

The nonstationarity of the runoff in Wei River basin is very significant and this work applied multiple variables into time-varying model by GLM. The revised version addressed the comments of the last two referees clearly.

Line 26 and the others, “potential evapotranspiration, ET”. Usually, ET is used to represent actual evapotranspiration and EP is used to represent potential evapotranspiration. It’s better to use EP to represent potential evapotranspiration.

Irrigated area is a very important index in the Wei River due to large agricultural irrigation water withdrawn. And irrigated area is added in the revised version.

Line 345-348, “Human activity data(i.e. gross domestic product, population and irrigation area) were taken from annals of statistics provided by the Shaanxi Provincial Bureau of Statistics (<http://www.shaanxitj.gov.cn/>) and Gansu Provincial Bureau of Statistics (source: <http://www.gstj.gov.cn/>).” If the data also come from Zhang (2008) as shown in Line 326, it should be listed here. It should be noted that the “population” in the annals are different from the people who lives in the catchment. So the uncertainty should be presented here to remind the readers. Nonetheless, it is the best population data so far.

It is qualified to publish.