## TOPIC: FRESHWATER AQUATIC BIOMES

### Lakes

- **Lake:** a _____ body of freshwater surrounded by land.
  - Can be divided into _____ categories:
    1) **Oligotrophic Lakes:** nutrient-_____ but oxygen-_____; tend to have clear, colder water.
    2) **Eutrophic Lakes:** nutrient-rich but oxygen-poor; tend to have _____ plant & algae growth.


### Streams & Rivers

- Bodies of water constantly _____ in one direction, from high to low elevation.
  - **Streams:** _____ volume, narrower, shallower, shorter, & lower flow rates than rivers.
  - **Rivers:** _____ volume, wider, deeper, longer, higher flow rate, & more tributaries than streams.

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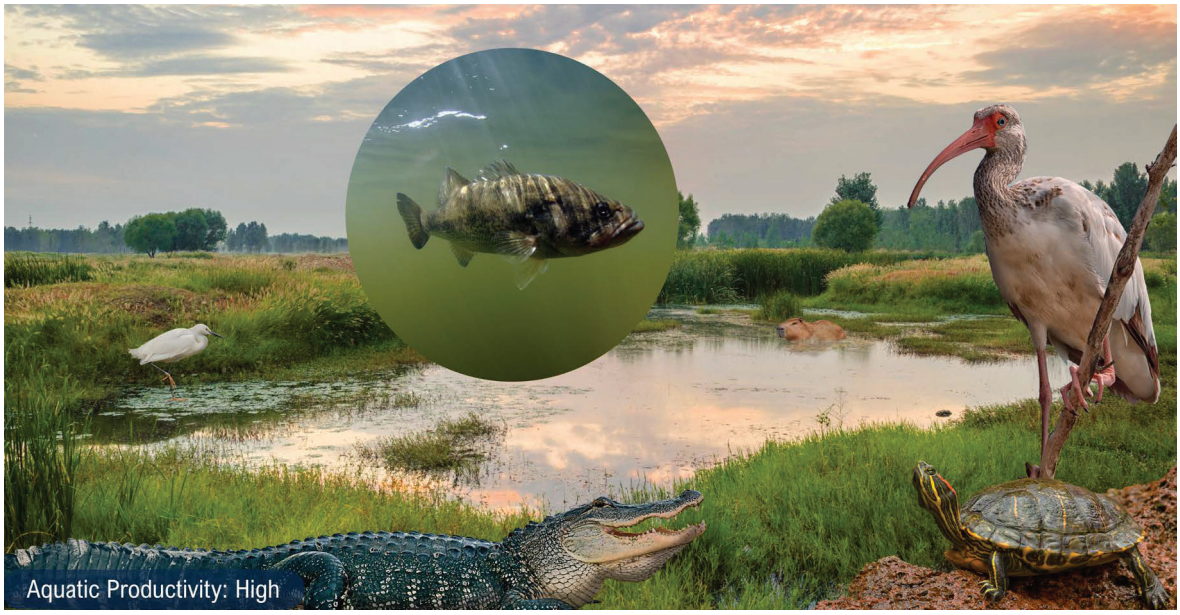
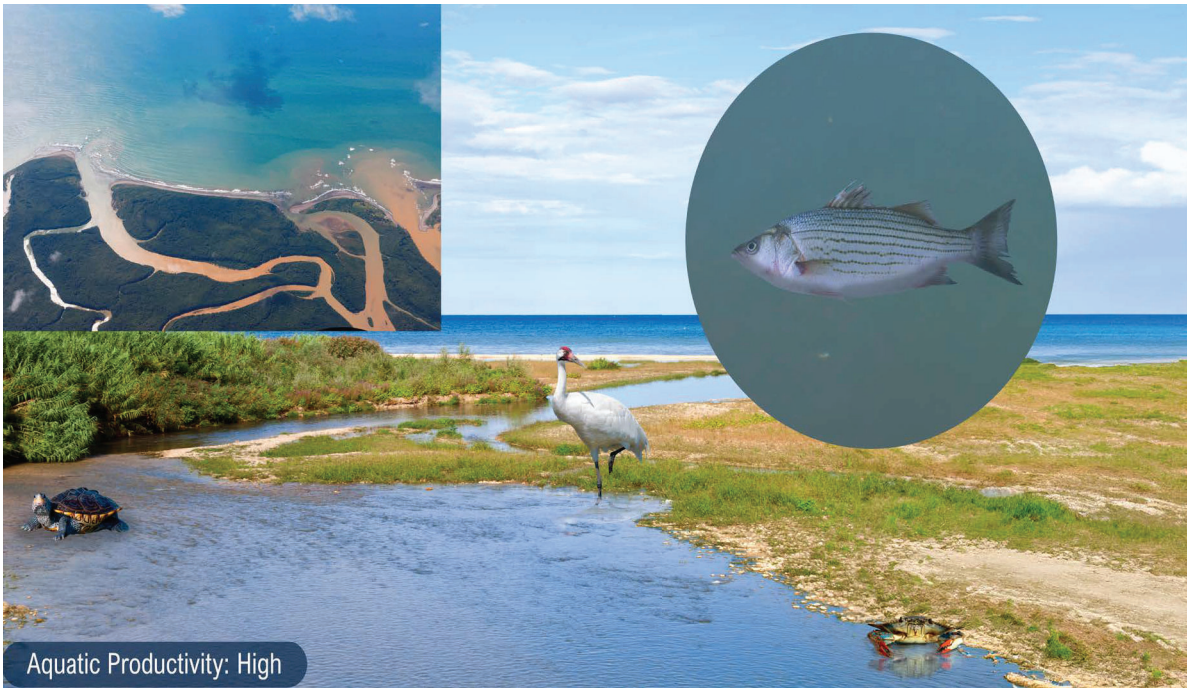
### Wetlands

- Land permanently or periodically saturated with stationary or slow-moving fresh or salt _____.
  - Includes marshes, swamps, bogs, and fens.
  - **Emergent Vegetation:** plants growing _____ water surface.




### Estuaries

- **Estuary:** a coastal *transitional* area between rivers & oceans; contains _____ freshwater & saltwater.
  - Denser saltwater occupies the bottom, while lower density river water is at the surface.



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### EXAMPLE

In which of the following aquatic biomes would you expect to find organisms that can tolerate both saltwater & freshwater?

a) Lakes.
b) Estuaries.
c) Riverine wetlands.
d) Streams.

### PRACTICE

Which of the following is a characteristic of oligotrophic lakes?

a) Murky water.
b) Dense vegetation.
c) Summer turnover.
d) Relatively low biomass & primary productivity.

### PRACTICE

What is the most significant physiological barrier for an aquatic organism traveling through an estuary?

a) Change in water temperature.
b) Change in water salinity.
c) Changes in light availability.
d) Change in water $O_2$ concentration.