Taylor Earl

11/6/14

Geology

* Lacustrine Lake
  + Natural lakes and man made reservoirs
  + Create habitat for animals and natural lakes also perform wetlands functions
  + Great salt lake, utah lake, and bear lake, rivers are sources of water for large lakes
* Ground water discharges in the mountains, and recharges in the valley
* Utah Lake
  + Largest freshwater lake in utah
  + max depth 15 feet, average 10 feet
  + 1.8 m acre feet of water
  + Jordan River is only outlet
  + Polluted
* Bear Lake
  + Bear River major river, but doesn't directly feed
  + The outflow is a canal through dingle marsh into bear river
  + Surface area 112 miles square
  + Shoreline 48 miles
* Water Law and Appropriation
  + No one owns the water, but the right to use and right to access water is regulated by the government
  + Eastern USA- Doctrine of Riparian Rights gives landowners adjacent to a stream or river right to use the water
  + Those who do not live adjacent to the water source do not necessarily have the right to use the water
* Prior Appropriation
  + Water belongs to the public, but first users of water entitled to the first right to use the water with preference over those who came later
  + Must use the water in a beneficial matter. If not, lose your right
* Colorado River
  + River drains a watershead including seven US and two mexican states
  + Originating in the colorado mountains, the river flows southwest across the CO plateau and Grand Canyon before reaching lake Meade
* Water Pollution
  + Many water systems that get many sources and types of pollution
  + Clean water act, RCRA, CERCLA, Safe Drinking Water Act
* Human Exposure
  + Ingestion
  + Inhilation
  + Skin Contact
  + Skin Absorption
* Point and Non-Point Source
  + Point source
    - discharge from an identifiable point
    - High concentration
  + non point
    - don't know exactly where it comes from
* Types of Pollutants
  + Biological Oxygen Demand
    - amount of O2 in the water used by bacteria
  + Too much organic matter and bacteria means too little O2 for a healthy environment
  + Comes from natural sources, agricultural runoff, urban runoff and sweage
  + Want at least 5 mg/l dissolved O2
  + Eutrophication - N and P, fertilizer