# GLOSSARY OF TERMS (AS USED IN THIS MANAGEMENT PLAN, THE FOLLOWING TERMS SHALL HAVE THE MEANINGS AS STATED BELOW)

**Abandoned Well:** Means any of the following:

(1) Any water well used less than 8 hours in a twelve-month period, or any well where failure to submit reports of annual usage has resulted in a well being classified as abandoned.
(2) A monitoring well from which no monitoring data has been taken for a period of two years.
(3) A well that is in such a state of disrepair that it cannot be made functional for its original use or any other use.
(4) An engineering test hole or soil boring that remains open after 24 hours has elapsed and testing work for that site or location has been completed.
(5) A cathodic protection well that is no longer used for its intended purpose.

**Acre-Foot (AF):** A unit of water measure equal to 325,851 gallons, or the land area of one acre covered one foot deep in water. Also considered to be 43,560 cubic feet of water at 7.48 gallons per cu.ft.

**Agency:** means the Fox Canyon Groundwater Management Agency (FCGMA).

**Agency Boundary:** The officially recorded outer boundary of the FCGMA, which includes the aquifer outcrop zone, and by LAFCO affirmation and public recordation, the Expansion Area mentioned in the Agency Ordinance.

**Agricultural Land:** Land which has been officially designated as "Prime", "Statewide", "Unique", or "Local" according to the Important Farmland Inventory (IFI) developed by the Soil Conservation Service (SCS). This category also includes grazing lands. Irrigated or non-irrigated usable lands designated as such by the SCS or the County.

**Alluvial Materials:** Sediment deposited by flowing water, such as in a riverbed.

**Alluvial Aquifer:** Earth, sand, gravel or other rock or mineral materials deposited by flowing water and capable of yielding that water to a well.

**Anadromous:** Pertaining to fish that are born in freshwater but spend a part of their life cycle in the sea and return to freshwater streams to spawn.

**Anisotropic Ratio of Hydraulic Conductivity:** The ratio of the horizontal hydraulic conductivity to the vertical hydraulic conductivity.

**Annular Space:** The space between an inner and outer well casing, or between the well casing and the well borehole wall.

**Applied Water Demand:** The quantity of water that would be delivered for urban or agricultural applications if no conservation measures were in place.

**Aquiclude:** A geologic formation, stratum, or layer, or part of a formation, which, although porous and capable of absorbing water slowly, will not transmit water fast enough to furnish an appreciable supply for wells or springs.

**Aquifer:** A saturated permeable geologic formation, unit, or structure, that yields water in sufficient quantities to supply pumping wells or springs.

**Aquifer (confined):** A water-bearing subsurface stratum that is bounded above and below by formations of impermeable, or relatively impermeable, soil or rock (i.e., an aquiclude or aquitard) to the extent that hydraulic pressure can be created within the aquifer.

**Aquifer (semi-confined):** An aquifer confined (usually from above) by a low-permeability layer that permits water to slowly flow through it.

**Aquifer (unconfined):** The saturated portion of the soil profile located above any confining layers where the upper surface is in direct contact with the atmosphere or atmospheric pressure through porous materials. This upper surface is known as the water table.

**Arid:** A term describing a climate or region in which precipitation is deficient in quantity or occurs infrequently such that agricultural production is not possible without irrigation, and consistent water supplies must be secured.

**Artificial Recharge:** The addition of water to a groundwater reservoir by human activity, such as irrigation return percolation, direct water injection, or induced infiltration from streams, wells, or recharge/spreading basins. See also GROUNDWATER RECHARGE or RECHARGE BASIN.

**Aquitard:** A saturated, but poorly permeable bed that impedes groundwater movement and does not yield water freely to wells, but which may transmit appreciable water to or from adjacent aquifers and, where sufficiently thick, may constitute an important groundwater storage unit.

**Basin Yield:** The absolute total quantity of water that can be obtained from a groundwater basin (usually on an annual basis) regardless of the consequences. (see also SAFE YIELD, WELL YIELD, OVERDRAFT, and GROUNDWATER OVERDRAFT).

**Bedrock Aquifer:** A consolidated rock deposit or geological formation of sufficient hardness and lack of interconnected pore spaces, but which may contain a sufficient amount of joints or fractures capable of yielding minimal water to a well.

**Beneficial Uses:** Includes any applicable water benefit to fish, wildlife, habitat, education, scientific, human, industrial, or recreational activities that are dependent upon adequate water flow thorough rivers, streams or wetlands. The Regional Water Quality Control Board's Basin 4A Plan categorizes beneficial uses per water quality standards.

