

Sierra Nevada Conservancy-Progress Report

**Sierra Nevada Conservancy Grant Program
Safe Drinking Water, Water Quality and Supply, Flood Control
River and Coastal Protection Act of 2008 (Proposition 84)**

Grantee Name: University of California

Project title: Fuel Treatment Monitoring and Educational Publication

SNC Reference Number: SNC 070071 **Submittal Date:** 10/31/12

Report Preparer: Glenn Nader **Phone #:** 530.822.7515

Check one:

6-Month Progress Report

Final Report

6-Month Progress Reports should reflect the previous six months. **Final Reports** should reflect the entire grant period.

A. Progress Report Summary: (Please provide a general description of work completed during this reporting period.)

Field research was conducted in the northern Sierra Nevada forest on previously treated fuel breaks in Lassen and Plumas counties to address the issue of how often maintenance should be done for the treatment to remain effective and also determine treatment methods that could extend the life of the investment. Downed fuels and understory and overstory vegetation were sampled within 51 treatment sites 2-15 years following initial treatment and 13 untreated sites. Sampling sites were stratified by treatment type (mechanical thin only, thin plus burning, and untreated), forest type (mixed conifer and east-side pine), and major slope aspect (north- and south-facing). The findings were peer reviewed and then published on September 2012 in **Forests** and can be seen at <http://www.mdpi.com/1999-4907/3/3/700> At the end of the article, Sierra Nevada Conservancy is credited with funding part of the research project. Other funding agencies were the Bureau of Land Management, Renewable Resource Extension Act, and University of California Berkeley Campus and Cooperative Extension. The Forest article has been provided to Fire Safe Councils and Forest Service land managers. The flame length modeling data that predicts fire risks has been developed into another article that will also be published. The information has also been included in an Extension publication that is presently being peer reviewed. Presentations at Fire Safe Councils and other fire management meetings are planned.

B. Deliverables or Outcomes completed during this Reporting Period or Milestones Achieved: (Include specific information, such as public meetings held, agency participation, partnerships developed, or acres mapped, treated or restored.)

The following deliverables were completed:

1. Complete the second year of establish long term monitoring sites on past treatment areas and collect data
2. Analysis of data
3. Write publication with findings. Published in *Forests* 2012, 3(3), 700-722; doi:[10.3390/f3030700](https://doi.org/10.3390/f3030700)
4. Provide outreach to Fire Councils (State Council workshop and Local Council educational meetings). A summary of the findings with a link to the publication have been emailed to the California State Fire Safe Council for distribution throughout the state. Forest Land managers (Forest Service and Private Industrial Timber Landowners were also emailed the same information.

C. Challenges or Opportunities Encountered: (Please describe what has worked and what hasn't; include any solutions you initiated to resolve problems. If your project is not on schedule, please explain why here.)

The freezing of the proposition funds did impact the flow of the project. The time estimates for deliverables were not met, as more difficulty was experienced in getting the field data analyzed, written up, reviewed and published than expected.

D. Unanticipated Successes Achieved: (Please describe any additional successes beyond completing scheduled tasks or meeting scheduled milestones.)

The research findings were more robust than anticipated.

E. Compare Actual Costs to Budgeted Costs: (Please refer to your grant agreement to list your deliverables/budget categories and budgeted costs compared to actual costs incurred during this reporting period in the table below.)

PROJECT BUDGET CATEGORIES	Budgeted SNC Dollars	Actual Dollars
Personnel	32,801	37,862.99
Benefits	12,358	13,491.01
Travel	3,298	1,349.10
Supplies	0	337.51
Services		152.00
Administrative	4,846	0
GRAND TOTAL	\$53,303	53,192.61

Explanation: (if needed)

F. Do you have information to report on the project-specific Performance Measures for your project? (If so, please list the Performance Measures below and describe your progress.)

The second year work plan for the project had the performance measure of retrospective information from as many as 25 projects conducted by the Forest Service and Fire Safe Councils. The two year research project ended up with 51 treatment sites and 13 untreated being included into the data set. The additional work conducted the first year was cooperatively funded by the Bureau of Land Management and Renewable Resource Extension Act grants.

G. Were there any other relevant materials produced under the terms of this Agreement that are not a part of the budgeted deliverables? If so, please attach copies. (Include digital photos, maps, media coverage of project, or other work products.)

None

H. Next Steps: (Work anticipated in the next 6 months, including location and timing of any scheduled events related to the project.)

