



Today's Goal:

Discuss revisions from original 2007 workplan to the 2014 workplan

SNAMP 2007       $\longrightarrow$       SNAMP 2014

Plan

1. Review general research design
2. Discuss necessary changes
3. Explore individual team revisions

6/22/12

## What is SNAMP?

A partnership with the goal of learning how to ensure the long-term sustainability of the Sierra Nevada forests.

## Who is SNAMP?

A collaboration among federal and state resource agencies.

An independent “third-party” of University researchers.

Public and private stakeholders.

## Why SNAMP?

Consensus that forest are at risk.

Controversy over USFS management.

Uncertainty on how best to reduce risk.

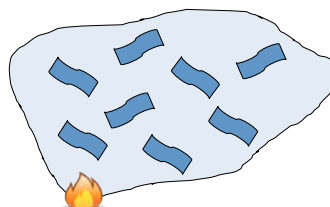
Acknowledged need to learn.



## Strategically Placed Area Treatment (SPLAT)

•The spatial pattern of the treated areas is designed to reduce rates of fire spread and reduces fire intensity at the head of the fire

•30% of the landscape strategically placed in 20 – 200 acres blocks

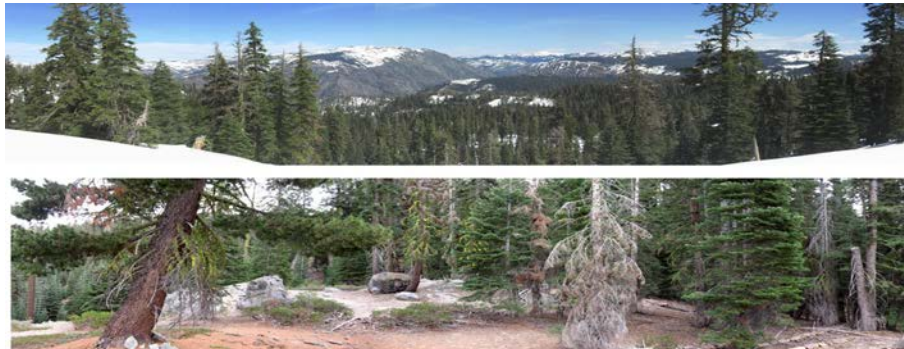


## Goal of SNAMP

Ensure sustainability of Sierra Nevada forests

## Means of SNAMP

Learn how to apply adaptive management



## The MOU Partners

- **US Forest Service**  
Region 5, Sierra and Tahoe National Forests  
Pacific Southwest Research Station
- **California State Resources Agency**  
Dept. Fish and Game  
Dept. Water Resources  
Dept. Forestry & Fire Protection
- **US Fish and Wildlife Service**



### Supporting organizations

- **Sierra Nevada Conservancy**  
**Resources Law Foundation Fund**

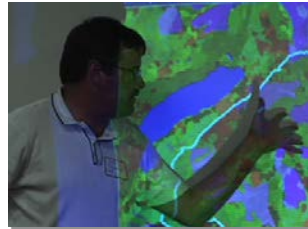


## University of California Role



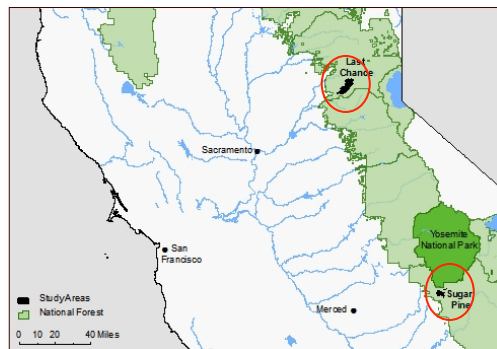
- Conduct innovative and relevant research in an open and transparent manner
- Provide a structured process for mutual learning throughout the adaptive management cycle

- Help develop and evaluate an adaptive management program with strong public participation.



