

عنوان مقاله:

Application of Ordered Weighted Averaging and a Hexagonal Gridding Pattern to Groundwater Monitoring Network Design

محل انتشار:

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خلاصه مقاله:

In this paper, spatial sampling redesign of a groundwater level monitoring network through a multi-criteria decision making approach (GLMN) has been considered. To do this, a hexagonal gridding pattern has been utilized in GLMN design. For several hexagonal grids, spatial sampling has been determined using the geographical locations of new proposed stations and some of the pre-existing stations. To determine the spatial variability of groundwater level in the region, the Kriging interpolation method has been taken into consideration. In this paper, a number of scenarios have been defined to examine the use of different hexagonal grids. These scenarios have been evaluated using the Ordered Weighted Averaging (OWA) technique considering three main criteria. The mentioned methodology has been applied for designing spatial sampling schemes of the Dehgolan plain in Kurdistan Province located in northwestern Iran. The results show the accuracy and applicability of the proposed methodology

کلمات کلیدی:

Groundwater level, Kriging, OWA, Hexagonal grid, Spatial sampling

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