



# Drinking Water Glossary



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These definitions are not intended to be complete or to have legal force, but rather to help consumers quickly understand drinking water-related terms in the context of their daily lives.

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

**Acute Health Effect:** An immediate (i.e., within hours or days) adverse health effect that may result from exposure to certain drinking water contaminants (e.g., pathogens).

**Aquifer:** A natural underground layer, often of sand or gravel, that contains water.

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

**Chronic Health Effect:** The possible result of exposure over many years to a drinking water contaminant at levels above its Maximum Contaminant Level.

**Coliform:** A group of related bacteria whose presence in drinking water may indicate contamination by disease-causing microorganisms.

**Community Water System:** A public water system which supplies drinking water to 25 or more of the same people year-round in their residences.

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

**Contaminant:** Anything found in water (including microorganisms, minerals, chemicals, radionuclides, etc.) which may be harmful to human health.

**Cryptosporidium:** A microorganism commonly found in lakes and rivers which is highly resistant to disinfection. Cryptosporidium has caused several large outbreaks of gastrointestinal illness, with symptoms that include diarrhea, nausea, and/or stomach cramps. People with severely weakened immune systems are likely to have more severe and more persistent symptoms than healthy individuals.

**Disinfectant:** A chemical (commonly chlorine, chloramine, or ozone) or physical process (e.g., ultraviolet light) that kills microorganisms such as bacteria, viruses, and protozoa.

**Disinfectant Byproducts:** Chemicals that may form when disinfectants (such as chlorine), react with plant matter and other naturally occurring materials in the water. These byproducts may pose health risks in drinking water.

**Distribution System:** A network of pipes leading from a treatment plant to customers. plumbing systems.

**Exemption:** State or US EPA permission for a water system not to meet a certain drinking water standard. An exemption allows a system additional time to obtain financial assistance or make improvements in order to come into compliance with the standard. The system must prove that: (1) there are compelling reasons (including economic factors) why it cannot meet US EPA health standards (Maximum Contaminant Levels or Treatment Techniques); (2) it was in operation on the effective date of the requirement; and (3) the exemption will not create an unreasonable risk to public health. The state must set a schedule under which the water system will comply with the standard for which it received an exemption.

**Finished Water:** Water that has been treated and is ready to be delivered to customers. See Source Water.

**Giardia lamblia:** A microorganism frequently found in rivers and lakes, which, if not treated properly, may cause diarrhea, fatigue, and cramps after ingestion. People with severely weakened immune systems are likely to have more severe and more persistent symptoms than healthy individuals.

**Ground Water:** The water that systems pump and treat from aquifers (natural reservoirs below the earth's surface).

**Health Advisory:** A US EPA document that provides guidance and information on contaminants that can affect human health and that may occur in drinking water.

**Inorganic Contaminants:** Mineral-based compounds such as metals, nitrates, and asbestos. These contaminants are naturally-occurring in some water, but can also get into water through farming, chemical manufacturing, and other human activities. US EPA has set legal limits on 16 inorganic contaminants.

**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.

**Microbes (microorganisms):** Tiny living organisms that can only be seen with the aid of a microscope. Some microbes can cause acute health problems when consumed (see pathogens).

**Monitoring:** Testing that water systems must perform to detect and measure contaminants. A water system that does not follow US EPA's monitoring methodology or schedule is in violation, and may be subject to legal action.

**National Primary Drinking Water Regulations:** Legally enforceable standards that apply to public water systems. These standards protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and which are known or anticipated to occur in public water supplies.

**Non-Transient, Non-Community Water System:** A public water system which supplies water to 25 or more of the same people at least six months per year in places other than their residences. Some examples are schools, factories, office buildings, and hospitals which have their own water systems.

**Organic Contaminants:** Carbon-based chemicals, such as solvents and pesticides, which can get into water through runoff from cropland or discharge from factories. US EPA has set legal limits on 56 organic contaminants.

**Pathogens:** Disease-causing organisms, such as some bacteria, viruses, or protozoa.

**Primacy:** Primary enforcement authority for the drinking water program. Under the Safe Drinking Water Act, states, U.S. territories, and Indian tribes that meet certain requirements, including setting regulations that are at least as stringent as US EPA's, may apply for, and receive, primary enforcement authority, or primacy.

**Public Notification:** An advisory that US EPA or the state requires a water system to distribute to affected consumers when the system has violated Maximum Contaminant Levels or other regulations. The notice advises consumers what precautions, if any, they should take to protect their health.

**Public Water System (PWS):** Any water system which provides water to at least 15 service connections or 25 people for at least 60 days annually. There are more than 170,000 PWSs providing water from wells, rivers, and other sources to about 250 million Americans. The others drink water from private wells. There are differing standards for PWSs of different sizes and types.

**Radionuclide:** An unstable form of a chemical element that radioactively decays, resulting in the emission of nuclear radiation. Prolonged exposure to radionuclides increases the risk of cancer. All of the radionuclides known to occur in drinking water are currently regulated, except for radon and naturally-occurring uranium, both of which were proposed for regulation in October 1999.

**Raw Water:** Water in its natural state, prior to any treatment for drinking. See finished water.

**Sample:** The water that is analyzed for the presence of US EPA-regulated drinking water contaminants. Depending on the regulation, US EPA requires water systems and states to take samples from source water, from water leaving the treatment facility, or from the taps of selected consumers.

**Sanitary Survey:** An on-site review of the water sources, facilities, equipment, operation, and maintenance of a public water system for the purpose of evaluating the adequacy of the facilities for producing and distributing safe drinking water.

**Secondary Drinking Water Standards:** Non-enforceable federal guidelines regarding cosmetic effects (such as tooth or skin discoloration) or aesthetic effects (such as taste, odor, or color) of drinking water.

**Sole Source Aquifer:** An aquifer that supplies 50 percent or more of the drinking water of an area.

**Source Water:** Water in its natural state, prior to any treatment for drinking. See finished water.

**Surface Water:** The water that systems pump and treat from sources open to the atmosphere, such as rivers, lakes, and reservoirs.

**Transient, Non-Community Water System:** A public water system which provides water in a place such as a gas station or campground where people do not remain for long periods of time. These systems do not have to test or treat their water for contaminants which pose long-term health risks because fewer than 25 of the same people drink the water over a long period. They still must test their water for microbes and several chemicals posing short-term health risk.

**Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.

**Turbidity:** The cloudy appearance of water caused by the presence of tiny particles. High levels of turbidity may interfere with proper water treatment and monitoring.

**Variance:** State or US EPA permission not to meet a certain drinking water standard. The water system must prove that: (1) it cannot meet a Maximum Contaminant Level, even while using the best available treatment method, because of the characteristics of the raw water, and (2) the variance will not create an unreasonable risk to public health. The state or US EPA must review, and allow public comment on, a variance every three years. States can also grant variances to water systems that serve small populations and which prove that they are unable to afford the required treatment, an alternative water source, or otherwise comply with the standard.

**Violation:** A failure to meet any state or federal drinking water regulation.

**Vulnerability Assessment:** An evaluation of drinking water source quality and its vulnerability to contamination by pathogens and toxic chemicals.

**Watershed:** The land area from which water drains into a stream, river, or reservoir.

**Wellhead Protection Area:** The area surrounding a drinking water well or well field which is protected to prevent contamination of the well(s).

## For More Information

To learn more about drinking water topics, call the Safe Drinking Water Hotline at 1-800-426-4791 or visit the safewater web site at [www.epa.gov/safewater](http://www.epa.gov/safewater).