

Variations in Water Supply and Quality in Selected Groundwater Sources in a Part of Southwest Nigeria

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Abstract : The study mapped selected wells in Inisa town, Osun state, in the guinea savanna region of southwest Nigeria, and determined the water quality considering certain elements. It also assessed the variation in the elevation of the water table surface to depth of the wells in the months of August and November. This is with a view to determine the level of contamination of the water with respect to land use and anthropogenic activities, and also to determine the variation that occurs in the quantity of well water in the rainy season and the start of the dry season. Results show a random pattern of the distribution of the mapped wells and shows that there is a shallow water table in the study area. The temporal changes in the elevation show that there are no significant variations in the depth of the water table surface over the period of study implying that there is a sufficient amount of water available to the town all year round. It also shows a high concentration of sodium in the water sample analyzed compared to other elements that were considered, which include iron, copper, calcium, and lead. This is attributed majorly to anthropogenic activities through the disposal of waste in landfill sites. There is a low concentration of lead which is a good indication of a reduced level of pollution.

Keywords : anthropogenic activities, land use, temporal changes, water quality

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