

Meeting Date: 04/27/16 (6)

ORDINANCE NO.: 10427 (N.S.)

AN ORDINANCE AMENDING TITLE 8, DIVISION 6, CHAPTER 7, OF  
THE SAN DIEGO COUNTY CODE OF REGULATORY ORDINANCES  
RELATING TO WATER CONSERVATION IN LANDSCAPING

The Board of Supervisors of the County of San Diego ordains as follows:

Section 1. The Board of Supervisors finds and determines as follows:

The State of California has set standards for water efficiency in landscaping since 1990. These requirements are currently set forth in the Water Conservation in Landscaping Act, Government Code sections 65591 et seq., (“Act”). In accordance with the Act and its predecessor statute, the Department of Water Resources adopted and periodically amended a Model Water Efficient Landscape Ordinance (“MWELO”). The MWELO is currently codified at 23 California Code of Regulations sections 490 et seq. The County was at all times required to adopt an ordinance as effective as the MWELO at conserving water or apply the MWELO. The County adopted and has enforced its own water efficient landscape regulations since the first MWELO became effective on January 1, 1993.

In response to prolonged drought conditions in the State, Governor Edmund G. Brown, Jr. by Executive Order B-29-15 issued April 1, 2015 directed the Department of Water Resources to amend the MWELO to increase water efficiency standards for new and existing landscapes and to limit the use of turf. The Department of Water Resources revised the MWELO in accordance with the Executive Order and the California Water Commission approved the revised MWELO on July 15, 2015. Consistent with the requirements of the Act, the County is amending its water efficient landscape requirements set forth at sections 86.701 et seq. of the San Diego County Code of Regulatory Ordinances to ensure that the County’s requirements are as effective as the current MWELO at conserving water.

This ordinance is consistent with the findings and declarations the State Legislature made when adopting the Act and is as effective as the State’s current MWELO at conserving water. Upon the effective date of this ordinance, the County’s water efficient landscape requirements shall apply to all covered new and existing landscapes in place of the State’s MWELO.

Section 2. Title 8, Division 6, Chapter 7 of the San Diego County Code of Regulatory Ordinances is hereby amended to read as follows:

## **CHAPTER 7. WATER CONSERVATION IN LANDSCAPING**

### **SEC. 86.701. PURPOSE.**

The State Legislature determined in the Water Conservation in Landscaping Act (the "Act"), Government Code sections 65591 et seq., that the State's water resources are in limited supply. The Legislature also recognized that while landscaping is essential to the quality of life in California, landscape design, installation, maintenance and management must be water efficient. Consistent with the Legislature's findings the purpose of this chapter is to:

- (a) Promote the values and benefits of landscaping practices that promote the conservation and efficient use of water in a manner at least as effective as the Act and implementing Regulations.
- (b) Establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and projects with modified landscapes.
- (c) Promote the use, when available, of tertiary treated recycled water and graywater for irrigating landscaping.
- (d) Use water efficiently without waste by setting a Maximum Applied Water Allowance as an upper limit for water use and reduce water use to the lowest practical amount.
- (e) Encourage proper planning, design, installation, management, and maintenance of landscapes that will achieve the conservation and efficient use of water in landscapes by:
  - (1) Creating the conditions to support life in the soil by reducing compaction, incorporating organic matter that increases water retention, and promoting productive plant growth that leads to more carbon storage, oxygen production, shade, habitat and aesthetic benefits.
  - (2) Minimizing energy use by reducing irrigation water requirements, reducing reliance on petroleum based fertilizers and pesticides, and planting climate appropriate shade trees in urban areas.
  - (3) Conserving water by capturing and reusing rainwater and graywater wherever possible and selecting climate appropriate plants that need minimal supplemental water after establishment.

(4) Protecting air and water quality by reducing power equipment use and landfill disposal trips, selecting recycled and locally sourced materials, and using compost, mulch and efficient irrigation equipment to prevent erosion.

(5) Protecting existing habitat and promoting the creation of new habitat by choosing local native plants, climate adapted non-natives and avoiding invasive plants, utilizing integrated pest management with least toxic methods as the first course of action.

## **SEC. 86.702. DEFINITIONS.**

The following definitions shall apply to this chapter:

- (a) "Aggregate" means the sum total of landscaped areas on a given parcel.
- (b) "Applied water" means the portion of water supplied by the irrigation system to the landscape.
- (c) "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.
- (d) "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.
- (e) "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.
- (f) "Common interest developments" means community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 4100.
- (g) "Cool season grass" means a type of grass that remains green in the winter months.
- (h) "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.
- (i) "Director of PDS" means the Director of Planning & Development Services or anyone whom the Director has appointed or hired to administer or enforce this chapter.

(j) “Discretionary permit” means any permit requiring a decision making body to exercise judgment prior to its approval, conditional approval or denial. Projects with conceptual landscape plans approved during discretionary review shall be conditioned to submit a final Landscape Documentation Package.

(k) “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.

(l) “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 may need three to five years for establishment, and trees, irrigated with a separately valved system, may require a minimum of five years.

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

(n) “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, which are 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.

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

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

(q) “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.

(r) “Graywater” means untreated wastewater that has not come into contact with toilet waste, kitchen sink waste, dishwasher waste or similarly contaminated sources. “Graywater” includes, but is not limited to, wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs.

(s) “Grading” means any importation, excavation, movement, loosening or compaction of soil or rock.

(t) “Hardscape” means any durable surface material, pervious or non-pervious.

(u) “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.

(v) “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 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 either a Landscape Documentation Package or Outdoor Water Use Application Using Prescriptive Compliance Option.

(w) “Invasive plant species” means species of plants not historically found in California that spread outside cultivated areas and may damage environmental or economic resources.

(x) “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 “Watersense” labeled auditing program.

(y) “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, 0.085 for bubblers, 0.75 for overhead rotator or precision nozzle spray devices, 0.70 for rotor, and 0.60 for all other spray nozzles.

(z) "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 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 include design features adjacent to an area with vegetation when allowed under section 86.714.

(aa) "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. Flow sensors connected to an automatic irrigation controller may also function as a landscape water meter.

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

(cc) "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.

(dd) "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.

(ee) "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.

(ff) "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.

(gg) "Mass grading" means the movement of more than 5,000 cubic yards of soil by mechanical means to alter the topographic features of a site.

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

(ii) "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 San Diego County Code of Regulatory Ordinances.

(jj) “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 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.

