

I have reviewed the revised version of the *Riparian Characteristics and Shade Response Experimental Research Study* and the comment matrix and feel that the authors have adequately addressed most of the comments. I'm not providing a detailed specific review since the request was to assess whether concerns were satisfactorily addressed but can provide a more detailed review if requested.

The rationale that was provided for some of my main concerns – i.e. the non-cut side masking, solar elevation angle filtering, and reduced range of orientations make sense given the specific objectives of the study to explicitly identify direct effects of timber harvest. While this will address the study objectives, I feel that the overall scientific benefits of the substantial study investment would be enhanced by a more detailed assessment of effective shade changes encompassing the full range of hemispherical and stream conditions. I therefore recommend that a more detailed treatment be considered during the analysis phase since the hemiphoto processing steps are simple and inexpensive relative to the experimental treatments and field data collection. This could be accomplished by following the study plan as written for CMER's needs and report, but incorporating a more complete analysis for a subsequent journal article. The more complete analysis could be completed both with and without non-cut side masking, additional stream cut side orientations, and perhaps a simple model-based analysis to estimate the potential effects of limiting the solar elevation angles for cases where there is a distinct vertical difference in canopy optical density.

I am still concerned that the limited number of hemiphotos used in the analysis will be adequate to capture the variations in stream shade. In the comment matrix it was noted that a statistician with expertise in these types of studies was consulted which is somewhat reassuring. It would however be much more convincing if the specific quantitative details of the guidance were provided in the document (possibly as an appendix) or if this aspect of the study design were supported with specific data either from an existing or pilot study. It is therefore not possible to critically assess whether this aspect of the study design is adequate to address the study objectives.

In addition to these general comments there are a couple minor specific comments to note:

1. L822: The Global Site Factor is incorrectly defined as the number of open pixels within a band of solar paths. I think that some of the confusion is because it appears to be incorrectly defined in Roon et al., 2021 and suggest reviewing the text on this parameter in the Delta-T's HemiView manual as one reasonable source of information.
2. L1254: Does this really mean to read ">" in this sentence? It seems that "<" would be more appropriate. Please also provide a justification for why this site constraint is included. In the response matrix it says that sites will not be excluded based on overstorey density thresholds so this addition seems in conflict with the response matrix.