

## **DEFINITIONS**

**Action Level.** The level of lead or copper which, if exceeded in over 10% of the sampling sites tested, triggers treatment or other requirements that a water system must follow.

**Acute.** Occurring over a short period of time; used to describe brief exposures and effects, which appear promptly after exposure.

**Aquifer.** A natural underground layer of porous, water-bearing materials (sand, gravel) usually capable of yielding a large amount or supply of water.

**Back pressure.** A pressure that can cause water to backflow into the water supply when a user's water system is at a higher pressure than the public water system.

**Backflow.** A reverse flow condition, created by a difference in water pressures, which causes water to flow back into the distribution pipes of a potable water supply from any source or sources other than an intended source. Also see cross connection, backpressure, and backsiphonage.

**Backsiphonage.** A form of backflow caused by a negative or below atmospheric pressure within a water system. Also see backflow and cross connection.

**Best Available Technology (BAT).** The water treatment(s) that US EPA certifies to be the most effective for removing a contaminant.

**Best Management Practices (BMPs).** Structural, nonstructural and managerial techniques that are recognized to be the most effective and practical means to control nonpoint source pollutants yet are compatible with the productive use of the resource to which they are applied. BMPs are used in both urban and agricultural areas.

**Carcinogen.** Any substance which tends to produce cancer in an organism.

**Chronic.** Occurring over a long period of time, either continuously or intermittently; used to describe ongoing exposures and effects that develop only after a long exposure.

**Community Water System (CWS).** A public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. Also see non-community water system, transient water system and non-transient non-community water system.

**Compliance.** The act of meeting all state and federal drinking water regulations.

**Cross connection.** Any actual or potential connection between a drinking (potable) water system and an unapproved water supply or other source of contamination. For example, if you have a pump moving nonpotable water and hook into the ground water system to supply water for a pump seal, a cross connection or mixing between the two water systems can occur. This mixing may lead to contamination of the drinking water. Also see backsiphonage and backflow.

**Dead end.** The end of a water main which is not connected to other parts of the distribution system by means of a connecting loop of pipe.

**Disinfection.** The process designed to kill most microorganisms in water, including essentially all pathogenic (disease-causing) bacteria. There are several ways to disinfect, with chlorine being most frequently used in water treatment. Compare with sterilization.

**Free available residual chlorine.** That portion of the total available residual chlorine composed of dissolved chlorine gas  $Cl_2$ , hypochlorous acid (HOCl), and/or hypochlorite ion ( $OCl^-$ ) remaining in water after chlorination. This does not include chlorine that has combined with ammonia, nitrogen, or other compounds.

**Impermeable.** Not easily penetrated. The property of a material or soil that does not allow, or allows only with great difficulty, the movement or passage of water.

**Maximum Contaminant Level (MCL).** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.

**Maximum Contaminant Level Goal (MCLG).** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. MCLGs are non-enforceable health goals.

**Micrograms per liter (ug/L)** One microgram of a substance dissolved in each liter of water. This unit is equal to parts per billion (ppb) since one liter of water is equal in weight to one billion micrograms.

**Milligrams per liter (mg/L).** A measure of concentration of a dissolved substance. A concentration of one mg/L means that one milligram of a substance is dissolved in each liter of water. For practical purposes, this unit is equal to parts per million (ppm) since one liter of water is equal in weight to one million milligrams. Thus a liter of water containing 10 milligrams of calcium has 10 parts of calcium per one million parts of water, or 10 parts per million (10 ppm). This term is equivalent to parts per million (ppm).

**Municipal water system.** A public water system that serves at least 25 year-round residents, or serves 15 service connections used by year-round residents. Owned by a municipality. (i.e. The City of . . .)

**Noncommunity Water System (NCWS).** A public water system that is not a community water system. There are two types of NCWSs: transient and non-transient.

**Nontransient Noncommunity Water System (NTNCWS).** A public water system that regularly serves at least 25 of the same nonresident persons per day for more than six months per year.

**Transient Noncommunity Water System (TNCWS).** A non-community water system that does not serve 25 of the same nonresident persons per day for more than six months per year.

**Non-municipal Water System.** A public water system that serves at least 25 year-round residents, or serves 15 service connections used by year-round residents. Owned by a private party. (i.e. Nursing homes, prisons, mobile home parks, housing developments.)

**Non-potable.** Water that may contain objectionable pollution, contamination, minerals, or infective agents and is considered unsafe and/or unpalatable for drinking.

**Operator.** A person that conducts day-to-day operational and technical activities related to the operation of a water supply.

**Owner.** A person that is responsible for meeting all the legal requirements that apply to a water supply.

**Parts per million (PPM).** Parts per million, a measurement of concentration on a weight or volume basis. This term is equivalent to milligrams per liter (mg/L) which is the preferred term.

**Permeate.** To penetrate and pass through, as water penetrates and passes through soil and other porous materials.

**Point-of-entry treatment device.** A treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in the drinking water distributed throughout the house or building.

**Point-of-use treatment device.** A treatment device applied to a single tap used for the purpose of reducing contaminants in drinking water at that one tap.

**Potable water.** Water that is safe and satisfactory for drinking and cooking.

**Primary Standards.** Primary standards may be either Maximum Contaminant Levels (MCLs) or Treatment Technique Requirements (TTR). In addition, there is a Maximum Contaminant Level Goal (MCLG) at which there should be no adverse health effects.

**Public Water System (PWS).** A system with at least 15 or more service connections or regularly serves at least 25 persons for 60 or more days of the year.

**Raw water.** 1) Water in its natural state, prior to any treatment. 2) Usually the water entering the first treatment process of a water treatment plant.

**Residual chlorine.** The amount of free and/or available chlorine remaining after a given contact time under specified conditions.

**Safe Drinking Water Act (SDWA).** Commonly referred to as SDWA. An Act passed by the U.S. Congress in 1974. The Act establishes a cooperative program among local, state and federal agencies to insure safe drinking water for consumers.

**Safe water.** Water that does not contain harmful bacteria, or toxic materials or chemicals. Water may have taste and odor problems, color and certain mineral problems and still be considered safe for drinking.

**Secondary Standards.** The Secondary Maximum Contaminant Level (SMCL) is a number associated with the aesthetic quality of the water, such as taste, odor, or color. Water with contaminants above the SMCL may not be pleasant to drink but will not cause health problems. According to EPA, these numbers are guidelines, not enforceable standards.

**Treatment Technique Requirements (TTR).** TTRs are set for contaminants that are difficult or costly to measure. For these contaminants, EPA may choose to require specific water treatment practices (such as filtration or corrosion control) to prevent health problems. This is done instead of setting an MCL for these contaminants.

**Total dissolved solids (TDS).** All of the dissolved solids in a water.

**Toxic.** A substance which is poisonous to an organism.

**Turbidity.** The cloudy appearance of water caused by the presence of suspended and colloidal matter. In the waterworks field, a turbidity measurement is used to indicate the clarity of water.

**Virus.** The smallest form of microorganisms capable of causing disease. Especially, a virus of fecal origin that is infectious to humans by waterborne transmission.