(kk) “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.  $MAWA = (ET_o) (0.62) [(ETAF \times LA) + ((1-ETAF) \times SLA)]$ .

(ll) “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, requiring discretionary review or issuance of a building permit.

(mm) “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.

(nn) “New construction” means a new building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.

(oo) “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.

(pp) “Outdoor water use authorization” is granted by the County after a Landscape Documentation Package, as per 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. Outdoor water use authorization is granted to tract homes upon acceptance of the signed Water Use Application Using Prescriptive Compliance Option form.

(qq) "Overspray" means the water from irrigation that is delivered outside a targeted area.

(rr) "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.

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

(tt) "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 0.0 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).

(uu) "Point to source drip" means the application type of irrigation water with a matched precipitation rate at low pressure through a system of tubing or lateral lines with a dedicated field-installed low volume emitter or emitters at each specific plant. The distribution uniformity of this type of irrigation generally does not exceed 90 percent.

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

(ww) "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.

(xx) "Recycled water" means waste water as a result of treatment of waste, is suitable for direct beneficial use or a controlled use that would not otherwise occur and is regulated per Title 22 of the California Code of Regulations for various outdoor irrigation uses by either secondary or tertiary treatments.

(yy) "Reference evapotranspiration" (ETo) means a standard measurement of environmental parameters which affect the water use of plants. ETo 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.

(zz) “Residential landscape” means landscapes surrounding single or multifamily homes, and also includes residential structures within a mixed-use development.

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

(bbb) “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.

(ccc) “Structural BMP” means a subset of best management practices (BMP’s) which detains, retains, filters, removes, or prevents the release of pollutants and control runoff discharge rates to surface waters from development 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.

(ddd) “Submeter” means a metering device to measure water applied to the landscape that is installed after the primary utility water meter. Flow sensors connected to an automatic irrigation controller may also function as a landscape water meter, provided they accurately measure and record water applied to the landscape.

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

(fff) “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.

(ggg) “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.

(hhh) “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.

(iii) “Water conserving plant species” means a plant species identified as having a very low or low plant factor.

(jjj) “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.

(kkk) “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.

### **SEC. 86.703. APPLICABILITY.**

(a) The following projects in the unincorporated area of the County for which the County issues a building permit or a discretionary permit after the chapter's effective date shall be required to obtain an outdoor water use authorization as part of the permitting process:

(1) Any new construction where the aggregate landscaped area is 500 square feet or more.

(2) Any modified landscape that in the aggregate totals 2,500 square feet or more.

(3) A new single family residence served by a public water purveyor within the San Diego County Water Authority or the Borrego Water District. A new single family residence served by an on-site well shall require landscape review to be compliant with the landscape regulations but does not need to provide water budget calculations to a water purveyor per Section 86.711. As used in this subsection, a new single family residence does not include a single family residence that is being rebuilt after it was destroyed due to a declared natural disaster, such as a fire, earthquake, hurricane or tornado.

(4) A model home that includes a landscaped area, where the home is served by a public water purveyor within the San Diego County Water Authority or by the Borrego Water District.

(5) A project not included in categories (a)(1) through (a)(4) that requires a new minor or major grading permit and contains an area served by temporary or permanent irrigation.

(6) A cemetery.

(b) The following projects for which the County issues a building permit or a discretionary permit may comply with the performance requirements of this ordinance, or conform to the Prescriptive Compliance Option set forth in this chapter, unless otherwise required through discretionary review to submit a Landscape Documentation Package:

(1) Any project with an aggregate landscaped area from 500 square feet to below 2,500 square feet.

(2) Any lot or parcel within a project with less than 2,500 square feet of an aggregate landscaped area that meets the Estimated Total Water Use (ETWU) requirements, found in Section 86.713 entirely with treated or untreated graywater, or through stored rainwater captured on site. These projects need only comply with the requirements of Section 86.722(a)(5) & (6).

(c) The following projects shall be exempt from the requirements of this chapter:

(1) A registered local, State or federal historical site, based on a determination by the Director of Planning & Development Services (Director of PDS) in consultation with the County Archeologist.

(2) An ecological restoration project that does not require a permanent irrigation system.

(3) A mined land reclamation project that does not require a permanent irrigation system.

(4) Existing plant collections included in a botanical garden or arboretum that is open to the public.

(d) Sections 86.728(a) and 86.729 shall apply to the owners and occupants of all property in the unincorporated area of the County, whether or not the property is subject to a water use allocation. Existing landscape projects that were installed before the effective date of this chapter where the landscape area is greater than one acre shall also be subject to section 86.730(b).

#### **SEC. 86.704. OUTDOOR WATER USE AUTHORIZATION.**

(a) No person who constructs a project subject to sections 86.703(a) and (b) shall use water for irrigation or a water feature without the authorization required by this chapter.

(b) A person constructing a project subject to sections 86.703(a) and (b) shall obtain a water use authorization to provide water to a landscaped area as follows:

(1) A person applying for a building permit shall obtain a water use authorization from the County as part of the permitting process.

(2) A person applying for a discretionary permit shall submit a landscape concept plan with the discretionary permit application. As used in this chapter, a landscape concept plan means a drawing of the site where the project will be located that includes a representation of the site features, proposed plantings areas and the proposed method and type of irrigation.

(3) A person issued a discretionary permit shall obtain a water use authorization as part of the permitting process for each building permit or for each project segment that requires installation of a water meter or connection to an existing water meter.

(c) A water use authorization issued by the County shall establish the allowed MAWA for property on which a project that is subject to this chapter is located.

(d) Once the County establishes the MAWA for a property, no person shall exceed the MAWA on that property, unless the County agrees to modify the MAWA, as provided in section 86.724.

(e) Any person may examine the water use authorization establishing the MAWA for a property at the Department of Planning & Development Services during normal business hours.

#### **SEC. 86.705. ADMINISTRATION, ENFORCEMENT AND LANDSCAPE MANUAL.**

(a) The Director of PDS shall administer and enforce this chapter, except that the Director of PDS may refer an application for a water use authorization to the Director of Public Works, Director of Parks and Recreation or the Director of General Services for processing.

(b) The Director of PDS shall prepare a landscape design manual that provides guidance to applicants on how to comply with the requirements of this chapter. The manual shall also provide guidance for a person with an existing landscaped area on how to increase water use efficiency and avoid wasting water.

