

Terminology Services - Vocabulary Catalog List Detail Report

Term
Absorbed Dose
Definition: The amount of a chemical that enters the body of an exposed organism.
Absorption
Definition: The uptake of water or dissolved chemicals by a cell or an organism (as tree roots absorb dissolved nutrients in the soil).
Absorption Factor
Definition: The fraction of a chemical making contact with an organism that is absorbed by the organism.
Acceptable Daily Intake
Definition: Estimate of the largest amount of chemical to which a person can be exposed on a daily basis that is not anticipated to result in adverse effects (usually expressed in mg/kg/day). Same as RfD.
Acronym: ADI
Accuracy
Definition: How closely an instrument measures the true or actual value of the process variable being measured or sensed.
Acid Mine Drainage
Definition: Drainage of water from areas that have been mined for coal or other mineral ores; the water has low pH, sometimes less than 2.0 (is acid), because of its contact with sulfur-bearing material; acid drainage is harmful because it often kills aquatic organisms.

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Acid Rain
Definition: Precipitation which has been rendered (made) acidic by airborne pollutants.
Acidic
Definition: (uh-SID-ick) The condition of water or soil which contains a sufficient amount of acid substances to lower the pH below 7.0.
Acidified
Definition: (uh-SID-uh-FIE-d) The addition of an acid (usually nitric or sulfuric) to a sample to lower the pH below 2.0. The purpose of acidification is to "fix" a sample so it won't change until it is analyzed.
Acre-Foot
Definition: A volume of water that covers one acre to a depth of one foot, or 43,560 cubic feet (12335 cubic meters).
Action Level
Definition: The concentration of lead or copper in water specified at Code of Federal Regulations 141. 80(c) which determines, in some cases, the treatment requirements contained in subpart I of this part that a water system is required to complete.
Activated Carbon
Definition: Adsorptive particles or granules of carbon usually obtained by heating carbon (such as wood). these particles or granules have a high capacity to selectively remove certain trace and soluble materials from water.

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<p>Active Transport</p> <p>Definition: An energy-expending mechanism by which a cell moves a chemical across the cell membrane from a point of lower concentration to a point of higher concentration, against the diffusion gradient.</p>
<p>Acute</p> <p>Definition: Occurring over a short period of time; used to describe brief exposures and effects which appear promptly after exposure.</p>
<p>Acute Exposure</p> <p>Definition: A single exposure to a toxic substance which results in severe biological harm or death. Acute exposures are usually characterized as lasting no longer than a day.</p>
<p>Acute Toxicity</p> <p>Definition: The ability of a substance to cause poisonous effects resulting in severe biological harm or death soon after a single exposure or dose. Also, any severe poisonous effect resulting from a single short-term exposure to a toxic substance.</p>
<p>Additive Effect</p> <p>Definition: Combined effect of two or more chemicals equal to the sum of their individual effects.</p>
<p>Adsorbate</p> <p>Definition: (add-SORE-bait) The material being removed by the adsorption process.</p>

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Adsorbent
Definition: (add-SORE-bent) The material (activated carbon) that is responsible for removing the undesirable substance in the adsorption process.
Adsorption
Definition: The process by which chemicals are held on the surface of a mineral or soil particle (compare with Absorption).
Aeration
Definition: (air-A-shun) The process of adding air to water. Air can be added to water by either passing air through water or passing water through air.
Aerobic
Definition: (air-0-bick) A condition in which free" (atmospheric) or dissolved oxygen is present in the water.
Age Tank
Definition: A tank used to store a chemical solution of known concentration for feed to a chemical feeder.
Aggregate
Definition: A mass or cluster of soil particles, often having a characteristic shape.
Agrochemical

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Definition: Synthetic chemicals (pesticide and fertilizers) used in agricultural production.
Air Binding Definition: A situation where air enters the filter media. Air is harmful to both the filtration and backwash processes. Air can prevent the passage of water during the filtration process and can cause the loss of filter media during the backwash process.
Air Gap Definition: An open vertical drop, or vertical empty space, that separates a drinking (potable) water supply to be protected from another water system in a water treatment plant or other location. This open gap prevents the contamination of drinking water by backsiphonage or backflow because there is no way raw water or any other water can reach the drinking water.
Air Padding Definition: Pumping dry air into a container to assist with the withdrawal of a liquid or to force a liquefied gas such as chlorine out of a container.
Air Stripping Definition: A treatment process used to remove dissolved gases and volatile substances from water. Large volumes of air are bubbled through the water being treated to remove (strip out) the dissolved gases and volatile substances.
Alarm Contact

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Definition: A switch that operates when some pre-set low, high or abnormal condition exists.
Algae
Definition: Microscopic plants which contain chlorophyll and live floating or suspended in water. They also may be attached to structures, rocks or other submerged surfaces. They are food for fish and small aquatic animals. Excess algal growths can impart tastes and odors to potable water. Algae produce oxygen during sunlight hours and use oxygen during the night hours. Their biological activities appreciably affect the pH and dissolved oxygen of the water.
Algal Bloom
Definition: (AL-gull) Sudden, massive growths of microscopic and macroscopic plant life, such as green or blue-green algae, which develop in lakes and reservoirs.
Algicide
Definition: (AL-gi-SIDE) Any substance or chemical specifically formulated to kill or control algae.
Aliphatic Hydroxy Acids
Definition: (Al-uh-FAT-ick) Organic acids with carbon atoms arranged in branched or unbranched open chains rather than in rings.
Aliquot
Definition: (AL-li-kwot) Portion of a sample.
Alkali

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<p>Definition: (AL-ka-lie) Various soluble salts, principally of sodium, potassium, magnesium, and calcium, that have the property of combining with acids to form neutral salts and may be used in chemical water treatment processes.</p>
<p>Alkaline</p> <p>Definition: (Al-ka-LINE) The condition of water or soil which contains a sufficient amount of alkali substances to raise the pH above 7.0.</p>
<p>Alkalinity</p> <p>Definition: (AL-ka-LIN-it-tee) The capacity of water to neutralize acids. This capacity is caused by the water's content of carbonate, bicarbonate, hydroxide and occasionally borate, silicate, and phosphate. Alkalinity is expressed in milligrams per liter of equivalent calcium carbonate. Alkalinity is not the same as pH because water does not have to be strongly basic (high pH) to have a high alkalinity. Alkalinity is a measure of how much acid can be added to a liquid without causing a great change in pH.</p>
<p>Alluvial</p> <p>Definition: (uh-LOU-vee-ul) Relating to mud and/or sand deposited by flowing water. Alluvial deposits may occur after a heavy rain storm.</p>
<p>Alternating Current</p> <p>Definition: An electric current that reverses its direction (positive/negative values) at regular intervals.</p> <p>Acronym: AC</p>
<p>Ambient</p>

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Definition: Environmental or surrounding conditions.
Ambient Temperature
Definition: (Am-Bee-Ent) Temperature of the surrounding air (or other medium). For example, temperature of the room where a gas chlorinator is installed.
Ammonium
Definition: One form of nitrogen that is usable by plants.
Amperage
Definition: (AM-purr-age) The strength of an electric current measured in amperes. The amount of electric current flow, similar to the flow of water in gallons per minute.
Ampere
Definition: (AM-peer) The unit used to measure current strength. The current produced by electromotive force of one volt acting through a resistance of one ohm.
Amperometric
Definition: (am-PURR-o-MET-rick) Based on the electric current that flows between two electrodes in a solution.
Amperometric Titration

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Definition: A means of measuring concentrations of certain substances in water (such as strong oxidizers) based on the electric current that flows during a chemical reaction.
Anaerobic
Definition: (AN-air-O-bick) A condition in which "free" (atmospheric) or dissolved oxygen is NOT present in water.
Analog
Definition: The readout of an instrument by a pointer (or other indicating means) against a dial or scale.
Analyzer
Definition: A device which conducts periodic or continuous measurement of some factor such as chlorine, fluoride or turgidity.
Animal Studies
Definition: Investigations using animals as surrogates for humans, on the expectation that results in animals are pertinent to humans.
Anion
Definition: (AN-EYE-en) A negatively charged ion in an electrolyte solution, attracted to the anode under the influence of a difference in electrical potential.
Anionic Polymer

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Definition: (AN-eye-ON-ick) A polymer having negatively charged groups of ions; often used as a filter aid and for dewatering sludges.
Annular Space
Definition: (AN-you-ler) A ring-shaped space located between two circular objects, such as two pipes.
Anode
Definition: (an-0-d) The positive pole or electrode of an electrolytic system, such as a battery.
Antagonism
Definition: Interference or inhibition of the effect of one chemical by the action of another chemical.
Appropriative
Definition: Water rights to or ownership of a water supply which is acquired for the beneficial use of water by following a specific legal procedure.
Appurtenance
Definition: (uh-PURR-ten-nans) Machinery, appliances, structures and other parts of the main structure necessary to allow it to operate as intended, but not considered part of the main structure.
Aquatic

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Definition: Plants of animal life living in, growing in, or adapted to water.
Aqueous
Definition: (A-kwee-us) Something made up of, similar to, or containing water; watery.
Aquifer
Definition: (ACK-wi-fer) A natural underground layer of porous, water-bearing materials (sand, gravel) usually capable of yielding a large amount or supply of water.
Artesian Aquifer
Definition: (are-TEE-zhun) Water held under pressure in porous rock or soil confined by impermeable geologic formations. An artesian well is free flowing.
Artesian Well
Definition: (are-TEE-zhun) Water held under pressure in porous rock or soil confined by impermeable geologic formations. An artesian well is free flowing.
Aseptic
Definition: (a-SEP-tick) Free from the living germs of disease, fermentation or putrefaction. Sterile.
Assay

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Term
Definition: A test for a particular chemical or effect.
Association of Boards of Certification
Definition: An international organization representing over 150 boards which certify the operators of waterworks and waste water facilities For information on ABC publications regarding the preparation of and how to study for operator certification examinations, contact ABC, 4261/2 Fifth Street, PO Box 786, Ames, Iowa 50010-0786.
Acronym: ABC
Asymmetric
Definition: (A-see-MET-rick) Not similar in size, shape, form or arrangement of parts on opposite sides of a line, point or plane.
Atom
Definition: The smallest unit of a chemical element; composed of protons, neutrons and electrons.
Available Chlorine
Definition: A measure of the amount of chlorine available in chlorinated lime, hypochlorite compounds, and other materials that are used as a source of chlorine when compared with that of elemental (liquid or gaseous) chlorine.
Available Expansion
Definition: The vertical distance from the sand surface to the underside of a trough in a sand filter.
Axial to Impeller

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Definition: The direction in which material being pumped flows around the impeller or flow parallel to the impeller shaft.
Axis of Impeller
Definition: An imaginary line running along the center of a shaft (such as an impeller shaft).
Back Pressure
Definition: 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
Definition: 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.
Background Level
Definition: In toxic substances monitoring, the average presence of a substance in the environment, originally referring to naturally occurring phenomena.
Backsiphonage
Definition: A form of backflow caused by a negative or below atmospheric pressure within a water system.
Backwashing

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<p>Definition: The process of reversing the flow of water back through the filter media to remove the entrapped solids.</p>
<p>Bacteria</p> <p>Definition: (back-TEER-e-uh) Singular: bacterium. Microscopic living organisms usually consisting of a single cell. Bacteria can aid in pollution control by consuming or breaking down organic matter in sewage, or by similarly acting on oil spills or other water pollutants. Some bacteria in soil, water or air may also cause human, animal and plant health problems.</p>
<p>Baffle</p> <p>Definition: A flat board or plate, deflector, guide or similar device constructed or placed in flowing water or slurry systems to cause more uniform flow velocities, to absorb energy, and to divert, guide, or agitate liquids (water, chemical solutions, slurry).</p>
<p>Bailer</p> <p>Definition: (BAY-ler) A 10- to 20-foot-long pipe equipped with a valve at the lower end. A bailer is used to remove slurry from the bottom or the side of a well as it is being drilled.</p>
<p>Base Metal</p> <p>Definition: A metal (such as iron) which reacts with dilute hydrochloric acid to form hydrogen.</p>
<p>Batch Process</p> <p>Definition: A treatment process in which a tank or reactor is filled, the water is treated or a chemical solution is prepared, and the tank</p>

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<p>is emptied. The tank may then be filled and the process repeated.</p>
<p>Best Available Technology</p> <p>Definition: The best technology treatment techniques, or other means which the Administrator finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are available (taking cost into consideration). For the purposes of setting MCLs for synthetic organic chemicals, any BAT must be at least as effective as granular activated carbon.</p> <p>Acronym: BAT</p>
<p>Best Management Practices</p> <p>Definition: 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.</p> <p>Acronym: BMPs</p>
<p>Bias</p> <p>Definition: An inadequacy in experimental design that leads to results or conclusions not representative of the population under study.</p>
<p>Bioaccumulation</p> <p>Definition: The retention and concentration of a substance by an organism.</p>
<p>Bioassay</p> <p>Definition: Test which determines the effect of a chemical on a living organism.</p>

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Biochemical Oxygen Demand
Definition: The amount of oxygen consumed by microorganisms (mainly bacteria) and by chemical reactions in the biodegradation of organic matter. Acronym: BOD
Bioconcentration
Definition: The accumulation of a chemical in tissues of an organism (such as fish) to levels that are greater than the level in the medium (such as water) in which the organism resides.
Biodegradation
Definition: Decomposition of a substance into more elementary compounds by the action of microorganisms such as bacteria.
Biological Growth
Definition: The activity and growth of any and all living organisms.
Bioremediation
Definition: A process of adding nutrient to ground water to speed up the natural process in which bacteria break down gasoline into harmless compounds.
Biotransformation

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Definition: Conversion of a substance into other compounds by organisms; includes biodegradation.
Black Water
Definition: Liquid and solid human body waste and the carriage water generated through toilet usage.
Blank
Definition: A bottle containing only dilution water or distilled water; the sample being tested is not added. Tests are frequently run on a SAMPLE and a BLANK and the differences are compared.
Body Weight
Acronym: BW
Bogs
Preferred Term: Wetlands
Bonnet
Definition: (BON-it) The cover on a gate valve.
Brackish
Definition: Mixed fresh and salt waters.

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<p>Brake Horsepower</p> <p>Definition 1: The horsepower required at the top or end of a pump shaft (input to a pump). Definition 2: The energy provided by a motor or other power source.</p>
<p>Breakpoint Chlorination</p> <p>Definition: Addition of chlorine to water until the chlorine demand has been satisfied. At this point, further additions of chlorine will result in a free residual chlorine that is directly proportional to the amount of chlorine added beyond the breakpoint.</p>
<p>Breakthrough</p> <p>Definition: A crack or break in a filter bed allowing the passage of floc or particulate matter through a filter. This will cause an increase in filter effluent turbidity A breakthrough can occur: 1) when a filter is first placed in service, 2) when the effluent valve suddenly opens or closes, and 3) during periods of excessive head loss through the filter (including when the filter is exposed to negative heads).</p>
<p>Brinelling</p> <p>Definition: (bruh-NEL-ing) Tiny indentations (dents) high on the shoulder of the bearing race or bearing. A type of bearing failure.</p>
<p>Buffer</p> <p>Definition: A solution or liquid whose chemical makeup neutralizes acids or bases without a great change in pH.</p>
<p>Buffer Capacity</p>

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<p>Definition: A measure of the capacity of a solution or liquid to neutralize acids or bases. This is a measure of the capacity of water for offering a resistance to changes in pH.</p>
<p>Buffer Strips</p> <p>Definition: Strips of grass or other close-growing vegetation that separate a waterway (ditch, stream, creek) from an intensive land use area (subdivision, farm); also referred to as filter strips, vegetated filter strips, and grassed buffers.</p>
<p>C Factor</p> <p>Definition: A factor of value used to indicate the smoothness of the interior of a pipe. The higher the C Factor, the smoother the pipe, the greater the carrying capacity, and the smaller the friction or energy losses from water flowing in the pipe. To calculate the C Factor, measure the flow, pipe diameter, distance between two pressure gages, and the friction or energy loss of the water between the gages. $C \text{ Factor} = \text{Flow (GPM)} / 193.75 (\text{Diameter, ft})^{2.63} (\text{Slope})^{0.54}$.</p>
<p>Caisson</p> <p>Definition: (KAY-sawn) A structure or chamber which is usually sunk or lowered by digging from the inside. Used to gain access to the bottom of a stream or other body of water.</p>
<p>Calcium Carbonate Equivalent</p> <p>Definition: An expression of the concentration of specified constituents in water in terms of their equivalent value to calcium carbonate. For example, the hardness in water which is caused by calcium, magnesium and other ions is usually described as calcium carbonate equivalent.</p> <p>Acronym: CaCO₃ Equivalent</p>

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Calibration
Definition: A procedure which checks or adjusts an instrument's accuracy by comparison with a standard or reference.
Cancer
Definition: A disease characterized by the rapid and uncontrolled growth of aberrant cells into malignant tumors.
Capillary Action
Definition: The movement of water through very small spaces due to molecular forces.
Capillary Forces
Definition: The molecular forces which cause the movement of water through very small spaces.
Capillary Fringe
Definition: The porous material just above the water table which may hold water by capillarity (a property of surface tension that draws water upwards) in the smaller void spaces.
Capital Costs
Definition: Costs (usually long-term debt) of financing construction and equipment.
Carcinogen

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Definition: (car-SIN-o-jen) Any substance which tends to produce cancer in an organism.
Carcinogen Assessment Group
Acronym: CAG
Carcinogenic
Definition: Cancer-producing.
CAS Registration Number
Definition: A number assigned by the Chemical Abstracts Service to identify a chemical.
Catalyst
Definition: (CAT-uh-LIST) A substance that changes the speed or yield of a chemical reaction without being consumed or chemically changed by the chemical reaction.
Catalyze
Definition: (CAT-uh-LIZE) To act as a catalyst. Or, to speed up a chemical reaction.
Catalyzed
Definition: (CAT-uh-LIZED) To be acted upon by a catalyst.

