

## ***Interactive comment on “Water resources in the Badain Jaran Desert, China: New insight from isotopes” by Xiujie Wu et al.***

**Anonymous Referee #2**

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General opinion

This manuscript (hess-2016-692; Water resources in the Badain Jaran Desert, China: New insight from isotopes Xiujie Wu, Xu-Sheng Wang, Yang Wang, and Bill X. Hu) is a concise presentation of the application of well-established isotope techniques in identification of groundwater sources for a group of desert lakes in China. A relatively small amount of isotopic data points to recent precipitation being the sole source of water in the coupled groundwater-surface water system. The isotopic evidence for that seems to be unequivocal, however, some questions (see specific comments) should be addressed in order to strengthen the line of reasoning. On the other hand, data on stable isotopic composition of DIC are not used at all and the part explaining  $^{14}\text{C}$  patterns requires some elaboration. Interpretation of presented data could be supported with a more detailed description of the hydrological

C1

setting and limnology of the lakes. Text reads well, it is comprehensible and clearly presents the context, goals and conclusions of the study, however the description of the sampling campaign needs to be improved. My recommendation is to accept the manuscript after major revision. The specific and technical comments are attached.

Please also note the supplement to this comment:

<http://www.hydrol-earth-syst-sci-discuss.net/hess-2016-692/hess-2016-692-RC2-supplement.pdf>

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C2