#### **SEC. 86.706. NEW DEVELOPMENT PROJECTS WITH LIMITED LANDSCAPING.**

An applicant for a building permit for a new single family residence or non-residential project subject to this chapter where the aggregate landscaped area of the project is greater than 500 square feet but less than 2,500 square feet shall, as a condition of obtaining a building permit, submit a Landscape Documentation Package or a landscape plan compliant with the Prescriptive Compliance Option in this chapter. The application process shall include establishing a MAWA for the project.

#### **SEC. 86.707. LANDSCAPE DOCUMENTATION PACKAGE.**

(a) Except as otherwise provided, an applicant for a building permit for a project described in section 86.703(a) shall submit a Landscape Documentation Package with the permit application.

(b) An applicant for a building permit for a project described in section 86.703(b) is eligible to conform to the Prescriptive Compliance Option specified in this chapter in lieu of submitting a Landscape Documentation Package.

(c) The Landscape Documentation Package required by subsection (a) shall contain the following:

(1) A project description that includes the date, project applicant, project location identified by address or parcel/lot number, total landscaped area in square feet, project type (e.g., new, modified, public, private, cemetery), water supply type (e.g., potable, recycled, well, graywater), checklist of all documents included in the Landscape Documentation Package, and project contacts for the applicant and property owner if different.

(2) A soil management report that complies with section 86.708 that analyzes soil composition within each landscaped area of the project.

(3) A landscaping and irrigation plan that complies with section 86.709 that describes the landscaping and irrigation for the project.

(4) A water efficient landscape worksheet that complies with section 86.711 that calculates the MAWA and the ETWU for the project.

(5) A grading design plan that complies with section 86.710 that describes the grading of the project.

#### **SEC. 86.708. SOIL MANAGEMENT REPORT.**

(a) The soil management report shall contain the following information:

(1) An analysis completed by a properly certified or accredited laboratory using accepted industry protocol. The analysis shall be of the soil for the proposed landscaped areas of the project that includes information about the soil texture, soil infiltration rate, pH, total soluble salts, sodium, and percent organic matter.

(2) Recommendations about soil amendments that may be necessary to foster plant growth and plant survival in the landscaped area using efficient irrigation techniques.

(b) When a project involves mass grading of a site the applicant shall submit a soil management report that complies with subsection (a) above with the Certificate of Completion required by section 86.725.

(c) In projects with multiple landscape installations (i.e., production home developments) a soil sampling rate of 1 in 7 lots or approximately 15 percent will satisfy this requirement. Large landscape projects shall sample at a rate equivalent to 1 in 7 lots. Mass grading projects shall provide a soil sampling test for every 25,000 square feet of area graded.

#### **SEC. 86.709. LANDSCAPING AND IRRIGATION PLAN.**

(a) The landscaping and irrigation plan shall be prepared by a landscape architect, civil engineer or architect licensed by the State of California. A homeowner of a single family residence required to submit a landscape and irrigation plan may prepare their own plans, or have a licensed landscape contractor prepare the landscaping and irrigation plan if the homeowner has contracted with that contractor to install the landscaping and irrigation pursuant to the plan. Property owners may also prepare plans and specifications for any property owned by that person.

(b) The landscaping and irrigation plan shall contain the following information in addition to any other information required to be shown by 23 California Code of Regulations sections 492.6 and 492.7:

(1) A list of all vegetation by common and botanical plant name which exists in the proposed landscaped area. The plan shall state what vegetation will be retained and what will be removed.

(2) A list of all vegetation by common and botanical plant name which will be added to each landscaped area. The plan shall include the total quantities by container size and species. Provide the plant factor for each species on the list as per WUCOLS. If the applicant intends to plant seeds, the plan shall describe the seed mixes and applicable germination specifications.

(3) A detailed description of each water feature that will be included in the landscaped area.

(4) The plan shall be accompanied by a drawing showing on a page or pages, delineating each hydrozone and specifying each as very low, low, moderate, high water or mixed water use; the specific location of all vegetation, retained or planted; the plant spacing and plant size; natural features that were created by natural processes; water features and hardscape areas. The drawing shall include a legend listing the common and botanical plant name of each plant shown on the drawing, including the species' plant factor.

(5) The location, type and size of all components of the irrigation system that will provide water to the landscaped area, including the controller, water lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, landscape water meters, and backflow prevention devices.

(6) The static water pressure at the point of connection to the public water supply and the flow rate in gallons, the application rate in inches per hour and the design operating pressure in pressure per square inch for each station. If the water pressure is below or exceeds the recommended pressure of the specified irrigation devices, the installation of a pressure regulating device is required.

(7) The MAWA for the plan, including the calculations used to determine the MAWA. The calculations shall be based on the formula in section 86.712 and the Water Efficient Landscape Worksheet.

(8) The ETWU for the plan, including the calculations used to determine the ETWU. The calculations shall be based on the formula in section 86.713 and the Water Efficient Landscape Worksheet.

(9) A statement signed under penalty of perjury by the person who prepared the plan that provides, "I am familiar with the requirements for landscape and irrigation plans contained in the County Landscape Water Conservation Regulations, in Title 8, Division 6, Chapter 7 of the San Diego County Code of Regulatory Ordinances. I have prepared this plan in compliance with those regulations. I certify that the plan implements those regulations to provide efficient use of water."

(c) The landscape and irrigation plan shall be designed to include all mandatory elements specified by 23 Code of California Regulations sections 492.6 and 492.7 and such additional or alternative requirements as follows:

(1) All plants shall be grouped in hydrozones and the irrigation system shall be designed to deliver water to hydrozones based on the moisture requirements of the plant grouping. A hydrozone may mix plants of moderate and low water use, and mix plants of high water use with plants of moderate water use, but no high water use plants shall be allowed in a low water use hydrozone. A high water use hydrozone may, however, provide for some low water use plants if the low water use plants are of a type that are likely to thrive and flourish with the additional water. The plan shall also demonstrate how the plant groupings, based on site location, slope, sun exposure, soil conditions, and plant types, accomplish the most efficient use of water.

(2) The irrigation system shall be designed to prevent standing water and any condition such as runoff, overspray and low-head drainage where irrigation water flows or sprays onto areas not intended for irrigation. The plan shall also demonstrate how grading and drainage techniques, such as avoidance of soil compaction in landscape areas, avoidance of disrupting natural drainage patterns and undisturbed soil, and grading to allow all irrigation and normal rainfall to remain within the property lines will promote healthy plant growth and prevent standing water, erosion and runoff.

