

## **Conservation 1404 Aquatic Biodiversity**

### **Pgs 126-142, 249-250 & 262 - 268**

#### **Vocabulary:**

Salinity

Marine = saltwater

Aquatic Organisms include:

Plankton

Zooplankton, phytoplankton, ultraplakton

Nekton

Benthos and

Decomposers

Euphotic Zone, Bathyal zone, and Abyssal zone

Coastal Zone

Estuaries, coastal wetlands & Mangrove forests

Open sea

Intertidal zone

Barrier islands

Freshwater

Lentic

Littoral, Limnetic, profundal and benthic zones

Overturns

Oligotrophic lake

Eutrophic lake

Eutrophication

Watershed = drainage basin

Inland wetlands

Lakes, streams, marshes, swamps, prairie potholes.

Mitigation banking, wetland banks

Wild rivers, scenic rivers, and recreational rivers.

#### **Concepts:**

.Coral reefs are a mutualistic relationship between polyps (animals) & a single-celled algae.

Coral reefs are tremendously important as a nursery for fish.

Factors that influence types and numbers of organisms in various layers are sunlight, dissolved oxygen, and nutrients.

Oceans have two life zones – coastal zone and the open sea.

Coastal zones are incredibly important – as filters, as nurseries, and to Reduce storm damage

Intertidal zones are extreme environments that change about every six hours.

Know the basic structure (and location) of barrier islands, e.g. fig 6-10.

Characteristics of the euphotic zone – high light levels, low nutrient levels, large, fast predatory fishes.

Characteristics of the bathyal zone – dimly lit, zooplankton and smaller fish.

Abyssal zone – dark, cold, low oxygen but high in nutrients.

Open Sea has generally low productivity per area, but there is a huge area. Also, it is highly productive where nutrient upwellings are.

The greatest marine biodiversity is in the coral reefs, estuaries, and the benthos.

Freshwater life zones include lentic and flowing.

Four zones in lentic systems and know the characteristics of each.

Overturms occur in the fall and in the spring; they equalize temperature, dissolved oxygen and nutrients.

Know how eutrophication occurs.

Know the three areas of a watershed and characteristics of each, fig. 6-17.

Nutrient inputs to waterways include leaves, feces and other forms of biomass. These inputs can be too high, leading to eutrophication and to control them you must focus on the watershed.

Wetland plants are highly productive because of the abundance of nutrients.

The economic value of wetlands is much greater than if they are converted into agriculture.

In US a federal permit is required to alter a wetland > 3 acres.

Only about 6% of wetlands are under Federal protection.

Wetlands restoration is big business and somewhat controversial.

Know about some of the introduced species into the Great Lakes

Know about the Columbia River – where it is, and how it is managed.

The National Wild and Scenic Rivers Act of 1968

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