FW Stream Abiotic Parameters

1. OXYGEN.

* Oxygen levels in the water drop as a result of a rise in organic decomposition. After some time the oxygen levels increase as the larger plants in the stream photosynthesis.

1. NITROGEN.

* Aquatic organisms can utilize both dissolved and some particulate forms of nitrogen.
* The delicate balance of an ecosystem can be upset when nitrogen concentrations become too high. Resulting problems can include algal blooms, excessive growth of aquatic plants and loss of species diversity.
* Decomposition of plant material and other organic matter is the source of much of the nitrogen.

1. CONDUCTIVITY.

* Conductivity is simply a measure of the amount of salt dissolved in the water.
* Needed by plants and animals for growth.
* Conductivity normally lowest during high flows and increases as flow decreases.
* If conductivity increases above the normal range the natural community will become stressed.
* Conductivity of a healthy stream is 30-500µs/cm. Saltwater 30,000 – 50,000µs/cm.

1. TEMPERATURE.

* Warmer water cannot hold as much oxygen as cooler water.
* Temperature influences the rate of photosynthesis by algae and large water plants.
* Warm water tends to be more susceptible to blooms and therefore eutrophication.
* Warmer temps stress organisms.
* Most aquatic organisms have a narrow temperature range in which they are able to effectively function.

1. TURBIDITY.

* Is the result of suspended solids and is a relative measure of the clarity of water: the greater the turbidity, the murkier the water.
* Increase in turbidity reduces the transmission of light.
* High turbidity increases water temp.