Notes from the September 19th, 2012 Sugar Pine Project Implementation Fieldtrip
USFS Batterston Work Station, Highway 41, Oakhurst, CA

In attendance:

Tray Baisioli – USFS, Pacific Southwest Research Station
David Campbell – Sierra Club
Brittany Dyer – Fresno and Chowchilla Rivers Watershed Council
Tom Effrd – USFS Retired
Tom Eliason – Sierra Club
Joanne Freemire – Native Plant Society
Danny Fry – University of California, Berkeley
Dean Gould – USFS, Sierra National Forest
Warren Gross – CARWQCB CA Regional Water Quality Control Board
Katie Johns – local resident
Susie Kocher – UC Cooperative Extension
Anne Lombardo – UC Cooperative Extension
Dave Martin – USFS, Sierra National Forest
J.R. Matchett – United States Geo. Survey
Charlotte Melrose – local resident
Cindy Muehlenbeck – local resident
Matt Muehlenbeck – local resident
Brady Neiles – Univ. of California, Berkeley
Maxwell Norton – UC Cooperative Extension
Carrie Obrien – Univ. of California, Berkeley
Anae Otto – USFS, Sierra National Forest
Gary Roller – Univ. of California, Berkeley
Mark Smith – USFS retired
Robyn Smith – Natural Resource Cons. Service
Scott Stephens – Univ. of California, Berkeley
Rick Sweitzer – Univ. of California, Berkeley
Denise Tolmie – USFS, Sierra National Forest
Anthony Toto – Regional Water Quality Control Board
Robert Turner – Sierra Club

Handouts from the field trip are available at http://snamp.cnr.berkeley.edu/documents/487/.

The field trip started at the US Forest Service’s Batterson station with introductions, handouts and a safety briefing. Treatments include thinning commercially sized trees, biomassing smaller trees, masticating, upgrading forest system roads, burning, and treating noxious weeds. The planning for this project was begun in 2007; actual work began last summer. The group then carpooled out to the Sugar Pine project site and observed a fuels treatment finished last summer.
Stop 1) Dave Martin, the Bass Lake District Ranger, gave an overview of the treatment at this location. The goals are to reduce fire threat and improve forest health. Naturally the forest would have had fewer cedars and fir before railroad logging in the 1920s. It would have been less dense and more clumpy. The first step in the treatment was removing some of the larger trees, up to 30 inches in diameter. Then smaller trees were ground up and turned into biomass chips. The work was finished the previous year.

This project was conducted under a service contract since there was not enough value in the trees sold to pay for the treatments, meaning that offering it as a timber sale was not economical. Instead the USFS is subsidizing the treatment. The new Grey’s Mountain project will be a timber sale that will pay for itself. Logs are being sent to the Sierra Pacific Industries mill in Chinese Camp. Cedar is the most valuable tree species.

Denise Tolmie, fire and fuels specialist, explained that riparian buffers of 300 feet were applied to Lewis Creek to minimize disturbance along streams. These buffers are also important as wildlife migration corridors. Dave said that other mitigations include not starting the work until the soil is dry so that they are not impacted by heavy equipment. They do a cumulative watershed effects analysis in order to keep impacts to soil down to 15% of the landscape as required by the forest plan.

Anae Otto, wildlife biologist described the “Limited Operating Period” (LOP) established for all likely fisher habitat in the area. No treatments were done in those areas until after June 30 when female fishers are through denning. The LOP was not only used in 700 acre buffers around den site, but also in all likely fisher habitat because the Sierra National Forest is part of a larger fisher conservation strategy. This strategy also requires the USFS to maintain as much canopy as possible, 60% or greater.

Dr. Rick Sweitzer from the SNAMP Fisher Team said that the site was in the western/lower elevation limit for fisher habitat. There had been a female fisher using this area until she died last
week. Although they are called fisher they do not eat fish. However they do stay in deep canyons and near streams during the hot summer, though they disperse in the winter. Bobcats have been recorded killing a female and her kit near a den trees. The Fisher Team is now looking at the habitat around den trees to see how well it conceals them.

**Stop 2** The group traveled east to a recently masticated unit near Westfall, off Highway 41. One side of the Forest Service road had been masticated and the other had not. This area is near an intermittent stream so a 50 foot wide buffer was applied. The cost of mastication has increased to about $550 to $650 an acre. It is only done on slopes less than 30%. Masticators run on a metal track and are not allowed on more than a 35% slope. A good operator can regulate quite well how close to the ground he gets the mastication head. It is expected to be effective for 10 to 12 years.

