if they are not in the best interest of the Tahoe Science Program administered by PSW.

C. Due Date and Proposal Submission

Complete proposals must be received by **Monday, November 14th at 5:00 p.m. Pacific Standard Time**. Proposals may be submitted via email or mail (in CD format). Proposals submitted via email with a time-stamp later than 5:00 p.m. will not be considered. Researchers submitting their proposals on CD via mail should plan for sufficient delivery time. **Proposals must be in PDF format**.

In all cases, the affiliation of the Principal Investigator(s) must match the institution through which project funding will be received. University researchers are advised to submit their proposals through their university's sponsored projects office. Researchers should conform to the submission policies of their host institutions, particularly with regard to obtaining institutional endorsements and requirements for original signed signature pages.

The PSW Tahoe Science Program Coordinator will send an email to the Principal Investigator confirming receipt of the proposal within one week of proposal submission.

D. Applying Through Grants.gov

Applicants may file an electronic application at the www.grants.gov website. Anyone who is awarded funding will eventually have to complete these steps (see Section V, Part B: Award Administration Information); however, **you do NOT have to complete these steps now if you apply directly via e-mail or mail**. Grants.gov contains full instructions on all required passwords, credentialing, and software. Follow the instructions at Grants.gov for registering and submitting an electronic application. If a system problem or technical difficulty occurs with an electronic application, please use the customer support resources available at the Grants.gov website.

First time Grants.gov users should go to the "Get Started" tab on the Grants.gov site and carefully read and follow the steps listed. These steps need to be initiated early in the application process to avoid delays in submitting your application online. In order to register with the Central Contractor Registry (CCR), your organization will need a Data Universal Numbering System (DUNS) number. A DUNS number is a unique nine-character identification number provided by the commercial company, Dun and Bradstreet (D&B). To find out if your organization already has a DUNS number or to obtain a DUNS number, contact Dun and Bradstreet at 1-866-705-5711.Registering with the Central Contractor Registry (CCR), will take some time to complete, so keep that in mind when beginning the application process. Information about registering with CCR was published in the Federal Register on January 17, 2006 (see 71 FR 2549).

To submit a proposal through Grants.gov, you must complete the following steps:

1. To determine if your organization has a DUNS number, or to obtain a DUNS number, contact Dun and Bradstreet at 1-866-705-5711. A DUNS number will be provided quickly by telephone at no charge. A DUNS number can also be obtained online at www.dnb.com.
2. Register in the Central Contractor Registry (CCR) at www.ccr.gov. Follow the instructions provided online, or by calling the CCR Assistance Center at 1-888-227-2423.
    A. You will need your organization's DUNS number to register.

B. Complete the Marketing Partner ID (MPIN) and Electronic Business Primary Point of Contact fields during the CCR registration process. These are mandatory fields that are required when submitting grant applications through Grants.gov.

3. Submit an SF 424 (Application for Federal Assistance) package.
4. Provide a tax identification number.
5. Designate a financial institution or an authorized payment agent through which a federal payment may be made in accordance with US Treasury Regulations, Money and Finance, 31 CFR 208 (Management of Federal Agency Disbursements).

The Grants.gov website includes a blank application package. To access the opportunity to compete for funding under this Request for Proposals, search for one or more of the following attributes:

Opportunity Number: **USDA-FS-PSW-TAHOE-2011**

Opportunity Title: **Tahoe Research Supported by SNPLMA Round 12**

Catalog of Federal Domestic Assistance (CFDA): **10.652** (Forestry Research).

IV. PROPOSAL PROCESSING AND REVIEW PROCEDURES

A full description of the review process that will be used to evaluate the proposals is available on the Tahoe Science Consortium website (http://www.tahoescience.org/peer_review/Default.aspx). A brief description of the major steps in the review process is provided below.

A. Administrative Review

The PSW Tahoe Science Program Coordinator and the Executive Director of the TSC will review the submitted proposals to ensure they comply with and meet all of requirements stated in the Request for Proposals. Only proposals fulfilling all of the requirements will be distributed for external peer review.

B. Technical Peer Review

Accepted proposals will be distributed to at least three independent scientists (not affiliated with the TSC or the projects' researchers) who will evaluate technical quality. All proposals with a technical review score of 4.0 or greater will be sent to the agencies for relevancy review. **Researchers have the option of identifying reviewers who you do not wish to review your proposal.** If you wish to exercise that option, please:

1. Send **a separate email** to the PSW Tahoe Science Program Coordinator (Tiff van Huysen, tlvanhuysen@fs.fed.us) upon submission of your proposal.
2. In the email, list the full name of the reviewer(s) you do not wish to review your proposal.
3. **Do NOT include this information with your proposal**.

C. Agency Relevancy Review

Proposals passing the technical peer review will be distributed to Lake Tahoe Basin agency representatives for relevancy review. Agency executives will then develop a list of priority projects based on the relevancy reviews.

