Let me start from the top with enumerating my concerns with the Blue Mountains Forest Resilience Project proposal. First of all, prior to the statement of Purpose and Need, we are informed of the massive scope of the project, and that it will all be encompassed in a single Environmental Impact Statement despite taking place in three separate Forests across many districts. From the outset, this is a disturbing possibility on multiple levels. The prospects of the Forest Service providing rigorous analysis of the potential impacts of any project, especially one involving road building and timber extraction, to wildlife habitat, fire regime, and cumulative impacts over such a large area are grim. Similarly, the ability of concerned individuals and potential stakeholders to make meaningful assessments and provide substantive input within the given comment periods is certainly curtailed by this overwhelming scale.

It is concerning that the concept of reference conditions, as evoked in the statements regarding the natural range of variation (RV) of forest structure and composition, is being employed to justify invasive mechanical treatments and extractive activities over such a large area, and lacking sufficient site-specific analysis. While physical components of reference conditions such as these are indeed important elements of a legitimate restoration strategy, they must be understood in the proper context regarding internal ecosystem dynamics (e.g. productivity, competition, migration and dispersal) and external formative processes (e.g. climate). While the Purpose and Need states that the "...natural ranges of variation (RV) in forest structure, composition, density, and pattern... are assumed to be resilient to disturbance and change." this assumption seems to have a huge role in rationalizing treatments whose broad (spatially and temporally speaking) effects we thus far cannot predict.

This fixation on physical RV values also ignores the changes in ecosystem dynamics and exogenous influences begun during the period of European settlement, such as cattle grazing (which has huge effects on fire behavior), the exclusion of indigenous peoples and their broadscale land management practices from treating much land they did previously, and the changing climate. We simply do not know how fire, disease, and insects interact in this new and shifting context, and treating massive areas of the forest in an incredibly brief period of time based on assumptions which have not been diligently tested and honestly accounted for is irresponsible.

Furthermore, the conditions described by the RV values alternatively favor and disadvantage various species of wildlife, some of which are sensitive and inform management practices. For example, the Northern Goshawk (Accipter gentilis), a species dependent upon old growth forest conditions, has been shown to have specific
structural preferences when establishing home range, regardless of forest type/composition. They prefer dense old growth stands and avoid clearcuts, early seral stands, meadows, and openings in general. Interestingly, they have also been documented to avoid more open old growth stands of less than 40% canopy closure, as well as partially logged old growth stands. Logging negatively influences both presence and reproductive success of these raptors, and there is no evidence that creating openings to foster prey abundance is actually beneficial to these raptors (Greenwald et al, 2005). The point of this example is that treating towards more open conditions is going to negatively impact goshawk habitat quality, and this is just one species among dozens whose habitat requirements are understood to greater and lesser degrees. This complex range of possible effects of active restoration treatment at the wildlife species level needs to be weighed alongside vigorous analyses of probabilities regarding severe fires (with an understanding of the long term effects of fires of different severities) which in turn need to take into account not just RV values regarding physical elements such as structure, and processes such as fire regimes, but how these interact with changing dynamics as mentioned above. This is extremely complex work, and human intervention needs to be taken on small scales, slowly and with vigilant monitoring, if at all. Treating hundreds of thousands of acres of forest within a ten year period is massive in scale, very fast, and does not allow for meaningful monitoring and ongoing analysis.

Finally, with all of the deficits of mature and old growth forest conditions due to past extraction, the potential for forest plan amendments to allow for the cutting of large trees is of great concern. The snag requirements of many wildlife species, including management indicator species and sensitive species, indicate that what old forests there are remaining would be better left alone. The presence of old growth forests with canopy closure <40% begs an important question so far left out of the picture, and it is by no means clear the ecological purpose of creating concomitant disturbances in these relatively intact areas in order to further thin them. From a practical and scientific perspective, these mature ecosystems are some of the closest to reference conditions that we have, and leaving them untreated would provide areas for testing and corroborating wildfire behavior models, for continuing to document behavior and habitat requirements of important wildlife species, and to use as guideposts towards ecological goals of diversity and resiliency.