

# A Brief on Ponds, Lakes and Wetlands

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Lake Tahoe –  
Big  
Oligotrophic  
Lake





# North Davis Recreational Pond





# North Davis Stormwater Wildlife Wetland



# Sequoia Canyon Wetland





# Yolo Bypass Permanent Wetland





# Yolo Bypass Seasonal Wetland



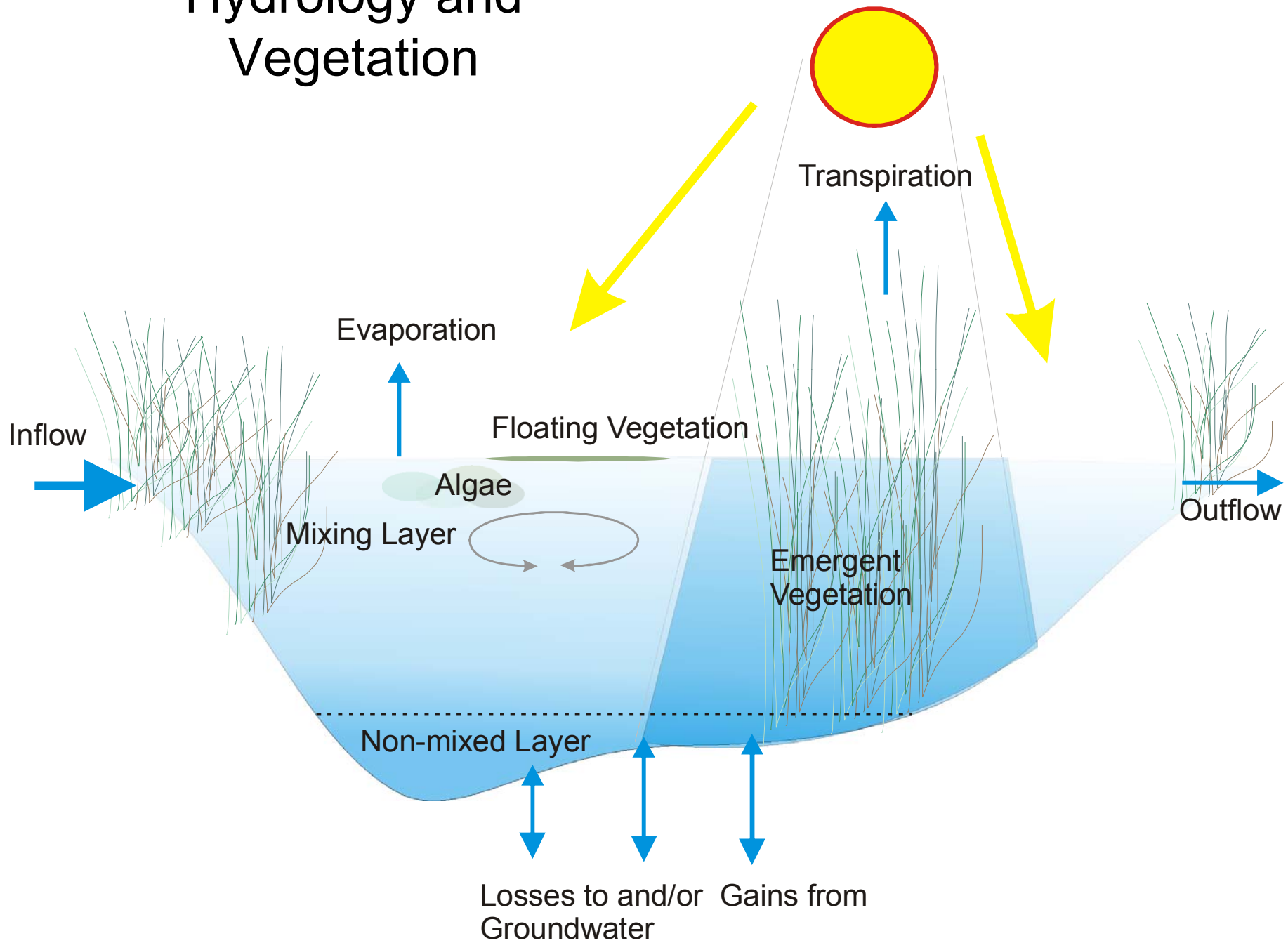




**Agricultural Tailwater Pond**



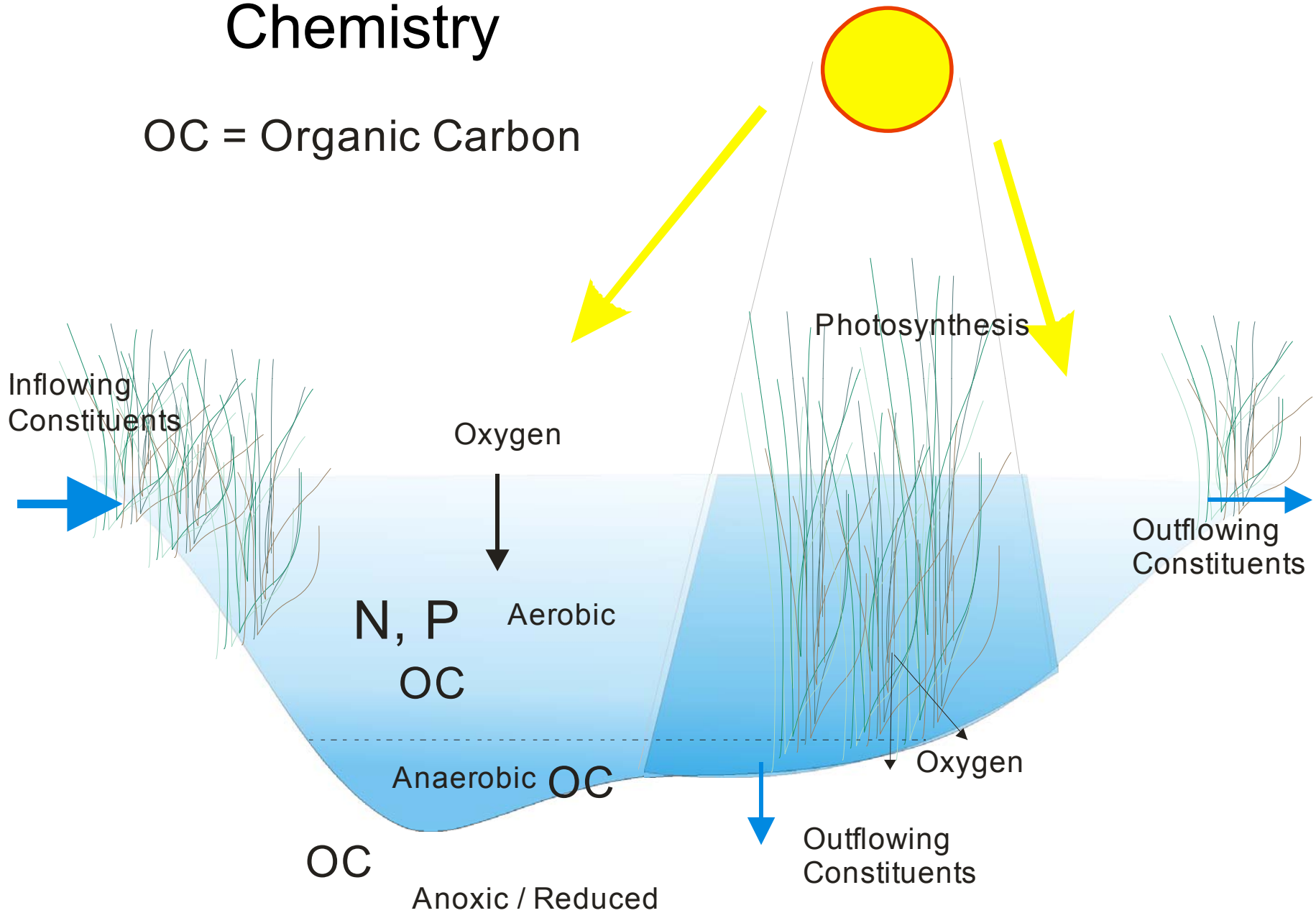
# Hydrology and Vegetation





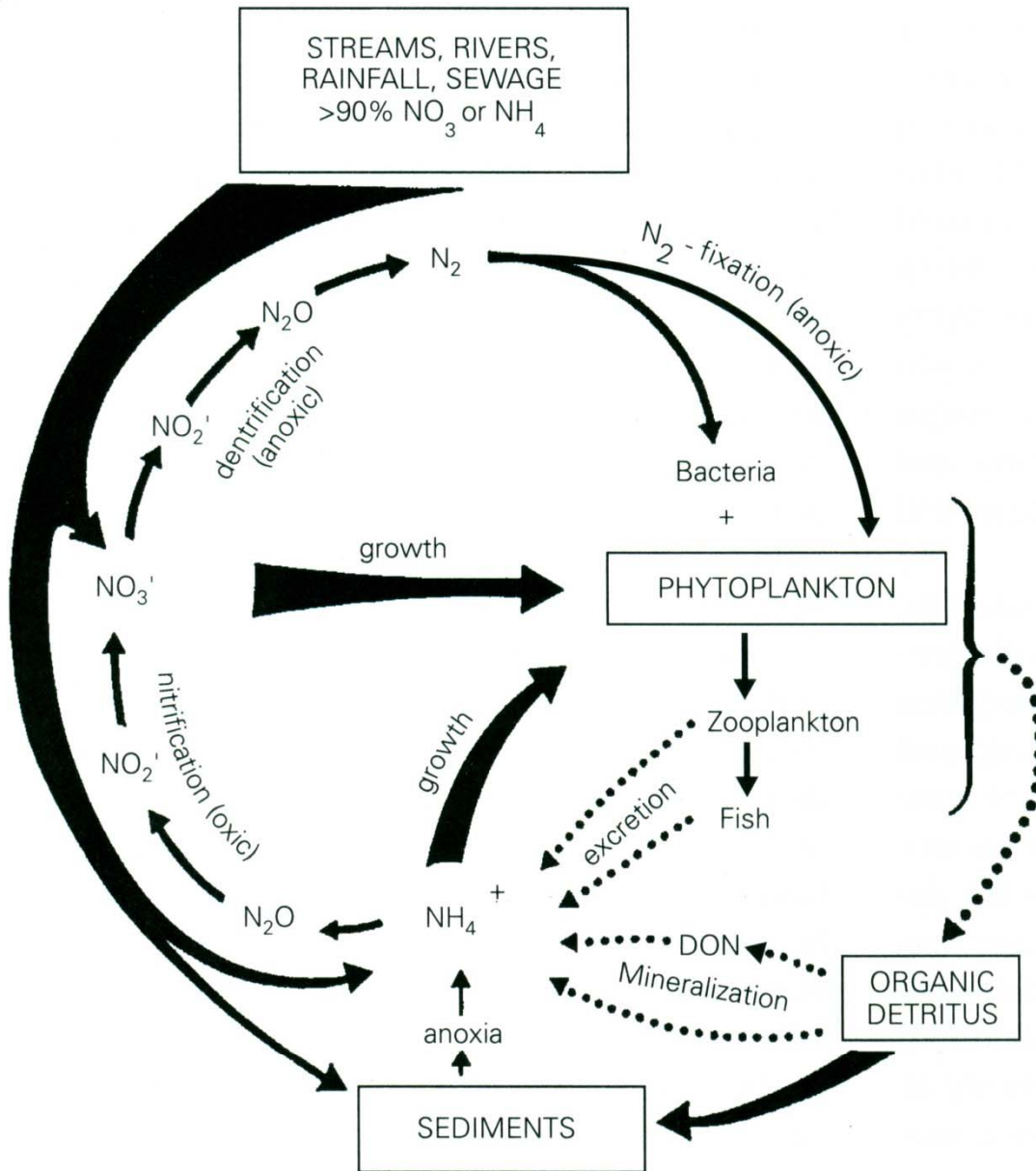
# Chemistry

OC = Organic Carbon