The data will also be used to produce a publication on modeled fire behavior on the sampled plots. This will provide fire fighters with data on the fire management durability of these fuel treatments.

Please Complete this Section for FINAL Report ONLY

Capacity-Building Results and Collaboration and Cooperation with Stakeholders:

(What partnerships did you initiate or strengthen as a result of this project? How did they affect the project outcome? If applicable, how did this grant increase your organization's capacity? What is your plan to sustain this increase?)

The partnership with the Forest Service and private landowners that had made the investment in fuel treatments on their land was a great strength. They were able to give the original treatment prescription information and the date treated that provided more data to the project. These data will provide an on the ground performance evaluation of fuel reduction treatments and indication to agencies and fire safe councils and realistic time frame to schedule retreatment to maintain them as an valuable tool for fire fighters. The data exists for future retrospective evaluations to further evaluate the fuel treatments under more years.

Description of Project Accomplishments:

1. Most Significant Accomplishment

Describe in one concise, well-written paragraph, the most significant accomplishment that resulted from this grant.

In dry western United States forests where past resource management has altered the ecological role of fire and stand characteristics alike, mechanical thinning and prescribed burning are commonly applied in wildfire hazard abatement. The reduced surface fuel loads and stand structures resulting from fuels modifications are temporary, yet few studies have assessed the lifespan of treatment effects. This project sampled forest fuels and vegetation following fuels reduction in a chronosequence of time since treatment in the northern Sierra Nevada and southern Cascade regions of California. Treatments altered overstory characteristics including stand density, basal area, and species composition. These effects were still present on the oldest treatment sites (8–15 years post-treatment). Other stand characteristics, particularly timelag fuel loads, seedling density, and shrub cover, exhibited substantial variability, and differences between treatment age classes and between treatment and control groups were not statistically significant.

2. WOW Factor

If applicable, please describe anything that happened as a result of the project or during the project that is particularly impressive.

That the fuel reduction projects are lasting longer than estimated.

3. Design and Implementation

When considering the design and implementation of this project, what lessons did you learn that might help other grantees implement similar work?

None

4. Indirect Impact

Please describe any indirect benefits of the project such as information that has been developed as a result of the project is being used by several other organizations to improve decision-making, or a conservation easement funded by this grant that encouraged other landowners in the area to have conservation easements on their property.

The findings will assist agencies and fire safe councils schedule fuel reduction retreatments in forested communities.

5. Collaboration and Conflict Resolution

If you worked in collaboration or cooperation with other organizations or institutions, describe those arrangements and their importance to the project. Also, describe if you encountered conflict in the project and how you dealt with it, or if there was conflict avoided as a result of the project.

The Forest Service and private landowners provided original treatment data and access to the sites for data collection. No conflicts were encountered.

6. Capacity-Building

SNC is interested in both the capacity of your organization, as well as local and regional capacity. Please describe the overall health of your organization including areas in need of assistance. SNC is interested in the strength and involvement of your board, significant changes to your staff, size and involvement of membership. In addition, describe how your project improved capabilities of partners, or the larger community.

The University of California has had successive years of budget reductions. Finding funding for applied research is becoming more limited. This grant has allowed UC to provide decision making knowledge to the Sierras.

7. Challenges

Did the project face internal or external challenges? How were they addressed? Describe each challenge and any actions that you took to address it. Was there something that SNC did or could have done to assist you? Did you have to change any of your key objectives in response to conditions “on the ground”?

The flow of funding presented some challenges, but the department covered the expenses to keep the project proceeding.

8. Photographs

Grantees are strongly encouraged to submit photos, slides or digital images whenever possible. These images will be used for SNC publications such as annual reports or on the website. Please make sure you clearly identify location, activity, and your project with each submitted image. Images will be credited to the submitting organization, unless specified otherwise.

9. Post Grant Plans

What are the post-grant plans for the project if it does not conclude with the grant? Include a description of the following (if applicable): (1) Changes in operations or scope; (2) Replication or use of findings; (3) Names of other organizations you expect to involve; (4) Plans to support the project financially, and; (5) Communication plans?

Further extending of the knowledge developed through meetings and publications.

10. Post Grant Contact

Who can be contacted a few years from now to follow up on the project? Please provide name and contact information.

Michael "Mike" De Lasaux
Natural Resources Advisor
Plumas & Sierra Counties
University of California Cooperative Extension
208 Fairground Road
Quincy, CA 95971
mjdelasaux@ucanr.edu
Phone: 530.283.6125
Fax: 530.283.6088