# Before the Board of Supervisors
# County of Placer, State of California

**In the matter of:** An Ordinance adopting Placer County Code Chapter 15, Article 15.75 and amending Placer County Code Chapter 17, Article 17.54, Section 17.54.030(C), related to Water Efficient Landscaping.

Ordinance No.: 5887-B

The following Ordinance was duly passed by the Board of Supervisors of the County of Placer at a regular meeting held October 3, 2017 , by the following vote on roll call:

| | |
|---|---|
| Ayes: | DURAN, WEYGANDT, HOLMES, UHLER, MONTGOMERY |
| Noes: | NONE |
| Absent: | NONE |

Signed and approved by me after its passage.

Chair, Board of Supervisors

THE FOREGOING INSTRUMENT IS A CORRECT COPY OF THE ORIGINAL ON FILE IN THIS OFFICE
ATTEST

MEGAN WOOD
Clerk of the Board of Supervisors, County of Placer, State of California

Deputy Clerk

Attest:

Clerk of said Board

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THE BOARD OF SUPERVISORS OF THE COUNTY OF PLACER, STATE OF CALIFORNIA, DOES HEREBY ORDAIN AS FOLLOWS:

**SECTION 1.** Placer County Code Chapter 15, Article 15.75 is hereby adopted as set forth in Exhibit A, which exhibit is incorporated herein by reference as if set forth in full.

**SECTION 2.** Placer County Code Chapter 17, Article 17.54, Section 17.54.030(C) Landscaping and Fencing is hereby amended as follows:

C. Landscaping.

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3. **Plan Review. The following must meet the standards, requirements and procedures set forth in the Placer County Building Code (Placer County Code Chapter 15, Section 15.75) and the Placer County landscape design guidelines for both design and water efficient landscaping:**

**a. New landscapes in single-family residential, multi-family residential, commercial, industrial, and public agency projects requiring a permit, plan check, or design review.**

**b. Rehabilitated landscapes requiring a permit, plan check, or design review.**

**See the Placer County landscape design guidelines for size thresholds where the water efficient landscaping requirements apply.**

~~3~~4. Maintenance Required. All landscaping materials shall be properly installed and continuously maintained. Any plants that do not survive shall be replaced with new live plant materials within a reasonable time period, as determined by the planning director.

**SECTION 3.** This ordinance shall take effect and be in full force thirty (30) days after the date of its passage. The Clerk is directed to publish this ordinance, or a summary thereof, within fifteen (15) days in accordance with government code section 25124.

# EXHIBIT A

## CHAPTER 15 BUILDING CODE

### Article 15.75 WATER EFFICIENT LANDSCAPE

### 15.75.010 Applicability.

1. The Water Efficient Landscaping Requirements outlined here apply to all of the following landscape projects:

a. New landscapes in single-family residential, multi-family residential, commercial, industrial, and public agency projects with an aggregate landscape area equal to or greater than 500 square feet requiring a permit, plan check, or design review.

b. Rehabilitated landscapes exceeding 2,500 square feet requiring a permit, plan check, or design review.

c. Existing landscapes limited to Sections 15.75.060 and 15.75.120.

d. Cemeteries. Recognizing the special landscape management needs of cemeteries, new and rehabilitated cemeteries are limited to Sections 17.75.020(2)(b), 15.75.050 and 15.75.060; and existing cemeteries are limited to Sections 15.75.060 and 15.75.120.

e. Homeowners Associations and Common Interest Developments. The architectural guidelines (i.e., CC&Rs) of a common interest development, which may include apartment projects, condominiums, planned developments, cooperatives, or single-family subdivisions governed by a homeowners association shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group. Further, said guidelines shall not prohibit the removal of turf, nor restrict or prohibit the reduction of turf in lieu of more water efficient alternatives.

f. For projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 5,000 square feet of landscape and meets the lot or parcel's landscape water requirement (Estimated Total Water Use) entirely with treated or untreated groundwater or through stored rainwater captured on site is subject only to subsection 1(g)(v).

g. Any project requiring a permit, plan check, or design review with an aggregate landscape area of 5,000 square feet or less shall be required to comply only with the following prescriptive compliance measures:

i. Submit a Project Information Sheet which includes the following elements:

(1) Date;

(2) Project applicant;

(3) Project address and parcel number;

(4) Total landscape area (square feet), including a breakdown of turf and plant material;

(5) Project type (e.g., new, rehabilitated, public, private, cemetery, homeowner-installed);

(6) Water supply type (e.g., potable, recycled, well) and identify the local retail water purveyor if the applicant is not served by a private well;

(7) Contact information for the project applicant and property owner; and,

(8) Applicant signature and date with statement, "I agree to comply with the requirements of the prescriptive compliance option to the Water Efficient Landscaping Regulations of the Placer County Landscape Design Guidelines".

ii. 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 contraindicated by a soil test).

iii. Plant material shall comply with all of the following:

(1) 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; and,

(2) A minimum three inch (3") 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.

iv. Turf shall comply with all of the following:

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

(2) Turf shall not be planted on sloped areas which exceed a slope of one foot vertical elevation change for every four feet of horizontal length; and,

(3) 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 subsurface irrigation or by other technology that creates no overspray or runoff.

v. Irrigation systems shall comply with the following:

(1) Automatic irrigation controllers are required and must use evapotranspiration or soil moisture sensor data;

(2) Irrigation controllers shall be of a type which does not lose programming date in the event the primary power source is interrupted;

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

(4) 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; and,

(5) 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.

vi. 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.