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<p>Cathode</p> <p>Definition: (KA-thow-d) The negative pole or electrode of an electrolytic cell or system. The cathode attracts positively charged particles or ions (cations).</p>
<p>Cathodic Protection</p> <p>Definition: (ca-THOD-ick) An electrical system for prevention of rust, corrosion, and pitting of metal surfaces which are in contact with water or soil. A low-voltage current is made to flow through a liquid (water) or a soil in contact with the metal in such a manner that the external electromotive force renders the metal structure cathodic. This concentrates corrosion on auxiliary anodic parts which are deliberately allowed to corrode instead of letting the structure corrode.</p>
<p>Cation</p> <p>Definition: (CAT-EYE-en) A positively charged ion in an electrolyte solution, attracted to the cathode under the influence of a difference in electrical potential. Sodium ion (Na⁺) is a cation.</p>
<p>Cationic Polymer</p> <p>Definition: A polymer having positively charged groups of ions; often used as a coagulant aid.</p>
<p>Cavitation</p> <p>Definition: (CAV-uh-TAY-shun) The formation and collapse of a gas pocket or bubble on the blade of an impeller or the gate of a valve. The collapse of this gas pocket or bubble drives water into the impeller or gate with a terrific force that can cause pitting on the impeller or gate surface Cavitation is accompanied by loud noises that sound like someone is pounding on the impeller or gate with a</p>

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hammer.
Central Nervous System
Definition: Portion of the nervous system which consists of the brain and spinal cord. Acronym: CNS
Centrate
Definition: The water leaving a centrifugal after most of the solids have been removed.
Centrifugal Pump
Definition: (sen-TRIF-h-gull) A pump consisting of an impeller fixed on a rotating shaft that is enclosed in a casing, and having an inlet and discharge connection. As the rotating impeller whirls the water around, centrifugal force builds up enough pressure to force the water through the discharge outlet.
Centrifuge
Definition: A mechanical device that uses centrifugal or rotational forces to separate solids from liquids.
Check Valve
Definition: A special valve with a hinged disc or flap that opens in the direction of normal flow and is forced shut when flows attempt to go in the reverse or opposite direction of normal flow.
Chelation

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<p>Definition: (key-LAY-shun) A chemical complexing (forming or joining together) of metallic cations (such as copper) with certain organic compounds, such as EDTA (ethylene diamine tetracetic acid). Chelation is used to prevent the precipitation of metals (copper).</p>
<p>Chemical Oxygen Demand</p> <p>Definition: An indirect measure of the amount of oxygen used by inorganic and organic matter in water. The measure is a laboratory test based on a chemical oxidant and therefore does not necessarily correlate with biochemical oxygen demand.</p> <p>Acronym: COD</p>
<p>Chisel Plowing</p> <p>Definition: Cropland preparation by a special implement (chisel) that avoids complete inversion of the soil (as occurs with conventional moldboard plowing). Chisel plowing can leave a protective cover of crop residues on the soil surface that helps prevent erosion and improve infiltration.</p>
<p>Chloramines</p> <p>Definition: (KLOR-uh-means) Compounds formed by the reaction of hypochlorous acid (or aqueous chlorine) with ammonia.</p>
<p>Chlorination</p> <p>Definition: (KLOR-uh-NAY-shun) The application of chlorine to water, generally for the purpose of disinfection, but frequently for accomplishing other biological or chemical results (aiding coagulation and controlling tastes and odors).</p>
<p>Chlorinator</p>

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Definition: (KLOR-uh-NAY-ter) A metering device which is used to add chlorine to water.
Chlorine-Contact Chamber
Definition: That part of a water treatment plant where effluent is disinfected by chlorine.
Chlorine Demand
Definition: Chlorine demand is the difference between the amount of chlorine added to water and the amount of residual chlorine remaining after a given contact time. Chlorine demand may change with dosage, time, temperature, pH, and nature and amount of the impurities in the water. Chlorine Demand, mg/L = Chlorine Applied, mg/L - Residual, mg/L.
Chlorine Requirement
Definition: The amount of chlorine which is needed for a particular purpose. Some reasons for adding chlorine are reducing the number of coliform bacteria (Most Probable Number), obtaining a particular chlorine residual, or oxidizing some substance in the water. In each case a definite dosage of chlorine will be necessary. This dosage is the chlorine requirement.
Chlorophenolic
Definition: (klor-o-FEE-NO-lick) Chlorophenolic compounds are phenolic compounds (carbolic acid) combined with chlorine.
Chlorophenoxy
Definition: (KLOR-o-fuh-KNOX-ee) A class of herbicides that may be found in domestic water supplies and cause adverse health

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effects. Two widely used chlorophenoxy herbicides are 2,4-D (2,4-Dichlorophenoxy acetic acid) and 2,4,5-TP (2,4,5-Trichlorophenoxy propionic acid (silvex)).
Chlororganic
Definition: (klor-or-GAN-nick) Organic compounds combined with chlorine. These compounds generally originate from, or are associated with, life processes such as those of algae in water.
Chronic
Definition: 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.
Chronic Exposure
Definition: Long-term, low-level exposure to a toxic chemical.
Circle of Influence
Definition: The circular outer edge of a depression produced in the water table by the pumping of water from a well.
Circuit
Definition: The complete path of an electric current, including the generating apparatus or other source; or, a specific segment or section of the complete path.
Circuit Breaker

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<p>Definition: A safety device in an electrical circuit that automatically shuts off the circuit when it becomes over-loaded. The device can be manually reset.</p>
<p>Cistern</p> <p>Definition: (SIS-turn) A small tank (usually covered) or a storage facility used to store water for a home or farm. Often used to store rain water.</p>
<p>Clarifier</p> <p>Definition: A large circular or rectangular tank or basin in which water is held for a period of time, during which the heavier suspended solids settle to the bottom.</p>
<p>Class (pipe and fittings)</p> <p>Definition: The working pressure rating of a specific pipe for use in water distribution systems which includes allowances for surges. This term is used for cast iron, ductile iron, asbestos cement and some plastic pipe.</p>
<p>Clay</p> <p>Definition: One type of soil particle with a diameter of approximately one ten-thousandth of an inch.</p>
<p>Clay Soil</p> <p>Definition: A soil containing more than 40 percent clay, but less than 45 percent sand, and less than 40 percent silt.</p>

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Clear Well
Definition: A reservoir for the storage of filtered water of sufficient capacity to prevent the need to vary the filtration rate with variations in demand. Also used to provide chlorine contact time for disinfection.
Clinical Studies
Definition: Studies of humans suffering from symptoms induced by chemical exposure.
Coagulant Aid
Definition: Any chemical or substance used to assist or modify coagulation.
Coagulants
Definition: (co-AGG-you-lents) Chemicals that cause very fine particles to clump together into larger particles. This makes it easier to separate the solids from the water by settling, skimming, draining or filtering.
Coagulation
Definition: (co-AGG-yoo-LAY-shun) The clumping together of very fine particles into larger particles caused by the use of chemicals (coagulants). The chemicals neutralize the electrical charges of the fine particles and cause destabilization of the particles. This clumping together makes it easier to separate the solids from the water by settling, skimming, draining, or filtering.
Cohesion

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<p>Definition: Molecular attraction which holds two particles together.</p>
<p>Coliform</p> <p>Definition: (COAL-i-form) A group of bacteria found in the intestines of warm-blooded animals (including humans) also in plants, soil, air and water. Fecal coliforms are a specific class of bacteria which only inhabit the intestines of warm-blooded animals. The presence of coliform a is an indication that the water is polluted and may contain pathogenic organisms.</p>
<p>Coliform Organism</p> <p>Definition: Microorganisms found in the intestinal tract of humans and animals. Their presence in water indicates fecal pollution and potentially dangerous bacterial contamination by disease-causing microorganisms.</p>
<p>Colloids</p> <p>Definition: (CALL-loids) Very small, finely divided solids (particles that do not dissolve) that remain dispersed in a liquid for a long time due to their small size and electrical charge. When most of the particles in water have a negative electrical charge, they tend to repel each other. This repulsion prevents the particles from clumping together, becoming heavier, and settling out.</p>
<p>Colorimetric Measurement</p> <p>Definition: A means of measuring unknown chemical concentrations in water by measuring a sample's color intensity. The specific color of the sample, developed by addition of chemical reagents, is measured with a photoelectric colorimeter or is compared with "color standards" using, or corresponding with, known concentrations of the chemical.</p>
<p>Combined Available Residual Chlorine</p>

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<p>Definition: The concentration of residual chlorine which is combined with ammonia (NH₃) and/or organic nitrogen in water as a chloramine (or other chloro derivative) yet is still available to oxidize organic matter and utilize its bactericidal properties.</p>
<p>Combined Residual Chlorination</p>
<p>Definition: The application of chlorine to water to produce combined available residual chlorine. This residual can be made up of monochloramines, dichloramines, and nitrogen trichloride.</p>
<p>Combined Sewer</p>
<p>Definition: A sewer that transports surface runoff and human domestic wastes (sewage), and sometimes industrial wastes. Wastewater and runoff in a combined sewer may occur in excess of the sewer capacity and cannot be treated immediately. The excess is frequently discharged directly to a receiving stream without treatment, or to a holding basin for subsequent treatment and disposal.</p>
<p>Community Water System</p>
<p>Definition: 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.</p>
<p>Acronym: CWS</p>
<p>Complete Treatment</p>
<p>Definition: A method of treating water which consists of the addition of coagulant chemicals, flash mixing, coagulation - flocculation, sedimentation and filtration.</p>
<p>Compliance Cycle</p>

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Term
<p>Definition: Three nine-year calendar year cycle during which public water systems must monitor. Each compliance cycle consists of three three-year compliance periods. The first calendar year cycle begins January 1, 1993 and ends December 31, 2001; the second begins January 1, 2002 and ends December 31, 2010; the third from January 1, 2011 to December 31, 2019, etc.</p>
<p>Compliance Period</p> <p>Definition: A three year calendar period within a compliance cycle. Each compliance cycle has three three-year compliance periods. Within the first compliance cycle, the first compliance period runs from January 1, 1993 to December 31, 1995; the second from January 1, 1996 to December 31, 1998; the third from January 1, 1999 to December 31, 2001.</p>
<p>Composite Samples</p> <p>Definition: (come-PAH-zit) A collection of individual samples obtained at regular intervals, usually every one or two hours during a 24-hour time span. Each individual sample is combined with the others in proportion to the rate of flow when the sample was collected. The resulting mixture (composite sample) forms a representative sample and is analyzed to determine the average conditions during the sampling period.</p>
<p>Composting</p> <p>Definition: A controlled microbial degradation of organic waste yield an environmentally sound, nuisance-free product of potential value as a soil conditioner.</p>
<p>Compound</p> <p>Definition: A substance composed of two or more elements whose composition is constant. For example, table salt (sodium chloride -</p>

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Term
NACI) is a compound.
Concentration Polarization
Definition 1: The ratio of the salt concentration in the membrane boundary layer to the salt concentration in the bulk stream. The most common and serious problem resulting from concentration polarization is the increasing tendency for precipitation of sparingly soluble salts and the deposition of particulate matter on the membrane surface. Definition 2: Used in corrosion studies to indicate a depletion of ions near an electrode. Definition 3: The basis for chemical analysis by a polarograph.
Conductance
Definition: A rapid method of estimating the dissolved-solids content of a water supply. The measurement indicates the capacity of a sample of water to carry an electrical current, which is related to the concentration of ionized substances in the water.
Conductivity
Definition: A measure of the ability of a solution (water) to carry an electric current.
Conductor
Definition: A substance, body, device or wire that readily conducts or carries electrical current.
Cone of Depression
Definition: The depression, roughly conical in shape, produced in the water table by the pumping of water from a well.
Cone of Influence

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Term
Definition: The depression, roughly conical in shape, produced in the water table by the pumping of water from a well.
Confined Aquifer
Definition: An aquifer in which ground water is confined under pressure which is significantly greater than atmospheric pressure.
Confluent Growth
Definition: A continuous bacterial growth covering the entire filtration area of a membrane filter, or a portion thereof, in which bacterial colonies are not discrete.
Confounding Factors
Definition: Variables other than chemical exposure level which can affect the incidence or degree of a parameter being measured.
Consumptive Use
Definition: Water removed from available supplies without direct return to a water resource system for uses such as manufacturing, agriculture, and food preparation.
Contactors
Definition: An electrical switch, usually magnetically operated.
Contaminant

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Term
<p>Definition: Any physical, chemical, biological, or radiological substance or matter that has an adverse effect on air, water, or soil.</p>
<p>Contamination</p>
<p>Definition: The introduction into water of microorganisms, chemicals, toxic substances, wastes, or wastewater in a concentration that makes the water unfit for its next intended use.</p>
<p>Continuous Sample</p>
<p>Definition: A flow of water from a particular place in a plant to the location where samples are collected for testing. This continuous stream may be used to obtain grab or composite samples. Frequently, several taps (faucets) will flow continuously in the laboratory to provide test samples from various places in a water treatment plant.</p>
<p>Contour Farming</p>
<p>Definition: A conservation-based method of farming in which all farming operations (for example, tillage and planting) are performed across (rather than up and down) the slope. Ideally, each crop row is planted at right angles to the ground slope.</p>
<p>Contour Strip Farming</p>
<p>Definition: A kind of contour farming in which row crops are planted in strips, between alternating strips of close-growing, erosion resistant forage (grass, grain, hay) crops.</p>
<p>Control Loop</p>
<p>Definition: The path through the control system between the sensor, which measures a process variable, and the controller, which controls or adjusts the process variable.</p>

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Term
<p>Control System</p> <p>Definition: A system which senses and controls its own operation on a close, continuous basis in what is called proportional (or modulating) control.</p>
<p>Controller</p> <p>Definition: A device which controls the starting, stopping, or operation of a device or piece of equipment.</p>
<p>Conventional Filtration</p> <p>Definition: A method of treating water to remove particulates. The method consists of the addition of coagulant chemicals, flash mixing, coagulation - flocculation, sedimentation and filtration.</p>
<p>Conventional Filtration Treatment</p> <p>Definition: A series of processes including coagulation, flocculation, sedimentation, and filtration resulting in substantial particulate removal.</p>
<p>Conventional Tillage</p> <p>Definition: The traditional method of farming in which soil is prepared for planting by completely inverting it with a moldboard plow. Subsequent working of the soil with other implements is usually performed to smooth the soil surface. Bare soil is exposed to the weather for some varying length of time depending on soil and climatic conditions.</p>
<p>Conventional Treatment</p>

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Term
Preferred Term: Conventional Filtration
Conveyance Loss
Definition: Water lost in conveyance (pipe, channel, conduit, ditch) by leakage or evaporation.
Corporation Cock
Preferred Term: Corporation Stop
Corporation Stop
Definition: A water service shutoff valve located at a street water main. This valve cannot be operated from the ground surface because it is buried and there is no valve box.
Corrosion
Definition: The gradual decomposition or destruction of a material by chemical action, often due to an electrochemical reaction. Corrosion may be caused by: 1) stray current electrolysis, 2) galvanic corrosion caused by dissimilar metals, or 3) differential concentration cells. Corrosion starts at the surface of a material and moves inward.
Corrosion Inhibitor
Definition: A substances that slows the rate of corrosion of metal plumbing materials by water, especially lead and copper materials, by forming a protective film on the interior surface of those materials.
Corrosivity

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Term
Definition: An indication of the corrosiveness of a water. The corrosiveness of a water is described by the water's pH, alkalinity, hardness, temperature, total dissolved solids, dissolved oxygen concentration, and the Langelier Index.
Cost/Benefit Definition: A quantitative evaluation of the costs which would be incurred versus the overall benefits to society of a proposed action such as the establishment of an acceptable dose of a toxic chemical.
Cost Sharing Definition: A publicly financed program through which society, as the beneficiary of environment protection, shares part of the cost of pollution control with those who must actually install the controls.
Coulomb Definition: (COO-lahm) A measurement of the amount of electrical charge conveyed in one second by an electric current of one ampere. One coulomb equals about 6.25×10^{18} electrons (6,250,000,000,000,000,000 electrons).
Coupon Definition: A steel specimen inserted into water to measure the corrosiveness of water. The rate of corrosion is measured as the loss of weight of the coupon (in milligrams) per surface area (in square decimeters) exposed to the water per day. 10 decimeters = 1 meter = 100 centimeters.
Cover Crop

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Term
<p>Definition: A crop that provides temporary protection for delicate seedlings and/or provides a canopy for seasonal soil protection and improvement between normal crop production periods. Except in orchards where permanent vegetative cover is maintained, cover crops usually are grown for one year or less. When plowed under and incorporated into the soil, cover crops are also referred to as green manure crops.</p>
<p>Crop Rotation</p> <p>Definition: A system of farming in which a regular succession of different crops are planted on the same land area, as opposed to growing the same crop time after time (monoculture).</p>
<p>Cross Connection</p> <p>Definition: 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 g water system to supply water for the pump seal, a cross-connection or mixing between the two water systems can occur. This mixing may lead to contamination of the drinking water.</p>
<p>CT</p> <p>Definition: The product of "residual disinfectant concentration" (C) in mg/l determined before or at the first customer, and the corresponding "disinfectant contact time" (T) in minutes, i.e., "C" x "T".</p>
<p>CT Calc</p> <p>Preferred Term: CTcalc</p>
<p>CT Calculations</p>

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Term
Preferred Term: CTcalc
CTcalc
Definition: The product of "residual disinfectant concentration" (C) in mg/l determined before or at the first customer, and the corresponding "disinfectant contact time" (T) in minutes, i.e., "C" x "T".
Cumulative Exposure
Definition: The summation of exposures of an organism to a chemical over a period of time.
Curb Cock
Preferred Term: Curb Stop
Curb Stop
Definition: A water service shutoff valve located in a water service pipe near the curb and between the water main and the building. This valve is usually operated by a wrench or valve key and is used to start or stop flows in the water service line to a building.
Curie
Definition: A measure of radioactivity. One Curie of radioactivity is equivalent to 3.7×10^{10} or 37,000,000,000 nuclear disintegrations per second.
Current

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Term
<p>Definition: A movement or flow of electricity. Water flowing in a pipe is measured in gallons per second past a certain point, not by the number of water molecules going past a point. Electric current is measured by the number of coulombs per second flowing past a certain point in a conductor. A coulomb is equal to about 6.25×10^{18} electrons (6,250,000,000,000,000,000 electrons). A flow of one coulomb per second is called one ampere, the unit of the rate of flow of current.</p>
<p>Dateometer</p> <p>Definition: (day-TOM-uh-ter) A small calendar disc attached to motors and equipment to indicate the year in which the last maintenance service was performed.</p>
<p>Day Tank</p> <p>Definition: A tank used to store a chemical solution of known concentration for feed to a chemical feeder. A day tank usually stores sufficient chemical solution to properly treat the water being treated for at least one day.</p>
<p>Dead End</p> <p>Definition: 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.</p>
<p>Decant</p> <p>Definition: To draw off the upper layer of liquid (water) after the heavier material (a solid or another liquid) has settled.</p>
<p>Dechlorination</p>

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Term
<p>Definition: (dee-KLOR-uh-NAY-shun) The deliberate removal of chlorine from water. The partial or complete reduction of residual chlorine by any chemical or physical process.</p>
<p>Decibel</p> <p>Definition: (DES-uh-bull) A unit for expressing the relative intensity of sounds on a scale from zero for the average least perceptible sound to about 130 for the average level at which sound causes pain to humans.</p>
<p>Decomposition</p> <p>Definition: The conversion of chemically unstable materials to more stable forms by chemical or biological action. If organic matter decays when there is no oxygen present (anaerobic conditions or putrefaction), undesirable tastes and odors are produced. Decay of organic matter when oxygen is present (aerobic conditions) tends to produce much less objectionable tastes and odors.</p>
<p>Defluoridation</p> <p>Definition: (de-FLOOR-uh-DAY-shun) The removal of excess fluoride in drinking water to prevent the mottling (brown stains) of teeth.</p>
<p>Degasification</p> <p>Definition: (DEE-GAS-if-uh-KAY-shun) A water treatment process which removes dissolved gases from the water. The gases may be removed by either mechanical or chemical treatment methods or a combination of both.</p>
<p>Degradation</p> <p>Definition: Chemical or biological breakdown of a complex compound into simpler compounds.</p>

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Term
Demineralization
Definition: (DEE-MIN-er-al-uh-ZAY-shun) A treatment process which removes dissolved minerals (salts) from water.
Denitrification
Definition: The biochemical conversion of nitrate and nitrite nitrogen in the soil dissolved in water to gaseous nitrogen.
Density
Definition: (DEN-sit-tee) A measure of how heavy a substance (solid, liquid or gas) is for its size. Density is expressed in terms of weight per unit volume, that is, grams per cubic centimeter or pounds per cubic foot. The density of water is 1.0 gram per cubic centimeter or about 62,4 pounds per cubic foot.
Dermal Exposure
Definition: Contact between a chemical and the skin.
Desalinization
Definition: (DEE-SAY-leen-uh-ZAY-shun) The removal of dissolved salts (such as sodium chloride, NaCl) from water by natural means (leaching) or by specific water treatment processes.
Desiccant
Definition: (DESS-uh-kant) A drying agent which is capable of removing or absorbing moisture from the atmosphere in a small

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Term
enclosure.
Desiccation
Definition: (DESS-uh-KAY-shun) A process used to thoroughly dry air; to remove virtually all moisture from air.
Desiccator
Definition: (DESS-uh-KAY-tor) A closed container into which heated weighing or drying dishes are placed to cool in a dry environment. The dishes may be empty or they may contain a sample. Desiccators contain a substance, such as anhydrous calcium chloride, which absorbs moisture and keeps the relative humidity near zero so that the dish or sample will not gain weight from absorbed moisture.
Destratification
Definition: (de-STRAT-uh-fuh-KAY-shun) The development of vertical mixing within a lake or reservoir to eliminate (either totally or partially) separate layers of temperature, plant, or animal life. This vertical mixing can be caused by mechanical means (pumps) or through the use of forced air diffusers which release air into the lower layers of the reservoir.
Detention Lag
Definition: The time period between the moment a change is made and the moment when such a change is finally sensed by the associated measuring instrument.
Detention Time
Definition 1: The theoretical (calculated) time required for a small amount of water to pass through a tank at a given rate of flow.

