Glossary of Water Terms

A

Acre-foot - A term used to describe volumes of drinking or recycled water. The volume of one acre of surface area to a depth of one foot. One acre-foot equals 325,851 gallons of water, which is enough to serve the needs of two households of five, for one year.
Acre-feet per year - Describes bulk water use and transfers. One thousand acre-feet per year (1000 AFY) is the equivalent of 0.8921 million gallons per day.
Aerate - To supply air to water, soil, or other media.
Aerobic - Pertaining to, taking place in, or caused by the presence of oxygen.
Algae - Chlorophyll-bearing nonvascular, primarily aquatic species that have no true roots, stems, or leaves; most algae are microscopic, but some species can be as large as vascular plants.
Algal bloom - The rapid proliferation of passively floating, simple plant life, such as blue-green algae, in and on a body of water.
Alkaline - Has a pH greater than 7; pH modifier in the U.S. Fish and Wildlife Service wetland classification system; in common usage, a pH of water greater than 7.4.
Alluvial aquifer - A water-bearing deposit of unconsolidated material (sand and gravel) left behind by a river or other flowing water.
Alluvial deposits - Rock, gravel, sand, silt and clay that have been carried and deposited by running water.
Alluvium - General term for sediments of gravel, sand, silt, clay, or other particulate rock material deposited by flowing water, usually in the beds of rivers and streams, on a flood plain, on a delta, or at the base of a mountain.
American Community Survey - Helps local officials, community leaders, and businesses understand the changes taking place in their communities. It is the premier source for detailed population and housing information about our nation.
Ammonia - A compound of nitrogen and hydrogen (NH_3) that is a common by-product of animal waste. Ammonia readily converts to nitrate in soils and streams.
Anaerobic - Pertaining to, taking place in, or caused by the absence of oxygen.
Anthropogenic - Having to do with or caused by humans.
Appropriative rights: The right to take and beneficially use a specific quantity of water as granted by the state in accordance with California waterlaws.
Aquatic guidelines - Specific levels of water quality which, if reached, may adversely affect aquatic life. These are nonenforceable guidelines issued by a governmental agency or other institution.
Aquatic - Living or growing in or on water.
Aquifer - An underground basin in a body of rock that is sufficiently permeable to conduct groundwater and to yield economically significant quantities of water to wells and springs. Water is stored after percolating down through many layers of rock and gravel. These basins are dark, and bacteria cannot live in them. The water in aquifers is clean and safe for drinking without adding any chemicals. If aquifers were allowed to dry out, the ground would collapse just as if a chair were pulled out from under a student.
Area of Special Biological Significance - 34 ocean areas monitored and maintained for water quality by the State Water Resources Control Board. These areas cover much of the length of California's coastal waters. They support an unusual variety of aquatic life, and often host unique individual species. These areas are basic building blocks for a sustainable, resilient coastal environment and economy.
Arroyo - A small, deep, flat-floored channel or gully of an ephemeral or intermittent stream, usually with nearly vertical banks cut, into unconsolidated material. A term commonly used in the arid and semiarid regions of the Southwestern United States.
Artesian well - A well that produces a flow of water due to the pressure of underground water storage.
Artificial recharge - Augmentation of natural replenishment of ground-water storage by some method of construction, spreading of water, or by pumping water directly into an aquifer.
Atmospheric deposition - The transfer of substances from the air to the surface of the Earth, either in wet form (rain, fog, snow, dew, frost, hail) or in dry form (gases, aerosols, particles).

Average discharge - As used by the U.S. Geological Survey, the arithmetic average of all complete water years of record of surface water discharge whether consecutive or not. The term "average" generally is reserved for average of record and "mean" is used for averages of shorter periods, namely, daily, monthly, or annual mean discharges.

B

Background concentration - A concentration of a substance in a particular environment that is indicative of minimal influence by human (anthropogenic) sources.

Backwater - A body of water in which the flow is slowed or turned back by an obstruction such as a bridge or dam, an opposing current, or the movement of the tide.

Bacteria - Single-celled microscopic organisms.

Bank storage - The change in the amount of water stored in an aquifer adjacent to a surface-water body resulting from a change in stage of the surface-water body.

Bank - The sloping ground that borders a stream and confines the water in the natural channel when the water level, or flow, is normal.

Base flow - The sustained low flow of a stream, usually ground-water inflow to the stream channel.

Basic Fixed Sites - Sites on streams in NAWQA Study Units at which streamflow is measured and samples are collected for analysis of temperature, salinity, suspended sediment, major ions and metals, nutrients, and organic carbon to assess the broad-scale spatial and temporal character and transport of inorganic constituents of streamwater in relation to hydrologic conditions and environmental settings.

Basic user charge - A charge levied on every acre-foot of water pumped from the groundwater basin or delivered by the SCVWD to recover costs incurred for the benefit of current users.

Bedrock - A general term used for solid rock that underlies soils or other unconsolidated material.

Bed sediment and tissue studies - Assessment of concentrations and distributions of trace elements and hydrophobic organic contaminants in streambed sediment and tissues of aquatic organisms to identify potential sources and to assess spatial distribution of those constituents.

Bed sediment - The material that temporarily is stationary in the bottom of a stream or other watercourse.

Belt Press - A device for reducing the liquid content of treatment plant sludge.

Benthic macroinvertebrates - These are small bottom dwelling aquatic animals and the aquatic larval stages of insects. They include insects, mollusks, crustaceans, worms, and other organisms without a backbone that live in, on, or near the bottom of lakes, streams, or oceans.

Best Management Practices (BMPs) - Activities or structural improvements that help reduce the quantity and improve the quality of stormwater runoff. BMPs include treatment requirements, operating procedures and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. Or solutions that include the proper handling, storage, and disposal of toxic materials to prevent stormwater pollution.

Bioaccumulation - The biological sequestering of a substance at a higher concentration than that at which it occurs in the surrounding environment or medium. Also, the process whereby a substance enters organisms through the gills, epithelial tissues, dietary, or other sources.

Bioavailability - The capacity of a chemical constituent to be taken up by living organisms either through physical contact or by ingestion.

Biochemical Oxygen Demand (BOD) -- The quantity of oxygen consumed by microorganisms in biological processes that breakdown or decay organic matter in a water body.

Biochemical process - A process characterized by, produced by, or involving chemical reactions in living organisms.

Biodegradation - Transformation of a substance into new compounds through biochemical reactions or the actions of microorganisms such as bacteria.

Biodiversity - Full range of variety and variability within and among living organisms, their associations, and habitat-oriented ecological complexes. Term encompasses ecosystem, species, and landscape as well as intraspecific (genetic) levels of diversity.

Biofiltration -- The use of vegetation (usually grasses or wetland plants) to filter and treat stormwater runoff as it is conveyed through an open channel or swale.

Biomass - The amount of living matter, in the form of organisms, present in a particular habitat, usually expressed as weight-per-unit area.

Biome - A biogeographic region; a major regional ecological community characterized by distinctive life forms and principal plant (terrestrial biome) and animal (marine biome) species.

Bioretention -- A stormwater control measure that uses vegetation in retention areas and is designed to allow infiltration of runoff into the ground. The plants provide additional pollutant removal and filtering functions while infiltration allows the temperature of the runoff to be cooled.

Biota - All living organisms of an area.

Bog - A nutrient-poor, acidic wetland dominated by a waterlogged, spongy mat of sphagum moss that ultimately forms a thick layer of acidic peat; generally has no inflow or outflow; fed primarily by rain water.

Bosque - A dense growth of trees and underbrush.

Box culvert - A closed conduit of rectangular cross section used to pass floodwaters under a highway or railroad.

Brackish water - Water with a salinity intermediate between seawater and freshwater (containing from 1,000 to 10,000 milligrams per liter of dissolved solids).

Braided stream - A stream characterized by an interlacing or tangled network of several small branching and reuniting shallow channels.

Breakdown product - A compound derived by chemical, biological, or physical action upon a pesticide. The breakdown is a natural process that may result in a more toxic or a less toxic compound and a more persistent or less persistent compound.

Brine - Water that contains more than 35,000 milligrams per liter of dissolved solids.

C

California Rapid Assessment Method (CRAM) - A cost-effective and scientifically defensible rapid assessment method for monitoring the conditions of wetlands throughout California. It is designed for assessing ambient conditions within watersheds, regions, and throughout the State.

California Stream Condition Index (CSCI) - A biological index used to score the condition of BMI communities in perennial wadeable rivers and streams.

Capillary fringe - The zone above the water table in which water is held by surface tension. Water in the capillary fringe is under a pressure less than atmospheric.

Catch Basin: Curbside opening that collects rainwater from streets and serves as an entry point to the storm drain system.

Center pivot irrigation - An automated sprinkler system involving a rotating pipe or boom that supplies water to a circular area of an agricultural field through sprinkler heads or nozzles.

Channelization - The straightening and deepening of a stream channel to permit the water to move faster or to drain a wet area for farming.

Channel scour - Erosion by flowing water and sediment on a stream channel; results in removal of mud, silt, and sand on the outside curve of a stream bend and the bed material of a stream channel.

Chaparral - Refers to areas with broad-leaved evergreen shrubs found in climates with hot dry summers and mild wet winters.

Check dams - Check dams were small structures of loose rock, logs, brush and occasionally concrete built in a series of mountain canyons to regulate and prolong the flow of rainwater descending through the watershed. Dams also can be built out of concrete. When builders constructed the huge dam at Shasta Lake, they poured concrete for 24 hours straight, seven days a week, for 51/2 years!

Chemicals of Emerging Concern (Contaminants of Emerging Concern) - Nanoparticles, pharmaceuticals, personal care products, estrogen-like compounds, flame retardants, detergents, and some industrial chemicals with potential significant impact on human health and aquatic life.

