



Pacific Southwest Research Station to Fund 15 New Science Projects for the Lake Tahoe Basin under Round 11 of SNPLMA

The USDA Forest Service Pacific Southwest Research Station (PSW) is initiating 15 new science projects (see table below) in support of the Lake Tahoe Restoration Act and the Lake Tahoe Environmental Improvement Program. PSW administers this 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). The Round 11 projects will guide research efforts in the areas of Forest Health, Watershed, Water Quality, and Habitat Restoration, Air Quality, and Integrating Science.

The Round 11 science package addresses all of the priority science subthemes included in the Final Recommendation for Round 11 SNPLMA science themes approved by the Tahoe Regional Executives (TREX) on April 26, 2010 and approved by the Secretary of Interior on October 21, 2010 and provides funding for the Tahoe Science Consortium (TSC). The total budget of \$3,750,000 includes a modest increase in the allocation for projects in the Watershed, Water Quality, and Habitat Restoration theme and the Integrating Science theme, which was offset by a reduction in the allocations for the Forest Health and Air Quality themes. In addition to directing funding to the highest quality proposals, this reallocation compensates for the fact that the previous round had reduced funding to the Watershed, Water Quality, and Habitat Restoration theme in favor of proposals submitted under the Air Quality theme.

Competitive Review Process

PSW received 55 proposals in response to the Round 11 Request for Proposals (RFP) for the competitive Tahoe Science Program. The recommended proposals were deemed the highest quality based upon a multi-stage review process that included a technical peer review by independent scientists and relevancy reviews by both agency staff and executives representing multiple state and federal government agencies in the Tahoe Basin. For this round, we provided copies of both the technical and agency relevancy reviews to all investigators recommended for funding so that they could address concerns identified during the review process in a timely manner. The 15 new science projects represent the second highest number awarded to date—an achievement made possible by implementing the majority of the projects as cooperative partnerships between PSW and the awardees. The use of cooperative partnerships and the ability to modify proposals in response to the extensive review process coordinated by the TSC both enhance the quality and relevance of projects and extend the impact of the valuable SNPLMA funds.

What's Next in 2011?

PSW expects to enter into grants and cooperative agreements with the research entities starting in May and June of this year following final approval of the Round 11 science projects by the BLM. Researchers are already busy planning for the upcoming field season for those projects which involve fieldwork. Many of these new projects are expected to yield results within the next two years. The RFP for the Round 12 science projects will be issued in September 2011.

Round 11 Tahoe Science Projects Selected for Funding

Theme	Subtheme	Project Title	Lead Research Entities
Forest Health	1a: Integrating the effects of forest management into the Lake Tahoe Total Maximum Daily Load (TMDL)	Adaptive management handbook and tools for vegetation management and estimation of pollutant loading from forested catchments	Integrated Environmental Restoration Services (Michael Hogan) & Vadose Zone Hydrology/University of California-Davis (Mark Grismer)
	1b: Impact of climate change on ecological communities and evaluation of adaptation strategies	Restoration strategies for whitebark, western white, and sugar pine in the Lake Tahoe Basin: ecological and epidemiological considerations	USDA-FS Pacific Southwest Research Station (Detlev Vogler & Annette Delfino-Mix) & University of California-Davis (Patricia Maloney)
Watersheds, Water Quality, and Habitat Restoration	2a: Understanding the impacts of aquatic invasive species	The ecology of curly leaf pondweed (<i>Potamogeton crispus</i>) and the potential for control using bottom barriers in Lake Tahoe	University of California-Davis (John Reuter & Marion Wittmann) & University of Nevada-Reno (Sudeep Chandra)
		Science to assist policy decisions regarding the prevention of invasive species: testing the survival and growth of quagga mussel in Lake Tahoe	University of Nevada-Reno (Sudeep Chandra) & Desert Research Institute (Kumud Acharya)
	2b: Quantifying the benefits of urban stormwater management	Quantifying the benefits of urban stormwater management	2ndNature, LLC (Nicole Beck)
		Evaluation of alternative abrasives and snow plowing practices and road sweeping/vacuuming as source control BMPs for load reduction of fine sediment particles and phosphorus in urban roadway stormwater	University of California-Davis (Hyun-Min Hwang), El Dorado County (Russell Wigart), University of California-Davis (Raphael Townsend), & Desert Research Institute (Alan Heyvaert)
	2c: Quantifying the effects of actions to reduce sediment loads using stream environment zones (SEZs)	Laboratory experiments on fine particle capture by submerged vegetation in SEZs: the effects of vegetation density, biofilm development and particle composition	University of California-Davis (Geoff Schladow)
		Tools to quantify urban stormwater load reduction from SEZ restoration actions	2ndNature, LLC (Nicole Beck)
Air Quality	3a: Secondary pollutant formation and the impacts of TMDL-related primary and secondary atmospheric pollutants	Secondary pollutant formation in the Lake Tahoe Basin	Desert Research Institute (Barbara Zielinska & Alan Gertler), USDA-FS Pacific Southwest Research Station (Andrzej Bytnerowicz), University of California-Riverside (Wendy Goliff) , & Environmental Incentives (Chad Praul)
	3b: Assessing the impacts of fire on air quality	Evaluation of prescribed burn impacts on air quality and visibility in the Lake Tahoe Basin	Desert Research Institute (Antony Chen, Mark Green, & Xiaoliang Wang)
Integrating Science	4a: Understanding current and future resource conditions through analysis of remote sensing data	Mapping hard and soft impervious cover in the Lake Tahoe Basin using LiDAR and multispectral images: a pilot study of the Lake Tahoe Land Cover and Disturbance Monitoring Plan	Spatial Informatics Group (Jarlath O'Neil-Dunne & David Saah)
		Assessment of fire hazard/risk in the Wildland Urban Interface (WUI) and SEZs	Spatial Informatics Group (David Saah, Jason Moghaddas, Jarlath O'Neil-Dunne, Qi Chen, & Tadashi Moody) & USDA-FS Pacific Southwest Research Station (Brandon Collins)
	4b: Identifying environmental indicators and developing approaches for monitoring and evaluation	Development of status and trend indicators for stream condition and other resources	Humboldt State University (Andrew Stubblefield & Alison O'Dowd) & Environmental Incentives (Chad Praul)
		Remote sensing of Lake Tahoe's nearshore environment	University of California-Davis (Erin Hestir & Geoff Schladow)
	4c: Development of robust methods for evaluating fine sediment concentrations and loads	Evaluating field and laboratory data for developing surrogate indicators to monitor fine sediment in the Tahoe Basin	Desert Research Institute (Alan Heyvaert), University of California-Davis (John Reuter & Masoud Kayhanian), & 2ndNature, LLC (Nicole Beck)