

Turbidity

USEPA Contaminant Classification: Primary, (Health-related)
EPA Maximum "Safe" Levels: 0.5-1.0 NTU*

Source: Turbidity is a measurement of the clarity, ("clearness") of the water. The less suspended solids floating in the water, the lower the Turbidity is going to be. It is the measurement of the blockage or absorbency of light transmittance through the water due to suspended particles in the sample. For the most part, these particles are comprised of non-harmful inert materials such as sand, clay, silt, **Iron and rust**. Sometimes, bacteria, algae, and plankton can be found in water in high enough concentrations to effect turbidity, making the water cloudy in appearance. Turbidity is measured in the Laboratory using a Spectrophotometer or a Nephelometer and is reported in a unit of measurement known as Nephelometric Testing Units, (NTU's).

Health Effects: If the Turbidity reading is high due to biological contamination, especially bacteria, then the health risks are apparent. If the Turbidity reading is high due to inert silt, clay, sand, etc., then its main health threat is in interfering in the decontamination process of the water. Water with a high Turbidity reading will require more chlorine, Ozone, Ultra-Violet light, etc., to disinfect it then water with a Turbidity reading below 1.0 NTU.

Home Damage Effects: Besides effecting water quality, many common contaminants that increase Turbidity can also change the taste and odors of the water. Water that has high Turbidity may cause staining or even clog pipes over time. It may also foul the laundry and interfere with the proper function of your dishwasher, hot water heater, showerheads, etc.

How to Fix Contaminated Water:

1. Mechanical sediment filter- These filters can be installed at the point where the water comes into your home and physically removes inert particles. Depending on the composition of the contaminants, these filters can remove large particles all the way down to 5 μ . (μ = Micron; 1 μ = 1/24,500th of an inch).

2. Automatic sediment filter- These large, whole-house systems use an aggregate mineral bed to filter out particles of all sizes. They have automatic regeneration settings that clean the filter aggregate on a regular basis for optimal performance.

3. Reverse Osmosis Units- These units are very effective at removing extremely small particles from the water at a molecular level. They are limited in function by the type and size of the sediment they can effectively remove. These units are usually installed under the sink and have a separate faucet to use for drinking and cooking. They can also be connected to your automatic ice make assuring you of safe drinking water.

*NTU = Nephelometric Testing Units