Changes to text within the MWELO use the following nomenclature:

Existing Text
New text
Deleted text

For EXHIBIT A ONLY, a high-level description of the reason for the changes are shown in this exhibit as "[HIGH-LEVEL REASON FOR CHANGE]" Please refer to the Initial Statement of Reasons (ISOR) document for support/evidence to answer the question: "Why is the Department making the proposed regulatory change?"

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Irrigation Barclays California Code of Regulations
Title 23. Waters
Division 2. Department of Water Resources
Chapter 2.7. Model Water Efficient Landscape Ordinance

§ 490. Purpose.

- (a) The State Legislature has found:
 - that the waters of the state are of limited supply and are subject to ever increasing demands;
 - (2) that the continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;
 - (3) that it is the policy of the State to promote the conservation and efficient use of water and to prevent the waste of this valuable resource;
 - (4) that landscapes are essential to the quality of life in California by providing areas for active and passive recreation and as an enhancement to the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development;
 - (5) that landscape design, installation, maintenance and management can and should be water efficient;
 - (6) that Section 2 of Article X of the California Constitution specifies that the right to use water is limited to the amount reasonably required for the beneficial use to be served and the right does not and shall not extend to waste or unreasonable method of use.
- (b) Consistent with the legislative findings, the purpose of this model ordinance is to:
 - (1) promote the values and benefits of landscaping practices that integrate and go beyond the conservation and efficient use of water;
 - (2) establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects by encouraging the use of a watershed approach that requires crosssector collaboration of industry, government and property owners to achieve the many benefits possible;
 - (3) establish provisions for water management practices and water waste prevention for existing landscapes;
 - (4) use water efficiently without <u>water</u> waste by setting a Maximum Applied Water Allowance as an upper limit for water use and reduce water use to the lowest practical amount; [CONSISTENCY WITH DEFINITIONS]
 - (5) promote the benefits of consistent landscape ordinances with neighboring local and regional agencies;
 - (6) encourage local agencies and water purveyors to use economic incentives that promote the efficient use of water, such as implementing a tiered-rate structure; and

- (7) encourage local agencies to designate the necessary authority that implements and enforces the provisions of the Model Water Efficient Landscape Ordinance or its local landscape ordinance.
- (c) Landscapes that are planned, designed, installed, managed and maintained with the watershed-based approach can improve California's environmental conditions and provide benefits and realize sustainability goals. Such landscapes will make the urban environment resilient in the face of climatic extremes. Consistent with the legislative findings and purpose of the Ordinance, conditions in the urban setting will be improved by: [GRAMMAR]
 - (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 esthetic 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. [GRAMMAR]
 - (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 creating 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.

NOTE: Authority cited: Section 65593 65596 and 65596.5 Government Code; and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Sections 65591, 65593, 65596, and 65596.5 Government Code; Chapter 49 California Fire Code; and Section 4291 Public Resources Code; Governor's Exec. Order B-29-15 (April 1, 2015).

§ 490.1. Applicability General Provisions.

- (a) The list of general provisions includes related statutes, regulations, and other considerations that should be reviewed for landscape projects defined in Section 491. [REORGANIZES EXISTING REQUIREMENTS THAT ARE APPLICABLE TO ALL LANDSCAPE PROJECTS IN A COMMON SECTION. THE CONTENTS ARE ORGANIZED FOR IMPROVED UNDERSTANDING OF MWELO AND EFFICIENT WORKFLOW]
- (<u>1 a</u>) <u>Designation of Responsibility.</u> A local agency may by mutual agreement, designate another agency, such as a water purveyor, to implement some or all of the requirements contained in this ordinance. Local agencies may collaborate with water purveyors to define each entity's specific responsibilities relating to this ordinance.

- (2 a) Water Waste Prevention. Local agencies shall prevent 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. Penalties for violation of these prohibitions shall be established locally. [MOVED INTO THE DEFINITION FOR WATER WASTE]
- (3 b) Recycled Water.
 - $(\underline{A} \ a)$ The installation of recycled water irrigation systems shall allow for the current and future use of recycled water.
 - (<u>B</u> b) All recycled water irrigation systems shall be designed and operated in accordance with all <u>California Plumbing Code (Chapter 15) and</u> applicable local and State laws.
 - (<u>C</u> e) 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. [REDUNDANT TEXT. THE ETAF FOR SLA'S IS INCLUDED IN THE ETAF DEFINITION.]
- (4) Gray water Systems. All graywater gray water systems shall conform to the California Plumbing Code (Title 24, Part 5, Chapter 16 15) and any applicable local ordinance standards.
 - (<u>A-a</u>) Graywater Gray water systems promote the efficient use of water and are encouraged to assist in on-site landscape irrigation.
 - (B d) For projects using treated or untreated graywater gray water or rainwater captured on site, any lot or parcel within the project that has less than 2500 sq. ft. of landscape area and meets the lot or parcel's landscape water requirement (Estimated Total Water Use) entirely with treated or untreated graywater gray water or through stored rainwater captured on site is subject only to Appendix D section (5) Section 492.(c).(2). [THIS EXISTING REQUIREMENT IS ALSO DUPLICATED IN STORMWATER AND RAINWATER TO PROVIDE CLARITY AND IMPROVE UNDERSTANDING OF MWELO.]
- (5) Stormwater Management and Rainwater Retention.
 - (A b) Project applicants shall refer to the local agency or Regional Water Quality Control Board for information on any applicable stormwater technical requirements.
 - (B) All non-potable rainwater catchment systems shall conform to the California

 Plumbing Code (Title 24, Part 5, Chapter 16). [TEXT IS ADDED TO PROVIDE

 CLARITY AND IMPROVE UNDERSTANDING OF MWELO BY REFERENCING

 EXISTING NON-POTABLE RAINWATER CATCHMENT SYSTEM

 REQUIREMENTS.]
 - (\underline{C} e) All planted landscape areas are required to have friable soil to maximize water retention and infiltration. Refer to § 492.6(a)(3) 493.1.
 - (<u>D</u> e) For projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 2500 sq. ft. of landscape area and meets the lot or parcel's landscape water requirement (Estimated Total

Water Use) entirely with treated or untreated graywater or through stored rainwater captured on site is subject only to Appendix D section (5) Section 492.(c).(2). [THIS EXISTING REQUIREMENT IS ALSO DUPLICATED IN GRAY WATER SYSTEMS TO PROVIDE CLARITY AND IMPROVE UNDERSTANDING OF MWELO.]

- (<u>E</u> d) 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:
 - (1) 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.
- $(\underline{F} \ e)$ 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:
 - Grade impervious surfaces, such as driveways, during construction to drain to vegetated areas.
 - Minimize the area of impervious surfaces such as paved areas, roof and concrete driveways.
 - Incorporate pervious or porous surfaces (e.g., gravel, permeable pavers or blocks, pervious or porous concrete) that minimize runoff.
 - Direct runoff from paved surfaces and roof areas into planting beds or landscaped areas to maximize site water capture and reuse.
 - Incorporate rain gardens, cisterns, and other rain harvesting or catchment systems.
 - Incorporate infiltration beds, swales, basins and drywells to capture storm water and dry weather runoff and increase percolation into the soil.
 - Consider constructed wetlands and ponds that retain water, equalize excess flow, and filter pollutants.

(6) Fire Safe Landscaping.

- (A) 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 the local Fuel Modification Plan guidelines development and construction in Local Responsibility Areas designated as Very High Fire Hazard Severity Zones and areas designated by the Board of Forestry and Fire Protection as State Responsibility Areas are required to comply with the California Fire Code (Title 24, Part 9, Chapter 49) "Requirements for Wildland-Urban Interface Fire Areas." [ADDED TEXT TO REDUCE AMBIGUITY AND PROVIDE CLARITY TO WHAT IS REQUIRED CONSISTENT WITH EXISTING CALIFORNIA FIRE CODE.]
- (<u>B</u> F) Public Resources Code Section 4291(a) and (b) <u>requires a person who owns</u>, <u>leases</u>, <u>controls</u>, <u>operates</u>, <u>or maintains a building or structure in</u>, <u>upon</u>, <u>or adjoining a mountainous area</u>, <u>forest-covered lands</u>, <u>shrub-covered lands</u>, <u>grass-covered lands</u>, <u>or land that is covered with flammable material to</u> address fire

safety and prevention by maintaining a defensible space or zone around a building or structure. [ADDED TEXT TO REDUCE AMBIGUITY AND PROVIDE CLARITY TO WHAT IS REQUIRED CONSISTENT WITH EXISTING PUBLIC RESOURCES CODE.]

- 1. Avoid fire-prone plant materials and highly flammable mulches.
- (<u>C</u> F) Refer to the Local Fuel Modification Plan guidelines may prescribe additional requirements. [NEW TEXT REDUCES AMBIGUITY AND PROVIDES CLARITY.]
 (7 1) Plant Material Selection [RENAMED SECTION REDUCES AMBIGUITY,
- (7 1) Plant Material Selection [RENAMED SECTION REDUCES AMBIGUITY PROVIDES CLARITY, AND IMPROVES UNDERSTANDING OF MWELO.]
 - (A) 4. selection Selection of trees based on applicable local tree ordinances or tree shading guidelines, and size at maturity as appropriate for the planting area; and
 - (<u>B</u> G) The use of invasive plant species, such as those listed by the California Invasive Plant Council, is strongly discouraged.
 - (1) Pursuant to Food and Agriculture Code §52334, the declaration of a plant, seed, nursery stock, or crop as invasive is a power reserved for the Secretary of the California Department of Food and Agriculture. [NEW TEXT CLARIFIES AUTHORITY OVER THE DETERMINATION OF A PLANT AS AN INVASIVE SPECIES.]
- (8 H) The architectural guidelines of a common interest development, which include community apartment projects, condominiums, planned developments, and stock cooperatives, shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group (Civil Code Section 4100 and Civil Code Section 4735).
- (9 a) Environmental Review. The local agency must comply with the California Environmental Quality Act (CEQA), as appropriate. [HEADINGS ARE ADDED TO PROVIDE CLARITY AND IMPROVE UNDERSTANDING.]
- (10 a) Penalties. A local agency may establish and administer penalties to the project applicant for non-compliance with the ordinance to the extent permitted by law.
- (11 a) <u>Public Education</u>. 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 the community.
 - (<u>A</u> 4) A local agency 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.
- (12 b) Model Homes. All model homes that are landscaped shall use display signs and written that provide information to demonstrate demonstrating the principles of water efficient landscapes described in this ordinance. [ADDED TEXT REDUCES AMBIGUITY AND PROVIDES CLARITY]
 - (A 1) Signs shall be used to identify the model <u>home</u> 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: [TEXT MOVED INTO SUBSECTIONS BELOW TO REDUCE AMBIGUITY AND PROVIDE CLARITY.]

- 1. fundamental water efficient landscape elements such as hydrozones, irrigation equipment, native plants, graywater gray water systems, and rainwater catchment systems, and others other elements as applicable that contribute to the overall water efficient theme. [ADDED TEXT REDUCES AMBIGUITY AND PROVIDES CLARITY]
- 2. information about the site water use <u>budget</u> 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. [TEXT IS MOVED INTO SUBSECTION 1. ABOVE]
- (<u>B</u> 2) Information shall be provided about designing, installing, managing, and maintaining water efficient landscapes.

