

Helpful LMWTP Definitions

Anthracite carbon: Anthracite coal has the highest percentage of carbon of all of the coals. It is now specifically mined and processed for water filtration.

Caustic soda: Caustic soda, or sodium hydroxide, is added to water to slightly raise the pH level of the water. Low pH levels in water can increase the risk of pipe corrosion.

Chlorine: Chlorine is added to drinking water through a process called chlorination. Chlorination kills bacteria and disinfects the water. Chlorine mixes with the water and is kept at a safe level for drinking, while at the same time keeping the water free from bacteria.

Clearwell: A clearwell is an enclosed tank where the treated water is stored before it is sent through the distribution system. Clearwells provide additional mixing time with water and the added chlorine and caustic soda.

Coagulation: In order to help small particles suspended in the water settle more quickly, a chemical is added to cause the particles to clump together. (see flocculation) More technically, the particles have a negative charge and repel each other. A chemical, such as alum, has a positive charge and neutralizes the charge of the particles. This is what allows the particles to clump together.

Finger weir: Weir plates help control the flow of the water from the sedimentation ponds into the filtration building. Only the clearest water from the ponds is captured and sent on for filtration. They are called finger weirs because they jut into the sedimentation pond like fingers.

Flocculation: During flocculation, water is slowly mixed so that particles can form clumps (see coagulation) called flocs. The flocs will settle out during sedimentation.

NTU: Nephelometric Turbidity Units. NTUs provide a measure of suspended particles—or turbidity—in the water. The instrument used to measure NTUs is measuring light scattered 90 degrees from the light source.

pH levels: pH is the measure of how acidic or basic (alkaline) a liquid, such as water is. pH ranges from 0-14 with 7 being neutral. Acids have pHs below 7, bases are above pH 7.

Turbidity: Turbidity is the cloudiness of the water caused by solids suspended in the water.

Ultraviolet (UV) Water Treatment process: UV treatment can reduce greater than 99% of the bacteria in the water. UV treatment only works at the plant, however, so chlorine needs to be added so discharged water is protected.