(3) The plan shall provide for use of mulch as follows:

(A) A minimum three inch layer of mulch shall be applied on all exposed soil surfaces in each landscaped area except in turf areas, creeping or rooting ground covers or direct seeding applications where mulch is contraindicated. To provide habitat for beneficial insects and other wildlife, up to 5 percent of the landscape area may be left without mulch. Designated insect habitat must be included in the landscape design plan as such.

(B) Stabilizing mulch shall be applied on slopes that meet current engineering standards.

(C) The mulching portion of a seed/mulch slurry in hydro-seeded applications shall comply with subsection (B) above.

(D) Highly flammable mulch material, such as straw or small or mini size wood chips, shall not be used in a "Hazardous Fire Area," as that term is defined in the County Fire Code. Inorganic mulches such as decomposed granite, gravel, or rocks may be used instead.

(E) Organic mulch materials made from recycled or post-consumer products/materials shall take precedence over inorganic materials or virgin forest products unless the recycled post-consumer organic products are not locally



available. Organic mulches are not required where prohibited by County Fire Code.

(4) The plan shall identify the type and amount of mulch for each area where mulch is applied.

(5) On a project other than a single family residence, the plan shall identify recreational areas.

(6) The plan shall identify areas permanently and solely dedicated to edible plants.

(7) The plan shall identify each area irrigated with recycled water, gray water and other non-potable water.

(8) The plan shall identify soil amendments and their type and quantity.

(A) Prior to the planting of any materials (unless contraindicated by the soils report or in the case of native vegetation, as approved by the Director of PDS) compacted soils shall be transformed to a friable condition. On engineered slopes, only amended planting holes need meet this requirement.

(B) Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected.

(C) To meet the requirements of (A) above, all landscaped areas, except those described in (B) above, shall install-compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of six inches into the soil. Soils with greater than 6 percent organic matter in the top 6 inches of soil are exempt from adding compost and tilling.

(9) The plan shall demonstrate that landscaping when installed and at maturity will be positioned to avoid obstructing roadway users' (e.g., motorists', bicyclists', pedestrians', and equestrians') views of pedestrian crossings, driveways, roadways and other vehicular travel ways, traffic signs, and traffic signals. Sight distance lines, as provided by a California registered Civil Engineer using the sight distance requirements defined in the County Public Road Standards, shall be shown on the plans. If the landscaping will require maintenance to avoid obstructing roadway users' views, the plan shall describe the maintenance and the frequency of the proposed maintenance. The plan shall demonstrate that landscaping when planted and at full maturity shall not obscure sight distance for all roadway users. The plan shall also be compliant with requirements defined in the Landscape Architecture chapter of the most current Caltrans Highway Design Manual.

(10) The plan shall avoid the use of landscaping with known surface root problems adjacent to a sidewalk and paved area, unless the plan provides for installation of root control barriers or other appropriate devices to control surface roots. Trees shall be planted a minimum of 24 inches from sidewalk. Root barriers are required when used in parkways with landscaped areas less than 3 feet in width and where specified.

(11) The plan shall provide that any slope greater than 25 percent will be irrigated with an irrigation system with an application rate of 0.75 inches per hour or less to prevent runoff and erosion. As used in this chapter, 25 percent grade means one foot of vertical elevation change for every four feet of horizontal length. An applicant may employ an alternative design if the plan demonstrates that no runoff or erosion will occur. Prevention of runoff and erosion must be confirmed during the irrigation audit.

(12) Installation of irrigation mainlines under paved areas within the public right-of-way shall be avoided. When approved, the plan shall provide that all wiring and piping under a paved area that a vehicle may use, such as a parking area, driveway or roadway, will be installed inside a PVC sleeve pipe.

(13) The plan shall provide that irrigation piping and irrigation devices that deliver water, such as sprinkler heads, shall be installed below grade using swing joints or other riser-protection components if they are within 24 inches of a vehicle or pedestrian use area. The Director of PDS may allow on-grade piping where landform constraints make below grade piping infeasible.

(14) The plan shall provide that only drip, drip line, or other low flow non-spray technology shall be used to irrigate any vegetation within 24 inches of an impermeable surface unless the adjacent impermeable surfaces are designed and constructed to cause water to drain entirely into a landscaped area. The setback may be planted or unplanted. The surfacing of the setback may be mulch, gravel, or other porous material.

(15) The plan shall provide that plants in a transitional area consist of a combination of site adaptive and compatible native and non-native species. The plan shall also provide that no invasive plant species shall be introduced or tolerated in a transitional area. The irrigation in a transitional area shall be designed so that no overspray or runoff shall enter an adjacent area that is not irrigated.

(16) The plan shall demonstrate compliance with best management practices required by sections 67.801 et seq. (Watershed Protection, Stormwater Management and Discharge Control regulations), and the County's Best Management Practice's Design Manual.

(17) The plan shall address fire safety issues and demonstrate compliance with State and County requirements for defensible space around buildings and structures and shall avoid the use of fire prone vegetation.

(18) The irrigation system shall provide for the installation of an easily accessible manual shutoff valve as close as possible to the water supply. Additional manual shutoff valves shall be installed between each zone of the irrigation system and the water supply.

(19) The irrigation system shall provide that irrigation for any landscaped area will be regulated by an automatic irrigation controller, along with sensors (rain, freeze, wind, etc.), appropriate to local climatic conditions, either integral or auxiliary, that will suspend or alter irrigation operation during unfavorable weather conditions.

(20) For the purpose of determining Estimated Total Water Use, average irrigation efficiency is assumed to be 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, 0.75 for rotor and 0.60 for all other spray nozzles.

(d) The landscaping and irrigation plan shall describe each automatic irrigation controller the system uses to regulate the irrigation schedule and whether it is an evapotranspiration (weather based) system or moisture detection system, utilizing non-volatile memory. The plan shall depict the location of electrical service for the automatic irrigation controller or describe the use of batteries or solar power that will power valves or an automatic irrigation controller.

(e) Landscape water meters, defined as either a dedicated water service meter or private submeter, shall be installed for all non-residential irrigated landscapes of 1,000 square feet or more and all residential irrigated landscapes of 5,000 square feet or greater. A landscape water meter may be either:

(1) a customer service meter dedicated to landscape use provided by the local water purveyor; or

(2) a privately owned meter or submeter.

(f) Flow sensors that detect high flow conditions created by system damage or malfunction are required for all non-residential landscapes and residential landscapes of 5,000 square feet or larger.