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Term
<p>Definition 2: The actual time in hours, minutes or seconds that a small amount of water is in a settling basin, flocculating basin or rapid-mix chamber. In storage reservoirs, detention time is the length of time entering water will be held before being drafted for use.</p>
<p>Dew Point</p> <p>Definition: The temperature to which air with a given quantity of water vapor must be cooled to cause condensation of the vapor in the air.</p>
<p>Dewater</p> <p>Definition 1: To remove or separate a portion of the water present in a sludge or slurry. To dry sludge so it can be handled and disposed. Definition 2: To remove or drain the water from a tank or a trench.</p>
<p>Diatomaceous Earth</p> <p>Definition: A fine, siliceous (made of silica) "earth" composed mainly of the skeletal remains of diatoms, a type of free-floating, microscopic plant found in the ocean.</p>
<p>Diatomaceous Earth Filtration</p> <p>Definition: A filtration method resulting in substantial particulate removal, that uses a process in which: 1) a "precoat" cake of diatomaceous earth filter media is deposited on a support membrane (septum), and 2) while the water is filtered by passing through the cake on the septum, additional filter media, known as "body feed," is continuously added to the feed water to maintain the permeability of the filter cake.</p> <p>Acronym: DE Filtration</p>
<p>Diffusion</p>

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Term
Definition: The movement of suspended or dissolved particles from a more concentrated to a less concentrated region as a result of the random movement of individual particles; the process tends to distribute them uniformly throughout the available volume.
Digital Readout Definition: Use of numbers to indicate the value or measurement of a variable. The readout of an instrument by a direct, numerical reading of the measured value.
Dilute Solution Definition: A solution that has been made weaker usually by the addition of water.
Dimictic Definition: (die-MICK-tick) Lakes and reservoirs which freeze over and normally go through two stratification and two mixing cycles within a year.
Direct Current Definition: Electrical current flowing in one direction only and essentially free from pulsation. Acronym: D.C.
Direct Filtration Definition: A filtration method of treating water which consists of the addition of coagulant chemicals, flash mixing, coagulation,

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Term
<p>minimal flocculation, and filtration. The flocculation facilities may be omitted, but the physical-chemical reactions will occur to some extent. The sedimentation process is omitted.</p>
<p>Direct Runoff</p> <p>Definition: Water that flows over the ground surface or through the ground directly into streams, rivers, or lakes.</p>
<p>Discharge Head</p> <p>Definition: The pressure (in pounds per square inch or psi) measured at the centerline of a pump discharge and very close to the discharge flange, converted into feet.</p>
<p>Disinfectant</p> <p>Definition: Any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone, that is added to water in any part of the treatment or distribution process and is intended to kill or inactivate pathogenic microorganisms.</p>
<p>Disinfectant Contact Time</p> <p>Definition 1: "T" in CT calculations Definition 2: The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration (C) is measured. Where only one C is measured, T is the time in minutes that it takes for water to move from the point of disinfectant application to a point before or at where residual disinfectant concentration (C) is measured. Where more than one C is measured, T is (a) for the first measurement of C, the time in minutes that it takes for water to move from the first or only point of disinfectant application to a point before or at the point where the first C+ is measured and (b) for subsequent measurements of C, the time in minutes that it takes for water to move from the previous C measurement point to the C measurement point for which the</p>

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Term
particular T is being calculated-. Disinfectant contact time in pipelines must be calculated based on plug flow by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe. Disinfectant contact time within mixing basins and storage reservoirs must be determined by tracer studies or an equivalent demonstration.
Disinfection
Definition: 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.
Disinfection By-Product
Definition: A compound formed by the reaction of a disinfectant such as chlorine with organic material in the water supply.
Dissolved Oxygen
Definition: Measure of water quality indicating free oxygen dissolved in water. Acronym: DO
Distillate
Definition: (DIS-tuh-late) In the distillation of a sample, a portion is evaporated; the part that is condensed afterwards is the distillate.
Divalent
Definition: (die-VAY-lent) Having a valence of two, such as the ferrous ion, Fe ²⁺ .
Diversion

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Term
Definition 1: Use of part of a stream flow as a water supply. Definition 2: A structural conveyance (or ditch) constructed across a slope to intercept runoff flowing down a hillside, and divert it to some convenient discharge point.
Domestic Plumbing Problem Definition: A coliform contamination problem in a public water system with more than one service connection that is limited to the specific service connection from which the coliform positive sample was taken.
Dosage Definition: The quantity of a chemical administered to an organism.
Dose Definition: The actual quantity of a chemical to which an organism is exposed.
Dose Equivalent Definition: The product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements (ICRU).
Dose-Response Definition: A quantitative relationship between the dose of a chemical and an effect caused by the chemical.

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Term
Dose-Response Curve
Definition: A graphical presentation of the relationship between degree of exposure to a chemical (dose) and observed biological effect or response.
Dose-Response Evaluation
Definition: A component of risk assessment that describes the quantitative relationship between the amount of exposure to a substance and the extent of toxic injury or disease.
Dose-Response Relationship
Definition: The quantitative relationship between the amount of exposure to a substance and the extent of toxic injury produced.
Downgradient
Definition: The direction that ground water flows; similar in concept to downstream for surface water, such as a river.
DPD
Definition: (pronounce as separate letters) A method of measuring the chlorine residual in water. The residual may be determined by either titrating or comparing a developed color with color standards.
Draft
Definition 1: The act of drawing or removing water from a tank or reservoir. Definition 2: The water which is drawn or removed from a

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tank or reservoir.
Drainage Definition: A technique to improve the productivity of some agricultural land by removing excess water from the soil; surface drainage is accomplished with open ditches; subsurface drainage uses porous conduits (drain tile) buried beneath the soil surface.
Drainage Basin Definition: The area of land that drains water, sediment, and dissolved materials to a common outlet at some point along a stream channel.
Drawdown Definition 1: The drop in the water table or level of water in the ground when water is being pumped from a well. Definition 2: The amount of water used from a tank or reservoir. Definition 3: The drop in the water level of a tank or reservoir.
Drinking Water Equivalent Level Definition: Estimated exposure (in mg/L) which is interpreted to be protective for non carcinogenic endpoints of toxicity over a lifetime of exposure. Developed for chemicals that have a significant carcinogenic potential (Group B). Provides risk manager with evaluation on non-cancer endpoints, but infers that carcinogenicity should be considered the toxic effect of greatest concern. Acronym: DWEL
DROOP Preferred Term: Offset

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Term
<p>Dynamic Pressure</p> <p>Definition: When a pump is operating, the vertical distance (in feet) from a reference point (such as a pump centerline) to the hydraulic grade line is the dynamic head.</p>
<p>Eductor</p> <p>Definition: (e-DUCK-ter) A hydraulic device used to create a negative pressure (suction) by forcing a liquid through a restriction, such as a Venturi. An eductor or aspirator (the hydraulic device) may be used in the laboratory in place of a vacuum pump. As an injector, it is used to produce vacuum for chlorinators.</p>
<p>Effective Corrosion Inhibitor Residual</p> <p>Definition: A concentration of corrosion inhibitor sufficient to form a protective coating on the interior walls of a pipe, reducing its corrosion.</p>
<p>Effective Range</p> <p>Definition: That portion of the design range (usually upper 90 percent) in which an instrument has acceptable accuracy.</p>
<p>Effective Size</p> <p>Definition: The diameter of the particles in a granular sample (filter media) for which 10 percent of the total grains are smaller and 90 percent larger on a weight basis. Effective size is obtained by passing granular material through sieves with varying dimensions of mesh and weighing the material retained by each sieve. The effective size is also approximately the average size of the grains.</p> <p>Acronym: E.S.</p>

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Term
<p>Effluent</p> <p>Definition: (EF-loo-ent) Water or some other liquid-raw, partially or completely treated-flowing from a reservoir, basin, treatment process or treatment plant.</p>
<p>Ejector</p> <p>Definition: A device used to disperse a chemical solution into water being treated.</p>
<p>Electrochemical Reaction</p> <p>Definition: Chemical changes produced by electricity (electrolysis) or the production of electricity by chemical changes (galvanic action). In corrosion, a chemical reaction is accompanied by the flow of electrons through a metallic path. The electron flow may come from an external force and cause the reaction, such as electrolysis caused by a DC (direct current) electric railway or the electron flow may be caused by a chemical reaction as in the galvanic action of a flashlight dry cell.</p>
<p>Electrochemical Series</p> <p>Definition: A list of metals with the standard electrode potentials given in volts. The size and sign of the electrode potential indicates how easily these elements will take on or give up electrons, or corrode. Hydrogen is conventionally assigned a value of zero.</p>
<p>Electrolysis</p> <p>Definition: (ee-leck-TRAWL-us-sis) The decomposition of material by an outside electrical current.</p>
<p>Electrolyte</p>

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Term
<p>Definition: (ee-LECK-tro-LIGHT) A substance which dissociates (separates) into two or more ions when it is dissolved in water.</p>
<p>Electrolytic Cell</p>
<p>Definition: (ee-LECK-tro-LIT-ick) A device in which the chemical decomposition of material causes an electric current to flow. Also, a device in which a chemical reaction occurs as a result of the flow of electric current. Chlorine and caustic (NaOH) are made from salt (NaCl) in electrolytic cells.</p>
<p>Electromotive Force</p>
<p>Definition: The electrical pressure available to cause a flow of current (amperage) when an electrical circuit is closed.</p> <p>Acronym: E.M.F.</p>
<p>Electromotive Series</p>
<p>Definition: A list of metals and alloys presented in the order of their tendency to corrode (or go into solution). This is a practical application of the theoretical ELECTROCHEMICAL SERIES.</p>
<p>Electron</p>
<p>Definition: An extremely small, negatively charged particle; the part of an atom that determines its chemical properties.</p>
<p>Element</p>
<p>Definition: A substance which cannot be separated into its constituent parts and still retain its chemical identity. For example, sodium (Na) is an element.</p>

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Term
End Bells
Definition: Devices used to hold the rotor and stator of a motor in position.
End Point
Definition: Samples are titrated to the end point. This means that a chemical is added, drop by drop, to a sample until a certain color change (blue to clear, for example) occurs. This is called the end point of the titration. In addition to a color change, an end point may be reached by the formation of a precipitate or the reaching of a specified pH. An end point may be detected by the use of an electronic device such as a pH meter.
Endangerment Assessment
Definition: A site-specific risk assessment of the actual or potential danger to human health or welfare and the environment from the release of hazardous substances or waste. The endangerment assessment document is prepared in support of enforcement actions under CERCLA or RCRA.
Endemic
Definition: (en-DEM-ick) Something peculiar to a particular people or locality, such as a disease which is always present in the population.
Endrin
Definition: (EN-drin) A pesticide toxic to freshwater and marine aquatic life that produces adverse health effects in domestic water supplies.

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Term
<p>Energy Grade Line</p> <p>Definition: A line that represents the elevation of energy head of water flowing in a pipe, conduit or channel. The line is drawn above the hydraulic grade line (gradient) a distance equal to the velocity head ($V^2/2g$) of the water flowing at each section or point along the pipe or channel.</p> <p>Acronym: E.G.L.</p>
<p>Enteric</p> <p>Definition: Of intestinal origin, especially applied to wastes or bacteria.</p>
<p>Entrain</p> <p>Definition: To trap bubbles in water either mechanically through turbulence or chemically through a reaction.</p>
<p>Enzymes</p> <p>Definition: (EN-zimes) Organic substances (produced by living organisms) which cause or speed up chemical reactions. Organic catalysts and/or biochemical catalysts.</p>
<p>Epidemic</p> <p>Definition: Widespread outbreak of a disease, or a large number of cases of a disease in a single community or relatively small area. Disease may spread from person to person, and/or by the exposure of many persons to a single source, such as a water supply.</p>
<p>Epidemiologic Study</p>

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Term
<p>Definition: Study of human populations to identify causes of disease. Such studies often compare the health status of a group of persons who have been exposed to a suspect agent with that of a comparable non-exposed group.</p>
<p>Epidemiology</p> <p>Definition: (EP-uh-DE-me-ALL-o-gee) A branch of medicine which studies epidemics (diseases which affect significant numbers of people during the same time period in the same locality). The objective of epidemiology is to determine the factors that cause epidemic diseases and how to prevent them.</p>
<p>Epilimnion</p> <p>Definition: (EP-ub-LIM-knee-on) The upper layer of water in a thermally stratified lake or reservoir. This layer consists of the warmest water and has a fairly uniform (constant) temperature. The layer is readily mixed by wind action.</p>
<p>Erosion</p> <p>Definition: Wearing away of soil by timing water, wind, or ice; erosion is the process by which the earth's surface is shaped and occurs even in remote, uninhabited areas at a slow rate (geologic erosion); of more concern is accelerated erosion caused by people's activities.</p>
<p>Ester</p> <p>Definition: A compound formed by the reaction between an acid and an alcohol with the elimination of a molecule of water.</p>
<p>Eutrophic</p> <p>Definition: (you-TRO-fick) Reservoirs and lakes which are rich in nutrients and very productive in terms of aquatic animal and plant</p>

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Term
life.
Eutrophication
Definition: (you-TRO-fi-KAY-shun) The increase in the nutrient levels of a lake or other body of water; this usually causes an increase in the growth of aquatic animal and plant life.
Evaporation
Definition: The process by which water or other liquid becomes a gas (water vapor or ammonia vapor). Water from land areas, bodies of water, and all other moist surfaces is absorbed into the atmosphere as a vapor.
Evapotranspiration
Definition: (ee-VAP-o-TRANS-purr-A-shun) The combined processes of evaporation and transpiration. It can be defined as the sum of water used by vegetation and water lost by evaporation.
Exemption
Definition: A State with primacy may relieve a public water system from a requirement respecting an MCL, treatment technique or both, by granting an exemption if certain conditions exist. These are: 1) the system cannot comply with a MCL or treatment technique due to compelling factors which may include economic factors; 2) the system was in operation on the effective date of the MCL or treatment technique requirement; and 3) the exemption will not result in an unreasonable public health risk.
Exposure
Definition: Contact with a chemical or physical agent.

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Term
Exposure Assessment
Definition: The determination or estimation (qualitative or quantitative) of the magnitude, frequency, duration, route, and extent (number of people) of exposure to a chemical.
Exposure Coefficient
Definition: Term which combines information on the frequency, mode, and magnitude of contact with contaminated medium to yield a quantitative value of the amount of contaminated medium contacted per day.
Exposure Level (chemical)
Definition: The amount (concentration) of a chemical at the absorptive surfaces of an organism.
Exposure Scenario
Definition: A set of conditions or assumptions about sources, exposure pathways, concentrations of toxic chemicals and populations (numbers, characteristics and habits) which aid the investigator in evaluating and quantifying exposure in a given situation.
Extrapolation
Definition: Estimation of unknown values by extending or projecting from known values.
Facultative
Definition: (FACK-ul-TAY-tive) Facultative bacteria can use either molecular (dissolved) oxygen or oxygen obtained from food

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Term
material such as sulfate or nitrate ions. In other words, facultative bacteria can live under aerobic or anaerobic conditions.
Faucet
Preferred Term: Hose Bib
Fecal Coliform Bacteria
Definition: Bacteria found in the intestinal tracts of animals. Their presence in water or sludge is an indicator of pollution and possible contamination by pathogens.
Feedback
Definition: The circulating action between a sensor measuring a process variable and the controller which controls or adjusts the process variable.
Filtration
Definition: A process for removing particulate matter from water by passage through porous media.
Finished Water
Definition: Water that has passed through a water treatment plant; all the treatment processes are completed or "finished." This water is ready to be delivered to consumers.
First Draw

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Term
<p>Definition: The water that immediately comes out when a tap is first opened. This water is likely to have the highest level of lead contamination from plumbing materials.</p>
<p>First Draw Sample</p>
<p>Definition: A one-liter sample of tap water, collected in accordance with CFR Section 141 86(b)(2), that has been standing in plumbing pipes at least 6 hours and is collected without flushing the tap.</p>
<p>Fix Sample</p>
<p>Definition: A sample is fixed in the field by adding chemicals that prevent the water quality indicators of interest in the sample from changing before final measurements are performed later in the lab.</p>
<p>Flagellates</p>
<p>Definition: (FLAJ-el-LATES) Microorganisms that move by the action of tail-like projections.</p>
<p>Flame Polished</p>
<p>Definition: Melted by a flame to smooth out irregularities. Sharp or broken edges of glass (such as the end of a glass tube) are rotated in a flame until the edge melts slightly and becomes smooth.</p>
<p>Floc</p>
<p>Definition: Clumps of bacteria and particulate impurities that have come together and formed a cluster. Found in flocculation tanks and settling or sedimentation basins.</p>

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Term
<p>Flocculation</p> <p>Definition: The gathering together of fine particles in water by gentle mixing after the addition of coagulant chemicals to form larger particles.</p>
<p>Floodplain</p> <p>Definition: The flat or nearly flat land on the floor of a steam valley or tidal area that is covered by water during floods.</p>
<p>Fluidized</p> <p>Definition: (FLEW-id-i-zd) A mass of solid particles that is made to flow like a liquid by injection of water or gas is said to have been fluidized. In water treatment, a bed of filter media is fluidized by backwashing water through the filter.</p>
<p>Fluoridation</p> <p>Definition: (FLOOR-uh-DAY-shun) The addition of a chemical to increase the concentration of fluoride ions in drinking water to a predetermined optimum limit to reduce the incidence (number) of dental caries (tooth decay) in children.</p>
<p>Fluorosis</p> <p>Definition: An abnormal condition caused by excessive intake of fluorine, characterized chiefly by mottling of the teeth.</p>
<p>Flush</p> <p>Definition 1: To open a cold-water tap to clear out all the water which may have been sitting for a long time in the pipes. In new</p>

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Term
<p>homes, to flush a system means to send large volumes of water gushing through the unused pipes to remove loose particles of solder and flux. Definition 2: To force large amounts of water through liquid to clean out piping or tubing storage or process tanks.</p>
<p>Flushing</p> <p>Definition: A method used to clean water distribution lines. Hydrants are opened and water with a high velocity flows through the pipes, removes deposits from the pipes, and flows out the hydrants.</p>
<p>Flux</p> <p>Definition: A flowing or flow.</p>
<p>Foot Valve</p> <p>Definition: A special type of check valve located at the bottom end of the suction pipe on a pump. This valve opens when the pump operates to allow water to enter the suction pipe but closes when the pump shuts off to prevent water from flowing out of the suction pipe.</p>
<p>Formation</p> <p>Definition: A group of similar consolidation (that is, relatively solid) rocks of unconsolidated (that is, relatively loose) minerals.</p>
<p>Free Available Residual Chlorine</p> <p>Definition: That portion of the total available residual chlorine composed of dissolved chlorine gas (Cl₂), 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.</p>

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Term
<p>Free Residual Chlorination</p> <p>Definition: The application of chlorine to water to produce a free available chlorine residual equal to at least 80 percent of the total residual chlorine (sum of free and combined available chlorine residual).</p>
<p>Freeboard</p> <p>Definition 1: The vertical distance from the normal water surface to the top of the confining wall. Definition 2: The vertical distance from the sand surface to the underside of a trough in a sand filter. (This distance is also called AVAILABLE EXPANSION.)</p>
<p>Freezing</p> <p>Preferred Term: Seize up</p>
<p>Frequency of the Current</p> <p>Preferred Term: Hertz</p>
<p>Fresh Water</p> <p>Definition: Water that generally contains less than 1,000 milligrams-per-liter of dissolved solids.</p>
<p>Friction Losses</p> <p>Definition: The head, pressure or energy (they are the same) lost by water flowing in a pipe or channel as a result of turbulence caused by the velocity of the flowing water and the roughness of the pipe. Water flowing in a pipe loses pressure or energy as a</p>

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Term
result of friction losses.
Fungi Definition: (FUN-ji) Mushrooms, molds, mildews, rusts, and smuts that are small non-chlorophyll-bearing plants lacking roots, stems and leaves. They occur in natural waters and grow best in the absence of light. Their decomposition may cause objectionable tastes and odors in water.
Gage Pressure Definition: The pressure within a closed container or pipe as measured with a gage. In contrast, absolute pressure is the sum of atmospheric pressure (14. 7 lbs/sq in) PLUS pressure within a vessel (as measured by a gage). Most pressure gages read in gage pressure or psig (pounds per square inch gage pressure).
Galvanic Cell Definition: An electrolytic cell capable of producing electrical energy by electrochemical action. The decomposition of materials in the cell causes an electric (electron) current to flow from cathode to anode.
Galvanic Series Definition: A list of metals and alloys presented in the order of their tendency to corrode (or go into solution). This is a practical application of the theoretical ELECTROCHEMICAL SERIES.
Galvanize Definition: To coat a metal (especially iron or steel) with zinc. Galvanization is the process of coating a metal with zinc.