**Best Management Practice (BMP):** A water conservation or mitigation (water use efficiency) measure that would lead to or implement water conservation. BMP's are intended to reduce water demand.

**Board:** Means the Board of Directors of the Fox Canyon Groundwater Management Agency (FCGMA).

**Boundary conditions:** The mathematical statement specifying the hydraulic head or groundwater flux at the boundary of the computer model domain.

**Brackish Water:** Water containing dissolved minerals in amounts that exceed normally acceptable standards for municipal, domestic, and irrigation uses. Considerably less saline than seawater.

**Calibration Parameters:** The parameters or input factors in the groundwater flow model that are estimated during the calibration process.

**Calibration Residuals:** The difference between the measured hydraulic head at a well location and the computer-modeled hydraulic head interpolated from the finite-difference grid to the well location.

**Calibration Residual Criterion:** The level of difference between the measured hydraulic head at a well location and the modeled hydraulic head interpolated from the finite-difference grid to the well location below which the model calibration or fit is considered acceptable.

**Calibration Targets:** The data to which the computer groundwater model is calibrated or fitted.

**Casing:** A tubular retaining structure, generally metal, concrete, or plastic that is installed into an excavated hole or well boring to maintain the opening or to prevent collapse of the hole. The perforated sections also serve a dual purpose by allowing groundwater to enter the well at specific depth intervals.

**Composite Sensitivity:** The composite sensitivity of an estimated parameter in the calibration refers to the sensitivity in model response to changes in the value of that parameter while keeping all other model parameter values constant. The composite sensitivity of a parameter is a measure relative to the composite sensitivity of the other model parameters (e.g., the model response to a change in the hydraulic conductivity value for a particular layer with a composite sensitivity of 100 is twice as sensitive than to another parameter, such as the hydraulic

conductivity of a different model layer, whose composite sensitivity value is only 50). Estimated parameters with large composite sensitivities produce greater changes in model response when their values are varied than those with smaller composite sensitivities.

**Conductivity:** Same as HYDRAULIC CONDUCTIVITY.

**Confined Groundwater:** Water beneath the surface of the ground that is confined or overlain by material sufficiently impervious to prevent a hydraulic connection with overlying groundwater or percolating water. A pressurized aquifer caused by an overlying, and sometimes underlying confining stratum or layer of low permeability (i.e., usually solid bedrock or other non-porous geologic material). Confined groundwater moves under the control of the difference in head between the intake and discharge areas of the water body.

**Conjunctive Use:** The operation of a groundwater basin in coordination with a surface water storage and conveyance system. The purpose is to recharge the basin during years of above average water supply to provide storage that can be withdrawn during drier years when surface water supplies are below normal.

**Conservation:** The management of natural resources such as water, land, etc. to prevent waste, destruction, or neglect. *Urban water conservation or water use efficiency* includes reductions realized from voluntary, more efficient, water use practices promoted through public education and from state-mandated requirements to install water-conserving fixtures in newly constructed and renovated buildings. *Agricultural water conservation or agricultural water use efficiency*, means reducing the amount of water applied in irrigation through measures that increase irrigation efficiency. (see NET WATER CONSERVATION).

**Contamination:** Alteration or impairment of waters by waste, salt-water intrusion or other means to a degree which creates a hazard to the public health through actual or potential poisoning or through actual or potential spreading of disease. A water supply that is rendered useless for the intended or practical purpose.

**Critical Dry Period:** A series of water-deficient years, usually an historical period, in which a full reservoir storage system at the beginning of the period is drawn down (without any spill) to minimum storage at the end of the period.

**Critical Dry Year:** A dry year in which the full commitments for a dependable water supply cannot be met and deficiencies are imposed on water deliveries.

**Cubic Feet Per Second** (cfs) or ($ft^3/s$)**:** A unit of water volume measurement equal to one cubic foot of water passing a given point in one second of time.

**Darcy's Law:** A mathematical expression relating the flow rate in a porous medium to the hydraulic gradient, cross-sectional area of flow, and the resistance to flow provided by the medium as represented by the hydraulic conductivity. Darcy's Law is given by Q=-KIA, where Q is the flow rate ($L^3/T$), K is the hydraulic conductivity (L/T) (see definition below), I is the hydraulic gradient (see definition below), and A is the cross-sectional of flow ($L^2$).

**Department of Water Resources** (DWR)**:** The California Department of Water Resources is a state agency that operates and maintains the State Water Project, including the California Aqueduct. The DWR also provides dam safety and flood control services, assists local water districts in water management and conservation activities, promotes recreational opportunities, and plans for future statewide water needs.