(g) Master shut-off valves are required on all projects except landscapes that make use of technologies that allow for the individual control of sprinklers that are individually pressurized in a system equipped with low pressure shut down features.

(h) Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf to facilitate the appropriate irrigation of trees. The mature size and extent of the root zone shall be considered when designing irrigation for the tree.

(i) Soil moisture probes shall be located in the bottom and the toe of side slopes of all vegetated storm water detention basins to ensure that the irrigation controller does not activate those valves irrigating these areas during periods of inundation.

(j) Areas less than 10 feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or overspray.

#### **SEC. 86.710. GRADING DESIGN PLAN.**

(a) The grading design plan shall be prepared by a landscape architect, civil engineer or architect licensed by the State of California. A homeowner of a single family residence required to submit a grading design plan may prepare their own plans, or have a licensed landscape contractor prepare the grading design plan if the homeowner has contracted with that contractor to do the work covered by the plan. Property owners may prepare Grading Design Plans and specifications for any property owned by that person. Grading Plans required per the County's Grading Ordinance will satisfy these requirements, but shall be prepared by a California licensed civil engineer. The grading design plan shall comply with following requirements:

(1) The grading on the project site shall be designed for the efficient use of water by minimizing soil erosion, runoff and water waste, resulting from precipitation and irrigation.

(2) The plan shall show the finished configurations and elevations of each landscaped area including the height of graded slopes, the drainage pattern, pad elevations, finish grade and any stormwater retention improvements. All Structural BMP's shall be labeled.

(3) The Grading Design Plan shall demonstrate grading has been designed to avoid obstructing roadway users' (e.g., motorists', bicyclists', pedestrians', and equestrians') views of pedestrian crossings, driveways, roadways, other vehicular travel ways, traffic signs, and traffic signals. Sight distance lines, as provided by a California registered Civil Engineer using the sight distance requirements defined in the County Public Road Standards, shall be shown on the plans as applicable.

(b) If the project applicant has submitted a grading plan with the application for the project the Director of PDS may accept that grading plan in lieu of the grading design plan required by this section, if the grading plan complies with subsection (a) above.

#### **SEC. 86.711. WATER EFFICIENT LANDSCAPE WORKSHEET.**

The Water Efficient Landscape Worksheet in Appendix B to Title 23 California Code of Regulations section 429.4 shall be submitted with the Landscape Documentation Package. The worksheet shall be prepared by a landscape architect, civil engineer or architect licensed by the State of California. A homeowner of a single family residence required to submit a water efficient landscape worksheet may prepare their own worksheet, or have a licensed landscape contractor prepare the water efficient worksheet if the homeowner has contracted with that landscape contractor to install the landscaping and irrigation covered by the plan for which the worksheet was prepared. Property owners may also prepare worksheets for any property owned by that person. The water efficient worksheet shall contain all of the following:

(a) Information on the plant factor, irrigation method, irrigation efficiency, and area associated with each hydrozone. Calculations are then made to show that the evapotranspiration adjustment factor (ETAF) for the landscape project does not exceed a factor of 0.55 for residential areas and 0.45 for non-residential areas, exclusive of Special Landscape Areas.

(1) The ETAF for a landscape project is based on the plant factors and irrigation methods selected, and when applied to reference evapotranspiration, a factor adjusts for plant water requirements and irrigation efficiencies.

(2) The MAWA is calculated based on the maximum ETAF allowed (0.55 for residential areas and 0.45 for non-residential areas) and shall be expressed in annual gallons.

(3) The Estimated Total Water Use is calculated based on the plants used and irrigation method selected for the landscape design. ETWU shall be expressed in annual gallons and must be below the MAWA.

(b) Water budget calculations shall adhere to the following requirements:

(1) The plant factor used shall be from WUCOLS, or may be obtained from horticultural researchers from academic institutions or professional associations as approved by the California Department of Water Resources. The

plant factor ranges from 0 to 0.1 for very low water use plants, 0.2 to 0.3 for low water use plants, from 0.4 to 0.6 for moderate water use plants and from 0.7 to 1.0 for high water use plants. If plants within a hydrozone have different water use requirements the hydrozone category shall be determined using the highest water using plant. Any plant may be selected for the landscape providing the Estimated Total Water Use in the landscape area does not exceed the Maximum Applied Water Allowance.

(2) Temporarily irrigated areas shall be included in the low water use hydrozone. Temporarily irrigated as used in this chapter means the period of time when plantings only receive water until they become established.

(3) The surface area of a water feature shall be included in a high water use hydrozone unless the water feature is a pool or a spa with a durable cover. In that case, the water feature may be included in a moderate water use hydrozone. Pool and spa covers are not required but highly recommended in conserving water due to evaporation.

(4) All Special Landscape Areas shall be identified and their water use calculated as shown on the Water Efficient Landscape Worksheet. The ETAF for new and existing Special Landscape Areas shall not exceed 1.0.

(c) Budget calculations for the MAWA and the ETWU shall use the formulas in section 86.712 and section 86.713.

#### **SEC. 86.712. MAXIMUM APPLIED WATER ALLOWANCE.**

(a) A landscape project subject to this chapter shall not exceed the MAWA. The MAWA for a new landscape project shall be determined by the following calculation:

$$\text{MAWA (Annual Gallons Allowed)} = \frac{(\text{ETo})(0.62) [(\text{ETAF} \times \text{LA}) + ((1-\text{ETAF}) \times \text{SLA})]}{1}$$

(b) The abbreviations used in the equation have the following meanings:

- (1) MAWA = Maximum Applied Water Allowance in gallons per year.
- (2) ETo = Evapotranspiration in inches per year.
- (3) 0.62 = Conversion factor to gallons per square foot.
- (4) ETAF (0.55 for residential areas and 0.45 for non-residential areas).

(5) LA = Landscaped area, exclusive of the special landscaped area in square feet.

(6) 1-ETAF = the additional ET adjustment factor for a special landscaped area

(7) SLA = Portion of the landscaped area identified as a special landscaped area in square feet.

(c) If a public water purveyor establishes a MAWA for a property that is different than the MAWA established pursuant to this chapter, the stricter MAWA shall prevail.

### **SEC. 86.713. ESTIMATED TOTAL WATER USE.**

(a) An applicant for a project subject to this chapter shall calculate the estimated water use for each hydrozone using the following equation:

(1) ETWU (Annual Gallons Required) = ETo x 0.62 x ETAF x Area

(2) The sum of all landscaped areas shall be the ETWU for the project.

