

San Luis Obispo County
Master Water Plan
Glossary of Terms

Acre-foot The quantity of water required to cover one acre to a depth of one foot; equal to 43,560 cubic feet, or 325,851 gallons. (One acre-foot is the quantity of water necessary to serve the annual demands of a family of 5.)

Alternative A collection of actions or action categories assembled to provide a comprehensive solution.

Applied Water (AW) The actual quantity of water delivered to a field, or the intake of a community's water system. This value may be different from the Gross Water Requirement.

Artificial Recharge The addition of surface water to a ground water basin by human activity, such as putting surface water into spreading basins.

Average Year Demand Water used under average hydrologic conditions for a defined level of development.

Average Year Supply The average annual supply of a source of water over a long period. For a local project without long-term data available, it is typically the annual average deliveries of the project during the 1984-1986 period.

Best Management Practice An urban water conservation measure that the California Urban Water Conservation Council agrees to implement among signatory agencies. Best Management Practice can also refer to agricultural water conservation measures. (See also Efficient Water Management Practice.)

Build-Out The planned development expectations of a city or county, usually represented by acres and/or density of people, by land use type.

Conjunctive Use Integrated management of surface water and ground water supplies to meet overall water supply and resource management objectives.

Connection Customer service line through which water is delivered from a water service agency to a residential structure or other urban user such as a park, golf course or industrial user.

Conservation Long term water use efficiency achieved through the introduction, implementation and retention of hardware and/or management changes.

Crop Coefficient (Kc) A theoretical conversion factor relating crop evapotranspiration to reference evapotranspiration (ET_o). This factor is specific to the reference crop used (i.e., grass, alfalfa, evaporation pan).

Crop Evapotranspiration (ET_c) Evapotranspiration of a specific crop or plant. ET_c is a function of the weather and the plant type and is the primary component of the net water requirement.

Distribution Uniformity (DU) A measure of the variation in the amount of water applied to the soil surface throughout an irrigated areas. DU is expressed as a percentage and generally represents the major component of irrigation efficiency.

Dependable Yield (ground water) The average amount of ground water that can be extracted from a ground water basin over a long period of time without developing a net change in storage of fresh water; the extraction must occur under a particular set of physical conditions affecting the water supply, use, and disposal of the ground water basin.

Desalination A process that converts sea water or brackish water to fresh water or an otherwise more usable condition through removal of dissolved solids.

Drought Condition Hydrologic conditions during which rainfall and runoff are much less than average.

Effective Precipitation The amount of precipitation which is stored in the root zone and becomes available for plants to use.

Efficient Water Management Practice (EWMP) An agricultural water conservation measure that can be organized as irrigation management services, physical and structural improvements, and institutional adjustments.

Effluent Waste water or other liquid, partially or completely treated, flowing from a treatment plant.

Electrical Conductivity (EC) A measurement of salinity expressed in dS/m.

Electrical Conductivity of Irrigation Water (EC_w) Electrical conductivity of irrigation water, expressed in dS/m.

Electrical Conductivity Threshold (EC_e) Estimated electrical conductivity of soil saturation extract at which yield reduction due to salts occurs, expressed in dS/m.

Endangered Species Act (ESA) Federal and State legislation that provides protection for species that are in danger of extinction.

Environmental Water Water for wetlands, for instream flow in a waterway, or for a designated wild and scenic river (based on unimpaired flow).

Evapotranspiration (ET) Quantity of water retained in plant tissues, and evaporated from plant tissues and surrounding soil surfaces. It is generally expressed as a rate.

Evapotranspiration of Applied Water (ETA_w) The portion of the total evapotranspiration which is provided by irrigation.

Gray Water Waste water from a household or small commercial establishment. Gray water does not include water from a toilet, kitchen sink, unfiltered dishwasher, or water used for washing diapers.

Gross Irrigation Water Requirement (GWR) The amount of irrigation water needed to be applied to satisfy the total beneficial uses, leaching requirements and system inefficiencies so that there is no under-irrigation. This is equivalent to the agricultural water demand for a basin.

Ground Water Water in the ground that is capable of being extracted. In California water law, it is divided into 1) definite underground streams, 2) underflow and 3) percolating waters.