**Desalting/Desalination:** A process that converts seawater or brackish water to fresh water or an otherwise more usable condition through removal of dissolved solids.

**Destroyed Well:** A well that has been destroyed in accordance with California State Well Standards, and/or Ventura County Well Ordinance as conditioned in a locally issued permit. Also see WELL DESTRUCTION.

**Distribution Uniformity (DU):** The ratio of the average low-quarter depth of irrigation water infiltrated to the average depth of irrigation water infiltrated, for the entire farm field, expressed as a percent.

**Drainage Basin:** The area of land from which water drains into a river or common watercourse; as, for example, the Santa Clara River Basin, in which all land and stream tributaries drain into the Santa Clara River. Also called, a "watershed".

**Drawdown:** The depth difference between the static or starting water level in a well to the final depth of water measured after a pumping well level stabilizes. Well water level stabilizes when there is no further drop in the piezometric head or water level after 3 or more successive measurements taken at specific time intervals (i.e., the pumping or extraction rate is equal to the infiltration rate within a well or boring).

**Efficient Water Management Practice (EWMP):** Any agricultural water conservation measure that water suppliers could implement. EWMPs are organized into three categories: 1) Irrigation Management Services; 2) Physical and Structural Improvements; and 3) Institutional Adjustments.

**Effluent:** Wastewater or other liquid, partially or completely treated or in its natural state. Typically, outflow or waste from a wastewater or water treatment plant.

**Electrical Conductivity** (EC)**:** A measure of the capacity of water to conduct an electrical current. Provides an approximation of mineral content of the water (more minerals equate to a higher conductivity and vice-versa).

**Estuary:** The lower course of a river entering the sea that is influenced by tidal action, or the portion of the river where the tide meets and mixes with the river current.

**Evapotranspiration** (ET)**:** The quantity of water transpired (given off), retained in plant tissues, and evaporated from plant tissues and surrounding soil surfaces. Quantitatively, it is expressed in terms of depth of water per unit area during a specified period of time.

**Expansion Area:** That area of land between the outermost boundary of the FCGMA and the watershed drainage divide (crest of slope) that drains into the Agency. The Expansion Area was approved by LAFCO as an official Sphere-of-Influence zone to help control water quality on adjacent aquifer outcrop zones.

**Farmland:** A tract, plot, or parcel of land that is cultivated for the purpose of agricultural production, and/or devoted to the raising or breeding of animals.

**Finite-Difference Grid:** The spatial discretization of the modeled domain into a grid of cells. In the vertical direction, the domain is discretized into layers. In the horizontal direction, the domain is discretized into a grid consisting of row and columns.

**Firm Yield:** The maximum annual supply of a given water development that is expected to be available on demand, with the understanding that lower yields will occur in accordance with a predetermined schedule or probability.

**Forebay:** A groundwater basin immediately upstream or upgradient from a larger basin or group of hydrologically connected basins. Also, a reservoir or pond situated at the intake of a pumping plant or power plant to stabilize water levels.

**Fox Canyon Groundwater Management Agency (FCGMA):** An agency created by the California State Legislature by passage of State Assembly Bill No. 2995 on Sept. 13, 1982. This law granted jurisdiction over all lands overlying the Fox Canyon aquifer to control seawater intrusion, protect water quality, and manage water resources. The Agency began operations on January 1, 1983, and is now officially considered a State Special District under authority of the California Water Code, Appendix, Sections 121-102, et seq.

**Fresh Water:** Water suitable for human consumption. Also known as Drinking Water or Potable Water.

**General-Head Boundary Condition:** A boundary condition that represents flow through the boundary as the product of the conductance of the boundary and the difference between the head at or beyond the boundary and the head in the aquifer. The conductance is equal to the products of the hydraulic conductivity (see definition below), the cross-sectional area perpendicular to flow, and the distance between the head at or beyond the boundary and the head in the aquifer.

**Groundwater:** Water beneath the surface of the Earth within the zone below the water table where the soil is completely saturated with water. Water stored in fractures, on wetted surfaces, or within voids of porous rocks or soils beneath the surface of the ground.

**Groundwater Basin:** A geographical, geological and/or hydrological defined area containing one or more aquifers or aquifer systems which store and transmit water capable of yielding significant quantities of water to extraction facilities.

**Groundwater Hydrology:** The branch of geology that deals with the distribution and behavior of groundwater, its occurrence and movements, its replenishment and depletion, the properties that control groundwater movement and storage, and the methods of investigation and utilization of water beneath the surface of the ground. Synonymous with Hydrogeology.

