



The CA Fire Science Consortium: Bridging science and management in northern California

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Background

- Disconnect between the public and the fire community is well recognized and well studied
- There is also a disconnect within the fire community, and between fire folks and the larger land management community
 - Science ≠ management
 - Goes both directions
 - New science not necessarily incorporated into management
 - Relevant management questions/techniques not always a focus for science





CA Fire Science Consortium

The CFSC is a network of fire science researchers, managers, and outreach specialists **tasked with improving science outreach and knowledge exchange** between fire researchers, managers, policymakers, and private landowners.

CA Fire Science Consortium

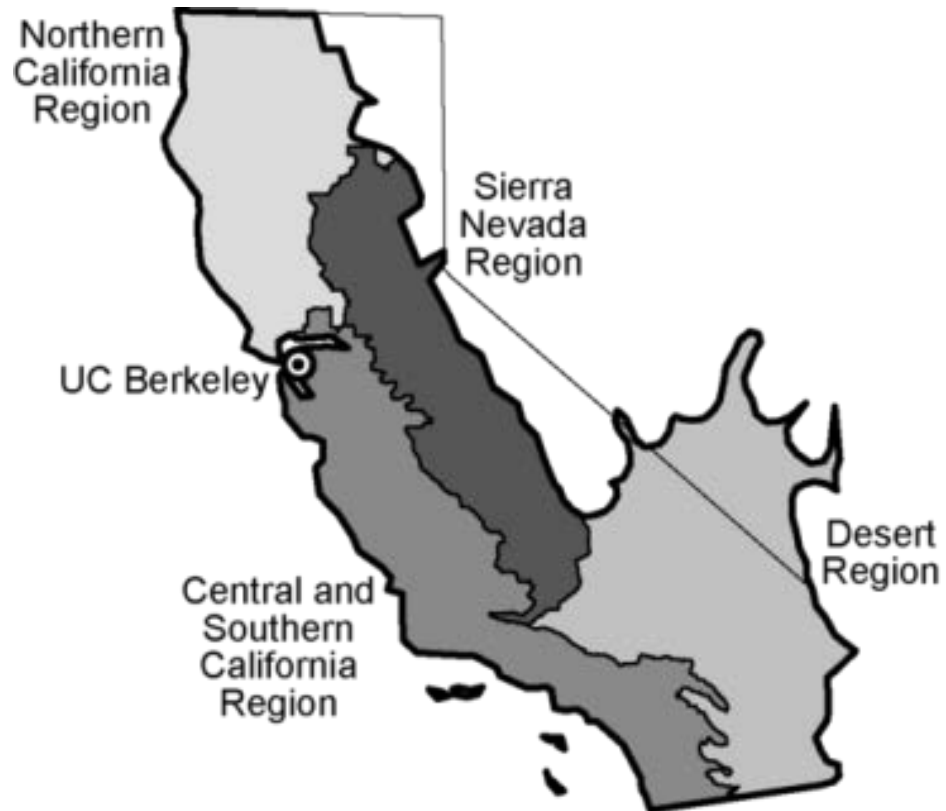
Part of a national network of consortia, funded by the Joint Fire Science Program

- Vision of program is to develop a **national collaborative science delivery network**



CA Fire Science Consortium

- Statewide organization with 4 regional teams
- Central hub at UC Berkeley
- Additional team focused on statewide WUI issues



CA Fire Science Consortium

- Northern CA Region
 - What are we doing?
 - Events
 - Written and web-based resources
 - Relationship with Rx Fire Council



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CA Fire Science Consortium

- Events
 - Building relationships
 - Disseminating new science
 - Showing examples of research “on the ground,” and examples of adaptive management
 - Identifying new research needs




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- Other resources
 - Research briefs
 - Webinars
 - FAC Net fire science blog





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Research Brief for Resource Managers

Release: August 2012 Contact: Lenya Quinn-Davidson Phone: (707) 441-5284
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Historical fire regimes: spatial patterns and controls on historical fire regimes and forest structure in the Klamath Mountains. *Ecological Applications*, 13(3): 704-719.
http://www.fs.fed.us/pnw/programs/ecology_of_western_forests/publications/publications/2002-01_TaylorSkinner.pdf

Introduction
Fire has played a critical role in western forests for millennia, shaping community composition and structure and contributing to notably complex patterns of vegetation in the region. However, it is the historical variations in fire regimes – not just fire alone – that has helped create and maintain high levels of diversity in these forests.

Widespread fire exclusion has effectively reduced diversity in these ecosystems, resulting in more homogeneous forests that are vulnerable to wildfire and other disturbances. Current restoration efforts focus on the reintroduction of fire to promote biodiversity and restore natural processes, yet they are complicated by a lack of understanding of historic patterns of fire and controls on fire spread. Thus, current prescribed fire efforts do not always succeed in mimicking historic fire regimes and achieving desired results.

This paper offers a reconstruction of historic fire regimes and forest age structures in a mixed-conifer forest in the Klamath Mountains of northern California, demonstrating the historic importance of temporal and spatial controls on fire in the area, and providing critical context for current restoration and management activities.

California Fire Science Consortium
Joint Fire Sciences Program



Northern California Fire Science Consortium

Spring 2013 Webinar Series

Dr. Frank Lake
USDA Forest Service, Pacific Southwest Research Station


Incorporating tribal traditional knowledge and community values into wildland fire management


March 27, 2013
11 am PDT

Description

This presentation will provide background information on existing federal agency fire planning and management activities. Additionally, it will discuss opportunities for how tribes and communities can coordinate with fire managers to identify values at risk and recommend mitigation actions or other treatments to reduce non-desired impacts to valued resources. This overview will include information about the Wildland Fire Decision Support System (WFDSS) and how “values at risk” are identified and could be managed. Different case study examples will be used to provide place-based context for different resources valued by tribes and communities.

Questions? Contact Lenya Quinn-Davidson at lquindavidson@ucanr.edu





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Thinning and prescribed fire on tree survival

Management Implications

- Reduction in fuels from thinning or prescribed fire can decrease fire intensity and severity in dry ponderosa pine forests. Thinning with prescribed fire is especially effective, reducing surface and ladder fuels and greatly improving tree survival rates.
- NEXUS predictions appear to give reasonable estimates of fire behavior and mortality under different fuels treatment scenarios.
- Though treatments can greatly improve survival rates, radiant and convective heat from wildfire in adjacent untreated stands may increase crown scorch and mortality just inside the treatment boundary. These edge effects may reduce the efficacy of narrow fuelbreaks and small treatment areas, and should be considered in treatment designs.

Plots were installed in 3 different treatment types: low structural diversity with prescribed fire; high structural diversity with prescribed fire; and low structural diversity without prescribed fire. In all cases, structural diversity categories resulted from different thinning prescriptions.

In all plots, distance from treatment boundary, scorch extent, mortality class, species, and size were recorded for each tree. The authors used these data to quantify relationships between specific tree characteristics (e.g., size and location) and likelihood of survival during wildfire.

Research briefs and other resources online <http://www.CaFireSci.org>



8 years in....what else could we be doing?

1. Think of a moment in the last 1-2 years when a science concept really clicked for you. How was it delivered?
2. In small groups, discuss #1 and then come up with a list of the 3 most effective ways to increase the flow of information between the science and management communities.
3. In small groups, brainstorm 3 topics for which you'd like to see more coverage by the CFSC. These could be new science topics, or topics that are well-studied but need more outreach.
4. Do you have ideas for interesting events or field trips? Take a minute to jot them down, along with your contact information.



Questions?

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