

UC Science Team Updates

SNAMP 2010 Second Quarter, June 21, 2010

Main research findings and work accomplished since last reported to MOUP on April 26th, 2010

Prepared by Ann M. Huber

Project Integration and Management Team

Budget

The task orders for Water and Spatial from the Department of Water Resources have been approved and are at the respective Universities for final signatures by Sponsored Projects.

We have submitted a rebudget request to the Sierra Nevada Conservancy. We overspent on salaries and underspent on S&E funds. The imbalance was caused by reshuffling made necessary by the Dec 18, 2008 suspension. We have every expectation that they will approve the rebudget. Potential loss is more than \$40,000 but this outcome is very unlikely.

UCST Coordination

- Logistical planning for UCST All Scientist Meeting / Retreat in September.
- Update UCST Statement of Neutrality to include expanded Owl and Fisher study areas.
- Investigate UC administrative policy on FOIA requests. There have not been any FOIA requests yet for SNAMP data but this question came up in a UCST meeting.
- Planned and lead monthly UCST conference calls; distribute monthly team updates.
- Review UCST draft manuscripts for consistency in acknowledgements, funding sources and SNAMP pub number.
- Online UCST document archival (manage bSpace site).

Communication with MOUP and SNAMP stakeholders

- MOUP quarterly meeting in April: agenda, notes, and follow-up on action items.
- Logistical planning and participation in SNAMP Information Sharing Meeting with USFS on May 27th, notes and follow-up on action items.
- Provided SNAMP briefing for Lester Snow, new Resources Secretary (June 21)
- Facilitating research projects that leverage SNAMP infrastructure.

Other

- Logistical planning for an introductory meeting with the SNAMP Oversight Committee.
- Field visit to Water Team study sites in Sugar Pine.

Spotted Owl Team

- Access to the SNAMP study area is still very limited due to snow. We can reach only a handful of territories right now, and our ability to conduct night surveys is extremely limited.

- We have been able to visit most of the recently occupied territories that are on the Eldorado demography study area.
- We have found 17 nests, 2 of which are in the SNAMP study area.
- We have 3 field trips planned, one SNAMP public trip (June 15), one with local high school students (June 24), one with the Georgetown District wildlife crew (July 8).

Fisher Team

We have just recently completed our 3rd denning season on the SNAMP Fisher Project. Overall, we identified 15 natal den trees and 15 maternal den trees for 15 different adult female fishers during late March to early June 2010. Three of the denning females died during the denning period and one ceased denning approximately 1 month into the denning season.

We documented mortalities on three radiocollared adult female fishers during the period; two of the deaths were from predation (bobcat), and one was a roadkill near Fisher Camp on Highway 41. We further documented bobcats visiting active den trees and killing fisher kits, something that was previously suspected based on photos of bobcats at den trees, but not confirmed.

For two of the denning females that were killed (F25 and F31) we knew the locations of their den trees, and the Fisher Team was able to climb the den trees and rescue the orphaned kits before they died of exposure/starvation. The 5 fisher kits that were rescued were transported to the Fresno Chaffee Zoo for assessing their health status, and to begin the process of hand rearing the animals in preparation for possible eventual release back into the Sierra National Forest at a location where their presence will not interfere with either the SNAMP Fisher Study or the Kings River Fisher Project. The Fisher Team is working with the Department of Fish and Game, the Fresno Chaffee Zoo, wildlife rehabilitators with Fresno Wildlife Care, and several veterinarians at UC Davis on a program to pen rear the fisher kits over the summer in preparation for their eventual release back into the Southern Sierra Nevada Fisher population.

Overall, 15 of 16 radiocollared adult female fishers on the SNAMP Fisher Study reproduced during spring 2010. Our preliminary estimate of fecundity for spring 2010 was 1.73 kits/female.

Project Leader Rick Sweitzer presented 3 different slide presentations on the SNAMP Fisher Project during the report period; one for a class and the teaching staff at Yosemite High School, one for the Mariposa Pilots Association, and one at the Annual Staff/Employee Orientation meeting of the Bass Lake Ranger District Office.