NOTE: Authority: Sections 65594,65595 65596 and 65596.5 Government Code. Section 11, Governor's Exec. Order No. B-29-15 (April 1, 2015); Section 1351, Civil Code; Sections 21080 and 21082, Public Resources Code. Reference: Sections 65593, 65596, 65596.5, Government Code; Sections 1351 through 4100, and 4735 Civil Code; Chapter 49 California Fire Code; Section 11, Governor's Exec. Order No. B-29-15 (April 1, 2015); Sections 4291, 21080, and 21082 Public Resources Code; Chapters 15 and 16 of the California Plumbing Code.

§ 490.2. 491. Definitions.

- (a) The terms used in this ordinance have the meaning set forth below:
- (<u>1</u> a) "applied water" means the portion of water supplied by the irrigation system to the landscape.
- (2) "aggregated landscape project" for the purposes of this ordinance, means the total combined landscape area of multiple associated landscape projects that requires a building permit, plan check or design review (i.e., production home developments, business parks, commercial developments). [ADDED TO REDUCE AMBIGUITY, PROVIDE CLARITY, AND IMPROVE UNDERSTANDING OF MWELO.]
- (3) "applicant signature" means the signature of the property owner or their designee. [ADDED TO REDUCE AMBIGUITY, PROVIDE CLARITY, AND IMPROVE UNDERSTANDING OF MWELO.]
- (4) "application rate" or "precipitation rate" means the rate at which an irrigation system applies water to a given area by an emission device(s), it is usually expressed as depth or volume per unit time (i.e., inches per hour or gallons per hour). Application rate is generally used with drip irrigation while precipitation rate is generally used with overhead irrigation. [ADDED TO REDUCE AMBIGUITY, PROVIDE CLARITY, AND IMPROVE UNDERSTANDING OF MWELO.]
- (5 b) "automatic irrigation controller" means a timing device with stations that can be 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 (sensor-based).
- (6 e) "backflow prevention device" means a safety device <u>required by the California</u>

 <u>Plumbing Code</u> used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.
- (7 d) "Certificate of Completion Package" means the document with the required elements pursuant to under Section 492.9 494.
- (e) "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 WaterSense irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program. [COMBINED WITH THE DEFINITION FOR DESIGNER OF RECORD.]
- (8 f) "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 labeled by the US Environmental Protection Agency's WaterSense irrigation auditor professional certification program and including the Irrigation Association's Certified Landscape Irrigation Auditor program.

 [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (9 g) "check valve" or "anti-drain valve" means a valve located under a sprinkler head, or other location in the irrigation system, to hold used in a pipeline or emission device that holds water in the system to prevent drainage from sprinkler heads emission devices when the sprinkler system is off. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (10 h) "common interest developments" means community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 1351 4100 and applies to this ordinance when there is a separate interest coupled with an interest in the common area or membership in the association per Chapter 2 Civil Code Section 4200 through 4202. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- $(\underline{11} \ i)$ "compost" means the safe and stable product of controlled biologic decomposition of organic materials that is beneficial to plant growth.
- (12 j) "conversion factor (0.62)" means the number <u>used in the Maximum Applied Water Allowance (MAWA) calculation</u> that converts acre-inches per acre per year to gallons per square foot per year. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (13 mm) "landscape water <u>dedicated irrigation</u> meter" means an inline <u>metering</u> device installed <u>by the local water purveyor</u> at the irrigation supply point that measures records the flow <u>volume</u> of water into the irrigation system and is connected to a totalizer to record water use <u>used</u>. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (14) "designee" means a person or entity authorized to sign documents on behalf of the project applicant.

- (15) "designer of record" for the purposes of this ordinance means the professional practitioner or project applicant functioning and providing services in compliance with the Business and Professions Code (BPC) Division 3 Professions and Vocations Generally, Chapter 3.5. Landscape Architecture, Article 3. Application of Chapter [5640-5644]. [REPLACES THE DEFINITION OF CERTIFIED IRRIGATION DESIGNER, LANDSCAPE ARCHITECT, AND LANDSCAPE CONTRACTOR.]
- (16) "design review" means review by the jurisdiction having authority for enforcing the water efficient landscape ordinance.
- $(\underline{17} \text{ k})$ "distribution uniformity" means the measure of the uniformity of irrigation water over a defined area.
- (18 l) "drip irrigation" means any non-spray low volume irrigation system utilizing emission devices with a where water is slowly applied at or below the soil surface and at or near the root zone of plants. Drip irrigation emission devices have a manufacturer specification for 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. [THE DEFINITION OF LOW VOLUME IRRIGATION IS COMBINED WITH THE DEFINITION OF DRIP IRRIGATION TO REDUCE AMBIGUITY AND PROVIDE CLARITY.]
- (19) "dynamic pressure" means the measure of water pressure with the water in motion, also known as working pressure.
- (20 m) "ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.
- (<u>21</u> n) "effective precipitation" or "usable rainfall" (Eppt) means the portion of total precipitation which becomes available for plant growth.
- (o) "emitter" means a drip irrigation emission device that delivers water slowly from the system to the soil. [REPLACED WITH DEFINITION FOR EMISSION DEVICE.]
- (22) "emission device" means an irrigation system component that dispenses water to the landscape.
- (23 p) "established landscape" means the point stage 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. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (24 q) "establishment period of the plants" or "establishment period" 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. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (25 ғ) "Estimated Total Water Use" (ETWU) is the sum of each hydrozone's estimated water use (EWU) and means the total water used for the landscape as described in Section 492.4 493.3. ETWU must be equal to or below the maximum applied water allowance (MAWA) to comply with MWELO. [REDUCES AMBIGUITY AND PROVIDES CLARITY]

- (26) "Estimated Water Use" (EWU) is the calculated water used for each hydrozone as described in Section 493.3.
- (27 s) "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 maximum ETAF allowed for new and existing (non-rehabilitated) in the MAWA equation must be equal to or below: [TEXT ADDED TO REDUCE AMBIGUITY AND PROVIDE CLARITY.]
 - (a) 0.55 for residential <u>regular landscapes</u> areas. [ADDED TEXT TO BE CONSISTENT WITH THE DEFINITION FOR REGULAR LANDSCAPE AREA.]
 - (b) 0.45 for non-residential regular landscape areas.
 - (c) 1.0 for Special Landscape Areas-shall not exceed 1.0.
 - (d) 0.8 for The ETAF for new and existing non-rehabilitated regular landscapes landscape areas over one acre in size installed before December 1, 2015 is 0.8, per Section 491.1. [REDUCES AMBIGUITY AND PROVIDES CLARITY.]
- (28 t) "evapotranspiration rate" means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.
- (29 u) "flow rate" means the rate at which water volume of water per unit of time that flows through pipes, valves and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (30 ¥) "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 a compatible automatic irrigation controller, or flow monitor capable of receiving flow signals and operating master valves. For the purposes of this definition, "compatible" means the flow sensor can communicate with the irrigation controller. This combination flow sensor/controller may also function as a landscape water meter or privately-owned submeter. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (31 w) "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.
- (32 x) "Fuel Modification Plan Guideline" means <u>landscaping</u> guidelines from a local fire authority to assist residents and businesses that are developing land or building structures in a fire hazard severity zone. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (33 y) "graywater" "gray water" 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" "gray water" 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.
- (34 z) "hardscapes" means any durable material (pervious and non-pervious).
- (35 aa) "hydrozone" means a portion section of the landscaped area having plants with similar water needs (i.e. "plant factors" as defined in 490.2(a)(65)) and generally similar rooting depth (i.e. turfgrass (shallow to moderate), shrubs (moderate), and trees (deep)). A hydrozone may be irrigated or non-irrigated. [REDUCES AMBIGUITY AND PROVIDES CLARITY.]
- (36 bb) "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).
- (37 ee) "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 by the California Invasive Plant Council in their Inventory and invasive plants and noxious weeds by the USDA in their invasive and noxious weeds PLANTS database. [REDUCES AMBIGUITY AND PROVIDES CLARITY.]
- (38 dd) "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 <u>water waste</u>, 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" "WaterSense" labeled auditing program.
- (39 ee) "irrigation efficiency" (IE) means the measurement of the amount of water beneficially used divided by the amount of water applied and is expressed as a percentage. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The average irrigation efficiency used in the Estimated Total Water use equation for purposes of this ordinance are: [TEXT ADDED TO USE CONSISTENT TERMS, REDUCE AMBIGUITY AND PROVIDE CLARITY.]
 - (a) 0.75 for overhead spray devices irrigation systems, and
 - (b) 0.81 for drip irrigation systems.
- (40 ff) "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.
- (<u>41</u> gg) "irrigation water use analysis" means an analysis of water use data based on meter readings and billing data.
- (hh) "landscape architect" means a person who holds a license to practice landscape architecture in the state of California Business and Professions Code, Section 5615. [REPLACED WITH "DESIGNER OF RECORD" TO REDUCE AMBIGUITY.]

- (42 ii) "landscape area" (LA) means all the <u>irrigated</u> planting areas, turf <u>turfgrass</u> areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance calculation. The <u>irrigated</u> 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) and is the sum of the landscape projects' regular landscape areas (RLA) and special landscape areas (SLA). LA = RLA + SLA. [ADDED TEXT FOR CONSISTENCY AND TO REDUCE AMBIGUITY AND PROVIDE CLARITY.]
- (jj) "landscape contractor" means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems. [REPLACED WITH THE DEFINITION FOR DESIGNER OF RECORD.]
- (43 kk) "Landscape Documentation Package" means the documents required under Section 492.3 per the compliance option chosen by the applicant, described in Section 493. [REDUCE AMBIGUITY AND PROVIDE CLARITY AND IMPROVE UNDERSTANDING.]
- (44 II) "landscape project" means total area of landscape in a project as defined in "landscape area" for the purposes of this ordinance, means the total landscape area meeting requirements under Section 490.1 491 that requires a building permit, plan check or design review. [REDUCE AMBIGUITY AND PROVIDE CLARITY.]
- (mm) "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. [REPLACED WITH DEFINITION FOR "DEDICATED IRRIGATION METER"]
- (45 nn) "lateral line" means the water delivery pipeline that supplies water from the valve to the emitters or sprinklers from the valve emission devices. [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
- (46 ee) "local agency" means a city or county, <u>or city and county,</u> 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.
- (47 pp) "local water purveyor" means any entity, including a public agency, city, county, or private water company that provides retail water service.
- (48) "low head drainage" means a condition where water partially or completely drains from the lateral line through the emission device after the irrigation cycle is completed. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (qq) "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. [COMBINED WITH THE DEFINITION FOR DRIP IRRIGATION. THE TEXT "LOW VOLUME" COMBINED INTO §493.2.2.d.(5)]

