

**FINAL EXPRESS TERMS  
FOR  
PROPOSED BUILDING STANDARDS  
OF THE  
CALIFORNIA BUILDING STANDARDS COMMISSION  
  
REGARDING PROPOSED CHANGES TO  
CALIFORNIA GREEN BUILDING STANDARDS CODE  
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11**

(The State agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific. (PART 1 – ADMINISTRATIVE CODE)

**LEGEND FOR FINAL EXPRESS TERMS (combination of 45-day and 15-day changes)**

1. For 45-day and 15-Day changes, California amendments or code language being modified appears underlined.
2. For 45-day and 15-Day changes, repealed text appears in ~~strikeout~~.
3. Notation: Authority and reference citations are provided at the end of each chapter.

**FINAL EXPRESS TERMS**

**ITEM 1 – DEFINITIONS**

**CHAPTER 2 - DEFINITIONS**

~~**HYDROZONE.** A portion of the landscaped area having plants with similar water needs.~~

~~**LANDSCAPE (PLANT) COEFFICIENT (KI).** The product of the species factor multiplied by the density factor and the microclimate factor.  $(KI = K_s \times K_d \times K_{mc})$  The landscape coefficient is used in the landscape water budget calculation. (UCCE, 2000)~~

~~**MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELo) [BSC]** The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatological parameters.  
A California regulation commencing with Section 490 of Chapter 2.7, Division 2, Title 23, California Code of Regulations. The MWELo regulation establishes a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects.~~

~~**REFERENCE EVAPOTRANSPIRATION (ETo).** [BSC] The estimated rate of evapotranspiration from a standardized surface of well watered, actively growing cool season four to seven inch (10.16 to 17.78 cm) turfgrass with sufficient density to fully shade the soil. The water needs of a landscape planting can be calculated by multiplying the Landscape Coefficient [KI] and Reference Evapotranspiration (ETo).~~

~~**WATER BUDGET.** Is the estimated total landscape irrigation water use which shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Water Efficient Landscape Ordinance (MWELo).~~

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## **SECTION 5.302 DEFINITIONS**

### **5.302.1 Definitions** The following terms are defined in Chapter 2.

GRAYWATER.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELo).

POTABLE WATER.

RECYCLED WATER

~~REFERENCE EVAPOTRANSPIRATION (ET<sub>o</sub>).~~

SUBMETER.

~~WATER BUDGET.~~

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#### **Notation**

Authority: Health and Safety Code Sections 18930.5, 18934.5 and 18938 (b).

Reference: Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.

## **ITEM 2 – MWELo POINTERS**

### **CHAPTER 5- NONRESIDENTIAL MANDATORY MEASURES**

#### **DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION**

#### **SECTION 5.304 OUTDOOR WATER USE**

~~**5.304.1 Water budget.** A water budget shall be developed for landscape irrigation use that installed in conjunction with a new building or an addition or alteration conforms to the local water efficient landscape ordinance or to the California Department of Water Resources Model Water Efficient Landscape Ordinance where no local ordinance is applicable.~~

~~**Note:** Prescriptive measures to assist in compliance with the water budget are listed in Sections 492.5 through 492.8, 492.10 and 492.11 of the ordinance, which may be found at:  
<http://www.water.ca.gov/wateruseefficiency/docs/WaterOrdSec492.cfm>.~~

~~**5.304.1 Scope.** The provisions of Section 5.304 Outdoor Water Use reference the mandatory Model Water Efficiency Landscape Ordinance (MWELo) contained within Chapter 2.7, Division 2, Title 23, California Code of Regulations.~~

~~**5.304.2 Outdoor water use in landscape areas equal to or greater than 500 square feet. [BSC]**  
When water is used for outdoor irrigation for new construction projects with an aggregate landscape area equal to or greater than 500 square feet requiring a building or landscape permit, plan check or design review, one of the following shall apply:~~

1. A local water efficient landscape ordinance that is, based on evidence in the record, at least as effective in conserving water as the updated model ordinance adopted by the Department of Water Resources (DWR) per Government Code Section 65595 (c).
2. The California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELo) commencing with Section 490 of Chapter 2.7, Division 2, Title 23, California Code of Regulations.

**5.304.3 Outdoor water use in rehabilitated landscape projects equal to or greater than 2,500 square feet.** Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review shall comply with Section 5.304.2, items 1 or 2.

**5.304.4 Outdoor water use in landscape areas of 2,500 square feet or less.** Any project with an aggregate landscape area of 2,500 square feet or less may comply with the performance requirements of MWELo or conform to the prescriptive compliance measures contained in MWELo's Appendix D.

**5.304.5 Graywater or rainwater use in landscape areas.** For projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 2,500 square feet 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).

