

Tahoe Science

Scientific research to improve the environment in the Tahoe Basin

Program Update to the *Lake Tahoe Federal Advisory Committee* January 21, 2009

Zach Hymanson
Executive Director
Tahoe Science Consortium




Jonathan Long
Tahoe Science Program Coordinator
Pacific Southwest Research Station





Presentation Outline



- Status of round  science proposal review
- Important dates & upcoming science meetings
- Status report on rounds  &  science projects
- Overview of new science information resources

Choosing Projects

RFP closes;
administrative
review

PSW
issues
RFP

Choosing Priorities

TSC SMIT
groups
identify
subthemes

Secretary of
Interior
approves
themes

Peer Review
Committee (PRC)
sends proposals to
external reviewers

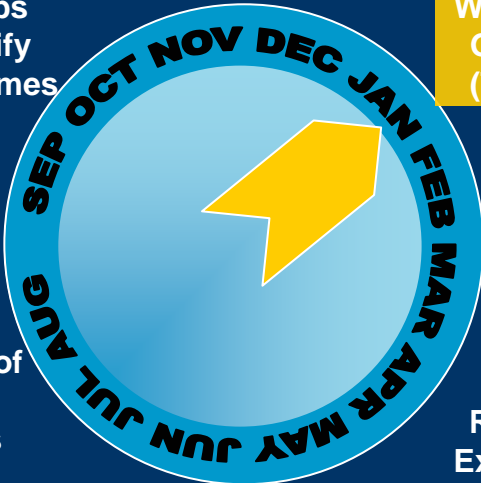
PRC evaluates
reviews to identify
technically good
proposals

Partnership
Coordination Team
(PCT)

Tahoe
Working
Group
(TWG)

Management
and regulatory
agencies
review
relevancy

**Round 9 proposals
are here**



Lake Tahoe
Federal
Advisory
Committee
(LTFAC)

Projects
selected based
on technical and
relevancy
reviews
TREX review

Tahoe
Regional
Executives
(TREX)

