



Sierra Nevada Adaptive Management Project Integration Team Meeting Detailed Notes
 Calvin Crest Conferences, Oakhurst, CA
 September 17th, 2008, 10:00 to 2:00 pm

In Attendance:

<i>In person -</i>	Tom Erfid	Kathryn Purcell	Denise Tolmie
Chelle Anderson	John Flaherty	Mariana Real	Wes Watts
Daniel Applebee	Pamela Flick	Harry Reeves	Brenda Whited
Keith Ballard	Joanne Freemire	Adele Reids	Kevin Williams
Larry Ballew	Jim Garner	Mark Reids	Sandy Wright
Reg Barrett	Rebecca Green	Kimberly	
Linda Blum	Lisa Gymer	Rodrigues	<i>On the web -</i>
Jill Brackett	Eric Hagen	Jeff Schneiderman	Cheryl Carrothers
Sue Britting	Lynn Huntsinger	Wendy Sicard	Victoria
Skip Bullock	Jim Irvine	Dave Smith	Hornbaker
Mike Chapel	Terry Johnson	Tessa Smith	Kim Ingram
Beau Demers	Susie Kocher	Aimee Sprague	Diane MacFarlane
Gunner Demers	Mark Lemon	Kim Squires	Darca Morgan
Ruth Demers	Anne Lombardo	Scott Stephens	Steve Self
Bill Dodge	Dave Martin	Jon Sturtevant	Adriana Sulak
Larry Duysen	Rick Messier	Molly Sullivan	Doug Temple
Tom Eliason	Brenda Negley	Rick Sweitzer	
Ron Eng	Anae Otto	Craig Thompson	

Summary of Key Agreements:

1. The group agreed that discovery of fisher natal dens by the UCST could have dramatic impacts on the Sugar Pine treatment goals.
2. The group recognized the need for more detailed information on the effects of the current USFS Standards and Guidelines reserving buffers around fisher dens on Sugar Pine project design.
3. The group recognized the need to integrate efforts with other fisher research in the southern Sierra.
4. The group recognized the need to integrate any results about treatment effects in the Cedar Valley project.
5. The UCST agreed to host a meeting/ field trip to view in the field the differences between implementation of the 2004 ROD which will restrict density management in the project and S&G alternatives being considered by the USFS.
6. The UC Science Team agreed to post the UC and USFS presentations on the SNAMP website

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 fisher team's data collection and identification of natal and maternal dens. PowerPoint Presentations available on the web at <http://snamp.cnr.berkeley.edu>.

II. Sugar Pine implementation update: Dave Martin from the Sierra National Forest gave an overview of planning to implement the Sugar Pine project. The emphasis (and funding) for Forest Service projects since 2000 has been on improvement of forest health and prevention of catastrophic wildfire. The goals of the Sugar Pine project are fuels reduction to protect human communities from wildland fires, reduction in conifer densities to improve resiliency against attack from insects, diseases, drought and/or wildland fire, and to demonstrate the effectiveness of Standards and Guidelines (S&G) in the 2004 Sierra Nevada Forest Plan Amendment.

Planning has gotten more complicated since the fisher team has discovered natal and maternal fisher dens in the project area. The 2004 Sierra Nevada Framework includes three S&Gs for projects in which fishers have been identified.

- S&G number 85 requires that projects protect fisher den site buffers from disturbance with a limited operating period (LOP) from March 1 through June 30 for vegetation treatments as long as habitat remains suitable. The LOP may be waived when a biological evaluation documents that such projects are unlikely to result in breeding disturbance considering their intensity, duration, timing, and specific location.
- S&G number 86 requires that projects avoid fuel treatments in fisher den site buffers (700 acres) to the extent possible. If areas within den site buffers must be treated to achieve fuels objectives for the urban wildland intermix zone, clearing must be limited to mechanical treatments of ladder and surface fuels. Piling or mastication to treat surface fuels and burning of piled debris are allowed. Prescribed fire may be used if no other reasonable alternative exists.
- S&G number 90 requires measures to protect important habitat structures such as large diameter snags and oaks, patches of dense large trees typically ¼ to 2 acres, large trees with cavities for nesting, clumps of small understory trees, and coarse woody material. Fire lines should be placed around snags and large logs to minimize effects to these attributes or mechanical treatments used when appropriate.

Dave said that the Bass Lake Ranger District staff believes that S&G 86 is not workable since 700 acre den site buffers might have to move with dens which will likely change throughout the life of the project, creating unworkable contracting issues. Density management objectives for the project area as a whole cannot be met using this S&G, especially if there are more den sites than we are currently aware of (a likely scenario). This S&G has not been implemented in the past because den sites had not been found in the past.

III. Fisher Team Research: Reg Barrett described how the Fisher Team is collecting information to assess the potential effects of fuels treatment on fisher. Their hypothesis is that the fisher population is retracting southward and that SPLAT treatments will exacerbate this contraction. This is in contradiction to the recent CBI study by Wayne Spencer who concluded that the fisher population is increasing northward and that SPLAT treatments will not impede this expansion.

Camera trapping information is being used to develop occupancy modeling. This involves installation of one camera per square kilometer grid for one month. The camera is rebaited weekly. In the first year of camera use (October 2007 – September 2008) 185 grids were surveyed. Of these, 102 grids had fisher present (55%). When actual occupancy was compared with that predicted by the CBI stud, it showed that the CBI predictions were 67% correct. This is probably pretty good considering it was a very coarse scale prediction.