2. The Water Efficient Landscaping Requirements codified herein do not apply to:

a. Registered local, state or federal historical sites.

b. Ecological restoration projects that do not require a permanent irrigation system.

c. Mined-land reclamation projects that do not require a permanent irrigation system.

d. Existing plant collections, as part of botanical gardens and arboretums open to the public.

e. All real property located within the boundaries of the Placer County Tahoe Basin Area Plan.

**15.75.020 Submittal requirements.**

1. Landscape Package Submittal Required. When applicable, and prior to issuance of a permit, as part of plan check, or design review, the project applicant shall submit a landscape package to the County for review and approval. The landscape package shall contain the information required by subsection 2 and shall be incorporated into the improvement plan and/or landscape plan set in a form determined acceptable to the Community Development Resource Agency Director.

2. Elements of the Landscape Package. The landscape package shall include the following elements:

a. Project Information Sheet

b. Water Efficient Landscape Worksheet. For the calculation of the maximum applied water allowance and estimated total water use, a project applicant shall use the ETo values found in the California Model Water Efficient Landscape Ordinance Reference Table for the project location.

i. Water budget calculations shall adhere to the following requirements:

(1) The plant factor used shall be obtained from the most recent Water Use Classification of Landscape Species (WUCOLS) publication or from horticultural researches with academic institutions or professional associations as approved by the California Department of Water Resources. The plant factors ranges shall be calculated as follows:

(a) 0 to 0.3 for low water use plants

(b) 0.4 to 0.6 for moderate water use plants

(c) 0.7 to 1.0 for high water use plants

(2) All water features shall be included in the high water use hydrozone.

(3) Temporarily irrigated areas shall be designed as low water use hydrozones.

(4) Special landscape areas shall be clearly identified and their water use calculated using the Water Efficient Landscape Worksheet.

(5) Water use for new and existing (non-rehabilitated) special landscape areas shall be calculated with an ETAF not to exceed 1.0.

c. Soil Management Report. In order to reduce runoff and encourage healthy plant growth, a soil management report shall be completed by the project applicant or designee as follows:

i. Submit soil sample(s) to a laboratory for analysis and recommendations.

(1) Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plans.

(2) The soil analysis shall include:

(a) Soil texture

(b) Infiltrate rate determined by laboratory test or soil texture infiltration rate table

(c) pH

(d) Total soluble salts

(e) Sodium

(f) Percent organic matter

(g) Recommendations for appropriate amendment

ii. The project applicant, or his/her designee, shall comply with one of the following:

(1) If significant mass grading is not planned, the soil analysis report shall be submitted to the County as part of the Landscape Documentation Package; or,

(2) If significant mass grading is planned, the soil analysis report shall be submitted to the County as part of the Certificate of Completion.

iii. The soil analysis report shall be made available, in a timely manner, to the professionals preparing the landscape design plans and irrigation design plans to make any necessary adjustments.

iv. Any soil management or amendment recommendations shall be including with the design plans for County review.

v. Upon completion of construction and prior to issuance of an occupancy permit, the project applicant or designee shall submit documentation verifying implementation of the soil analysis report recommendations within the landscaped area to the County with the Certificate of Completion.

d. Landscape Design Plan. For the efficient use of water, a landscape shall be carefully designed and planned for the intended function of the project. A landscape design plan must comply with the Landscape Design Guidelines. Where applicable, landscape plans, including plant selection, shall be designed consistent with the applicable specific plan or community plan planning area design guidelines. At a minimum, landscape design plans to be submitted as part of the Landscape Documentation Package shall address the following:

i. The landscape design plan, at a minimum, shall:

(1) Delineate property lines, utilities and utility easements, streets, driveways, walkways, and other paved areas or hardscapes (pervious or impervious);

(2) Identify buildings and structures including pad elevation(s) if applicable;

(3) Identify natural features to remain, including rock outcroppings, existing oak and ornamental trees, shrubs, etc.;

(4) Identify recreational or other special landscape areas, as defined in Section 15.75.160;

