



**Sierra Nevada Adaptive Management Project Integration Team Meeting Detailed Notes**  
 UC Cooperative Extension Office, Auburn, CA  
 July 25<sup>th</sup>, 2008, 10:00 to 2:00 pm

***In Attendance:***

<i>In person -</i>	Chris Fischer	Canh Nguyen	Doug Tempel
Vince Berigan	Pamela Flick	Harry Reeves	Matt Triggs
Linda Blum	Julie Griffith -	Tony Rodarte	Sheila Whitmore
Steve Brink	Flatter	Kimberly	
Sue Britting	Rocky Gutierrez	Rodrigues	<i>On the web -</i>
Mike Chapel	Brian Hansen	Gary Roller	Adriana Sulak
Jan Cutts	Ann Huber	Steve Self	Darca Morgan
Jon Dvorak	Kim Ingram	Bill Snyder	Dale Steele
Shasta Ferranto	Susie Kocher	Aimee Sprague	George Terhune
Amy Fesnock	Lynn Lorensen	Frank Stewart	

***Summary of Key Agreements:***

1. The group recognized the need for more detailed information on the rationale behind SPLAT implementation, specifically how the treatment is strategically placed within the larger landscape. Ann Huber and Kim Rodrigues will work with the USFS to produce this information for the group.
2. The group recognized the need to furnish spatial data on the SPLAT project to help the public better understand project implementation. The Public Participation Team committed to making this happen at future meetings.
3. The USFS agreed to host a field trip to view the tree marking on the Last Chance Project.
4. The UC Science Team invited the group to submit their hypotheses about variables affecting owl territory and occupancy for model development.
5. The UC Science Team agreed to post the owl presentation Powerpoint file on the SNAMP website.
6. The UC Science Team should make a map of studied owl territories available to industrial forestland owners who have land in the study area so that they can identify parts of owl territories on their land and potentially participate in the study.
7. The IT agreed to hold another short meeting to discuss suitable habitat criteria for the spotted owl in light of new information.

**I. Introduction:** Kim Rodriguez gave an overview of the SNAMP project. The goal of this Integration Team (IT) meeting was to further define the adaptive management loop, in this case focusing on the Owl Team's data collection and analysis process.

**II. SPLAT implementation update:** Staff from the Tahoe National Forest gave an update on their planning to implement the Last Chance project. The District designed the project as part of an overall strategy with connected projects, based on the 2004 Sierra Nevada Framework. They plan to do a thinning with mechanical treatments after. The decision has not been published but should be within the next few weeks. The marking crews are laying out the project area. There are no other projects planned in the treatment area in the next five year plan. Implementation of the project is somewhat flexible because of the recent fires in the district. The mastication contract has been awarded for a separate unit. The USFS committed to not implementing the project before SNAMP LiDAR is flown in the area, even though funding delays for the UC Science Team have made this data collection schedule uncertain.

*Strategic placement:* Meeting participants expressed interest in getting more information about the project and how it was designed. This includes the specific rationale for implementing the SPLATs in their particular location within the landscape. Information in the Environmental Assessment only gave general guidelines for placement, not the specific details that led to the decisions. It's important that the SPLAT rationale and design is well understood in order to understand the research results. The USFS agreed to produce this information for the group. Other comments about the project in the EA included concerns about canopy cover. District staff said that they are keeping canopy cover over 50%. Participants expressed desire for a field trip to see the mark on the ground.

*Implementation timing:* There was also concern about the pace of implementation of fuels treatments. Participants asked how many acres of SPLATs have been implemented by the Region or Forest. The USFS did not know of anyone tracking this, but concluded that there are currently probably very few SPLAT acres if any. However, many similar treatments have been done that are not called SPLATs.

**II. Owl Team Research:** Rocky Gutierrez gave a powerpoint presentation on the Owl Team's work so far and answered many questions. The team is collecting information to assess the potential effects of SPLATs on spotted owl territory occupancy and reproductive success. This includes the history of occupancy and reproduction for each owl territory during the course of the SNAMP study, individual owl capture-recapture histories, and habitat data for each owl territory. The number of owls found in the Last Chance project area was too small for statistical significance (since habitat is poorer there) so the study was expanded to the team's El Dorado Study site that has been monitored for many years. There have not been any SPLATs implemented in the El Dorado Study area, although there have been other fuels treatments. Most owls found in the study area are new to the team.

Only one owl territory will be affected by the Last Chance project. Based on the current information provided by the Tahoe NF and Eldorado NF to the Owl Team, the projected sample sizes for the entire Owl study area are 13 treated territories and 41 untreated territories. The

team is able to choose between several time periods for analysis, either starting with the SNAMP project timeline or with a retrospective analysis that includes CASPO treatments in the 1990's. In addition, if the Big Grizzly project is implemented in the El Dorado study area, this will also increase the number of territories affected by treatments.

