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**JGSR**  
*Journal of Geosciences Research*  
Vol. 4, No.1, January, 2019  
pp. 23-30

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## Aquifer System in Katol and Narkhed Taluka, Nagpur District, Maharashtra

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### **Abstract**

Groundwater exploration through drilling is one of the methods to know the geometry and potential of the sub-surface aquifer that helps in sustainable groundwater development. Under various groundwater exploration programmes of Central Ground Water Board (CGWB), total 37 wells (exploratory, observation and piezometers) were drilled from 1974-79 to 2015-16 in groundwater stressed Katol and Narkhed talukas of Nagpur District, Maharashtra. Three aquifer systems have been established in this area viz., Aquifer-I, shallow aquifer in weathered/fractured basalt from 5 to 32m bgl; Aquifer-II, deeper aquifer in jointed/fractured basalt from 32 to 160m bgl and Aquifer-III, trap cover Gondwana (TCG) aquifer from 59 to 300m bgl (sandstone). The huge groundwater potential bearing TCG aquifer is explored on local scale. Based on the aquifer characteristics, groundwater potential areas were demarcated in Katol and Narkhed talukas, which help the local people and administrator for better groundwater development and management of this area.

**Keywords:** Groundwater exploration, Basaltic aquifer, Trap covered Gondwana (TCG), Katol and Narkhed taluka, Maharashtra