(5) Delineate and label each hydrozone by number, letter, or other method as low, moderate, high water, or mixed water use. Temporarily irrigated areas of the landscape shall be included in the low water use hydrozone for the water budget calculation;

(6) Identify recreational areas;

(7) Identify areas permanently and solely dedicated to edible plants;

(8) Identify areas irrigated with recycled water;

(9) Identify type of mulch and application depth;

(10) Identify soil amendments, type, and quantity;

(11) Identify type and surface area of water features;

(12) Identify location, installation details, and 24-hour retention or infiltration capacity of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Project applicants shall refer to the County or regional Water Quality Control Board for information on any applicable stormwater technical requirements. Stormwater best management practices are encouraged in the landscape design plan and examples are provided in Section 15.75.090;

(13) Identify any applicable rain harvesting or catchment as discussed in Section 15.75.090 and their 24-hour retention or infiltration capacity;

(14) Identify any applicable graywater discharge piping, system components and area(s) of distribution;

(15) The landscape plan shall contain the following statement: "I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plan"; and,

(16) Bear the signature of a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title16 of the California Code of Regulations, and Section 6721 of the Food and Agriculture Code).

ii. Plant Materials.

(1) 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. Methods to achieve water efficiency shall include one or more of the following:

(a) Protection and preservation of native species and natural vegetation;

(b) Selection of water-conserving plant, tree and turf species, especially local native plants;

(c) Selection of plants based on local climate suitability, disease and pest resistance;

(d) Selection of trees based on the Landscape Design Guidelines tree shading requirements, and size at maturity as appropriate for the planting area; and,

(e) Selection of plants from community plan, area plan, Landscape Design Guidelines, or local landscape program plant lists.

(f) Selection of plants from local fuel modification plan guidelines.

(2) Each hydrozone shall have plant materials with similar water use, with the exception of hydrozones with plants of mixed water use, as specified in Section 15.75.020(2)(e)(ii)(4). Hydrozones shall be designated as low, moderate, high water or mixed water use and shall be labeled by number, letter, or other method. Areas irrigated with recycled water should be clearly delineated.

(3) Plants shall be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site. Methods to achieve water efficiency shall include one or more of the following:

(a) Use the Sunset Western Climate Zone System which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;

(b) Recognize the horticultural attributes of plants (i.e., mature plant size, invasive surface roots) to minimize damage to property or infrastructure [e.g., buildings, sidewalks, power lines]; allow for adequate soil volume for healthy root growth; and,

(c) Consider the solar orientation for plant placement to maximize summer shade and winter solar gain.

(4) Turf is not allowed on slopes greater than 25 percent where the toe of the slope is adjacent to an impermeable hardscape and where 25 percent means 1 foot of vertical elevation change for every 4 feet of horizontal length (rise divided by run x 100 = slope percent).

(5) High water use plants, characterized by a plant factor of 0.7 to 1.0, are prohibited in street medians.

(6) A landscape design plan for projects in fire-prone areas shall address fire safety and prevention. A defensible space or zone around a building or structure is required per Public Resources Code Section 4291(a) and (b). Avoid fire-prone plant materials and highly flammable mulches. Refer to local fire safe guidelines.

(7) The use of invasive and/or noxious plant species, such as those listed by the California Invasive Plant Council and the Landscape Design Guidelines, shall not be used.

(8) The architectural guidelines or covenants, conditions and restricts (CC&Rs) of a common interest development, which include apartment projects, condominiums, and planned developments, shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.

iii. Water Features

(1) Recirculating water systems shall be used for water features.

(2) Where available, recycled water shall be used as a source for decorative water features.

(3) Surface area of a water feature shall be included in the high water use hydrozone area of the water budget calculation.

(4) Pool and spa covers are highly recommended.

iv. Soil Preparation, Mulch and Amendments

(1) Prior to the planting of any materials, compacted soils shall be transformed to a friable condition. On engineered slopes, only amended planting holes need meet this requirement.

(2) Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected (see Section 15.75.020(2)(c).

(3) For landscape installations, 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.

(4) A minimum three inch (3") 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. 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.

(5) Stabilizing mulching products shall be used on slopes that meet current engineering standards.

(6) The mulching portion of the seed/mulch slurry in hydro-seeded applications shall meet the mulching requirement.

(7) Organic mulch materials made from recycled or post-consumer 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 fire safe guidelines.

e. Irrigation Design Plan. This section applies to landscaped areas requiring permanent irrigation, not areas that require temporary irrigation solely for the plant establishment period. For the efficient use of water, an irrigation system shall meet all the requirements listed in this section and the manufacturers' recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An irrigation design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package.

i. System Requirements

(1) Landscape water meters, defined as either a dedicated water service meter or private sub-meter, shall be installed for all non-residential irrigated landscapes of 1,000 sq. ft. but not more than 5,000 sq.ft. (the level at which Water Code 535 applies) and residential irrigated landscapes of 5,000 sq. ft. or greater. A landscape water meter may be either:

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

(b) A privately owned meter or sub-meter.