(b) The abbreviations used in the equation have the following meanings:

(1) ETWU = Estimated total water use in gallons per year.

(2) ETo = Evapotranspiration in inches per year.

(3) 0.62 = Conversion factor to gallons per square foot.

(4) ETAF = Evapotranspiration Adjustment Factor

(5) Area = Landscaped area in square feet.

(c) The ETWU for a proposed project shall not exceed the MAWA.

### **SEC.86.714. ADJUSTMENT TO LANDSCAPED AREA FOR NON-VEGETATED AREA.**

Rock and stone or pervious design features such as decomposed granite ground cover that are adjacent to a vegetated area may be (but are not required to be) included in the calculation of the MAWA and ETWU provided the features are integrated into the design of the landscape area and the primary purpose of the feature is decorative.

## **SEC. 86.715. LIMITATIONS ON USE OF WATER FEATURES.**

The total of all water features for a project, except for a swimming pool or spa, shall be limited to 15 percent of the total landscaped area of the project, or as determined by the Water Efficient Landscape Worksheet. Recirculating water systems must be used for all water features. Where available, recycled water shall be used as a source of water for decorative water features.

## **SEC.86.716. LIMITATIONS ON USE OF TURF IN LANDSCAPED AREAS.**

The following regulations shall apply to the use of turf on a project subject to this chapter:

(a) Turf shall not exceed 25 percent of the total aggregate landscaped area for single family residences and multi-family residential projects.

(b) No turf is allowed in non-residential areas unless included in a special landscape area. In multi-family residential areas turf is only allowed where it is readily useable by residents and serves more than just an ornamental function.

(c) Only subsurface irrigation or other means that produces no runoff or overspray shall be used for turf in a landscaped area where any dimension of the turf area is less than ten feet wide.

(d) Turf and all other high water use plants, characterized by a plant factor of 0.7 to 1.0 are prohibited in street medians.

(e) Turf shall not be allowed on slopes greater than 25 percent grade where the toe of the slope is adjacent to an impermeable hardscape.

(f) A ball field, park, golf course, cemetery and other similar use shall be designed to limit turf in any portion of a landscaped area not essential for the operation of the facility.

(g) No turf shall be allowed in a landscaped area if the turf cannot be irrigated without causing runoff, overspray or other wasteful water uses.

## **SEC. 86.717. CEMETERIES.**

A person submitting an application for a Major Use Permit for a cemetery shall also submit the following:



- (a) A concept plan, as described in section 86.704(b)(2).
- (b) A water efficient irrigation worksheet that calculates the MAWA for the project with the application that complies with section 86.711.
- (c) A landscape and irrigation maintenance schedule that complies with section 86.727.

#### **SEC. 86.718. PROJECTS WITH MODEL HOMES.**

A person who obtains a permit to construct a single family residential development that contains one or more landscaped model homes shall use signs and written information to demonstrate the principles of water efficient landscapes described in this ordinance.

- (a) Signs shall be used to identify the model as an example of a water efficient landscape featuring elements such as hydrozones, irrigation equipment, and others that contribute to the overall water efficient theme.
- (b) Signs shall include information about the site water use as designed per this ordinance; specify who designed and installed the water efficient landscape; and demonstrate low water use approaches to landscaping such as using native plants, graywater systems, and rainwater catchment systems.
- (c) Information shall be provided about designing, installing, managing, and maintaining water efficient landscapes.
- (d) Plans shall show the locations of all signs and provide construction details of each sign along with a copy of the specific text included on each sign.

#### **SEC.86.719. RECYCLED WATER.**

- (a) A person who obtains a permit for a project that is subject to this chapter shall use recycled water for irrigation when tertiary treated recycled water is available from the water purveyor who supplies water to the property for which the County issues a permit.
- (b) A person using recycled water from a public water purveyor shall install a distribution system that separates recycled water from potable water. Pipes carrying recycled water shall be purple and areas accessible to the public shall be posted with signs per the requirements of Title 22 California Code of Regulations.

(c) Landscapes using recycled water are considered Special Landscape Areas. The ET Adjustment Factor for new and existing (non-modified) Special Landscape Areas shall not exceed 1.0.

(d) This section does not excuse a person using recycled water from complying with all State and local laws and regulations related to recycled water use.

#### **SEC. 86.720. GRAYWATER SYSTEMS.**

(a) Graywater systems promote the efficient use of water and are encouraged to assist in on-site landscape irrigation. All graywater systems shall conform to the California Plumbing Code (Title 24, Part 5, Chapter 16).

(b) Graywater shall only be used for subsurface although, graywater can be discharged to the ground surface in a mulch basin as long as it remains covered with at least two inches of mulch, rock, or soil. Graywater systems may include tanks, filters, pumps, and piping for subsurface landscape irrigation through mulch basins, disposal trenches, or subsurface drip irrigation fields.

(c) Graywater can be used to irrigate fruit trees, ornamental trees, shrubs, groundcovers, and lawns. Graywater shall not be used in vegetable gardens where the food is a root crop or touches the ground surface.

(d) Graywater does not include captured rainwater.

#### **SEC. 86.721. STORMWATER-MANAGEMENT AND RAINWATER RETENTION.**

(a) Stormwater management practices minimize runoff and increase infiltration which recharges groundwater and improves water quality. Implementation is encouraged for stormwater best management practices in the design of landscape and grading plans in order to minimize wet weather runoff, to increase harvest and use through on-site rainwater retention and to increase infiltration.

(b) Project applicants shall refer to the local agency or Regional Water Quality Control Board for information on any applicable stormwater technical requirements. Projects shall be compliant with all applicable Fact Sheets within the County's Best Management Practice's Design Manual.

(c) All planted landscape areas are required to have friable soil to maximize water retention and infiltration and to otherwise meet the requirements set forth in section 86.709. All Structural BMP's shall be labeled.

(d) All landscape areas shall be designed for capture and infiltration of stormwater and non-stormwater in accordance with the Watershed Protection, Stormwater Management and Discharge Control Ordinance, San Diego County Code of Regulatory Ordinances section 67.801 et seq.