**Notes:**

1. DWR's Model Water Efficient Landscape Ordinance, definitions and supporting documents are available at the following link: <http://water.ca.gov/wateruseefficiency/landscapeordinance/> [verify link with DWR]
2. A water budget calculator is available at the following link: <http://water.ca.gov/wateruseefficiency/landscapeordinance/> [verify link with DWR]
3. The MWELo prescriptive compliance measure Appendix D may be found at the following link: [verify link with DWR] In addition, a copy of MWELo Appendix D may be found in Chapter 8 of this code.

**Notation**

Authority: Health and Safety Code Sections 18930.5, 18934.5 and 18938 (b).

Reference: Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.

## **ITEM 3 – CONTROLLERS, SENSORS AND METERS**

**~~5.304.2 Outdoor potable water use.~~**

~~For new water service or for addition or alteration requiring upgraded water service for landscaped areas of at least 1,000 square feet but not more than 5,000 square feet (the level at which *Water Code* §535 applies), separate submeters or metering devices shall be installed for outdoor potable water use.~~

**~~5.304.3 Irrigation design.~~**

~~In new nonresidential construction or building addition or alteration with at least 1,000 but not more than 2,500 square feet of cumulative landscaped area (the level at which the MWELo applies), install~~

~~irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.~~

**5.304.3.1 Irrigation controllers.**

~~Automatic irrigation system controllers installed at the time of final inspection shall comply with the following:~~

- ~~1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.~~
- ~~2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.~~

~~**Note:** More information regarding irrigation controller function and specifications is available from the Irrigation Association.~~

**Notation**

Authority: Health and Safety Code Sections 18930.5, 18934.5 and 18938 (b).

Reference: Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.

**ITEM 4 – VOLUNTARY MEASURES**

**APPENDIX A5- NONRESIDENTIAL VOLUNTARY MEASURES**

**DIVISION A5.3 WATER EFFICIENCY AND CONSERVATION**

**SECTION A5.302 DEFINITIONS**

**A5.302.1 Definitions.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

**COMPACT DISHWASHER.**

**HYDROZONE.**

**LANDSCAPE (PLANT) COEFFICIENT [KL].**

**MODEL WATER EFFICIENT LANDSCAPE ORDINANCE.**

**PLANTS.**

**POTABLE WATER.**

**RECYCLED WATER.**

**REFERENCE EVAPOTRANSPIRATION (ET<sub>o</sub>).**

**STANDARD DISHWASHER.**

**SUBMETER.**

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**SECTION A5.304 OUTDOOR WATER USE**

**A5.304.1 ~~A5.304.1.1~~ Reserved.**

**A5.304.2 ~~A5.304.2.1~~ Outdoor potable water use.**

For new water service not subject to the provisions of *Water Code* Section 535, separate meters or submeters shall be installed for indoor and outdoor potable water use for landscaped areas of at least 500 square feet but not more than 1,000 square feet (the level at which Section 5.304.2 applies)

**A5.304.4 ~~Potable water reduction.~~**

~~Provide water efficient landscape irrigation design that reduces the use of potable water beyond the initial requirements for plant installation and establishment in accordance with Section A5.304.4.1 or A5.304.4.2. Calculations for the reduction shall be based on the water budget developed pursuant to Section 5.304.1.~~

**A5.304.4.1 ~~Tier 1.~~**

~~Reduce the use of potable water to a quantity that does not exceed 60 percent of ETo times the landscape area.~~

**A5.304.4.2 ~~Tier 2.~~**

~~Reduce the use of potable water to a quantity that does not exceed 55 percent of ETo times the landscape area.~~

~~**Note:** Methods used to accomplish the requirements of this section must be designed to the requirements of the California Building Standards Code and shall include, but not be limited to, the following:~~

- ~~1. Plant coefficient.~~
- ~~2. Irrigation efficiency and distribution uniformity.~~
- ~~3. Use of captured rainwater.~~
- ~~4. Use of recycled water.~~
- ~~5. Water treated for irrigation purposes and conveyed by a water district or public entity.~~
- ~~6. Use of graywater.~~

**A5.304.4.3 ~~Verification of compliance.~~**

~~A calculation demonstrating the applicable potable water use reduction required by this section shall be provided.~~

**A5.304.5 ~~Potable water elimination.~~**

~~Provide a water efficient landscape irrigation design that eliminates the use of potable water beyond the initial requirements for plant installation and establishment. Methods used to accomplish the requirements of this section must be designed to the requirements of the California Building Standards Code and shall include, but not be limited to, the following:~~

- ~~1. Plant coefficient.~~
- ~~2. Irrigation efficiency and distribution uniformity.~~
- ~~3. Use of captured rainwater.~~

4. ~~Use of recycled water.~~
5. ~~Water treated for irrigation purposes and conveyed by a water district or public entity.~~
6. ~~Use of graywater.~~

#### **Notation**

Authority: Health and Safety Code Sections 18930.5, 18934.5 and 18938 (b).

