

pH

Why do we measure this?

The pH measures the acidity or basic nature of stream water. The pH of the water can effect the biological and chemical processes in the stream. Organisms can live only in a narrow range of pH values, 6.5 – 8.2, outside of these values biochemical reactions in organisms are disrupted. Acidic water (water with a pH reading less than 7) can dissolve metals that are bound in sediment in a stream which in turn can cause fish deformities and death. Water that is too basic can also disrupt physiological processes. There are several factors that can change the pH of a stream. Acid rain and atmospheric acid caused by the burning of fossil fuels, can lower the pH of stream water. The alkalinity of the surrounding soil can raise the pH of a stream or provide a buffer to acid deposition.

Equipment Needed:

- pH test kit
- Waders
- Physical and Chemical Data Sheet

Definition of Terms

Acid Rain: acid precipitation in the form of rain.

pH: a measure of acidity and alkalinity of a solution that is a number on a scale on which a value of 7 represents neutrality and lower numbers indicate increasing acidity and higher numbers increasing alkalinity and on which each unit of change represents a tenfold change.