

## ***Interactive comment on “Baseflow simulation of SWAT model in an inland river basin in Tianshan Mountains, Northwest China” by Y. Luo et al.***

**Anonymous Referee #1**

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The paper presents an improvement of the SWAT model for baseflow component modelling in application to the snow/glacier melt dominated streamflow processes in Northwest China. The approach is described clearly, and the results are convincing. However the language should be checked by a native speaker (e.g. by one of the co-authors). The manuscript can be accepted for publication after a minor revision.

The following corrections/amendments are needed:

1. It is recommended to add the logarithmic Nash and Sutcliffe criterium (LNSE) to the study in addition to NSE and PBIAS. LNSE is especially useful as a criterium of fit for the low flow periods.

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2. Table 1 mentioned on p. 10404, l. 12 (Physical features) does not exist. Please add it.

3. Please add a small map of China to Fig. 2 indicating where your study area is located.

4. Language should be checked by a native speaker. There are many small grammar mistakes, e.g.: - Title: "of SWAT model" → "using SWAT model" - p. 10399, l. 2: are → is - l. 10: of the → the - l. 12: constant → constants - l. 12: comprise → compromise? - l. 13: tried → used? - l. 15: Soil Water → Soil and Water - l. 16: one - reservoir → one-reservoir - l. 20: remove "-" - l. 24: base flow → baseflow - l. 27: is due primarily → is primarily due - l. 29: in during → during - p. 10400, l. 10: constant → constants - l. 22: are detailed → is described - l. 23: thus, → thus - p. 10401, l. 15: remove "then will be" - p. 10402, l. 6: enters → entering - p. 10403, ll. 4-7: divide sentence into two: dot at the end of line 5. Then: "It was used, among others,..." - p. 10404, l. 17: remove "within the" - p. 10405, l. 2: How can it be: unpublished publication? Maybe a report? - p. 10406, l. 4: snowpack → snow - l. 6: Winter → winter, Spring → spring - l. 8: of the river flows → for the rivers - p. 10407, l. 10-12: please reformulate the sentence (now: "using ... reproduced") - l. 14: took out → taken - l. 20: summery → summary - p. 10408, l. 9: was depleted → depleted - l. 13: become → becomes - p. 10409, l. 12: turns → turned - ll. 25-26: remove "In point view of mathematical simulation" - p. 10410, l. 25: achieved → lead to

Besides, in a number of places should be: "an issue", "an initial estimation", etc. instead of "a issue", "a initial estimation".

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 10397, 2011.

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