Chloramine - A combined chlorine and ammonia compound used as a disinfectant for potable water.

Chlorine - A disinfectant used in the water treatment process.

Chlorofluorocarbons - A class of volatile compounds consisting of carbon, chlorine, and fluorine. Commonly called freons, which have been in refrigeration mechanisms, as blowing agents in the fabrication of flexible and rigid foams, and, until banned from use several years ago, as propellants in spray cans.

Cienaga - A marshy area where the ground is wet due to the presence of seepage or springs.

Circumneutral - Said of water with a pH between 5.5 and 7.4; pH modifier used in the U.S. Fish and Wildlife Service wetland classification system.

Clean Water Act - Establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. “Clean Water Act” became the Act’s common name with amendments in 1972 (EPA). This legislation that provides statutory authority for the NPDES program, which is Public law 92-500; 33U.S.C. 1251 et seq. Also known as the Federal Water Pollution Control Act.

Climate - The sum total of the meteorological elements that characterize the average and extreme conditions of the atmosphere over a long period of time at any one place or region of the Earth's surface.

Coastal Zone Management Act - Administered by NOAA, this act provides for the management of the nation’s coastal resources, including the Great Lakes. The goal is to “preserve, protect, develop, and where possible, to restore or enhance the resources of the nation’s coastal zone.” (NOAA)

Colonization - Successful invasion of a newly created habitat; successful recruitment in gaps or vacant niches following disturbance.

Combined sewer overflow - A discharge of untreated sewage and stormwater to a stream when the capacity of a combined storm/sanitary sewer system is exceeded by storm runoff.

Commercial withdrawals - Water for use by motels, hotels, restaurants, office buildings, commercial facilities, and civilian and military institutions. The water may be obtained from a public supplier or it may be self-supplied.

Composition - A list of plants and animals that make up a community, or any other ecological unit.

Concentration - The ratio of the quantity of any substance present in a sample of a given volume or a given weight compared to the volume or weight of the sample.

Concrete-lined channel - A flood control or water conveyance channel with the sides and bottom made of concrete.

Cone of depression - The depression of heads around a pumping well caused by withdrawal of water.

Confined aquifer (artesian aquifer) - An aquifer that is completely filled with water under pressure and that is overlain by material that restricts the movement of water.

Confining layer - A body of impermeable or distinctly less permeable (see permeability) material stratigraphically adjacent to one or more aquifers that restricts the movement of water into and out of the aquifers.

Confluence - The flowing together of two or more streams; the place where a tributary joins the mainstream.

Conjunctive use - The planned use and storage of surface and groundwater supplies to improve water supply reliability.

Conservation - The act of protecting from loss or depletion.

Constituent - A chemical or biological substance in water, sediment, or biota that can be measured by an analytical method.

Construction General Permit -- An NPDES permit issued by the SWRCB for the discharge of stormwater associated with construction activity fro soil disturbances of one acre or more.

Consumptive use - The quantity of water that is not available for immediate reuse because it has been evaporated, transpired, or incorporated into products, plant tissue, or animal tissue. Also referred to as "water consumption".

Contact recreation - Recreational activities, such as swimming and kayaking, in which contact with water is prolonged or intimate, and in which there is a likelihood of ingesting water.

Contamination - An impairment of the quality of water by microorganisms, chemicals, sewage or industrial waste which renders water unfit for its intended use. In California, this means the water poses an actual hazard to public health.

Contributing area - The area in a drainage basin that contributes water to streamflow or recharge to an aquifer.

Conveyance - The transportation of water away from an area to avoid flooding.

Core sample - A sample of rock, soil, or other material obtained by driving a hollow tube into the undisturbed medium and withdrawing it with its contained sample.

Corridor - A connection between adjacent and similar habitats large enough to allow the movement of propagules across all biological resources to pass; connection includes both core and edge habitat; a natural or restored connection for a population of organisms to use in order to breed and/or remain contiguous.

Cover - Plant material, living (vegetative cover) and dead (litter cover), on the soil surface; the area of ground covered by vegetation of a particular plant species, which is usually expressed as a percentage.

Criterion - A standard rule or test on which a judgment or decision can be based.

Critical Coastal Area - These are coastal watersheds which meet the dual goals of improving degraded coastal water quality, and providing extra protection from polluted runoff to coastal waters with recognized high resource value. California's Critical Coastal Areas (CCA) program aims to foster collaboration among local stakeholders and government agencies, to better coordinate efforts to protect high resource-value coastal waters from polluted runoff. This is coordinated by the Coastal Commission.

Cubic feet per second - A unit of measurement for flowing water; the number of cubic feet of water that passes by a given point in a second.

Cubic foot per second (ft^3/s, or cfs) - Rate of water discharge representing a volume of 1 cubic foot passing a given point during 1 second, equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meter per second. In a stream channel, a discharge of 1 cubic foot per second is equal to the discharge at a rectangular cross section, 1 foot wide and 1 foot deep, flowing at an average velocity of 1 foot per second.

Cultivar - A variety of plant produced and maintained through continued maintenance.

Curb Cut - An area of curb that has been removed to allow an unobstructed pathway from the street level. Curb cuts are often used to redirect water from traditional drainage ways to a stormwater BMP.

D

Dam - A structure built to hold back water.

Data Quality Objective - These are qualitative and quantitative statements derived from the outputs of the first six steps of the Data Quality Objective (DQO) Process, which is used to systematically plan for collecting environmental data of a known quality and quantity to support decisions. This guidance by the U.S. EPA describes a seven-step process that is used for developing performance and acceptance criteria that will be used to establish a collection design for a project.

Datum plane - A horizontal plane to which ground elevations or water surface elevations are referenced.

Daylighting - Exposing a previously covered stream to the open environment.

DDT (Dichloro-diphenyl-trichloroethane) - An organochlorine insecticide no longer registered for use in the United States.

Deciduous - Refers to plants that shed foliage at the end of the growing season.

Deepwater habitat - Permanently flooded lands lying below the deepwater boundary of wetlands.

Degradation products - Compounds resulting from transformation of an organic substance through chemical, photochemical, and/or biochemical reactions.

Degraded - Condition of the quality of water that has been made unfit for some specified purpose.

Delta - The low, nearly flat tract of land at or near the mouth of a river, resulting from the accumulation of sediment supplied by the river in such quantities that it is not removed by tides, waves, or currents. Commonly a triangular or fan-shaped plain.

Denitrification - A process by which oxidized forms of nitrogen such as **nitrate** (NO_3^-) are reduced to form nitrites, nitrogen oxides, ammonia, or free nitrogen: commonly brought about by the action of denitrifying bacteria and usually resulting in the escape of nitrogen to the air.

Design standards -- Design Standards refers to the City's "Manual of Stormwater Quality Control Standards for New Development and Redevelopment." Within the Manual is a variety of post-construction design standards to incorporate specific structural BMPs into construction projects.

Design storm - A rain event that is used as a worst probable scenario when calculating what volume and flow rate of water needs to be stored or treated.

Detection limit - The concentration of a constituent or analyte below which a particular analytical method cannot determine, with a high degree of certainty, the concentration.

Detect - To determine the presence of a compound.

Detention ponds -- A BMP consisting of a permanent pool of water designed to treat runoff by detaining water long enough for settling, filtering, and biological uptake. Wet ponds are also often designed to have an aesthetic or recreational value.

Detention -- The temporary storage of stormwater runoff to allow treatment by sedimentation and metered discharge of runoff at reduced peak flow rates.

Developed water - Water that is controlled and managed (dammed, pumped, diverted, stored, etc.) for a variety of uses.

Direct runoff - The runoff entering stream channels promptly after rainfall or snowmelt.

Disadvantaged Community - The areas designated by the State of California Department of Water Resources as a community with a median household income less than 80 percent of the statewide average (Water Code section 79505.5[a]). According to CalEPA, these areas represent the 25% highest scoring census tracts in CalEnviroScreen 3.0, along with other areas with high amounts of pollution and low populations.

Discharge - The volume of fluid passing a point per unit of time, commonly expressed in cubic feet per second, million gallons per day, gallons per minute, or seconds per minute per day.

Discharge area (ground water) - Area where subsurface water is discharged to the land surface, to surface water, or to the atmosphere.

Disinfection - A cleansing of harmful chemicals.

Dispersion - The extent to which a liquid substance introduced into a ground-water system spreads as it moves through the system.

Dissolved constituent - Operationally defined as a constituent that passes through a 0.45-micrometer filter.

Dissolved oxygen - Oxygen dissolved in water; one of the most important indicators of the condition of a water body. Dissolved oxygen is necessary for the life of fish and most other aquatic organisms.

Dissolved solids - Minerals and organic matter dissolved in water.

Disturbance - Any relatively discrete event in time that disrupts ecosystem, community, or population structure and changes resources, substrate availability, or the physical environment. Key descriptors are magnitude, frequency, size of area, and dispersion. Can be natural or human-caused.

Diversion - A turning aside or alteration of the natural course of a flow of water, normally considered physically to leave the natural channel. In some States, this can be a consumptive use direct from another stream, such as by livestock watering. In other States, a diversion must consist of such actions as taking water through a canal, pipe, or conduit.

Dominant plant - The plant species controlling the environment.

Drainage Management Area - Following the low impact development principle of managing storm water through small-scale, decentralized measures, DMAs are designated individual drainage areas within a Regulated Project that typically follow grade breaks and roof ridge lines and account for each surface type (e.g., landscaping, pervious paving, or roofs).

Drainage basin - The land area drained by a river or stream.

Drainage divide - Boundary between adjoining drainage basins.