- (rr) "main line" means the pressurized pipeline that delivers water from the water source to the valve or outlet.
- (49 ss) "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 shut-off valve will greatly reduce any water loss due to a leaky station valve ruptured pipe or leak in the irrigation system. TO REDUCE AMBIGUITY <a href="AND PROVIDE CLARITY.]
- (50) "matched precipitation rate" or "matched application rate" means that all emission devices within a hydrozone delivers water at the same volume of water per unit of time. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (51 tt) "Maximum Applied Water Allowance" (MAWA) means the upper limit of annual applied water for the established landscaped area as specified in Section 492.4 493.3. It is based upon the area's reference evapotranspiration, the maximum ET Adjustment Factor allowed, and the size of the regular landscape area (RLA) and the special landscape area (SLA). 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)x (0.62)x [(ETAF x LA RLA) + ((1-ETAF) 1.0 x SLA)] [MOVED THE DEFINITIONS OF ESTIMATED TOTAL WATER USE AND SPECIAL LANDSCAPE AREA FROM THE MAWA DEFINITION AND INCLUDED WITH THEIR APPROPRIATE DEFINITIONS.]
- (52 uu) "median" is an a landscape project area between opposing lanes of traffic that may be unplanted or planted with trees, shrubs, perennials, and ornamental grasses. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (vv) "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. [DELETED "MICROCLIMATE" IS NOT USED IN MWELO.]
- (<u>53</u> ww) "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.
- (<u>54</u> xx) "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.
- (55) "multifamily residential landscape" means the landscape area surrounding or associated with any structure designed for human habitation that has been divided into two or more legally created independent living quarters. [REDUCES AMBIGUITY AND PROVIDES CLARITY]

- (56 yy) "new construction" means, for the purposes of this ordinance, a new building with a landscape <u>area</u> or other new landscape <u>project</u>, such as a park, playground, or greenbelt without an associated building <u>per Section 491</u>. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (57 zz) "non-residential landscape" means landscapes in the landscape area surrounding or associated with commercial, institutional, industrial and public settings that may have areas designated for recreation or public assembly. It also includes portions of the landscape area associated with common areas of common interest developments with designated recreational areas. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (58) "non-volatile memory" means a type of computer memory used in automatic irrigation controllers that retains stored information after power is removed and will maintain the programmed irrigation schedule after power is restored. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (<u>59</u> aaa) "operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.
- (60 bbb) "overhead sprinkler irrigation systems" or "overhead spray irrigation systems" means irrigation systems that deliver water through the air (e.g., spray heads and rotors). [CONSISTENCY WITH DEFINITIONS, REDUCES AMBIGUITY AND PROVIDES CLARITY AND IMPROVES UNDERSTANDING]
- (61 esc) "overspray" means the irrigation water which is delivered beyond the target area.
- (62 ddd) "parkway" means the area between a sidewalk and the curb or traffic lane. It may be planted or unplanted, and with or without pedestrian egress.
- (63 eee) "permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.
- (64 fff) "pervious" means any surface or material that allows the passage of water through the material and into the underlying soil.
- (65 ggg) "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 ranges are:
 - (a) for very low water use plants is 0 to 0.1,
 - (b) the plant factor range for low water use plants is 0.1 to 0.3,
 - (c) the plant factor range for moderate water use plants is 0.4 to 0.6,
 - (d) 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 <u>publication database</u> "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).
- (66 hhh) "project applicant" means the individual or entity submitting a Landscape Documentation Package required under Section 492.3 491.4, 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 their designee.

- (67 iii) "rain sensor" or "rain sensing shutoff device" means a component which automatically suspends an irrigation event when it rains.
- (68 jjj) "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.
- (69 kkk) "recreational area" means areas, excluding private single-family single-family residential areas landscapes, designated for active play, recreation or public assembly in parks, sports fields, picnic grounds, amphitheaters or golf course tees, fairways, roughs, surrounds and greens. [REDUCES AMBIGUITY AND PROVIDES CLARITY, AND IS CONSISTENT WITH DEFINED TERMS]
- (70 III) "recycled water," or "reclaimed water," or "treated sewage effluent water" means treated or recycled waste water of a quality suitable for nonpotable uses such as landscape irrigation and water features. This water is not intended for human consumption.
- (71 mmm) "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 as represented in Appendix A C, and is an estimate of the evapotranspiration of a large field of four- to seven-inch tall, cool-season grass turfgrass that is well-watered well-watered. Reference evapotranspiration is used as the basis of determining the Maximum Applied Water Allowances so that regional differences in climate can be accommodated. [IMPROVES GRAMMAR]
- (72 nnn) "Regional Water Efficient Landscape Ordinance" means a local Ordinance adopted by two or more local agencies, water suppliers and other stakeholders interested parties 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. [ACKNOWLEDGES DIVERSITY, EQUITY, INCLUSION]
- (73) "regular landscape area" (RLA) is the portion of the irrigated landscape area that is not a special landscape area. RLA = LA SLA. [DEFINITION ADDED TO CLARIFY HOW ETAF APPLIES TO DIFFERENT LANDSCAPE AREAS.]
- (74 eoe) "rehabilitated landscape" means any relandscaping landscape renovation project that requires a permit, plan check, or design review, meets the requirements of Section 490.1 491, and the modified landscape area is equal to or greater than 2,500 square feet.
- (ppp) "residential landscape" means landscapes surrounding single or multifamily homes. [SPLIT INTO TWO DEFINITIONS: SINGLE-FAMILY AND MULTIFAMILY RESIDENTIAL LANDSCAPE.]
- (75) "riser" means a length of pipe with male nominal pipe threads on each end usually affixed to a lateral or submain supporting a sprinkler head or anti-siphon valve.

 [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (<u>76</u> qqq) "run off" "runoff" means water which is not absorbed by the soil or landscape to which it is applied and flows from the <u>target</u> landscape area. For example, run off <u>Runoff</u> may result from water that is applied at too great a rate (application rate

- exceeds infiltration rate), from low head drainage, or when there is a slope.

 [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (77) "single-family residential landscape" means the landscape areas surrounding or associated with a one or two-family dwelling or townhouse. Swimming pools of single-family residential landscapes are water features and not special landscape areas. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (78 rrr) "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.
- (<u>79</u> sss) "soil texture" means the classification of soil based on its percentage of sand, silt, and clay.
- (80 ttt) "Special Landscape Area" (SLA) means an <u>irrigated</u> area <u>that may be all or part</u> of the landscape <u>project and is permanently and solely</u> dedicated solely to edible plants <u>such as orchards and vegetable gardens</u>, recreational areas, areas irrigated with recycled water, or water features using recycled water. [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
- (81 uuu) "sprinkler head" or "spray head" "sprinkler" means a an emission device which delivers water that applies water by converting water pressure to a high velocity discharge stream or stream(s) through the air by a nozzle (e.g. spray, rotors and rotators). Sprinklers have a manufacturer specification for flow rate measured in gallons per minute. [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING OF MWELO. SEE ISOR FOR DETAIL.]
- (82 vvv) "static water pressure" means the pipeline or municipal water supply pressure when water is not flowing.
- (83 www) "station" means an area a hydrozone served by a circuit on an automatic irrigation controller that operates either one valve or by a set of valves that operate simultaneously. [REDUCES AMBIGUITY AND PROVIDES CLARITY AND CONSISTENCY WITH TERMS USED IN MWELO, AND CLARIFIED DEFINITIONS.]
- (84 xxx) "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.
- (85 yyy) "submeter" means a <u>privately owned</u> metering device to measure water applied to the landscape that is installed after the primary utility water meter. [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (86 zzz) "turf" "turfgrass" means a living 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.

 [DEFINITION IS SIMPLIFIED BECAUSE ANY PLANT CAN BE USED PER RENUMBERED §493.2.(b).]
- (87 aaaa) "valve" means a device used to control the flow of water in the irrigation system.

- (88) "water budget calculation" means the calculation of a landscape water budget defined by Estimated Water Use (EWU), Estimated Total Water Use (ETWU) and Maximum Applied Water Allowance (MAWA). [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING]
- (89 bbbb) "water conserving plant species" means a plant species identified as having a very low or low plant factor.
- (90 ecce) "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 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. [IMPROVES GRAMMAR]
- (91) "water waste" means the over application of water through inefficient landscape irrigation that causes runoff onto adjacent property, non-irrigated landscapes, private and public walkways, roadways, parking lots, or structures. Water waste includes low head drainage, overspray, runoff, or other similar conditions that causes overland flow. [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING OF MWELO. TEXT IS MOVED FROM EXISTING MWELO REGULATION INTO DEFINITION. SEE ISOR FOR DETAIL.]
- (92 dddd) "watering window" means the time of day irrigation is allowed.
- (93 eeee) "WUCOLS" means the Water Use Classification of Landscape Species published maintained by the California Center for Urban Horticulture, University of California. Cooperative Extension and the Department of Water Resources 2014.

 WUCOLS is an online database that classifies and provides regional water needs for commonly available landscape plants. [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING]

NOTE: Authority cited: Section 65595 65596 and 65596.5 Government Code; and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Sections 65596, 65596.5 and 65598 Government Code; Chapter 49 California Fire Code; Section 4291 Public Resources Code; Chapters 15 and 16 California Plumbing Code. and section 11, Governor's Exec. Order No. B-29-15 (April 1, 2015).

§ <u>491.</u> 490.1. Applicability.

- (a) After December 1, 2015, and consistent with Executive Order No. B-29-15, this This ordinance shall apply to all of the following landscape projects: [REDUCES AMBIGUITY, DATE IS ASSOCIATED WITH EO THAT NO LONGER APPLIES.]
 - (1) new construction projects with an aggregate <u>a</u> landscape area <u>as defined in</u> <u>section 490.2(a)(42)</u> equal to or greater than 500 square feet requiring a building

- or landscape permit, plan check or design review; [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (2) rehabilitated landscape projects with an aggregate <u>a</u> landscape area <u>as defined</u> in section 490.2(a)(42) equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review;
- (3) aggregated landscape projects as defined in section 490.2(a)(2) include accommodations for soil sampling (Section 493.1) and Irrigation Audits (Section 493.8). [REDUCES AMBIGUITY BY DESCRIBING THE SPECIFIC ALLOWANCES FOR AGGREGATED LANDSCAPE PROJECTS.]
- (<u>4</u> <u>3</u>) existing landscapes limited to Sections 493, 493.1 and 493.2 <u>Section 491.1;</u> and **[UPDATES SECTION REFERENCES.]**
- (<u>5</u> 4) cemeteries. Recognizing the special landscape management needs of cemeteries, new and rehabilitated cemeteries are limited to Sections 492.4, 492.11, and 492.12 493.3, 493.5 and 493.6; and existing cemeteries are limited to Sections 493, 493.1, and 493.2 Section 491.1.
- (<u>b</u> e) Any project with <u>an aggregate a landscape area as defined in section 490.2(a)(42) of 2,500 square feet or less may comply with <u>either</u> the performance requirements of this ordinance, <u>described in section 493</u>, or conform to the prescriptive measures contained in <u>Appendix D section 492</u>. [REDUCE AMBIGUITY, PROVIDE CLARITY, AND IMPROVE UNDERSTANDING OF MWELO.]</u>
- (b) For local land use agencies working together to develop a regional water efficient landscape ordinance, the reporting requirements of this ordinance shall become effective December 1, 2015 and the remainder of this ordinance shall be effective no later than February 1, 2016. [NO LONGER APPLIES]
- (d) For projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 2500 sq. ft. of landscape and meets the lot or parcel's landscape water requirement (Estimated Total Water Use) entirely with treated or untreated graywater or through stored rainwater captured on site is subject only to Appendix D section (5). [TEXT MOVED INTO §490.1]
- (c e) This ordinance does not apply to:
 - (1) registered local, state or federal historical sites;
 - (2) ecological restoration projects that do not require a permanent irrigation system;
 - (3) mined-land reclamation projects that do not require a permanent irrigation system; or
 - (4) existing plant collections, as part of botanical gardens and arboretums open to the public.

