

عنوان مقاله:

Application of Geostatistical Methods to Estimate Groundwater Level Fluctuations

محل انتشار:

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خلاصه مقاله:

Keeping the water table at a favorable level is quite significant for a sustainable management of groundwater plans. Various management measures need to know the spatial and temporal behavior of groundwater. Therefore, the measurement of groundwater levels are generally carried out at spatially random locations in the field; whereas, most of the groundwater models requires these measurement at a pre-specified grid. Geostatistical techniques could produce an accurate map of groundwater level. Naishaboor plain with 4190 sq km was selected due to presence of over 48 observation wells, mostly with more than 20 years of record. A universal kriging and co-kriging - with level of surface as auxiliary variable - estimator has been used to model groundwater level for three kind of climate condition (wet, normal and dry) and three levels (maximum, average and minimum). The result showed the Gaussian model selected as the best variogram. Furthermore, the RMSE and MRE indicated that kriging method was more accurate than co-kriging in mapping the groundwater level; although, there was not distinct difference

کلمات کلیدی:

Groundwater level, Kriging, SPI, Fluctuation

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