Drawdown - The difference between the water level in a well before pumping and the water level in the well during pumping. Also, for flowing wells, the reduction of the pressure head as a result of the discharge of water.

Drinking water: Water, treated or untreated, which is intended for human use and consumption and considered to be free of harmful chemicals and disease-causing bacteria, cysts, viruses, or other microorganisms.

Drinking-water standard or guideline - A threshold concentration for a constituent or compound in a public drinking-water supply, designed to protect human health. As defined here, standards are U.S. Environmental Protection Agency regulations that specify the maximum contamination levels for public water systems required to protect the public welfare; guidelines have no regulatory status and are issued in an advisory capacity.

Drip irrigation - An irrigation system in which water is applied directly to the root zone of plants by means of applicators (orifices, emitters, porous tubing, or perforated pipe) operated under low pressure. The applicators can be placed on or below the surface of the ground or can be suspended from supports.

Drought - A prolonged period of less-than-normal precipitation such that the lack of water causes a serious hydrologic imbalance.

E

Ecological studies - Studies of biological communities and habitat characteristics in NAWQA Study Units to evaluate the effects of physical and chemical characteristics of water and hydrologic conditions on aquatic biota and to determine how biological and habitat characteristics differ among environmental settings.

Ecology - The study of the interrelationships between living organisms and their environment.

Ecoregion - An area of similar climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables.

Ecosystem - The interacting system of a biological community and its non-living environmental surroundings.

Ecotone - The boundary or transition zone between adjacent communities or biomes.

Effluent - Outflow from a particular source, such as a stream that flows from a lake or liquid waste that flows from a factory or sewage-treatment plant as treated wastewater.

Electrical conductivity - A measure of the ability of the water to conduct electrical current. It is used as a measure of the dissolved solids in the water.

Emergent plants - Erect, rooted, herbaceous plants that may be temporarily or permanently flooded at the base but do not tolerate prolonged inundation of the entire plant.

Endangered species - A species that is in imminent danger of becoming extinct.

Endemic - Refers to a species that is not only native to a geographic area but is also restricted to that area or specific habitat.

Enhancement - Management technique (using removal of exotics, seeding, transplantation, fencing, watershed manipulations, etc.) that attempts to restore to pre disturbance conditions areas that are only partially disturbed by human influence; alters a site for an improvement for a specific value.

Environment - The sum of all conditions and influences affecting the life of organisms. One's surroundings.

Environmental framework - Natural and human-related features of the land and hydrologic system, such as geology, land use, and habitat, that provide a unifying framework for making comparative assessments of the factors that govern water-quality conditions within and among NAWQA Study Units.

Environmental impact report (EIR) - A report required by the California Environmental Quality Act to describe the environmental impact of a proposed project.

Environmental impact statement (EIS) - A report required by the federal Environmental Protection Act to describe the environmental impact of a proposed federal project.

Environmental Protection Agency (EPA): The mission of the Environmental Protection Agency is to protect human health and the environment. Since 1970, EPA has been working for a cleaner, healthier environment for the American people. www.epa.gov/epahome/aboutepa.htm

Environmental justice - According to the U.S. EPA, environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. This goal will be achieved when everyone enjoys the same degree of protection from environmental and health hazards, and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

Environmental sample - A water sample collected from an aquifer or stream for the purpose of chemical, physical, or biological characterization of the sampled resource.

Environmentally Sensitive Habitat Area - Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments (Coastal Act Section 30107.5).

Environmental setting - Land area characterized by a unique combination of natural and human-related factors, such as row-crop cultivation or glacial-till soils.

Ephemeral stream - A stream or part of a stream that flows only in direct response to precipitation; it receives little or no water from springs, melting snow, or other sources; its channel is at all times above the water table.

EPT richness index - An index based on the sum of the number of taxa in three insect orders, Ephemeroptera (mayflies), Plecoptera (stoneflies), and Trichoptera (caddisflies), that are composed primarily of species considered to be relatively intolerant to environmental alterations.

Equivalent Impervious Surface Area – Is equal to Impervious Tributary Surface Area (ft2) + Pervious Tributary Surface Area (ft2), where Impervious Tributary Surface Area is defined as the sum of all of the site's conventional impervious surfaces, and Pervious Tributary Surface Area is defined as the sum of all of the site's pervious surfaces, corrected by a factor equal to the surface's runoff coefficient.

Equal-width increment (EWI) sample - A composite sample of water collected across a section of stream with equal spacing between verticals and equal transit rates within each vertical that yields a representative sample of stream conditions.

Erosion: Removal of soil particles by wind and water. Often the eroded debris (silt or sediment) becomes a pollutant via stormwater runoff. Erosion occurs naturally but can be intensified by human activities such as farming, development, road-building, and timber harvesting.

Erosion - Erosion is the process that moves material, especially soil, from one location to another. Erosion is caused by the action of wind, water, or other forces working on the earth's surface.

Estuarine wetlands - Tidal wetlands in low-wave-energy environments where the salinity of the water is greater than 0.5 part per thousand and is variable owing to evaporation and the mixing of seawater and freshwater; tidal wetlands of coastal rivers and embayments, salty tidal marshes, mangrove swamps, and tidal flats.

Estuary - Area where the current of a stream meets the ocean and where tidal effects are evident; an arm of the ocean at the lower end of a river.

Eutrophication - The process by which water becomes enriched with plant nutrients, most commonly phosphorus and nitrogen.

Evaporation - The process by which water is changed to gas or vapor; occurs directly from water surfaces and from the soil.

Evaporite minerals (deposits) - Minerals or deposits of minerals formed by evaporation of water containing salts. These deposits are common in arid climates.

Evapotranspiration - The process by which water is discharged to the atmosphere as a result of evaporation from the soil and surface-water bodies, and transpiration by plants.

Exfiltration - The process of subsurface groundwater moving away from the point of infiltration and dispersing through the rest of the soil.

Exotic species - Plants or animals not native to the area that have established viable populations within a community; species present within a community that did not exist there before the influence of human activities. Refers to a species that is foreign to a geographic area and usually alienated from its natural competitors and predators.

F

FDA action level - A regulatory level recommended by the U.S. Environmental Protection Agency for enforcement by the Food and Drug Administration (FDA) when pesticide residues occur in food commodities for reasons other than the direct application of the pesticide. Action levels are set for inadvertent pesticide residues resulting from previous legal use or accidental contamination. Applies to edible portions of fish and shellfish in interstate commerce.

Fecal bacteria - Microscopic single-celled organisms (primarily fecal coliforms and fecal streptococci) found in the wastes of warm-blooded animals. Their presence in water is used to assess the sanitary quality of water for body-contact recreation or for consumption. Their presence indicates contamination by the wastes of warm-blooded animals and the possible presence of pathogenic (disease producing) organisms.

Fertilizer - Any of a large number of natural or synthetic materials, including manure and nitrogen, phosphorus, and potassium compounds, spread on or worked into soil to increase its fertility.

Filter Strip -- Grassed strips situated along roads or parking areas that remove pollutants from runoff as it passes through, allowing some infiltration, and reductions of velocity.

Filtrate - Liquid that has been passed through a filter.

Filtration - The reduction in concentration of chemical and physical pollutants in water caused by passing the water through screens. In the treatment of stormwater quality the screens used are usually the void spaces between sand particles, but can also be biological filters.

First flush - The first big rain after an extended dry period (usually summer) which flushes out the accumulated pollutants in the storm drain system and carries them straight to the creeks and rivers.

Flash flood - A sudden local flood, typically due to heavy rain.

Flood - Any relatively high streamflow that overflows the natural or artificial banks of a stream.

Flood attenuation - a weakening or reduction in the force or intensity of a flood.

Flood control channel: The open portion (often concrete-lined) of the storm drain system.

Flood irrigation - The application of irrigation water whereby the entire surface of the soil is covered by ponded water.

Flood plain - A strip of relatively flat land bordering a stream channel that is inundated at times of high water.

Flow line - The idealized path followed by particles of water.

Flowpath - An underground route for ground-water movement, extending from a recharge (intake) zone to a discharge (output) zone such as a shallow stream.

Flow-Through Water Quality Treatment Systems – Storm Water Control Measures that are designed to treat storm water through filtration and/or settling. Flow-through systems do not provide significant retention or detention benefits for storm water volume control.

Fluvial deposit - A sedimentary deposit consisting of material transported by suspension or laid down by a river or stream.

Fragmentation - Process by which habitats are increasingly subdivided into smaller units, resulting in their increased insularity as well as losses of total habitat area.

Freshwater chronic criteria - The highest concentration of a contaminant that freshwater aquatic organisms can be exposed to for an extended period of time (4 days) without adverse effects.

Freshwater - Water that contains less than 1,000 milligrams per liter of dissolved solids.

G

Gaging station - A particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Garden - 1. A piece of ground for the cultivation of herbs, plants, fruits, flowers, etc.; it is usually close to the house. 2. A place for public enjoyment, planted with trees, flowers, etc.

Geology - Scientific study of the origin, history and structure of the earth.

Geomorphic - Pertaining to the form or general configuration of the Earth or of its surface features.

Geomorphology - The science that treats the general configuration of the Earth's surface; the description of landforms.

Green - The term "green" is used to describe a process, structure, or idea that integrates environmental considerations, i.e., green buildings, green cities, green roofs, etc. Energy efficiency and environmental sustainability are key characteristics of being "green."

Greenhouse Gases - Gases that trap heat in the atmosphere. Carbon dioxide makes up the vast majority of greenhouse gas emissions, but methane, nitrous oxide, and fluorinated gases also make up greenhouse gas emissions.

Green Infrastructures - Systems and practices that use or mimic natural processes to infiltrate, evapotranspirate, or reuse stormwater or runoff on the site where it is generated.