Reference: Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.

## **ITEM 5 – COMPLIANCE FORMS AND WORKSHEETS**

### **CHAPTER 8 COMPLIANCE FORMS, AND WORKSHEETS AND REFERENCE MATERIAL**

**Note:** Appendix D – Prescriptive Compliance Option is reprinted from the Model Water Efficient Landscape Ordinance (MWELo) contained in the California Code of Regulations, Title 23, Division 2, Chapter 2.7, Section 490, as adopted by the Department of Water Resources (DWR) on July 15, 2015. The language contained in Appendix D is reprinted herein as a resource. Please contact DWR to verify the applicable Title 23 requirements prior to using this document for enforcement purposes. For questions regarding this appendix (interpretation, effectiveness, applicability, etc.), DWR may be contacted by the following information:

*[THE FOLLOWING IS A REPRINT OF MWELo'S APPENDIX D AND IS NOT ADOPTED BY BSC]*

**California Department of Water Resources**  
Urban Water Use Efficiency Unit  
ATTN: Julie Saare-Edmonds, Senior Environmental Scientist  
P.O. Box 942836  
Sacramento, CA 94236-0001 Email: [Julie.Saare-Edmonds@water.ca.gov](mailto:Julie.Saare-Edmonds@water.ca.gov)  
Telephone: 916-651-9676  
<http://water.ca.gov/wateruseefficiency/landscapeordinance/>

#### **Appendix D – Prescriptive Compliance Option**

- (a) This appendix contains prescriptive requirements which may be used as a compliance option to the Model Water Efficient Landscape Ordinance.
- (b) Compliance with the following items is mandatory and must be documented on a landscape plan in order to use the prescriptive compliance option:
  - (1) Submit a Landscape Documentation Package which includes the following elements:
    - (A) date
    - (B) project applicant
    - (C) project address (if available, parcel and/or lot number(s))
    - (D) total landscape area (square feet), including a breakdown of turf and plant material
    - (E) project type (e.g., new, 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".

- (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);
  - (3) Plant material shall comply with all of the following:
    - (A) For residential areas, install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 75% of the plant area excluding edibles and areas using recycled water; For non-residential areas, install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 100% of the plant area excluding edibles and areas using recycled water;
    - (B) A minimum three inch (3") layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated.
  - (4) Turf shall comply with all of the following:
    - (A) Turf shall not exceed 25% of the landscape area in residential areas, and there shall be no turf in non-residential areas;
    - (B) Turf shall not be planted on sloped areas which exceed a slope of 1 foot vertical elevation change for every 4 feet of horizontal length;
    - (C) Turf is prohibited in parkways less than 10 feet wide, unless the parkway is adjacent to a parking strip and used to enter and exit vehicles. Any turf in parkways must be irrigated by sub-surface irrigation or by other technology that creates no overspray or runoff.
  - (5) Irrigation systems shall comply with the following:
    - (A) Automatic irrigation controllers are required and must use evapotranspiration or soil moisture sensor data and utilize a rain sensor.
    - (B) Irrigation controllers shall be of a type which does not lose programming data in the event the primary power source is interrupted.
    - (C) Pressure regulators shall be installed on the irrigation system to ensure the dynamic pressure of the system is within the manufacturers recommended pressure range.
    - (D) Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be installed as close as possible to the point of connection of the water supply.
    - (E) All irrigation emission devices must meet the requirements set in the ANSI standard, ASABE/ICC 802-2014. "Landscape Irrigation Sprinkler and Emitter Standard," All sprinkler heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.
    - (F) Areas less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or overspray.
  - (6) For non-residential projects with landscape areas of 1,000 sq. ft. or more, a private submeter(s) to measure landscape water use shall be installed.
- (c) At the time of final inspection, the permit applicant must provide the owner of the property with a certificate of completion, certificate of installation, irrigation schedule and a schedule of landscape and irrigation maintenance.

## **ITEM 6 – VOLUNTARY MEASURES – TABLES**

### **APPENDIX A5 NONRESIDENTIAL VOLUNTARY MEASURES**

**DIVISION A5.6 – VOLUNTARY TIERS**

**TABLE A5.601 NONRESIDENTIAL BUILDINGS: Green Building Standards Code Proposed Performance Approach**

*[COPY IN TABLE A5.601 AND EDIT REFERENCES REGARDING OUTDOOR WATER USE]*

**SECTION A5.602 NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLISTS**

*[COPY IN TABLE A5.602 AND EDIT REFERENCES REGARDING OUTDOOR WATER USE]*