**Groundwater Mining:** The withdrawal of water from an aquifer greatly in excess of replenishment; if continued, the underground supply will eventually be exhausted or the water table will drop below economically feasible pumping lifts.

**Groundwater Overdraft:** The condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that replenishes the basin over a period of years. (see OVERDRAFT).

**Groundwater Recharge:** Increases in groundwater quantities or levels by natural conditions or by human activity. See also ARTIFICIAL RECHARGE.

**Groundwater Storage Capacity:** The space contained in a given volume of geologic deposits. Under optimum use conditions, the usable groundwater storage capacity is the volume of water that can, within specified economic limitations, be alternately extracted and replaced in the reservoir. (Directly related to SAFE YIELD).

**Groundwater Table:** The upper surface of the zone of saturation (all pores of subsoil are filled with water), or the current water level in a well. Synonymous with hydraulic head level or standing water level in an aquifer.

**Hydraulic Conductivity:** Defined as the rate of flow of water through a unit cross-section under a unit hydraulic gradient. It is a constant of proportionality in Darcy's Law relating the flow rate through a cross-sectional area perpendicular to the flow direction and the hydraulic gradient. The hydraulic conductivity is a measure of the permeability of the porous medium to water or other liquids and is inversely proportional to the resistance of the medium to water flow. Hydraulic conductivity is sometimes also known as "the coefficient of permeability".

**Hydraulic Gradient:** The ratio of the change in hydraulic head between two spatial locations to the horizontal distance between the two spatial locations.

**Hydrograph:** A graphic plot of changes in the flow of water or in elevation of water level against time.

**Hydrologic Cycle:** The process by which water travels in a sequence from the air (condensation) to the ground (precipitation) and returns to the atmosphere (evaporation).

**Infiltration:** The gradual downward flow of water from the ground surface into soil materials. Synonymous with Percolation or Recharge.

**Initial conditions:** The hydraulic head distribution everywhere in the model domain at the beginning of the model simulation.

**In-Lieu Credits:** Actually, a transfer of existing or already earned conservation or storage credits. A term used to describe the exchange of a previously earned credit by a well operator or owner, for an acre-foot of imported water (plus a monetary charge for that water) from the Calleguas Municipal Water District. NOTE: only those retail water providers who have been pre-approved by the FCGMA Board of Directors may participate in the In-Lieu Credit Exchange Program.

**Instream Use:** Use of water that does not require diversion from its natural watercourse. For example; the use of water for navigation, recreation, fish and wildlife, esthetics, or scenic enjoyment.

**Irrigation Efficiency:** The efficiency of water application or use. Normally computed by dividing evapotranspiration of applied water by applied water and converting the result to a percentage, however as used by the FCGMA it is a special formula available to agricultural irrigators based on computed weather station data provided after the end of each calendar year. An option that acts like a form of extraction allocation.

**Irrigation Return Flow:** Applied water that is not transpired, evaporated, or deep percolated into a groundwater basin, but that returns to a surface water supply.

**Key Well:** A significant or special well chosen or selected as the main or typical representative of the well group or area where several wells are located in proximity to each other.

**Leaching:** The flushing of salts from the soil by the downward percolation of applied water.

**Lower Aquifer System (LAS):** That land area primarily underlying the Oxnard Plain Pressure Basin or aquifers generally deeper than about 350 feet below ground surface, that includes the Hueneme aquifer, the Fox Canyon Aquifer, and the Grimes Canyon aquifer.

**Maximum Contaminant Level (MCL):** Enforceable regulatory standards under the Safe Drinking Water Act that must be met by all public drinking water systems to which they apply.

**Micrograms per Liter (ug/l):** One ten thousandth of a liter, or approximately one part per billion (ppb).

**Milligrams Per Liter (mg/l):** The mass (milligrams) of any substance dissolved in a standard volume (liter) of water. One liter of pure water has a mass of 1,000 grams. For dilute solutions where water is the solvent medium, the numerical value of mg/l is very close to the mass ratio expressed in parts per million (ppm).

**Mineralization of Groundwater:** The addition of inorganic substances (like salts), usually dissolved from surface or aquifer material, to groundwater.

**Miner's Inch (MI):** Generally accepted to mean the quantity of water that will escape from an aperture or opening 1-inch square through a 2-inch thick plank or board placed across the flow of water in a ditch, canal, sluice, or stream channel with a steady head pressure from water standing 6-inches above the top of the escape opening in the plank. Roughly equivalent to 2,274 cubic feet (cu.ft.) of water in 24 hours; or 1.5 cubic feet per minute; or fixed by statute in northern California as 40 miners inches equal to 1 cubic foot per second (cfs), but in southern California, 50 miners inches is considered 1 cfs regardless of legal definition. A volume unit of water commonly used in California around the year 1900 in hydraulic mining that ranged from 2,000 to 2,600 cubic feet of water in 24 hours, or 90 cu.ft. per hour (673.2 gallons/hr.).