Green Roof - A green roof is partially or completely covered with vegetation. They commonly contain native or adaptive plants, soil, a root barrier, a drainage system, a waterproof membrane, and the roof support structure. Green roofs absorb and filter rainwater, provide building installation, enhance the roof lifespan, moderate roof deck temperatures, improve heating and cooling system efficiency, and amenity value for urban rooftop views and spaces.

Greenways - A corridor of undeveloped land preserved for recreational use or environmental protection.

Grey Infrastructure - Hard infrastructures or systems engineered and constructed by humans, such as roads, utilities, and flood control works.

Geotextiles - Porous fabrics that have been designed to allow only soil particles of a certain size to pass through. They are used to filter pollutants from water, and to provide structural support.

Groundwater: Water that flows below the ground surface through saturated soil, glacial deposits, or rock.

Groundwater flow system - The underground pathway by which ground water moves from areas of recharge to areas of discharge.

Grubbing - Derived from the word "grub," which means to root out or uproot; trees are cut and removed, then stumps and roots are grubbed out. Grubbing includes removing large, long-rooted vines, which also must be uprooted and cleared away. Trees are moved to safe areas and firewood is made available free to the public or burned.

Gutter: The edge of a street (below the curb) designed to drain water runoff from streets, driveways, parking lots, etc. into storm drain inlets.

H

Habitat - The locality, site and particular type of local environment occupied by an organism; includes food, water, shelter, cover, and the ability to raise young.

Habitat connectivity. A measure of connectedness in a habitat-oriented description of landscape elements.

Habitat creation – Establishment of a historical ecosystem on lands that did not previously support that system, or on severely altered sites.

Habitat degradation. Decline in habitat quality that accompanies non-natural forms of disturbance.

Hardscape - Hardscape refers to the man-made features of a landscape constructed from concrete, masonry, wood, or other non-plant materials. This may include streets, sidewalks, patios, decks, etc.

Headwater - The source or sources and upper part of a stream, especially of a large stream or river.

Health advisory - Nonregulatory levels of contaminants in drinking water that may be used as guidance in the absence of regulatory limits. Advisories consist of estimates of concentrations that would result in no known or anticipated health effects (for carcinogens, a specified cancer risk) determined for a child or for an adult for various exposure periods.

Herbaceous - With characteristics of an herb; a plant with no persistent woody stem above ground.

Herbicide - A type of pesticide designed to kill plants.

Horticulture - The art or science of cultivating fruits, flowers, and vegetables for specific use to humans; the cultivation of a garden.

Household hazardous materials: Common everyday products that people use in and around their homes-including paint, paint thinner, herbicides, and pesticides-that, due to their chemical nature, can be hazardous if not properly disposed.

Human health advisory - Guidance provided by U.S. Environmental Protection Agency, State agencies or scientific organizations, in the absence of regulatory limits, to describe acceptable contaminant levels in drinking water or edible fish.

Hydric soil - Soil that is wet long enough to periodically produce anaerobic conditions, thereby influencing the growth of plants.

Hydrocarbons - A chemical that consists only of hydrogen and carbon. Hydrocarbons are often left on parking and road surfaces by the petroleum products used to grease vehicles.

Hydrograph - Graph showing variation of water elevation, velocity, streamflow, or other property of water with respect to time.

Hydrologic conductivity - A measure of the ability of water to pass through soil.

Hydrologic cycle - (also called the water cycle): The movement of water as it evaporates from rivers, lakes or oceans, returns to the earth as precipitation, flows into rivers and evaporates again.

Hydrologic regime - The characteristic behavior and total quantity of water involved in a drainage basin.

Hydrologic unit - A geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the U. S. Geological Survey on State Hydrologic Unit Maps. Each hydrologic unit is assigned a hierarchical hydrologic unit code consisting of 2 digits for each successively smaller drainage basin unit.

I

Illegal discharge: The release or placement of any material into the County stormwater conveyance system which is not authorized by the County. The discharge of anything other than stormwater to the

municipal separate storm sewer system. No debris or waste should be dumped into the MS4 since these materials are quickly carried to nearby waters.

Illicit connection: Any connection to the storm drain system that is not permitted: or any legitimate connection that is used for illegal discharge.

Impaired - Condition of the quality of water that has been adversely affected for a specific use by contamination or pollution.

Impermeability - The incapacity of a rock to transmit a fluid.

Impervious Surface or Cover - A hard, non-vegetated surface area that prevents or significantly limits the entry of water into the soil mantle, as would occur under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, oiled, macadam or other surfaces which similarly impede the natural infiltration of storm water. This may apply to roads, streets, parking lots, rooftops and sidewalks.

Imported water - Water that is moved from one drainage basin to another. For example, water moved from the Sacramento Valley to the San Joaquin Valley through canals and pipelines into the Santa Clara Valley. This area uses more water than it naturally has, so water must be imported to fulfill the needs of the large population.

Index of Biotic Integrity (IBI) - An aggregated number, or index, based on several attributes or metrics of a fish community that provides an assessment of biological conditions.

Indicator sites - Stream sampling sites (in NAWQA Study Units) located at outlets of drainage basins with relatively homogeneous land use and physiographic conditions; most indicator-site basins have drainage areas ranging from 20 to 200 square miles.

Indigenous. Refers to a species that is native to a geographic area; plants that existed in an area prior to the 1600's, before Russian exploration. *Syn: native*

Indurated - Cemented, hardened, or a rocklike condition.

Industrial General Permit -- An NPDES Permit issued by the SWRCB for the discharge of stormwater associated with industrial activity.

Industrial withdrawals - Water withdrawn for or used for thermoelectric power (electric utility generation) and other industrial and manufacturing uses such as steel, chemical and allied products, paper and allied products, mining, and petroleum refining. The water may be obtained from a public supplier or may be self-supplied.

Infiltration -- The process or rate at which water percolates from the land surface into the ground. Infiltration is also a general category of BMP designed to collect runoff and allow it to flow through the ground for treatment.

Infrastructure - The facilities and services necessary for a society, community, or economy to function.

Inorganic - Containing no carbon; matter other than plant or animal.

Inorganic soil - Soil with less than 20 percent organic matter in the upper 16 inches.

Insecticide - A substance or mixture of substances intended to destroy or repel insects.

Instantaneous discharge - The volume of water that passes a point at a particular instant of time.

Instream use - Water use taking place within the stream channel for such purposes as hydroelectric power generation, navigation, water-quality improvement, fish propagation, and recreation. Sometimes called non-withdrawal use or in-channel use.

Integrated drainage - Drainage developed during geomorphic maturity in an arid region, characterized by coalescence of drainage basins as a result of headward erosion in the lower basins or spilling over from the upper basins.

Integrated Pest Management (IPM) -- IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or pest-related damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant plant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatment is implemented with the goal of removing only the target organism. See the City's IPM program website.

Integrator or Mixed-use site - Stream sampling site (in a NAWQA Study Unit) located at an outlet of a drainage basin that contains multiple environmental settings. Most integrator sites are on major streams with relatively large drainage areas.

Intensive Fixed Sites - Basic Fixed Sites with increased sampling frequency during selected seasonal periods and analysis of dissolved pesticides for 1 year. Most NAWQA Study Units have one to two integrator Intensive Fixed Sites and one to four indicator Intensive Fixed Sites.

Intermittent stream - A stream that flows only when it receives water from rainfall runoff or springs, or from some surface source such as melting snow.

Internal drainage - Surface drainage whereby the water does not reach the ocean, such as drainage toward the lowermost or central part of an interior basin or closed depression.

Intertidal - Alternately flooded and exposed by tides.

Intolerant organisms - Organisms that are not adaptable to human alterations to the environment and thus decline in numbers where alterations occur.

Invertebrate - An animal having no backbone or spinal column.

Invasive Species - As per Executive Order 13112 (Section 1. Definitions) an "invasive species" is a species that is non-native (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

Ion - A positively or negatively charged atom or group of atoms.

Irrigation - Controlled application of water to arable land to supply requirements of crops not satisfied by rainfall.

Irrigation district - In the United States, a cooperative, self-governing public corporation set up as a subdivision of the state, with definite geographic boundaries, organized to obtain and distribute water for irrigation of lands within the district; created under authority of the State legislature with the consent of a designated fraction of the land owners or citizens and the taxing power.

Irrigation return flow - The part of irrigation applied to the surface that is not consumed by evapotranspiration or uptake by plants and that migrates to an aquifer or surface-water body.

Irrigation withdrawals - Withdrawals of water for application on land to assist in the growing of crops and pastures or to maintain recreational lands.

J

Joint Powers Authority - An entity permitted under the law whereby two or more public authorities (e.g. local governments, or utility or transport districts), not necessarily located in the same state, may jointly exercise any power common to all of them.

K

Keystone species - Species on which a large number of species within a given community depend for survival.

L

Landscape - Ecological mosaic of specific ecosystems; a complex of interacting ecosystems and humans.

Landscaping - Manipulated ecosystem for cultural values such as aesthetics and recreational access.

Land-use study - A network of existing shallow wells in an area having a relatively uniform land use. These studies are a subset of a NAWQA Study-Unit Survey and have the goal of relating the quality of shallow ground water to land use.

Leachate - A liquid that has percolated through soil containing soluble substances and that contains certain amounts of these substances in solution.

Leaching - The removal of materials in solution from soil or rock; also refers to movement of pesticides or nutrients from land surface to groundwater.

Linkage. A smaller or narrower connection between adjacent and similar habitats that allows the passage of some biological resources.

Litter - Any solid waste object that can be held or carried in a person's hand that is left behind or placed in an inappropriate location. Any such material or item disposed of in an inappropriate manner - the end outcome of an environmentally undesirable disposal action.

