

An Introduction to Geohydrological Modelling

A model is a tool to answer questions. It is a framework of assumptions, simplifications and predictions, that describe natural systems and their dynamic behavior on the basis of physical processes and with respect to specified questions. Geohydrological Models in general also called "Groundwater Models" describe the system behavior of saturated subsurface flow and transport. Flow models address the relationship between the different components of groundwater flow and the resulting groundwater table.

In this presentation, an overview of Geohydrological Modelling technique will be discussed. Contents of the presentation will include Fundamentals, Aquifer parameters, Boundary Conditions, Initial Conditions and the Numerical Solutions of the Flow Equation. We will also try to solve/model simplified typical geohydrological problems on MODFLOW. MODFLOW is the U.S. Geological Survey's finite-difference flow model. In simple words, it is a computer code that solves the groundwater equation.