STUDY OF GROUNDWATER LEVEL PROFILE IN AN UNCONFINED AQUIFER: CASE STUDY OF NAGPUR URBAN AREA, CENTRAL INDIA

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ABSTRACT

Groundwater flow analysis in an unconfined aquifer has received more and more attention by hydrologists for the prediction of drawdown patterns of the water table in an aquifer. The increase in Irrigational, Industrial and Domestic draft worldwide made mandatory to study the groundwater flow and its variable characteristics. Remote Sensing (RS) System and Geographic Information System (GIS) have been used as technological application for generation of various thematic maps. In this study, attempt has been made to analyze variation groundwater profile in a shallow unconfined aquifer in accordance with the ground surface topography. The profiles were generated for five sections in the study area using the GIS tool Overlay of the Surface contours and the groundwater level contours. The sections were selected on the basis of Hydrogeological map of the study area. In second part the weathering extent of five areas rock samples were tested for water Absorption in soil laboratory.

KEYWORDS: Groundwater Reserve, Groundwater, Hydrologists, Aquifer