



Private Water Systems Home Study Course

Definitions

Acidity – Total Amount of acid and acid forming substances in water, any substance that has a pH level below 7.

Aesthetic – Related to or dealing with the beautiful, the way something looks.

Aquifer – Saturated layer of sand, gravel, or rock that can readily transmit water.

Aquitards – Geologic formations that are layers comprised of either clay with tiny, poorly connected pores or of nonporous rock, and they restrict the flow of water from one aquifer to another.

Artesian Well – Well water under pressure because of being drilled into a confined aquifer. (Also, see Flowing Artesian Well)

Atmosphere – The whole mass of air surrounding the earth.

Base Flow – Water in a stream provided by groundwater seeping through stream banks and stream beds. Groundwater that discharges to surface water.

Borehole – A hole drilled in the earth.

Brine – Salty groundwater. Water of a sea or salt lake.

Calcium carbonate – A compound consisting of the elements calcium, carbon, and oxygen. Its chemical formula is CaCO_3 . It is somewhat soluble in water. Spelunkers (Cave Explorers) like it because water can remove it to make a cave and rearrange it making stalagmites and stalactites to look at. Boiler operators and cooks dislike it because it precipitates out of hot water making stone-like deposits that are hard to remove.

Cistern – A tank for storing rainwater for drinking or other uses.

Coliform Bacteria – Bacteria found naturally in soil and the environment that can be a health concern if found in water supplies. A large group of bacteria that are commonly found in sewage and manure. While they do not cause disease, they persist longer in the environment than

pathogens. Water is routinely tested for these bacteria to indicate the potential for the presence of disease causing bacteria, viruses, and parasites.

Concentration – A measurement of the amount of a substance contained in a liter of water. Usually expressed as mg/L.

Cone of Depression – A cone shape in the water table where it has been lowered around a well due to pumping of the well.

Confined Aquifer – A saturated layer of sand, gravel, or rock that has clay or non-porous rock above and below it.

Consumptive Water Use – Water that is used and then not returned to its source. Evaporation, transpiration, and bottled water are examples of consumptive use.

Corrosive – Water having the power to remove substances by chemical or electrolytic activity over time, such as water pipes in a home.

Diameter – The length of a straight line through the center of a round object. The width of a circular or cylindrical object, such as the mouth of a well.

Dolomite – A mineral consisting of a calcium and magnesium carbonate found in crystals and in extensive beds as a compact limestone.

Effluent – Waste material discharged into the environment.

EPA – The U.S. Environmental Protection Agency

Evaporation – To pass off in vapor or invisible minute particles. The physical process by which a liquid is transferred into a gaseous state. The conversion of liquid water to water vapor.

Evapotranspiration – Loss of water from the soil by evaporation and transpiration from plants.

FDA – The Federal Food and Drug Administration

Flowing Artesian Well – Well water under enough pressure to flow onto the land surface without being pumped.

Foliated – Composed of or separable into layers.

Geologic – Related to the study of the earth.

Gneiss – A foliated metamorphic rock corresponding in composition to granite.

GPD - Gallons Per Day

GPM – Gallons Per Minute

Groundwater –Water found below the ground surface and located below the water table. Also known as the “saturated zone” because all the soil pores and rock fractures are completely filled with water. The source of water is springs and wells.

Groundwater Mining – Extracting groundwater faster than it is being recharged.

Hardness – The presence of dissolved substances, chiefly calcium carbonate, in water. Noted by the increased the amount of soap needed to produce lather and the deposits of calcium carbonate that form on heated surfaces limiting their ability to transfer heat.

Hydrologic – Dealing with the properties, distribution, and circulation of water on the surface of the land, in the soil and underlying rock, and in the atmosphere.

Impervious – Not allowing entrance or passage. Impervious surfaces may include paved parking lots, buildings, etc. that cause precipitation to run off as surface water rather than percolate and infiltrate into the ground.

Infiltrate – To pass into or through a substance, such as when water seeps into the soil.

Limestone – A rock that is formed chiefly by the accumulation of organic remains, consists mainly of calcium carbonate.

MCL – Maximum Contaminant Level – The greatest level of contaminants of certain chemicals allowed in public drinking water.

mg/L – Milligrams per liter the same as parts per million.

Non-consumptive Water Use –Water that is used and then returned to its source, such as in hydroelectric power generation where water turns the turbines and then is returned to its source.

NSF – National Sanitation Foundation

Oxidized – To combine with oxygen in order to break down organic waste or chemicals in water or sewage by bacterial and chemical means. Iron after combination with oxygen is called rust.

Peak Demand – Highest volume of water needed during a defined time period.

pH – percent hydrogen - Values range from 1 to 14. Water with a pH of 7 is neutral, below 7 is acidic, and above 7 is basic (usually alkaline). Used to express acidity or alkalinity of a solution in terms of the hydrogen concentration.

Perchloroethylene (PCE) – A colorless nonflammable liquid used often as a solvent in dry cleaning and for removal of grease from metals.

Percolating – To trickle through a permeable material such as soil.

Precipitation – Rain, snow, sleet or hail.

Pressure Tank - Tank that holds a volume of water under pressure to supply water to a system when the well pump is not running.

POE – Point of Entry – describes the location of a device that treats all or most of the water entering a home.

Potable Water – Water considered safe to drink.

POU – Point of Use – describes the location of a device that treats water at a particular tap source.

Recharge – Water that enters the soil surface, trickles downward by gravity and becomes groundwater.

Reservoir – A man-made lake where water is collected and stored in quantity for use.

Retrofit – To furnish with new parts or equipment not available when manufactured.

Schist – A metamorphic crystalline rock.

Seeps – A location where water contained in the ground oozes slowly to the surface and often forms a pool.

Spring – A location where the water table or groundwater reaches the surface of the ground and results in a significant flow of water.

Surface Water – Liquid water that is above ground. It flows along the earth and is found in rivers, lakes, and streams, etc.

TDS – Total Dissolved Solids. A measure of everything dissolved in the water.

Transpiration – The passing of water through a vegetative plant and back to the atmosphere.

Trichloroethylene (TCE) – A nonflammable liquid used often as a solvent in dry cleaning and for removal of grease from metals.

Turbidity – A measure of the amount of suspended solids (particles) in the water.

Unconfined Aquifer – A saturated layer of sand, gravel or rock that has no aquitard above it. Also known as a water table aquifer.

USGS – The U.S. Geological Survey

VOCs – Volatile Organic Chemicals such as chloroform and benzene. Volatile means they evaporate readily at room temperature.

Watershed – An area of land that drains downslope to the lowest point such as a river, lake, stream, or groundwater.

Water Table – The upper surface of the saturated zone or groundwater.

Well – A deep hole or shaft sunk into the earth to obtain water, oil, gas, or brine.

Well Decommissioning – The process of properly sealing and unused well to prevent groundwater pollution.

Well Head Protection – Limiting or eliminating the use of potentially contaminating substances within the watershed area for the well. The watershed area is difficult to establish exactly. Instead, a circular area is used. The area is centered around the well with a diameter proportional to the average daily volume of water extracted from the well. This diameter should be a minimum of 100 feet for a household well.

References:

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Water Words Dictionary, Nevada Division of Water Resources, Department of Conservation and Natural Resources.

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