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Term
<p>Garnet</p> <p>Definition: (GAR-nit) A group of hard, reddish, glassy, mineral sands made up of silicates of base metals (calcium, magnesium, iron and manganese). Garnet has a higher density than sand.</p>
<p>Gastroenteritis</p> <p>Definition: An inflammation of the stomach and intestine resulting in diarrhea, with vomiting and cramps when irritation is excessive. When caused by an infectious agent, it is often associated with fever.</p>
<p>Gauge, Pipe</p> <p>Definition: A number that defines the thickness of the sheet used to make steel pipe. The larger the number, the thinner the pipe wall.</p>
<p>Gavage</p> <p>Definition: Type of exposure in which a substance is administered to an animal through a stomach tube.</p>
<p>Geological Log</p> <p>Definition: A detailed description of all underground features discovered during the drilling of a well (depth, thickness and type of formations).</p>
<p>Geophysical Log</p> <p>Definition: A record of the structure and composition of the earth encountered when drilling a well or similar type of test hole or boring.</p>

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Term
Germicide
Definition: (GERM-uh-SIDE) A substance formulated to kill germs or microorganisms. The germicidal properties of chlorine make it an effective disinfectant.
Giardia lamblia
Definition: Flagellate protozoan which is shed during its cyst stage into the feces of man and animals. When water containing these cysts is ingested, the protozoan causes a severe gastrointestinal disease called giardiasis.
Giardiasis
Definition: (gee-are-DYE-us-sis) Intestinal disease caused by an infestation of Giardia flagellates.
Glass, Pipe and Fittings
Definition: The working pressure rating of a specific pipe for use in water distribution systems which includes allowances for surges. This term is used for cast iron, ductile iron, asbestos cement and some plastic pipe.
Gooseneck
Definition: A portion of a service connection between the distribution system water main and a meter.
Grab Sample
Definition: A single sample collected at a particular time and place which represents the composition of the water only at that time and

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Term
place.
Grade Definition 1: The elevation of the invert of the bottom of a pipeline, canal, culvert or similar conduit. Definition 2: The inclination or slope of a pipeline, conduit, stream channel, or natural ground surface; usually expressed in terms of the ratio or percentage of number of units of vertical rise or fall per unit of horizontal distance. A 0.5 percent grade would be a drop of one-half foot per hundred feet of pipe.
Gram Definition: A unit of mass equivalent to one milliliter of water at 4 degrees Celsius. 1/454 of a pound.
Gravimetric Definition: A means of measuring unknown concentrations of water quality indicators in a sample by WEIGHING a precipitate or residue of the sample.
Grey Water Definition: Wastewater other than sewage, such as sink drainage or washing machine discharge.
Gross Alpha Particle Activity Definition: The total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.
Gross Beta Particle Activity

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Term
Definition: The total radioactivity due to beta particle emission as inferred from measurements on a dry sample.
Ground Water
Definition: The supply of fresh water found beneath the Earth's surface usually in aquifers which is often used for supplying wells and springs. Because ground water is a major source of drinking water there is growing concern over areas where leaching agricultural or industrial pollutants or substances from leaking underground storage tanks are contaminating ground water.
Ground Water under the Direct Influence (UDI) of Surface Water
Definition: Any water beneath the surface of the ground with: 1) significant occurrence of Insects or other macroorganisms, algae, or large-diameter pathogens such as Giardia lamblia or, 2) significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions. Direct influence must be determined for individual sources in accordance with criteria established by the State. The State determination of direct influence may be based on site-specific measurements of water quality and/or documentation of well construction characteristics and geology with field evaluation.
Half-Life
Definition: The length of time required for the mass, concentration, or activity of a chemical or physical agent to be reduced by one-half.
Halogen
Definition: One of the chemical elements chlorine, bromine, or iodine.

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Term
<p>Hard Water</p> <p>Definition: Alkaline water containing dissolved salts that interfere with some industrial processes and prevent soap from lathering. Water may be considered hard if it has a hardness greater than the typical hardness of water from the region. Some textbooks define hard water as water with a hardness of more than 100 mgAL as calcium carbonate.</p>
<p>Hardness, Water</p> <p>Definition: A characteristic of water caused mainly by the salts of calcium and magnesium, such as bicarbonate, carbonate, sulfate, chloride and nitrate. Excessive hardness in water is undesirable because it causes the formation of soap curds, increased use of soap, deposition of scale in boilers, damage in some industrial processes, and sometimes causes objectionable tastes in drinking water.</p>
<p>Hazard Evaluation</p> <p>Definition: A component of risk assessment that involves gathering and evaluating data on the types of health injury or disease (e.g., cancer) that may be produced by a chemical and on the conditions of exposure under which injury or disease is produced.</p>
<p>Head</p> <p>Definition: The vertical distance (in feet) equal to the pressure (in psi) at a specific point. The pressure head is equal to the pressure in psi times 2.31 ft/psi.</p>
<p>Head Loss</p> <p>Definition: The head, pressure or energy (they are the same) lost by water flowing in a pipe or channel as a result of turbulence</p>

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Term
caused by the velocity of the flowing water and the roughness of the pipe, channel walls or restrictions caused by fittings. Water flowing in a pipe loses head, pressure or energy as a result of friction losses.
Header
Definition: A large pipe to which a series of smaller pipes are connected.
Heat Sensor
Definition: A device that opens and closes a switch in response to changes in the temperature. This device might be a metal contact, or a thermocouple which generates a minute electrical current proportional to the difference in heat, or a variable resistor whose value changes in response to changes in temperature.
Heavy Metals
Definition: Metallic elements with high atomic weights, e g, mercury, chromium, cadmium, arsenic, and lead. They can damage living things at low concentrations and tend to accumulate in the food chain.
Hectare
Definition: (HECK-tar) A measure of area in the metric system similar to an acre. One hectare is equal to 10,000 square meters and 2.4711 acres.
Hematopoiesis
Definition: The production of blood and blood cells; hemopoiesis.

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Term
Hemopoiesis
Preferred Term: Hematopoiesis
Hepatic
Definition: Pertaining to the liver.
Hepatitis
Definition: (HEP-uh-TIE-this) Hepatitis is an inflammation of the liver usually caused by an acute viral infection. Yellow jaundice is one symptom of hepatitis.
Hepatoma
Definition: A malignant tumor occurring in the liver.
Herbicide
Definition: (HERB-uh-SIDE) A compound, usually a man-made organic chemical, used to kill or control plant growth.
Hertz
Definition: The number of complete electromagnetic cycles or waves in one second of an electrical or electronic circuit. Acronym: Hz
Heterotrophic Microorganisms

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Term
<p>Definition: Bacteria and other microorganisms that use organic matter synthesized by other organisms for energy and growth.</p>
<p>Heterotrophic Plate Count</p>
<p>Definition: The number of colonies of heterotrophic bacteria grown on selected solid media at a given temperature and incubation period, usually expressed in number of bacteria per milliliter of sample.</p>
<p>Acronym: HPC</p>
<p>High-Line Jumpers</p>
<p>Definition: Pipes or hoses connected to fire hydrants and laid on top of the ground to provide emergency water service for an isolated portion of a distribution system.</p>
<p>High Test Hypochlorite</p>
<p>Definition: Calcium hypochlorite or $\text{Ca}(\text{OCI})_2$</p>
<p>Acronym: HTH</p>
<p>High-to-Low-Dose Extrapolation</p>
<p>Definition: The process of prediction of low exposure risks to rodents from the measured high exposure-high risk data.</p>
<p>Histology</p>
<p>Definition: The study of the structure of cells and tissues; usually involves microscopic examination of tissue slices.</p>

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Term
Hose Bib
Definition: Faucet. A location in a water line where a hose is connected.
Human Equivalent Dose
Definition: A dose which, when administered to humans, produces an effect equal to that produced by a dose in animals.
Human Exposure Evaluation
Definition: A component of risk assessment that involves describing the nature and size of the population exposed to a substance and the magnitude and duration of their exposure. The evaluation could concern past exposures, current exposures, or anticipated exposures.
Human Health Risk
Definition: The likelihood (or probability) that a given exposure or series of exposures may have or will damage the health of individuals experiencing the exposures.
Humus
Definition: Organic portion of the soil remaining after prolonged microbial decomposition.
Hydrated Lime
Definition: Limestone that has been burned and treated with water under controlled conditions until the calcium oxide portion has

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Term
been converted to calcium hydroxide (Ca(OH) ₂). Hydrated lime is quicklime combined with water. $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$
Hydraulic Grade Line
Definition: The surface or profile of water flowing of hydraulic gradient. The slope of the hydraulic grade line is under pressure, the hydraulic grade line is at the level water would rise to in a small vertical tube connected to the pipe.
Hydraulic Gradient
Definition: The slope of the hydraulic grade line. This is the slope of the water surface in an open channel, the slope of the water surface of the groundwater table, or the slope of the water pressure for pipes under pressure.
Hydrochlorination
Definition: (Hi-poe-KLOR-uh-NAY-shun) The application of hypochlorite compounds to water for the purpose of disinfection.
Hydrochlorinators
Definition: (Hi-poe-KLOR-uh-NAY-tors) Chlorine pumps, chemical feed pumps or devices used to dispense chlorine solutions made from hypochlorites such as bleach (sodium hypochlorite) or calcium hypochlorite into the water being treated.
Hydrogeologic Conditions
Definition: Conditions stemming from the interaction of ground water and the surrounding soil and rock.
Hydrogeologic Cycle

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Term
Definition: The natural process recycling water from the atmosphere down to (and through) the earth and back to the atmosphere again.
Hydrogeologist
Definition: (HI-dro-gee-ALL-uh-gist) A person who studies and works with groundwater.
Hydrogeology
Definition: The geology of ground water, with particular emphasis on the chemistry and movement of water.
Hydrograph
Definition: A graph of the rate of runoff plotted against time for a point on a channel.
Hydrologic Cycle
Definition: (HI-dro-LOJ-ick) Movement or exchange of water between the atmosphere and the earth.
Hydrology
Definition: The study of the occurrence, distribution and circulation of the natural waters of the earth.
Hydrolysis
Definition: (hi-DROLL-uh-sis) A chemical reaction in which a compound is converted into another compound by taking up water.
Hydrophilic

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Term
Definition: (Hi-dro-FILL-ick) Having a strong affinity (liking) for water. The opposite of hydrophobic.
Hydrophobic
Definition: (Hi-dro-FOE-bick) Having a strong aversion (dislike) for water. The opposite of hydrophilic.
Hydropneumatic
Definition: (Hi-dro-new-MAT-ick) A water system, usually small, in which a water pump is automatically controlled (started and stopped) by the air pressure in a compressed-air tank.
Hydrostatic Pressure
Definition 1: (Hi-dro-STAT-ick) The pressure at a specific elevation exerted by a body of water at rest. Definition 2: In the case of groundwater, the pressure at a specific elevation due to the weight of water at higher levels in the same zone of saturation.
Hypochlorite
Definition: (Hi-poe-KLOR-ite) Chemical compounds containing available chlorine; used for disinfection. They are available as liquids (bleach) or solids (powder, granules and pellets). Salts of hypochlorous acid.
Hypolimnion
Definition: (Hi-poe-LIM-knee-on) The lowest layer in a thermally stratified lake or reservoir. This layer consists of colder, more dense water, has a constant temperature and no mixing occurs.

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Term
Imhoff Cone
Definition: A clear cone-shaped container marked with graduations. The cone is used to measure the volume of settleable solids in a specific volume (usually one liter) of water.
Impeller
Definition: A rotating set of vanes in a pump designed to pump or lift water.
Impermeable
Definition: (im-PURR-me-uh-BULL) 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.
In-Line Filtration
Definition: The addition of chemical coagulants directly to the filter inlet pipe. The chemicals are mixed by the flowing water. Flocculation and sedimentation facilities are eliminated. This pretreatment method is commonly used in pressure filter installations.
In Situ
Definition: In place, the original location, in the natural environment.
In Vitro
Definition: In glass; a laboratory experiment performed in a test tube or other vessel.

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Term
In Vitro Studies
Definition: Studies of chemical effects conducted in tissues, cells or subcellular extracts from an organism (I e , not in the living organism).
In Vivo
Definition: Within a living organism; a laboratory experiment performed in which the substance under study is inserted into a living organism.
In Vivo Studies
Definition: Studies of chemical effects conducted in intact living organisms.
Incidence of Tumors
Definition: Percentage of animals with tumors.
Indicator (chemical)
Definition: A substance that gives a visible change, usually of color, at a desired point in a chemical reaction, generally at a specified end point.
Indicator (instrument)
Definition: A device which indicates the result of a measurement. Most indicators in the water utility field use either a fixed scale and

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Term
movable indicator (pointer) such as a pressure gage or a movable scale and movable indicator like those used on a circular-flow recording chart.
Infiltration Definition 1: The gradual flow or movement of water into and through (to percolate or pass through) the pores of the soil. Definition 2: The penetration of water from the soil into sewer or other pipes through defective joints, connections or manhole walls.
Infiltration Gallery Definition: A subsurface groundwater collection system, typically shallow in depth, constructed with open-jointed or perforated pipes that discharge collected water into a water-tight chamber. From this chamber the water is pumped to treatment facilities and into the distribution system. Infiltration galleries are usually located close to streams or ponds and may be under the direct influence of surface water.
Infiltration Rate Definition: Quantity of water (usually measured in inches) that will enter a particular type of soil per unit time (usually one hour).
Influent Definition: (IN-flu-ent) Water or other liquid-raw or partially flowing INTO a reservoir, basin, treatment process or treatment plant.
Ingestion Definition: Type of exposure through the mouth.

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Term
Inhalation
Definition: Type of exposure through the lungs.
Initial Compliance Period
Definition: The first full three-year compliance period which begins at least 18 months after promulgation.
Inorganic
Definition: Material such as sand, salt, iron, calcium salts and other mineral materials. Inorganic substances are of mineral origin, whereas organic substances are usually of animal or plant origin.
Input Horsepower
Definition: The total power used in operating a pump and motor. $\text{Input HP} = (\text{Brake HP})(100\%)\text{Motor Efficiency, \%}$
Insecticide
Definition: Any substance or chemical formulated to kill or control insects.
Instream Uses
Definition: Water uses that can be carried out without removing the water from its source, as in navigation and recreation.
Integrated Exposure Assessment

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Term
Definition: A summation over time, in all media, of the magnitude of exposure to a toxic chemical.
Integrator
Definition: A device or meter that continuously measures and calculates (adds) total flows in gallons, or million cubic feet or some other unit of volume measurement.
Interface
Definition: The common boundary layer between two substances such as water and a solid (metal); or between two fluids such as water and a gas (air); or between a liquid (water) and another liquid (oil).
Interflow
Definition: Lateral movement of water in the upper layer of soil.
Interlock
Definition: An electrical switch, usually magnetically operated. Used to interrupt all (local) power to a panel or device when the door is opened or the circuit exposed to service.
Internal Friction
Definition: Friction within a fluid (water) due to cohesive forces.
Interspecies Extrapolation Model

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Term
Definition: Model used to extrapolate from results observed in laboratory animals to humans.
Interstate Carrier
Definition: Any vehicle or transport which conveys passengers in interstate commerce.
Interstice
Definition: (in-TUR-stuhz) A very small open space in a rock or granular material.
Invert
Definition: The lowest point of the channel inside a pipe, conduit, or canal.
Ion
Definition: An electrically charged atom, radical (such as SO ₄ ²⁻), or molecule formed by the loss or gain of one or more electrons.
Ionic Concentration
Definition: The concentration of any ion in solution, usually expressed in moles per liter.
Ionization
Definition: (EYE-on-uh-ZAY-shun) The splitting or dissociation (separation) of molecules into negatively and positively charged ions.
Irreversible Effect

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Term
<p>Definition: Effect characterized by the inability of the body to partially or fully repair injury caused by a toxic agent.</p>
<p>Jar Test</p> <p>Definition: A laboratory procedure that simulates a water treatment plant's coagulation/flocculation units with differing chemical doses and also energy of rapid mix, energy of slow mix, and settling time. The purpose of this procedure is to ESTIMATE the minimum or ideal coagulant dose required to achieve certain water quality goals. Samples of water to be treated are commonly placed in six jars. Various amounts of chemicals are added to each jar, and the settling of solids is observed. The dose of chemicals that provides satisfactory settling removal of turbidity and/or color is the dose used to treat the water being taken into the plant at that time. When evaluating the results of a jar test, the operator should also consider the floc quality in the flocculation area and the floc loading on the filter.</p>
<p>Jogging</p> <p>Definition: The frequent starting and stopping of an electric motor.</p>
<p>Joule</p> <p>Definition: (jewel) A measure of energy, work or quantity of heat. One joule is the work done when a force of one newton is displaced a distance of one meter in the direction of force.</p>
<p>Kilo</p> <p>Definition 1: Kilogram. Definition 2: Kilometer. Definition 3: A prefix meaning "thousand" used in the metric system and other scientific systems of measurement.</p>
<p>Kinetic Energy</p>

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Term
<p>Definition: Energy possessed by a moving body of matter, such as water, as a result of its motion.</p>
<p>Kjeldahl Nitrogen</p> <p>Definition: (KELL-doll) Nitrogen in the form of organic proteins or their decomposition product ammonia, as measured by the Kjeldahl Method.</p>
<p>Landfill</p> <p>Definition: Facility in which solid waste from municipal and/or industrial sources is disposed; sanitary landfills are those that are operated in accordance with environmental protection standards.</p>
<p>Langelier Index</p> <p>Definition: An index reflecting the equilibrium pH of a water with respect to calcium and alkalinity. This index is used in stabilizing water to control both corrosion and the deposition of scale. Langelier index = pH - pHs where pH = actual pH of the water, and pHs= pH at which the water having the same alkalinity and calcium content is just saturated with calcium carbonate.</p> <p>Acronym: LI</p>
<p>Large Water System</p> <p>Definition: A water system that serves more than 50,000 persons.</p>
<p>Latency</p>

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Term
Definition: Time from the first exposure to a chemical until the appearance of a toxic effect.
Laundering Weir
Definition: (LAWN-der-ing weer) Sedimentation basin overflow weir. A plate with V-notches along the top to assure a uniform flow rate and avoid short-circuiting.
Launders
Definition: (LAWN-ders) Sedimentation basin and filter discharge channels, consisting of overflow weir plates (in sedimentation basins) and conveying troughs.
LC50
Definition: The concentration of a chemical in air or water which is expected to cause death in 50% of test animals living in that air or water.
LD50
Definition: The dose of a chemical taken by mouth or absorbed by the skin which is expected to cause death in 50% of the test animals so treated.
Leachate
Definition: A liquid that results from water collecting contaminants as it trickles through wastes, agricultural pesticides or fertilizers. Leaching may occur in farming areas, feedlots, and landfills, and may result in hazardous substances entering surface water, ground water, or soil.

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Term
Leaching
Definition: The process by which soluble substances are dissolved and transported down through the soil by recharge.
Lead
Definition: A heavy metal that is hazardous to health if breathed or swallowed. Its use in gasoline paints, and plumbing compounds has been sharply restricted or eliminated by federal laws and regulations. Acronym: Pb
Lead Service Line
Definition: A service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck or other fitting which is connected to such lead line.
Legionella
Definition: A genus of bacteria, some species of which have caused a type of pneumonia called Legionnaires Disease.
Lesion
Definition: A pathological or traumatic discontinuity of tissue or loss of function of a part.
Lethal
Definition: Deadly; fatal.