Agreements
established

SNPLMA
Executive
Committee

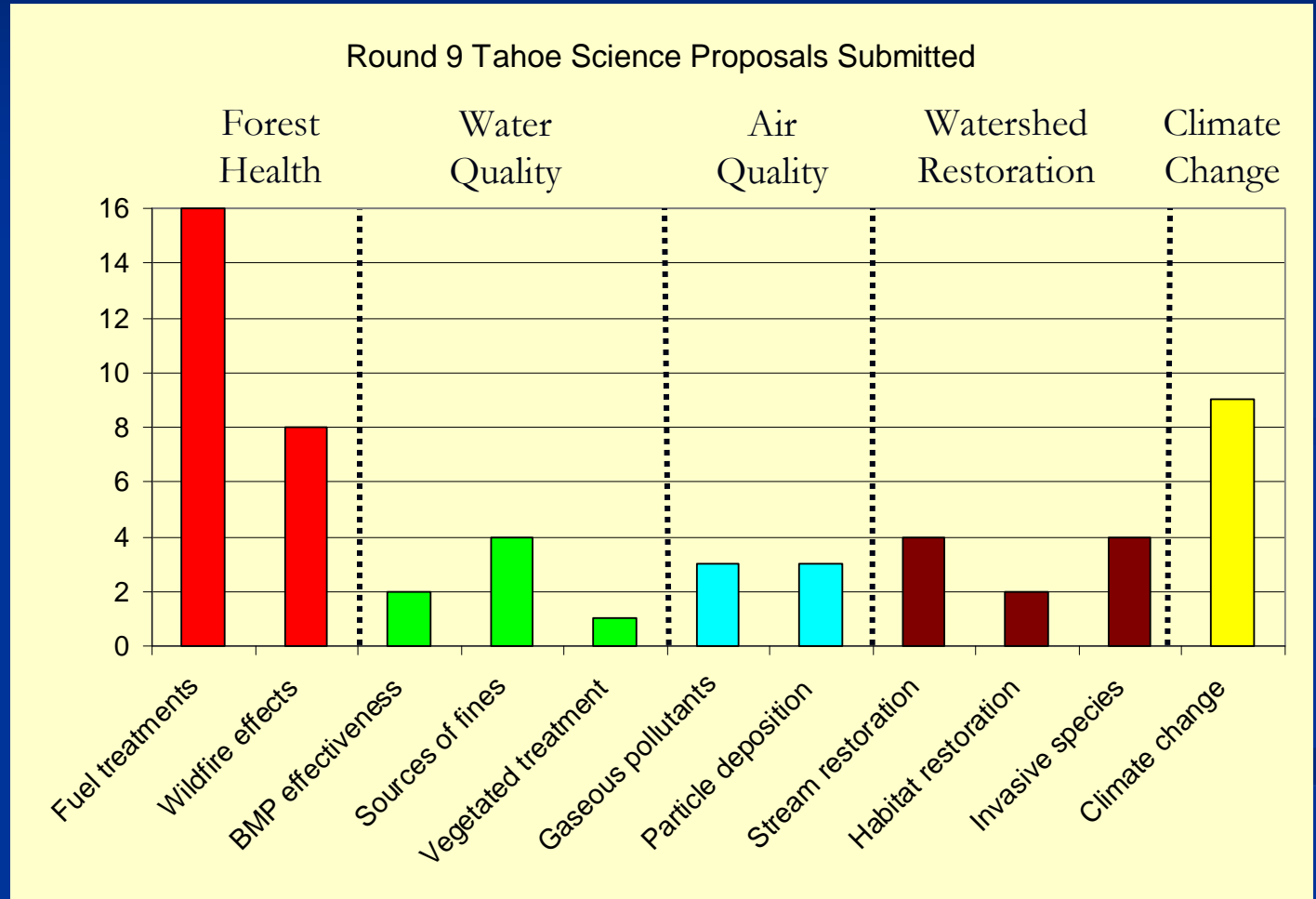
Newly funded
projects begin





Status of Round 9 Science Proposal Review

- 56 proposals received
- 54 advanced to technical review
- 34 advanced to agency relevancy review



Upcoming Schedule: Round



+

January: Round 9 relevancy reviews underway

February: Review synthesis and proposal selection

March: Round 9 TREX review

April-May: Round 9 agreements established

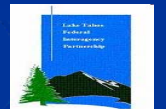
June: Round 9 projects begin

August: Federal Event

August: Kick-off meeting for **Round 11** themes

September: PSW distributes **Round 10** RFP

October: TSC begins review of **Round 10** proposals





Upcoming Science Meetings

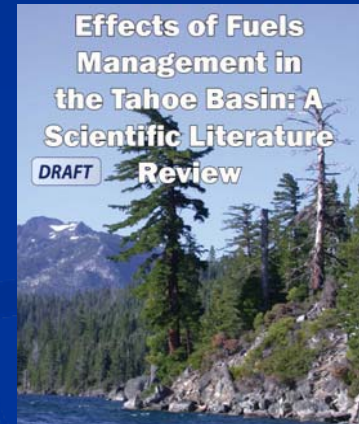
- March 17-18 2009: Climate Change Symposium register at <http://ucanr.org/climatesymposium>
- Fall 2009: Water Quality Modeling Workshop
- March 2010: Biennial Lake Tahoe Science Conference

Science Integration and Information



An Integrated
Science Plan
for the Lake
Tahoe Basin:
Conceptual
Framework
and Research
Strategies

- Finalized Tahoe Science Plan available at www.tahoescience.org
- Literature review and on-line bibliography (www.tiims.org) on the effects of fuel reduction treatments (in review)
- Initiated Regional Stormwater Monitoring Plan (RSWMP)
- Monitoring protocols for forest management in sensitive areas (draft in review)



Fires and Fuels Projects

 Restoration and fuel treatment of riparian forests (10/2010)

- Surveyed more than 35 tributaries and streams in the Tahoe Basin to locate fire scars

 Effects of prescribed burning on vegetation and fuel loading in CA State Parks (3/2009)

- Collected existing and new data on vegetation plots in preparation for data analysis.


