Response to Reviewer #2:

Thank you for reviewing the paper for a second time! Please see our response to your final comment below.

Reviewer 2 comments

Thank you for providing your response to my comments. In general I find them to be satisfactory. I do however have a remaining and important comment. I am still confused about which dataset you mean by "Princeton CONUS forcings" dataset. Are you referring to MSWEP V2.2? If yes, then that dataset does go back to 1979, plus its a global dataset hence now mainly based on NLDAS-2, which is only available over North America. I am also confused because currently the Beck et al., 2019 paper that you are citing does not describe a new precipitation dataset it whereas compares several precipitation datasets including MSWEP. Do you mean to cite other Beck et al, 2019 paper which was published in BAMS?

Also, I might suggest to use a different term than "Princeton CONUS forcings" for the forcings dataset you are using, as there are other forcings datasets generated by the Princeton Group, most notably Sheffield et al., 2006 dataset.

Author response

We are not referring to the MSWEP dataset. The dataset that we use is described in the citation to Pan et al. (2016), while the Beck et al. (2019) paper that we cite provides some validation and examination of the strengths and weaknesses of the dataset. We have clarified this by changing the text to read:

"We obtain all meteorological forcings, except precipitation (*P*) and air temperature (*TA*), from the Princeton CONUS Forcing dataset, which provides hourly forcings at 3-km spatial resolution based on the NLDAS-2 dataset (Pan et al., 2016). This dataset downscales the NLDAS-2 precipitation dataset using Stage IV and Stage II radar products (Pan et al., 2016) and has been validated and compared to several other gridded datasets, showing good performance (Beck et al., 2019)."

Regarding the name of the dataset, when we spoke with Dr. Ming Pan, who provided us access to the data, he instructed us to call it the "Princeton CONUS Forcings" dataset. So, we believe it is best to follow his preference.