



Fifty-five Proposals submitted to the Pacific Southwest Research Station to Conduct Research in the Lake Tahoe Basin

The Pacific Southwest Research Station (PSW) received 55 proposals in response to a request issued September 3, 2010 for research in support of the Lake Tahoe Restoration Act and the Lake Tahoe Environmental Improvement Program. This is the fifth round of proposals received under the competitive Tahoe Science Program administered by PSW and funded by the Bureau of Land Management under the Southern Nevada Public Land Management Act (SNPLMA).

The *Impact of climate change on ecological communities and the evaluation of adaptation strategies* and *Quantifying the benefits of urban stormwater management* subthemes drew the most proposals, although two new science integration subthemes, one focused on applications of remote sensing data and a second focused on environmental indicators and monitoring, also brought in many proposals. The median request (\$200,000) was lower than in Round 10. However, the number of proposals was up 38% from Round 10, as was the total amount requested (\$12 million), which is more than 3.5 times the available funding. Based upon these factors and historical data, we estimate that 14-18 proposals are likely to be funded in Round 10.

Table 1: Submissions received by subtheme.

Theme	Funding Target	Subtheme	# Submissions
1) Forest Health	\$850,000	Integrating the effects of forest management into the Lake Tahoe TMDL	4
		Impact of climate change on ecological communities and the evaluation of adaptation strategies	10
2) Watershed, Water Quality, and Habitat Restoration	\$1,050,000	Understanding the impacts of aquatic invasive species	6
		Quantifying the benefits of urban stormwater management	9
		Quantifying the effects of actions to reduce sediment loads using SEZs	6
3) Air Quality and Meteorology	\$850,000	Secondary pollutant formation and the impacts of TMDL-related primary and secondary atmospheric pollutants	1
		Assessing the impacts of fire on air quality	4
4) Science Integration	\$650,000	Understanding current and future resource conditions through analysis of remote sensing data	7
		Identifying environmental indicators and development of approaches for monitoring and evaluation	7
		Development of robust assessment methods for evaluating fine sediment concentrations and loads	1

What's Next?

November: proposals have been sent to scientists for external peer review.

January: Above average proposals as evaluated through an independent technical peer review will advance to a relevancy review by management and regulatory agencies in the Tahoe Basin.

February: Selection of projects based on technical and relevancy reviews.

March-May: Approval of projects for funding, transfer of funds from BLM, and processing of awards

June: Anticipated start of Round 11 projects.

September: The request for proposals (RFP) for Round 12 is scheduled to be issued.

Table 2 below provides the titles of all proposals received in Round 11 by subtheme.

For information about all Tahoe SNPLMA science projects, please check out our website at:

<http://www.fs.fed.us/psw/partnerships/tahoescience/>

Table 2: List of proposals under consideration for Round 11

Subtheme	Title
1A	Adaptive Management Handbook and Tools for Vegetation Management and Estimation of Pollutant Loading from Forested Catchments
1A	Impacts of Defensible Space and Erosion Control BMP on the Water Clarity of Lake Tahoe
1A	Development of an Online Watershed Interface to predict the effects of forest and fire management on sediment and nutrient loads in surface runoff in the Tahoe Basin
1A	Multi-year Stormwater Runoff Monitoring for Hillslope Scale Prescribed Fire Forest Treatment Projects
1B	A decision-support tool for assessing Adaptation Strategies of Aspen and Aspen-Conifer Communities in the Lake Tahoe Basin
1B	Assessing the Vulnerability of Subalpine and Alpine Plant Communities to Forest Expansion Under Climate Change
1B	A century of change in small mammal populations in the Tahoe Basin: past and future implications of climate change for ecological communities and adaptive strategies
1B	A Biometrical Analysis of Climate Change Effects on Tahoe Basin Forests and Wildlife from 2010 to 2099
1B	Restoration Strategies for whitebark, western white, and sugar pine in the Lake Tahoe Basin: Ecological and Epidemiological Considerations
1B	Tree recruitment and forest mortality in Lake Tahoe Basin sub-alpine forests: understanding the influence of climate and disturbance to project responses into the future
1B	A stakeholder-driven climate change vulnerability assessment and adaptation evaluation process
1B	Evaluating the Benefits of Meadow Restoration for Pollinator communities under Different IPCC Scenarios of Climate Change
1B	Land Facets and Landscape Connectivity as Adaptation Strategies in the Lake Tahoe Basin
1B	Augmenting the Existing Forest Inventory and Analysis (FIA) Permanent Plot Sampling Grid for Ecological Monitoring in the Lake Tahoe Basin
2A	Abiotic Control of Aquatic Invasive Species Dispersal: Age-Related Effects of Nearshore Ultraviolet Radiation on Warmwater Fishes
2A	Combined barrier and chemical control of the invasive species, Asian clam (<i>Corbicula fluminea</i>) in Lake Tahoe
2A	Thermal Tolerance of Quagga Mussel Veligers: Ballast Tank Decontamination and Natural Mortality of Veligers in Different Seasons
2A	Lake Tahoe invasion management project: Synthesis of control strategies and development of a model to assess invasion risk
2A	The ecology of curly leaf pondweed (<i>Potamogeton crispus</i>) and the potential for control using bottom barriers in Lake Tahoe
2A	Science to assist policy decisions regarding the prevention of invasive species: testing the survival and growth of quagga mussel in Lake Tahoe
2B	Assessment of Suspended Fine Sediment in Urban Stormwater Using a Portable Washoff Simulator for Street Sweeper Effectiveness and Road Rapid Assessment Methodology (RAM) Validation
2B	Quantifying the benefits of urban stormwater management
2B	Evaluating ultrafine sediment loads and phosphorus concentrations in Lake Tahoe tributaries
2B	Engineered Soils to Reduce Groundwater Contamination at Infiltration Facilities
2B	A field-based approach to evaluating BMPs: integrating multi-scaled, remotely-sensed data, field-

