

Homogeneity +

Isotropy \Rightarrow Changes in flow with direction

- Same $k \rightarrow$ homogeneous

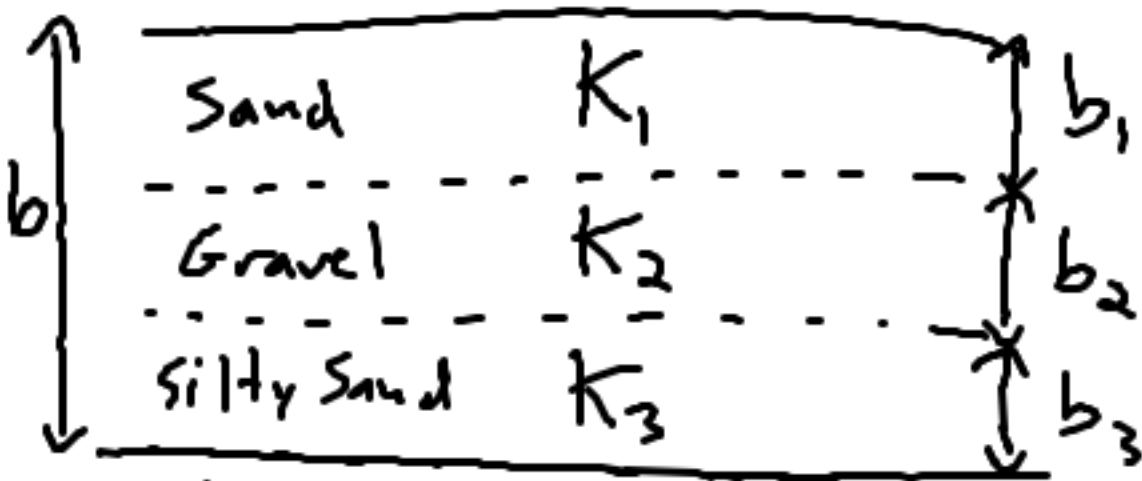


Heterogeneous



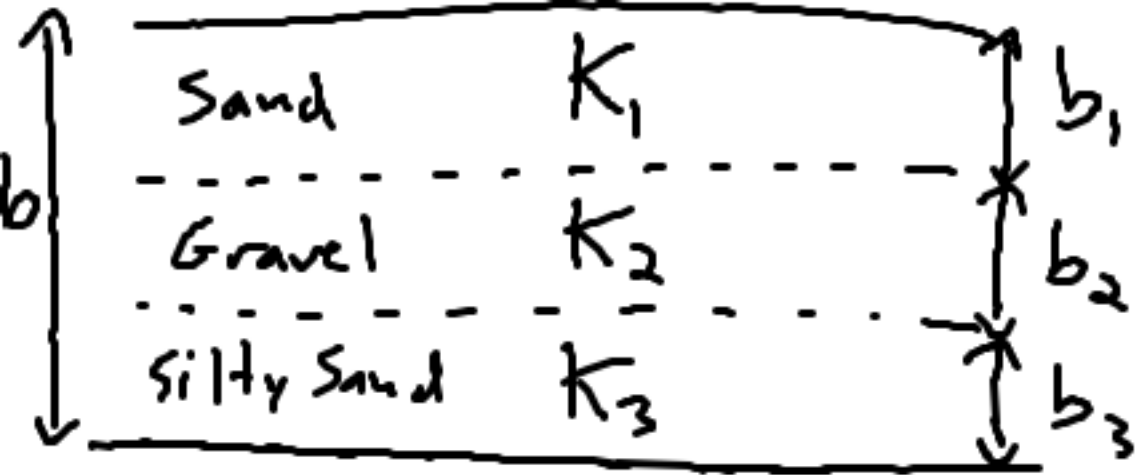
Anisotropic

If $K_v = K_H$
Isotropic



$$K_{Avg}^h = \sum_{m=1}^n \frac{K_m \cdot b_m}{b} =$$

$$\frac{K_1 \cdot b_1}{b} + \frac{K_2 \cdot b_2}{b} + \frac{K_3 \cdot b_3}{b}$$



$$K_{Avg}^V = \frac{b}{\sum_{m=1}^3 \frac{b_m}{K_m}} = \frac{b}{\left(\frac{b_1}{K_1} + \frac{b_2}{K_2} + \frac{b_3}{K_3} \right)}$$

Transmissivity

$$T = K \cdot b$$

$b = \text{thickness}$

$$\frac{L^2}{\text{Time}}$$

Time

$$Q = T \cdot W \cdot \frac{dh}{dl}$$

Steady Flow over
constant width

- Confined Aquifer

