

On the Application and Comparison of Two Geostatistics Methods in the Parameterisation Step to Calibrate Groundwater Model: Grid-Based Pilot Point and Head-Zonation Based Pilot Point Methods

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Abstract : Properly selecting the most suitable and effective geostatistics method in the parameterization step of groundwater modeling is critical to attain a satisfactory model. In this paper, two geostatistics methods, i.e., Grid-Based Pilot Point (GB-PP) and Head-Zonation Based Pilot Point (HZB-PP) methods, were applied in an eogenetic karst catchment and compared using as model performances and computation time the criteria. Overall, the results show that appropriate selection of method is substantial in the parameterization of physically-based groundwater models, as it influences both the accuracy and simulation times. It was found that GB-PP method performed comparably superior to HZB-PP method. However, reflecting its model performances, HZB-PP method is promising for further application in groundwater modeling.

Keywords : groundwater model, geostatistics, pilot point, parameterization step

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