## **SEC. 86. 722. PRESCRIPTIVE COMPLIANCE OPTION**

(a) For those projects eligible to utilize and electing to use the Prescriptive Compliance Option to comply with this chapter, the following items are mandatory and must be submitted to the Director of PDS:

(1) A Prescriptive Compliance Option Plan which includes the following elements:

- (A) date
- (B) project applicant
- (C) project address (if available, parcel and/or lot number(s))
- (D) total landscape area (square feet), including a breakdown of turf and plant material
- (E) project type (e.g., new, modified, public, private, cemetery, homeowner-installed)
- (F) water supply type (e.g., potable, recycled, well, graywater) and identify the local retail water purveyor if the applicant is not served by a private well
- (G) contact information for the project applicant and property owner
- (H) applicant signature and date with statement, "I agree to comply with the requirements of the Prescriptive Compliance Option contained in Title 8, Division 6, Chapter 7, of the San Diego County Code of Regulatory Ordinances related to water conservation in landscaping.

(2) Incorporate compost at a rate of at least four cubic yards per 1,000 square feet to a depth of six inches into landscape area (unless contra-indicated by a soil test in which prescribed volumes of compost can be modified as approved by the Director);

(3) Plant material shall comply with all of the following:

(A) for residential areas, install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 75 percent of the plant area excluding edibles and areas using recycled water; for non-residential areas, install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 100 percent of the plant area excluding edibles and areas using recycled water;

(B) a minimum three inch (3inch) layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated. Prescribed depths of mulch and location may be modified as approved by the Director.

(4) Turf shall comply with all of the following:

(A) Turf shall not exceed 25 percent of the landscape area in residential areas, and there shall be no turf in non-residential areas;

(B) Turf shall not be planted on sloped areas which exceed a slope of 1 foot vertical elevation change for every 4 feet of horizontal length;

(C) Turf is prohibited in parkways less than 10 feet wide, unless the parkway is adjacent to a parking strip and used to enter and exit vehicles. Any turf in parkways must be irrigated by sub-surface irrigation or by other technology that creates no overspray or runoff.

(5) Irrigation systems shall comply with the following:

(A) Automatic irrigation controllers are required and must use evapotranspiration or soil moisture sensor data and utilize a rain sensor.

(B) Irrigation controllers shall be of a type which does not lose programming data in the event the primary power source is interrupted.

(C) Pressure regulators shall be installed on the irrigation system to ensure the dynamic pressure of the system is within the manufacturers recommended pressure range.

(D) Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be installed as close as possible to the point of connection of the water supply.

(E) All irrigation emission devices must meet the requirements set in the ANSI standard, ASABE/ICC 802-2014, "Landscape Irrigation Sprinkler and Emitter Standard." All sprinkler heads installed in the landscape must

document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.

(F) Areas less than 10 feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or overspray.

(6) For non-residential projects with landscape areas of 1,000 square feet or more, a private submeter(s) to measure landscape water use shall be installed. Flow sensor's connected to an automatic irrigation controller may also function as a landscape water meter, provided they accurately measure and record water applied to the landscape.

(b) At the time of final inspection, the permit applicant must provide the owner of the property with a certificate of completion, certificate of installation, irrigation schedule and a schedule of landscape and irrigation maintenance.

#### **SEC. 86.723. INSTALLATION BEFORE FINAL INSPECTION.**

A person issued an outdoor water use authorization for a project, shall install the approved landscaping and irrigation system before final inspection of the project.

#### **SEC. 86.724. MODIFICATION OF OUTDOOR WATER USE AUTHORIZATION.**

(a) A person may submit an application to modify the outdoor water use authorization required by this chapter on a form provided by the Director of PDS.

(b) An applicant requesting modification of an authorization where the total landscaped area after modification is greater than 500 square feet but less than 2,500 square feet shall comply with section 86.706.

(c) An applicant requesting modification of an authorization other than the type of project in subsection (b) above, shall comply with sections 86.707 - 86.711.

#### **SEC. 86.725. CERTIFICATE OF COMPLETION.**

All projects requiring the issuance of a water use authorization that have installed approved landscaping and irrigation, shall submit to the Director of PDS a Certificate of Completion that contains the following elements:

(a) A Certificate of Completion on a form provided by the Director of PDS within 10 days after installation, verifying that the landscaping and irrigation were installed as allowed in the approved landscape and irrigation plan, that all approved soil amendments were implemented and the installed irrigation system is functioning as designed and approved. The certificate of completion shall be signed under penalty of perjury by the person to whom the water use authorization has been issued and by a California licensed, landscape architect, civil engineer or architect. Where the water use authorization has been issued to a single family homeowner who either hired a licensed landscape contractor to install the landscaping and irrigation, or installed it themselves, the certificate shall be signed under penalty of perjury by the homeowner and the contractor, or by the homeowner if installed by them. Property owners who designed and installed landscape on their own property shall also be required to sign certificates.

(b) An irrigation schedule that complies with section 86.726 that describes the irrigation times and water usage for the project

(c) A landscape and irrigation system maintenance schedule that complies with section 86.727.

(d) A soil management report that complies with section 86.708 if the applicant did not submit the report with the landscape documentation package.

(e) For new construction and modified landscape projects installed after the effective date of this ordinance, as described in Section 86.703:

(1) the project applicant shall submit an irrigation audit report with the Certificate of Completion that shall include, 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 run-off that causes overland flow, and preparation of an irrigation schedule, including configuring irrigation controllers with application rate, soil types, plant factors, slope, exposure, and any other factors necessary for accurate programming.

#### **SEC. 86.726. IRRIGATION SCHEDULE.**

The irrigation schedule required by section 86.725 shall be prepared by a California licensed, landscape architect, civil engineer, architect, landscape contractor, or property owner and provide the following information:

(a) A description of the automatic irrigation system that will be used for the project.

(1) A diagram of the irrigation plan showing hydrozones shall be kept with the irrigation controller for subsequent management purposes. A copy shall be provided with the submittal of the Certificate of Completion to verify compliance.

(b) The time period when overhead irrigation will be scheduled and confirm that overhead irrigation shall only be used during the shorter of the following two intervals; 1) between 8:00 p.m. and 10:00 a.m., or 2) any more restrictive period mandated by a public water purveyor.

(c) For implementation of the irrigation schedule, particular attention must be paid to irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that applied water meets the Estimated Total Water Use. Total annual applied water shall be less than or equal to Maximum Applied Water Allowance (MAWA). Actual irrigation schedules shall be regulated by automatic irrigation controllers using current reference evapotranspiration data (e.g., CIMIS) or soil moisture sensor data.

(d) The parameters used for setting the irrigation system controller for watering times for:

- (1) The plant establishment period.
- (2) Established landscaping.
- (3) Temporarily irrigated areas.
- (4) Different seasons during the year.

(e) The parameters used for each station for the following factors:

- (1) The days between irrigation.
- (2) Station run time in minutes for each irrigation event, designed to avoid runoff.
- (3) Number of cycle starts required for each irrigation event, designed to avoid runoff.
- (4) Amount of water to be applied on a monthly basis.
- (5) The root depth setting.
- (6) The plant type setting.
- (7) The soil type.

- (8) The slope factor.
- (9) The shade factor.
- (10) Application rate setting.
- (11) Irrigation uniformity or efficiency setting.

**SEC. 86.727. LANDSCAPING AND IRRIGATION MAINTENANCE.**

(a) A person using water under a water use authorization that the County issued pursuant to this chapter shall maintain the landscaping and irrigation on the property to ensure compliance with the MAWA.

(b) A property owner using water on property subject to a water use authorization shall prepare a regular maintenance schedule for the landscaping and irrigation on the project. The schedule shall provide for, but not be limited to: (1) routine inspections to guard against runoff and erosion and detect plant or irrigation system failure (2) replacement of dead, dying and diseased vegetation, (3) eradication of invasive plant species in transitional areas, (4) auditing, repairing and adjusting the irrigation system and its components when necessary, (5) replenishing mulch, topdressing with compost (6) soil amendment when necessary to support and maintain healthy plant growth, (7) fertilizing, pruning, weeding and mowing and, (8) aerating and dethatching turf areas, (9) maintenance to avoid obstruction of motorists' view. The schedule shall also identify who will be responsible for maintenance and include emergency contact information.

(c) A person who uses water pursuant to a water use authorization shall maintain the irrigation system to meet or exceed an average irrigation efficiency of 0.75.

(d) A person who replaces broken or malfunctioning irrigation system components shall replace the components with the same materials or their equivalent, or with components with greater efficiency, however, the precipitation/application rates shall remain matched on any given valve.

(e) A person who replaces vegetation shall replace it with plantings that are representative of the hydrozone in which the plants were removed and shall be typical of the water use requirements of the plants removed provided that the replaced vegetation does not result in mixing plants contrary to the requirements of this chapter.



(f) A project applicant is encouraged to implement established landscape industry sustainable Best Practices for all landscape maintenance activities.

**SEC. 86.728. PROHIBITION ON WASTING WATER AND EXCEEDING THE MAXIMUM ALLOWED WATER ALLOWANCE**

(a) No person who owns or occupies property in the unincorporated area of the County shall use water for irrigation that due to runoff, low head drainage, overspray or other similar condition, results in water flowing onto adjacent property, non-irrigated areas, structures, walkways, roadways or other paved areas. This section is not intended to apply to circumstances beyond the control of the property owner or other person in possession of the property.

(b) No person whose property is subject to an outdoor water use authorization pursuant to this chapter shall exceed the MAWA for the property.

(c) A person who violates subsections (a) or (b) above shall be subject to the Administrative Citation Procedures in sections 18.101 et seq. of this code.

(d) The County may also obtain an injunction against a person who continues to violate subsections (a) or (b) after receiving a warning of an Administrative Citation pursuant to section 18.103.

**SEC. 86.729. COUNTY'S RIGHT TO INSPECT.**

Whenever the County has reasonable grounds to believe that a person is violating section 86.728 the County may inspect the property and any irrigation system or water feature on the property. If a person refuses to consent to an inspection the County may obtain an inspection warrant pursuant to Code of Civil Procedure sections 1822.50 et seq. No person shall interfere with a County inspector conducting an inspection authorized by this chapter.

**SEC. 86.730. OUTDOOR WATER USE AUDIT.**

(a) The County may randomly audit outdoor water use on any property for which it issued a water use authorization pursuant to this chapter to determine compliance with the authorization. A person who owns or occupies property subject to a water use authorization, shall be deemed to consent to the audit of outdoor water use if the person engages in outdoor water use on the property.

(b) The County may also analyze, survey and audit outdoor water use using methods described in 23 California Code of Regulations sections 490 et seq., on an existing landscape project where the landscaped area exceeds one acre and the County has reasonable grounds to believe that due to irrigation runoff, low head

drainage, overspray or other similar condition, water is flowing onto adjacent property, non-irrigated areas, structures, walkways, roadways or other paved areas of the project.

**SEC. 86.731. FEES.**

An applicant for a project subject to this chapter shall include with the application, all fees established by the Board of Supervisors to cover the County's costs to review an application, any required landscape documentation package and any other documents the County reviews pursuant to the requirements of this chapter.

**SEC. 86.732. APPEAL**

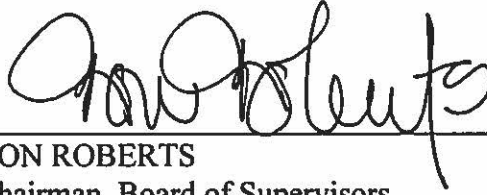
A person whose application for a water use authorization, modification of a water use authorization, or Certificate of Completion is denied may appeal the denial to the Planning Commission by making a written request for the appeal to the Director of PDS within 10 days of the denial. The Planning Commission shall consider the matter within 45 days after the appeal is file. The 45 day period may be extended upon written consent of the appellant. The Planning Commission's decision shall be final.

Section 3. This ordinance shall take effect and be in force thirty days after its passage, and before the expiration of fifteen days after its passage, a summary hereof shall be published once with the names of the members of this Board voting for and against it in the Daily Transcript, a newspaper of general circulation published in the County of San Diego.

Approved as to form and legality  
County Counsel

By: Thomas Bosworth, Senior Deputy

PASSED, APPROVED, AND ADOPTED by the Board of Supervisors of the County of San Diego this 27<sup>th</sup> day of April, 2016.



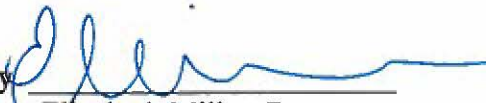
RON ROBERTS  
Chairman, Board of Supervisors  
County of San Diego, State of California

The above Ordinance was adopted by the following vote:

AYES: Cox, Jacob, D. Roberts, R. Roberts, Horn

ATTEST my hand and the seal of the Board of Supervisors this 27<sup>th</sup> day of April, 2016.

DAVID HALL  
Clerk of the Board of Supervisors

By   
Elizabeth Miller, Deputy



Ordinance No. 10427 (N.S.)

04/27/16 (6)