**Model Calibration:** The process of adjusting the parameters in the groundwater flow model until an acceptable agreement is achieved between the simulated hydraulic head values and the measured hydraulic head values at specific well locations.

**Model Domain:** The volume defined by the horizontal and vertical study area boundaries in which groundwater flow is simulated.

**Model Validation:** Evaluation of the calibrated groundwater flow model performed by running the calibrated model using an independent set of aquifer stresses and comparing the simulated heads against the associated measured heads.

**Municipal and Industrial (M&I):** Refers to water use (generally) by urban customers for human consumption or activities, industrial processes, golf courses, decorative fountains, or landscape irrigations.

**Naturally Occurring Contaminants:** A deleterious or unwanted substance present in groundwater which is of natural origin (i.e., not caused by human activity).

**Net Water Conservation:** The difference between the amount of applied water conserved and the amount by which this conservation reduces usable return flows.

**Net Water Demand:** The applied water demand less water saved through conservation efforts (equals the net applied water minus the actual water used).

**New Water:** That portion of a streamflow or other surface water flow, local groundwater, treated wastewater, or other water source not being recovered for any beneficial use prior to being introduced as a new water supply. Water not previously available in the system, created by reducing irrecoverable losses or flow to unusable water bodies (such as the ocean or inland salt sinks like the Salton Sea). Examples: (1) Water stored when a reservoir

captures runoff that would otherwise flow to the ocean during periods of "excess" outflow; (2) Water conserved by reducing agricultural drainage discharge.

**Non-Point Source:** A contributing factor to water pollution that cannot be traced to a specific source (see Point Source for further reference).

**Numerical Groundwater Flow Model:** A computer program that solves a set of algebraic equations generated by approximating the equation describing groundwater flow, the boundary conditions, and the initial conditions that form the mathematical model.

**Ojai Basin Groundwater Management Agency (OBGMA):** A sister agency to the FCGMA that was also formed by action of the State Legislature, but at a later date. Covers a smaller geographic area and is about one-tenth the size of the FCGMA. It does however, have similar powers to regulate and preserve water quality and quantity.

**Osmosis:** The spontaneous flow of a diluted liquid or solvent through a permeable membrane to a concentrated liquid or solvent until the concentrations of the two liquids are equal. Not to be confused with diffusion. If the membrane pores are too large to allow solute molecules to pass through, it would be considered a semi-permeable membrane.

**Overdraft:** The condition of a groundwater basin or aquifer where the average annual amount of water extracted exceeds the average annual supply of recharge water to that same basin or aquifer. See also Prolonged Overdraft.

**Paper Water:** Water proposed for transfer that does not create an increase in the water supply. *Example 1 - A proposal to market water the seller is legally entitled to use under a water service contract or a water right, but has not historically used*. Paper water transfers often involve an offer to sell water that someone else would otherwise use in the absence of the transfer. *Example 2 - An offer to transfer return flows that would otherwise be used by a downstream appropriator.* To the extent that a paper water transfer results in an increase in consumption by the buyer, the water is really coming from a user other than the seller. NOTE: The "no-injury rule" prohibits water transfers that would harm another legal user of the water (Water Code Sections 1706, 1725, 1736, 1810(d)). It is a statutory basis for prohibiting transfers of paper water. (see Real Water).

**Parts Per Million (ppm):** A ratio of two substances, usually by mass, expressing the number of units of the designated substance present in one million parts of the mixture. For water solutions, parts per million is almost identical to milligrams per liter.

**Per Capita Water Use:** The amount of water used by or supplied from the system of an urban water purveyor divided by the total residential population served by that water; normally expressed in gallons per-capita-per-day (gpcd), or gallons per day per person (gal/day/person).

**Perched Groundwater:** Groundwater supported by a zone of material of low permeability located above an underlying main body of groundwater with which it is not essentially hydrostatically connected.

**Percolation:** The downward movement of water through soil or alluvium to the groundwater table.

**Perennial Yield:** The rate at which water can be withdrawn perennially under specified operating conditions without producing an undesired result. An undesired result is an adverse situation such as: (1) a reduction of the yield of a water source; (2) development of uneconomic pumping lifts; (3) degradation of water quality; (4) interference with prior water rights; or (5) land subsidence. Perennial yield is an estimate of the long-term average annual amount of water that can be withdrawn without inducing a long-term progressive drop in water level. The term “safe yield” is sometimes used in place of perennial yield, although the concepts behind the terms are not identical: The concept of “safe yield” generally implies a fixed quantity equivalent to a basin’s average annual natural recharge, while the “perennial yield” of a basin or system can vary over time with different operational factors and management goals.