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Subtheme	Title
	based measurements, and hydrologic analysis
2B	Developing and Evaluating the Impervious Area Connectivity Map for the Lake Tahoe Basin Using an Integrated LiDAR/GIS–Based Modeling Approach
2B	Vertical Treatment Concepts for Lake Tahoe Basin Runoff Water Control
2B	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
2B	Predicting the benefits of sediment basins for the Lake Tahoe Basin using the WEPP Model
2C	Laboratory experiments on fine particle capture by submerged vegetation in stream environment zones (SEZs): The effects of vegetation density, biofilm development and particle composition
2C	Assessing fine sediment reduction in Stream Environmental Zones of Upper Truckee River
2C	Quantifying TMDL Credit for the Snow Creek SEZ Restoration Project
2C	Tools to quantify urban stormwater load reduction from SEZ restoration actions
2C	Expansion of the Tahoe Project Sediment Model to SEZ Restoration Practices
2C	Quantification of Fine Sediment Sequestration by SEZ Management Activities
3A	Secondary pollutant formation in the Lake Tahoe Basin
3B	Evaluation of Prescribed Burn Impacts on Air Quality and Visibility in the Lake Tahoe Basin
3B	Characterization of Biomass Burning Aerosols in the Lake Tahoe Air Basin
3B	Biomass Burning Impacts on Air Quality in the Lake Tahoe Basin
3B	Characterization of Fire Impacts by Fire Type in the Lake Tahoe Basin
4A	LiDAR quality: Identifying uncertainty to maximize flow route modeling effectiveness
4A	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
4A	An integrated approach to quantify hard and soft impervious cover and use these data for relevant analyses in the Lake Tahoe Basin
4A	Defining Permeability Units in Sub-Alpine Watersheds Using High-Resolution Remote Sensing Data
4A	Mapping aquatic vegetation in the Lake Tahoe basin with WorldView-2 imagery
4A	Assessment of Fire Hazard/Risk in the Wildland Urban Interface “WUI” and Stream Environment Zones “SEZs”
4A	Modeling forest management impacts on succession, disturbance, and landscape pattern; collaborative scenario development and wildlife implications
4B	Streamlining the Lake Tahoe Interagency Monitoring Program for Use as a Monitoring Tool
4B	Pile Burning in Aspen Restoration
4B	Implementation of the Healthy Vegetation and Hazardous Fuels Desired Conditions Monitoring Plan
4B	Development of status and trend indicators for stream condition and other resources
4B	Remote Sensing of Lake Tahoe's Near Shore Environment
4B	Monitoring desired conditions for vegetation and wildlife habitat: An independent test of proposed indicators for monitoring vegetation in the Lake Tahoe basin
4B	Benthic indicators for status and trends monitoring in Lake Tahoe
4C	Evaluating Field and Laboratory Data for Developing Surrogate Indicators to Monitor Fine Sediment in the Tahoe Basin

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