

Homogeneous Soil Column

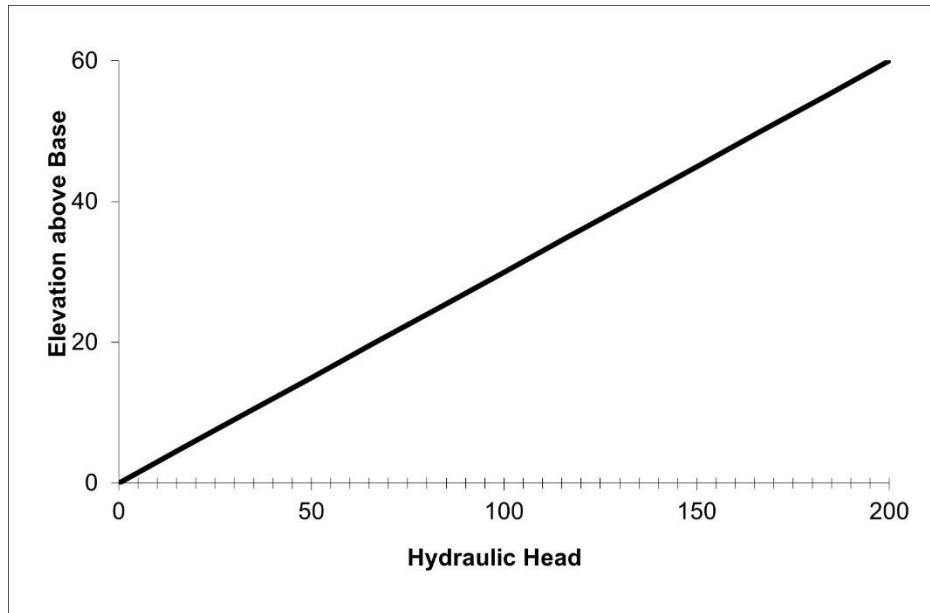


Figure 1: Homogeneous soil column head profile. Exhibits linear relationship between hydraulic head and depth within column.

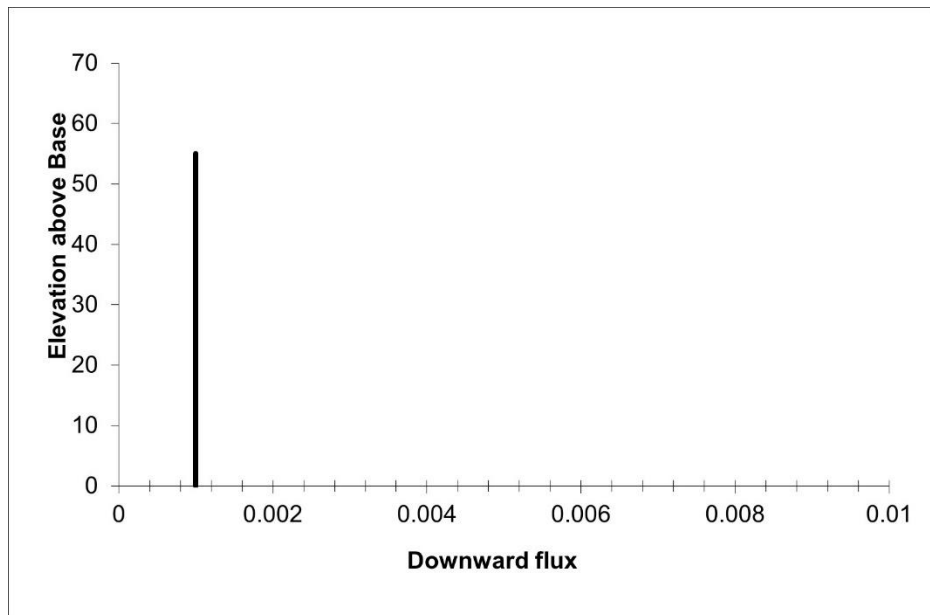


Figure 2: Downward flux profile of a homogeneous soil column. Indicates flow within the column is under steady-state conditions since the downward flux with depth is constant, creating the vertical line seen on the graph above.