Load - Material that is moved or carried by streams, reported as weight of material transported during a specified time period, such as tons per year.

Locally appropriate - Plants whose habitat requirements match the locale's sun, soil and water parameters.

Locally native - A species that has arrived and inhabited an area (watershed) naturally, without deliberate assistance by man, or would occur had it not been removed through past management. Some species are only native in particular regions. Differences in characteristics and adaptation to conditions occur more locally -- hence 'locally native'.

Long-term monitoring - The collection of data over a period of years or decades to assess changes in selected hydrologic conditions.

Low Impact Development -- LID means a sustainable landscaping approach that can be used to replicate or restore natural watershed functions and/or address targeted watershed goals and objectives such as pollution prevention related to stormwater. One of LID's primary goals is to reduce runoff volume by infiltrating rainfall water to groundwater, evaporating rainwater back to the atmosphere after a storm and finding beneficial uses for water rather than exporting it as a waste product down storm sewers. The result is a landscape functionally equivalent to predevelopment hydrologic conditions, which means less surface runoff and less pollution damage to lakes, streams and coastal waters.

M

Main stem - The principal trunk of a river or a stream.

Major ions - Constituents commonly present in water in concentrations exceeding 1.0 milligram per liter. Major cations are calcium, magnesium, sodium, and potassium; the major anions are sulfate, chloride, fluoride, nitrate, and those contributing to alkalinity, generally assumed to be bicarbonate and carbonate.

Marine wetland - Wetlands that are exposed to waves and currents of the open ocean and to water having a salinity greater than 30 parts per thousand; present along the coastlines of the open ocean.

Marsh - A water-saturated, poorly drained area, intermittently or permanently water covered, having aquatic and grasslike vegetation.

Maximum contaminant level (MCL) - Maximum permissible level of a contaminant in water that is delivered to any user of a public water system. MCLs are enforceable standards established by the U.S. Environmental Protection Agency.

Maximum Detection Limit - The limit of detection is the smallest amount or concentration of analyte in the test sample that can be reliably distinguished from zero

Maximum Extent Practicable (MEP) -- MEP is the technology-based standard established in the Federal Clean Water Act that discharges of stormwater must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve. MEP is generally a result of emphasizing pollution prevention and source control BMPs primarily but possibly in combination with other treatment methods. The MEP approach is an ever evolving, flexible and advancing concept, which considers technical and economic feasibility. As knowledge about controlling pollutants in stormwater continues to evolve so does that which constitutes MEP. The way in which MEP is met varies between communities.

Measurable Goal -- Measurable goals are definable tasks or accomplishments that are associated with implementing BMPs who's collective outcome have a measurable or quantifiable effect upon the quality of stormwater discharge to the waters of the State or United States.

Median Household Household Income - Commonly used to provide data about geographic areas. It divides households into two equal segments, with the first half of households earning less than the MHI, and the other half earning more.

Mediterranean climate. A climate characterized by cool, wet winters and warm, dry summers.

Memorandum of Understanding - A type of agreement between two or more parties. It expresses a convergence of will between the parties, indicating an intended common line of action.

Method detection limit (MDL) - The minimum concentration of a substance that can be accurately identified and measured with current laboratory technologies.

Micrograms per liter (µg/L) - A unit expressing the concentration of constituents in solution as weight (micrograms) of solute per unit volume (liter) of water; equivalent to one part per billion in most streamwater and groundwater. One thousand micrograms per liter equals one milligram per liter.

Milligram (mg) - A mass equal to 10^{-3} grams.

Milligrams per liter (mg/L) - A unit expressing the concentration of chemical constituents in solution as weight (milligrams) of solute per unit volume (liter) of water; equivalent to one part per million in most streamwater and groundwater.

Mineral soil - Soil composed predominantly of mineral rather than organic materials; less than 20 percent organic material.

Minimum Control Measure -- A stormwater program area that must be addressed (BMPs implemented to accomplish the program goal) by all regulated Small MS4s. The six minimum control measures required to be addressed by regulated Small MS4s are defined in section 3.

Minimum reporting level (MRL) - The smallest measured concentration of a constituent that may be reliably reported using a given analytical method. In many cases, the MRL is used when documentation for the method detection limit is not available.

Mitigation - Actions taken to avoid, reduce, or compensate for the effects of human-induced environmental damage. Restoring, replacing, or creating ecological habitats (*e.g.* wetlands) in one area to compensate for loss of natural habitats in another area due to development.

Mitigation Banks - 1.) sites selected for habitat restoration or creation 2.) market-based banks that exchange “mitigation credits” on a development site for habitat restoration/creation requirements on another site.

Monitoring - Repeated observation, measurement, or sampling at a site, on a scheduled or event basis, for a particular purpose.

Monitoring well - A well designed for measuring water levels and testing ground-water quality.

Mouth - The place where a stream discharges to a larger stream, a lake, or the sea.

Mycorrhizae. Largely symbiotic relationships between large and taxonomically diverse groups of fungi and vascular plants that allows for the uptake of water and minerals by the vascular plant, and for the uptake of sugars and carbohydrates from the vascular plant by the associated fungus.

N

National Academy of Sciences/National Academy of Engineering (NAS/NAE) recommended maximum concentration in water - Numerical guidelines recommended by two joint NAS/NAE committees for the protection of freshwater and marine aquatic life, respectively. These guidelines were based on results of aquatic toxicity studies, available in 1972, and were considered preliminary even at the time.

National Pollutant Discharge Elimination System (NPDES) - National Pollutant Discharge Elimination System is an authorization, license, or equivalent control document issued by the EPA or an approved state agency to implement the requirements of the NPDES program as required by the Clean Water Act. In California, the SWRCB has issued General Permits for stormwater discharges associated with industrial and construction activities.

National Water-Quality Assessment (NAWQA) Program - The long term USGS program, begun in 1991, to assess the occurrence and distribution of water-quality conditions Nationwide.

National Wetland Inventory - An inventory by the US Fish and Wildlife Service which is a publicly available resource that provides detailed information on the abundance, characteristics, and distribution of US wetlands.

Natural buffer - A variable width area maintained with natural vegetation between a pollutant source and a water body that provides natural filtration and other forms of protection.

Natural levee - A long, broad, low ridge built by a stream on its floodplain along one or both banks of its channel in time of flood.

Navigable water - In the context of the Clean Water Act, all surface water.

Net Impervious Area – The sum of new and replaced post-project impervious areas, minus any reduction in total imperviousness from the pre-project to post-project condition: Net Impervious Area = (New and Replaced Impervious Area) – (Reduced Impervious Area Credit), where Reduced Impervious Area Credit is the total pre-project to post-project reduction in impervious area, if any.

New Development – Land disturbing activities that include the construction or installation of buildings, roads, driveways and other impervious surfaces. Development projects with pre-existing impervious surfaces are not considered New Development.

Niche - Ecological role of a species in a community conceptualized as the multidimensional space, of which the coordinates are the various parameters representing the condition of existence of the species, to which it is restricted by the presence of competitor species; sometimes used loosely as an equivalent of microhabitat in the sense of the physical space occupied by a species.

Nitrate - An ion consisting of nitrogen and oxygen (NO_3^-). Nitrate is a plant nutrient and is very mobile in soils.

Nitrification - To treat or combine with nitrogen.

Non-contact water recreation - Recreational activities, such as fishing or boating, that do not include direct contact with the water.

Non-detect - Environmental data that is below detection limits. Values tha are below detection limits are reported as tiling less than some reported limit of detection, rather than as actual values.

Non-governmental Organization - A nonprofit organization that operates independently of any government, typically one whose purpose is to address a social or political issue.

Non-persistent emergent plants - Emergent plants whose leaves and stems break down at the end of the growing season from decay or by the physical forces of waves and ice; at certain seasons, there are no visible traces of the plants above the surface of the water.

Nonpoint Source Pollution:Water contamination that originates from a broad area (such as leaching of agricultural chemicals from crop land) and enters the water resource diffusely over a large area.Nonpoint-source pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even underground sources of drinking water.

Nonpotable Water - Water that does not meet State Department of Health drinking water standards.

Non-selective herbicide - Kills or significantly retards growth of most higher plant species.

Notice of Intent (NOI) --NOI means a formal notice of intent that the city will comply with an NPDES permit to follow certain discharge conditions and to commence with activities submitted by the owner/operators of construction sites and industrial facilities. The NOI is submitted to the SWRCB and provides information on the permittee, location of discharge, type of discharge and certifies that the permittee will comply with conditions of the Construction and Industrial General Permits. The NOI is not a permit application and does not require approval.

Notice of Termination (NOT) -- NOT means a formal notice of intent to terminate activities submitted by the owner/operators of construction sites and industrial facilities. The NOT is submitted to the SWRCB and provides information on the permittee. and certifies that the permittee is no longer subject to the conditions of the Construction and Industrial General Permits.

Notice of Violation (NOV) -- NOV means a formal notice to the property owner whenever the City finds that a person has violated a prohibition or failed to meet a requirement of this Chapter.

Nutrient - Any inorganic or organic compound needed to sustain plant life.

Nutrients - A substance that provides food or nourishment, such as usable proteins, vitamins, minerals or carbohydrates. Fertilizers, particularly phosphorus and nitrogen, are the most common nutrients that reside on land surface as a result of runoff and contribute to eutrophication.

O

Offstream use - Water withdrawn or diverted from a ground- or surface-water source for use. *See also* Withdrawal

Onsite Wastewater Treatment Systems - Wastewater treatment systems that are used to treat wastewater from a home or business and return treated wastewater back into the receiving environment. They are typically referred to as septic systems, because most involve a septic tank for partial treatment.

