



Groundwater study of Bhiwani District

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Abstract: Groundwater is the major source fresh water available for various human activities worldwide. In the semiarid region of Indian state of Haryana groundwater is primarily used as a source of water supply for drinking and irrigating the agricultural land. Due to rapid growth of population and the intensive agricultural activity and agriculture based industry dependency on groundwater have increased the by manifold. The majority of the aquifers are suffering from stresses because of over drafting of groundwater beyond their maximum safe yield potential, though some other aquifer are being recharged beyond the rainy season by the irrigation canal. Thus, it is imperative to study the groundwater dynamics of such hydro geological set up. In the present study, an attempt has been made to explore the groundwater dynamics (seasonal and annual) of the Bhiwani district of Haryana. The monthly rainfall data were also collected for the same period and its effect on groundwater level and fluctuation in groundwater level were explored. Results indicate that different degree of fluctuation spatially and seasonally. No strong and definite relationships were observed between ground water level (fluctuation) and rainfall during the study period. It is expected the study may provide some vital clue for proper management of groundwater resource of the region.

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INTRODUCTION: Bhiwani District lies in South-Western part of Haryana state covering an area of 5140 sq.km. There is no perennial river passing through the district. Physiographic-ally the district consists of flat and level plain interrupted from place to place by clusters of sand dunes, isolated hillocks and rocky ridges. A few isolated rocky ridges elevated sharply from the plain occur in the south central portion or the district. Dohan river is the only ephemeral stream in the area and flows in direct response to precipitation. Bhiwani district ranks 3rd in Haryana with a population of 16,34,445 according to 2011 Census. The male population is 866,672 and female is 767,773. The density of population is 342 per sq.km. The literacy rate in the district is around 75.21%. 80% of the population lives in Rural area and the remaining 20% of the population lives in Urban area. Out of 444 villages 437 are inhabited and 7 are uninhabited.