NOTE: Authority cited: Section 65595 65596 and 65596.5 Government Code. and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Section Sections 65596, 65596.5, and 65598 Government Code.; and section 11, Governor's Exec. Order No. B-29-15 (April 1, 2015).

493. Provisions for Existing Landscapes

(a) A local agency may by mutual agreement, designate another agency, such as a water purveyor, to implement some or all of the requirements contained in this ordinance. Local agencies may collaborate with water purveyors to define each entity's specific responsibilities relating to this ordinance. [TEXT IS MOVED INTO §490.1]

§491.1 493.1 Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis. Provisions for Existing Non-rehabilitated Landscapes

- (a) This section, 493.1 491.1, shall apply to all existing <u>non-rehabilitated</u> landscapes that were installed before December 1, 2015 and are over one acre in size.
 - (1) For all <u>existing non-rehabilitated</u> landscapes in 493.1 (a) that have a water meter, the local agency 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 <u>non-rehabilitated</u> landscapes. [ADDED TEXT REDUCES AMBIGUITY AND PROVIDES CLARITY TO WHAT IS REQUIRED. USES CONSISTENT TERMS THROUGHOUT MWELO.]
 - (A) The Maximum Applied Water Allowance for existing non-rehabilitated landscapes shall be calculated as: MAWA = (0.8) (ETo) (LA) (0.62) (ETo) x (0.62) x (0.8 x RLA + 1.0 x SLA). [REDUCES AMBIGUITY AND PROVIDES CLARITY, THE CORRECT EQUATION IS CONSISTENT WITH THE DEFINITION OF MAWA.]
 - (2) For all <u>existing non-rehabilitated</u> landscapes in 493.1 (a), that do not have a meter, the local agency 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.
- (b) All landscape irrigation audits shall be conducted by a certified landscape irrigation auditor.

NOTE: Authority cited: Section Sections 65595, 65596 and 65596.5 Government Code.; and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Section 65593, 65596 and 65596.5, Government Code.; Governor's Exec. Order No. No. B-29-15 (April 1, 2015).

§ 491.2 492. Provisions for New Construction or Rehabilitated Landscapes

(a) A local agency may designate by mutual agreement, another agency, such as a water purveyor, to implement some or all of the requirements contained in this ordinance. Local agencies may collaborate with water purveyors to define each entity's specific responsibilities relating to this ordinance. [TEXT IS MOVED INTO §490.1]

(a) There are two options for compliance with the Model Water Efficient Landscape Ordinance; [REDUCES AMBIGUITY AND PROVIDES CLARITY TO THE COMPLIANCE OPTIONS ALLOWED.]

- (1) Prescriptive compliance option as described in Sections 491.3.(a) and 492.
- (2) Performance compliance option as described in Sections 491.3.(b) and 493.
- (b) Any new construction project with a landscape area between 500 and 2,500 square feet, an applicant may comply with either the prescriptive or performance compliance option. [REDUCES AMBIGUITY BY CLARIFYING WHEN THE PRESCRIPTIVE OPTION IS ALLOWED. SEE ISOR FOR DETAILS.]
- (c) Any landscape project with a landscape area of 2,500 square feet, or greater, shall use the performance compliance option. [REDUCES AMBIGUITY BY CLARIFYING WHEN THE PERFORMANCE OPTION IS USED. SEE ISOR FOR DETAILS.]

NOTE: Authority cited: Section 65595, Sections 65596 and 65596.5, Government Code; and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Sections 65593, 65596 and 65596.5, Government Code.; Governor's Exec. Order No. No. B-29-15 (April 1, 2015).

§ 491.3 492.1. Compliance with Landscape Documentation Package. Compliance Responsibilities

- (a) Local Agency. The local agency is 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. [REDUCES AMBIGUTIY AND IMPROVES UNDERSTANDING BY REORGANIZING EXISTING REQUIREMENTS OF THE LOCAL AGENCY. SEE ISOR FOR DETAILS.]
 - $(\underline{1} \ \underline{a})$ Prior to construction, the local agency shall:
 - (<u>A</u> 4) provide the project applicant with the ordinance and procedures for permits, plan checks or design reviews;
 - (<u>B</u> 2) review the Landscape Documentation Package submitted by the project applicant;
 - $(\underline{C}\ 3)$ approve or deny the Landscape Documentation Package;
 - $(\underline{D}\ 4)$ issue a permit or approve the plan check or design review for the project applicant; and
 - (2 5) For the performance compliance option only, upon approval of the Landscape Documentation Package, the local agency shall submit a copy of the Water Efficient Landscape Worksheet to the local water purveyor.
- (b) Project Applicant. [REDUCES AMBIGUTIY AND IMPROVES UNDERSTANDING BY REORGANIZING EXISTING REQUIREMENTS OF THE PROJECT APPLICANT. SEE ISOR FOR DETAILS.]
 - $(\underline{1}-\underline{b})$ Prior to construction, the project applicant shall:
 - (A 4) submit a Landscape Documentation Package to the local agency.
 - (2 e) Upon approval of the Landscape Documentation Package by the local agency, the project applicant shall:
 - (<u>A</u> 4) receive a permit or approval of the plan check or design review and record the date of the permit in the Certificate of Completion;

- (<u>B</u> 2) submit a copy of the approved Landscape Documentation Package along with the record drawings, and any other information to the property owner or his/her their designee. And [REDUCES AMBIGUITY AND PROVIDES CLARITY BECAUSE RECORD DRAWINGS ARE INCLUDED WITH THE LANDSCAPE DOCUMENTATION PACKAGE. SEE ISOR FOR DETAILS.]
- (<u>C</u> 3) <u>Performance compliance option only -</u> submit a copy of the Water Efficient Landscape Worksheet to the local water purveyor. [REDUCES AMBIGUTIY AND PROVIDES CLARITY ABOUT WHEN IT IS REQUIRED.]

NOTE: Authority cited: Section Sections 65595, 65596 and 65596.5 Government Code. Reference: Section 65593, 65596, and 65596.5 Government Code.; Governor's Executive Order N-10-19 (April 29, 2019).

§ 491.4. 492.3 Elements of the Landscape Documentation Package.

- (a) Prescriptive Compliance. Submit a Landscape Documentation Package which includes the following elements: [REDUCES AMBIGUITY AND PROVIDES CLARITY TO WHAT IS REQUIRED WITH THE PRESCRIPTIVE COMPLIANCE LANDSCAPE DOCUMENTATION PACKAGE. SEE ISOR FOR DETAILS.]
 - (1) Project information sheet with the following elements;
 - (A) date
 - (B) name of the project applicant
 - (C G) contact information for the project applicant and property owner
 - $(\underline{D}\ C)$ project address (if available, parcel and/or lot number(s))
 - (E-D) total landscape area (square feet), including a breakdown of turf and plant material
 - (<u>F</u> <u>E</u>) project type (e.g., new, rehabilitated, institutional (i.e. public), public, private, cemetery, homeowner-installed)
 - $(G \neq)$ 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
 - (H) applicant signature and date with statement, "I agree to comply with the requirements of the prescriptive compliance option to the MWELO."-
 - (2) A landscape design plan that includes:
 - (A-D) Total landscape area (square feet)
 - $(\underline{B}-\underline{D})$ A breakdown of turf turfgrass and plant material (e.g., plant legend).
- (<u>b</u> a) <u>Performance Compliance</u>. The Landscape Documentation Package shall include the following six (6) elements: [REDUCES AMBIGUITY AND PROVIDES CLARITY TO WHAT IS REQUIRED WITH THE PERFORMANCE COMPLIANCE LANDSCAPE DOCUMENTATION PACKAGE. SEE ISOR FOR DETAILS.]
 - (1) project information sheet that includes; [REORGANIZATION PROVIDES CLARITY AND IMPROVES UNDERSTANDING, AND IS CONSISTENT WITH RENAMED APPENDIX B.]
 - (A) date
 - (B) name of the project applicant

- (<u>C</u> H) project contacts to include contact information for the project applicant and property owner
- $(\underline{D} \ C)$ project address (if available, parcel and/or lot number(s))
- (<u>E</u> D) total landscape area (square feet)
- (<u>F</u> <u>E</u>) project type (e.g., new, rehabilitated, <u>institutional (i.e.</u> public), private, cemetery, homeowner-installed)
- (<u>G</u> F) 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
- (<u>H</u> G) checklist of all documents in Landscape Documentation Package
- (I) applicant signature and date with statement, "I agree to comply with the requirements for the performance compliance option of the water efficient landscape ordinance and submit a complete Landscape Documentation Package".
- (2) Water Efficient Landscape Worksheet; [TEXT IS MOVED BELOW TO (6)]
 - (A) hydrozone information table
 - (B) water budget calculations
 - 1. Maximum Applied Water Allowance (MAWA)
 - 2. Estimated Total Water Use (ETWU)
- (2 3) soil management report (pursuant to Section 493.1); [REDUCES AMBIGUITY BY PROVIDING SECTION REFERENCES TO THE REQUIREMENTS.]
- (3 4) landscape design plan (pursuant to Section 493.2);
- (4 6) grading design plan- (pursuant to Section 493.2.1);
- (5) irrigation design plan (pursuant to Section 493.2.2); and
- (6 2) Water Efficient Landscape Worksheet (pursuant to Section 493.3);
 - (A) hydrozone information table
 - (A) 1. Maximum Applied Water Allowance (MAWA)
 - (B) Estimated Water Use (EWU)
 - (B) water budget calculations
 - 1. Maximum Applied Water Allowance (MAWA)
 - 2. Estimated Total Water Use (ETWU)
 - (C) 2. Estimated Total Water Use (ETWU)

NOTE: Authority cited: Section Sections 65595, 65596, and 65596.5, Government Code; Reference: Section Sections 65593, 65596, and 65596.5, Government Code.

§ 492. Appendix D Prescriptive Compliance Option. [TEXT IS MOVED FROM THE PREVIOUS APPENDIX D, AND THE CONTENT IS ORGANIZED TO IMPROVE MWELO UNDERSTANDING. SEE ISOR FOR DETAILS.]

(a) This appendix section contains prescriptive requirements, which may be used as a compliance option to the Model Water Efficient Landscape Ordinance. for new construction projects with a landscape area between 500 and 2,500 square feet.

[REDUCES AMBIGUITY AND IMPROVES UNDERSTANDING BY CLARIFYING]

WHEN THE PRESCRIPTIVE OPTION CAN BE USED, CONSISTENT WITH §491.2]

- (b) Compliance with the following items requirements of this section is mandatory and must be documented in the Landscape Documentation Package pursuant to Section 491.4.(a) on a landscape plan in order to use the prescriptive compliance option:

 (1) Submit a Landscape Documentation Package which includes the following elements: [TEXT IS MOVED TO §491.4 LANDSCAPE DOCUMENTATION PACKAGE]
 - (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, rehabilitated, public, private, cemetery, homeowner-installed)
 - (F) 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
 - (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 to the MWELO".
- (c) Landscape project requirements [REDUCES AMBIGUTIY AND PROVIDES CLARITY.]
 - (1 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); Soils with greater than 6% organic matter in the top 6 inches of soil are exempt from adding compost and tilling.
 - $(\underline{2}\ 5)$ Irrigation systems shall comply with the following:
 - (A 6) For non-residential projects with landscape areas of 1,000 sq. ft. or more, a private submeter(s) to measure landscape water use shall be installed.
 - (<u>B</u> A) Automatic irrigation controllers are required and must use <u>either</u> evapotranspiration (<u>weather-based</u>) or soil moisture <u>sensor</u> (<u>sensor-based</u>) data and utilize a rain sensor.
 - (<u>C</u>B) Irrigation controllers shall be of a type which does not lose programming data in the event the primary power source is interrupted use non-volatile memory. [TEXT IS MOVED INTO THE DEFINITION OF NON-VOLATILE MEMORY.]
 - (D C) Pressure regulators regulating devices, which may include pressure boosters or reducers, shall be installed on the irrigation system to ensure the dynamic pressure of the system is within the manufacturers recommended pressure range. [NEW TEXT REDUCES AMBIGUITY AND PROVIDES CLARITY.]

