

Interactive comment on “Climate regime and soil storage capacity interact to effect evapotranspiration in western United States mountain catchments” by E. S. Garcia and C. L. Tague

E. S. Garcia and C. L. Tague

garcia@geog.ucsb.edu

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We appreciate Reviewer 3's comments and note they reflect similar concerns expressed by Reviewers 1 and 2. A major critique common among all reviewers is the lack of a clearly stated research objective and its contribution to hydrologic knowledge. We agree that this was not clear and have re-written the introduction.

This manuscript's primary research objective is to address the interaction between soil characteristics and key climate metrics that influence forest water availability in

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Mediterranean environments that receive a significant amount of precipitation as winter snowpack. To our knowledge, little research has focused on the soil-climate interaction in this geographic niche due, in part, to the difficulty in modeling these environments with empirical models. Yet forests in these regions are sensitive to forest mortality events that are increasingly common worldwide. Our results place new emphasis on the variability in long-term estimates of ET that soil characterization imposes. This has implications for better estimating a major component of the hydrologic budget, and quantifies a range in the sensitivity of these long-term estimates to soil.

The reviewer's concern of model validation in our study watersheds highlights that our manuscript would also benefit from a more concisely written methodology. Our model validation of daily streamflow records and annual estimates of net primary productivity (NPP) are included on page 2283 lines 9-14. These are typical validation measures in eco-hydrologic modeling and we believe are sufficient for our annual estimates of watershed ET.

Please also note the supplement to this comment:

<http://www.hydrol-earth-syst-sci-discuss.net/11/C2467/2014/hessd-11-C2467-2014-supplement.pdf>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 11, 2277, 2014.

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