

GLY 4822, Assignment 11

1. Use Groundwater Vistas or some other user interface to MODFLOW and MT3D to solve a solute transport problem. Chose an arbitrary spatial distribution of initial concentration to represent a spill, but check with your classmates to ensure that no two are alike.

Create and solve a uniform flow across the default domain with a head difference of 1 ft. Set the model top and bottom elevations so that the aquifer is flat and 10 feet thick. Set the boundary heads to ensure that the aquifer is confined at all times. Use transient conditions because the solute transport will be transient, even though the flow is steady.

Describe the model domain and the flow and solute transport parameters relevant to your problem in your write up. Provide 'color flood' maps of the contaminant that show the initial concentration distribution and its evolution over time as part of your report. Include a monitoring well downstream of the contaminant source and measure the concentration change at it over time; plot the concentration as a function of time.