- (<u>E</u> <u>D</u>) 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.
- (<u>F</u> <u>E</u>) All irrigation emission devices must meet the requirements set in the ANSI standard, ASABE/ICC 802-2014-2020. "Landscape Irrigation Sprinkler and Emitter Standard," All sprinkler heads installed in the landscape must document a <u>low-quarter</u> distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014-2020.
- (G) The California Code of Regulations Title 20, section 1605.3(x) requires all spray sprinkler bodies that are components of spray sprinklers, shall meet standards described in Title 20, Section 1605.3(x).(1).(A). Overhead irrigation emission devices with the components to drive rotation or contain an integral control valve are not included in this standard. [EXISTING REQUIREMENT, REQUIRED TO BE INCLUDED WITH MWELO; CURRENTLY ENFORCED AT POINT OF SALE. SEE ISOR FOR DETAILS.]
- (<u>H</u> F) Areas Landscape areas less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no water waste, runoff or overspray. [REDUCES AMBIGUTIY AND IMPROVES UNDERSTANDING]
- (3) Plant material shall comply with all of the following;
 - (A) For residential areas, landscapes, install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 75% of the plant landscape area excluding edibles areas permanently and solely dedicated to edible plants, and areas using recycled water; [REDUCES AMBIGUITY AND PROVIDES CLARITY.]
 - (B) For non-residential areas landscapes, install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 100% of the plant landscape area excluding edibles areas permanently and solely dedicated to edible plants, and areas using recycled water; [REDUCES AMBIGUITY AND PROVIDES CLARITY]
 - (<u>C</u> 4) Turf_Turfgrass_shall comply with all of the following:
 - 1.(A) Turf <u>Turfgrass</u> shall not exceed 25% of the landscape area in residential areas, landscapes,
 - and there <u>There</u> shall be no turf <u>turfgrass</u> in non-residential areas <u>landscapes</u>; <u>[TEXT UPDATED TO BE CONSISTENT WITH DEFINITIONS.]</u>
 - 3. (B) Turf Turfgrass shall not be planted on sloped areas which exceed a slope of 1 foot vertical elevation change for every 4 feet of horizontal length;
 - 4.(C) Turf <u>Turfgrass</u> 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 <u>turf turfgrass</u> in parkways must be irrigated by <u>sub-surface</u>

<u>subsurface</u> irrigation or by other technology that creates no <u>water waste</u>, overspray or runoff.

- (4) A minimum three inch (3") layer of mulch shall be applied on all exposed soil surfaces of planting areas except in <u>turf turfgrass</u> areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated.
- (d-e) At the time of final inspection, the permit applicant must provide the owner of the property and the local agency with a certificate of completion package, pursuant to Section 494.(a). certificate of installation, irrigation schedule and a schedule of landscape and irrigation maintenance. [DELETED TEXT IS MOVED INTO §494.(a).]
- (e) The designer of record shall use a plant legend with plant photographs to make plants identifiable to an inspector during final inspection. The legend must identify the plant by botanical name, common name or cultivar as specified in Division 18, Chapter 5, Article 7, Section 53481 of the Food and Agricultural Code. [NEW REQUIREMENT, SEE ISOR FOR DETAILS.]

NOTE: Authority cited: Sections 65596 and 65596.5, Government Code; Reference: Sections 65593, 65596, and 65596.5, Government Code.

§ 493. Provisions for Existing Landscapes Performance Compliance Option.

(a) §490.1. (c) Any project with an aggregate landscape area of 2,500 square feet or less may comply with the performance requirements of this ordinance or conform to the prescriptive measure contained in Appendix D. The performance compliance requirements shall be used as the compliance option for any landscape project with greater than 2,500 square feet of area. [REDUCES AMBIGUITY AND PROVIDES CLARITY BY REORGANIZING THE PERFORMANCE COMPLIANCE OPTION REQUIREMENTS.]

NOTE: Authority cited: Sections 65596 and 65596.5 Government Code. Reference: Section 65593, 65596, 65596.5, Government Code.

§ <u>493.1</u> 492.5 Soil Management Report.

- (a) In order to reduce runoff and encourage healthy plant growth, a A soil management report shall be completed by the project applicant, or his/her their designee, as follows:
 - (1) Submit soil samples to a laboratory for analysis and recommendations.
 - (A) Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.
 - (B) The soil analysis shall include:
 - 1. soil texture;
 - 2. infiltration rate determined by laboratory test or soil texture infiltration rate table;
 - 3. pH;
 - 4. total soluble salts;
 - 5. sodium;

- 6. percent organic matter; and
- 7. recommendations.
- (C) In <u>aggregated landscape</u> projects with multiple landscape installations (i.e. production home developments) a soil sampling rate of 1 in 7 <u>individual</u> lots or approximately 15% <u>of the total number of individual lots</u> will satisfy this requirement. Large landscape projects shall sample at a rate equivalent to 1 in 7 lots. [DEFINITION IS ADDED FOR AGGREGATED LANDSCAPE PROJECTS; REDUCES AMBIGUITY AND SIMPLIFIES MWELO.]
 - (2) The project applicant, or his/her their designee, shall comply with one of the following:
 - (A) If significant mass grading is not planned, the soil analysis management report shall be submitted to the local agency as part of the Landscape Documentation Package; or
 - (B) If significant mass grading is planned, the soil analysis management report shall be submitted to the local agency as part of the Certificate of Completion.
 - (3) The soil analysis management 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 to the design plans.
 - (4) The project applicant, or his/her their designee, shall submit documentation verifying implementation of soil analysis management report recommendations to the local agency with the Certificate of Completion. <a href="mailto:[TEXT IS UPDATED FOR CONSISTENT USE OF TERMS IN THE MWELO.]

NOTE: Authority cited: Section Sections 65595, 65596, and 65596.5, Government Code.; and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Section Sections 65593, 65596 and 65596.5, Government Code.; and section 11, Governor's Executive Order No. B-29-15 (April 1, 2015).

§ <u>493.2.</u> 492.6 Landscape Design Plan.

- (a) 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 meeting the following design criteria shall be submitted as part of the Landscape Documentation Package.

 [(a) IS REDUNDANT WITH REQUIREMENTS IN §491.4 AND REQUIREMENTS BELOW.]
- (a b) The landscape design plan, at a minimum shall
 - (1) delineate and label each hydrozone by number, letter or other method;
 - (2) identify the plant factor for each hydrozone as very low, low, moderate, high water, or mixed water use. [REDUCES AMBIGUITY AND IMPROVES UNDERSTANDING.]
 - (A) Temporarily irrigated landscape areas shall use the low water use plant factor range in the water budget calculation.
 - (3) identify recreational areas special landscape areas, including: [TEXT IS REORGANIZED TO REDUCE AMBIGUITY AND PROVIDE CLARITY.]

- (A 3) recreational areas;
- (<u>B</u> 4) areas permanently and solely dedicated to edible plants;
- (<u>C</u> 5) areas irrigated with <u>or water features using recycled water;</u> [PROVIDES CLARITY BY UPDATING TO BE CONSISTENT WITH DEFINITION OF SLAS. SEE ISOR FOR DETAILS.]
- (4 6) identify type of mulch and application depth;
- $(\underline{5}\ 7)$ identify type and quantity of soil amendments;
- (6 8) identify type and surface areas of water features;
- (7 9) identify hardscapes (pervious and non-pervious);
- (<u>8</u> <u>10</u>) 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 per local agency 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 <u>492.16</u>. 490.1(a)(5) requirements.
- (<u>9</u> 11) identify any applicable rain harvesting or catchment technologies and their 24-hour retention or infiltration capacity, <u>if applicable</u>;
- (<u>10</u> 12) Identify any applicable graywater discharge piping, system components, and area(s) of distribution;
- (11) Designated insect habitat must be included identified in the landscape design plan as such.
- (12) The designer of record shall use a plant legend with plant photographs to make plants identifiable to an inspector. The legend must identify the plant by botanical name, common name or cultivar as specified in Division 18, Chapter 5, Article 7, Section 53481 of the Food and Agricultural Code. [REDUCES AMBIGUTIY AND PROVIDES CLARITY. SEE ISOR FOR DETAILS.]
- (13) 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
- (14) bear the signature of a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape the designer of record. (See Sections 5500.1, 5615, 5641.7, 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 Division 3, Chapter 3.5, Article 3, Sections 5640 through 5644 of the Business and Professions Code). [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (<u>b</u> 4) Plant <u>Material Selection</u> [REDUCES AMBIGUITY AND PROVIDES CLARITY BY RENAMING AND ORGANIZING THE REQUIREMENTS]
 - $(\underline{1}\ A)$ 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:

- $(\underline{2} +)$ The architectural guidelines of a common interest development, which include community apartment projects, condominiums, planned developments, and stock cooperatives, shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.
- (3 B) 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 492.7(a)(2)(D).
 - (A) Exceptions are allowed for hydrozones that use a mix of plant materials with low and moderate plant factors or moderate and high plant factors, as specified in Section 492.7(a)(2)(D) 493.2.2.(d)(7). [TEXT IS MOVED FROM ABOVE TO IMPROVE UNDERSTANDING.]
- (<u>4</u> €) High water use plants, characterized by a plant factor <u>range</u> of 0.7 to 1.0, are prohibited in street medians.
- (<u>5</u> D) <u>Turf_Turfgrass</u> is not allowed on slopes greater than 25% where the toe of the slope is adjacent to <u>an impermeable a non-pervious</u> hardscape and where 25% means 1 foot of vertical elevation change for every 4 feet of horizontal length (rise divided by run x 100 = slope percent). [REDUCES AMBIGUITY AND PROVIDES CLARITY, CONSISTENT USE OF TERMS IN MWELO.]
- (<u>6</u> A) Methods to achieve water efficiency shall include one or more of the following:
 - (A) 1. protection and preservation of-native species and natural vegetation;
 - (B) 3. selection of-plants based on local climate suitability, disease and pest resistance;
 - (C)-2. selection of-water-conserving plant, tree and turf-turfgrass species, especially local native plants;
 - (D) 4. Selection of trees based on applicable local tree ordinances or tree shading guidelines, and size at maturity as appropriate for the planting area; and
 - (E) 5. Selection of plants from local and regional landscape program recommended plant lists; [SEE ISOR FOR DETAILS.]
 - (F) 6. selection of plants from local Fuel Modification Plan Guidelines.
- (7 C) 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) 1. 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) 2. 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) 3. consider the solar orientation for plant placement to maximize summer shade and winter solar gain.