Operations & Maintenance - The functions, duties and labor associated with the daily operations and normal repairs, replacement of parts and structural components, and other activities needed to preserve an asset/infrastructure so that it continues to provide acceptable services and achieves its expected life.

Organic - Containing carbon, but possibly also containing hydrogen, oxygen, chlorine, nitrogen, and other elements.

Organic detritus - Any loose organic material in streams - such as leaves, bark, or twigs - removed and transported by mechanical means, such as disintegration or abrasion.

Organic soil - Soil that contains more than 20 percent organic matter in the upper 16 inches.

Outfall -- the location where a point source from a municipal separate stormwater drainage discharges to Waters of the United States and does not include open conveyances connecting two municipal separate stormwater drainages, or pipes, tunnels or other conveyances which connect segments of the same stream or other Waters of the United States or State and are used to convey Waters of the United States or State.

Outwash - Soil material washed down a hillside by rainwater and deposited upon more gently sloping land.

P

Part per million (ppm) - Unit of concentration equal to one milligram per kilogram or one milligram per liter.

Pathogens - 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.

Peak discharge - The greatest volume of stream flow occurring during a storm event.

Peak runoff rates - The discharge associated with the peak runoff volume, or the volume over time.

Peak runoff volumes - The depth of rainwater that falls on an area that has to be treated or managed by stormwater infrastructure.

Peat - A highly organic soil, composed of partially decomposed vegetable matter.

Percentile Rainfall Event (e.g., 85th and 95th) – A percentile rainfall event represents a rainfall amount which a certain percent of all rainfall events for the period of record do not exceed.

Perched groundwater - Unconfined groundwater separated from an underlying main body of ground water by an unsaturated zone.

Percolation pond - A pond that allows water to percolate (or seep) through layers of rock and gravel. The water is cleaned as it slowly travels downward and eventually reaches an underground aquifer. The purpose of man-made percolation ponds is both to clean the water and to keep the ground from sinking.

Percolation - The movement, under hydrostatic pressure, of water through interstices of a rock or soil (except the movement through large openings such as caves).

Perennial stream - A stream that normally has water in its channel at all times.

Performance Criteria - Series of defined issues that are the basis for judging success of a project.

Performance Standards -- Performance Standards are the level of implementation necessary to demonstrate the control of pollutants in stormwater to MEP.

Periphyton - Microorganisms that coat rocks, plants, and other surfaces on lake bottoms.

Permeable or Pervious Surface – A surface that allows varying amounts of storm water to infiltrate into the ground (e.g. pasture, native vegetation areas, landscape areas, and permeable pavements).

Permeability - The capacity of a rock for transmitting a fluid; a measure of the relative ease with which a porous medium can transmit a liquid.

Pest - Any animal or plant that is not valued by human society and usually overgrows or competes with valued animals or plants.

Pesticide - Any substance used to kill plant or animal pests; major categories of pesticides include herbicides and insecticides.

pH - A measure of the acidity (less than 7) or alkalinity (greater than 7) of a solution; a pH of 7 is considered neutral.

Phenols - A class of organic compounds containing phenol (C_6H_5OH) and its derivatives. Used to make resins, weed killers, and as a solvent, disinfectant, and chemical intermediate. Some phenols occur naturally in the environment.

Phosphorus - A nutrient essential for growth that can play a key role in stimulating aquatic growth in lakes and streams.

Photosynthesis - The synthesis of compounds with the aid of light.

Pioneer plant - Herbaceous annual and perennial seedling plants that colonize bare areas as a first stage in secondary succession.

Piping - Erosion by percolating water in a layer of subsoil, resulting in caving and in the formation of narrow conduits, tunnels, or "pipes" through which soluble or granular soil material is removed.

Plankton - Floating or weakly swimming organisms at the mercy of the waves and currents. Animals of the group are called zooplankton and the plants are called phytoplankton.

Point-source contaminant - Any substance that degrades water quality and originates from discrete locations such as discharge pipes, drainage ditches, wells, concentrated livestock operations, or floating craft.

Pollutant - Any substance that, when present in a hydrologic system at sufficient concentration, degrades water quality in ways that are or could become harmful to human and/or ecological health or that impair the use of water for recreation, agriculture, industry, commerce, or domestic purposes.

Polychlorinated biphenyls (PCBs) - A mixture of chlorinated derivatives of biphenyl, marketed under the trade name Aroclor with a number designating the chlorine content (such as Aroclor 1260). PCBs were used in transformers and capacitors for insulating purposes and in gas pipeline systems as a lubricant. Further sale for new use was banned by law in 1979.

Polycyclic aromatic hydrocarbon (PAH) - A class of organic compounds with a fused-ring aromatic structure. PAHs result from incomplete combustion of organic carbon (including wood), municipal solid waste, and fossil fuels, as well as from natural or anthropogenic introduction of uncombusted coal and oil. PAHs include benzo(a)pyrene, fluoranthene, and pyrene.

Pool - A small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

Population - A collection of individuals of one species or mixed species making up the residents of a prescribed area.

Porosity - The ratio of the volume of voids in a rock or soil to the total volume.

Potable water - Water that is safe and palatable for human consumption.

Potential evapotranspiration - The amount of moisture which, if available, would be removed from a given land area by evapotranspiration; expressed in units of water depth.

Precipitation - Any or all forms of water particles that fall from the atmosphere, such as rain, snow, hail, and sleet. The act or process of producing a solid phase within a liquid medium.

Pre-Project – Storm water runoff conditions that exist onsite immediately before development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development.

Pristine - The earliest condition of the quality of a water body; unaffected by human activities.

Project Site – The area defined by the legal boundaries of a parcel or parcels of land within which the new development or redevelopment takes place and is subject to these requirements.

Public-supply withdrawals - Water withdrawn by public and private water suppliers for use within a general community. Water is used for a variety of purposes such as domestic, commercial, industrial, and public water use.

Q

Quality assurance - Evaluation of quality-control data to allow quantitative determination of the quality of chemical data collected during a study. Techniques used to collect, process, and analyze water samples are evaluated.

R

Rain Barrel - A rain barrel is a small storage device that collects stormwater, usually from a roof surface. Although use of the collected water for drinking and vegetable garden irrigation is not recommended, it can be used for washing your car, watering ornamental plants, and landscape irrigation.

Rain Garden - A deliberately built depression planted with vegetation that allows stormwater to collect, briefly settle, then infiltrate into the ground. The plants and soil in the rain gardens filter pollutants from runoff, assist with groundwater recharge, improve the aesthetic beauty of the landscape, and reduce flood volume.

Rainwater Harvest – Capture and storage of rainwater or storm water runoff for later use, such as irrigation, domestic use (e.g. toilets), or storage for fire suppression.

Reach - A continuous part of a stream between two specified points.

Receiving Waters – Bodies of water, surface water systems or groundwater that receive surface water runoff through a point source, sheet flow or infiltration.

Recharge (ground water) - The process involved in the absorption and addition of water to the zone of saturation; also, the amount of water added.

Recharge area (ground water) - An area within which water infiltrates the ground and reaches the zone of saturation.

Reclamation - Management techniques that attempt to reverse impacts to land caused by human disturbance and to bring back some form and function; altering an area to bring it to a state similar to the original (predisturbance) ecosystem.

Recycled water - Water that has gone through a sewage treatment plant and is then re-used for irrigation or other purposes.

Redevelopment – On a site that has already been developed, construction or installation of a building or other structure subject to planning and building authority including: 1) the creation or addition of impervious surfaces; 2) the expansion of a building footprint or addition or replacement of a structure; or 3) structural development including construction, installation or expansion of a building or other structure. It does not include routine road maintenance, nor does it include emergency construction activities required to immediately protect public health and safety.

Reference site - A NAWQA sampling site selected for its relatively undisturbed conditions.

Regulation (of a stream) - Artificial manipulation of the flow of a stream.

Rehabilitation - Falls short of restoration, but seeks to re-establish many components of the indigenous ecosystem.

Reintroduction - Placement of an individual, population, or species back into its former habitat after it has been extirpated from that habitat.

Relative abundance - The number of organisms of a particular kind present in a sample relative to the total number of organisms in the sample.

Remediation: The process of correcting environmental degradation.

Replaced Impervious Surface – The removal of existing impervious surfaces down to bare soil or base course, and replacement with new impervious surface. Replacement of impervious surfaces that are part of routine road maintenance activities are not considered replaced impervious surfaces.

Reservoir - A large storage area for water.

Residential water use - *See* Domestic withdrawals.

Retrofit -The process for constructing and separating new potable and recycled pipelines that allow recycled water to be used for non-drinking purposes. A retrofit system separates recycled water from drinking water pipelines.

Return flow - That part of irrigation water that is not consumed by evapotranspiration and that returns to its source or another body of water.

Riffle - A shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

Riparian - Pertaining to or situated on the bank of a natural body of flowing water.

Riparian rights - The legal right which assures an owner of land adjacent to a creek or natural body of water the reasonable use of that water.

Riparian zone - Pertaining to or located on the bank of a body of water, especially a stream.

River - A large, natural stream of water that empties into a large body of water such as a lake or the ocean.

Riverine wetlands - Wetlands within river and stream channels; ocean-derived salinity is less than 0.5 part per thousand.

Runoff - Runoff is excess rainfall, snowmelt, or irrigation water that flows over the surface of the land. It will eventually infiltrate into the ground, evaporate, or flow into a storm drain system, stream, river, lake or other waterbody.

Rural withdrawals - Water used in suburban or farm areas for domestic and livestock needs. The water generally is self-supplied and includes domestic use, drinking water for livestock, and other uses such as dairy sanitation, evaporation from stock-watering ponds, and cleaning and waste disposal.