Burning is sometimes done after mastication, unless there are excessive manzanita seeds present, as fire stimulates them. Burning is difficult in the San Joaquin Valley Air District which is under pressure to obtain federal air standards as a result of the Clean Air Act. Burns are only allowed when there is good air mixing, to avoid an inversion layer that would trap the smoke too low. Burn windows are small and when they occur, everyone wants to burn. When good burn days do occur the smoke often blows east causing visibility issues there.

Dr. Scott Stephens of the SNAMP Forest Team has done fire and fuel treatment experiments at UC Berkeley’s experimental forest, Blodgett. These have shown that small mastication pieces, like those at the site, decompose very well with the increased surface area; taking about seven years to disappear. Denise Tolmie said that fuel treatment contract supervisors for the Forest Service are very diligent about checking for oil or hydraulic fluid leaks in equipment in the field, checking them daily.

**Stop 3** Big Sandy Road near Tenaya Lodge.

The group learned about the fire history of the region from the Forest Team. They have completed fire modeling efforts with pre-treatment data to predict fire behavior in the Sugar Pine treatment
area before the project is implemented. They will collect data again this coming summer, post-treatment, on the same several hundred plots they measured before the treatment. This data, along with our Lidar data, the newest in remote sensing information will be gathered this fall and will be used to run fire models to determine how well the treatments have reduced fire risk.

Scott Stephens and Danny Fry of the Forest Team presented their analysis of local fire history developed by collecting fire scar cutouts from their forest inventory plots in the project area. They passed around two local fire scar wedges with fires identified, starting in 1840, with the last one about the turn of the century. The fire scars show the period of fire suppression that was begun after the devastating fires of 1910. Fire scars can be distinguished from disease on the tree ring section by the presence of charcoal. Scott reported that the Sierra National Forest noticeably had fewer fires than nearby forests. He added that data he has been analyzing from the Yosemite area in 1911 showed an average canopy cover of about 30%.

Rick Sweitzer said that the present project area is currently well used by fisher, especially in areas where it burned more frequently in the past. Two females, F7 and F17 use the area, and have home ranges of 10 to 15 square miles. It is too early to know yet what the effects of the treatments will be on the fisher because no post-project data have been collected yet. However, the population is relatively stable though treatments have been occurring nearby. Treatments are generally small compared to the animal’s home ranges. In order to study effects, the team needs enough treatments in fisher areas to have a large enough sample size to answer the research question. The more treatments in the areas the better our
answers. The team’s goal is to have 20 animals collared at all times and they had 44 last year. The Fisher Team met with the US Forest Service, Sierra Forest Legacy, Sierra Nevada Conservancy in July about the future of the research. The USFS agreed to fund the research past 2013 potentially until 2017 to get the needed years of post treatment data.

At the treatment side, the group viewed a skidder dragging trees to the landing to be delimbed. The landing was serving four active zones. Logs are about 40 feet long. The lumber is going north to the Sierra Pacific Industries mill in Sonora.

Next steps:

Sugar Pine fuels treatments are planned to be finished in early November 2012. A Lidar flight will be flown to map the area again in the end of October 2012. All forest inventory plots will be re measured in the summer of 2013. The UC Science Team is meeting for two days at the end of September to work on integration metrics and an outline for the final report. Upcoming public involvement events include:

- Cable thinning fieldtrip to the northern SNAMP site, Foresthill, October 16th
- SNAMP Annual Meeting, Sacramento, October 23
- Northern prescribed fire conference, South Lake Tahoe, November 8 & 9

Evaluation:

Participants were asked to fill out evaluation forms about the day. 26 people did. Overall they agreed that they had learned something new at the event (88%), constructive discussion was encouraged (96%), the goals of the meeting were clearly stated (93%). Only 68% agreed that there was a clear plan of action for the future.
Participants were also asked about the most interesting or useful thing they learned today. They wrote in:

**Fisher**
- Selection preference of white fir & incense cedar for denning
- About the fisher. Didn't know about it! Enjoyed learning and conversation.
- That female fisher survival can be reduced up to 10% based on the number of illegal marijuana plantations in their home range.
- About the follow up fisher plans
- Fisher and fire discussions

**Treatments**
- Mastication (2)
- About the results on fire risks in years following mastication.
- The variety of solutions to the problem of fire control, so that different methods can be applied on a case by case basis.

**Fire**
- Fire modeling
- Fire ecology and history (3)
- Historic fire frequency (2). Didn't realize fire was so frequent in this forest type

**Forest conditions**
- Historical forest conditions average 30% canopy cover, max of 55%

**Tree facts**
- Cedar rings do not show drought variations like pine. Cedar is now more prized lumber than pine

**Many things/everything**
- A variety of things from different parties (3)
- Great field trips

**Study design**
- The methods used to study forest health
- Too soon to evaluate treatment effects on fauna and fishing

**Attendees**
- I was particularly impressed with the numbers and diversity of attendees