

عنوان مقاله:

Qualitative zoning of groundwater for drinking purposes in Lenjan plain using GQI method through GIS

محل انتشار:

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نویسندگان:

Amin Mohebbi Tafreshi - *Young Researchers and Elite Club, Science and Research Branch, Islamic Azad University, Tehran, Iran*

Ghazaleh Mohebbi Tafreshi - *Young Researchers and Elite Club, Science and Research Branch, Islamic Azad University, Tehran, Iran*

خلاصه مقاله:

Background: A new method has been presented specifically for zoning the quality of groundwater for drinking purposes; this method is the groundwater quality index (GQI) method. The present research used the GQI method to qualitatively zoning of the Lenjan groundwater for drinking purposes. Methods: Three phases were applied in this research. In the first phase, working on the quality data of 38 wells within the studied plain, the raster map of quality concentration parameters, including pH, TDS, Cl, SO₄, Ca, Mg, and Na parameters, was provided by interpolation using the kriging method in the ArcGIS software. In the second phase, the mentioned maps were standardized so that various bits of data can follow a common standard and scale. In the third phase, weight was applied to each standardized map, and ultimately the classification map for each parameter was drawn. The final GQI map was created by combining the mentioned classification maps. Results: The GQI values for Lenjan plain were rated from the minimum (67.48) to the maximum (90.05). The results showed an average to acceptable level of quality for drinking water. Conclusion: According to the final map, the central and southern parts of Lenjan plain, which have acceptable GQI rankings, are the best zones from which to use groundwater for drinking purposes

کلمات کلیدی:

Drinking water, GQI, Groundwater, Lenjan, Water quality index, Water quality, Water wells

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