

Hydrol. Earth Syst. Sci. Discuss., author comment AC1
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Reply on RC1

Don A. White et al.

Author comment on "Is the reputation of *Eucalyptus* plantations for using more water than *Pinus* plantations justified?" by Don A. White et al., Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2022-200-AC1>, 2022

Thanks Dr Ryan for your review.

I will not respond to the minor editorial comments here

Your suggestion regarding plotting ET v P is a good one. In Zhang et al 2004, 2004 a number of models are proposed to relate ET to P in Table 1 (same table number in both papers) and we have, in response to your review fitted all models in this table. In each case there was no significant difference between the Pines and Eucalypts. However as you note in all these models P are normalised WRT PET. Zhang et al argues this is necessary to satisfy the energy limit.

We then fitted a simple exponential rise to a max to the relationship between ET and P. The results were still non-significant but the P value was much lower (0.115). This was due to a small number of points of high leverage that are from Euc sites on deep soils. This is very useful and strengthens the discussion regarding the importance of site - on deep soils, as David Scott noted in his South African work, Eucs have the potential to have a larger impact than pines, but when all sites are analysed together the effect is non-significant. we will expand this discussion based on these results

We analysed the effect of measurement method - and all comparisons were non-significant.

Thanks for these helpful suggestions and comments

Don - on behalf of all authors