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COMMENT

# Comment on 'Evaluation of the impact of groundwater irrigation on streamflow in Nebraska' by Fujian Wen and Xunhong Chen

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The authors perform trend analysis of climatic and discharge data of Nebraska's major streams. They conclude that the only watershed where a significant and systematic decline in streamflow can be detected is the Republican River basin, shared by three states, Colorado, Nebraska, and Kansas. They also conclude that this observed decline in streamflow cannot be explained by any similar trends in precipitation or temperatures but more likely by the rapid increase in the number of irrigation wells. This, however, is not a new conclusion; similar conclusion has already been drawn quite recently by Szilagyi (1999, 2001). The existence of these latter studies somewhat contradicts the above authors' assessment that 'Systematic analysis of streamflow trends, including climatic variables in Nebraska, however, has received little special treatment. Several earlier studies — Lins (1985), Lettenmaier et al. (1994) and Burt et al. (2002) — on streamflow trends in Nebraska used only very few stream gauges'. Szilagyi (2001) went beyond statistical analysis (1999) and used a hydrologic model to show that the observed streamflow decline in the Republican River basin indeed cannot be explained by any potential changes in climatic forcing. For additional information of the observed decline in streamflow of the Republican River basin, please refer to Szilagyi (1999, 2001) in addition to the studies cited by Wen and Chen.

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