D. Selection Process

The selection process has changed slightly from last year. The TSC Peer Review Committee (PRC) will synthesize results of the technical reviews and agency relevancy reviews to create a list of proposals recommended for funding. **This year, the PRC will give primary consideration to the agency priority project list in determining proposals recommended for funding. Prior to finalizing the list of recommended projects, the PRC will meet with the agency executives to review the recommended list of**

projects and funding allocations. PSW will review the suite of recommended proposals to finalize funding allocations. Proposals ***recommended*** for funding are not guaranteed funding due to constraints on funding allocations. Final funding allocations for recommended proposals will be determined by the number of projects recommended for funding and individual project budgets. Some projects may be identified as alternates to receive support should funds become available during the negotiation of awards. PSW reserves the right to negotiate scopes of work, budget amounts, and deliverables with Principal Investigators based upon feedback from the peer review process and to comply with Forest Service policies. Projects may be required to modify their proposed indirect cost rates and/or demonstrate cost share contributions. Once the recommendations and funding allocations have been finalized, PSW will forward the package of recommended projects to the Tahoe Regional Executive Committee (TREX) and to the BLM for final approval.

V. AWARD INFORMATION

A. Award Notification

The PSW Tahoe Science Program Coordinator anticipates notifying Principal Investigators about decisions regarding possible funding of their proposals by April 2012; however, this schedule is contingent upon approval by TREX and the BLM. Anonymous peer review comments and agency relevancy review results will be distributed to the Principal Investigators of all proposals.

B. Award Administration Information

Upon execution of a federal award, the recipient will need to complete the following steps (**Note: if you submitted your proposal via Grants.gov you have already completed these steps and it is NOT necessary to repeat them**):

1. To determine if your organization has a DUNS number, or to obtain a DUNS number, contact Dun and Bradstreet at 1-866-705-5711. A DUNS number will be provided quickly by telephone at no charge. A DUNS number can also be obtained online at www.dnb.com.
2. Register in the Central Contractor Registry (CCR) at www.ccr.gov. Follow the instructions provided online, or by calling the CCR Assistance Center at 1-888-227-2423.
    A. You will need your organization's DUNS number to register.
    B. Complete the Marketing Partner ID (MPIN) and Electronic Business Primary Point of Contact fields during the CCR registration process. These are mandatory fields that are required when submitting grant applications through Grants.gov.
3. Submit an SF 424 (Application for Federal Assistance) package.
4. Provide a tax identification number.
5. Designate a financial institution or an authorized payment agent through which a federal payment may be made in accordance with US Treasury Regulations, Money and Finance, 31 CFR 208 (Management of Federal Agency Disbursements).

Projects should expect to begin no earlier than June 2012, although the actual start date may be later than this. PSW cannot issue awards until the Bureau of Land Management notifies PSW that the funding is approved and available. Project charges cannot be incurred prior to the award.

It is the responsibility of the researchers to coordinate with appropriate agency representatives or partners and secure any permits, agreements, or approvals necessary prior to initiating research. If, for example, the research is proposed to be conducted on agency or private lands, all applicable approvals must be secured from the land manager or owner. If the research requires use of data collected by

an agency, then approval must be secured to use this data. The applicable prerequisite(s) must be satisfied before receiving funding.

C. Award Conditions

Funding for recommended projects is not guaranteed and is subject to the availability and authorization of funds through the SNPLMA program, as well as final approval of the SNPLMA Round 12 science subthemes by the Secretary of Interior. PSW reserves the right to partially fund proposals by funding discrete activities, portions, or phases of proposed projects. If PSW decides to partially fund a proposal, it will do so in a manner that does not prejudice any applicants or affect the basis upon which the proposal, or portion thereof, was evaluated and selected for award, and that maintains the integrity of the competition and selection process. PSW reserves the right to make additional awards under this announcement (after the original award selections are made) if additional funding becomes available. Any additional selections for awards will be made no later than six months after the original selection decisions. The additional selections must be made in accordance with the terms of this announcement and PSW policy.

D. Reporting Requirements

In addition to project-specific reports and products, **all funded projects are required to submit quarterly project updates in January, April, July, and October and an annual accomplishments report to comply with the requirements of the Tahoe Science Program.** Proposals should account for these reports in the project budgets and timelines.

VI. LAKE TAHOE BASIN AGENCY CONTACTS

Lake Tahoe Basin agency representatives and their contact information are listed in the table below. Please contact these individuals to discuss potential research projects, agency research needs, and opportunities for agency collaboration and involvement.