Heterogeneous Soil Column (3 Soil Types)

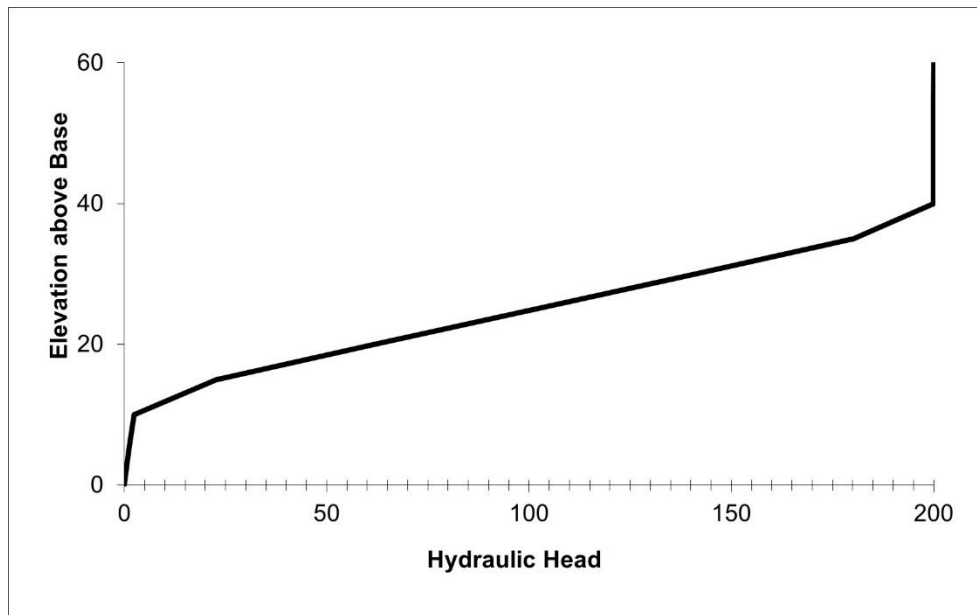


Figure 3: Hydraulic head profile of a heterogeneous soil column. The hydraulic head varies with depth throughout the soil column.

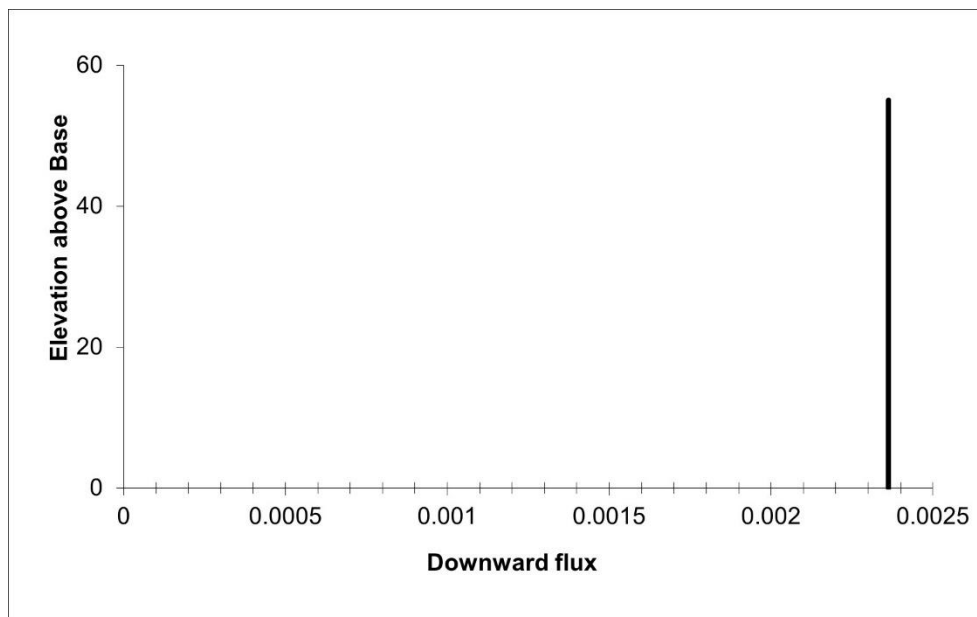


Figure 4: Downward flux for a heterogeneous soil column. Flow within the heterogeneous soil column is steady-state since the downward flux is shown to be constant with depth by the figure above.

