Chapter 7 Section 1 Notes

Aquatic Ecosystems

Freshwater Ecosystems (lakes, ponds, rivers, and streams)
Marine Ecosystems (marshes, bays, coral reefs, and oceans)

Factors that determine where aquatic organisms live

- temperature, sunlight, oxygen, nutrients, and the nature of the bottom.

Organisms are grouped by location and adaptations

Plankton are drifters (can't swim against current) that stay near the surface of the water.
Phytoplankton – produces most of the food for most aquatic ecosystems
photosynthetic organisms need sunlight
Zooplankton – drifting animals
Nekton – free swimming organisms (ex. fish and whales)
Benthos – bottom dwelling organisms (ex. mussels, worms, and barnacles)

Lakes and Ponds

littoral zone – aquatic zone found near the shore; life is diverse and abundant (cattails, reeds, water lilies are rooted here); advantages of living here: warmer temperatures, more sunlight, higher oxygen level

benthic zone – aquatic zone located near the bottom of a pond or lake; water is cool and dark (decomposers live here)

Eutrophication – increase the nutrients in an aquatic ecosystem
Eutrophic lakes have a large amount of plant growth due to nutrients.
Runoff – precipitation that can carry pollutants into aquatic ecosystems

Freshwater Wetlands (2 main types: marshes & swamps)

Marshes – wetland dominated by nonwoody plants

- **salinity (***amount of dissolved salts***) varies:** some marshes have fresh water, some are brackish, salt marshes have the highest level of salinity

Swamps – wetland dominated by woody plants

- commonly found on flat, poorly drained land

Environmental functions of wetlands

- control flooding by absorbing water from rivers.
- absorb and remove pollutants from water
- trap carbon that would otherwise be released into the air

Rivers – as they flow down a mountain to flatter ground they generally become wider, warmer, and slower.

- Dams are a threat against a river ecosystem