Pacific Southwest Research Station Received 41 Proposals to Conduct Research in the Lake Tahoe Basin under Round 12 of SNPLMA

The USDA Forest Service Pacific Southwest Research Station (PSW) Tahoe Science Program received 41 proposals (see table below) in November 2011 to conduct research in support of the Lake Tahoe Restoration Act and the Lake Tahoe Environmental Improvement Program. PSW administers the competitive Tahoe Science Program with funds provided by the Bureau of Land Management (BLM) through the sale of public lands as authorized by the Southern Nevada Public Land Management Act (SNPLMA). This is the sixth round of proposals received through the Tahoe Science Program. The Round 12 proposals address research needs in the areas of Forest Health, Watershed, Water Quality, and Habitat Restoration, Air Quality, and Integrating Science.

The Integrating science subtheme Identifying environmental indicators and development of approaches for monitoring and evaluation drew the most submissions, followed by the Forest Health subtheme Impact of climate change on ecological communities and the evaluation of adaptation strategies.

Review Process

The proposals undergo a multi-stage review process that includes an administrative review, a technical peer review by independent scientists, and a relevancy review by agency staff and agency executives representing multiple state and federal government agencies in the Tahoe Basin. The administrative review was completed in mid-November and the proposals are currently being reviewed for technical merit. Proposals passing the technical review will advance to the agency relevancy review in January. It is anticipated that PSW will receive the list of proposals recommended for funding in early March.

Round 12 Tahoe Science Program Proposal Submissions

THEME	TARGET ALLOCATION	SUBTHEME	NUMBER OF SUBMISSIONS	PROPOSAL TITLE
Forest Health	**$750,000**	**1a: Informing decisions for multi-objective forest management**	**3**	Incorporating project-level analysis and enhanced decision support into the OptFuels fuel treatment planning system for the Lake Tahoe Basin
				Wildlife response to thinning and prescribed burns in a post-fire landscape
				Estimating impacts of maintaining a defensible space on offsite sediment delivery
		1b: Improving Watershed Erosion Prediction Project(WEPP)-based analyses of forest management activities at the watershed scale	**1**	Development of an Online Watershed Interface to predict the effects of forest and fire management on sediment and phosphorus loads in surface runoff in the Lake Tahoe Basin
		1c: Impact of climate change on ecological communities and the evaluation of adaptation strategies	**7**	Status of Jeffrey pine (*Pinus jeffreyi*) populations in relation to dwarf mistletoe infection, forest management, water-use, and environmental change

				Drought stress and bark beetle outbreaks in the future forest: Extending an existing model to inform climate change adaptation
				Development of a landscape scale adaptation strategy for the high elevation conifer forests of the Lake Tahoe Basin
				Using provenance test data to inform ecological restoration in the Tahoe Basin
				Assessing climate change-associated species dynamics and forest management strategies in the Lake Tahoe Basin
				How resilient are the forests? Evaluating the effect of climate change and forest management on tree water use efficiency
				Tree water consumption via transpiration in the major forest types of Lake Tahoe Basin
Watersheds, Water Quality, and Habitat Restoration	**$1,300,000**	**2a: Understanding the impacts of aquatic invasive species**	**1**	Emerald Bay control and management: Stressors and mechanisms controlling Asian clam populations in Emerald Bay
		2b: Quantifying the benefits of urban stormwater management	**5**	Aligning stormwater quality datasets with priority management objectives
				Application of the stream load reduction tool (SLRT) to quantify the project and reach scale water quality benefits of Upper Truckee River restoration efforts
				Will the addition of calcium salts change the settling rate of fine sediment particles in the Lake Tahoe Basin?
				Efficiency of captive hydrology machine in capturing fine sediment particles produced in the Lake Tahoe Basin
				Adsorptive media soil amendments for infiltration best management practices (BMPs)
		2c: Increasing our understanding of special status species and communities	**4**	Understanding the decline of deepwater sensitive species in Lake Tahoe: What is responsible, eutrophication or species invasions?
				Evaluation of status, threats, and translocations of the western pearlshell mussel (*Margaritifera falcata*) in the Lake Tahoe Basin
				Ecosystem response to aspen restoration
				Effectiveness of reintroductions and probiotic treatment as tools to restore the endangered Sierra Nevada yellow-legged frog (*Rana sierrae*) to the Lake Tahoe Basin
		2d: Technical review of stream environment zone (SEZ) definition and classification system	**3**	Hydrologic assessment of stream environment zones (SEZ) to support the review of SEZ policies and development of a SEZ classification system
				A collaborative definition, classification refinement, and mapping of the stream environment zones in the Lake Tahoe Basin

				Development of riparian ecological site descriptions for the Lake Tahoe Basin
Air Quality	**$600,000**	**3a: Improving the estimates of atmospheric deposition**	**5**	Refining estimates of atmospheric deposition for sediment particles and particulate nutrients in the Lake Tahoe Basin
				Stable isotope approach to understanding N deposition and nutrient cycling in Lake Tahoe
				Improving estimates of atmospheric wet and dry deposition of nutrients to Lake Tahoe watersheds
				Reducing the uncertainties of particulate phosphorus deposition to the Lake Tahoe watershed
				Measurement of atmospheric deposition flux with eddy covariance system in the Lake Tahoe Basin
		3b: Managing air pollutants	**1**	Ozone modeling system and emission control strategies
Integrating Science	**$750,000**	**4a: Understanding current and future resource conditions through analysis of remote sensing data**	**2**	Synthesis of spatially-explicit sustainability indicators for the Tahoe Basin
				Quantifying the potential for a low-cost, distributed stormwater detention system using LiDAR and remotely-sensed data
		4b: Identifying environmental indicators and development of approaches for monitoring and evaluation	**9**	Historic data analysis and development of a 5 Year LTIMP Design and Evaluation Plan
				Development of ecological indicators to understand longer-term changes of smaller lakes within the Tahoe Basin
				Realigning the Lake Tahoe Interagency Monitoring Program for use as a monitoring tool
				Implementation of data analysis system for stormwater status
				Ozone stress maps as a tool for environmental monitoring to identify vulnerable forests in the Lake Tahoe Basin
				Developing a Monitoring and Evaluation Action Plan for the plant communities of concern in the Lake Tahoe Basin
				Renewing and refining the Tahoe yellow cress Conservation Strategy: incorporating new science and management tools
				Collection, review, and analysis of existing water quality datasets and recommendations for long-term water quality monitoring of Lake Tahoe
				Microbial plankton as environmental indicators: an integrated view of lake status