**Permeability:** The ability of a water-bearing material to transmit water. Measured by the quantity of water passing through a unit cross section within a specific time interval under 100% hydraulic gradient.

**pH:** A way of using parts of Hydrogen to express both acidity and alkalinity on a scale of 0 to 14, with the midpoint of 7 representing neutrality. Numbers less than 7 indicate increasing acidity, and numbers greater than 7 indicate increasing alkalinity. Potable water pH should be around 7 for optimal quality and taste characteristics.

**Point Source:** Any discernable, confined and discrete conveyance site from which waste or polluted water is discharged into a water body, the source of which can be identified. See also Non-point Source.

**Pollution (of water):** The alteration of the physical, chemical, or biological properties of water by the introduction of any substance into water that adversely affects any beneficial use of that water.

**Potable Water:** Water suitable for human consumption without undesirable health consequences. Drinkable water meets or exceeds California Department of Health Services minimum drinking water requirements.

**Porosity:** The ratio of the volume of voids between particles in a soil or rock sample to the total volume of the sample.

**Pressure:** In the case of water, depth times density, or force per unit area. An increase or decrease in pressure is transmitted equally through a medium, liquid, or substance like water. The density of water is 62.4 lbs/sq. ft. Air pressure at sea level is generally 14.7 lbs./sq. ft.

**Prolonged Overdraft:** Net extractions in excess of a basin's perennial yield; typically averaged over a period of ten or more years.

**Rainy Season:** From October 1 through April 15. This is different from Rainfall Year which is Oct. 1 thru Sept. 30.

**Real Water:** (1) Available water from the net savings resulting from not planting and/or irrigating a crop that would otherwise be irrigated; (2) Stored water released that would not otherwise be released (some use the term "wet water"). Real water is not necessarily new water, but new water must, by definition, be real.

**Receiving Waters:** All waters that are "Waters of the State" within the scope of the State Water Code, including but not limited to, natural streams, creeks, rivers, reservoirs, lakes, ponds, water in vernal pools, lagoons, estuaries, bays, the Pacific Ocean, and groundwater.

**Recharge:** The addition of water from any source into the groundwater system.

**Recharge (artificial):** The infusion of water into an aquifer or groundwater system via settling basins, percolation ponds, recharge trenches, or direct injection through wells designed for such purpose.

**Recharge Basin:** A surface facility, often a large pond, used to increase the infiltration of water into a groundwater basin or aquifer usually for the express or intended purpose of recharging groundwater.

**Reclaimed Water:** Treated wastewater or otherwise non-potable water suitable for beneficial uses such as wetlands, agricultural, golf course, park and other landscape irrigation.

**Recycled Water:** Urban wastewater that becomes suitable for a specific beneficial use as a result of treatment.

**Return Flow:** The portion of withdrawn water that is not consumed by evapotranspiration and which returns instead to its source or to another body of water.

**Reuse:** The additional use of once-used water.

**Reverse Osmosis:** A method of removing salts or impurities from water by forcing the source water through a porous membrane under high pressure.

**Riparian:** Of, or on the banks of, a stream or other body of water. Usually, lands adjacent to flowing water or a place where water can or does flow on a more or less regular or constant basis.

**Riparian Vegetation:** Vegetation growing on or immediately near the banks of a stream or other body of water.

**Runoff:** The surface flow of water from an area; the total volume of surface flow during a specified time.

**RWQCB:** The California Regional Water Quality Control Board.

**Safe Yield (groundwater):** The maximum quantity of water that can be withdrawn from a groundwater basin over a long period of time without developing a condition of overdraft. Sometimes referred to as sustainable yield.

**Salinity:** Generally, the concentration of mineral salts dissolved in water. Salinity may be measured by weight (total dissolved solids or TDS), electrical conductivity (EC), or osmotic pressure. Where seawater is the major source of salt, salinity is often used to refer to the concentration of chlorides in the water. See also TDS.

**Sealing Zone 1:** An area of minimum well sanitary surface sealing depth based on local geology that does not include a confining layer. Sealing Zone 1 extends throughout most of the mountainous areas and some unconfined groundwater basins.

**Sealing Zone 2:** Areas where the local geology contains a single confining layer. Generally the required well seal is much deeper than in Sealing Zone 1 in order to reach a confining layer which will prevent poor quality, perched water from migrating into the useable aquifer through the well annular space.

