

Chapter III focuses on  
specific <sup>analytical</sup> solutions of the

Continuity Equation w/ Darcy's Law

to a number of applications:

a) Ideal wells

a.1. Steady Flow (Thiem & Dupuit Equations)

a.2. Un-steady (or Transient) Flow (THEIS Equation).

b) Non-ideal wells (e.g., leaky aquifers)

c) Tests to obtain aquifer parameters

c.1. Aquifer  $\rightarrow T$  &  $S$

c.2. Well  $\rightarrow$  Discharge and losses

c.3. Slug or borehole tests  $\rightarrow K_{av}$

d) Well systems:

d.1. Fully & Partly penetrating wells

d.2. Linear & Circular arrays

d.3. Coastal interfaces.