Heterogeneous Soil Column (2 Soil Types, Approximately Equal Depths)

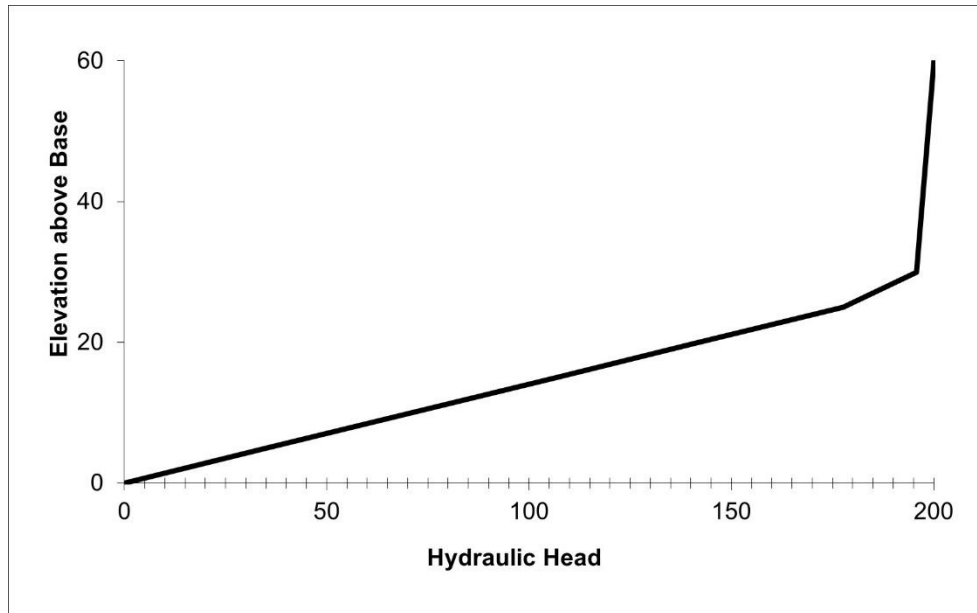


Figure 5: Hydraulic head profile for a heterogeneous soil column with only two soil types of approximately equal depths. The two soil types can be distinguished by the significant difference in slope of the hydraulic head v. elevation lines on the graph above.

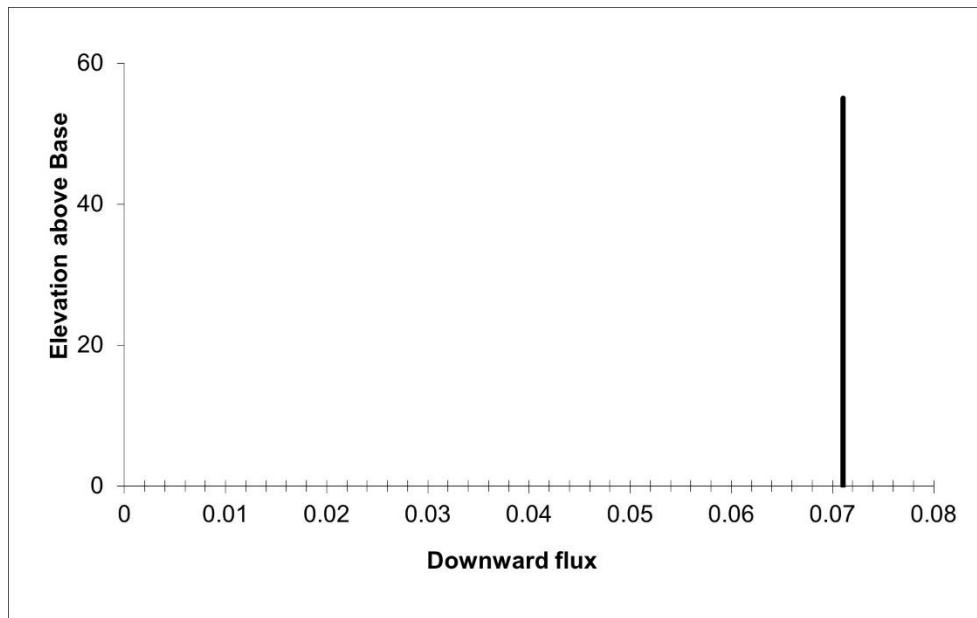


Figure 6: Downward flux v. depth of a heterogeneous soil column with two soil types. Flow within the column can be seen to be steady-state since the downward flux v. elevation is constant as seen above.

