

WATER EFFICIENT LANDSCAPE DESIGN MANUAL

SECTION 5 DEFINITIONS

Aggregate means the sum total of landscaped areas on a given parcel.

Applied water means the portion of water supplied by the irrigation system to the landscape.

Automatic irrigation controller means a timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers are able to self-adjust and schedule irrigation events using either evapotranspiration (weather-based) or soil moisture sensor data.

Building permit means a permit issued by the County Building Department authorizing the permit holder to among other things, erect, construct, enlarge, alter, repair or improve a building or structure.

Certified landscape irrigation auditor means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization or other accredited certification program.

Common interest developments means community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 4100.

Cool season turf means a type of grass that remains green in the winter months.

Developer includes the owner of a project and the owner's partners, associates, employees, consultants, trustees or agents or any other persons who have any other business or financial relationship with the owner.

Director PDS means the Director of Planning & Development Services or anyone whom the Director has appointed or hired to administer or enforce this chapter.

Discretionary permit means any permit requiring a decision making body to

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exercise judgment prior to its approval, conditional approval or denial.

Established landscape means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.

Establishment period of the plants means the first year after installing the plant in the landscape or the first two years if irrigation will be terminated after establishment. Typically, most plants are established after one or two years of growth. Native habitat mitigation areas and trees may need three to five years for establishment.

Estimated total water use (ETWU) means the estimated total water use in annual gallons per year for a landscaped area.

ET adjustment factor (ETAF) means a factor of 0.55 for residential areas and 0.45 for non-residential areas, that, when applied to reference evapotranspiration, adjusts for plant water requirements and irrigation efficiency, two major influences on the amount of water that is required for a healthy landscape. The ETAF for new and existing non-Special Landscape Areas shall not exceed 1.0. The ETAF for existing non-modified landscapes is 0.8.

Evapotranspiration rate means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time period.

Exclusive Use Area for a single family tract home includes all outdoor areas within the boundaries of the property and excludes any slope planting and/or front yard landscaping installed by the developer under a previously approved Landscape Documentation Package. Areas of native vegetation, open space easements, and vegetated BMP's are not Exclusive Use Area's.

Flow sensor means an inline device installed at the supply point of the irrigation system that produces a repeatable signal proportional to flow rate.

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Flow sensors must be connected to an automatic irrigation controller, or flow monitor capable of receiving flow signals and operating master valves. This combination flow sensor/controller may also function as a landscape water meter or submeter.

Friable means a soil condition that is easily crumbled or loosely compacted down to a minimum depth per planting material requirements, whereby the root structure of newly planted material will be allowed to spread unimpeded.

Graywater means untreated waste water that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful **processing, manufacturing, or operating wastes**. "Graywater" includes, but is not limited to, wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers.

Grading means any importation, excavation, movement, loosening or compaction of soil or rock.

Hardscape means any durable surface material, pervious or non-pervious.

Hazardous Fire Area means any geographic area mapped by the State or designated by a local jurisdiction as a moderate, high or very high fire hazard area or which the fire authority having jurisdiction has determined is a hazardous fire area, because the type and condition of vegetation, topography, weather and structure density increase the probability that the area will be susceptible to a wildfire. (See County Code Section 96.1.202)

Hydrozone means a portion of the landscape area having plants with similar water needs and rooting depth. A hydrozone may be irrigated or non-irrigated.

Initial Outdoor Water Use Authorization is achieved at time of Landscape Documentation Package approval, and prior to installation and submittal of the Certificate of Completion. This allows a property owner to proceed with installation of the landscape prior to final Outdoor Water Use Authorization being granted. This also allows those applicants utilizing the Outdoor Water Use

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Application Using Prescriptive Compliance Option form to install landscaping prior to submittal of the Certificate of Completion (Prescriptive Compliance Option). Single-family tract homes will be issued Initial Outdoor Water Use Authorization to the developer after approval of a Landscape Documentation package, an Outdoor Water Use Application Using Prescriptive Compliance Option, or submittal and approval of a subdivision plan and chart identifying **each residential lots' water use budget as described in Section 1.A(4)(g).**

Invasive plant species means species of plants not historically found in California that spreads outside cultivated areas cultivated areas and may damage environmental or economic resources.