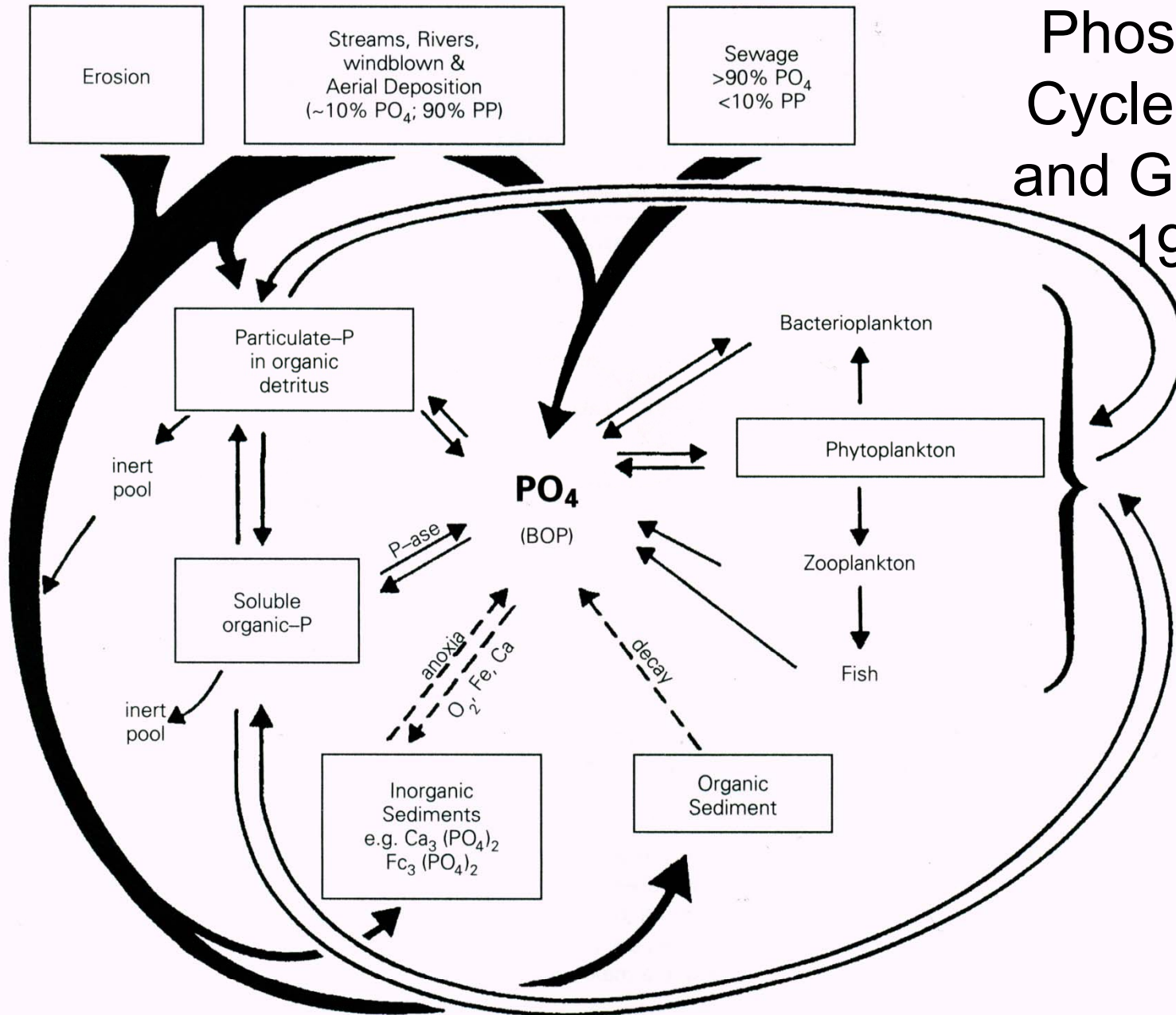


# Nitrogen Cycle (from Horne and Goldman 1994)

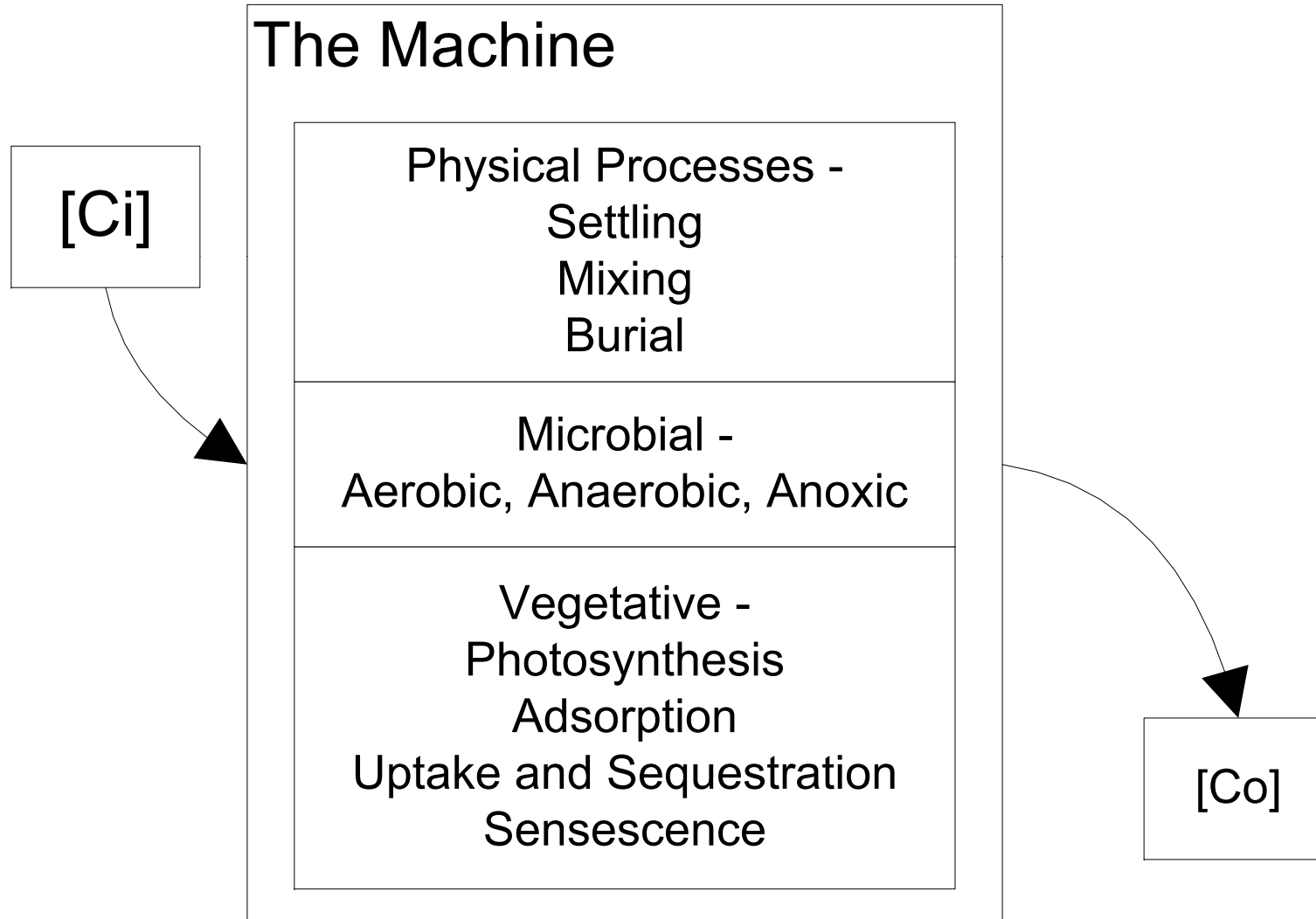




# Phosphorus Cycle (Horne and Goldman, 1994)



# The Pond Machine





# Processes and **estimated** changes in loads and concentrations of water quality constituents

	Concentrations	Loads	Biotic			Abiotic			
			Uptake	Release	Microbial Processes	Settling	Burial	Evaporation	Adsorption
Nutrients	▼▼	▼▼	■	■	■	■	■	■	■
Particulates	▼▼	▼▼	■	■	■	■	■	■	■
Metals	▼ / ▲	▼	■	■	■	■	■	■	■
Mercury	▼ / ▲	▼	■	■	■	■	■	■	■
Dissolved organic carbon	▲	▼	■	■	■	■	■	■	■
Chloride	▲	▼	■	■	■	■	■	■	■
Hydrocarbons	▼ / ▲	▼	■	■	■	■	■	■	■

# Goals and Considerations

- Hydrologic Goals
- Water Quality Goals
- Aesthetics
- Educational Value and Access
- Habitat Value
- Connectivity to other systems
- Operation, Maintenance and Sustainability