

***Interactive comment on* “Impact of climate change and anthropogenic activities on stream flow and sediment discharge in the Wei River basin, China” by P. Gao et al.**

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We are grateful for your comments and changed the text in the manuscript due to your considerations.

(1) We included a justification for the selection of the flood season into the introduction (see as well tab. 3 in the manuscript). Most of the runoff in the Loess Plateau is generated by excess rain, which occurs during the many short-duration, high-intensity rainstorms in the flood season. And several studies indicate that a few intensive rainstorms in this time of the year produce most of the runoff and sediment. The sediment

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discharge in the flood season accounted for nearly 90% of the total sediment for the year in the Wei River (Chen, 1996; Zhu, et al., 2008).

(2) We agree that it is important to include air temperature analysis. We included a chapter into the manuscript.

(3) The justification and additional background of the double mass curve method and change point determination was added into the text of the manuscript.

Reference:

Chen X. D.: The Yellow River Hydrology, The Yellow River Water Conservancy Press, Zhengzhou, China, 521 pp., 1996.

Zhu H. F., Kang M. Y., Zhao W. W., and Guo W. W.: Effect of human activities on flood season runoff in water and soil conservation region, *Advances in Water Science*, (3): 400-406, 2008.

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