Irrigation audit means an in depth evaluation of the performance of an irrigation system conducted by a certified landscape irrigation auditor. An irrigation audit includes, but is not limited to, inspection, system tune-up, system test with distribution uniformity or emission uniformity, soil moisture test/observation for drip and subsurface irrigation, reporting overspray or runoff that causes overland flow and preparation of an irrigation schedule. The audit must be conducted in a manner consistent with the Irrigation Association's Landscape Irrigation Auditor Certification program or other U.S. Environmental Protection Agency "Watercourse" labeled auditing program.

Irrigation efficiency means the measurement of the amount of water beneficially used divided by the water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The irrigation efficiency for purposes of this ordinance are 0.90 for point source drip, 0.85 for in-line emitter tubing, or subsurface, 0.85 for bubblers, 0.75 for overhead rotator or precision nozzle spray devices, 0.70 for rotor, and 0.60 for all other spray nozzles.

Landscaped area means all the planting areas, turf areas, and water features in a landscape design subject to the Maximum Applied Water Allowance calculation. The landscape area does not include footprints of buildings or

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structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes, and other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation). A landscape area may also include features adjacent to an area with vegetation when allowed under section 86.714.

Landscape design manual means the manual, approved by the Director of Planning & Development Services that establishes specific design criteria and guidance to implement the requirements of this chapter.

Landscape water meter means an inline device installed at the irrigation supply point that measures the flow of water into the irrigation system and is connected to a totalizer to record water use.

Licensed landscape contractor means a person licensed by the State of California as a specialty contractor in the C-27 category, to construct, maintain, repair, install or subcontract the development of a landscape system.

Low head drainage means a sprinkler head or other irrigation device that continues to emit water after the water to the zone in which the device is located has shut off.

Low volume irrigation means the application of irrigation water at low pressure through a system of tubing or lateral lines and low volume emitters such as drip lines or bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

Major grading permit means all grading activities requiring a grading permit from the County that are considered to be "major grading" within the scope of section 87.208 of the San Diego County Code of Regulatory Ordinances.

Mass grading means the movement of more than 5000 cubic yards of soil by mechanical means to alter the topographic features of a site.

Master shut-off valve is an automatic valve installed at the irrigation supply point which controls water flow into the irrigation system. When this valve is

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closed water will not be supplied to the irrigation system. A master valve will greatly reduce any water loss due to a leaky station valve.

Maximum applied water allowance (MAWA) means the upper limit of annual applied water measured in annual gallons for the established landscaped area as specified in Section 86.712. It is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscape area. The Estimated Total Water Use shall not exceed the Maximum Applied Water Allowance. Special Landscape Areas, including recreation areas, areas permanently and solely dedicated to edible plants such as orchards and vegetable gardens, and areas irrigated with recycled water are subject to the MAWA with an ETAF not to exceed 1.0. $MAWA = (ET_o) (0.62) [(ETAF \times LA) + ((1-ETAF) \times SLA)]$.

Median means an area between opposing lanes of traffic that may be unplanted or planted with trees, shrubs, perennials, and ornamental grasses.

Minor grading permit means all grading activities requiring a grading permit from the County that are considered to be 'minor grading' within the scope of section 87.206 of the Diego County Code of Regulatory Ordinances.

Modified landscape means a deviation from an approved landscape plan, that results in a cumulative increase or decrease from the original approved plan in excess of 10 percent of the landscaped area; or, whether a landscape plan was previously approved or not, the re-landscaping of any property where the modified landscape area is 2,500 square feet or greater.

Mulch means an organic material such as leaves, bark, straw, compost or inorganic mineral materials such as rocks, gravel or decomposed granite left loose and applied to the soil surface to reduce evaporation, suppress weeds, moderate soil temperature or prevent soil erosion.

New construction means a new building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated

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building.

Non-residential landscape means landscapes in commercial, institutional, industrial and public settings that may have areas designated for recreation or public assembly. It also includes portions of common areas of common interest developments with designated recreational areas.

