Combined Comments from Rich Farrington, Craig Ostergaard, and Ben Solvesky

**Scottiago Field Trip**

The ACCG Planning Work Group hosted a field trip in the Scottiago Forest Health Project area on June 26, 2019 exploring how to mechanically increase forest complexity and spotted owl habitat quality in uniform stands. Field trip participants visited two commercial thinning sites in spotted owl Home Range Core Areas (HRCA) that were treated under the CASPO guidelines (GTR 133, spotted owl strategy in place from 1992-2001). Units in these areas were previously treated with dbh limits in the low-to mid-20" range within the past 20 years. Under CASPO prescriptions, most of the trees less than 20" dbh were removed, and the residual trees are now fairly evenly spaced. Eventually the goal is to create fire and climate resilient high-quality nesting and foraging habitat where appropriate in the project area.

Several forest management experts, including USFS Pacific Southwest Research Station ecologists Malcolm North and John Keane, attended to offer their insights on management approaches. Key takeaways included:

* **What are Climate Change Implications for stand Prescriptions –** GTR 220 prescriptions were tested in a Southern Sierra Forest and there was a large amount of tree mortality afterward. Not enough trees were taken out per M. North.
* **“Clumps and Gaps”** stand structure is more beneficial over uniform spacing. Clumps could be 3-8 trees or range up to 25 or so. Gaps around clumps would open the canopy, allow light in and accelerate growth of clump canopies. Gaps could be ¼ to ½ acre in size. Fire can add natural gaps by killing trees, which should be acceptable. Gaps should be greater in number on dry, ridge sites, and fewer in wet sites. **Tall, big trees** in “wet” clumps with tight crown closure benefit owl nesting. Make gaps around them. Aim to have 20-30% canopy cover of large trees within a stand. Gaps will accelerate growth of canopy cover.
* **Oaks** with cavities can be nesting habitat for owls. Oaks should be saved and gaps created around them to let in light so they don’t get shaded out by conifers.
* **Ground fire** is needed to reduce duff and eliminate ground fuels in clumps and gaps. Otherwise burning heavy ground fuels can damage clumps.
* **Restricting +30” tree cutting** can be a future problem if all the trees in a clump are over 30” and thinning is needed to grow the trees taller, increase canopy closure, and regenerate young replacement trees. Trees will not grow much or be able to reproduce. (This is covered above)
* Malcolm North stated that gaps can produce the understory forest stand next to clumps that owls need for protection from predators and that greater than 30” dbh trees need to be removed in gaps to grow and protect clumps over time.
* **Use water availability/soil quality as guide**. Wetter areas can support larger/denser clumps; gaps between trees can be as small as 6-8 feet (approximately 12 feet but could be as small as 6 feet). For drier areas, aim to create 12-15 foot spacing between intermediate-sized trees. After thinning ladder fuels and intermediate-sized trees, thin white fir and cedar co-dominants in *drier* areas; some co-dominant thinning may be needed in wetter areas.
* **Prey availability**. Small mammal (e.g., woodrat, and others) abundance and availability also affects the quality of habitat for spotted owls. Gaps are important to increase shrub and understory habitat to for small mammals to improve owl foraging habitat. Woodrat upper range is about 4,000feet elevation. Only relevant to lower elevation forest service lands. Upper elevation prey includes flying squirrels.
* **Thinning around existing tree groups.** If the stand is in a good spot, thin around the clumps. If the stand is in poor/thin soil, create gaps.
* **Prepare future owl habitat.** Think beyond protecting existing protected activity centers (PACs). Suitable Clumps outside of PACs that are resilient to fire and disease can be future owl habitat.
* **Allow fire to burn large dbh areas**. Mechanical thinning treatments are limited for areas dominated by large dbh trees (i.e., cannot remove trees with >30” dbh). Prescribed fire may be an option in these areas.
* **Rely on multiple rounds of experts to mark trees.** After trained crews initially mark trees for thinning, bring in experts (e.g., wildlife biologists and local silviculturists) on site to check and provide recommendations.
* **Wildfire threats.** Analyze likely direction of wildfires when deciding on a thinning strategy. Consider creating larger gaps in these areas.
* **Future field trips.** Consider visiting the Callecat project site where GTR 220 was used for the first time. Dinkey Creek is an example of GTR 220- prescriptions impacted by tree mortality.
* **Thoughts on Purpose of field trip:** to inform future projects. What are the implications of utilizing DxP (Designation by Prescription) to achieve vertical and horizontal heterogeneity.