## SNAMP Study Areas and Research Teams

- Two Study Areas:
  - Tahoe National Forest
  - Sierra National Forest
- Six Research Teams:
  - Pacific Fisher
  - Spotted Owl
  - Fire & Forest Ecosystem Health
  - Spatial
  - Water Quality and Quantity
  - Public Participation



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Adaptive Management – a controlled landscape experiment

Capture biophysical gradient

True replication – impossible

Robust alternative – pick sites that are “not unique”

Minimize influence of SNAMP research

Ranger districts responsible for implementing plan

Use Before-After-Control-Impact design (BACI) for experiment

Proven approach when randomization impossible

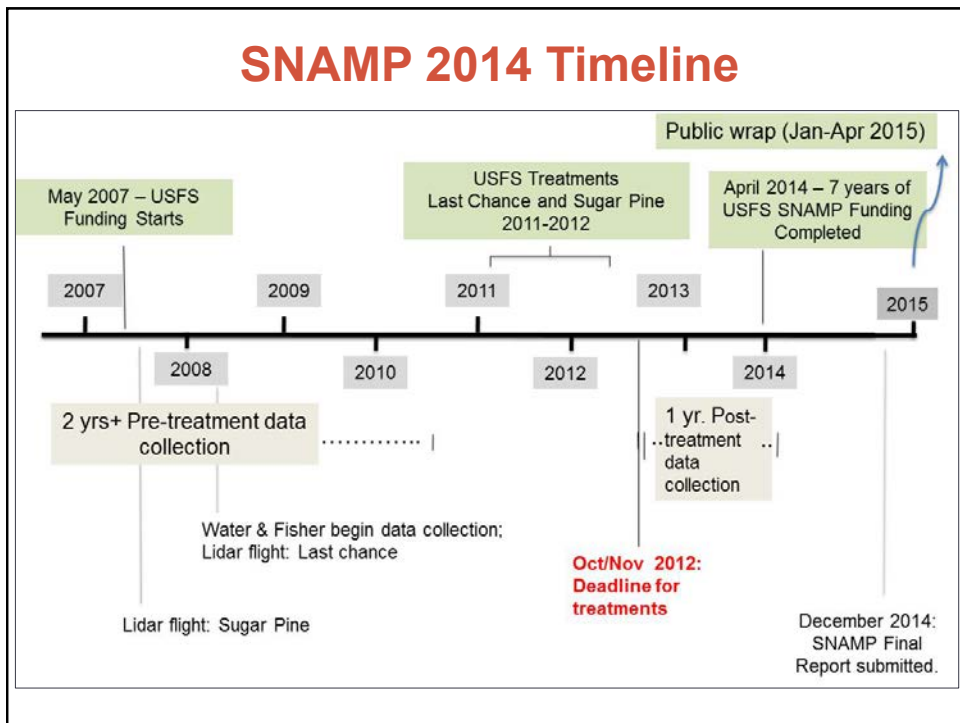
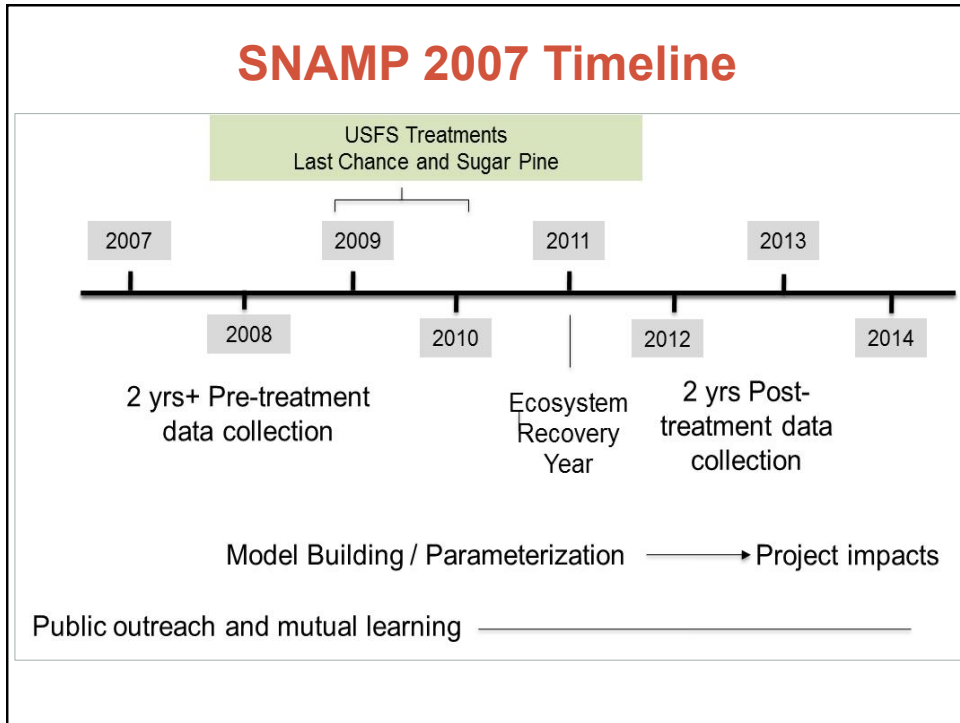
Often used in forest hydrology – paired watershed approach