 Effects of prescribed fire on nutrient emissions in air and water (07/2010)

- Conducted pre and and post-burn inventories in plots near Incline Village that were burned in October 2008


Fires and Fuels Projects

 Effectiveness of upland fuel reduction treatments (06/2011)

 Tools to evaluate fuel loading in the Angora Fire Region (**12/2009**)

 Balancing fuel reduction, soil exposure, and potential for erosion (03/2011)

 Identifying reference forest conditions (08/2011)

 *Round 9 projects* will evaluate alternatives for reducing forest fuels and effects of wildfire

Conserving Special Communities and Wildlife



Restoring sugar pines (5/2011)



Identifying disease resistant white pines (6/2011)



Evaluating effects of ski resorts on
American marten (12/2011)



Air Quality



Cost effectiveness of different road dust control strategies (**11/2009**)



Sources of particulate matter (**6/2009**)



Round 9 projects will examine particulate matter from vehicles and sources of ozone pollution

Water Quality Modeling



Assessing sources of fine sediment using WEPP (6/2010)



Minimizing road erosion using WEPP (4/2010)



Predicting nutrient and sediment loading from prescribed fire using WEPP (9/2010)



Developing a toolbox to reduce water quality pollution (5/2010)

Pollutant Reduction



Analyzing and standardizing data on sediment particle size (**10/2009**)

- Preliminary analysis indicates a strong correlation between turbidity and particles $<20\mu\text{m}$



Assessing performance of BMPs (**12/2009**)




Evaluating the potential of floodplains to reduce fine sediments (08/2010)




Round 9 projects will focus on reducing fine particles from urban areas

Stream Restoration


 Applying modeling tools for stream restoration
(4/2010)


 Predicting sediment load reductions from
channel restoration (12/2010)

 Tools to evaluate and track benefits of stream
restoration (01/2010)

Lake Quality

 Using remote sensing to monitor water quality
(09/2009)

 Predicting and managing changes in near-shore
water quality (6/2010)

 Identifying indicators to sustain near-shore
clarity and fisheries (4/2010)

Climate Change



Modeling influence of management on wildfire under future climatic conditions (08/2011)



Implications of climate change for design of Best Management Practices (9/2008-03/2010)



Modeling the invasion risk of cheatgrass (**11/2009**)



Round 9 projects will focus on adapting management practices to projected climates

Reporting: PSW Website

- Information about all science projects from Rounds 7-9
- Science Update Report

The screenshot shows the Pacific Southwest Research Station website. The header includes the station name and a search bar. The main content area is titled "Research Partnerships" and "Tahoe Research Supported by the SNPLMA Program". It features a section for "Scientific research to improve the environment in the Lake Tahoe Basin" with text about the Lake Tahoe Restoration Act and the SNPLMA program. Below this, there are sections for "Round 7" and "Round 8", each with a description of the research projects selected for that round. A "Science Project Pages" dropdown menu is visible, currently showing "Road dust control". There is also a "Science Issues" section and a "Process for Selection Projects" link. On the right side, there is a sidebar with "Priority Research Issues and projects designed to address them" and three categories: "Air Quality", "Forest Fuel Management", and "Special Ecological Communities". The footer of the page shows "Done".

Pacific Southwest Research Station

(enter query) Search
Search www.fs.fed.us

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Pacific Southwest Research Station
800 Buchanan Street
West Annex Building
Albany, CA 94710-0011
(510) 559-6300

USDA U.S. Forest Service

Research Partnerships

Tahoe Research Supported by the SNPLMA Program

Scientific research to improve the environment in the Lake Tahoe Basin

The [Lake Tahoe Restoration Act](#) called for scientific research and monitoring to inform efforts to restore Lake Tahoe and its watershed, including projects within the watershed Environmental Improvement Program Funding to achieve this mission has been set aside through [Southern Nevada Public Lands Management Act](#) (SNPLMA). Starting in Rounds 5 and 6 of the SNPLMA program, science projects in the Tahoe basin were supported by a variety of federal agency sponsors. To learn more about those projects, please visit the [Lake Tahoe Basin Management Unit SNPLMA web site](#).

