Optimum Utilization of Groundwater Resources in a Heavily Exploited Aquifer (of Tehran)

A. Salavitabar
Mahab Ghodss Consulting Eng. Tehran, IRAN.

J. Najihammodi
PWIT, Ministry of Energy, Tehran, IRAN.

Abstract. This article is as a result of many reports, data, informations and studies available or done in the area. By using these informations, it was able to pin point the effective aquifer's parameters that influence the hydraulic and solute transport characteristics of groundwater potential. A two dimensional finite element model was prepared and calibrated for the hydraulic and solute transport aspects for a relatively long period of time so that to be able to forecast the effect of aquifer exploitation and waste infiltration for the future in the area. Analytical and graphical results with a proper water balance are indicated. A suitable recommendations for controlling water level and contamination of the aquifer at different location of Tehran’s Valley is also suggested.