(2) Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data utilizing non-volatile memory shall be required for irrigation scheduling in all irrigation systems.

(3) 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 to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.

(a) If the static pressure is above or below the required dynamic pressure of the irrigation system, pressure-regulating devices such as inline pressure regulators, booster pumps, or other devices shall be installed to meet the required dynamic pressure of the irrigation system.

(b) Static water pressure, dynamic or operating pressure and flow reading of the water supply shall be measured at the point of connection. These pressure and flow measurements shall be conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at installation.

(4) Sensors (rain, freeze, wind, etc.), either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions shall be required on all irrigation systems, as appropriate for local climatic conditions. Irrigation should be avoided during windy or freezing weather or during rain.

(5) Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be required, as close as possible to the point of connection of the water supply, to minimize water loss in case of an emergency (such as a main line break) or routine repair.

(6) Backflow prevention devices shall be required to protect the water supply from contamination by the irrigation system. A project applicant shall refer to the applicable local agency code (i.e., public health) for additional backflow prevention requirements.

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

(8) 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.

(9) The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.

(10) Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems.

(11) The design of the irrigation system shall conform to the hydrozones of the landscape design plan.

(12) The irrigation system must be designed and installed to meet, at a minimum, the irrigation efficiency criteria as described in Section 15.75.020(2)(b) regarding the Maximum Applied Water Allowance.

(13) All irrigation emission devices must meet the requirements set in the American National Standards Institute (ANSI) standard, American Society of Agricultural and Biological Engineers'/International Code Council's (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.

(14) It is highly recommended that the project applicant inquire with the local water purveyor about peak water operating demands (on the water supply system) or water restrictions that may impact the effectiveness of the irrigation system.

(15) In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.

(16) Sprinkler heads and other emission devices shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.

(17) Head to head coverage is recommended. However, sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.

(18) Swing joints or other riser-protection components are required on all risers subject to damage that are adjacent to hardscapes or in high traffic areas of turf grass.

(19) Check valves or anti-drain valves are required for all irrigation systems on all sprinkler heads where low point drainage could occur.

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

(21) Overhead irrigation shall not be permitted within 24 inches of any non-permeable surface. Allowable irrigation within the setback from non-permeable surfaces may include drip, drip line, or other low flow non-spray technology. The setback area may be planted or unplanted. The surfacing of the setback may be mulch, gravel, or other porous material. These restrictions may be modified if:

(a) The landscape area is adjacent to permeable surfacing and no runoff occurs; or

(b) The adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or

(c) The irrigation designer specifies an alternative design or technology, as part of the Landscape Documentation Package and clearly demonstrates strict adherence to irrigation system design criteria in Section 15.75.020(2)(e)(i)(9). Prevention of overspray and runoff must be confirmed during the irrigation audit.

(22) Slopes greater than 25 percent shall not be irrigated with an irrigation system with an application rate exceeding 0.75 inches per hour. This restriction may be modified if the landscape designer specifies an alternative design or technology, as part of the Landscape Documentation Package, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff and erosion must be confirmed during the irrigation audit.

ii. Hydrozone

(1) Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.

(2) Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.

(3) 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.

(4) Individual hydrozones that mix plants of moderate and low water use, or moderate and high water use, may be allowed if:

(a) Plant factor calculation is based on the proportions of the respective plant water uses and their plant factor; or

(b) The plant factor of the higher water using plant is used for calculations.

(5) Individual hydrozones that mix high and low water use plants shall not be permitted.

(6) On the landscape design plan and irrigation design plan, hydrozone areas shall be designated by number, letter, or other designation. On the irrigation design plan, designate the areas irrigated by each valve, and assign a number to each valve. Use this valve number in the Hydrozone Information Table. This table can also assist with the irrigation audit and programming the controller.

iii. The irrigation design plan, at a minimum, shall contain:

(1) Location and size of separate water meters for landscape;

(2) Location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention devices;

(3) Static water pressure at the point of connection to the public water supply;

(4) Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station;

(5) Recycled water irrigation systems as specified in Section15.75.080;

(6) The following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the irrigation design plan"; and

(7) The signature of a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or any other person authorized to design an irrigation system. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agricultural Code.)

f. Grading Design Plan. For the efficient use of water, grading of a project site shall be designed to minimize soil erosion, runoff, and water waste. A grading plan shall be submitted as part of the Landscape Documentation Package. A comprehensive grading plan prepared by a civil engineer for other local agency permits satisfies this requirement.

i. The project applicant shall submit a landscape grading plan that indicates finished configurations and elevations of the landscape area including:

(1) Height of graded slopes;

(2) Drainage patterns;

(3) Pad elevations;

(4) Finish grade; and,

(5) Stormwater retention improvements, if applicable.

ii. To prevent excessive erosion and runoff, it is highly recommended that project applicants:

(1) Grade so that all irrigation and normal rainfall remains within property lines and does not drain on to non-permeable hardscapes;

(2) Avoid disruption of natural drainage patterns and undisturbed soil; and

(3) Avoid soil compaction in landscape areas.

iii. The grading design plan shall contain the following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading design plan" and shall bear the signature of a licensed professional as authorized by law.