*Data collection:* The Owl Team is collecting habitat data including dominant tree size/basal area, canopy cover, understory layer, downed logs, and proportion of territory in suitable habitat. The forest team is collecting information on circular plots for all trees over 15 cm in diameter (6 inches) including oaks, which may be important for owls. This information meshes with data being collected by the FFEH Team.

*Analysis:* To analyze the data, researchers make the assumption that owls nest in the center of their territory. While this may not always be true, this assumption is thought to be reasonably accurate. Rocky believes that owls choose their nesting habitat based on a hierarchy of factors, the first being the availability of a suitable nest tree, and cover around the nest or presence of an ecotone as secondary. Foraging habitat is probably mostly about prey density.

All analyses will be conducted after post-treatment vegetation and occupancy data is collected. This will take several years post project. The schedule for treatment in the El Dorado Study area is not the same as that of Last Chance, but this delay is needed to increase the sample size. For territories that overlap private ground, Timber Harvest Plans could be analyzed to better understand the treatment rationales.

Models using explanatory variables will be developed and will be ranked using AIC. This allows comparison of models with different variables. These models will be ranked to determine which model(s) provides the most parsimonious explanation of the variation in the response variables (i.e. territory occupancy, reproductive success). The Owl Team is also considering the use of Bayesian statistics. Models will be postulated before analysis, in order to avoid data dredging. Models will be formulated using the results of previous research as a guide. Rocky encouraged participants to nominate variables for model development. He committed to trying every proposed model or explaining why not.

A previous analysis looked at the effects of habitat alteration on occupancy, but did not distinguish among wildfires, clear cuts, or other types of timber harvest. The definition of suitable habitat used will mirror that used by CASPO for nesting. The definition for foraging habitat is less clear. Rocky has new information on foraging that he hopes to apply to the study.

*Fire effects:* Participants asked about the impact of the recent fires on owls. Birds cannot repair their lung tissue, so physiological effects are possible. Generally, effects occur from high intensity fire, not low intensity fire. The team was collecting data in the study area since before the recent fires so if owls are affected, they may pick up impacts in future years. There will be no direct evidence since the owls are not radio collared. The Owl Team believes that radiotelemetry is infeasible in the rugged and relatively unroaded terrain of the Last Chance area.

*Collaboration:* The study area's ownership is a checkerboard pattern with about 1/3<sup>rd</sup> or 15 territories in the El Dorado Study area overlapping with private land. Private industrial

landowners may be interested in collaborating with the research. Making a map available of the private land area would allow companies to know how or where to get involved.

***IV. Adaptive Management Discussion:*** In order for the study to go forward, implementation in a timely fashion is very important. Participants were urged to push for implementation through their organizations. Contractors should be available for these projects, despite the recent fires and the salvage work that will ensue.

Funding delays due to administrative barriers are currently jeopardizing the science portion of SNAMP, primarily those portions funded by the Department of Water Resources. The USFS has ranked this project as their #1 earmarked priority and has proposed the same level of funding for next year.

The UC Science Team is facing a critical juncture and will need delivery of funds by August 15<sup>th</sup> to keep the team integrated and in sync. The water and spatial teams are most pressed and may have to drop out if not funded by then. The MOU Partners will be discussing this issue on a conference call on August 1<sup>st</sup>. Some participants urged the remainder of the SNAMP science team to move on if parts of the project are dropped. However, the science team is committed to remaining a whole so that the trade offs of fuel treatments for different values can be examined. Using the returns from a stewardship contract in the area to fund the water team was suggested.

***V. Meeting evaluation and next steps:*** A written evaluation form was filled out by most participants. In addition, they said that what worked well for this meeting included:

- A small room that made for better exchange,
- Presenters' openness to being interrupted with questions
- Having the lead scientist engaged with the integration team
- Knowing that the Powerpoint presentation will be made available reduces the need to take extensive notes during the meeting
- Having the ability to attend by web
- Lunch was very good

For next time, it would help to:

- Have treatment maps available
- Facilitate car pooling
- Try a different time of day or weekend to encourage public attendance
- Arrange the room so participants can see each other better
- Use the note pod to allow those on the computer to see what is written on flip charts.
- Send some background info to new participants before they attend.

Meeting participants expressed interest in holding another short meeting with the Owl Team about suitable habitat. It's important for the integration team to be on the same page about criteria for nesting and foraging habitat (and occupancy and reproduction) and to hear more about the new telemetry data that Rocky has developed. It is also important to understand better how the integration team will interface with management decisions.