

pGeology 101, Fall 2007

Name:

Assignment 7: Rivers and groundwater

Due: November 21, 2007, noon

Define/distinguish the following terms:

groundwater vs. stream

delta vs. estuary

tributary vs. distributary

suspended load vs. bed load

alluvial fan vs. playa

levee vs. floodplain

channelization vs. revetment (riprap)

porosity vs. permeability

aquifer vs. aquiclude (aquitard)

artesian spring vs. geyser

cone of depression vs. saltwater intrusion

karst vs. speleothem

Draw a map view of a stream from its **headwaters** to its **mouth** (you can make the mouth either a delta or an estuary. Include accurately where the stream would be **braided** (draw several channels), and where the stream would be **meandering** (draw several meanders). On one of the meanders indicate the **cut bank** and the **point bar**.

Draw a **stream profile** (which is sort of a cross-sectional view – no details about the rocks is needed, however) from the headwaters of a stream to its mouth. Indicate the **base level**, and accurately reproduce the changes in **stream gradient** in your drawing. Under the profile, label the portion of the stream where **erosion** would dominate, and the portion where **deposition** would dominate.

Draw what happens to the stream profile when the stream is dammed. Specifically indicate where erosion and deposition due to the dam occur.