

UC Science Team Updates for SNAMP 2010 Q1 Meeting

Main research findings and work accomplished since last reported to MOUP on January 11, 2010
April 26, 2010

Project Integration and Management Team

Budget

- Providing bimonthly budget projections to PIs.
- Processed Year 4 subaward for PPT outreach to PI Rodrigues via UC Davis.
- Prepared and processed DWR Task Agreement for Spatial Funding
- Provided background on agreements regarding spatial objectives and funding.
- Organized close-out of SWIG grant from DFG.

Research

- Presented SNAMP poster at UC/USFS Pre and Post Wildfire Conference February 9-11.
- Investigating possibility of an integration project with the SNAMP wildlife teams, other UC researchers, and PSW researchers to evaluate the approach of occupancy analysis as a method to assess change in population rates. Note: Integration project on hold while MOUP and UCCE discuss potential role in Sagehen Experimental Forest.

UCST Coordination

- Planned and lead monthly UCST conference calls; distribute monthly team updates.
- Check PI statements for adherence to SNAMP neutrality agreements.
- Review UCST draft manuscripts.
- Working with Public Participation Team to find venue for SNAMP Annual Meeting in October.
- Online UCST document archival management (manage bSpace site).

Communication with MOUP and SNAMP stakeholders

- MOUP quarterly meeting in January: wrote notes and followed up on action items.
- Request to USFS Contract Officer (Mike Chapel) to add Sweitzer and Peery as PIs on SNAMP.
- Coordinated team response to SNAMP stakeholders questions about UCST neutrality that arose from recent decision by CA Fish and Game regarding the status of the Pacific fisher.
- Responded to CNR Dean's inquiry regarding role of SNAMP in current controversies with the California Department of Fish and Game.
- Coordinated team response to SNAMP stakeholders questions about UCST neutrality that arose from recent legal challenges to the USFS 2004 framework.
- Coordinated team response to request from Bass Lake to identify Sugar Pine units to be treated in a third year of treatments.
- Coordinate communication with science team and Patricia Manly (PSW) regarding request to use SNAMP study sites / study design for a USFS small mammal and bird study.
- Requests for spatial data from Bass Lake Ranger District.

Other

- Repeated request to UC Division of Agricultural Resources to form SNAMP Oversight Committee.

Spotted Owl Team

- Rocky has received notice that the Eldorado demography study will be fully funded for the coming year.
- Sheila is updating the Owl habitat vegetation map to reflect recent timber harvests.
- Submitted a SNAMP manuscript to Journal of Forest Ecology on the use of Lidar to characterize wildlife habitat (using spotted owl nesting habitat as a case study) by C. Garcia-Feced, D. Tempel, and M. Kelly. The manuscript was rejected by the Journal of Wildlife Management.
- Hiring for the 2010 field season is completed. Field season data collection begins May 3.
- The Eldorado demography field season is underway, but off to a slow start because of snow and wet weather conditions.
- The UC Science team approved Rocky's proposal to add Dr. Zachariah Peery (Univ. of Wisconsin-Madison) as a co-PI on the SNAMP Owl Team. Dr. Peery will most likely not officially become PI on SNAMP until 2011, when he can be added to the USFS contract.

Fire and Forest Ecosystem Health

- We produced the first draft of a conditional burn probability map for the southern SNAMP site. We shared the map with Sierra National Forest.
- 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.
- Brandon submitted a revised SNAMP manuscript to Forest Science titled 'Simulating fire and forest dynamics for a landscape fuel treatment project in the Sierra Nevada' by Collins, Stephens, Roller, and Battles.
- Shared vegetation summaries with Pat Manly (PSW) for bird and small mammal study that uses the Sugar Pine study site.
- Tree core processing continues for forest health pre-treatment conditions.

Fisher Team

- Camera survey work for project year 3 is progressing very well. All 1km² grids within the Key Watersheds portion of the fisher project study area have been resurveyed for a 3rd time as part of the BACI study design. Results were that fishers were detected in 68 of the 119 survey grids (naïve occupancy = 57%). The 57% occupancy of surveyed grids in the Key Watersheds was intermediate between the 61% and 55% occupancy rates for project year 1 and project year 2, respectively.
- Winter season trapping was a major activity by the Fisher Team during January to mid March. We were successful in recapturing all but one fisher that needed to be fitted with new radiocollars, including male fisher M02 in Yosemite National Park.
- There were no mortalities of collared fishers during the reporting period (12 January to 21 April), and we are currently monitoring the movements, survival, and reproductive activities of 30 radiocollared fishers.
- USDA Forest Service Aviation Supervisor John Litton worked very hard to acquire and outfit a backup airplane (Piper Super Cub) in support of the Fisher Project while the Cessna 185 is down for major repairs/maintenance. Forest Service support of our aerial telemetry work has been outstanding and is very greatly appreciated.