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Term
<p>Level Controls</p> <p>Definition: A float device (or pressure switch) which senses changes in a measured variable and opens or closes a switch in response to that change. In its simplest form, this control might be a floating ball connected mechanically to a switch or valve such as is used to stop water flow into a toilet when the tank is full.</p>
<p>Lifetime Exposure</p> <p>Definition: Total amount of exposure to a substance that a human would receive in a lifetime (usually assumed to be 70 years).</p>
<p>Lindane</p> <p>Definition: (LYNN-dane) A pesticide that causes adverse health effects in domestic water supplies and also is toxic to freshwater and marine aquatic life.</p>
<p>Linearity</p> <p>Definition: (LYNN-ee-AIR-it-ee) How closely an instrument measures actual values of a variable through its effective range; a measure used to determine the accuracy of an instrument.</p>
<p>Linearized Multistage Model</p> <p>Definition: Derivation of the multistage model, where the data are assumed to be linear at low doses.</p>
<p>Littoral Zone</p>

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Term
Definition 1: (LIT-or-al) That portion of a body of fresh water extending from the shoreline lakeward to the limit of occupancy of rooted plants. Definition 2: The strip of land along the shoreline between the high and low water levels.
Loading
Definition: The quantity of a substance entering the environment (soil, water, or air).
Logarithm
Definition: (LOG-a-rith-m) The exponent that indicates the power to which a number must be raised to produce a given number. For example: if $B^2 = N$, the 2 is the logarithm of N (to the base B), or $10^2 = 100$ and $\log_{10} 100 = 2$. Acronym: Log
Lowest-Observed-Adverse-Effect Level
Definition: The lowest dose in an experiment which produced an observable adverse effect. Acronym: LOAEL
Macroscopic Organisms
Definition: (MACK-row-SKAWP-ick) Organisms big enough to be seen by the eye without the aid of a microscope.
Malignant
Definition: Very dangerous or virulent, causing or likely to cause death.
Man-Made Beta Particle and Photon Emitting

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Term
Definition: All radionuclides emitting beta particles and/or photons listed in Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure, NBS Handbook 69, except the daughter products of thorium-232, uranium-235 and uranium-238.
Man-Made Beta Particle Emitting Preferred Term: Man-Made Beta Particle and Photon Emitting
Man-Made Photon Emitting Preferred Term: Man-Made Beta Particle and Photon Emitting
Managerial Controls Definition: Methods of nonpoint source pollution control that are derived from managerial decisions, such as changes in application times or rates for agrochemicals.
Manifold Definition: A large pipe to which a series of smaller pipes are connected.
Manometer Definition: (man-NAH-mut-ter) An instrument for measuring pressure. Usually, a manometer is a glass tube filled with a liquid that is used to measure the difference in pressure across a flow-measuring device such as an orifice or Venturi meter. The instrument used

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to measure blood pressure is a type of manometer.
Margin of Safety Definition: Maximum amount of exposure producing no measurable effect in animals (or studied humans) divided by the actual amount of human exposure in a population. Acronym: MOS
Mathematical Model Definition: Model used during risk assessment to perform extrapolations.
Maximum Contaminant Level Definition: The maximum permissible level of a contaminant in water which is delivered to the free flowing outlet of the ultimate user of a public water system, except in the case of turbidity where the maximum permissible level is measured at the point of entry to the distribution system. Contaminants added to the water under circumstances controlled by the user are excluded from this definition, except those contaminants resulting from the corrosion of piping and plumbing caused by water quality. Acronym: MCL
Maximum Contaminant Level Goal Definition: The maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety. Maximum contaminant level goals are non-enforceable health goals. Acronym: MCLG

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Term
<p>Maximum Tolerated Dose</p> <p>Definition: The dose that an animal species can tolerate for a major portion of its lifetime without significant impairment or toxic effect other than carcinogenicity.</p> <p>Acronym: MTD</p>
<p>Maximum Total Trihalomethane Potential</p> <p>Definition: The maximum concentration of total trihalomethanes produced in a given water containing a disinfectant residual, after 7 days at 25 degrees C or above.</p> <p>Acronym: MTTP</p>
<p>Measured Variable</p> <p>Definition: A characteristic or component part that is sensed and quantified (reduced to a reading of some kind) by a primary element or sensor.</p>
<p>Mechanical Joint</p> <p>Definition: A flexible device that joins pipes or fittings together by the use of lugs and bolts.</p>
<p>Medium-Size Water System</p> <p>Definition: A water system that serves greater than 3,300 and less than or equal to 50,000 person.</p>
<p>Meg</p>

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Term
Definition: A procedure used for checking the insulation resistance on motors, feeders, buss bar systems, grounds, and branch circuit wiring.
Megger
Definition: (from megohm) An instrument used for checking the insulation resistance on motors, feeders, buss bar systems, grounds, and branch circuit wiring.
Megohm
Definition: Meg means one million, so 5 megohms means 5 million ohms. A megger reads in millions of ohms.
Meniscus
Definition: (meh-NIS-cuss) The curved top of a column of liquid (water, oil, mercury) in a small tube. When the confining sides are not wetted (as with mercury), the curve forms a hill or upward bulge.
Mesh
Definition: One of the openings or spaces in a screen or woven fabric. The value of the mesh is usually given as the number openings per inch. This value does not consider the diameter of the wire or fabric; therefore, the mesh number does not always have a definite relationship to the size of the hole.
Mesotrophic
Definition: (MESS-o-TRO-rick) Reservoirs and lakes which contain moderate quantities of nutrients and are moderately productive in terms of aquatic animal and plant life.

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Term
<p>Metabolism</p> <p>Definition: (meh-TAB-uh-LIZ-um) The sum of the chemical reactions occurring within a cell or a whole organism; includes the energy-releasing breakdown of molecules (catabolism) and the synthesis of new molecules (anabolism).</p>
<p>Metabolite</p> <p>Definition: Any product of metabolism, especially a transformed chemical.</p>
<p>Metalimnion</p> <p>Definition: (MET-uh-LIM-knee-on) The middle layer in a thermally stratified lake or reservoir. In this layer there is a rapid decrease in temperature with depth.</p>
<p>Metastatic</p> <p>Definition: Pertaining to the transfer of disease from one organ or part to another not directly connected with it.</p>
<p>Methoxychlor</p> <p>Definition: (meth-OXY-klor) A pesticide which causes adverse health effects in domestic water supplies and is also toxic to freshwater and marine aquatic life. The chemical name for methoxychlor is 2,2-bis (P-methoxyphenol)- 1, 1, 1 - trichloroethane.</p>
<p>Methyl Orange Alkalinity</p> <p>Definition: A measure of the total alkalinity in a water sample. The alkalinity is measured by the amount of standard sulfuric acid</p>

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Term
required to lower the pH of the water to a pH level of 4.5, as indicated by the change in color of methyl orange from orange to pink. Methyl orange alkalinity is expressed as milligrams per liter equivalent calcium carbonate.
Methylene-Blue-Active Substances Definition: These substances are used in surfactants or detergents. Acronym: MBAS
Microbial Growth Definition: (my-KROW-bee-ul) The activity and growth of microorganisms such as bacteria, algae, diatoms, plankton and fungi.
Microgram Definition: One-millionth of a gram (3.5×10^{-8} oz 0.000000035 oz). Acronym: pg
Micrograms per Liter Definition: 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. Acronym: pg/L
Micron Definition: (MY-kron) A unit of length. One millionth of a meter or one thousandth of a millimeter. One micron equals 0.00004 of an inch.

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Term
Microorganisms
Definition: (MY-crow-OR-gan-IS-zums) Living organisms that can be seen individually only with the aid of a microscope.
mil
Definition: A unit of length equal to 0.001 of an inch. The diameter of wires and tubing is measured in mils, as is the thickness of plastic sheeting.
Milligram
Definition: One-thousandth of a grain (3.5 x 10 ⁻¹ oz; 0.000035 oz).
Acronym: mg
Milligrams per Liter
Definition: 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).
Acronym: mg/L
Millimicron
Definition: (MILL-uh-MY-kron) A unit of length equal to 10 ⁻³ microns (one thousandth of a micron), 10 ⁻⁶ millimeters, or 10 ⁻⁹ meters; correctly called a nanometer, nm.

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Term
<p>Million-Gallons per Day</p> <p>Definition: A measure of water flow.</p> <p>Acronym: MGD</p>
<p>Mineralization</p> <p>Definition: The microbial conversion of an element from an organic to an inorganic state.</p>
<p>Modeling</p> <p>Definition: Use of mathematical equations to simulate and predict real events and processes.</p>
<p>Molar</p> <p>Definition: A molar solution consists of one gram molecular weight of a compound dissolved in enough water to make one liter of solution. A gram molecular weight is the molecular weight of a compound in grains. For example, the molecular weight of sulfuric acid (H₂SO₄) is 98. A one M solution of sulfuric acid would consist of 98 grains of H₂SO₄ dissolved in enough distilled water to make one liter of solution.</p>
<p>Molarity</p> <p>Definition: A molar solution consists of one gram molecular weight of a compound dissolved in enough water to make one liter of solution. A gram molecular weight is the molecular weight of a compound in grains. For example, the molecular weight of sulfuric acid (H₂SO₄) is 98. A one M solution of sulfuric acid would consist of 98 grains of H₂SO₄ dissolved in enough distilled water to make one liter of solution.</p>

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Term
Mole
Definition: The molecular weight of a substance, usually expressed in grains.
Molecular Weight
Definition: The molecular weight of a compound in grams is the sum of the atomic weights of the elements in the compound. The molecular weight of sulfuric acid (H ₂ SO ₄) in grams is 98.
Molecule
Definition: (MOLL-uh-KULE) The smallest division of a compound that still retains or exhibits all the properties of the substance.
Monitoring
Definition: Measuring concentrations of substances in environmental media or in human or other biological tissues.
Monitoring Wells
Definition: Wells used to collect ground-water samples for analysis to determine the amount, type, and spread of contaminants In ground water.
Monomer
Definition: (MON-o-MER) A molecule of low molecular weight capable of reacting with identical or different monomers to form polymers.

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Term
<p>Monomictic</p> <p>Definition: (mo-no-MICK-tick) Lakes and reservoirs which are relatively deep, do not freeze over during the winter months, and undergo a single stratification and mixing cycle during the year. These lakes and reservoirs usually become destratified during the mixing cycle, usually in the fall of the year.</p>
<p>Monovalent</p> <p>Definition: Having a valence of one, such as the cuprous (copper) ion, Cu⁺.</p>
<p>Mortality</p> <p>Definition: Death</p>
<p>Most Probable Number</p> <p>Definition: The most probable number of coliform-group organisms per unit volume of sample water, expressed as the number of organisms per 100 mL of sample water.</p> <p>Acronym: MPN</p>
<p>Motile</p> <p>Definition: (MO-till) Capable of self-propelled movement. A term that is sometimes used to distinguish between certain types of organisms found in water.</p>
<p>Motor Efficiency</p>

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Term
<p>Definition: The ratio of energy delivered by a motor to the energy supplied to it during a fixed period or cycle. Motor efficiency ratings will vary depending upon motor manufacturer and usually will range from 88.9 to 90.0 percent.</p>
<p>Mudballs</p> <p>Definition: Material that is approximately round in shape and varies from pea-sized up to two or more inches in diameter. This material forms in filters and gradually increases in size when not removed by the backwashing process.</p>
<p>Mulch</p> <p>Definition: Any substance spread or allowed to remain on the soil surface to conserve soil moisture and shield soil particles from the erosive forces of raindrops and runoff.</p>
<p>Multi-Stage Model</p> <p>Definition: Mathematical model based on the multi-stage theory of the carcinogenic process, which yields risk estimates either equal to or less than the one-hit model.</p>
<p>Multi-Stage Pump</p> <p>Definition: A pump that has more than one impeller. A single-stage pump has one impeller.</p>
<p>Multiple Use</p> <p>Definition: Use of land for more than one purpose; i.e., grazing of livestock, wildlife production, recreation, watershed, and timber production. Could also apply to use of bodies of water for recreational purposes, fishing, and water supply.</p>

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Term
<p>Municipal Sewage</p> <p>Definition: Wastes (mostly liquid) originating from a community; may be composed of domestic wastewaters and/or industrial wastewaters.</p>
<p>Mutagen</p> <p>Definition: An agent that causes a permanent genetic change in a cell other than that which occurs during normal genetic recombination.</p>
<p>Mutagenicity</p> <p>Definition: The capacity of a chemical or physical agent to cause permanent alteration of the genetic material within living cells.</p>
<p>N,N-Diethyl-p-Phenylene-Diamine</p> <p>Preferred Term: DPD</p>
<p>National Environmental Training Association</p> <p>Definition: A professional organization devoted to serving the environmental trainer and promoting better operation of water-works and pollution control facilities. For information on NETA membership and publications, contact NETA, 8687 Via de Ventura, Suite 214, Scottsdale, AZ 85258.</p> <p>Acronym: NETA</p>
<p>National Institute of Occupational Safety and Health</p>

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Term
<p>Definition: The National Institute of Occupational Safety and Health is an organization that tests and approves safety equipment for particular applications. NIOSH is the primary Federal agency engaged in research in the national effort to eliminate on-the-job hazards to the health and safety of working people. The NIOSH Publications Catalog contains a listing of NIOSH publications mainly on industrial hygiene and occupational health. To obtain a copy of the catalog, write to National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161. NTIS Stock No PB-86-116-787, price \$45.95.</p> <p>Acronym: NIOSH</p>
<p>National Interim Primary Drinking Water Regulations</p> <p>Definition: Commonly referred to as NIPDWRs.</p> <p>Acronym: NIPDWR</p>
<p>National Pollutant Discharge</p> <p>Definition: Elimination System permit is the regulatory agency document issued by either a federal or state agency which is designed to control all discharges of pollutants from point sources in U.S. waterways. NPDES permits regulate discharges into navigable waters from all point sources of pollution, including industries, municipal treatment plants, large agricultural feed lots and return Irrigation flows.</p>
<p>National Priorities List</p> <p>Definition: A list of Superfund sites chosen for immediate attention.</p> <p>Acronym: NPL</p>
<p>National Secondary Drinking Water Regulations</p>

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Term
Definition: Commonly referred to as NSDWRs. Acronym: NSDWRs
National Toxicology Program Acronym: NTP
Natural Organic Matter Definition: Complex organic compounds that are formed from decomposing plant animal and microbial material in soil and water. They can react with disinfectants to form disinfection by products. Total organic carbon (TOC) is often measured as an indicator of natural organic matter.
Near the First Service Connection Definition: At one of the 20 percent of all service connections in the entire system that are nearest the water supply treatment facility, as measured by water transport time within the distribution system.
Necrosis Definition: Death of cells or tissue.
Nematodes Definition: Roundworms, any of which are pathogenic for plants and sometimes animals.

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Term
Neoplasm
Definition: An abnormal growth or tissue, as a tumor.
Nephelometric
Definition: (NEFF-el-o-MET-rick) A means of measuring turbidity in a sample by using an instrument called a nephelometer. A nephelometer passes light through a sample and the amount of light deflected (usually at a 90 degree angle) is then measured.
Nephelometric Turbidity Unit
Definition: The unit of measure for turbidity. Acronym: NTU
Neurotoxicity
Definition: Exerting a destructive or poisonous effect on nerve tissue.
Newton
Definition: A force which, when applied to a body having a mass of one kilogram, gives it an acceleration of one meter per second per second.
Nitrification
Definition: The biochemical transformation of ammonium nitrogen to nitrate nitrogen.

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Term
Nitrification Inhibitor
Definition: A chemical that slows down the conversion of ammonium to nitrate nitrogen.
Nitrogen Fixation
Definition: The biological or chemical process by which elemental nitrogen, from the air, is converted to organic or available nitrogen.
Nitrogenous
Definition: (nye-TRAH-jen-us) A term used to describe chemical compounds (usually organic) containing nitrogen in combined forms. Proteins and nitrates are nitrogenous compounds.
No-Observed-Adverse-Effect Level
Definition: The highest dose in an experiment which did not produce an observable adverse effect. Acronym: NOAEL
No-Observed-Effect Level
Definition: Dose level at which no effects are noted. Acronym: NOEL
Noble Metal
Definition: Chemically inactive metal (such as gold). A metal that does not corrode easily and is much scarcer (and more valuable)

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Term
than the so-called useful or base metals.
Nominal Diameter
Definition: An approximate measurement of the diameter of a pipe. Although the nominal diameter is used to describe the size or diameter of a pipe, it is usually not the exact inside diameter of the pipe.
Non-Community Water System
Definition: A public water system that is not a community water system. There are two types of NCWSs: transient and non-transient. Acronym: NCWS
Non-Conventional Pollutant
Definition: Any pollutant which is not a statutorily listed or which is poorly understood by the scientific community.
Non-Ionic Polymer
Definition: (NON-eye-ON-ick) A polymer that has no net electrical charge.
Non-Point Source
Definition: Pollution sources which are diffuse and do not have a single point of origin or are not introduced into a receiving stream from a specific outlet. The pollutants are generally carried off the land by stormwater runoff. The commonly used categories for non-point sources are: agriculture, forestry, urban, mining, construction, dams and channels, land disposal, and saltwater intrusion.
Non-Potable

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Term
Definition: (non-POE-tuh-bull) Water that may contain objectionable pollution, contamination, minerals, or infective agents and is considered unsafe and/or unpalatable for drinking.
Non-Transient Non-Community Water System
Definition: A public water system that regularly serves at least 25 of the same nonresident persons per day for more than six months per year. Acronym: NTNCWS
Normal
Definition: A normal solution contains one grain equivalent weight of reactant (compound) per liter of solution. The equivalent weight of an acid is that weight which contains one gram atom of ionizable hydrogen or its chemical equivalent. For example, the equivalent weight of sulfuric acid (H ₂ SO ₄) is 49 (98 divided by 2 because there are two replaceable hydrogen ions). A one N solution of sulfuric acid would consist of 49 grains of H ₂ SO ₄ dissolved in enough water to make one liter of solution. Acronym: N
Nutrient
Definition: Any substance that is assimilated (taken in) by organisms and promotes growth. Nitrogen and phosphorous are nutrients which promote the growth of algae. There are other essential and trace elements which are also considered nutrients.
Nutrient Pollution
Definition: Contamination of water resources by excessive inputs of nutrients. In surface waters, excess algal production is a major

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Term
concern.
Occupational Safety and Health Act of 1970
Definition: (0-shuh) The Williams-Steiger Occupational Safety and Health Act of 1970 (OSHA) is a law designed to protect the health and safety of industrial workers and also the operators of water supply systems and treatment plants. OSHA also refers to the federal and state agencies which administrator the OSHA regulations.
Acronym: OSHA
Odor Threshold
Definition: The minimum odor of a water sample that can just be detected after successive dilutions with odorless water.
Offset
Definition: The difference between the actual value and the desired value (or set point); characteristic of proportional controllers that do not incorporate reset action.
Offstream Uses
Definition: Water withdrawn from surface or ground water sources for use at another place.
OHM
Definition: The unit of electrical resistance. The resistance of a conductor in which one volt produces a current of one ampere.
Olfactory Fatigue

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Term
Definition: (oh-FAK-tore-ee) A condition in which a person's nose, after exposure to certain odors, is no longer able to detect the odor.
Oligotrophic Definition: (AH-lig-o-TRO-flick) Reservoirs and lakes which are nutrient poor and contain little aquatic plant or animal life.
Oncology Definition: Study of cancer.
One-Hit Model Definition: Mathematical model based on the biological theory that a single "hit" of some minimum critical amount of a carcinogen at a cellular target - namely, DNA - can initiate an irreversible series of events, eventually leading to a tumor.
Operation and Maintenance Costs Definition: The ongoing, repetitive costs of operating a water system; for example, employee wages and costs for treatment chemicals and periodic equipment repairs.
Optimal Corrosion Control Treatment Definition: The corrosion control treatment that minimizes the lead and copper concentrations at users' taps while insuring that the treatment does not cause the water system to violate any national primary drinking water regulations.

