

# Transparency

## Why do we measure this?

Transparency is a measure of water clarity. Turbid waters are caused by suspended solids in the water column. These suspended solids can be soil particles, microbes, phytoplankton or other materials that range in size from microscopic to 1 mm in diameter. A moderate amount of turbidity can be a sign of a healthy stream ecosystem, an indication of adequate vegetation and reproduction. High turbidity can cause an increase in water temperature because suspended solids near the surface of the water absorb heat from sunlight. An increase in water temperature causes a decrease in dissolved oxygen because warmer water cannot hold as much dissolved oxygen as cooler water. High turbidity also blocks light that stream vegetation needs for photosynthesis. Fish populations suffer clogged gills

### Equipment Needed:

- ◆ Transparency Tube
- ◆ Chest Waders
- ◆ Physical and Chemical Data Sheet

and the burying of their eggs in turbid environments. There are many environmental factors that can influence the turbidity of a stream. Stream discharge, excessive algal growth, soil erosion, construction, and agricultural practices are some factors that can increase turbidity in a stream.

## Definition of Terms

**Turbidity:** A measure of water clarity. Clarity can be affected by suspended material.

**Suspended Material:** Small particles floating in the water.