Outdoor water use authorization is granted by the County after a Landscape Documentation Package, as per Section 86.707 has been approved, landscape and irrigation has been installed, and a Certificate of Completion, per Section 86.725 has been accepted and approved.

Overspray means the water from irrigation that is delivered outside an area targeted.

Parkway as defined by the County's Public Road Standards, means the distance measured from the curb face, or edge of pavement where no curb is provided, to the property line of a road right-of-way. It may be planted or unplanted, and with or without pedestrian facilities.

Pervious means any surface or material that allows the passage of water through the material and into underlying soil.

Plant factor means a factor that when multiplied by the ETo, estimates the amount of water a plant needs. The plant factor range for very low water use plants is 0 to 0.1, the plant factor range for low water use plants is 0.2 to 0.3, the plant factor range for moderate water use plants is 0.4 to 0.6, and the plant factor range for high water use plants is 0.7 to 1.0. Plant factors used shall be from the publication "Water Use Classification of Landscape Species" (WUCOLS). Plant factors may also be obtained from horticultural researchers from academic institutions or professional associations as approved by the California Department of Water Resources (DWR).

Public water purveyor means a public utility, municipal water district, municipal irrigation district or municipality that delivers water to customers.

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Recreational area means areas, excluding private single family residential areas, designated for active play, recreation or public assembly in parks, sports fields, picnic grounds, amphitheaters or golf course tees, fairways, roughs, surrounds and greens.

Recycled water means waste water that has been treated at the highest level required by the California Department of Health Services for water not intended for human consumption as regulated per Title 22 of the California Code of regulations for various outdoor irrigation uses by either secondary or tertiary treatments.

Reference evapotranspiration (ET_o) means a standard measurement of environmental parameters which affects the water use of plants. ET_o is expressed in inches per day, month, or year and is an estimate of the evapotranspiration of a large field of four-inches to seven-inches tall, cool season grass that is well watered. Reference evapotranspiration is used as the basis of determining the MAWA so that regional differences in climate can be accommodated.

Residential landscape means landscapes surrounding single or multifamily homes, and also includes residential structures within a mixed use development.

Runoff means water that is not absorbed by the soil or landscape to which it is applied and flows from the landscaped area.

Special landscaped area means an area of the landscape dedicated solely to edible plants, recreational areas, areas irrigated with recycled water, or water features using recycled water.

Structural BMP means a subset of best management practices (BMP'S) which detain, retain, filter, remove, or prevent the release of pollutants and control runoff discharge rates to surface waters from developments projects in perpetuity, after construction of a project is completed. These BMP's can satisfy the requirements for Pollutant Control BMP's and Hydromodification BMP requirements for Priority Development Projects.

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Submeter means a metering device to measure water applied to the landscape that is installed after the primary utility water meter. Flow sensor's connected to an automatic irrigation controller may also function as a landscape water meter.

Subsurface irrigation means an irrigation device with a delivery line and water emitters installed below the soil surface that slowly and frequently emit small amounts of water into the soil to irrigate plant roots.

Tertiary treated recycled water means water that has been through three levels of treatment including filtration and disinfection and meets California Code of Regulations, Title 22 standards for use as outdoor irrigation.

Transitional area means a portion of a landscaped area that is adjacent to a natural or undisturbed area and is designated to insure that the natural area remains unaffected by plantings and irrigation installed on the property.

Turf means a groundcover surface of cool season or warm season mowed grass. Annual bluegrass, Kentucky bluegrass, perennial ryegrass, red fescue and tall fescue are cool season grasses. Bermuda grass, kikuyu grass, seashore paspalum, St. Augustine grass, zoysias grass and buffalo grass are warm season grasses.

Water conserving plant species means a plant species identified as having a very low or low plant factor.

Water feature means a design element where open water performs an aesthetic or recreational function. A water feature includes a pond, lake, waterfall, fountain, artificial streams, spa and swimming pool where a public water purveyor provides water for the feature. Constructed wetlands used for on-site wastewater treatment or stormwater best management practices that are used solely for water treatment or stormwater retention are not water features.

WUCOLS means Water Use Classification of Landscape Species and refers to the most recent version of the Department of Water Resources publication authored by the University of California Cooperative Extension and the Department of Water Resources 2014.