**15.75.030 Approval required.**

Upon approval of the Landscape Package by the County, and provided all other applicable County requirements are met, the project applicant shall:

1. Receive from the County a permit or approval and record the date of the permit or approval in the Certificate of Completion; and,

2. Submit a copy of the approved landscape package along with the record drawings, and any other information to the property owner or designee.

a. Certificate of Completion. The Certificate of Completion shall include the following six (6) elements:

i. Project information sheet that contains:

(1) Date;

(2) Project name;

(3) Project applicant name, telephone, and mailing address;

(4) Project address and location; and,

(5) Property owner name, telephone, and mailing address;

ii. Certification by either the signer of the landscape design plan, the signer of the irrigation design plan, or the licensed landscape contractor that the landscape project has been installed per the approved Landscape Documentation Package.

(1) Where there have been significant changes made in the field during construction, these "as-built" or record drawings shall be included with the certification.

(2) A diagram of the irrigation plan showing hydrozones shall be kept with the irrigation controller for subsequent management purposes.

iii. Irrigation scheduling parameters used to set the controller (see Section15.75.040);

iv. Landscape and irrigation maintenance schedule (see Section 17.75.050);

v. Irrigation audit report (see Section 17.75.060); and

vi. Soil analysis report, if not submitted with the Landscape Documentation Package, and documentation verifying implementation of soil report recommendations (see Section 15.75.020(2)(c)).

b. The project applicant shall:

i. Submit the signed Certificate of Completion to the County review;

ii. Ensure that copies of the approved Certificate of Completion are submitted to the local water purveyor and property owner or his or her designee.

c. The County shall:

i. Receive the signed Certificate of Completion from the project applicant;

ii. Approve or deny the Certificate of Completion. If the Certificate of Completion is denied, the County shall provide information to the project applicant regarding reapplication, appeal, or other assistance.

**15.75.040 Irrigation scheduling.**

For the efficient use of water, all irrigation schedules shall be developed, managed, and evaluated to utilize the minimum amount of water required to maintain plant health. Irrigation schedules shall meet the following criteria:

1. Irrigation scheduling shall be regulated by automatic irrigation controllers.

2. Overhead irrigation shall be scheduled between 9:00 p.m. and 9:00 a.m. unless weather conditions prevent it. If allowable hours of irrigation differ from the local water purveyor, the stricter of the two shall apply. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

3. 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, 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.

4. Parameters used to set the automatic controller shall be developed and submitted for each of the following:

a. The plant establishment period;

b. The established landscape; and,

c. Temporarily irrigated areas.

5. Each irrigation schedule shall consider for each station all of the following that apply:

a. Irrigation interval (days between irrigation);

b. Irrigation run times (hours or minutes per irrigation event to avoid runoff);

c. Number of cycle starts required for each irrigation event to avoid runoff;

d. Amount of applied water scheduled to be applied on a monthly basis;

e. Application rate setting;

f. Root depth setting;

g. Plant type setting;

h. Soil type;

i. Slope factor setting;

j. Shade factor setting; and,

k. Irrigation uniformity or efficiency setting.

**15.75.050 Landscape and irrigation maintenance schedule.**

1. Landscapes shall be maintained to ensure water use efficiency. A regular maintenance schedule shall be submitted with the Certificate of Completion.

2. A regular maintenance schedule shall include, but not be limited to, routine inspection; auditing, adjustment and repair of the irrigation system and its components; aerating and dethatching turf areas; topdressing with compost; replenishing mulch; fertilizing; pruning; weeding in all landscape areas, and removing and obstructions to emission devices. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

3. Repair of all irrigation equipment shall be done with the originally installed components or their equivalents or with components with greater efficiency.

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

**15.75.060 Irrigation audit, irrigation survey, and irrigation water use analysis.**

1. All landscape irrigation audits shall be conducted by a third-party certified landscape irrigation auditor. Landscape audits shall not be conducted by the person who designed the landscape or installed the landscape.

2. In large projects or projects with multiple landscape installations (i.e. production home developments) an auditing rate of 1 in 7 lots or approximately 15 percent will satisfy this requirement.

3. For new construction and rehabilitated landscape projects as described in Section 15.75.010:

a. The project applicant shall submit an irrigation audit report with the Certificate of Completion to the County and water agency that may include, but is not limited to: inspection, system tune-up, system test with distribution uniformity, 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;

b. The County shall implement programs that may include, but not be limited to, irrigation water use analysis, irrigation audits, and irrigation surveys for compliance with the Maximum Applied Water Allowance.

