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Characterisation of Aquifer Parameters through Pump Test in Selected Watersheds of Kolhapur District, Maharashtra

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Abstract

Estimating the aquifer parameters is an essential part of the groundwater studies. The availability and movement of groundwater is best expressed in terms of the basic parameters of specific capacity (C), transmissivity (T) and storativity (S). These are determined through the aquifer performance tests (APT). In the present study, total of 10 APT were conducted at different locations within the shallow basaltic aquifers. The essential data like diameters, depths and initial water level of these wells were recorded. The water was pumped out continuously for 3 hours and changes in water level both for drawdown and recuperation were recorded. The depth of the dugwells varied considerably from 11 to 18.2m. The aquifer performance test results showed that the specific capacity of wells in study area is varies from 16 to 583.36LPM/m². The study of pumping test data suggests that the values of storativity and transitivity fall in the range of 1.8 to 13.7m²/day and 40.67 to 211.87m²/day, respectively.

Keywords: Aquifer performance test, Specific Capacity, Transmissivity, Storativity, Kolhapur District, Maharashtra.