**Sealing Zone 3:** The area overlying the Oxnard Plain Pressure Groundwater Basin, which contains multiple fresh water zones (aquifers). Here, deep wells must be sealed in up to three zones to prevent present or future migration of saline water and/or poor quality perched water into fresh water zones.

**Seawater Intrusion:** A mixing or displacement of fresh water with highly saline water from an ocean or sea that results from the reversal of hydrostatic pressure allowing water flow to be onshore rather than offshore. Can be caused by the overdrafting of aquifers, which also results in the depletion of water supplies and lowering of water levels. Lowering water levels usually also lowers hydrostatic pressure in an aquifer, allowing seawater replacement.

**Secondary Treatment:** In sewage treatment, the biological process of reducing suspended, colloidal, and dissolved organic matter in effluent from primary treatment systems. Secondary treatment is usually carried out through the use of trickling filters or by an activated sludge process.

**Semi-Perched Aquifer:** The water bearing area that is located between the earth's surface and an impermeable geologic layer (usually clay, rock, or silt deposits) that exist above an aquifer.

**Sensitivity Analysis:** An evaluation of the influence of uncertainty in the model parameters, stress inputs, and boundary conditions on the calibrated groundwater flow model response. The analysis is performed by varying each uncertain component over a reasonable range of values while keeping the other components constant and then measuring the associated model response.

**Serious Overdraft:** Prolonged overdraft that results, or would result, within a span of ten years, in measurable, unmitigated adverse environmental or economic impacts, either long-term or permanent. Such impacts include but are not limited to seawater intrusion, other substantial groundwater quality degradation, land surface subsidence, substantial effects on riparian or other environmentally sensitive habitats, or unreasonable interference with the beneficial use of a groundwater basin's resources.

**Specific Capacity (SC):** The estimated water volume or sustainable discharge rate from a well calculated by dividing the discharge rate in gallons per minute by the total drawdown in feet after a pumping well stabilizes.

**Specific Gravity (SG):** A comparison of a substance to an equal volume of water calculated as the weight of the substance divided by the weight of an equal volume of water. Water is 62.4 lbs/cu. ft.

**Specific Storage:** The specific storativity of a saturated aquifer is defined as the volume of water that a unit volume of aquifer releases from storage under a unit decline in hydraulic head.

**Specific Yield**: As applied to water bearing materials, it is the ratio of the volume of water drained by the force of gravity from a saturated material over a reasonably long period of time, expressed as a percentage of the total volume of the saturated material.

**Sphere of Influence:** An area officially adopted or approved by the Local Area Formation Commission (LAFCO) that designates the probable ultimate boundary of a city or special district.

**Spreading Basin:** See Recharge Basin.

**Spreading Grounds:** See Recharge Basin.

**Steady-State Model:** A groundwater flow model in which the hydraulic head distribution and aquifer stresses are independent of time.

**Storage Capacity:** The maximum amount of water that a groundwater basin can absorb, only a fraction of which is recoverable by wells or groundwater extractions.

**Storage Coefficient:** The volume of water that an aquifer releases from storage per unit surface area of aquifer per unit decline in the component of hydraulic head perpendicular to that surface. The product of the saturated aquifer thickness and the specific storage volume or value.

**Surface Water:** Fresh or saline lakes, reservoirs, bays, harbors, rivers, streams, estuaries, wetlands, or impoundments of water available on the surface of the ground.

**SWP:** State Water Project.

**SWRCB:** California State Water Resources Control Board.

**Tertiary Treatment:** In sewage, the additional treatment of effluent beyond that of secondary treatment to obtain a very high quality of effluent.

**Total Dissolved Solids (TDS):** A term that represents the amount of natural minerals dissolved in water. Total weight of salts measured in milligrams per liter (mg/l) by "cooking off" or evaporating the pure water in an oven set at 180 degrees centigrade. TDS can also be approximated by adding the total weight (in grams) of individual salts determined in chemical laboratory tests (summation method usually results in an error factor of 5 to 10 percent or more). TDS can also be estimated by measuring the electrical conductivity (EC) value in water by using a volt-ohm meter. EC is typically a higher number than actual TDS, thus EC must be divided by 500 for every 1,000 of the EC value to reach a more equivalent TDS level or value that more closely matches the laboratory measured TDS value.

