the SIERRA NEVADA
SNAMP
Adaptive Management Project

The SNAMP Project:
Learning how to apply
adaptive management in the Sierra Nevada Forest Plan Amendment

Afternoon Meeting
Sacramento, CA
November 5 2008

Presentation Outline

1:00 Welcome
1:05 History and Background of SNAMP
1:10 Support for SNAMP
1:15 Research Highlights from the UC Science Team
Members of Science Team present initial results, highlighting products and integration between teams:
- Research design and goals – *Scott Stephens*
- FFEH - *Scott Stephens*
- Water – *Roger Bales*
- PPT - *Maggi Kelly*
- Spatial – *Maggi Kelly*
- Wildlife – *Reg Barrett*

2:00 Question and Answer
<< 5 minute break >>
2:20 Project Level Successes and Challenges
2:50 What's Next for SNAMP
2:55 Open Commentary from Public

SNAMP:
Research
Design & Goals

Active experimentation in an adaptive management framework.

Research designed to measure physical and natural processes at the relevant management scale (i.e., the fireshed).

Research questions are based on key forest management goals:

•Reducing the potential for catastrophic wildfire

•Improving forest health

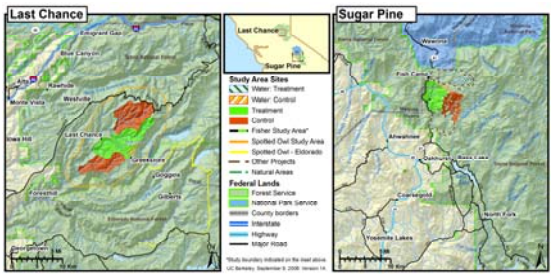
•Protecting wildlife habitat with a focus on the most sensitive species

•Maintaining the quantity and quality of water

•Working with the public

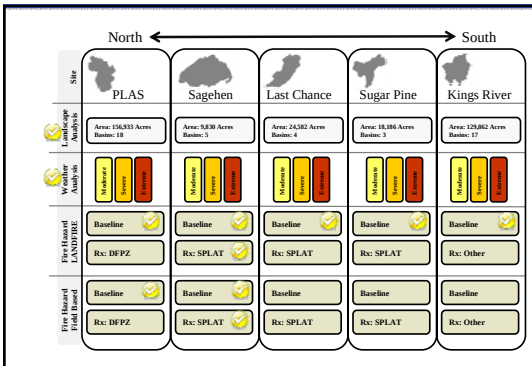
SNAMP Science Team: Our Commitment

- Research
  - We will conduct innovative research on the impacts of USFS management that is credible to our academic peers and that is relevant to resource managers.
- Open and Transparent Process
  - We commit to an open and transparent process and will adhere to our role as a "neutral third-party with expertise in projects of this sort."
- Information Tracking
  - We will follow how information is gathered and used as it is fed back into the adaptive management process; report on use of information to public, Science Team, and USFS.
- Public Participation
  - We will engage the public as stakeholders in this research enterprise to develop a "community of stakeholders" at local and regional scales.



SNAMP Study Areas

These sites were chosen because: 1) Active USFS management plans in place; 2) Met a range of scientific criteria (including providing habitat for wildlife species and the potential for recruiting large tree structure), and 3) the sites were representative of typical Sierran landscapes.



Science Team Updates

Fire and Forest Ecosystem Health
•Scott Stephens, UCB, 5 mins

Water
•Roger Bales, UCM, 6 mins

Public Participation
•Maggi Kelly, UCB, 6 mins

Spatial
•Maggi Kelly, UCB, 6 min

Wildlife
•Reg Barrett, UCB, 12 mins

SNAMP Science Team: Fire & Forest Ecosystem Health

FFEH Team Members

Principal Investigators:
- John Battles, UCB
- Scott Stephens, UCB

Postdoctoral Researchers:
- Brandon Collins

Field Team Leader:
- Gary Roller

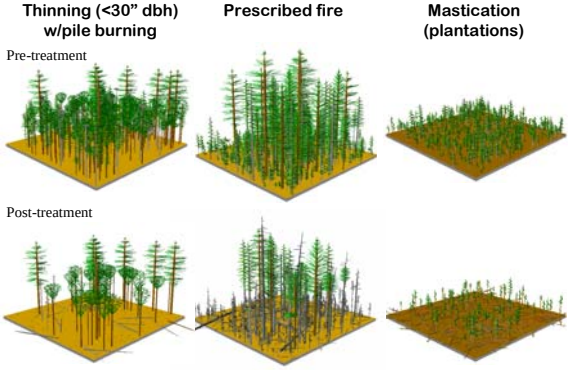
Fire & Forest Ecosystem Health Team Goals

- The Fire and Forest Ecosystem Health Team will investigate effects of strategic fuel treatments on fire behavior, tree morbidity and mortality, and forest health.

FFEH Team Activities

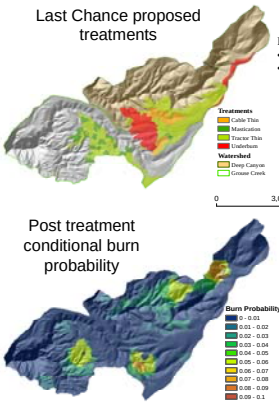
- Preliminary Fire Modeling:
  - pre- and post-treatment scenarios
- Forest Health

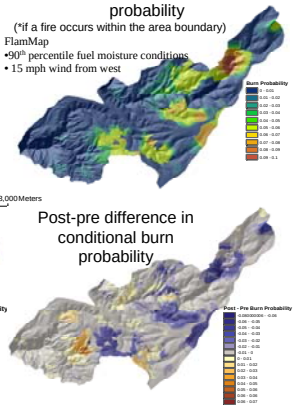
Last Chance Project – treatment stands (initial run)



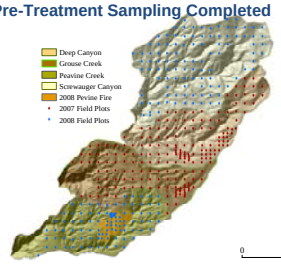
Pre treatment ***conditional**** burn probability

(*if a fire occurs within the area boundary)
FlamMap
•90th percentile fuel moisture conditions
• 15 mph wind from west

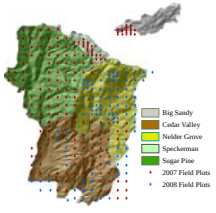




Pre-Treatment Sampling Completed



Sugar Pine Project 2008:
- 284 forest/fuel inventory plots (0.05ha)
  - Nelder Grove, Cedar Valley (matrix)
- 714 paired live/dead tree cores (1428 total)
- 148 fires-scarred cross-sections
  - o Sugar Pine treatment area only
  - o 90% CADE, 10% PIPO



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Last Chance Project 2008:
- 208 forest/fuel inventory plots (0.05 ha)
  - o Peavine Creek, Screwauger Canyon, Peavine fire
- 839 paired live/dead tree cores (1678 total)
- 0.5 ha stem plot, all trees measured, mapped, cored
  - o 293 live trees, 191 dead trees
- 105 fire-scarred cross-sections from
  - o Grouse Creek watershed only
  - o 47% CADE, 38% PIPO, 14% PILA, 1% PSME

Tree Health Using Tree Rings

We will use these models on a representative sample of trees at each site, before and after treatment, to assess changes in forest health.

Das et al. Canadian Journal of Forest Research 2007

Battles et al. Climate Change 2008