



Analysis on the characteristics of parameters in groundwater table fluctuation model for predicting groundwater levels in Hancheon watershed, South Korea

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A novel application of groundwater table fluctuation method is suggested to predict groundwater level by means of groundwater table variation due to recharge and discharge under unsteady condition. This model analyzes transient groundwater characteristics by using reaction factor related with groundwater flow and specific yield related with recharge. The groundwater level varies according to the characteristics and composite materials of aquifer. In this study, specific yield and reaction factor which are the major two hydrogeological parameters in the WTF(Water Table Fluctuation) method were estimated and analyzed their spatial characteristics. 8 groundwater level stations which have enough measuring period and high correlation with rainfall in the Hancheon watershed were used. The results showed that specific yield was randomly distributed and reaction factor showed inverse trend with altitude. If the enough data were collected, reaction factor according to altitude in ungauged points could be estimated by using these parameter characteristics.

keywords: Key words : Groundwater level, parameters, reaction factor, specific yield

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