S

Saline water - Water that is considered unsuitable for human consumption or for irrigation because of its high content of dissolved solids; generally expressed as milligrams per liter (mg/L) of dissolved solids; seawater is generally considered to contain more than 35,000 mg/L of dissolved solids.

Salinity- The concentration of salt dissolved in water.

Saltwater seepage -When saltwater makes its way into an aquifer, contaminating the freshwater with salt.

Sanitary sewer (different from the storm sewer system): A system of underground pipes that carries sanitary waste or process wastewater to a treatment plant.

Sea level - Long-term average position of the sea surface. Sea level varies from place to place and with the time period for which the average is calculated. For the conterminous United States, sea level is most commonly referenced to the National Geodetic Vertical Datum of 1929.

Secondary maximum contaminant level (SMCL) - The maximum level of a contaminant or undesirable constituent in public water systems that, in the judgment of the U.S. Environmental Protection Agency (USEPA), is required to protect the public welfare. SMCLs are secondary (nonenforceable) drinking water regulations established by the USEPA for contaminants that may adversely affect the odor or appearance of such water.

Sediment - Solid material, both mineral and organic, that is being transported or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or

below sea level. Soil, sand, and minerals washed from land into water, usually after rain. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

Sediment guideline - Threshold concentration above which there is a high probability of adverse effects on aquatic life from sediment contamination, determined using modified U.S. Environmental Protection Agency USEPA (1996) procedures.

Sediment quality objectives - Level of a constituent in sediment which is established with an adequate margin of safety for the reasonable protection of the beneficial uses of water or the prevention of nuisances.

Seep - A small area where water percolates (see percolation) slowly to the land surface.

Selective herbicide - A compound that kills or significantly retards growth of an unwanted plant species without significantly damaging desired plant species.

Self-Treating Areas – A portion of a Regulated Project in which infiltration, evapotranspiration and other natural processes remove pollutants from stormwater. The self-treating areas may include conserved natural open areas and areas of native landscaping. The self-treating area only treats the rain falling on itself and does not receive storm water runoff from other areas.

Semivolatile organic compound (SVOC) - Operationally defined as a group of synthetic organic compounds that are solvent-extractable and can be determined by gas chromatography/mass spectrometry. SVOCs include phenols, phthalates, and Polycyclic aromatic hydrocarbons (PAHs).

Shrubland - Land covered predominantly with shrubs.

Sideslope gradient - The representative change in elevation in a given horizontal distance (usually about 300 yards) perpendicular to a stream; the valley slope along a line perpendicular to the stream (near a water-quality or biological sampling point).

Significant ecological area - Officially designated areas within LA County with irreplaceable biological resources.

Slough - A small marshy tract lying in a swale or other local shallow, undrained depression; a sluggish creek or channel in a wetland.

Sludge - The settled solids containing enough water to form a semi-liquid mass that comes from treatment processes in sewage, reclamation and freshwater plants.

Small Municipal Separate Storm Sewer System (Small MS4) -- Means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are:

Soil - The layer of material at the land surface that supports plant growth.

Soil Amendments - Soil amendments include any material added to soil to improve its physical, chemical, biological, or structural properties or to provide enhanced plant growth.

Soil horizon - A layer of soil that is distinguishable from adjacent layers by characteristic physical and chemical properties.

Soil moisture - Water occurring in the pore spaces between the soil particles in the unsaturated zone from which water is discharged by the transpiration of plants or by evaporation from the soil.

Sole-source aquifer - As defined by the U.S. Environmental Protection Agency, an aquifer that supplies 50 percent or more of the drinking water of an area.

Solid-phase extraction - A procedure to isolate specific organic compounds onto a bonded silica extraction column.

Source control: Action to prevent pollution where it originates.

Species - Populations of organisms that may interbreed and produce fertile offspring having similar structure, habits, and functions.

Species (taxa) richness - The number of species (taxa) present in a defined area or sampling unit.

Species diversity - An ecological concept that incorporates both the number of species in a particular sampling area and the evenness with which individuals are distributed among the various species.

Specific capacity - The yield of a well per unit of drawdown.

Standard deviation - Statistical measure of the dispersion or scatter of a series of values. It is the square root of the variance, which is calculated as the sum of the squares of the deviations from the arithmetic mean, divided by the number of values in the series minus 1.

Standard industrial classification - A system for classifying industries by a four-digit code. Established in the United States in 1937, it is used by government agencies to classify industry areas.

Standard Urban Water Mitigation Plan (SUSMP) - Plans designated the Best Management Practices that must be used in specified categories of development and redevelopment. The State Board requirement imposed under a Phase 1 MS4 permit and requiring SUSMP in all MS4 permits.

State climate division - Geographic area in a State based primarily on crop-reporting districts. States can have 2 to 10 climate divisions.

State Waters - As defined by section 342D-1, HRS, all waters (fresh, brackish, or salt) around and within the State, including, but not limited to, coastal waters, streams, rivers, drainage ditches, ponds, reservoirs, canals, ground waters, and lakes, providing that drainage ditches, ponds, and reservoirs required as part of a water pollution control system are excluded.

State Water Resources Control Board -- SWRCB is an agency of the State of California whose mission is to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. The SWRCB oversees all NPDES permitting in the State through its regional organizations known as Regional Water Quality Control Boards.

Storm drain: An opening leading to an underground pipe or open ditch for carrying surface runoff, separate from the sanitary sewer or wastewater system.

Storm Drain System: A vast network of underground pipes and open channels designed for flood control, which discharges straight to the ocean.

Storm surge - An abnormal and sudden rise of the sea along a shore as a result of the winds of a storm.

Stormwater - Precipitation that accumulates in natural and/or constructed storage and stormwater systems during and immediately following a storm event. Rainwater that enters the storm drain system and empties into rivers, lakes and streams.

Storm Water Control Measures (SCMs) – Storm water management measures integrated into project designs that emphasize protection of watershed processes through replication of pre-development runoff patterns (rate, volume, duration). Storm Water Control Plan – A plan detailing how a proposed project will achieve the applicable PostConstruction Storm Water Management Requirements.

Storm Water Management Plan -- SWMP is a planning document developed to address stormwater quality within a City's jurisdiction. The SWMP will address a wide variety of activities conducted within the City that are sources of pollutants in stormwater as part of compliance with the requirements of the NPDES Stormwater Discharge Permit.

Stormwater pollution: Water from rain, irrigation, garden hoses or other activities that picks up pollutants (cigarette butts, trash, automotive fluids, used oil, paint, fertilizers and pesticides, lawn and garden clippings and pet waste) from streets, parking lots, driveways and yards and carries them through the storm drain system and straight to local creeks and rivers.

Storm Water Pollution Prevention Plan (SWPPP) -- a documented plan to describe a process whereby a facility thoroughly evaluates potential pollutant sources at a site and selects and implements appropriate measures designed to prevent or control the discharge of pollutants in stormwater runoff during construction activities.

Stratification - Subdivision of the environmental framework. NAWQA Study Units are divided into subareas that exhibit reasonably homogeneous environmental conditions, as determined by both natural and human influences.

Stream: A body of water, confined within a bed and banks and having a detectable current. Stream is the umbrella term used in the scientific community for all flowing natural waters. In a river or stream, the water is influenced by gravity and flows downhill to reduce its potential energy. The movement of water in a stream is called the current and varies from place to place and time to time dependent upon the volume of water, the slope, and shape and other characteristics of the bed.

Streamflow - The discharge of water in a natural channel.

Stream order - A ranking of the relative sizes of streams within a watershed based on the nature of their tributaries. The smallest unbranched tributary is called first order, the stream receiving the tributary is called second order, and so on.

Stream reach - A continuous part of a stream between two specified points.

Structural Control Measure -- means any structural facility designed and constructed to mitigate the adverse impacts of stormwater and urban runoff pollution (e.g. canopy, structural enclosure). The category may include both Treatment Control and Source Control Measure.

Study Unit - A major hydrologic system of the United States in which NAWQA studies are focused. Study Units are geographically defined by a combination of ground- and surface-water features and generally encompass more than 4,000 square miles of land area.

Submersed plant - A plant that lies entirely beneath the water surface, except for flowering parts in some species.

Subsidence - The gradual downward settling or sinking of the Earth's surface with little or no horizontal motion.

Substrate size - The diameter of streambed particles such as clay, silt, sand, gravel, cobble and boulders.

Substrate - The surface beneath a wetland, lake, or stream in which organisms grow or to which organisms are attached.

Subsurface drain - A shallow drain installed in an irrigated field to intercept the rising ground-water level and maintain the water table at an acceptable depth below the land surface.

Surface runoff - Runoff that travels over the land surface to the nearest stream channel.

Surface water - An open body of water such as a lake, river, or stream.

Surface Water Ambient Monitoring Program (SWAMP) - The State Water Board's monitoring, assessment, and reporting program for ambient surface water.

Survey - Sampling of a representative number of sites during a given hydrologic condition.

Suspended - (as used in tables of chemical analyses)The amount (concentration) of undissolved material in a water-sediment mixture. Most commonly refer to that material retained on a 0.45- micrometer filter.

Suspended solids- Particles transported in suspension by a stream.

Sustainable landscaping - A landscaping approach that looks at the things that flow into and out of a landscape and try to minimize their use. For example, a typical garden requires a number of resources for its construction - concrete, lumber, plants, compost, PVC irrigation pipe and so forth. Additional inputs are needed for the maintenance of the garden, such as water, fertilizer, fuel to operate power equipment, pesticides and herbicides. A garden also generates materials that may be harmful to the environment, such as lawn clippings, tree and shrub prunings (collectively referred to as "greenwaste"), polluted runoff of chemical-laden water and others. Sustainable landscaping attempts to reduce these inputs and outputs without sacrificing beauty, economy and ease of maintenance.

