Comment on RC1
Reviewer: Hannah Besso

Thank you for your reply. I think many of the changes you propose will improve the paper. I think adding the intra-seasonal variability plots at select sites is helpful for understanding the consistent sign of the bias. I like that you show one of each site with consistent negative bias, positive bias, and relatively neutral bias. My one comment on those plots is that it might be more meaningful to choose a variety of sites that are more spread out to better represent the different regions in your study. Devil's Postpile, Dana Meadows, and Ostrander Lake are all within or adjacent to Yosemite NP, so maybe consider replacing a few of those with sites in Colorado that have a similar bias signal.

My main reason for writing a follow-up comment has to do with the vegetation component of the study. I'm sorry that my communication about this component was not as clear as it could have been. I don't think you need to include details of the insignificant results, since in your discussion you say that the dataset was insufficient. Instead, you should use a dataset better able to capture the relationship between vegetation and RSD – at best, use the canopy height from the lidar data. If you don't have time to add this analysis, you should remove the vegetation component from Research Question 3, and you can still have the discussion section that talks about the importance of vegetation but that you were unable to investigate this in the analysis. I think if you keep your analysis as-is and report the insignificant results (as you do now or in greater detail), you run the risk of people mis-citing your work to say that vegetation in general has no relationship with RSD, which does not seem to be what you concluded.

Finally, it might be worth mentioning in your discussion that there is a benefit to the 'high bias' at snotel stations. Once a station melts out, we lose any information it could provide about snow in the rest of the basin. Stations placed in high elevation locations that melt out later mean that we continue to gain information for longer into the melt season, and we see from your paper and Pflug et al. (2022) that fairly consistent relationships can be developed between snow at a station and snow throughout the basin even if absolute depth is not the same. So the 'high bias' stations can be seen as providing a longer time series (and therefore more information) than can 'negative bias' stations that melt out earlier.

I am happy to continue this conversation via email or on a call if there are questions about my reply. Please don't hesitate to reach out! I'm excited to see this work published.

-Hannah
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