SNAMP Goals and Objectives

Purpose
- To evaluate the effects of forest fuels treatments done by the US Forest Service
- Studies focus on fire and forest health, water quality and quantity, wildlife (Pacific Fisher and California spotted owl) and public participation.

The study is designed to collect data using a BACI approach (Before and After treatment data collection in Control and Impact sites). It is designed to last seven years and includes:
- 2 years of pre-project data collection
- 2 years of implementation and data collection
- 1 year of ecosystem recovery and data collection
- 2 years of post-project data collection

We are in the pre-project data collection phase, although some teams have completed this phase. The USFS is currently planning project implementation.

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 Sierra landscapes.

Science Team Overviews
Fire and Forest Ecosystem Health
- Scott Stephens, UCB
- Roger Bales, UCM
Public Participation
- Lynn Huntsinger, UCB
Spatial
- Maggi Kelly, UCB
Fisher
- Reg Barrett, UCB
Owl
- Doug Temple, UCM

SNAMP Science Team: Forest Health & Fire

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

FFEH Team Activities
- Preliminary Fire Modeling
- Pre- and post-treatment scenarios
- Forest Health
- Pre-treatments Sampling Done
**Last Chance Project – treatment stands (initial run)**

- **Thinning (<30" dbh)**
  - Pre-treatment
  - Post-treatment
- **Prescribed fire**
- **Mastication (plantations)**

**Last Chance proposed treatments**

- Pre treatment conditional burn probability
  - >0.05
  - <0.05

**Sugar Pine Project 2008:**

- 284 forest/fuel inventory plots (0.05ha)
- 148 fire-scarred cross-sections
- 714 paired live/dead tree cores (1428 total)
- 0.5 ha stem plot, all trees measured, mapped, cored
- 263 live trees, 263 dead trees
- 20 trees scarred cross-sections

**SNAMP Science Team: Water**

- Water team goals
  - Water team members will be monitoring water quality and quantity across treatment and control catchments prior to, and after, treatments. They are investigating impacts of strategic fuel treatments in SNAMP study areas on water quantity and quality.

- Water team activities
  - Instrumentation
    - Meteorological tower & snow depth/soil moisture nodes
    - Sediment, streamflow, snow depth/soil moisture & water chemistry
  - Modeling
    - Distributed Hydrology-Solids-Vegetation Model: DHVSVM

**Tree Health Using Tree Rings**

- We are building models that effectively estimate tree health using tree rings.

**Vulnerability Profiles**

- Decreasing forest health

**SNAMP Public Meeting**

- Nov 5, 2008

**SNAMP Public Meeting**

- Nov 5, 2008

**2007 Field Plots**

- 2008 Pevine Fire
  - Grouse Creek
  - Deep Canyon

**Post treatment**

- 0.5 ha stem plot, all trees measured, mapped, cored
- 263 live trees, 263 dead trees

**Pre treatment**

- 0.5 ha stem plot, all trees measured, mapped, cored
- 263 live trees, 263 dead trees
- 20 trees scarred cross-sections

**Sugar Pine Project 2008:**

- 284 forest/fuel inventory plots (0.05ha)
- 148 fire-scarred cross-sections
- 714 paired live/dead tree cores (1428 total)
- 0.5 ha stem plot, all trees measured, mapped, cored
- 263 live trees, 263 dead trees
- 20 trees scarred cross-sections

**Sierra Nevada Adaptive Management Project**

- Das et al. Canadian Journal of Forest Research 2007

**Water Team Members**

- Phil Saksa
- Sarah Martin
- Martha Conklin