

## ***Interactive comment on “Isolating the impacts of land use and climate change on streamflow” by I. Chawla and P. P. Mujumdar***

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This paper handled a very interesting research issue, tested and analyzed many qualitative cases elaborately, and summarized the simulation results very concisely with some reasonable physical explanations. Reviewer only raises one major and a couple of minor comments.

< Major Comment >

The impact of LU on streamflow seems surprisingly small, ranging from 0 to 7% in Table 6 in spite of authors' explanation from the bottom of page 2220 to the top of page 2221. One possible reason for this small impact may be because the measure ( $Q_{\text{climate}}/LU$ ) is based on the total amount of streamflow. It seems that LU affects the peak discharge

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and timing rather than the total volume. Therefore, if authors had investigated smaller time scales, there might have been a larger impact on the peakflow characteristics. Since the simulation ran on a daily basis, the smaller time scale examination may be possible. Even a monthly time-step examination (like the hydrograph analysis in page 2215) may reveal more meaningful findings.

< Minor Comment >

- L20 P2220: Is Q\_climate/LU correctly defined?
- L25 P2220: "... the analysis is Sect. 3.3.1 ..." → "... the analysis in Sect. 3.3.1 ..."

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 12, 2201, 2015.

**HESSD**

12, C600–C601, 2015

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