**15.75.070 Irrigation efficiency.**

For the purpose of determining Estimated Total Water Use, average irrigation efficiency is assumed to be 0.75 for overhead spray devices and 0.81 for drip system devices.

**15.75.080 Recycled water and graywater systems.**

1. The installation of recycled systems shall allow for the current and future use of recycled water.
2. All recycled water irrigation systems shall be designed and operated in accordance with all applicable local and State laws.
3. Landscapes using recycled water are considered Special Landscape Areas. The ET Adjustment Factor for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0.
4. 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) and any applicable local ordinance standards. Refer to Section 15.75.010 for the applicability of this ordinance to landscape areas less than 5,000 square feet with the Estimated Total Water Use met entirely by graywater.

**15.75.090 Stormwater management and rainwater retention.**

1. Stormwater management practices minimize runoff and increase infiltration which recharges groundwater and improves water quality. Implementing stormwater best management practices into the landscape and grading design plans to minimize runoff and to increase on-site rainwater retention and infiltration are encouraged.
2, Project applicants shall refer to the local agency or Regional Water Quality Control Board for information on any applicable stormwater technical requirements.
3. All planted landscape areas are required to have friable soil to maximize water retention and infiltration. Refer to Section 15.75.020(2)(d)(iv)(1).
4. It is strongly recommended that landscape areas be designed for capture and infiltration capacity that is sufficient to prevent runoff from impervious surfaces (i.e. roof and paved areas) from either: the one inch, 24-hour rain event or (2) the 85th percentile, 24-hour rain event, and/or additional capacity as required by any applicable local, regional, state or federal regulation.
5. It is recommended that storm water projects incorporate any of the following elements to improve on-site storm water and dry weather runoff capture and use:
    a. Grade impervious surfaces, such as driveways, during construction to drain to vegetated areas.
    b. Minimize the area of impervious surfaces such as paved areas, roof and concrete driveways.
    c. Incorporate pervious or porous surfaces (e.g., gravel, permeable pavers or blocks, pervious or porous concrete) that minimize runoff.
    d. Direct runoff from paved surfaces and roof areas into planting beds or landscaped areas to maximize site water capture and reuse.
    e. Incorporate rain gardens, cisterns, and other rain harvesting or catchment systems.
    f. Incorporate infiltration beds, swales, basins and drywells to capture storm water and dry weather runoff and increase percolation into the soil.
    g. Consider constructed wetlands and ponds that retain water, equalize excess flow, and filter pollutants.

**15.75.100 Education/Model home signage.**

1. Education is a critical component to promote the efficient use of water in landscapes. The use of appropriate principles of design, installation, management and maintenance that save water is encouraged in Placer County.

2. The County or water supplier/purveyor shall provide information to owners of permitted renovations and new single-family residential homes regarding the design, installation, management, and maintenance of water efficient landscapes based on a water budget.

3. Model Homes. All model homes shall be landscaped and use signs and written information to demonstrate the principles of water efficient landscapes described in these Landscape Design Guidelines.

   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. Signage shall include information about the site water use as designed per the local 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.

   b. Information shall be provided about designing, installing, managing, and maintaining water efficient landscapes.

**15.75.110 Irrigation audit, irrigation survey, and irrigation water use analysis.**

1. This section shall apply to all existing landscapes that were installed before December 1, 2015 and are over one acre in size.

   a. For all landscapes in Section 15.75.110(1) that have a water meter, the County shall administer programs that may include, but not be limited to, irrigation water use analyses, irrigation surveys, and irrigation audits to evaluate water use and provide recommendations as necessary to reduce landscape water use to a level that does not exceed the Maximum Applied Water Allowance for existing landscapes. The Maximum Applied Water Allowance for existing landscapes shall be calculated as: MAWA = (0.8) (ETo)(LA)(0.62).

   b. For all landscapes in subsection 1 above that do not have a meter, local water agencies shall administer programs that may include, but not be limited to, irrigation surveys and irrigation audits to evaluate water use and provide recommendations as necessary in order to prevent water waste.

2. All landscape irrigation audits shall be conducted by a certified landscape irrigation auditor.

**15.75.120 Water waste prevention.**

Water waste resulting from inefficient landscape irrigation by prohibiting runoff from leaving the target landscape due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures shall be minimized. Restrictions regarding overspray and runoff may be modified if:

1 The landscape area is adjacent to permeable surfacing and no runoff occurs; or,

2. The adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping.

**15.75.130 Effective precipitation.**

1. An applicant may use Effective Precipitation (25 percent of annual precipitation) in tracking water use utilizing the following equation to calculate Maximum Applied Water Allowance:

   MAWA= (ETo - Eppt) (0.62) [(0.55 x LA) + (0.45 x SLA)] for residential areas.

