

Interactive comment on “Implications of water management representations for watershed hydrologic modeling in the Yakima River Basin” by Jiali Qiu et al.

Anonymous Referee #3

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This paper discussed an important topic with respect to current water management issues. With increases in extreme climate events, the role of reservoir is critical to maintain stable water resource at the watershed level. In addition, irrigation impacts on overall water budget are highly recognized. This paper considered the two issues at the same time. The authors well wrote down the importance and necessity of the paper. I have a few minor comments to clarify some results. 1. Line 98. Use the same unit for precipitation and snowfall. 2. Line 99: Delete a comma (“,”) after cropland 3. Line 101. Change “(Malek et al., 2016)” to “the study by Malek et al. (2016)” 4. Line 165. Crop Data Layer to Cropland Data Layer 5. Line 172. What thresholds were used to define HRUs? 6. Line 173. Please more elaborate MODIS ET and how to

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apply it to your simulation? 7. Line 199. Please make a table that compares model performance measures of different scenarios 8. Line 213. Do you explain why R0 ET is greater than R1 and R2 from Oct. to Mar.? 9. Line 216. in R1 -> for R1 10. Line 228 (Figure 8). Do you know why ET from R2S2 was higher before April and lower from May to October relative to ET from R2S1? 11. Line 234 (Figure 9). Like other results, compare monthly values since ET has high monthly variability. 12. Line 260-261. Do you know any references to support the statement? 13. Line 323. Change “ground water” to “groundwater” for consistency.

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