

ASSESSMENT OF GROUNDWATER QUALITY BY WATER QUALITY INDICES FOR IRRIGATION AND DRINKING IN MARRIGUDA WATERSHED, PART OF NALGONDA DISTRICT, TELANGANA STATE, INDIA

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Abstract

This study was conducted to assess the factors regulating groundwater quality in an area with agriculture as the main land use. Under this study, eighteen groundwater samples have been collected from Marriguda Watershed area of Nalgonda district. Groundwater samples were chemically analyzed for major physicochemical parameters in order to understand the different geochemical processes affecting groundwater quality. The analytical results show normal concentration of total dissolved solids, electrical conductivity, and magnesium in the test samples which indicates signs of deterioration as per WHO (1993) and BIS (2012) standards. The groundwater samples are more than 50% suitable for irrigation purposes based on irrigational quality parameters and less than 50% groundwater samples show values more than WHO (1993) and BIS (2012) standards.

Keywords: Groundwater quality, physicochemical parameters, Marriguda watershed, Nalgonda district and irrigation quality parameters