(c 2) Water Features

- (1 A) Recirculating water systems shall be used for water features.
- (2 B) Where available, recycled water shall be used for decorative water features.
- (<u>3</u> C) Surface area of a water feature shall use the high water use hydrozone plant factor in the water budget calculation.
- (4 D) Pool and spa covers are highly recommended. pursuant to subdivision (d) of Section 115921 of the Health and Safety Code. [TEXT ADDED TO INCLUDE HEALTH AND SAFETY CODE TO IMPROVE UNDERSTANDING.]

(d 3) Soil Preparation, Mulch and Amendments

- (<u>1</u>-A) 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 B) Soil amendments shall be incorporated according to recommendations of the soil management report and what is appropriate for the plants selected (see Section 492.5 493.1).
- (<u>3</u> C) For landscape installations, compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable pervious area shall be incorporated to a depth of six inches into the soil. Soils with greater than 6% organic matter in the top 6 inches of soil are exempt from adding compost and tilling.
- (4 D) A minimum three inch three-inch (3") layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf-turfgrass areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated.
 - (A) To provide habitat for beneficial insects and other wildlife, up to 5% of the landscape area may be left without mulch. Designated insect habitat must be included and identified in the landscape design plan-as such-(see Section 493.2.(a).(11)). [REDUCES AMBIGUTIY AND PROVIDES CLARITY.]
- (<u>5</u> ∓) The mulching portion of the seed/mulch slurry in hydro-seeded applications shall meet the mulching requirement in Section 493.2.(d).(4). [REDUCES AMBIGUITY BY INCLUDING SECTION REFERENCE.]
- (<u>6</u> €) Stabilizing mulching products shall be used on slopes that meet current engineering standards.
- (7-G) Organic mulch materials made from recycled or post-consumer 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 local Fuel Modification Plan Guidelines or other applicable local ordinances. (Public Resources Code

<u>Section 4291)</u> [REDUCES AMBIGUITY BY IMPROVING GRAMMAR. UNDERSTANDING IS IMPROVED BY INCLUDING SECTION REFERENCE.]

(A) 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.

NOTE: Authority cited: Section 65595, Sections 65596 and 65596.5 Government Code; and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Section Sections 65593 and 65596, Government Code; Section 1351, Civil Code; and section 11; Governor's Exec. Order No. B-29-15 (April 1, 2015).

§ 493.2.1 492.8. Grading Design Plan.

- (a) For the efficient use of water, grading Grading of a project site shall be designed to minimize soil erosion, runoff, and water waste. A grading plan shall be submitted by the project applicant as part of the Landscape Documentation Package. A comprehensive grading plan prepared by a civil engineer for other local agency permits satisfies this requirement. [TEXT IS MOVED FROM (1) BELOW]
 - (1) The project applicant shall submit a <u>A</u> landscape grading plan that indicates finished configurations and elevations of the landscape area including:
 - (A) height of graded slopes;
 - (B) drainage patterns;
 - (C) pad elevations;
 - (D) finish grade; and
 - (E) stormwater retention improvements, if applicable.
 - (2) To prevent excessive erosion and runoff, it is highly recommended that project applicants:
 - (A) grade so that all irrigation and normal rainfall remains within property lines and does not drain on to non-permeable non-pervious hardscapes;
 - (B) avoid disruption of natural drainage patterns and undisturbed soil; and
 - (C) avoid soil compaction in landscape areas.
 - (3) 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.

NOTE: Authority cited: Section 65595, Sections 65596 and 65596.5 Government Code. Reference: Section Sections 65593, 65596, and 65596.5 Government Code.

§ <u>493.2.2</u> 492.7. Irrigation Design Plan.

(a) 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.

(b) Irrigation System Efficiency [REDUCES AMBIGUITY AND PROVIDES CLARITY BY RENAMING AND ORGANIZING THE EXISTING REQUIREMENTS.]

- (1 L) The irrigation system must be designed and installed to meet, at a minimum, the irrigation efficiency criteria as described in Section 492.4 493.5 regarding the Maximum Applied Water Allowance.
- (<u>2</u> a) For the purpose of determining Estimated Total Water Use, average irrigation system efficiency is assumed to be:
 - (A) 0.75 for overhead spray devices irrigation systems and [REDUCES AMBIGUITY, CONSISTENT USE OF TERMS IN THE MWELO.]
 - (B) 0.81 for drip system devices irrigation systems.
- (3 Q) Head to head coverage is recommended. However, sprinkler Sprinkler head spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations. Head to head Head-to-head coverage is recommended. [REORGANIZATION OF CONTENT TO DESCRIBE REQUIREMENT FOLLOWED BY GUIDANCE AND IMPROVED GRAMMAR.]
- (<u>c</u> b) 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 emission devices, moisture sensing devices, rain switches sensors, quick couplers, pressure regulators regulating devices, and backflow prevention devices; [REDUCES AMBIGUITY AND PROVIDES CLARITY, CONSISTENT USE OF TERMS IN THE MWELO.]
 - (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 the emission devices controlled by each station; [REDUCES AMBIGUTIY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (5) identify special landscape areas irrigated with and water features using recycled water irrigation systems as specified in Section 492.14 490.1.(a).(3); [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (<u>6</u> 12) identify any applicable graywater discharge piping, system components, and <u>landscape area(s) areas</u> of <u>distribution</u> where graywater is <u>distributed</u>; [REDUCES AMBIGUTIY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (<u>7</u>-F) On the landscape design plan and irrigation design plan, hydrozone areas shall be designated by number, letter, or other designation <u>as identified on the landscape design plan</u>. On the irrigation design plan, designate <u>Designate</u> the

areas irrigated by each valve, and assign a number to each valve. Use this valve number in using the Hydrozone Information Table Water Efficient

Landscape Worksheet (see Appendix B Section A). This table can also assist with the irrigation audit and programming the controller. [REDUCES

AMBIGUTIY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]

- (A) Each valve shall irrigate a hydrozone, or part of a hydrozone, with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use. [CLARIFICATION. SEE ISOR FOR DETAILS.]
- (8 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
- (9 7) the signature of a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or any other person authorized to design an irrigation system the designer of record. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 Division 3, Chapter 3.5, Article 3, Sections 5640 through 5644 of the Business and Professions Code, Section 832.27 of Title16 of the California Code of Regulations, and Section 6721 of the Food and Agricultural Code.)
 [REDUCES AMBIGUTIY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]

(d 2) Hydrozone General Design Criteria

- (1-F) Backflow prevention devices shall be required to protect the water supply from contamination by the irrigation system as specified in Chapter 6 of the California Plumbing Code. A project applicant shall refer to the applicable local agency code (i.e., public health) for additional backflow prevention requirements.
- (2 ₭) The design of the irrigation system shall conform to the hydrozones of the landscape design plan.
- (<u>3</u> B) Sprinkler heads and other emission Emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.
- (4 C) Where feasible, trees shall be placed on separate valves stations from hydrozones that include shrubs, groundcovers, and turf turfgrass 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. [REDUCES AMBIGUTIY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING AND CONSISTENT USE OF TERMS IN THE MWELO.]
- (5 ♥) In mulched planting areas, the use of low volume irrigation systems is required to maximize water infiltration into the root zone. ITEXT IS MOVED FROM WITHIN DEFINITION OF LOW-VOLUME IRRIGATION, REDUCES AMBIGUITY AND IMPROVES UNDERSTANDING.]

- (<u>6</u> ∓) Areas less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no <u>water waste</u>, runoff, or overspray.
- (7 D) Individual hydrozones that <u>use a mix plants of with low and moderate and low water use plant factors</u>, or moderate and high water use plant factors, may be allowed if the plant factor used in the estimated water use (EWU) calculation is either: [REDUCES AMBIGUTIY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (A) 1.plant factor calculation is based on the proportions proportion of the respective plant water uses and their plant factor factors; or
 - (B) 2. the plant factor of the higher highest water using plant factor is used for calculations.
- (8 €) Individual hydrozones that <u>use a</u> mix <u>of plants with</u> high and low water use plants plant factors shall not be permitted. [REORGANIZATION AND CLARIFICATION]
- (9 J) Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems.
- (10 U) Overhead irrigation shall not be permitted within 24 inches of any non-permeable non-pervious surface. Allowable irrigation within the setback from non-permeable surfaces may include drip <u>irrigation</u>, <u>drip line</u>, 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: [REDUCES AMBIGUTIY AND PROVIDES CLARITY BY USING CONSISTENT TERMS IN THE MWELO.]
 - (A) 1. the landscape area is adjacent to permeable pervious surfacing and no runoff occurs; or
 - (B) 2. the adjacent non-permeable non-pervious surfaces are designed and constructed to drain entirely to landscaping; or
 - (C) 3. 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 492.7 (a)(1)(I) the prevention of water waste. Prevention of overspray and runoff must be confirmed during the irrigation audit. [REDUCES AMBIGUITY, IMPROVE CLARITY]
- (11 \(\forall \) Slopes greater than 25% shall not be irrigated with an irrigation system with a using an application rate exceeding 0.75 inches per hour.
 - (A) 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.
- (12 N) It is highly recommended that the project applicant or local agency 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.

(e) Irrigation System Components

(1) Meters

- (A) 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 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:
- 1. a customer service meter dedicated to landscape use provided by the local water purveyor; or
- 2. a privately owned meter or submeter. [REDUCES AMBIGUITY ABOUT METER REQUIREMENTS]
- (A) Pursuant to California Water Code Section 535, a water purveyor shall install dedicated irrigation meters for new retail water service to a property with more than 5,000 sq.ft. of irrigated landscape excluding single-family residential connections and connections for the commercial production of agricultural crops or livestock. [REDUCES AMBIGUTIY AND PROVIDES CLARITY BY USING CONSISTENT TERMS IN THE MWELO. PLEASE SEE ISOR FOR MORE DETAIL.]
- (B) For the purposes of this ordinance, a submeter or dedicated irrigation meter shall be installed and may be used to assist with leak detection and water management for: [REDUCES AMBIGUITY AND PROVIDES CLARITY]

 1. non-residential landscapes with an irrigated landscape of 1,000 sq.ft. or
 - non-residential landscapes with an irrigated landscape of 1,000 sq.ft. or more.
- residential landscapes with an irrigated landscape of 5,000 sq. ft. or more.
 Water Pressure
 - (A) 2. 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.
 - (B) 1. 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.
 - (C) If the water pressure is below or exceeds the recommended pressure of the specified irrigation emission devices, the installation of a pressure regulating device pressure-regulating devices is required to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.

(3) Water Waste Prevention Equipment [ADDED HEADING TO PROVIDE CLARITY AND IMPROVE UNDERSTANDING BY ORGANIZING EXISTING REQUIREMENTS.]

- (A I) 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 water waste. [TEXT MOVED INTO ADDED DEFINITION FOR WATER WASTE.]
- (<u>B</u> <u>H</u>) 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.
- (C €) 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 in the pressurized pipeline that delivers water from the water source to the valve or outlet) or routine repair. [MOVED FROM THE PREVIOUS DEFINITION OF MAIN LINE INTO THE REGULATION TEXT.]
- (<u>D</u> S) Check valves or anti-drain valves are required on all sprinkler heads where low point drainage could occur.
- $(\underline{E} \ R)$ 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 turfgrass.
- (<u>F</u> ⊆) 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 5000 sq. ft. or larger.