Starting with round 7, the Pacific Southwest Research Station (PSW) assumed responsibility for sponsoring science projects using SNPLMA funds. The PSW Station established a competitive grant award program with a rigorous [peer review process](#) coordinated by the [Tahoe Science Consortium](#), a collection of universities and agencies with active research programs at Lake Tahoe.

Round 7

In 2007 (round 7), 15 targeted research projects were selected to address a variety of priority science issues. Using the drop-down menu below, you can view details and updates about these projects.

Science Project Pages:
Road dust control

Round 8

In 2008 (round 8), 14 new science projects were selected. Read more about the round 8 selections:

- [Round 8 - Selections Announcement](#)
- [Round 8 - List of Projects](#)

Science Issues

The Tahoe Science Consortium convenes a panel of scientists along with representatives of management agencies who collaboratively generate an annual list of research priorities, or science themes, ultimately approved by the Secretary of Interior.

- [Round 7 \(2006\) Themes](#)
- [Round 8 \(2007\) Themes](#)
- Round 9 Themes are under development

Process for Selection Projects

Priority Research Issues and projects designed to address them.

- Air Quality
- Forest Fuel Management
- Special Ecological Communities

Done

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

Reporting: BLM Website

- Updates on project schedules, deliverables and FY 2008 accomplishments

The screenshot shows the BLM Nevada website interface. At the top, it displays the U.S. Department of the Interior Bureau of Land Management logo and a banner for Nevada with the National System of Public Lands logo. Below the banner is a search bar and a navigation menu. The main content area is titled "Projects Funded By SNPLMA (Search Engine)" and contains a table of project details.

Project ID	Project Description	Agency	Funding Source	Location
7-48	Examinations of Dust and air-borne sediment control demonstration projects.	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-49	Predicting and Managing Changes in Near-Shore Water Quality	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-50	Application of Enhanced Stream Corridor Modeling Tools for Adaptive Mgmt of Tahoe Basin Streams	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-51	Methodology to Predict Total and Fine Sediment Load Reductions as a Result of Channel Restoration in Lake Tahoe Streams	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-52	Assessing the Sources and Transport of Fine Sediment in Response to Mgmt Practices in the Tahoe Basin using the WCEP Model	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-53	Potential nutrient emissions from geotreated fill in the Lake Tahoe basin	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-54	Restoration and Fuel Treatment of Lake Tahoe's Riparian Forests	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-55	Restoring sugar pine in the Tahoe Basin	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-56	Natural and anthropogenic threats to white pine from lower montane forests to subalpine woodlands of the Lake Tahoe Basin	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-57	Improving Road Erosion Modeling for the Lake Tahoe Basin	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-58	Development of a BMP Performance Assessment and Data Analysis System for the Tahoe Integrated Info Mgmt System (TIIMS)	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-59	Analysis of 15 Years of data from the EA State Parks Reserved Fine Effects Monitoring Program	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-60	Receptor Modeling Study to determine the source of observed ambient particulate matter (PM) in the Lake Tahoe Basin	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	
7-61	Tahoe Basin Particle Size Analysis and Protocol Development	FOREST SERVICE	CLARK, DOUGLAS, EL DORADO, PLATER, WASHOE	

www.blm.gov/nv/st/en/snplma/snplma_prephase_1.html



Contact Information



Zach Hymanson

Executive Director

Tahoe Science Consortium

291 Country Club Drive

Incline Village, NV 89451

(775) 881-7561

redfir@sbcglobal.net

www.tahoescience.org

Jonathan Long

Biologist/SNPLMA Tahoe Science
Program Coordinator

Pacific Southwest Research Station

291 Country Club Drive

Incline Village, NV 89451

(775) 881-7560 x. 7482

jwlong@fs.fed.us

Leaving position
at end of February--
position will be posted shortly!