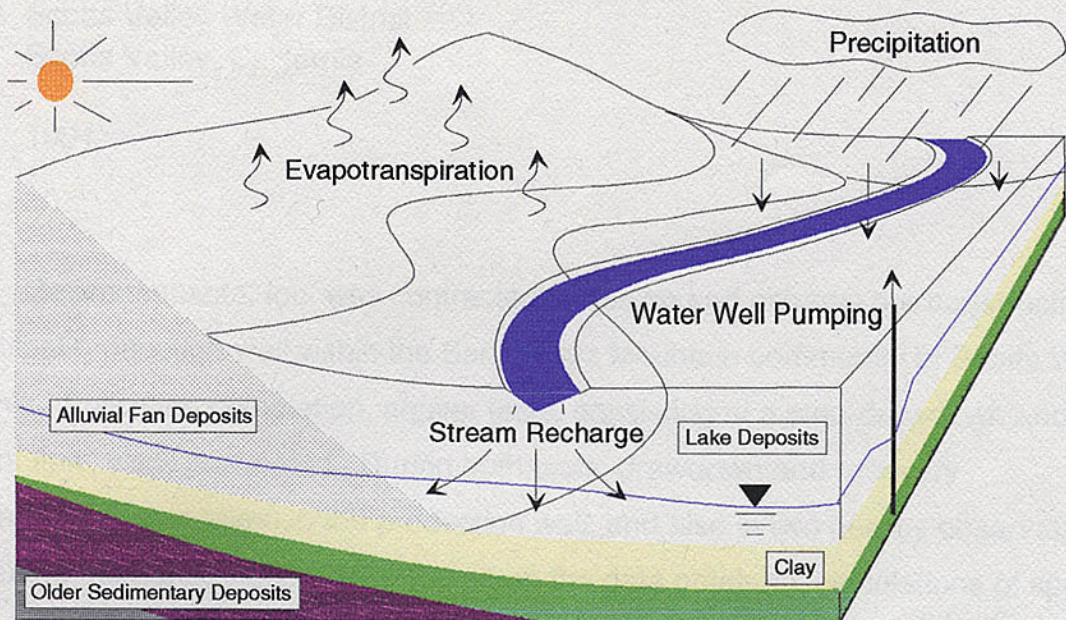


# AQUIFER ANALYSIS



Conceptual model of the hydrologic cycle in a sedimentary basin environment.

Water can be stored and transmitted in a variety of rock types. Different rock types, fracture patterns, and other geological features such as faults, bedding, and contacts control the amount of water that an aquifer is able to provide to a well. Pumping tests of a well, or aquifer analysis, is an effective means of determining the capabilities and limitations of a well to deliver water to the surface. Frequently, ground-water barriers are encountered that pose serious restrictions on the amount of water an aquifer can deliver within a certain time period.

A properly performed pumping test and pumping test analysis will assist in determining the volume of water that a well or aquifer can safely deliver over a period of time. An understanding of the recovery time the well system requires for adequate replenishment of pumped volume is equally as important. Calculations such as specific capacity, transmissivity, and "safe yield" play a critical role in the prudent use of the available ground-water supply.