**Total Maximum Daily Load (TMDL):** is a number that represents the assimilative capacity of a receiving water to absorb a pollutant. The TMDL is the sum of the individual wasteload allocations for point sources, load allocations for nonpoint sources plus an allotment for natural background loading, and a margin of safety. TMDLs can be expressed in terms of mass per time (the traditional approach) or in other ways such as toxicity or a percentage reduction or other appropriate measure relating to a State water quality objective. A TMDL is implemented by reallocating the total allowable pollution among the different pollutant sources (through the permitting process or other regulatory means) to ensure that the desired water quality objectives are achieved.

**Transient Model:** A groundwater flow model in which the hydraulic head distribution and aquifer stresses are simulated as a function of time.

**Transmissivity:** The rate at which water of a prevailing density and viscosity is transmitted through a unit width of an aquifer or confining bed under a unit hydraulic gradient.

**Turbidity:** A measure of cloudiness and suspended sediments in water. Water high in turbidity appears murky and contains sediments in suspension. Turbid water may also result in higher concentrations of contaminants and pathogens that bond to the available particles in the water.

**Unconfined Groundwater:** Groundwater in an aquifer whose upper water surface (water table) is at atmospheric pressure.

**United Water Conservation District (UWCD):** An independent special district and wholesale water provider that also administers basin management programs primarily within the Santa Clara River Valley and the Oxnard Plain. Originally established as the Santa Clara River Water Conservation District in 1927.

**Unsaturated Zone:** See Vadose Zone.

**Upper Aquifer System (UAS):** The area primarily underlying the Oxnard Plain Pressure Groundwater Basin, which contains the Perched and Semi-Perched aquifers, the Oxnard aquifer, and the Mugu aquifer. The UAS is mainly recharged via the 9.6 square mile unconfined Oxnard Plain Forebay Basin.

**Vadose Zone:** The subsurface zone above the water table and the capillary fringe in which pores within the geologic matrix (rocks or soils) are only partially filled with water or air, and where fluid pressure is at or equal to atmospheric pressure.

**Water Level:** The water surface elevation in an unconfined aquifer, or the piezometric head level or elevation in a confined aquifer, usually measured relative to existing ground surface or in reference to mean sea level.

**Water Reclamation:** The treatment of water of impaired quality, including brackish water and/or seawater, to produce a water of suitable quality for the intended use.

**Water Right:** A legally protected right, granted by law, to take possession of water occurring in a water supply and to divert the water and put it to beneficial uses.

**Water Quality:** A term used to describe the chemical, physical, and/or biological characteristics of water with respect to its suitability for a particular use.

**Water Quality Standards:** Defined as the beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.) of water and the water quality objectives adopted by the State or the United States Environmental Protection Agency (EPA) to protect those uses.

**Water Table:** The upper surface of the zone of saturation, or the highest current groundwater elevation or level.

**Water Well Ordinance No. 4184:** The Ventura County Groundwater Conservation Ordinance which was originally adopted by the Board of Supervisors in October 1970 and revised in 1979, 1984, 1985, 1987, 1991and most recently in May 1999. The main purpose of the ordinance is to ensure that all new or modified water wells, cathodic protection wells and monitoring wells are drilled by licensed water well contractors and are properly sealed so that they cannot serve as conduits for the movement of poor quality or polluted waters into useable aquifers or be hazardous to people or animals.

**Watershed:** An area of land or a physical system of streams, hill slopes, valleys and surface runoff networks that drain to a lowest common point or place. Watersheds can vary in size, and every stream, tributary, or river has an associated watershed.

**Well Destruction:** To fill a well with concrete or cement grout (including both interior and annular spaces if the well is cased) completely in such a manner that it will not produce liquids or gasses or act as a conduit for the transmission of water or fluids between any water, oil, or gas-bearing formations penetrated.

**Well Log:** A paper or electronic record of the drilling procedures, drilling location, construction methods, well design, and/or lithology encountered during the drilling phase of a well or boring. Also called a “Drillers Log”, “Drillers Report”, “Borehole Log”, or “Lithologic Log”. It is a written recording of the various rock and soil formations or materials and the depths at which they were encountered along with any notable things like static groundwater level, physical or chemical properties or geologic materials, etc.

**Well Owner:** For legal purposes, the owner of the land on which a well is located (unless some written agreement, deed, or right exists that says otherwise).

**Well Screen Interval:** One or more continuous sections or portions of a well casing where small openings or “perforations” exist that allow water or other fluids to enter the well from the surrounding water-bearing formations.

**Well Yield:** The quantity of water obtained from a well expressed as a continuous rate of flow (as in gallons per minute), or as a volume per unit of time (as in cubic feet per second or acre-feet per year, etc.).

**Zone of Saturation:** The subsurface zone below the water table where pores within the geologic unit or stratum are completely filled with water, and where fluid pressure is greater than atmospheric pressure.