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Term
Oral
Definition: Of the mouth; through or by the mouth.
Organic
Definition: Substances that come from animal or plant sources. Organic substances always contain carbon. (Inorganic materials are chemical substances of mineral origin.)
Organic Acids
Preferred Term: Volatile Acids
Organics
Definition 1: A term used to refer to chemical compounds made from carbon molecules. These compounds may be natural materials (such as animal or plant sources) or man-made materials (such as synthetic organics). Definition 2: Any form of animal or plant life.
Organism
Definition: Any form of animal or plant life.
Orifice
Definition: (OR-uh-fiss) An opening (hole) in a plate, wall or partition. An orifice flange or plate placed in a pipe consists of a slot or a calibrated circular hole smaller than the pipe diameter. The difference in pressure in the pipe above and at the orifice may be used to

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Term
determine the flow in the pipe.
<p>Orthotolidine</p> <p>Definition: (or-tho-TOL-uh-dine) Orthotolidine is a calorimetric indicator of chlorine residual. If chlorine is present, a yellow-colored compound is produced. This reagent is no longer approved for chemical analysis.</p>
<p>Osmosis</p> <p>Definition: (oz-MOE-sis) The passage of a liquid from a weak solution to a more concentrated solution across a semipermeable membrane. The membrane allows the passage of the solvent (water) but not the dissolved solids (solutes). This process tends to equalize the conditions on either side of the membrane.</p>
<p>Other Non-Distribution System Plumbing Problem</p> <p>Definition: A coliform contamination problem in a public water system with more than one service connection that is limited to the specific service connection from which the coliform positive sample was taken.</p>
<p>Overall Efficiency Pump</p> <p>Definition: The combined efficiency of a pump and motor together.</p>
<p>Overdraft</p> <p>Definition: The pumping of water from a groundwater basin or aquifer in excess of the supply flowing into the basin. This pumping results in a depletion or "mining" of the groundwater in the basin.</p>

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Term
<p>Overflow Rate</p> <p>Definition: One of the guidelines for the design of settling tanks and clarifiers in treatment plants. Used by operators to determine if tanks and clarifiers are hydraulically (flow) over- or underloaded. $\text{Overflow Rate (GPD/sq ft)} = \text{Flow (GPD)}/\text{Surface Area (sq ft)}$.</p>
<p>Overturn</p> <p>Definition: The almost spontaneous mixing of all layers of water in a reservoir or lake when the water temperature becomes similar from top to bottom. This may occur in the fall/winter when the surface waters cool to the same temperature as the bottom waters and also in the spring when the surface waters warms after the ice melts.</p>
<p>Oxidation</p> <p>Definition: (ox-uh-DAY-shun) Oxidation is the addition of oxygen, removal of hydrogen, or the removal of electrons from an element or compound. In the environment, organic matter is oxidized to more stable substances. The opposite of reduction.</p>
<p>Oxidation-Reduction Potential</p> <p>Definition: The electrical potential required to transfer electrons from one compound or element (the oxidant) to another compound or element (the reductant); used as a qualitative measure of the state of oxidation in water treatment systems.</p> <p>Acronym: ORP</p>
<p>Oxidizing Agent</p> <p>Definition: Any substance, such as oxygen (O₂) or chlorine (Cl₂), that will readily add (take on) electrons. The opposite is a reducing agent.</p>

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Term
Ozonation
Definition: (O-zoe-NAY-shun) The application of ozone to water for disinfection or for taste and odor control.
Packed Tower Aeration
Definition: A method of treating water to remove volatile organic chemical (VOCs) contaminants. As water is mixed with air, VOCs move from water to air which then passes through carbon filters to trap the contaminants.
Palatable
Definition: (PAL-a-ta-ble) Water at a desirable temperature that is free from objectionable tastes, odors, colors, and turbidity. Pleasing to the senses.
Parshall Flume
Definition: A device used to measure the flow in an open channel. The flume narrows to a throat of fixed dimensions and then expands again. The rate of flow can be calculated by measuring the difference in head (pressure) before and at the throat of the flume.
Particle Count
Definition: The results of a microscopic examination of treated water with a special "particle counter" which classifies suspended particles by number and size.
Particulate

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Term
<p>Definition: (par-TICK-you-let) A very small solid suspended in water which can vary widely in size, shape, density, and electrical charge. Colloidal and dispersed particulates are artificially gathered together by the processes of coagulation and flocculation.</p>
<p>Partition Coefficient</p>
<p>Definition: A measure of the extent to which a pesticide is divided between the soil and water phases.</p>
<p>Parts per Billion</p>
<p>Acronym: ppb</p>
<p>Parts per Million</p>
<p>Definition: Parts per million parts, 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.</p>
<p>Acronym: ppm</p>
<p>Pascal</p>
<p>Definition: The pressure or stress of one newton per square meter. 1 psi = 6895 Pa = 6.895 kN/sq m = 0.0703 kg/sq cm</p>
<p>Acronym: Pa</p>
<p>Pathogenic Organisms</p>
<p>Definition: (path-o-JEN-ick) Organisms, including bacteria, viruses or cysts, capable of causing diseases (typhoid, cholera, dysentery) in a host (such as a person). There are many types of organisms which do NOT cause disease. These organisms are called non-</p>

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Term
pathogenic.
Pathogens
Definition: Microorganisms that can cause disease in other organisms or in humans, animals and plants. They may be bacteria, viruses, or parasites and are found in sewage in runoff from animal farms or rural areas populated with domestic and/or wild animals, and in water used for swimming. Fish and shellfish contaminated by pathogens, or the contaminated water itself, can cause serious illnesses.
Pathology
Definition: The study of disease.
Percent Saturation
Definition: The amount of a substance that is dissolved in a solution compared with the amount that could be dissolved in the solution, expressed as a percent. Amount of substance that is dissolved x 100% Amount that could be dissolved in solution.
Percolating Water
Definition: (PURR-co-LAY-ting) Water that passes through soil or rocks under the force of gravity.
Percolation
Definition 1: (PURR-ko-LAY-shun) The slow seepage of water into and through the ground. Definition 2: The slow passage of water through a filter medium.

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Term
Performance Evaluation Sample
Definition: A reference sample provided to a laboratory for the purpose of demonstrating that the laboratory can successfully analyze the sample within limits of performance specified by the Agency. The true value of the concentration of the reference material is unknown to the laboratory at the time of the analysis.
Periphyton
Definition: (puh-RIF-uh-tawn) Microscopic plants and animals that are firmly attached to solid surfaces under water such as rocks, logs, pilings and other structures.
Permeability
Definition: Generally used to refer to the ability of rock or soil to transmit water.
Permeate
Definition: (PURR-me-ate) To penetrate and pass through, as water penetrates and passes through soil and other porous materials.
Permissible Dose
Definition: The dose of a chemical that may be received by an individual without the expectation of a significantly harmful result.
Persistence
Definition: The resistance to degradation as measured by the period of time required for complete decomposition of a material.

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Term
Person
Definition: An individual, corporation, company, association, partnership; municipality; or State, Federal, or tribal agency.
Pesticide
Definition: Any substance or chemical designed or formulated to kill or control weeds or animal pests.
Petroleum Derivatives
Definition: Chemicals formed when gasoline breaks down in contact with ground water.
pH
Pharmacokinetics
Definition: The dynamic behavior of chemicals inside biological systems; it includes the processes of uptake, distribution, metabolism, and excretion.
Phenolic Compounds
Definition: (FEE-noll-LICK) Organic compounds that are derivatives of benzene.
Phenolphthalein Alkalinity
Definition: (FEE-nol-THAY-leen) The alkalinity in a water sample measured by the amount of standard acid required to lower the pH

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Term
to a level of 8.3, as indicated by the change in color of phenolphthalein from pink to clear. Phenolphthalein alkalinity is expressed as milligrams per liter equivalent calcium carbonate.
Photosynthesis Definition: (foe-tow-SIN-thus-sis) A process in which organisms, with the aid of chlorophyll (green plant enzyme), convert carbon dioxide and inorganic substances into oxygen and additional plant material, using sunlight for energy. All green plants grow by this process.
Phytoplankton Definition: (Flo-tow-PANK-ton) Small, usually microscopic plants (such as algae), found in lakes, reservoirs, and other bodies of water.
Pico Definition: A prefix used in the metric system and other scientific systems of measurement which means 10 ⁻¹² or 0.000000000001.
Picocurie Definition: A measure of radioactivity. One picocurie of radioactivity is equivalent to 0.037 nuclear disintegrations per second. Acronym: pCi
Pigtail Preferred Term: Gooseneck

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Term
Pipe Schedule
Preferred Term: Schedule, Pipe
Plan View
Definition: A diagram or photo showing a facility as it would appear when looking down on top of it.
Plankton
Definition 1: Small, usually microscopic, plants (phytoplankton) and animals (zooplankton) in aquatic systems. Definition 2: All of the smaller floating, suspended or self-propelled organisms in a body of water.
Plug Flow
Definition: A type of flow that occurs in tanks, basins or reactors when a slug of water moves through a tank without ever dispersing or mixing with the rest of the water flowing through the tank.
Plumes
Definition: The way polluted water extends downstream from the pollution source (analogous to smoke from a smokestack as it drifts downwind in the atmosphere).
Point of Disinfectant Application
Definition: The point where disinfectant is applied and water downstream of that point is not subject to recontamination by surface

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Term
water runoff.
Point-of-Entry Treatment Device
Definition: 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
Definition: A treatment device applied to a single tap used for the purpose of reducing contaminants in drinking water at that one tap.
Point Source
Definition: A stationery location or fixed facility from which pollutants are discharged or emitted. Also, any single identifiable source of pollution, e.g., a pipe, ditch, ship, ore pit, factory smokestack.
Pole Shader
Definition: A copper bar circling the laminated iron core inside the coil of a magnetic starter.
Pollutant
Definition: Generally, any substance introduced into the environment that adversely affects the usefulness of a resource.
Pollution
Definition: Generally, the presence of matter or energy whose nature, location or quantity produces undesired environmental effects.

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Term
Under the Clean Water Act, for example, the term is defined as the man-made or man-induced alteration of the physical, biological, and radiological integrity of water.
Polyelectrolyte
Definition: A chemical formed by the union of many monomers (a molecule of low molecular weight). Polymers are used with other chemical coagulants to aid in binding small suspended particles to larger chemical flocs for their removal from water. All polyelectrolytes are polymers, but not all polymers are polyelectrolytes.
Polymer
Definition: A chemical formed by the union of many monomers (a molecule of low molecular weight). Polymers are used with other chemical coagulants to aid in binding small suspended particles to larger chemical flocs for their removal from water. All polyelectrolytes are polymers, but not all polymers are polyelectrolytes.
Population at Risk
Definition: A population subgroup that is more likely to be exposed to a chemical, or is more sensitive to a chemical, than is the general population.
Pore
Definition: A very small open space in a rock or granular material.
Porosity
Definition: The capacity of soil of rock to hold water.

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Term
Positive Displacement Pump
Definition: A type of piston, diaphragm, gear or screw pump that delivers a constant volume with each stroke. Positive displacement pumps are used as chemical solution feeders.
Postchlorination
Definition: The addition of chlorine to the plant effluent, FOLLOWING plant treatment, for disinfection purposes.
Potable Water
Definition: Water that is safe and satisfactory for drinking and cooking.
Potency
Definition: Amount of material necessary to produce a given level of a deleterious effect.
Potentialiation
Definition: The effect of one chemical to increase the effect of another chemical.
Potentiometric Surface
Definition: The level to which water will rise in cased wells or other cased excavations into aquifers, measured as feet above mean sea level.
POTW

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Term
Preferred Term: Wastewater Treatment Plant
Pounds per Square Inch Gage Pressure
Definition: The pressure within a closed container or pipe measured with a gage in pounds per square inch. Acronym: PSIG
Power Factor
Definition: The ratio of the true power passing through an electric circuit to the product of the voltage and amperage in the circuit. This is a measure of the lag or load of the current with respect to the voltage.
Prechlorination
Definition: (pre-SIP-uh-TATE) The addition of chlorine at the headworks of the plant PRIOR TO other treatment processes mainly for disinfection and control of tastes, odors and aquatic growths. Also applied to aid in coagulation and settling.
Precipitate
Definition 1: An insoluble, finely divided substance which is a product of a chemical reaction within a liquid. Definition 2: The separation from solution of an insoluble substance.
Precipitation
Definition 1: (pre-SIP-uh-TAY-shun) The process by which atmospheric moisture falls onto a land or water surface as rain, snow, hail,

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Term
or other forms of moisture. Definition 2: The chemical transformation of a substance in solution into an insoluble form (precipitate).
<p>Precision</p> <p>Definition: The ability of an instrument to measure a process variable and to repeatedly obtain the same result. The ability of an instrument to reproduce the same results.</p>
<p>Precursor, THM</p> <p>Definition: (pre-CURSE-or) Natural organic compounds found in all surface and groundwaters. These compounds MAY react with halogens (such as chlorine) to form trihalomethanes (try-HAL-o-METH-hanes) (THMs); they MUST be present in order for THMs to form.</p>
<p>Prescriptive</p> <p>Definition: (pre-SKRIP-tive) Water rights which are acquired by diverting water and putting it to use in accordance with specified procedures. These procedures include filing a request to use unused water in a strewn, river or lake with a state agency.</p>
<p>Pressure Control</p> <p>Definition: A switch which operates on changes in pressure. Usually this is a diaphragm pressing against a spring. When the force on the diaphragm overcomes the spring pressure, the switch is actuated (activated).</p>
<p>Pressure Head</p> <p>Definition: The vertical distance (in feet) equal to the pressure (in psi) at a specific point. The pressure head is equal to the pressure in psi times 2.31 ft/psi.</p>

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Term
Prevalence Study
Definition: An epidemiological study which examines the relationships between diseases and exposures as they exist in a defined population at a particular point in time.
Primacy
Definition: The responsibility for ensuring that a law is implemented, and the authority to enforce a law and related regulations. A primacy agency has the primary responsibility for administrating and enforcing regulations.
Primary Element
Definition: An instrument which measures (senses) a physical condition or variable of interest. Floats and thermocouples are examples of primary elements.
Prime
Definition: The action of filling a pump casing with water to remove the air. Most pumps must be primed before startup or they will not pump any water.
Prior Appropriation
Definition: A doctrine of water law that allocates the right to use water on a first-come first-serve basis.
Process Variable

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Term
Definition: A physical or chemical quantity which is usually measured and controlled in the operation of a water treatment plant or an industrial plant.
Product Water
Definition: Water that has passed through a water treatment plant. All the treatment processes are completed or finished. This water is the product from the water treatment plant and is ready to be delivered to the consumers.
Profile
Definition: A drawing showing elevation plotted against distance, such as the vertical section or side view of a pipeline.
Proportional Samples
Preferred Term: Composite Samples
Prospective Study
Definition: An epidemiological study which examines the development of disease in a group of persons determined to be presently free of the disease.
Prussian Blue
Definition: A blue paste or liquid (often on a paper like carbon paper) used to show a contact area. Used to determine if gate valve seats fit properly.
Public Water System

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Term
<p>Definition: A system for the provision to the public of piped water for human consumption, if such system has at least fifteen service connections or regularly serves an average of at least 25 individuals at least 60 days out of the year. Such term includes: 1) any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system, and 2) any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. A public water system is either a "community water system" or a "non-community water system."</p>
<p>Pumping Station</p> <p>Definition: Mechanical devices installed in sewer or water systems or other liquid-carrying pipelines that move the liquids to a higher level.</p>
<p>Pumping Water Level</p> <p>Definition: The vertical distance in feet from the centerline of the pump discharge to the level of the free pool while water is being drawn from the pool.</p>
<p>Purveyor, Water</p> <p>Definition: (purr-VAY-or) An agency or person that supplies water (usually potable water).</p>
<p>Putrefaction</p> <p>Definition: (PEW-truh-FACK-shun) Biological decomposition of organic matter, with the production of ill-smelling and tasting products, associated with anaerobic (no oxygen present) conditions.</p>
<p>Qualitative</p>

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Term
Definition: Descriptive of kind, type or direction, as opposed to size, magnitude or degree.
Quantitative
Definition: Descriptive of size, magnitude or degree.
Quicklime
Definition: A material that is mostly calcium oxide (CaO) or calcium oxide in natural association with a lesser amount of magnesium oxide. Quicklime is capable of combining with water to form hydrated lime.
Radial to Impeller
Definition: Perpendicular to the impeller shaft. Material being pumped flows at a right angle to the impeller.
Radical
Definition: A group of atoms that is capable of remaining unchanged during a series of chemical reactions. Such combinations (radicals) exist in the molecules of many organic compounds; sulfate (SO ₄ ²⁻) is an inorganic radical.
Radionuclide
Definition: Any man-made or natural element which emits radiation in the form of alpha or beta particles, or as gamma rays.
Range

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Term
Definition: The spread from minimum to maximum values that an instrument is designed to measure.
Ranney Collector
Definition: This water collector is constructed as a dug well from 12 to 16 feet (3.5 to 5 m) in diameter that has been sunk as a caisson near the bank of a river or lake. Screens are driven radially and approximately horizontally from this well into the sand and the gravel deposits underlying the river.
Raw Water
Definition 1: Water in its natural state, prior to any treatment. Definition 2: Usually the water entering the first treatment process of a water treatment plant.
Reaeration
Definition: (RE-air-A-shun) The introduction of air through forced air diffusers into the lower layers of the reservoir. As the air bubbles form and rise through the water, oxygen from the air dissolves into the water and replenishes the dissolved oxygen. The rising bubbles also cause the lower waters to rise to the surface where oxygen from the atmosphere is transferred to the water. This is sometimes called surface reaeration.
Reagent
Definition: (re-A-gent) A pure chemical substance that is used to make new products or is used in chemical tests to measure, detect, or examine other substances.
Recarbonation

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Term
<p>Definition: (re-CAR-bun-NAY-shun) A process in which carbon dioxide is bubbled into the water being treated to lower the pH. The pH may also be lowered by the addition of acid. Recarbonation is the final stage in the lime-soda ash softening process. This process converts carbonate ions to bicarbonate ions and stabilizes the solution against the precipitation of carbonate compounds.</p>
<p>Receiver</p> <p>Definition: A device which indicates the result of a measurement. Most receivers in the water utility field use either a fixed scale and movable indicator (pointer) such as pressure gage or a movable scale and movable indicator like those used on a circular-flow recording chart.</p>
<p>Receiving Waters</p> <p>Definition: All distinct bodies of water that receive runoff or wastewater discharges, such as streams, rivers, ponds, lakes, and estuaries.</p>
<p>Receptor</p> <p>Definition 1: In biochemistry: a specialized molecule in a cell that binds a specific chemical with high specificity and high affinity. Definition 2: In exposure assessment: an organism that receives, may receive, or has received environmental exposure to a chemical.</p>
<p>Recharge</p> <p>Definition: Process by which rain water (precipitation) seeps into the ground-water system.</p>
<p>Recharge Area</p>

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Term
Definition: Generally, an area that is connected with the underground aquifer(s) by a highly porous soil or rock layer. Water entering a recharge area may travel for miles underground.
Recharge Rate
Definition: The quantity of water per unit time that replenishes or refills an aquifer.
Recorder
Definition: A device that creates a permanent record, on a paper chart or magnetic tape, of the changes of some measured variable.
Reducing Agent
Definition: Any substance, such as base metal (iron) or the sulfide ion (S ²⁻), that will readily donate (give up) electrons. The opposite is an oxidizing agent.
Reduction
Definition: (re-DUCK-shun) Reduction is the addition of hydrogen, removal of oxygen, or the addition of electrons to an element or compound. Under anaerobic conditions (no dissolved oxygen present), sulfur compounds are reduced to odor-producing hydrogen sulfide (H ₂ S and other compounds). The opposite of oxidation.
Reference
Definition: A physical or chemical quantity whose value is known exactly, and thus is used to calibrate or standardize instruments.
Reference Dose

