**Lakes Notes**

Lakes

        Lake formation

         Tectonic activity

         Glaciation

         Volcanoes

         Fluvial

         Reservoirs

        Lake zonation

         Littoral zone – shallow margin

        Sunlight penetrates to bottom

         Limnetic zone – open water beyond littoral zone

        Photosynthesis occurs

         Profundal zone – beneath limnetic to bottom

        Too dark for photosynthesis

         Benthic - bottom

        Trophic state

         Oligotrophic

        Low nutrients/low plant growth

        Deep, steep sides

        Crystal clear blue-green water

         Eutrophic

        High nutrients/high plant growth

        Shallow

        Murky, brown water

         Mesoptrophic – between eutrophic and oligotrophic

        Threats

         Pollution

        Cultural eutrophication

        Toxic wastes

         Invasion by nonnative species

         Lower water levels – diversions

        e.g., Aral Sea