**Notes about Reservoirs, Flux, and Processes**

**Reservoirs** can be described at any scale that is useful to the analysis

The world’s forests can be described as a reservoir of carbon or water.

A potted plant can also be described as a reservoir of carbon or water.

The world’s oceans and a cup of tea are both reservoirs of thermal energy or heat, at very different scales.

***Processes* (italicized below) and Fluxes** occur at a variety of spatial and temporal scales.

*Photosynthesis* is a continuous process when conditions are right, but molecules of CO2 can be removed from the atmosphere and stored in a leaf in a faction of second.

The *weathering* of minerals from exposed bedrock into the pedosphere is also a continuous process that happens at a very slow rate.

The *eruption* of a volcano moves energy and matter from the geosphere into the atmosphere very rapidly.

The *decomposition* of a dead animal moves matter and energy from the biosphere into the pedosphere and atmosphere slowly.

*Evaporation* can be described at any temporal or spatial scale, from the drying of a shirt on a clothes line to the continuous process of evaporation that moves water molecules from the oceans into the atmosphere.

A bird’s *digestion* of seeds moves matter and energy from one element of the biosphere into another.

Forest fires (*combustion*) move vast amounts of matter and energy from the biosphere into the atmosphere and pedosphere in a short period of time. Rotting or *decomposition* will eventually transfer the same amount of matter and energy into other spheres but over a much longer period of time.