Swale - A natural or human-made open depression or wide, shallow ditch that intermittently contains or conveys runoff. Swales (a.k.a. grassed channel, dry swale, wet swale, biofilter, or bioswale) are vegetated, open-channel stormwater BMPs designed specifically to treat and attenuate stormwater runoff for a specific water quality volume.

Swamp - An area intermittently or permanently covered with water, and having trees and shrubs.

Synoptic sites - Sites sampled during a short-term investigation of specific water-quality conditions during selected seasonal or hydrologic conditions, to provide improved spatial resolution for critical water-quality conditions.

T

Taxon (plural taxa) - Any identifiable group of taxonomically related organisms.

Technical memorandum - A document that is specifically targeted to persons who are interested in the technical details of a project or task. Technical memoranda often are brief and cover only a single topic.

Terrestrial - Pertaining to, consisting of, or representing the Earth.

Tertiary - A high level of wastewater treatment that repurifies the water to meet state health requirements.

Tertiary-treated sewage - The third phase of treating sewage that removes nitrogen and phosphorus before it is discharged.

Thermal loading - Amount of waste heat discharged to a water body.

Tier 1 sediment guideline - Threshold concentration above which there is a high probability of adverse effects on aquatic life from sediment contamination, determined using modified U.S. Environmental Protection Agency USEPA (1996) procedures.

Tile drain - A buried perforated pipe designed to remove excess water from soils.

Till - Predominantly unsorted and unstratified drift, deposited directly by and underneath a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, and boulders.

Tissue study - The assessment of concentrations and distributions of trace elements and certain organic contaminants in tissues of aquatic organisms.

Tolerant species - Those species that are adaptable to (tolerant of) human alterations to the environment and often increase in number when alterations occur.

Topography - The general configuration of a land surface or any part of the Earth's surface, including its relief and the position of its natural and man-made features.

Total DDT - The sum of DDT and its metabolites (breakdown products), including DDD and DDE.

Total Maximum Daily Load -- TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards. Water quality standards identify the uses for each water body, for example, drinking water supply, contact recreation (swimming), and aquatic life support (fishing), and the scientific criteria to support that use. The Clean Water Act, section 303, establishes the water quality standards and TMDL programs.

Total Suspended Solids - An aggregate measure of water quality that describes the amount of solids, usually soil particles, found in a water sample.

Trace element - A chemical element that is present in minute quantities in a substance.

Tracer - A stable, easily detected substance or a radioisotope added to a material to follow the location of the substance in the environment or to detect any physical or chemical changes that it undergoes.

Transmissivity - The rate at which water of the prevailing kinematic viscosity is transmitted through a unit width of an aquifer under a unit hydraulic gradient. It equals the hydraulic conductivity multiplied by the aquifer thickness.

Transpiration - The process by which water passes through living organisms, primarily plants, into the atmosphere.

Treatment Control Measure -- means any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process.

Tributary - A river or stream flowing into a larger river, stream or lake.

Turbidity - The state, condition, or quality of opaqueness or reduced clarity of a fluid due to the presence of suspended matter.

U

Unconfined aquifer - An aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure.

Underdrain - A perforated PVC pipe that runs below an infiltration system. The pipe collects treated water, and moves it to a larger underground storm sewer.

Underserved Community -

Understory - A foliage layer lying beneath and shaded by the main canopy of a forest.

Un-ionized ammonia - The neutral form of ammonia-nitrogen in water, usually occurring as NH_4OH. Un-ionized ammonia is the principal form of ammonia that is toxic to aquatic life. The relative proportion of un-ionized to ionized ammonia (NH^{4+}) is controlled by water temperature and pH. At temperatures and pH values typical of most natural waters, the ionized form is dominant.

Urban sprawl - Used by land developers, planners and governmental institutions to describe a pattern of low-density, often unsightly, automobile dependent development that has been a common form of growth outside of urban areas since at least World War II.

Unsaturated zone - A subsurface zone above the water table in which the pore spaces may contain a combination of air and water.

Upgradient - Of or pertaining to the place(s) from which groundwater originated or traveled through before reaching a given point in an aquifer.

Upland - A general term for non-wetland; elevated land above low areas along streams or between hills; any elevated region from which rivers gather drainage.

Urban site - A site that has greater than 50 percent urbanized and less than 25 percent agricultural area.

V

Vernal pool - A small lake or pond that is filled with water for only a short time during the spring.

Void space - The unoccupied area between soil particles usually filled by air, unless the soil is saturated.

Volatile organic compounds - Organic chemicals that have a high vapor pressure relative to their water solubility. These include components of gasoline, fuel oils, and lubricants, as well as organic solvents, fumigants, some inert ingredients in pesticides, and some by-products of chlorine disinfection.

W

Wastewater - Used water that comes from homes and businesses.

Wasteway - A waterway used to drain excess irrigation water dumped from the irrigation delivery system.

Water (hydrologic) cycle: The flow and distribution of water from the sky, to the Earth's surface, through various routes on or in the Earth, and back to the atmosphere. The main components are precipitation, infiltration, surface runoff, channel and depression storage, and groundwater.

Water budget - Accounting of the inflow to, outflow from, and water storage changes in a hydrologic unit.

Water column - An imaginary column extending through a water body from its floor to its surface.

Water demand - Water requirements for a particular purpose, such as irrigation, power, municipal supply, plant transpiration, or storage.

Water exports - Artificial transfer (by pipes or canals) of freshwater from one region to another.

Water imports - Artificial transfer (by pipes or canals) of freshwater to one region from another.

Water quality - The physical, biological, chemical and aesthetic characteristics found in a sample of water. A healthy environment is one in which the water quality supports a rich and varied community of organisms and protects public health.

Water Quality Authority -

Water-quality criteria - Specific levels of water quality which, if reached, are expected to render a body of water unsuitable for its designated use. Commonly refers to criteria established by the U.S. Environmental Protection Agency. Water-quality criteria are based on specific levels of pollutants that would make the water harmful if used for drinking, swimming, farming, fish production, or industrial processes.

Water quality objective - The limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area

Water reclamation - The treatment and management of wastewater to produce water of suitable quality for additional use.

Water reclamation plant - A facility that converts wastewater into water reusable for other purposes.

Water-resources region - Natural drainage basin or hydrologic area that contains either the drainage area of a major river or the combined areas of a series of rivers. In the United States, there are 21 regions of which 18 are in the contiguous United States, and one each in Alaska, Hawaii, and the Caribbean.

Water rights - Legal rights to the use of water.

Watershed: Geographical area that drains to a specified point on a water course, usually a confluence of streams or rivers, can also be known as drainage area, catchments, or a river basin. **Or** an area of land that drains water or runoff to a single point. The land area that drains water to a particular stream, river, or lake. It is a land feature that can be identified by tracing a line along the highest elevations between two areas on a map, often a ridge. Large watersheds, like the Mississippi River basin contain thousands of smaller watersheds.

Watershed Approach - A coordinated framework for environmental management that focuses public and private efforts on the highest priority problems within hydrologically-defined geographic areas taking into consideration both ground and surface water flow.

Watershed Management - A widely used phrase associated with studies, programs and policies, under-taken to protect and/or define the acceptable uses of drainage basins and their receiving waters.

Watershed Management Area - A collaborative framework for municipalities and special purpose agencies to work collaboratively and find synergies across water resource disciplines.

Waters of the State -- means any surface water or groundwater, including saline waters, within the boundaries of the State of California.

Waters of the United States -- any surface water or groundwater, including saline waters, within the boundaries of the United States.

Water supply - The water available for an area or community.

Water table - The top of the water within an unconfined aquifer.

Water year - A continuous 12-month period selected to present data relative to hydrologic or meteorological phenomena during which a complete annual hydrologic cycle normally occurs. The water year used by the U.S. Geological Survey runs from October 1 through September 30, and is designated by the year in which it ends.

Weathering - Process whereby earthy or rocky materials are changed in color, texture, composition, or form (with little or no transportation) by exposure to atmospheric agents.

Weather - State of the atmosphere at any particular time and place.

Weighted mean - A value obtained by multiplying each of a series of values by its assigned weight and dividing the sum of these products by the sum of the weights. In the ordinary arithmetic mean, each value is assigned a weight of 1.

Weir - A dam made of wood, concrete, rocks, steel or similar material places on the bottom of a stream channel in a watercourse to control the flow of water; a dam in a waterway or conduit used to control the water level or the flow; a structure over which liquids flow and which is used to measure the rate of flow.

Wetland: An area that is inundated or saturated by surface water or groundwater at a frequency, duration, and depth sufficient to support a predominance of emergent plant species adapted to growth in saturated soil conditions.

Withdrawal - Water removed from the ground or diverted from a surface-water source for use. Also refers to the use itself; for example, public-supply withdrawals or public-supply use.

X

XeriscapingTM -- An alternative landscaping technique that focuses on water conservation through plant selection and site design.

X-year storm event -- The storm event that has a probability of recurring on average once every X-years based on records from previous years.

References:

https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/caltrans/att8_glossary_public4.pdf

Keeton, W. T. and J. L Gould. 1986. Biological Science. W.W. Norton and Company. New York, NY. Pgs. 1175

SERCAL 1992. Revegetation/Restoration Planning: The Basics. Society for Ecological Restoration. November 1992.

https://www.esf.edu/ere/endreny/GICalculator/Glossary.html

From: https://water.usgs.gov/water-basics_glossary.html

https://www.valleywater.org/learning-center/glossary-of-water-terms

1. Source: https://www.cityofdavis.org/city-hall/public-works-utilities-and-operations/stormwater/residential/residential-educational-resources/glossary