عنوان مقاله:

(Modeling Groundwater And River-Aquifer Interactions (Case Study: Shazand Plain

محل انتشار:

سومین کنفرانس بین المللی و ششمین کنفرانس ملی صیانت از منابع طبیعی و محیط زیست (سال: 1401)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

Water is one of the most important aspects of sustainable development and environmental protection in any country. In the arid country of Iran, the study and proper use of water resources play an essential role in its development. This study aims to simulate groundwater and its interactions with surface water in Shazand plain of Markazi province, which has had a significant drop in groundwater level and also a severe decline in streamflow in recent years. For this purpose, the MODFLOW-OWHM model is used under ModelMuse (the graphical user interface), which is capable of simulating surface water and groundwater interactions. The groundwater level and streamflow are calibrated (۲۰۰۹-۲۰۱۰) and validated (۲۰۱۰-۲۰۱۱) using riverbed and aquifer hydraulic conductivities. The results show that the rivers do not have a significant role in the charging and discharging of Shazand aquifer. Rainfall and well withdrawal have the most impact on charging and discharging the aquifer. Also, according to the SFR results, most interactions between the rivers and the aquifer occur in the north and northwest of the region because of higher groundwater levels as well as higher river flow rates. This study can be the beginning of further investigations on the impact of .climate change on water resources in this region

کلمات کلیدی:

Groundwater-surface water interactions, Integrated hydrological model, MODFLOW-OWHM, Groundwater, Modeling

لینک ثابت مقاله در پایگاه سیویلیکا: