

APPLICATION OF VISUAL MODFLOW AND GIS IN GROUNDWATER MODELING

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ABSTRACT

It is universal tendency to tap groundwater, which has resulted in serious falls in water levels in many parts of the world. Farmers have met this situation by incurring heavy expenditure by way of deepening the tube wells and lowering of pump sets, which in turn caused disastrous reflex at least in certain areas in the form of seawater intrusion. It is necessary that such developments should be taken note off and tackled in a systematic manner, so that extreme attractiveness of groundwater as resources should not be its own enemy. With the advent of powerful personal computers and the advances in other technologies, efficient techniques for water management have evolved of which GIS (geographic information system) and groundwater modeling is of great significance. The applications of GIS and Visual MODFLOW changed our thoughts and ways to manage water resources in the present situation. This paper presents the result of ground water model done with the application of GIS & Visual MODFLOW developed for the Thirukkazhukundram block in Tamilnadu. The main intent of this study is to highlight the usage of Visual MODFLOW and GIS techniques to present a comprehensive review on their applications to groundwater hydrology.

KEYWORDS: Digitization, Command & Non Command Areas, GIS, Groundwater Model, Visual MODFLOW