Groundwater Banking The practice of using available storage capacity within groundwater basins to store surface water that is recharged during periods when it is available such as during peak flood flows.

Ground Water Overdraft The condition of a ground water basin in which the amount of water withdrawn by pumping exceeds the amount of water that replenishes the basin over a period of years, developing a net decline in storage of fresh water.

Ground Water Recharge Refers to increases in ground water storage by natural conditions or by human activity.

Ground Water Storage Capacity The space or voids contained in a given volume of soil and rock deposits.

Ground Water Table The upper surfaces of the zone of saturation (all pores of subsoil filled with water), except where the surface is formed by an impermeable body.

Hydroelectricity Electricity generated by conversion of the energy of running water.

Hydrologic Basin The complete drainage area upstream from a given point on a stream.

Irrigation Efficiency (IE) Efficiency of irrigation water application, expressed as a percentage.

$$IE = \text{Irrigation Water Beneficially Used} \div \text{Total Irrigation Water Applied}$$

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

Leaching Requirement (LR) Fraction of water entering the soil which must pass through the root zone in order to prevent soil salinity from exceeding a specified value. LR is a function of the salt tolerance of a crop and the quality of the applied irrigation water.

Milligrams Per Liter The weight in milligrams of any substance dissolved in one liter of liquid. Nearly the same as parts per million. Abbreviation: mg/l.

Net Irrigation Water Requirement Quantity of water required to satisfy crop evapotranspiration, leaching requirements in addition to water needed to satisfy a specific cultural practice (i.e., frost protection or soil firming). The NWR is the sum of all beneficial uses (it does not include system inefficiencies).

Per Capita Water Use The water produced by or introduced into the system of a water supplier divided by the total residential population; normally expressed in gallons per capita per day (gpcd).

Percolation The downward movement of water through the soil or alluvium to a ground water table.

Recharge Basin A surface facility, often a large pond, used to increase the percolation of surface water into a ground water basin.

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

Reference Evapotranspiration (ET_o) Estimated maximum potential evapotranspiration from a theoretical grass 4 - 6 inches tall, adequately irrigated, under full cover. This term is a calculated value based on weather parameters and is used as a tool to calculate water use of a specific crop based on specific weather conditions.

Reliability For water supply, the percentage of time an established level of supply is forecast to be available.

Residential Water Use An urban water use that includes service to single family and multiple-family dwelling structures and manufactured homes.

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

Reuse The additional use of previously used water.

Riparian Located on the banks of a stream or other body of water.

Riparian Vegetation Vegetation growing on the banks of a stream or other body of water.

Riparian Habitat Habitat which exists within riparian vegetation.

Safe Yield See Dependable Yield.

Sea Water Intrusion The movement of salt water into a body of fresh water. It can occur in either surface water or ground water.

Service Area The geographical land area served by the distribution system of a water agency.

Spreading Basin See Recharge Basin.

Stakeholder Any individual or entity with an interest in the outcome of a project.

State Water Project A state operated water management and conveyance system that provides water to agricultural, urban, and industrial users in California.

Sustainable Safe Yield See Dependable Yield.

Total Dissolved Solids A quantitative measure of the residual minerals dissolved in water that remain after evaporation of a solution. Usually expressed in milligrams per liter. Abbreviation: TDS.

Unaccounted for Water (UAW) The difference between water delivered to the intake of a distribution system (Applied Water) and the water consumed by the end user. Typically includes leakage in mains and errors in measuring.

Water Quality A description of the chemical, physical, biological and bacteriological characteristics of water usually in regard to its suitability for a particular purpose.

Water Planning Area A subunit of the County, delineated with logical boundaries, based on water resources and uses.

Water Recycling See Reuse.

Water Rights A legally protected right to take possession of water in a water supply and to divert that water for beneficial use. These can include both appropriative and riparian rights.

Watershed An area that drains ultimately to a particular channel or river, usually bounded peripherally by a natural topographical divide, such as a hill, ridge, or mountain.

Water Year A continuous 12-month period for which hydrologic records are compiled and summarized. In California, it begins on October 1 and ends September 30 of the following year.

Reference:

- Urban Water Use in California, Dept. of Water Resources, August 1994.
- Phase I Final Report, CALFED Bay-Delta Program, September 1996.
- California Water Plan Update, Dept. of Water Resources, October 1994.