   MAWA= (ETo - Eppt) (0.62) [(0.45 x LA) + (0.55 x SLA)] for non-residential areas.

**15.75.140 Water agency participation.**

By mutual agreement, the County may designate a water agency or water purveyor to implement some or all of the Water Efficient Landscape requirements such as outreach and education measures.

**15.75.150 Inspections and enforcement.**

Landscape projects subject to the provisions of these requirements shall be subject to inspections as required by the Planning Services Director to verify compliance with the approved plans. No landscape project applicant shall be deemed to have complied with the provisions of these requirements until a final inspection of the work has been completed by the County. Enforcement of the water efficient landscaping requirements falls under Chapter 17, Article 17.62, Code Compliance and Enforcement.

**15.75.160 Definitions.**

Unless the context clearly requires otherwise, the definitions in this section shall govern the provisions of this article.

"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 data.

"Backflow prevention device" means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

"Certificate of completion" means the document required under Section 15.75.030(2)(a).

"Certified irrigation designer" means a person certified to design irrigation systems by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency's Water Sense irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program.

"Certified landscape irrigation auditor" means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor program.

"Check valve" or "Anti-drain valve" means a valve located under a sprinkler head, or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.

"Common interest developments" means community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 1351.

"Compost" means the safe and stable product of controlled biologic decomposition of organic materials that is beneficial to plant growth.

"Conversion factor (0.62)" means the number that converts acre-inches per acre per year to gallons per square foot per year.

"Distribution uniformity" means the measure of the uniformity of irrigation water over a defined area.

"Drip irrigation" means any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

"Ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

"Effective precipitation" or "Usable rainfall" (Eppt) means the portion of total precipitation which becomes available for plant growth.

"Emitter" means a drip irrigation emission device that delivers water slowly from the system to the soil.

"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 total water used for the landscape as described in Section 15.75.020(2)(b).

"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 factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape. The ETAF for a new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0. The ETAF for existing non-rehabilitated 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.

"Flow rate" means the rate at which water flows through pipes, valves and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.

"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.

"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.

"Fuel modification plan guideline" means guidelines from a local fire authority to assist residents and businesses that are developing land or building structures in a fire hazard severity zone.

"Graywater" means untreated wastewater 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. Health and Safety Code Section 17922.12.

"Hardscapes" means any durable material (pervious and non-pervious).

"Homeowner-provided landscaping" means any landscaping either installed by a private individual for a single family residence or installed by a licensed contractor hired by a homeowner. A homeowner, for purposes of this ordinance, is a person who occupies the dwelling he or she owns. This excludes speculative homes, which are not owner-occupied dwellings.

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

"Infiltration rate" means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

"Invasive plant species" means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. Invasive species may be regulated by county agricultural agencies as noxious species. Lists of invasive plants are maintained at the California Invasive Plant Inventory and USDA invasive and noxious weeds database.

"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, 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.

"Irrigation efficiency" (IE) means the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The irrigation efficiencies for purposes of this ordinance are 0.75 for overhead spray devices and 0.81 for drip systems.

"Irrigation survey" means an evaluation of an irrigation system that is less detailed than an irrigation audit. An irrigation survey includes, but is not limited to: inspection, system test, and written recommendations to improve performance of the irrigation system.

"Irrigation water use analysis" means a review of water use data based on meter readings and billing data.

"Landscape architect" means a person who holds a license to practice landscape architecture in the state of California Business and Professions Code, Section 5615.

"Landscape area" means all the planting areas, turf areas, and water features in a landscape design plan 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).

"Landscape contractor" means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

"Landscape documentation package" means the documents required under Section 15.75.020(2).

"Landscape project" means total area of landscape in a project as defined in "landscape area" meeting requirements under Section 15.75.010(1).

"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.

"Lateral line" means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

"Local agency" means a city or county, including a charter city or charter county, that is responsible for adopting and implementing the ordinance. The local agency is also responsible for the enforcement of this ordinance, including but not limited to, approval of a permit and plan check or design review of a project.

"Local water purveyor" means any entity, including a public agency, city, county, or private water company that provides retail water service.

"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, drip lines, and bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

"Main line" means the pressurized pipeline that delivers water from the water source to the valve or outlet.

"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.

"Maximum applied water allowance" (MAWA) means the upper limit of annual applied water for the established landscaped area as specified in Section 15.75.020(2)(b). 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 = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)],

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

"Microclimate" means the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density, or proximity to reflective surfaces.

"Mined-land reclamation projects" means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.

"Mulch" means any 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 for the beneficial

purposes of reducing evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.

"New construction" means, for the purposes of these guidelines, a new building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated 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.

"Operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

"Overhead sprinkler irrigation systems" means systems that deliver water through the air (e.g., spray heads and rotors).

"Overspray" means the irrigation water which is delivered beyond the target area.

"Permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

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

"Plant factor" or "Plant water use factor" is a factor, when multiplied by ETo, estimates the amount of water needed by plants. For purposes of this ordinance, 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 00.1 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 cited in this ordinance are derived from the 2000 publication "Water Use Classification of Landscape Species". 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).

"Project applicant" means the individual or entity submitting a Landscape Documentation Package required under Section 15.75.010(1)(b) to request a permit, plan check, or design review from the local agency. A project applicant may be the property owner or his or her designee.

"Rain sensor" or "rain sensing shutoff device" means a component which automatically suspends an irrigation event when it rains.

"Record drawing" or "as-builts" means a set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

"Recreational area" means areas, excluding private single family residential areas, designated to 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", "Reclaimed water", or "Treated sewage effluent water" means treated or recycled waste water of a quality suitable for non-potable uses such as landscape irrigation and water features. This water is not intended for human consumption.

"Reference evapotranspiration" or "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- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of determining the Maximum Applied Water Allowance so that regional differences in climate can be accommodated.

"Regional Water Efficient Landscape Ordinance" means a local Ordinance adopted by two or more local agencies, water suppliers and other stakeholders for implementing a consistent set of landscape provisions throughout a geographical region. Regional ordinances are strongly encouraged to provide a consistent framework for the landscape industry and applicants to adhere to.

"Rehabilitated landscape" means any re-landscaping project that requires a permit, plan check, or design review, meets the requirements of Section 15.75.010, and the modified landscape area is equal to or greater than 2,500 square feet.

"Residential landscape" means landscapes surrounding single or multifamily homes.

"Runoff" means water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area. For example, runoff may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or when there is a slope.

"Soil moisture sensing device" or "Soil moisture sensor" means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

"Soil texture" means the classification of soil based on its percentage of sand, silt, and clay.

"Special landscape area" (SLA) means an area of the landscape dedicated solely to edible plants, recreational areas, areas irrigated with recycled water, water features using recycled water, or Low Impact Development areas.

"Sprinkler head" means a device which delivers water through a nozzle.

"Static water pressure" means the pipeline or municipal water supply pressure when water is not flowing.

"Station" means an area served by one valve or by a set of valves that operate simultaneously.

"Swing joint" means an irrigation component that provides a flexible, leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.

"Submeter" means a metering device to measure water applied to the landscape that is installed after the primary utility water meter.

"Turf" means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermudagrass, Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are warm-season grasses.

"Valve" means a device used to control the flow of water in the irrigation system.

"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. Water features include ponds, lakes, waterfalls, fountains, artificial streams, spas, and swimming pools (where water is artificially supplied). The surface area of water features is included in the high water use hydrozone of the landscape area. Constructed wetlands used for on-site wastewater treatment or stormwater best management practices that are not irrigated and used solely for water treatment or stormwater retention are not water features and, therefore, are not subject to the water budget calculation.

"Watering window" means the time of day irrigation is allowed.

"WUCOLS" means the Water Use Classification of Landscape Species published by the University of California Cooperative Extension and the Department of Water Resources, 2014.

**15.75.170 Reference evapotranspiration (ETo) table.**

| City | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual ETo |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Auburn | 1.2 | 1.7 | 2.8 | 4.4 | 6.1 | 7.4 | 8.3 | 7.3 | 5.34 | 3.4 | 1.6 | 1.0 | 50.6 |
| Blue Canyon | 0.7 | 1.1 | 2.1 | 3.4 | 4.8 | 6.0 | 7.2 | 6.1 | 4.6 | 2.9 | 0.9 | 0.6 | 40.5 |
| Colfax | 1.1 | 1.5 | 2.6 | 4.0 | 5.8 | 7.1 | 7.9 | 7.0 | 5.3 | 3.2 | 1.4 | 0.9 | 47.9 |
| Roseville | 1.1 | 1.7 | 3.1 | 4.7 | 6.2 | 7.7 | 8.5 | 7.3 | 5.6 | 3.7 | 1.7 | 1.0 | 52.2 |
| Soda Springs | 0.7 | 0.7 | 1.8 | 3.0 | 4.3 | 5.3 | 6.2 | 5.5 | 4.1 | 2.5 | 0.7 | 0.7 | 35.4 |
| Tahoe City | 0.7 | 0.7 | 1.7 | 3.0 | 4.3 | 5.4 | 6.1 | 5.6 | 4.1 | 2.4 | 0.8 | 0.6 | 35.5 |
| Truckee | 0.7 | 0.7 | 1.7 | 3.2 | 4.4 | 5.4 | 6.4 | 5.7 | 4.1 | 2.4 | 0.8 | 0.9 | 36.2 |