(4) Emission Devices [ADDED HEADING TO PROVIDE CLARITY AND IMPROVE UNDERSTANDING BY ORGANIZING EXISTING REQUIREMENTS.]

- (A P) Sprinkler heads and other emission Emission devices shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.
- (<u>B</u> <u>M</u>) 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) 802-20142020 "Landscape Irrigation Sprinkler and Emitter Standard,.
 - All sprinkler heads overhead irrigation systems installed in the landscape must document a distribution uniformity low quarter distribution uniformity of 0.65 or higher using the protocol defined in ASABE/ICC 802-20142020. [CLARIFIES CONFUSING TEXT]

- (C) Non-rotating spray sprinkler bodies, defined by California Code of Regulations Title 20 Section 1602, are required to meet standards described in California Code of Regulations Title 20, Section 1605.3(x)(1).
- (5) System Controls [ADDED HEADING TO PROVIDE CLARITY AND IMPROVE UNDERSTANDING BY ORGANIZING EXISTING REQUIREMENTS.]
 - (A B) Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data utilizing non-volatile memory shall be required for scheduling irrigation scheduling in all irrigation systems events.
 - (<u>B</u> D) 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.

NOTE: Authority cited: Section 65595, Sections 65596 and 65596.5 Government Code; and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Section Sections 65593, 65596, and 65596.5 Government Code.; and section 11, Governor's Exec. Order No. B-29-15 (April 1, 2015).

§ 493.3 492.4. Water Efficient Landscape Worksheet.

- (a) A project applicant shall complete the Water Efficient Landscape Worksheet in Appendix B A which contains 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. The ETAF for a landscape project is based on the plant factors and irrigation methods selected. The Maximum Applied Water Allowance is calculated based on the maximum ETAF allowed (0.55 for residential areas and 0.45 for non-residential areas) and expressed as annual gallons required. The Estimated Total Water Use (ETWU) is calculated based on the plants used and irrigation method selected for the landscape design. compares the landscape project's Estimated Total Water Use (ETWU) with the Maximum Applied Water Allowance (MAWA). ETWU must be equal to or below the MAWA. [REORGANIZATION OF CONTENT UNTANGLES THE CONFLATED ETAF DESCRIPTION ASSOCIATED WITH ETWU AND MAWA. REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (1) The MAWA is calculated based on the maximum ETAF allowed for the landscape project (0.55 for residential areas and 0.45 for non-residential areas) and expressed as annual gallons required allowed. The maximum ETAF allowed is:
 - (A) 0.55 for residential <u>regular landscape</u> areas. [CONSISTENT WITH ADDED DEFINITIONS, REDUCES AMBIGUITY AND PROVIDES CLARITY.]

- (B) 0.45 for non-residential regular landscape areas.
- (<u>C</u>5) ETAF 1.0 for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0.
- (2) The ETWU is the sum of estimated water use (EWU) for each hydrozone. The evapotranspiration adjustment factor (ETAF) for each hydrozone is based on the plant factor and the average irrigation system efficiency. EWU is calculated using the ETAF, regular landscape area areas, and the special landscape areas. [REORGANIZATION OF CONTENT FROM ABOVE REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
- (<u>3</u> 4) In calculating the Maximum Applied Water Allowance and Estimated Total Water Use, a project applicant shall use the ETo values from the Reference Evapotranspiration Table in Appendix A <u>C</u>. For geographic areas not covered in Appendix A <u>C</u>, use data from other cities located nearby in the same reference evapotranspiration zone, as found in the CIMIS Reference Evapotranspiration Zones Map, Department of Water Resources, 1999.
- (b) Water budget calculations shall adhere to the following requirements:
 - (1) The plant factor used shall be from WUCOLS or from horticultural researchers with academic institutions or professional associations as approved by the California Department of Water Resources (DWR). The plant factor ranges from are: [REORGANIZATION OF CONTENT PROVIDES CLARITY AND IMPROVES UNDERSTANDING OF MWELO.]
 - (A) 0 to 0.1 for very low water using plants,
 - (B) 0.1 to 0.3 for low water use plants,
 - (C) from 0.4 to 0.6 for moderate water use plants.
 - (D) and from 0.7 to 1.0 for high water use plants.
 - (2) All water features shall be included in the use the high water use hydrozone plant factor in the water budget calculations. [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (3) and temporarily <u>Temporarily</u> irrigated areas shall be included in <u>use</u> the low water use hydrozone plant factor in the water budget calculations. [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (4-3) All Special Landscape Areas (SLA) shall be identified in the Landscape Design Plan (Section 493.2) and the Irrigation Design Plan (Section 493.2.2) and their water use calculated as shown in Appendix B A. [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (<u>5</u> a) A local agency may consider Effective Precipitation (25% of annual precipitation) in tracking water use and may use the following equation to calculate Maximum Applied Water Allowance:
 - (A) Residential landscapes: [CONSISTENT EQUATION WITH MAWA DEFINITION]
 - MAWA = (ETo Eppt) \underline{x} (0.62) \underline{x} [(0.55 x LA RLA) + (0.45 1.0 x SLA)] for residential areas.

(B) Non-residential landscapes:

MAWA = (ETo - Eppt) \underline{x} (0.62) \underline{x} [(0.45 x LA RLA) + (0.55 1.0 x SLA)] for non-residential areas.

NOTE: Authority cited: Section 65595, Sections 65596 and 65596.5 Government Code; and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Section Sections 65593, 65596, and 65596.5 Government Code; and section 11, Governor's Exec. Order No. B-29-15 (April 1, 2015).

§ <u>493.4</u> <u>492.10</u>. Irrigation Scheduling.

- (a) For the efficient use of water, all <u>All</u> irrigation schedules shall be developed, managed, and evaluated to utilize the minimum amount of water required to maintain plant health <u>and prevent water waste</u>. Irrigation schedules shall meet the following criteria:
 - (1) Irrigation scheduling shall be regulated by automatic irrigation controllers.
 - (2 4) Parameters used to set the automatic <u>irrigation</u> controller shall be developed and submitted <u>with the Certificate of Completion</u> for each of the following: [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (A) the plant establishment period;
 - (B) the established landscape; and
 - (C) temporarily irrigated areas.
 - (3 5) Each irrigation schedule shall consider for each station all of the following parameters that apply: [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (A) irrigation interval (days between irrigation events);
 - (B) irrigation run times (hours or minutes per irrigation event to avoid runoff <u>and prevent water waste)</u>;
 - (C) number of cycle starts required for each irrigation event to avoid runoff and prevent water waste;
 - (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 distribution uniformity or irrigation efficiency setting.
 - (4_2) Overhead irrigation systems shall be scheduled between 8:00 p.m. and 10:00 a.m. unless weather conditions prevent it. If allowable hours of irrigation differ from the local water purveyor If the local agency or water purveyor has watering windows that are different or longer, the stricter of the two shall apply. Operation of the irrigation system outside the normal watering window

is allowed for auditing and system maintenance. [REDUCES AMBIGUITY AND PROVIDES CLARITY]

- (5 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). [REDUCES AMBIGUITY AND PROVIDES CLARITY TO THE EXISTING REQUIREMENTS THROUGH REORGANIZATION.]
 - (A) Actual irrigation schedules shall be regulated by automatic irrigation controllers using current reference evapotranspiration data (e.g., CIMIS) or soil moisture sensor data.
 - (B) For implementation of the irrigation schedule, particular attention must be paid to carefully consider the irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that applied water meets the Estimated Total Water Use.

NOTE: Authority cited: Section 65595, Sections 65596 and 65596.5 Government Code. Reference: Section Sections 65593, 65596, and 65596.5 Government Code.

§ 493.5 492.11. Landscape and Irrigation Maintenance Schedule.

- (a) Landscapes shall be maintained to ensure water use efficiency. A regular landscape and irrigation maintenance schedule shall be submitted with the Certificate of Completion. [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
- (b) 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 turfgrass areas; topdressing with compost, replenishing mulch; fertilizing; pruning; weeding in all landscape areas, and removing obstructions to emission devices.
 - (1) Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.
- (c) Repair of all irrigation equipment shall be done with <u>replacement parts for</u> the originally installed components or their equivalents or with components with greater efficiency that improve the average irrigation system efficiency.

 [REDUCES AMBIGUITY AND PROVIDES CLARITY]
- (d) A project applicant is encouraged to implement established landscape industry sustainable Best Practices for all landscape maintenance activities.

NOTE: Authority cited: Section 65595, Sections 65596 and 65596.5 Government Code; and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Section Sections 65593, 65596, and 65596.5 Government Code.; and section 11, Governor's Exec. Order No. B-29-15 (April 1, 2015).

§ <u>493.6</u> 492.12. Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.

- (a) All landscape irrigation audits shall be conducted by a local agency landscape irrigation auditor or a third party certified landscape irrigation auditor. Landscape irrigation audits shall not be conducted by the person who designed the landscape or installed the landscape. [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
- (b) In large projects or projects with multiple landscape installations (i.e. production home developments) aggregated landscape projects (i.e. production home developments) an auditing rate of 1 in 7 individual lots or approximately 15% of the total number of individual lots will satisfy this requirement.
- (c) For new construction and rehabilitated landscape projects installed after December 1, 2015, as described in Section 490.1 491:
 - (1) the project applicant shall submit an irrigation audit report with the Certificate of Completion to the local 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;
 - (2) the local agency shall administer 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.

NOTE: Authority cited: Section 65595, Sections 65596 and 65596.5 Government Code; and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Section Sections 65593, 65596, and 65596.5 Government Code.; and section 11, Governor's Exec. Order No. B-29-15 (April 1, 2015).

§ 494. 492.9. Certificate of Completion Package.

- (a) Prescriptive Compliance Option. The Certificate of Completion Package (see Appendix B for a sample certificate) shall include: [REDUCES AMBIGUITY BY ORGANIZING AND CLARIFYING THE CERTIFICATE OF COMPLETION PACKAGE REQUIREMENTS FOR EACH COMPLIANCE OPTION.]
 - (1) a certificate of completion limited to: [TEXT BELOW IS MOVED FROM APPENDIX D]
 - (A) Project Information Sheet (Appendix B Element 1)
 - (B) certificate of installation Certificate of Installation according to the Landscape Documentation Package (Appendix B Element 2)
 - (C) irrigation schedule <u>addressing applicable parameters as described in Section</u> 493.4(a)(3); (Appendix B Element 4):

- (D) schedule of landscape and irrigation maintenance schedule (Appendix B Element 5).
- (<u>b</u> a) <u>Performance Compliance Option.</u> The Certificate of Completion <u>Package</u> (see Appendix <u>C</u> <u>B</u> for a sample certificate) shall include the following six (6) elements:
 - (1) project information sheet that contains: [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (A) date;
 - (B) project name;
 - (C) project applicant name, telephone, and mailing address;
 - (D) project address and location; and
 - (E) property owner name, telephone, and mailing address;
 - (2) certification by either the <u>designer of record</u> 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 (see Section 491.4); [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING OF MWELO.]
 - (A) where there have been significant changes made in the field during construction, these "as-built" or record drawings shall be included with the certification;
 - (B) A diagram of the irrigation plan showing hydrozones shall be kept with the <u>automatic</u> irrigation controller for subsequent management purposes.
 - (3-6) soil analysis management report, if not submitted with Landscape Documentation Package, and documentation verifying implementation of soil report recommendations (see Section-492.5 493.1).
 - (<u>4</u> <u>3</u>) irrigation scheduling parameters used to set the <u>automatic irrigation</u> controller (see Section-<u>492.10</u> <u>493.4</u>);
 - (5 4) landscape and irrigation maintenance schedule (see Section 492.11 493.5);
 - (6 5) irrigation audit report (see Section 492.12 493.6); and
- (c b) The project applicant shall:
 - (1) submit the signed Certificate of Completion <u>Package</u> to the local agency for review;
 - (2) ensure that copies of the approved Certificate of Completion <u>Package</u> are submitted to the local water purveyor and property owner or <u>his or her their</u> designee.
- (d e) The local agency shall:
 - (1) receive the signed Certificate of Completion Package from the project applicant;
 - (2) approve or deny the Certificate of Completion <u>Package</u>. If the Certificate of Completion <u>Package</u> is denied, the local agency shall provide information to the project applicant regarding reapplication, appeal, or other assistance.