Analytical approach

Collect field measurements before and after treatments

Use data to develop well-validated models (statistical and/or process)

Project effects of forest management at fireshed



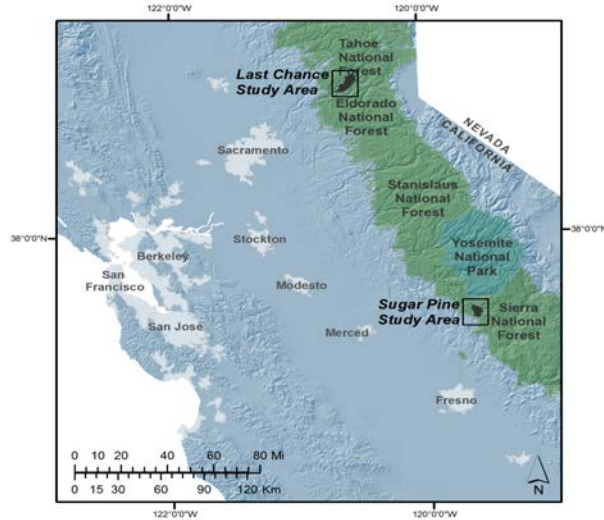
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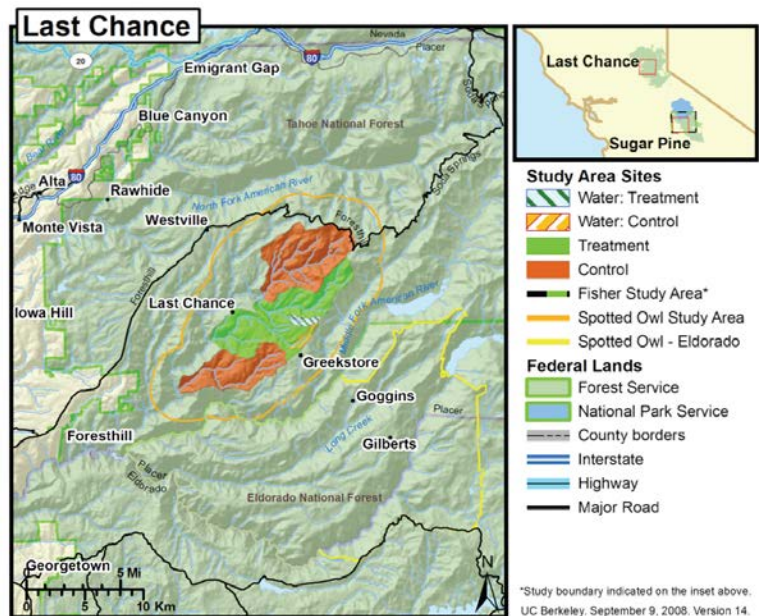
- Tahoe National Forest
- Sierra National Forest

Six Research Teams:

1. Pacific Fisher
2. Spotted Owl
3. Fire & Forest Ecosystem Health
4. Spatial
5. Water Quality and Quantity
6. Public Participation



BACI design – ensure experimental power



### Drivers of revisions

1. Delays in aligning multiagency support
2. Reduction/uncertainty in funding
3. Delay in applying treatments

### Summary of revisions from 2007 plan to 2014 plan

1. Reduction in the intensity of efforts
2. Inferential approach is one-step removed
3. Accept limitations imposed by shorter post-treatment period



### Consequences

1. Reduces ability to detect subtle changes
2. Introduces more uncertainty in results
3. Limits scope of information provided

### SNAMP 2014 is a scientifically valid management study.

1. It integrates the response of multiple resources to novel landscape-level treatments.
2. It conducts the investigation at the management-relevant scale (fired).
3. It actively engages the public in the process.

SNAMP 2014 develops and demonstrates **Collaborative Adaptive Management**