What Is Turbidity?

Turbidity is a measure of the relative clarity of water: the greater the turbidity, the murkier the water. Turbidity increases as a result of suspended solids in the water that reduce the transmission of light. Suspended solids are varied, ranging from clay, silt and plankton, to industrial wastes and sewage.

With higher levels of turbidity, water loses its ability to support a diversity of aquatic organisms. Water becomes warmer as suspended particles absorb heat from the sunlight and cause oxygen levels to fall. Remember- [warm water holds less oxygen than cooler water](http://www.ririvers.org/wsp/CLASS_3/DissolvedOxygen.htm).

Photosynthesis decreases because less light penetrates the water, resulting in even further drops in oxygen levels. The combination of warmer water, less light and oxygen depletion makes it impossible for some forms of aquatic life to survive.

Suspended solids affect aquatic life in other ways as well. Suspended solids can clog fish gills, reduce growth rates, decrease resistance to disease and prevent egg and larval development. Particles of silt, clay and organic materials settle to the bottom, especially in areas of a river or stream that are slow moving. These settled particles could smother the eggs of fish and aquatic insects, as well as suffocate newly hatched insect larvae. Material that settles into the spaces between rocks makes these microhabitats unsuitable for mayfly and stonefly nymphs, caddisfly larvae and other aquatic insects living there.

What Do The Results Mean?

* **0 JTU Ü Excellent**
* **>0 to 40 JTU Ü Good**
* **>40 to 100 JTU Ü Fair**
* **>100 JTU Ü Poor**

Turbidity between 20-40 JTUs is optimal to support aquatic life.

Very low turbidity readings indicate an absence of planktonic life in a system; high turbidity readings can indicate water with too much suspended matter (and potentially too little dissolved oxygen) to support aquatic life.

Turbidity can be useful as an indicator of the effects of runoff from construction, agricultural practices, logging activity, discharges, and other sources.