The denning season is now over and we have resumed trapping activities in different parts of the study area. Trapping during the summer period will be targeted/focused on recapturing/recollaring several fishers that dropped their radiocollars during the winter+spring

period, and on several noncollared fishers that were detected by survey cameras over the last 3 months.

At present, we are actively monitoring 24 different radiocollared fisher by daily/near daily aerial telemetry. Also, in addition to the targeted trapping described above, over the next 3 months we will be using cameras to survey remote parts of the study area for fishers. Finally, the Fisher Integration Meeting is scheduled for July 22 in Fresno. Project Leader Rick Sweitzer is working on a variety of data analyses in preparation for this event.

Fire and Forest Ecosystem Health

- We continue to work on fuels modeling for the southern SNAMP site and the development of a succession of fuels models for existing and post-treatment conditions.
- Tree core processing continues for forest health pre-treatment conditions.

Water Quality and Quantity Team

- We are continuing to collect bi-weekly stream grab samples for suspended sediment concentration, ionic content, and isotopic analysis. Sampling began Jan 2010. Grab samples will continue until we receive the automated ISCO water samplers. Snowpack ion and isotope samples were also collected during peak accumulation.
- A technical report on soil bulk density distribution from our soil moisture sensor installations has been completed by an undergraduate student. It will be available to SNAMP as soon as it undergoes some modification and refinement.
- Analysis of data from the various watershed sites is in progress.
- Soil samples from soil moisture sensor installations will be processed for texture analysis by the UC Davis ANR Lab as soon as this year's DWR funds become available.
- Model inputs are being compiled, for hydrologic modeling in the various basins.

Spatial Team

- We continue to develop and refine the SNAMP data server.
- We are in the process of verifying LiDAR results from the southern site, where there are some very large trees.
- We are working on upscaling the northern site LiDAR data. We have finished the regression analysis on the plot level data, and have begun to map the vegetation parameters across the whole study area.
- We continue to extract the spatial distribution of fuels information from LiDAR according to Scott & Burgan's 2005 fuel models set.

Public Participation Team (PPT)

PPT: Website

- Continuing to maintain website.
- SNAMP newsletter Vol 4 No 1 published; focuses on the wildfire meta-analysis.
- Developing next SNAMP newsletter to focus on the Fisher team; expected publication in late Spring 2010.
- Sent out web updates to the full SNAMP distribution list in June 2010.

PPT: Research

- Archiving SNAMP materials on SNAMP data server
- Conducting follow-up interviews – to be complete by June 30th, 2010
- Data analysis
- Working on next journal articles with PPT
- Creating web survey of entire SNAMP participant list with PPT
- Longer term: program evaluation matrix refinement

PPT: Outreach Whole Team Activities

- Planning Fisher Team IT meeting in July
- Collecting and producing introductory SNAMP videos for posting the website
- Collecting and analyzing demographic data for SNAMP participation

PPT: Outreach at Northern Site - Kim Ingram

Planning a Spotted Owl field trip June 15th with the owl team

Presentations at the Northern Site:

- Sierra Foothills Audubon Society in Nevada City, Placer County – March 2010
- Yuba Watershed Protection & Fire Safe Council in Dobbins, Yuba County – March 2010
- The Amador County Fire Safe Council, Jackson, CA – April 2010
- Placer County Water Authority symposium – April 2010
- The Butte County Fire Safe Council, Paradise, CA – May 2010

PPT: Outreach at Southern Site – Anne Lombardo

- Coordinated with the high school and the fisher team to have a high school student volunteer. Worked with the fisher team to set up the rescued fisher kit blog:
<http://ucanr.org/blogs/Fisher/>
- Staffed a SNAMP table with information on pacific fishers at three earth day events.

Presentations at the Southern Site:

- Tuolumne County Board of Supervisors