Heterogeneous Soil Column (3 Soil Types, Broken Steady-State)

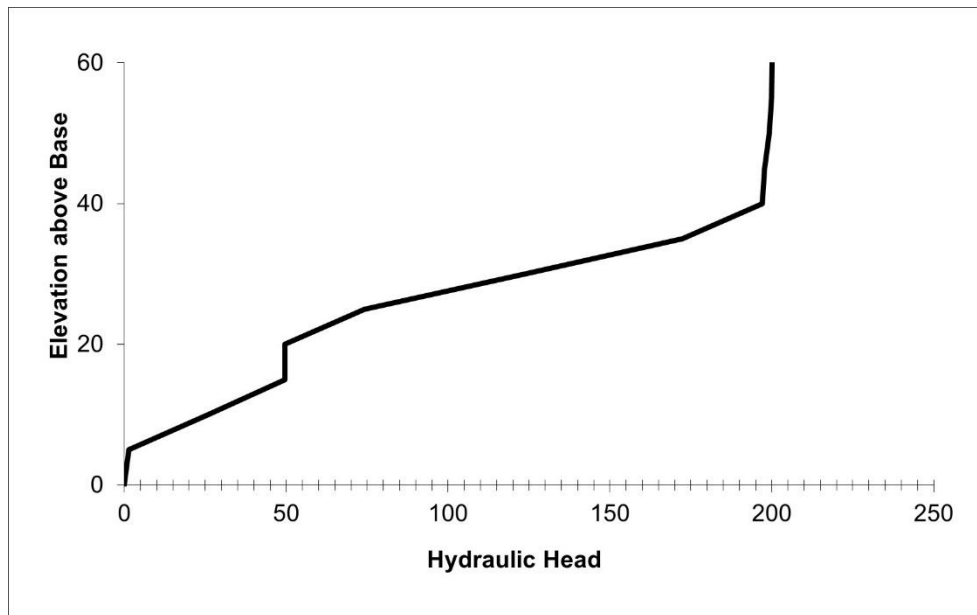


Figure 7: Hydraulic head of a heterogeneous soil column of 3 soil types of varying depths.

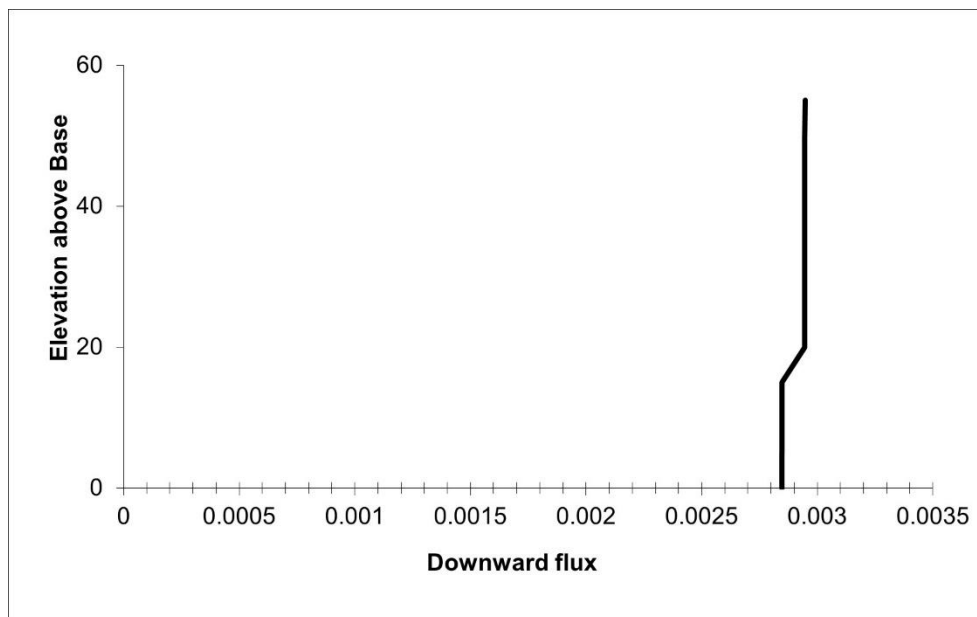


Figure 8: Downward flux v. depth of a heterogeneous soil column of 3 soil types of varying depths. It is unclear whether steady-state applies in this soil column or not.