Hydrology and Earth System Sciences Discussions

Interactive comment on "Future humidity trends over the western United States in the CMIP5 global climate models and variable infiltration capacity hydrological modeling system" *by* D. W. Pierce et al.

Anonymous Referee #2

Received and published: 6 February 2013

Thank you for clarifying your text, especially in regard to my comment 10.

I would like to offer one additional thought regarding my prior comment 4. While in your response you state that your "hunch is that... most people probably didn't bother specifying the annually averaged precipitation..." my understanding is to the contrary. Having applied the VIC model in a variety of settings, and having seen the VIC input configuration used by other groups (including those at UW, Princeton, and USBR), I can say I cannot recall ever seeing the average annual precipitation not supplied to VIC as an in-

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

put. This does not diminish the importance of the paper in exploring these assumptions available to VIC/VMS users, especially in a climate change context. However, the final, revised manuscript should make clear, both in the abstract and the conclusion, that it is not that "..the meteorological algorithms used by the [VIC] hydrological model...do not preserve" humidity trends (page 13652, line ~10) or that this is "...because the meteorological algorithms VIC incorporates infer..." (line 14) trend biases. It is only that if the option is selected to have VIC/VMS compute average annual precipitation internally that this issue seems to arise. At least that appears to be the limit of what was investigated here. That is an essential distinction, since it does not appear that this issue affects many prior studies, and it also appears it is easily remedied by supplying average annual precipitation in the input files.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 13651, 2012.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper