K. Smith Open Forum BOS 3/3/15

Response to USFS King Fire Restoration proposal

It is my contention that fuel reduction is not emphasized nearly enough in the proposed USFS King Fire Restoration Project. I know that one of the constraints on the size of acreage to be treated is the concern about various Spotted Owl activity centers located within the burn area. My initial reaction to this issue is that a fire of such high severity covering almost 100,000 acres cannot be good for almost any of the wildlife forms that lived in the burned area, but I realize that this is just an emotional reaction. So I decided to look at the scientific literature to see if it supports my reaction.

There is a large body of scientific literature available that attempts to answer the question of whether Spotted Owls and Fuel Reduction activities can co-exist within the same forest. I tried to look at some of the articles both for and against the use of fuel reduction techniques in and around Spotted Owl territory. I have come to the conclusion that spotted owls and fuel reduction projects can coexist in shared spaces; and that indeed, the long-term survival of both spotted owls and our forests requires a measure of fuels management that has not been employed in our national forests for many decades.

Multiple studies predict fires very similar to what we recently experienced in the King Fire.

- Lee and Irwin (2005) referenced the belief of Weatherspoon et al. (1992) that "severe wildfire may represent the greatest threat to current owl habitat in Sierran mixed-conifer forests."
- Verner et al. (1992) predicted "stand-destroying" fires that would contribute to the loss of old-growth forest characteristics and old trees necessary for successful owl nesting
- Franklin and Agee (2003) state that the Sierra Nevada forests are "likely to experience uncharacteristic stand-replacing fires ... with resulting loss of critical watershed and habitat for the California spotted owl".
- Irwin and Thomas (2002) feel that "forest conditions in some locations are primed for wildland fires that could render owl habitat unsuitable for decades".

The arguments against use of fuel reduction techniques near Spotted Owl habitats refer to short-term negative impacts attributed to decreases in acreage with high canopy cover (> 70%). Douglas Tempel et al. (2014) says that high canopy cover is the "primary driver" in population growth of Spotted Owls. However, Lee and Irwin (2005) cite multiple studies (Franklin et al. 2000; North et al. 2000; Ward 2001; Seamans et al. 2002) that point to a "high degree of variation in year to year production of young. The search for causal factors behind the variation consistently points to weather as a primary driving factor." Lee and Irwin (2005).

Even if fuel reduction activities result in short-term negative impacts, these would seem to be similar to the natural variation in annual fledglings. This natural variation is expected and does not necessarily contribute to long term decline of the species. If we truly want to protect spotted owls we need to be looking at the long-term impacts, both positive and negative. The loss of huge tracts of land to high severity fire certainly has a long-term negative impact.

Lee and Irwin (2005) used 20 years of historical data to model owl occupancy and reproduction using seven different vegetation scenarios over six decades into the future. These scenarios used various combinations of fuel reduction treatments and/or mixed-lethal fire. From these modeling scenarios they concluded "results lend credence to the hypothesis that modest fuels treatments are compatible with territory-level canopy cover needs for spotted owl reproduction in the Sierra Nevada." Their belief is that owl occupancy does not trend with

increased canopy cover; instead, there is a minimum combination of high and medium density canopy cover needed for successful owl habitation.

The latest argument is that spotted owls use burned acreage also, so there should be no snag removal done in order to save the burned areas for owl habitation. Although Bond et al. (2009) argues that spotted owls use burned patches for foraging, Roloff et al. (2012) cites Weatherspoon (1992); MacCracken et al. (1996); Gaines et al. (1997) and Bond et al. (2002), all stating that spotted owls "rarely use large scale areas that burn at high severity." This seems to argue in favor of low-severity controlled burns over small patches to provide foraging opportunities for the owls. It also supports the idea that much of the snag areas can be salvage logged without danger to spotted owls.

I can provide anecdotal evidence that in the 20+ visits I have made to our 103 acres that burned at almost 100% high severity I have yet to see a single small furry creature that might become a meal for owls, whereas prior to the fire these little animals were abundant. I have however, seen multiple squirrel and a couple fox (?) skulls, all that remains after being cremated in the inferno. No foraging opportunities in our 100 acre wood!

Roloff et al. cites Courtney et al. (2004), stating "loss of habitat from large-scale crown fire is a primary conservation concern." The Roloff study states that "active management reduces fire hazard and provides better habitat conditions for spotted owls over the long term" and continues that an active fuels reduction strategy is a better alternative than no management in order to conserve spotted owl habitat. The article then refers to the fact that many times spotted owl habitat exists in a mosaic of public and private ownership. This certainly describes the King Fire area. It concludes that "Ignoring fire hazard is not a socially or economically acceptable option in these mixed ownership landscapes." Roloff et al. (2012)

I am very concerned that the USFS King Fire Restoration project, as currently defined, fits this description of a not socially or economically acceptable option because it does not take into account the future fire implications created by the minimal fuel reduction activities in the current plan.

Alan A. Ager et al. "Modeling wildfire risk to northern spotted owl (Strix occidentalis caurina) habitat in Central Oregon, USA" Forest Ecology and Management 246 (2007) 45-56

Danny C. Lee, Larry L. Irwin "Assessing risks to spotted owls from forest thinning in fire-adapted forests of the western United States" Forest Ecology and Management 211 (2005) 191-209

Susan L. Roberts et al. "Effects of fire on spotted owl site occupancy in a late-successional forest" Biological Conservation v. 144 i. 1 (1/2011) 610-619

Gary F. Roloff, Stephen P. Mealy, John D. Bailey "Comparative Hazard Assessment for protected species in a fire-prone landscape" Forest Ecology Management 277 (2012) 1-10

Douglas Tempel et al. "Effects of forest management on California Spotted Owl: implications for reducing wild fire risk in fire prone forests" Ecological Applications 24 (12/2014) 2089-2106