Organization	Name and Title	E-mail	Phone Number	Area(s) of Emphasis
California Tahoe Conservancy	**Zach Hymanson**, Environmental Program Manager II	zhymanson@tahoe.ca.gov	530-543-6017	All
Lahontan Regional Water Quality Control Board	**Hannah Schembri**, Water Resources Control Engineer	hschembri@waterboards.ca.gov	530-542-5423	Lake Tahoe TMDL, particle deposition, stream restoration, water quality
Nevada Division of Environmental Protection	**Jason Kuchnicki**, Lake Tahoe Watershed Unit Branch Supervisor	jkuchnic@ndep.nv.gov	775-687-9450	Water quality
Nevada Division of State Lands	**Elizabeth Harrison**, Water Quality Program Manager	eharrison@lands.nv.gov	775-684-2736	Water quality
Tahoe Regional Planning Agency	**Shane Romsos**, Acting Measurement Department Manager	sromsos@trpa.org	775-589-5201	All
Tahoe Science Consortium	**Maureen McCarthy**, Executive Director	mimccarthy@unr.edu	775-881-7561	Air quality, science integration, visualization
USDA Forest Service-Lake Tahoe Basin Management Unit	**Holly Eddinger**, Ecosystem Supervisory Biologist and Biological Program Leader	heddinger@fs.fed.us	530-543-2633	Invasive species and sensitive species
	David Fournier, Assistant Staff Officer for Vegetation, Urban Lots, Fire and Fuels	dfournier@fs.fed.us	530-543-2626	Forest vegetation and fuels
	Shana Gross, Ecologist	segross@fs.fed.us	530-543-2752	Climate change
	Sue Norman, Hydrologist	snorman@fs.fed.us	530-543-2662	Watershed restoration
U.S. Environmental Protection Agency	**Jack Landy**, U.S. EPA Lake Tahoe Basin Coordinator	landy.jacques@epa.gov	775-589-5248	Air quality, climate change, particle deposition, stream restoration, water quality
U.S .Fish and Wildlife Service	**Steve Chilton**, Aquatic Nuisance Species Coordinator	Steve_Chilton@fws.gov	775-589-5265	Aquatic invasive species and sensitive species

VII. ADDITIONAL INFORMATION

A. Current and Pending Support Form

Summaries of Current and Pending Support are required for each investigator receiving at least 10% of the total personnel costs. A copy of the Current and Pending Support Form is included with this Request for Proposals following this section.

B. Proposal Checklist and Important Reminders

A checklist of proposal requirements and important reminders is included with this Request for Proposals following the Current and Pending Support Form. Please review this page prior to submitting your proposal.

Current and Pending Support

The following information should be provided for each investigator and other senior personnel.

Investigator:	Other agencies to which this proposal has been/will be submitted.

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future
Project/Proposal Title:

Source of Support:
Total Award Amount: $ Total Award Period Covered:
Location of Project:
Person-Months Per Year Committed to the Project. Cal: Acad: Sumr:

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future
Project/Proposal Title:

Source of Support:
Total Award Amount: $ Total Award Period Covered:
Location of Project:
Person-Months Per Year Committed to the Project. Cal: Acad: Sumr:

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future
Project/Proposal Title:

Source of Support:
Total Award Amount: $ Total Award Period Covered:
Location of Project:
Person-Months Per Year Committed to the Project. Cal: Acad: Sumr:

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future
Project/Proposal Title:

Source of Support:
Total Award Amount: $ Total Award Period Covered:
Location of Project:
Person-Months Per Year Committed to the Project. Cal: Acad: Sumr:

Support: ☐ Current ☐ Pending ☐ Submission Planned in Near Future
Project/Proposal Title:

Source of Support:
Total Award Amount: $ Total Award Period Covered:
Location of Project:
Person-Months Per Year Committed to the Project. Cal: Acad: Sumr:

USE ADDITIONAL SHEETS AS NECESSARY

Proposal Checklist and Important Reminders

Checklist

1. Read the full Request for Proposals to become familiar with:
    A. Expectations for proposed research (see page 4)
    B. Policies regarding budgets and funding instruments (see page 16)
    C. Proposal preparation and submission requirements (see page 14)
    D. Proposal review and selection process (see page 18)
    E. Award process (see page 19)

2. Review the Tahoe Science Update Report for information on current research

3. Prepare proposal in accordance with proposal format and content requirements including:
    A. Complete budget information (see page 15)
    B. CVs for investigators (see page 15)
    C. Current and Pending Support for investigators (see page 15)

4. Submit proposal via www.grants.gov or to the PSW Tahoe Science Program Coordinator

Important Reminders

1. Proposals should be submitted via www.grants.gov OR **via email or mail (in CD format)** in **PDF format** to the PSW Tahoe Science Program Coordinator:

    Tiff van Huysen
    Ecologist & Tahoe Science Program Coordinator
    USDA Forest Service-Pacific Southwest Research
    TCES Suite 320
    291 Country Club Dr.
    Incline Village, NV 89451
    775-881-7560 ext. 7482
    tlvanhuysen@fs.fed.uss

2. Complete proposals must be received by **Monday, November 14th at 5:00 p.m. Pacific Standard Time**.

3. Proposals that do not comply with the requirements in the Request for Proposals will not be submitted for peer review and will not be considered for funding.

4. Funding for recommended projects is not guaranteed; awards will be subject to the availability and authorization of SNPLMA funding and final approval of the science subthemes by the Secretary of Interior.

Any questions regarding the Tahoe Science Program and the Round 12 Request for Proposals should be directed to Tiff van Huysen.