- The major current focus of the Fisher Team is tracking and closely monitoring the activities of 17 radiocollared adult+subadult fishers during the Spring 2010 denning season. Denning activities by female fishers commenced around March 25, and will end in mid June. As of April 21, 14 of 17 adult+subadult females were localized to den trees. Over the last 3 weeks we located 18 different den trees (14 natal den trees, 4 maternal den trees), and anticipate that another 10-20 maternal den trees will be used by the known denning females before the end of the denning period.
- Among the 18 den trees we already know of, 3 are within the Sugar Pine treatment area, and 3 are very near the Sugar Pine treatment area. We are cooperating with the Forest Service by providing their wildlife biologists with the coordinates of den trees so they will be able to develop habitat buffer zones around den trees.
- In 2-3 weeks we will begin the process of climbing den trees in order to locate den cavities and count the number of kits each female produced.

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. It will continue until we have our 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 the 2008 Last Chance snow survey around Duncan Peak is in progress. Distribution of snow depth and comparison with MODIS and LandSat Snow Covered Area remote sensing products are being analyzed. If results prove favorable, they may be included in a larger manuscript to be submitted to a journal.
- 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.

Public Participation Team (PPT)

PPT: Website

- Continue to maintain website.
- SNAMP newsletter focused on the fire integration meta-replication study between SNAMP and USFS Pacific Southwest Research Station.

PPT: Research

- Archiving SNAMP materials on SNAMP data server.
- Working on manuscripts in collaboration with all members of the PPT.
- Working with the California Agriculture journal on a news article and possible research article.
- Data analysis.
- Targeting follow up interviews.
- Longer term: program evaluation matrix refinement.
- Working with PPT outreach members on evaluation email survey proposal.
- Presented a SNAMP poster at the National Society for Range Management meeting in February.

PPT: Outreach

- **SNAMP article in Forestland Steward newsletter will be published in spring issue.**
- **Planning Fisher Integration Team (IT) meeting in Fresno on July 22nd, 2010.**
- Working with the Owl Team to host an Owl IT meeting tentatively in early August 2010.
- Planning Water IT meeting in early 2011.
- Planning Owl and Water field trips at the northern site in 2010.
- Planning with Sierra and Tahoe National Forests to hold outreach events around project implementation (timeline uncertain).
- Hosted Forest Team IT meeting on February 17th in Davis.
- Editing SNAMP videos for the website using already filmed clips.
- Developing a method to track and analyze participant demographics (after suggestion at the annual meeting).
- Working on venue selection for October 2010 annual meeting.
- Planning an evaluation survey to gauge stakeholder opinion of SNAMP outreach and collaboration so far.

PPT: Outreach at Northern Site - Kim Ingram

- Met with Pam Flick from Friends of Wildlife to film her talking about public participation.
- Met with staff from the Indian Development Resources & Services Inc.
- Kim I. will represent SNAMP at a Placer County Water Agency Forum on April 29th.

Presentations at the Northern Site:

- El Dorado County Fire Safe Council Annual Gathering, El Dorado County
- Auburn Sierra Club General Meeting, Placer County
- Sierra County Firesafe and Watershed Council in Sierraville, Sierra County
- Sierra Foothills Audubon Society in Nevada City, Placer County
- Yuba Watershed Protection & Fire Safe Council in Dobbins, Yuba County
- Amador County Fire Safe Council, Amador County

PPT: Outreach at Southern Site – Anne Lombardo

- Filmed Dave Martin on fuels treatments for a SNAMP video.
- Working on a children's book about fisher. Illustrations will be drafted by children in the local elementary school, high school students and local artists groups. The children are using the Fisher Team's mounted fisher specimen as a model for their drawings.
- Fisher drawing/awareness opportunities have been offered to three art classes in the local high school.
- Meeting with the local biomass operation/community development group started by the Sierra Nevada Conservancy.
- Met with the local game warden and CalTrans office regarding Fisher road kill.
- Met with the tribal liaison for the Sierra National Forest in Clovis as well as the chairman of a local Mono tribal group.
- Represented SNAMP at three different earth day celebrations.
- Completed certification as a Project Learning Tree environmental education workshop facilitator.

Presentations at the Southern Site:

- Reedley College Watershed Ecology class with Sarah Martin from the Water Team.
- Central Sierra Watershed Committee Meeting.
- Plan to give a SNAMP presentation to the Tuolumne Board of Supervisors in a few months.

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.