NOTE: Authority cited: Section 65595, Sections 65596 and 65596.5 Government Code.; and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015).

Reference: Section Sections 65596 and 65596.5. Government Code.; and section 11, Governor's Exec. Order No. B-29-15 (April 1, 2015).

§ 495. Reporting.

- (a) Local agencies shall report on implementation and enforcement by December 31, 2015 January 31st of each year. Local agencies responsible for administering individual ordinances shall report on their updated ordinance, while those agencies developing a regional ordinance shall report on their existing ordinance. Those agencies crafting a regional ordinances shall also report on their new ordinance by March 1, 2016. Subsequently, reporting for all agencies will be due by January 31st of each year. Reports shall be submitted to the Department of Water Resources. [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
- (b) Local agencies are to shall submit reports to the Department of Water Resources and address the following: [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (1) State whether you are adopting a single agency ordinance or a regional agency alliance ordinance, and the date of adoption or anticipated date of adoption.
 - (2 4) State the entity responsible for implementing the ordinance.
 - (3 2) Define the reporting period. The reporting period shall commence on December 1, 2015 and the end on December 28, 2015. For local agencies crafting regional ordinances with other agencies, there shall be an additional reporting period commencing on February 1, 2016 and ending on February 28, 2016. In subsequent years, all local agency reporting will be for the calendar year. The reporting period shall be for the previous calendar year, January 1 to December 31. [REDUCES AMBIGUITY, PROVIDES CLARITY, AND IMPROVES UNDERSTANDING.]
 - (4 3) State if using a locally modified Water Efficient Landscape Ordinance (WELO) or the MWELO. If using a locally modified WELO, <u>describe</u> how is it different than MWELO, is it at least as efficient as MWELO, and are there any exemptions specified? [REDUCES AMBIGUITY AND PROVIDES CLARITY.]
 - (5) State number and types of <u>completed</u> projects subject to the ordinance during the specified reporting period. [REDUCES AMBIGUITY AND PROVIDES CLARITY.]
 - (6) State the total <u>landscape</u> area (in square feet or acres) subject to the ordinance over the reporting period, if available. [TEXT IS ADDED TO BE CONSISTENT WITH TERMS USED IN MWELO.]
 - (7) Provide the number of new housing residential starts, new commercial non-residential projects, and landscape retrofits rehabilitated landscapes during the reporting period. [TEXT IS ADDED TO BE CONSISTENT WITH TERMS USED IN MWELO.]

- (8) Describe the procedure for review of projects subject to the ordinance. [REDUNDANT WITH EXISTING REQUIREMENTS LISTED BELOW.]
- (<u>8</u> 10) Describe enforcement measures.
- (9) Describe actions taken to verify compliance.:
 - (A) Is a plan check performed; if so, by what entity?
 - (B) Is a site inspection performed; if so, by what entity?
 - (C) Is a post-installation audit required; if so, by whom?
- (10 12) Describe educational and other needs to properly apply the ordinance.
- (11) Explain challenges to implementing and enforcing the ordinance.

NOTE: Authority cited: Section 65595, Sections 65596 and 65596.5 Government Code; and sections 11 and 30, Governor's Exec. Order No. B-29-15 (April 1, 2015). Reference: Section Sections 65596, and 65596.5 Government Code.; and section 11, Governor's Exec. Order No. B-29-15 (April 1, 2015).

Exhibit B is a figure showing how the contents from the 2015 model water efficient landscape ordinance (2015 MWELO) are reorganized into the draft 2023 MWELO Table of Contents. This visualization of the reorganization intends to aid the reader with understanding how the existing requirements of MWELO have been reorganized to make the ordinance easier to understand. The reorganization of Appendices is not shown because their reorganization is straightforward as described in the Initial Statement of Reasons. The proposed amendments do not change existing MWELO requirements.

Many content headings and their requirements in the 2015 MWELO are reorganized within the draft 2023 MWELO. A visualization showing the entire reorganization of the contents is not shown as the exhibit would become overly complex and difficult to understand. However, this exhibit simply shows how the MWELO has been reorganized to improve understanding and implementation.

The figure uses the following symbols:

- Sections with circles next to the section number are moved into Section 490.1
 General Provisions as described in the Initial Statement of Reasons (ISOR).
- Sections with triangles have moved specific requirements from within the previous section into section 490.1 General Provisions as described in the ISOR.
- Sections with a blue diamond have moved the requirements within the previous section into the sections shown using black solid lines and as described in the ISOR.
- Sections with stars next to the section number are either new or renamed section headings to reduce ambiguity, provide clarity, and improve MWELO's understanding.
- A transparent blue box around sections 493.1 through 493.6 in the 2023 MWELO
 Table of Contents identifies that these subsections are associated with the §493
 Performance Compliance Option and make the compliance option requirements
 easier to understand.

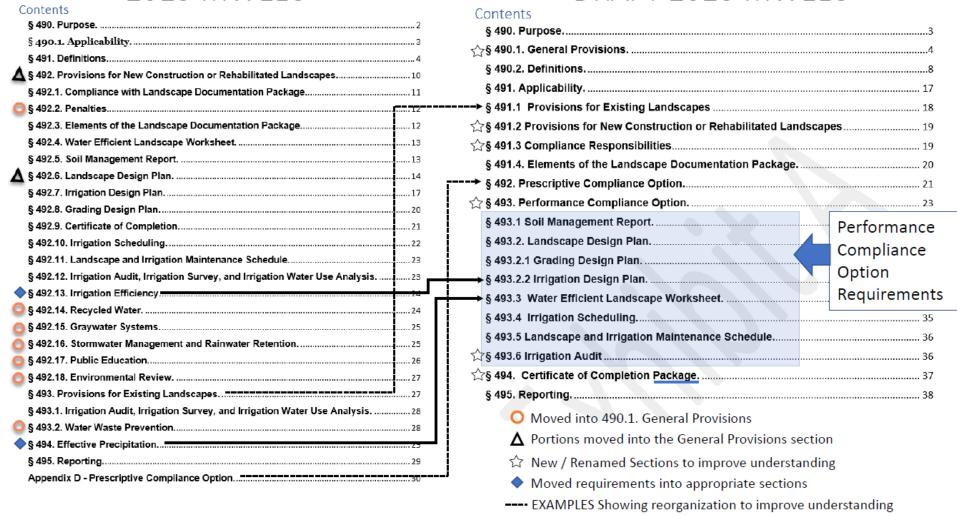
Two examples blow show how the 2015 MWELO contents have been reorganized using dashed black lines as follows:

- In the 2015 MWELO, Section 493. Provisions for Existing Landscapes is moved to §491.1 in the draft 2023 MWELO.
- In the 2015 MWELO, Appendix D. Prescriptive Compliance Option is moved to §492 in the draft 2023 MWELO.

The word "Package" in Section 494 is underlined to highlight that this text was added to improve understanding as described in the ISOR.

2015 MWELO

DRAFT 2023 MWELO



This exhibit provides a more in-depth description of why the revisions made to the Maximum Applied Water Allowance (MAWA) equation as shown in re-numbered §490.2(yy), §491.1(a)(1)(A), §493.3(b)(5), and in re-numbered Appendix A do not change the calculation of the maximum applied water allowance.

In the 2015 MWELO, (and in: §491(tt), §493.1(a)(1), §494, and in Appendix B) the MAWA equation is shown as:

$$MAWA = (ETo) \times (0.62) \times [(ETAF \times LA) + ((1-ETAF) \times SLA)]$$

In the 2015 MWELO equation the landscape area (LA) measurement includes the special landscape area (SLA) measurement. The previous equation accounts for the additional water allowance to SLAs by having a separate term where the maximum evapotranspiration adjustment factor (ETAF) allowed for SLAs, which was partially accounted as part of the LA ETAF, from the higher maximum ETAF allowance given to SLAs as defined.

Using an example of a residential landscape in Dixon, CA

ETo = 52.10"/yr. (Dixon, Ca)

Maximum ETAF allowed = 0.55 for residential landscapes

0.62 = converts acre-inches per acre per year to gallons per square foot per year

Regular Landscape Area (RLA) = 2,050 square feet; the term "regular landscape area" is shown in the 2015 MWELO Appendix B but was not a defined term.

Special Landscape Area (SLA) = 150 square feet (fruit tree orchard)

Landscape Area (LA) = LA = RLA + SLA = 2,050 +150 = 2,200 square feet

Step 1: MAWA = $(52.1) \times (0.62) \times [(0.55 \times 2,200) + ((1 - 0.55) \times 150)]$

Step 2: MAWA = $(52.1) \times (0.62) \times [(0.55 \times 2,200) + (0.45 \times 150)]$

Step 3: MAWA = $(52.1) \times (0.62) \times [(1,210) + (67.5)]$

Step 4: MAWA = 41,266 gallons allowed per year

For individuals that are not MWELO experts, the 2015 MWELO MAWA equation is confusing because you would need to know that SLAs are included as part of the measured LA, and that the ((1-ETAF) x SLA) is simply a correction to give the 1.0 maximum ETAF allowance to SLAs. The ambiguity in this equation is addressed with the draft MWELO amendments and is described below.

In the proposed changes to the MAWA equation the definitions of Regular Landscape Area (§490.2(uuu)), Landscape Area (§490.2(pp)), and Special Landscape areas are clarified as being separate and distinctly measured areas of the landscape project. This does not change how the MAWA is calculated, the clarification reduces ambiguity and

EXHIBIT C – EXAMPLE MAWA CALCULATION MWELO AMENDMENT

makes it easier to understand. Using the same example landscape project used with the 2015 MAWA equation, the revised equation is proposed as:

Using the same residential landscape example from above:

ETo = 52.10"/yr. (Dixon, Ca)

Maximum ETAF allowed = 0.55 for residential landscapes

0.62 = converts acre-inches per acre per year to gallons per square foot per year

Regular Landscape Area (RLA) = 2,050 square feet

Special Landscape Area (SLA) = 150 square feet (fruit tree orchard)

Step 1: MAWA = $(52.1) \times (0.62) \times [(0.55 \times 2,050) + (1.0 \times 150)]$

Step 2: MAWA = $(52.1) \times (0.62) \times [1,127.5 + 150]$

Step 3: MAWA = 41,266 gallons allowed per year

2015 MWELO - MAWA = 41,266 gallons allowed per year

Draft 2023 MWELO – MAWA = 41,266 gallons allowed per year