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Term
<p>Definition: The daily exposure level which, during an entire lifetime of a human, appears to be without appreciable risk on the basis of all facts known at the time.</p> <p>Acronym: RfD</p>
<p>Reliquifaction</p> <p>Definition: (re-LICK-we-FACK-shun)</p>
<p>rem</p> <p>Definition: The unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A millirem (mrem)" is 1/1000 of a rem.</p>
<p>Renal</p> <p>Definition: Pertaining to the kidney.</p>
<p>Repeat Compliance Period</p> <p>Definition: Any subsequent compliance period after the initial compliance period.</p>
<p>Representative Sample</p> <p>Definition: A portion of material or water that is as nearly identical in content and consistency as possible to that in the larger body of material or water being sampled.</p>

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Term
Reservoir
Definition: Any natural or artificial holding area used to store, regulate, or control water.
Residual Chlorine
Definition: The amount of free and/or available chlorine remaining after a given contact time under specified conditions.
Residual Disinfectant Concentration
Definition 1: "C" in CT calculations. Definition 2: The concentration of disinfectant measured in mg/L in a representative sample of water.
Residue
Definition: The dry solids remaining after the evaporation of a sample of water or sludge.
Respiration
Definition: The process in which an organism uses oxygen for its life processes and gives off carbon dioxide.
Retrospective Study
Definition: An epidemiological study which compares diseased persons with non-diseased persons and works back in time to determine exposures.
Reverse Osmosis

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Term
<p>Definition: (oz-MOE-sis) The application of pressure to a concentrated solution which causes the passage of a liquid from the concentrated solution to a weaker solution across a semipermeable membrane. The membrane allows the passage of the solvent (water) but not the dissolved solids (solutes). The liquid produced is a demineralized water.</p>
<p>Reversible Effect</p> <p>Definition: An effect which is not permanent, especially adverse effects which diminish when exposure to a toxic chemical is ceased.</p>
<p>Rill</p> <p>Definition: A small channel eroded into the soil surface by runoff, rills easily can be smoothed out (obliterated) by normal tillage.</p>
<p>Riparian Rights</p> <p>Definition: A doctrine of state water law under which a land owner is entitled to use the water on or bordering his property, including the right to prevent diversion or misuse of upstream waters. Riparian land is land that borders on surface water.</p>
<p>Risk</p> <p>Definition: The potential for realization of unwanted adverse consequences or events.</p>
<p>Risk Assessment</p> <p>Definition: A qualitative or quantitative evaluation of the environmental and/or health risk resulting from exposure to a chemical or physical agent (pollutant); combines exposure assessment results with toxicity assessment results to estimate risk.</p>

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Term
<p>Risk Characterization</p> <p>Definition: Final component of risk assessment that involves integration of the data and analysis involved in hazard evaluation, dose-response evaluation, and human exposure evaluation to determine the likelihood that humans will experience any of the various forms of toxicity associated with a substance.</p>
<p>Risk Estimate</p> <p>Definition: A description of the probability that organisms exposed to a specified dose of chemical will develop an adverse response (e.g., cancer).</p>
<p>Risk Factor</p> <p>Definition: Characteristic (e.g., race, sex, age, obesity) or variable (e.g., smoking, occupational exposure level) associated with increased probability of a toxic effect.</p>
<p>Risk Management</p> <p>Definition: Decisions about whether an assessed risk is sufficiently high to present a public health concern and about the appropriate means for control of a risk judged to be significant.</p>
<p>Risk Specific Dose</p> <p>Definition: The dose associated with a specified risk level.</p>
<p>Rodenticide</p>

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Term
<p>Definition: (row-DENT-uh-SIDE) Any substance or chemical used to kill or control rodents.</p>
<p>Rotameter</p> <p>Definition: (RODE-uh-ME-ter) A device used to measure the flow rate of gases and liquids. The gas or liquid being measured flows vertically up a tapered, calibrated tube. Inside the tube is a small ball or bullet-shaped float (it may rotate) that rises or falls depending on the flow rate. The flow rate may be read on a scale behind or on the tube by looking at the middle of the ball or at the widest part or top of the float.</p>
<p>Rotor</p> <p>Definition: The rotating part of a machine. The rotor is surrounded by the stationary (non-moving) parts (stator) of the machine.</p>
<p>Route of Exposure</p> <p>Definition: The avenue by which a chemical comes into contact with an organism (e.g., inhalation, ingestion, dermal contact, injection).</p>
<p>Run-Off</p> <p>Definition: That part of precipitation, snow melt, or irrigation water that runs off the land into streams or other surface water. It can carry pollutants from the air and land into the receiving waters.</p>
<p>Sacrificial Anode</p> <p>Definition: An easily corroded material deliberately installed in a pipe or tank. The intent of such an installation is to give up (sacrifice) this anode to corrosion while the water supply facilities remain relatively corrosion free.</p>

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Term
<p>Safe</p> <p>Definition: Condition of exposure under which there is a "practical certainty" that no harm will result in exposed individuals.</p>
<p>Safe Drinking Water Act</p> <p>Definition: An Act passed by the US Congress in 1974. The Act establishes a cooperative program among local, state and federal agencies to insure safe drinking water for consumers.</p> <p>Acronym: SDWA</p>
<p>Safe Water</p> <p>Definition: 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.</p>
<p>Safe Yield</p> <p>Definition: The annual quantity of water that can be taken from a source of supply over a period of years without depleting the source beyond its ability to be replenished naturally in "wet years".</p>
<p>Salinity</p> <p>Definition 1: The relative concentration of dissolved salts, usually sodium chloride, in a given water. Definition 2: A measure of the concentration of dissolved mineral substances in water.</p>
<p>Sand</p>

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Term
Definition: Soil particles between 0.05 and 2.0 mm in diameter.
Sand Filters
Definition: Devices that remove some suspended solids from sewage. Air and bacteria decompose additional wastes filtering through the sand so that cleaner water drains from the bed.
Sanitary Sewer
Definition: A sewer that transports only wastewaters (from domestic residences and/or industries) to a wastewater treatment plant.
Sanitary Survey
Definition: An on-site review of the water source, 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.
Saprophytes
Definition: (SAP-row-FIGHTS) Organisms living on dead or decaying organic matter. They help natural decomposition of organic matter in water.
Saturated Zone
Definition: The area below the water table where all open spaces are filled with water.
Saturator

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Term
<p>Definition: (SAT-you-RAY-tore) A device which produces a fluoride solution for the fluoridation process. The device is usually a cylindrical container with granular sodium fluoride on the bottom. Water flows either upward or downward through the sodium fluoride to produce the fluoride solution.</p>
<p>SCFM</p> <p>Definition: Cubic Feet of air per Minute at Standard conditions of temperature, pressure and humidity (0 degrees C /14.7 psia /50% relative humidity).</p>
<p>Schedule, Pipe</p> <p>Definition: A sizing system of arbitrary numbers that specifies the ID (inside diameter) and OD (outside diameter) for each diameter pipe. This term is used for steel, wrought iron, and some types of plastic pipe. Also used to describe the strength of some types of plastic pipe.</p>
<p>Secchi Disc</p> <p>Definition: (SECK-key) A flat, white disc lowered into the water by a rope until it is just barely visible. At this point, the depth of the disc from the water surface is the recorded Secchi disc transparency.</p>
<p>Secondary Maximum Contaminant Levels</p> <p>Definition: Secondary MCLs for various water quality indicators are established to protect public welfare.</p> <p>Acronym: SMCLs</p>
<p>Sediment Yield</p>

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Term
Definition: The quantity of sediment arriving at a specific location.
Sedimentation
Definition: A water treatment process in which solid particles settle out of the water being treated in a large clarifier or sedimentation basin.
Sedimentation Basin
Preferred Term: Clarifier
Seepage
Definition: The percolation of water through the soil from unlined channels, ditches, watercourses and water storage facilities.
Seize up
Definition: Seize up occurs when an engine overheats and a part expands to the point where the engine will not run.
Semi-Confined Aquifer
Definition: An aquifer that is partially confined by a soil layer (or layers) of low permeability through which recharge and discharge can occur.
Sensor
Definition: An instrument that measure (senses) a physical condition or variable of interest. Floats and thermocouples are examples

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Term
of sensors.
Septage
Definition: The liquid and semisolid contents removed by pumping from a septic tank.
Septic
Definition: (SEP-tick) A condition produced by bacteria when all oxygen supplies are depleted. If severe, bottom deposits and water turn black, give off foul odors, and the water has a greatly increased chlorine demand.
Septic System
Definition: An onsite system designed to treat and dispose of domestic sewage; a typical septic system consists of a tank that receives wastes from a residence or business, and a system of tile lines or a pit for disposal of the liquid effluent that remains after decomposition of the solids by bacteria in the tank.
Sequestration
Definition: (SEE-kwes-TRAY-shun) A chemical completing (forming or joining together) of metallic cations (such as iron) with certain inorganic compounds, such as phosphate. Sequestration prevents the precipitation of the metals (iron).
Service Line Sample
Definition: A one-liter sample of water collected in accordance with CFR Section 14186(b)(6) of the code of Federal Regulations, that has been standing for a least 6 hours in a service line.

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Term
Service Pipe
Definition: The pipeline extending from the water main to the building served or to the consumers system.
Set Point
Definition: The position at which the control or controller is set. This is the same as the desired value of the process variable.
Settling Basin
Preferred Term: Clarifier
Sewage
Definition 1: The used water and solids that flow from homes through sewers to a wastewater treatment plant. The preferred term is WASTEWATER. Definition 2: Liquid and solid wastes carried in sewers.
Sewer
Definition: An underground system of conduits (pipes and/or tunnels) that collect and transport wastewaters and/or runoff; gravity sewers carry free-flowing water and wastes; pressurized sewers carry pumped wastewaters under pressure.
Sewerage System
Definition: The network of sewers that carries sewage from point of origin to point of treatment.
Shock Load

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Term
<p>Definition: The arrival at a water treatment plant of raw water containing unusual amounts of algae, colloidal matter, color, suspended solids, turbidity, or other pollutants.</p>
<p>Short-Circuiting</p> <p>Definition: A condition that occurs in tanks or basins when some of the water travels faster than the rest of the flowing water. This is usually undesirable since it may result in shorter contact, reaction, or settling times in comparison with the theoretical (calculated) or presumed detention times.</p>
<p>Silt</p> <p>Definition: Soil particles between 0.05 and 0.002 mm in diameter.</p>
<p>Simulate</p> <p>Definition: To reproduce the action of some process, usually on a smaller scale.</p>
<p>Single Family Structure</p> <p>Definition: A building constructed as a single-family residence that is currently used as either a residence or a place of business.</p>
<p>Single-Stage Pump</p> <p>Definition: A pump that has only one impeller. A multi-stage pump has more than one impeller.</p>
<p>Sink</p>

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Term
Definition: A place in the environment where a compound or material collects.
Slake
Definition: To mix with water with a true chemical combination (hydrolysis) taking place, such as in the slaking of lime.
Slope
Definition: The slope or inclination of a trench bottom or a trench side wall is the ratio of the vertical distance to the horizontal distance or "rise over run".
Slow Sand Filtration
Definition: A process involving passage of raw water through a bed of sand at low velocity (generally less than 0.4 m/h) resulting in substantial particulate removal by physical and biological mechanisms.
Sludge
Definition: (sluj) The settleable solids separated from water during processing.
Slurry
Definition: (SLUR-e) A watery mixture or suspension of insoluble (not dissolved) matter; a thin watery mud or any substance resembling it (such as a grit slurry or a lime slurry).
Soft Water

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Term
<p>Definition: Water having a low concentration of calcium and magnesium ions. According to US Geological Survey guidelines, soft water is water having a hardness of 60 milligrams per liter or less.</p>
<p>Software Programs</p>
<p>Definition: Computer programs; the list of instructions that tell a computer how to perform a given task or tasks.</p>
<p>Soil and Water Conservation District</p>
<p>Definition: A local government entity within a defined water or soil protection area that provides assistance to farmers and other local residents in conserving natural resources, especially soil and water.</p> <p>Acronym: SWCD</p>
<p>Soil Conservation District</p>
<p>Definition: A local government entity within a defined water or soil protection area that provides assistance to farmers and other local residents in conserving natural resources, especially soil and water.</p> <p>Acronym: SCD</p>
<p>Soil Conservation Service</p>
<p>Definition: An agency of the United States Department of Agriculture that provides technical assistance for resource conservation to farmers, other Federal, state and local agencies, and to local soil conservation districts.</p> <p>Acronym: SCS</p>
<p>Soil Erodibility</p>

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Term
Definition: A measure of the soil's susceptibility to raindrop impact, runoff and other erosional processes.
Soil Profile
Definition: A vertical section of the earth's highly weathered upper surface often showing several distinct layers, or horizons.
Soil Structure
Definition: The arrangement of soil particles into aggregates.
Soil Texture
Definition: The proportions of soil particles (sand, silt, and clay) in a soil profile.
Solder
Definition: A metallic compound used to seal the joints between pipes. Until recently, most solder contained 50 percent lead. The use of lead solder containing more than 0.2% lead is now prohibited for pipes carrying potable water.
Sole Source Aquifer
Definition: An aquifer that supplies 50 percent or more of the drinking water of an area.
Solenoid
Definition: (SO-luh-noid) A magnetically (electrical coil) operated mechanical device. Solenoids can operate a small valve or a switch.

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Term
<p>Solution</p> <p>Definition: A liquid mixture of dissolved substances. In a solution it is impossible to see all the separate parts.</p>
<p>Sorption</p> <p>Definition: A surface phenomenon which may be either absorption or adsorption, or a combination of the two; often used when the specific mechanism is not known.</p>
<p>Sounding Tube</p> <p>Definition: A pipe or tube used for measuring the depths of water.</p>
<p>Span</p> <p>Definition: The scale or range of values an instrument is designed to measure.</p>
<p>Specific Conductance</p> <p>Definition: A rapid method of estimating the dissolved-solids content of a water supply. The measurement indicates the capacity of a sample of water to carry an electrical current, which is related to the concentration of ionized substances in the water.</p>
<p>Specific Gravity</p> <p>Definition: Weight of a particle, substance, or chemical solution in relation to the weight of water. Water has a specific gravity of 1.000 at 4 degrees C (39 degrees F). Particulates in raw water may have a specific gravity of 1.005 to 2.5.</p>

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Term
<p>Specific Yield</p> <p>Definition: The quantity of water that a unit volume of saturated permeable rock or soil will yield when drained by gravity. Specific yield may be expressed as a ratio or as a percentage by volume.</p>
<p>Spoil</p> <p>Definition: Excavated material such as soil from the trench of a water main.</p>
<p>Spore</p> <p>Definition: The reproductive body of an organism which is capable of giving rise to a new organism either directly or indirectly. A viable (able to live and grow) body regarded as the resting stage of an organism. A spore is usually more resistant to disinfectants and heat than most organisms.</p>
<p>Spring</p> <p>Definition: Ground water seeping out of the earth where the water table intersects the ground surface.</p>
<p>Spring Line</p> <p>Definition: Theoretical center of a pipeline. Also, the guideline for laying a course of bricks.</p>
<p>Standard</p> <p>Definition: A physical or chemical quantity whose value is known exactly, and is used to calibrate or standardize instruments.</p>

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Term
Standard Method
Preferred Term: Standard Methods for the Examination of Water and Wastewater
Standard Methods for the Examination of Water and Wastewater
Definition: A joint publication of the American Public Health Association, American Water Works Association, and the Water Pollution Control Federation which outlines the procedures used to analyze the impurities in water and wastewater.
Standard Sample
Definition: The aliquot of finished drinking water that is examined for the presence of coliform bacteria.
Standard Solution
Definition: A solution in which the exact concentration of a chemical or compound is known.
Standardize
Definition 1: To compare with a standard. Definition 2: In wet chemistry, to find out the exact strength of a solution by comparing it with a standard of known strength. Definition 3: To set up an instrument or device to read a standard. This allows you to adjust the instrument so that it reads accurately, or enables you to apply a correction factor to the readings.
Starters
Definition: Devices used to start up large motors gradually to avoid severe mechanical shock to a driven machine and to prevent

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Term
disturbance to the electrical lines (causing dimming and flickering of lights).
<p>State</p> <p>Definition: The agency of the State or Tribal government which has jurisdiction over public water systems. During any period when a State or Tribal government does not have primary enforcement responsibility pursuant to Section 1413 of the Safe Drinking Water Act, the term "State" means the Regional Administrator, U.S. Environmental Protection Agency.</p>
<p>Static Head</p> <p>Definition: When water is not moving, the vertical distance (in feet) from a specific point to the water surface is the static head.</p>
<p>Static Pressure</p> <p>Definition: The static pressure in psi is the static head in feet times 0.433 psi/ft.</p>
<p>Static Water Depth</p> <p>Definition: The vertical distance in feet from the centerline of the pump discharge down to the surface level of the free pool while no water is being drawn from the pool or water table.</p>
<p>Static Water Level</p> <p>Definition 1: The elevation or level of the water table in a well when the pump is not operating. Definition 2: The level or elevation to which water would rise in a tube connected to an artesian aquifer, or basin, or conduit under pressure.</p>
Stator

Terminology Services - Vocabulary Catalog List Detail Report

Term
Definition: That portion of a machine which contains the stationary (non-moving) parts that surround the moving parts (rotor).
Sterilization
Definition: (STARE-uh-luh-ZAY-shun) The removal or destruction of all microorganisms, including pathogenic and other bacteria, vegetative forms and spores.
Stethoscope
Definition: An instrument used to magnify sounds and convey them to the ear.
Stochastic
Definition: Based on the assumption that the actions of a chemical substance results from probabilistic events.
Storm Sewer
Definition: A sewer that collects and transports surface runoff to a discharge point (infiltration basin, receiving stream, treatment plant).
STP
Preferred Term: Wastewater Treatment Plant
Stratification

Terminology Services - Vocabulary Catalog List Detail Report

Term
<p>Definition: The formation of separate layers (of temperature, plant, or animal life) in a lake or reservoir. Each layer has similar characteristics such as all water in the layer has the same temperature.</p>
<p>Strip Cropping</p>
<p>Definition: A crop production system that involves planting alternating strips of row crops and close-growing forage crops; the forage strips intercept and slow runoff from the less protected row crop strips.</p>
<p>Subchronic</p>
<p>Definition: Of intermediate duration, usually used to describe studies or levels of exposure between 5 and 90 days.</p>
<p>Submerged Aquatic Vegetation</p>
<p>Definition: Aquatic vegetation, such as sea grasses, that cannot withstand excessive drying and therefore live with their leaves at or below the water surface. SAVs provide an important habitat for young fish and other aquatic organisms.</p> <p>Acronym: SAV</p>
<p>Submergence</p>
<p>Definition: The distance between the water surface and the media surface in a filter.</p>
<p>Suction Lift</p>
<p>Definition: The NEGATIVE pressure [in feet (meters) of water or inches (centimeters) of mercury vacuum] on the suction side of the pump. The pressure can be measured from the centerline of the pump DOWN TO (lift) the elevation of the hydraulic grade line on the suction side of the pump.</p>

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Term
Suggested No Adverse Response Level
Definition: The concentration of a chemical in water that is expected not to cause an adverse health effect. Acronym: SNARL
Superchlorination
Definition: (SUE-per-KLOR-uh-NAY-shun) Chlorination with doses that are deliberately selected to produce free or combined residuals so large as to require dechlorination.
Superfund
Definition: Federal law which authorizes EPA to manage the clean-up of abandoned or uncontrolled hazardous waste sites.
Supernatant
Definition: (sue-per-NAY-tent) Liquid removed from settled sludge. Supernatant commonly refers to the liquid between the sludge on the bottom and the water surface of a basin or container.
Supersaturated
Definition: An unstable condition of a solution (water) in which the solution contains a substance at a concentration greater than the saturation concentration for the substance.
Supplier of Water

