

WANG Jinzhe, LIAN Yingli, YAN Mingjiang and ZHANG Guanghui, 2013. Affect the Rencognition of Climate Change and Human Activities on Groundwater in Zhangye Basin. *Acta Geologica Sinica* (English Edition), 87(supp.): 654-655.

## Affect the Rencognition of Climate Change and Human Activities on Groundwater in Zhangye Basin

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The groundwater changes exactly under the additive effect of climate change and human activities, but what factors play a key role is unknown. In this article, the factors, Mountain runoff, Heihe river runoff, Liyuan River runoff, amount of Zhengyixia discharged, Zhangye basin consumption of water and groundwater, precipitation of Qilian Mountains and Zhangye Basin, temperatures in the Qilian Mountains and Zhangye basin as driving factors, and depth of Zhangye basin phreatic and confined water as response factors, then researched the reason of groundwater depth and temperature used relational grade analysis method. The correlation that phreatic depth with Mountain runoff and Zhengyixia discharged is 0.82, that precipitation of Qilian Mountains is 0.77 and delaying 3 month relative to Mountain runoff and Zhengyixia discharged, that phreatic temperatures and air temperature in Zhangye basin is 0.76 and temperature impacting on phreatic evaporation and controlling phreatic depth. The correlation of the Confined water and it's exploitation is 0.83. The correlations show that Mountain runoff and Zhengyixia discharged is key of impacting on phreatic depth and Confined water depth controlled by it's exploitation.

**Key words:** groundwater depth; water temperature; related degree; Zhangye basin

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