Live trapping is being done to attach radio collars, collect genetic data, and assess animal reproductive status, age, and health. Radio-tracking is being done daily to locate mortalities within 24 hours. It will also be used to map the home ranges of all collared fisher. 20 fisher are currently “on the air”. The team expects to have a total of at least 40 fisher tracked until death over the next seven years. During the denning period, cameras and walk ins will be used to better understand reproduction. Seven fishers have died in the first year: 2 from road kills, 2 from predation, 2 from drownings, and one from disease. One has emigrated to Yosemite National Park. All together this information will be used to determine fisher vital rates including reproduction, mortality, and dispersal and conduct population viability modeling.

The team currently thinks that the young are born in a natal den, but then are moved to a new area. This may be because animals are in a tight space and need to move on when the den gets dirty to reduce disease. They may also be avoiding predators, or looking for new prey.

IV. Adaptive Management Discussion: Dave Martin said that the USFS would like to manage for fire and fuels and forest density. Management for fire and fuels involves managing ladder fuels to guard against crown fire. It is a form of density management at the lowest level. Density management involves removal of more stems than needed strictly for fuels management. It might also involve removing some larger trees to improve forest health that would not need to be removed solely for fuels management. Dave shared maps of the initial treatment units with the group but stressed that these were designed before the UCST found den sites.

Most agreed that the discovery of fisher dens will have a dramatic impact on the ability to manage for density. This year the UCST had information only on one natal den (and associated maternal dens). With 14 fisher currently collared, many more den sites should be identified next spring. This may lead to buffers that restrict density management on most or all of the project.

Origin of the 700 acre buffer requirement: Diane MacFarlane explained that the requirement was an established standard for 2001 Sierra Nevada Framework and carried forward into 2004 ROD. The strategy was to conserve fisher and allow reproduction to occur through primary and alternate den structures. It was developed with input from multiple experts and used metadata from a 1988 CDFG study that looked at likelihood of den location and the size of buffer needed to support the dens. The buffer does not need to be a circle, but should include the best habitat identified by those with on the ground knowledge. The 700 acres was intended to provide for the BEST 700 acres with greatest opportunity for natal and maternal den areas to be captured. No discussion of whether the buffer would move was included.

Tom Erfid explained that the 2001 S&G was developed before additional 2004 S&Gs on wildfire risk reduction. The 2004 ROD added a constraint to what was previously there. By their natures, S&Gs are very precautionary, especially since den locations are not typically known. Compromises must always be made between S&Gs. Using the current S&Gs would allow for their testing.

Links with other research: Links have been made with researchers on the King's River study. They have found that their 7 natal dens which have each been moved 500 to 1000 meters. King's River relies on prescribed fire while Sugar Pine relies on mechanical treatment (since fires are difficult to implement). Cheryl Carrothers said that on the King's River project one proposal is to monitor animals during treatment. They plan to have researchers on site with the authority to halt the treatment when there is a problem. Opportunities for links with private land research are few. Only Yosemite Mountain Ranch has an area large enough for study and their management is similar to USFS management. Steve Self said that on SPI lands where nine fishers were collared, all dens were in a 50% core area.

Next Steps: Kim Rodrigues framed the dilemma this way: Current standard and guidelines (LOP, 700 acre buffer, habitat structures) restrict/eliminate density management in the Sugar Pine Project. The USFS has three options for moving forward on this project.

- **Option 1:** Alter the density management goal and manage only for fire and fuels. This allows for testing of ROD.
- **Option 2:** Develop alternative to current S&G to allow density management. This does not allow for testing of 2004 ROD.
- **Option 3:** Don't use the locations of the fisher dens in project planning and go forth with the project as planned. This is most like the real world conditions where den locations are usually unknown, but may not be legally feasible.

Kim suggested that the three options for action be explored within the Integration Team format. Meeting participants expressed interest in holding another meeting/field trip with the fisher team and the USFS to explore how the different options would affect the Sugar Pine project. The goal would be to examine the actual impacts of implementing the 2004 ROD Standards and Guidelines on the Sugar Pine project (Option 1) or alternatively, changing these S&Gs to accomplish density management as well as fuels management (Option 2).

Suggestions to further the discussion at the meeting included:

- Identify the questions the USFS and UCST are using to think about the problem and have these available to the IT ahead of time to get public input.
- Identify the information that IT participants need to give substantive comments.
- Provide this detailed information.
- Add others to conversation through targeted outreach.
- Provide more information on the issue through websites so that interested, yet non expert locals can be involved.
- Ask advocates of the three alternatives for USFS to come with good arguments on their favorite to convince rest of the IT.

Information requested: Participants suggested that information on stand density and stand health in the treatment area be presented. Each has a range within which can achieve objectives and a risk. How much of the density management would be addressed by fuels management? What is the risk of each alternative? Show how marked units fit or don't fit into the current direction (2004 ROD). Provide information on the effects of treatments in the Cedar Valley area. Four fisher tracked in that area died.¹

Dave Martin agreed that analysis was necessary and will be done within the EIS. The EIS was set to be out at end of September but is now due out in October/November. This moves the clock on public input periods, preparation, contracting, sales, before doing any implementation. At this rate the sale would be out in late August 2009. Some of the area has been marked. He said that input from a future meeting could contribute to the EIS because it would help refine alternatives. There is a lot of information in the draft document although the decision on the preferred alternative has not yet been made. Changes could also be made at later stages to the final EIS.

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:

- Having the USFS at the meeting to present their information
- Having scientists present their latest results
- Getting the information from the direct source and multiple perspectives
- Timely delivery of information
- Videoconferencing

For next time, it would help to:

- Have a longer meeting because travel time to this site is long for many from out of the area.
- Have options built into the meeting time to allow a subset of core participants to continue with a longer meeting after the main meeting has concluded.

¹According to Rick Sweitzer, none of the ranges of these animals encompassed more than a small portion of the Cedar Valley treatments, except for M-01 killed by a mountain lion.