Terminology Services - Vocabulary Catalog List Detail Report

Term
Definition: Any person who owns or operates a public water system.
Surface Loading
Definition: One of the guidelines for the design of settling tanks and clarifiers in treatment plants. Used by operators to determine if tanks and clarifiers are hydraulically (flow) over- or underloaded.
Surface Pump
Definition: A mechanism for removing water or wastewater from a sump or wet well.
Surface Reaeration
Preferred Term: Reaeration
Surface Runoff
Definition: Precipitation, snow melt, or irrigation in excess of what can infiltrate the soil surface and be stored in small surface depressions; runoff is a major transporter of non-point source pollutants.
Surface Water
Definition: All water naturally open to the atmosphere (rivers, lakes, reservoirs, streams, impoundments, seas, estuaries, etc) and all springs, wells, or other collectors which are directly influenced by surface water.
Surfactant

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Term
<p>Definition: (sir-FAC-tent) Abbreviation for surface-active agent. The active agent in detergents that possesses a high cleaning ability.</p>
<p>Surge Chamber</p>
<p>Definition: A chamber or tank connected to a pipe and located at or near a valve that may quickly open or close or a pump that may suddenly start or stop. When the flow of water in a pipe starts or stops quickly, the surge chamber allows water to flow into or out of the pipe and minimize any sudden positive or negative pressure waves or surges in the pipe.</p>
<p>Suspended Solids</p>
<p>Definition 1: Solids that either float on the surface or are suspended in water or other liquids, and which are largely removable by laboratory filtering. Definition 2: The quantity of material removed from water in a laboratory test, as prescribed in STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER.</p>
<p>Swamps</p>
<p>Preferred Term: Wetlands</p>
<p>Synergism</p>
<p>Definition: An interaction of two or more chemicals which results in an effect that is greater than the sum of their effects taken independently.</p>
<p>System with a Single Service Connection</p>
<p>Definition: A system which supplies drinking water to consumers via a single service line.</p>

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Term
Systemic
Definition: Relating to whole body, rather than its individual parts.
Systemic Effects
Definition: Effects observed at sites distant from the entry point of a chemical due to its absorption and distribution into the body.
Telemetry
Definition: (tel-LEM-uh-tree) The electrical link between the transmitter and the receiver. Telephone lines are commonly used to serve as the electrical line.
Temperature Sensor
Definition: A device that opens and closes a switch in response to changes in the temperature. This device might be a metal contact, or a thermocouple that generates minute electrical current proportional to the difference in heat, or a variable resistor whose value changes in response to changes in temperature.
Teratogenesis
Definition: The induction of nonhereditary congenital malformations (birth defects) in a developing fetus by exogenous factors acting in the womb; interference with normal embryonic development.
Teratogenicity

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Term
Definition: The capacity of a physical or chemical agent to cause teratogenesis in offspring.
Terrace
Definition: A broad channel, bench, or embankment constructed across the slope to intercept runoff and detain or channel it to protected outlets, thereby reducing erosion from agricultural areas.
Therapeutic Index
Definition: The ratio of the dose required to produce toxic or lethal effect to dose required to produce nonadverse or therapeutic response.
Thermal Stratification
Definition: (STRAT-uh-fuh-KAY-shun) The formation of layers of different temperatures in a lake or reservoir.
Thermocline
Definition: (THUR-moe-KLINE) The middle layer in a thermally stratified lake or reservoir. In this layer there is a rapid decrease in temperature with depth.
Thermocouple
Definition: A heat-sensing device made of two conductors of different metals joined at their ends. An electric current is produced when there is a difference in temperature between the ends.
THM Precursor

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Term
Preferred Term: Precursor, THM
Threshold
Definition: The lowest dose of a chemical at which a specified measurable effect is observed and below which it is not observed.
Threshold Odor
Definition: The minimum odor of a water sample that can just be detected after successive dilutions with odorless water.
Threshold Odor Number
Definition: The greatest dilution of a sample with odor-free water that still yields a just-detectable odor.
Thrust Block
Definition: A mass of concrete or similar material appropriately placed around a pipe to prevent movement when the pipe is carrying water. Usually placed at bends and valve structures.
Tillage
Definition: Plowing, seedbed preparation, and cultivation practices.
Time Lag
Definition: The time required for processes and control systems to respond to a signal or to reach a desired level.

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Term
Time-Weighted Average
Definition: The average value of a parameter (e.g., concentration of a chemical in air) that varies over time.
Timer
Definition: A device for automatically starting or stopping a machine or other device at a given time.
Tissue
Definition: A group of similar cells.
Titrate
Definition: (TIE-trate) To TITRATE a sample, a chemical solution of known strength is added on a drop-by-drop basis until a certain color change, precipitate, or pH change in the sample is observed (end point). Titration is the process of adding the chemical reagent in increments until completion of the reaction, as signaled by the end point.
Titration
Preferred Term: Titrate
TNCWS
Preferred Term: Transient Water System
Too Numerous to Count

Terminology Services - Vocabulary Catalog List Detail Report

Term
<p>Definition: The total number of bacterial colonies exceeds 200 on a 47-mm diameter membrane filter used for coliform detection.</p>
<p>Topography</p>
<p>Definition: The arrangement of hills and valleys in a geographic area.</p>
<p>Total Dissolved Phosphorus</p>
<p>Definition: Total phosphorus content of material that will pass through a filter of a specific size.</p>
<p>Total Dissolved Solids</p>
<p>Definition: All of the dissolved solids in a water. TDS is measured on a sample of water that has passed through a very fine mesh filter to remove suspended solids. The water passing through the filter is evaporated and the residue represents the dissolved solids.</p>
<p>Acronym: TDS</p>
<p>Total Dynamic Head</p>
<p>Definition: When a pump is lifting or pumping water, the vertical distance (in feet) from the elevation of the energy grade line on the suction side of the pump to the elevation of the energy grade line on the discharge side of the pump.</p>
<p>Acronym: TDH</p>
<p>Total Nitrogen</p>
<p>Definition: The sum of all nitrogen forms.</p>

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Term
Total Particulate Phosphorus
Definition: Total phosphorus content of material retained on a filter of a specific size.
Total Phosphorus
Definition: The sum of all phosphorus forms.
Total Residual Chlorine
Definition: The amount of available chlorine remaining after a given contact time. The sum of the combined available residual chlorine and the free available residual chlorine.
Total Trihalomethanes
Definition 1: The sum of the concentration, in milligrams per liter, of the several trihalomethane compounds, rounded to two significant figures. Definition 2: The sum of the concentration in milligrams per liter of the trihalomethane compounds (trichloromethane [chloroform], dibromochloromethane, bromodichloromethane and tribromomethane [bromoform]), rounded to two significant figures. Acronym: THMs, TTHM
Totalizer
Definition: A device or meter that continuously measures and calculates (adds) total flows in gallons, million gallons, cubic feet, or some other unit of volume measurement.
Toxaphene

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Term
Definition: (TOX-uh-FEEN) A chemical that causes adverse health effects in domestic water supplies and also is toxic to freshwater and marine aquatic life.
Toxic
Definition: (TOX-ick) A substance which is poisonous to an organism.
Toxic Pollutants
Definition: Materials contaminating the environment that cause death, disease, birth defects in organisms that ingest or absorb them. The quantities and length of exposure necessary to cause these effects can vary widely.
Toxic Substance
Definition: A chemical or mixture that may represent an unreasonable risk of injury to health or the environment.
Toxicant
Definition: A harmful substance or agent that may injure an exposed organism.
Toxicity
Definition: The quality or degree of being poisonous or harmful to plant, animal or human life.
Toxicity Assessment
Definition: Characterization of the toxicological properties and effects of a chemical, including all aspects of its absorption,

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Term
metabolism, excretion and mechanism of action, with special emphasis on establishment of dose-response characteristics.
Toxicology
Definition: The science and study of poisons control.
Transducer
Definition: trans-DUE-sir) A device which senses some varying condition and converts it to an electrical signal for transmission to some other device (a receiver) for processing or decision making.
Transformation
Definition: Acquisition by a cell of the property of uncontrolled growth.
Transient Non-Community Water System
Preferred Term: Transient Water System
Transient Water System
Definition: A non-community water system that does not serve 25 of the same nonresident persons per day for more than six months per year.
Acronym: TWS
Transmission Lines

Terminology Services - Vocabulary Catalog List Detail Report

Term
Definition: Pipelines that transport raw water from its source to a water treatment plant. After treatment, water is usually pumped into pipelines (transmission lines) that are connected to a distribution grid system.
Transmissivity
Definition: The ability of an aquifer to transmit water.
Transpiration
Definition: (TRAN-spur-RAY-shun) The process by which water vapor is released to the atmosphere by living plants.
Treated Wastewater
Definition: Wastewater that has been subjected to one or more physical, chemical, and biological processes to reduce its pollution of health hazard.
Tremie
Definition: (TREH-me) A device used to place concrete or grout under water.
Trichloroethane
Definition: (try-KLOR-o-ETH-hane) An organic chemical used as a cleaning solvent that causes adverse health effects in domestic water supplies. Acronym: TCE
Trihalomethane

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Term
<p>Definition: One of a family of organic compounds named as derivatives of methane. THMs are generally the by-products from chlorination of drinking water that contains organic material. The resulting compounds (THMs) are suspected of causing cancer.</p> <p>Acronym: THM</p>
<p>Tube Settler</p> <p>Definition: A device that uses bundles of small bore (2 to 3 inches or 50 to 75 mm) tubes installed on an incline as an aid to sedimentation. The tubes may come in a variety of shapes including circular and rectangular. As water rises within the tubes, settling solids fall to the tube surface. As the sludge (from the settled solids) in the tube gains weight, it moves down the tubes and settles to the bottom of the basin for removal by conventional sludge collection means. Tube settlers are sometimes installed in sedimentation basins and clarifiers to improve particle removal.</p>
<p>Tubercle</p> <p>Definition: (TOO-burr-cull) A protective crust of corrosion products (rust) which builds up over a pit caused by the loss of metal due to corrosion.</p>
<p>Tuberculation</p> <p>Definition: (too-BURR-que-LAY-shun) The development or formation of small mounds of corrosion products (rust) on the inside of iron pipe. These mounds (tubercles) increase the roughness of the inside of the pipe thus increasing resistance to water flow.</p>
<p>Tumor Incidence</p> <p>Preferred Term: Incidence of Tumors</p>

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Term
Turbid
Definition: Having a cloudy or muddy appearance.
Turbidimeter
Definition: A device that measures the amount of suspended solids in a liquid.
Turbidity
Definition: (ter-BID-it-tee) The cloudy appearance of water caused by the presence of suspended and colloidal matter. Technically, turbidity is an optical property of the water based on the amount of light reflected by suspended particles. In the waterworks field, a turbidity measurement is used to indicate the clarity of water. Turbidity cannot be directly equated to suspended solids because white particles reflect more light than dark-colored particles and many small particles will reflect more light than an equivalent large particle.
Uncertainty Factor
Definition: A number (equal to or greater than one) used to divide NOAEL or LOAEL values derived from measurements in animals or small groups of humans in order to estimate a NOAEL value for the whole human population.
Unconfined Aquifer
Definition: An aquifer containing water that is not under pressure; the water level in a well is the same as the water table outside the well.
Underground Storage Tank

Terminology Services - Vocabulary Catalog List Detail Report

Term
Acronym: UST
Unit Cancer Risk
Definition: Estimate of the lifetime risk caused by each unit of exposure in the low exposure region.
Unit Hydrograph
Definition: The hydrograph of one inch of storm runoff generated by a rainstorm of fairly uniform intensity within a specific period of time.
United States Environmental Protection Agency
Acronym: EPA
Unsaturated Zone
Definition: The area between the land surface and water table in which the pore spaces are only partially filled with water.
Upper-Bound Estimate
Definition: Estimate not likely to be lower than the true risk.
Urban Runoff

Terminology Services - Vocabulary Catalog List Detail Report

Term
<p>Definition: Stormwater from city streets and adjacent domestic or commercial properties that may carry pollutants of various kinds into the sewer systems and/or receiving waters.</p>
<p>User Fee</p> <p>Definition: A fee which is collected only from those persons who use a particular service, as opposed to one collected from the public in general. User fees generally vary in proportion to the degree of use of the service.</p>
<p>Variable Costs</p> <p>Definition: Input costs that change as the nature of the production activity of its circumstances change; for example, as production levels vary.</p>
<p>Variance</p> <p>Definition: A State with primacy may relieve a public water system from a requirement respecting an MCL by granting a variance if certain conditions exist. These are: 1) the system cannot meet the MCL in spite of the application of best available treatment technology, treatment techniques or other means (taking costs into consideration), due to the characteristics of the raw water sources which are reasonably available to the system, and 2) the variance will not result in an unreasonable public health risk. A system may also be granted a variance from a specified treatment technique if it can show that, due to the nature of the system's raw water source, such treatment is not necessary to public health.</p>
<p>Vegetative Controls</p> <p>Definition: Non-point source pollution control practices that involve plants (vegetative cover) to reduce erosion and minimize the loss of pollutants.</p>

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Term
Virus
Definition: The smallest form of microorganisms capable of causing disease. Especially, a virus of fecal origin that is infectious to humans by waterborne transmission.
Void
Preferred Term: Interstice
Void Space
Preferred Term: Interstice
Volatile
Definition: Readily vaporizable at a relatively low temperature.
Volatile Acids
Definition: Acids produced during digestion. Fatty acids which are soluble in water and can be steam-distilled at atmospheric pressure. Volatile acids are commonly reported as equivalent to acetic acid.
Volatile Liquids
Definition: Liquids which easily vaporize or evaporate at room temperatures.
Volatile Solids

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Term
<p>Definition: Those solids in water or other liquids that are lost on ignition of the dry solids at 550 degrees C.</p>
<p>Volatilization</p>
<p>Definition: Loss of a substance through evaporation.</p>
<p>Voltage</p>
<p>Definition: The electrical pressure available to cause a flow of current (amperage) when an electrical circuit is closed.</p>
<p>Volumetric</p>
<p>Definition: A measurement based on the volume of some factor. Volumetric titration is a means of measuring unknown concentrations of water quality indicators in a sample by determining the volume of titrant or liquid reagent needed to complete particular reactions.</p>
<p>Vortex</p>
<p>Definition: A revolving mass of water which forms a whirlpool. This whirlpool is caused by water flowing out of a small opening in the bottom of a basin or reservoir. A funnel-shaped opening is created downward from the water surface.</p>
<p>Wastewater</p>
<p>Definition: The used water and solids from a community (including used water from industrial processes) that flow to a treatment plant. Storm water, surface water, and ground-water infiltration also may be included in the wastewater that enters a wastewater treatment plant. The term, sewage usually refers to household wastes, but this word is being replaced by the term, wastewater.</p>

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Term
<p>Wastewater Treatment Plant</p> <p>Definition: A facility that receives wastewaters (and sometimes runoff) from domestic and/or industrial sources, and by a combination of physical, chemical, and biological processes reduces (treats) the wastewaters to less harmful byproducts; known by the acronyms, STP (sewage treatment plant), and POTW (publicly owned treatment works).</p>
<p>Water Balance Model</p> <p>Preferred Term: Water Budget</p>
<p>Water Budget</p> <p>Definition: A summation of inputs, outputs, and net changes to a particular water resource system over a fixed period.</p>
<p>Water Hammer</p> <p>Definition: The sound like someone hammering on a pipe that occurs when a valve is opened or closed very rapidly. When a valve position is changed quickly, the water pressure in a pipe will increase and decrease back and forth very quickly. This rise and fall in pressures can do serious damage to the system.</p>
<p>Water Purveyor</p> <p>Definition: (purr-VAY-or) An agency or person that supplies water (usually potable water).</p>
<p>Water Solubility</p>

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Term
Definition: The maximum concentration of a chemical compound which can result when it is dissolved in water. If a substance is water soluble, it can very readily disperse through the environment.
Water Storage Pond
Definition: An impound for liquid wastes, so designated as to accomplish some degree of biochemical treatment of the wastes.
Water Supplier
Definition: A person who owns or operates a public water system.
Water Supply System
Definition: The collection, treatment, storage, and distribution of potable water from source to consumer.
Water Table
Definition: The level of ground water. The upper surface of the zone of saturation of groundwater above an impermeable layer of soil or rock (through which water cannot move) as in an unconfined aquifer. This level can be very near the surface of the ground or far below it.
Water Treatment Lagoon
Definition: An impound for liquid wastes, so designed as to accomplish some degree of biochemical treatment of the wastes.
Water Well

Terminology Services - Vocabulary Catalog List Detail Report

Term
Definition: An excavation where the intended use is for the location, acquisition, development, or artificial recharge of groundwater (excluding Sandpoint wells).
Waterborne Disease Outbreak
Definition: The significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water system that is deficient in treatment, as determined by the appropriate local or state agency.
Watershed
Definition: The land area that drains into a stream. An area of land that contributes runoff to one specific delivery point; large watersheds may be composed of several smaller "subsheds", each of which contributes runoff to different locations that ultimately combine at a common delivery point.
Watt
Definition: A unit of power equal to one joule per second. The power of a current of one ampere flowing across a potential difference of one volt.
Weir
Definition 1: (weir) A wall or plate placed in an open channel and used to measure the flow of water. The depth of the flow over the weir can be used to calculate the flow rate, or a chart or conversion table may be used. Definition 2: A wall or obstruction used to control flow (from settling tanks and clarifiers) to assure uniform flow rate and avoid short-circuiting.
Weir Diameter

Terminology Services - Vocabulary Catalog List Detail Report

Term
<p>Definition: (weir) Many circular clarifiers have a circular weir within the outside edge of the clarifier. All the water leaving the clarifier flows over this weir. The diameter of the weir is the length of a line from one edge of a weir to the opposite edge and passing through the center of the circle formed by the weir.</p>
<p>Weir Loading</p> <p>Definition: A guideline used to determine the length of weir needed on settling tanks and clarifiers in treatment plants. Used by operators to determine if weirs are hydraulically (flow) overloaded. $(\text{GPM}/\text{ft}) = \text{Flow (GPM)} / \text{Length of Weir (ft)}$.</p>
<p>Well</p> <p>Definition: A bored, drilled, or driven shaft, or a dug hole, whose depth is greater than the largest surface dimension and whose purpose is to reach underground water supplies or oil, or to store or bury fluids below ground.</p>
<p>Well Field</p> <p>Definition: Area containing one or more wells that produces usable amount of water.</p>
<p>Well Monitoring</p> <p>Definition: The measurement, by on-site instruments or laboratory methods, of the quality of water in a well.</p>
<p>Well Plug</p> <p>Definition: A watertight and gastight seal installed in a bore hole or well to prevent movement of fluids.</p>
<p>Wet Chemistry</p>

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Term
Definition: Laboratory procedures used to analyze a sample of water using liquid chemical solutions (wet) instead of, or in addition to, laboratory instruments.
Wetlands Definition: Any number of tidal and nontidal areas characterized by saturated or nearly saturated soils most of the year that form an interface between terrestrial (land-based) and aquatic environments; including freshwater marshes around ponds and channels (rivers and streams), brackish and salt marshes; other common names include swamps and bogs.
Wire-to-Water Efficiency Definition: The efficiency of a pump and motor together.
Withdrawal Definition: The process of taking water from a source and conveying it to a place for a particular type of use.
Yield Definition: The quantity of water (expressed as a rate of flow- GPM, GPH, GPD, or total quantity per year) that can be collected for a given use from surface or groundwater sources. The yield may vary with the use proposed, with the plan of development, and also with economic considerations.
Zeta Potential

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Term
Definition: In coagulation and flocculation procedures, the difference in the electrical charge between the dense layer of ions surrounding the particle and the charge of the bulk of the suspended fluid surrounding this particle. The zeta potential is usually measured in millivolts.
Zone of Aeration
Definition: The comparatively dry soil or rock located between the ground surface and the top of the water table.
Zone of Saturation
Definition: The soil or rock located below the top of the groundwater table. By definition, the zone of saturation is saturated with water.
Zooplankton
Definition: (ZOE-PLANK-ton) Small, usually microscopic animals(such as protozoans), found in lakes and reservoirs.