

# Unit 5: Fresh Water Surface Water

Fresh vs. Salt Water  
River Systems

## Background Information

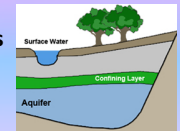
- Water is the largest agent (cause) of erosion.
- Earth's water is categorized by its salinity.
  - Fresh water = 3%
  - Salt water = 97%
- World wide, fresh water is important for . . .
  - Agriculture (uses the most fresh water)
  - Industry/factories
  - Drinking (known as potable water)
  - Transportation



## Parts of River Systems

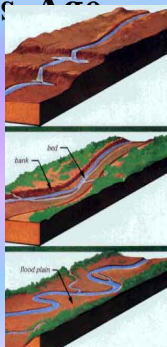
- 1 River basin—area of land, streams, tributaries that all drain into 1 river
- Many watersheds—areas of land that drains into 1 small water body (stream, tributary, pond, etc)
- Aquifers—underground areas of high permeability where water is stored

Part of the Cape Fear River Basin



## River Characteristics: Channel Shape vs. Age

- Straight & Steep
  - Youngest—little edge erosion
- Gently Sloped & Meandering (aka lots of curves/bends)
  - Older—time for erosion to make the curves
- Flat with Oxbow lakes (aka crescent-shaped lakes along edge)
  - Oldest—time for erosion to make bends and then cut them off



## River Characteristics: Headlands vs. Mouth

- Rivers move from high to low elevation
  - Headlands
    - Start of river in mountains
    - Steep, narrow, straight, V-shaped channel
    - Cold, fast-moving water
  - Mouth
    - End of river as it joins a lake or ocean
    - Flat, wide, meandering, U-shaped channel
    - Warm, slow-moving water



## River/Stream Characteristics: Load

- How much sediment the stream can move:
  - In solution/Dissolved Load—dissolved particles
  - Suspended Load—particles carried along in the water
  - Bed Load—particles that bounce/drag along the bottom of the river
- Load capacity depends mostly on river velocity (aka speed)

