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Comments: To the Project Team,

Enclosed please find the comments of Dr. Douglas Tempel regarding the Mokelumne Amador Calaveras (MAC) Forest Health and Resilience Project Draft Environmental Impact Statement (DEIS). The Project is proposed as a Project-Specific Forest Plan Amendment (PSFPA), which is intended to allow more aggressive logging and fuel reduction treatments than currently allowed by the 2004 Sierra Nevada Forest Plan Amendment (Framework).

I have spent over 20 years conducting scientific research on California spotted owls. Indeed, spotted owls were the subject of both my Master's thesis and Ph.D. dissertation, both of which I obtained from the University of Minnesota under the guidance of Dr. R. J. Gutiérrez. For my Master's thesis, I assessed stress hormone levels in an owl population and how habitat and human disturbance may impact these levels. While completing my dissertation on spotted owl population ecology, I served for 7 years as the Project Leader for a long-term spotted owl demographic study on the Eldorado National Forest. During this time, I also served on the Science Team for the Sierra Nevada Adaptive Management Plan, where I conducted research on the impacts of fuel reduction treatments on spotted owls. I continued as a post-doctoral research associate at the University of Wisconsin under the guidance of Dr. Zach Peery, where I was lead author for a meta-analysis of spotted owl population dynamics that incorporated data from 4 long-term demographic study areas (Eldorado NF, Lassen NF, Sierra NF, Sequoia-Kings Canyon NP). Since then, I have collaborated on several papers focused on how wildfire affects spotted owl populations. In total, I have been an author on 18 peer-reviewed journal articles related to spotted owl population dynamics, response to wildfire, habitat use, and physiology. Finally, I served as a member on a U.S. Forest Service conservation assessment team for the California spotted owl during 2015-16 in which we summarized the current state of knowledge about the owl and made management recommendations for owl conservation.

I do support forest management activities that reduce the risk of catastrophic wildfire for the benefit of people and ecosystems. However, these activities should balance the long-term risk of future wildfire with short-term impacts to wildlife species in decline, such as the spotted owl. In my professional opinion, the MAC DEIS fails in this regard by ignoring the serious, immediate threats posed to the owl by the proposed Project action. In the aforementioned meta-analysis of 4 owl demographic studies located throughout the Sierra Nevada, the only stable study population was located within Sequoia-Kings Canyon NP (Tempel et al. 2016). All three study populations within National Forests were in decline, largely the result of decades of incremental habitat loss on National Forest lands. The actions proposed here would continue this long-term loss and fragmentation of owl habitat.

Specifically, I have 3 primary concerns regarding the proposed Project:

1)The physical scale of this Project is large (i.e., most of the Mokelumne River watershed), and there are several other such large-scale projects planned elsewhere in the Sierra Nevada. This includes 2 proposed projects near the MAC Project (SERAL 1, SERAL 2). However, the individual project reviews, including the MAC DEIS, fail to consider the adjacent habitat loss from other projects and recent wildfires. The agency should consider the cumulative impacts on spotted owl habitat of all proposed actions, or they risk creating isolated local populations unable to persist over longer time periods. In southern California, where local populations are naturally isolated from each other in disjunct mountain ranges, population declines have been even more severe than in the Sierra Nevada (Tempel et al. 2022). In fact, the largest declines have occurred in the smallest, most isolated populations on the Cleveland NF (Tempel et al. 2022).

2)The proposed action will result in the loss of 3,957 acres of owl habitat within Protected Activity Centers (PACs;

DEIS Table 18, p. 55-57). These PACs represent the most critical remaining habitat for spotted owls because they contain owl nesting and roosting sites that have been used by owls for decades in many cases (Berigan et al. 2012). Recognizing the vital importance of PACs, Standard & Guideline 80 from the 2004 Framework stated that no more than 5% of the acres contained within owl PACs would be treated in a single year and no more than 10% per decade. However, the MAC DEIS makes no reference to this standard, and it's unclear whether the agency is even monitoring its adherence to this standard.

3) An additional 33,114 acres of spotted owl habitat outside of PACs would be converted to unsuitable habitat (DEIS p. 54, Table 16). My research shows that when canopy cover is below 70% within spotted owl territories, adult survival and territory occupancy are negatively impacted (Tempel et al. 2014). When canopy cover is below 50%, territory occupancy declines are even more severe (Tempel et al. 2016). However, the MAC Project proposes to reduce canopy cover below 50% within 38 PACs (DEIS Table 18, p. 55-57), which contain the most critical habitat within owl territories (see above).

In summary, I believe that the agency has failed to adequately consider the adverse impacts upon spotted owls in the proposed Project action, and thus, the Project's needs to be reassessed.

Respectfully,

Dr. Douglas Tempel

References:

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