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Evaluation of Groundwater Quality for Preparation of Water Requirement for Agriculture in Razan-Ghahavand Plain by GIS

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Abstract

Evaluation of groundwater quality is important for management of agricultural industry. Aim of this study is the evaluation of groundwater quality in Razan-Ghahavand plain by GIS for preparation of water requirement for agriculture. For this purpose we used averages collected data from 49 wells during 4 years period. These data include Electrical Conductivity, Total Dissolved Solids, pH, Chloride (Cl), Sodium (Na) and Sodium Attraction ratios. At first, the plan of water quality parameters was drawn by the use of descriptive methods prescribed by the consultants of California University and also interpolation methods. Then these plans were integrated together and the study area was divided into three zones with good, moderate and poor groundwater qualities for agriculture. Also results show that 43.7% of total area had undesirable concentration of sodium ions.

Keywords: Ground water quality, Agriculture, Razan-Ghahavand Plain, GIS.

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