

Water Emergency Memo

Memorandum

DATE: June 16, 2015
TO: OC Development Services
FROM: Hadi Tabatabaee, County Building Official
SUBJECT: Outdoor Potable Water Reduction Emergency Regulation

Recently, the California Building Standards Commission approved and adopted emergency regulations in the 2013 California Green Building Standards Code to be effective June 1, 2015. The emergency regulations require water budgets for irrigation of outdoor landscaped areas in new residential construction. Full text of the emergency rulemaking, its background and summary are included as Attachment.

These emergency regulations shall apply to all new residential landscape plans submitted on or after June 1, 2015.

If you have any question, please feel free to contact me.

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STATE OF CALIFORNIA - BUSINESS, CONSUMER SERVICES, AND HOUSING AGENCY

EDMUND G. BROWN, JR., Governor

**DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF CODES AND STANDARDS**

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May 29, 2015

INFORMATION BULLETIN 2015- 03 (SHL, FBH, MH)

TO: Local Code Enforcement Agencies
Third-Party Agencies (FBH)
Interested Parties (SHL, FBH, MH)
State Agencies and Departments
Division Staff

SUBJECT: Emergency Regulations Effective June 1, 2015
Outdoor Potable Water Reduction
2013 California Green Building Standards (CALGreen) Code

The purpose of this Information Bulletin (IB) is to inform local enforcement agencies and all stakeholders affected by California building standards of the recent adoption and approval of emergency regulations in the 2013 California Green Building Standards Code (Part 11, Title 24 California Code of Regulations). These emergency regulations were approved by the California Building Standards Commission (CBSC) on May 29, 2015, and are effective **June 1, 2015**. The emergency regulations require water budgets for irrigation of outdoor landscaped areas in new residential construction. The full text of the emergency rulemaking, developed by the Department of Housing and Community Development (HCD), is included as Attachment A to this IB. Further information on other state agency proposals and availability of a published Supplement is addressed in the California Building Standards Commission's IB No. 15-02 available at the following website: <http://www.bsc.ca.gov/pubs/bullet.aspx>

BACKGROUND

Governor Brown's Executive Order B-29-15 (April 1, 2015) provides a summary of the ongoing drought conditions in California starting with the declaration of a State of Emergency (January 17, 2014) and a Continued State of Emergency (April 25, 2014): citing evidence of a record low snowpack, decreased water levels in reservoirs, reduced river flows, and declining supplies in underground water basins. In addition, the Governor acknowledged that a distinct possibility exists for drought conditions to continue. Further, Executive Order B-29-15 found that conditions of extreme peril to the safety of persons and property continue to exist due to water shortage and drought conditions with which local authority is unable to cope. To address these concerns, Executive Order B-29-15 specified that strict compliance with identified statutes and regulations would prevent, hinder or delay, or mitigate the effects of the drought.

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The objectives and individual directives applicable to this rulemaking include focus on saving water and increasing enforcement against water waste. The full text of Executive Order B-29-15 may be viewed at: http://gov.ca.gov/s_executiveorders.php

In view of the urgency to conserve California's water resources, as deemed essential by the Governor's Executive Order B-29-15 and prior proclamations, HCD, in coordination with other state agencies, proposed the adoption of these building standards through the emergency adoption process.

SUMMARY (See Attachment A for complete regulatory text)

**RESIDENTIAL EMERGENCY REGULATIONS IN THE 2013 CALGREEN CODE
EFFECTIVE JUNE 1, 2015:**

- A water budget shall be developed for landscape irrigation use that conforms to the local water efficient landscape ordinance or to the California Department of Water Resources' (DWR) Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. This requirement applies to permit applications for newly constructed residential structures with landscaping.
- Until the next update of the MWELO by DWR, the following factors shall be used in the calculation of Maximum Applied Water Allowance (MAWA) as addressed in the MWELO.
 1. ET Adjustment Factor (ETAF) = 0.55.
 2. Special Landscape Areas (SLA) Factor = 0.45. (The resulting total ETAF for SLA shall be 1.0).
- Local agency adoption of MWELO and similar ordinances:
 - The HCD emergency regulations supersede the MWELO and CALGreen residential Tier 1 or Tier 2 (Sections A4.304.3 and A4.304.4). Local agencies will need to modify local ordinances to reflect HCD's changes to ETAF factors, in the MAWA formula.
 - Local agencies who have adopted a local ordinance more stringent than the MWELO will need to verify whether the ordinance will need to be revised to reflect changes in water use allowances resulting from these emergency regulations.
- The MWELO, as codified in the California Code of Regulations, Title 23 Waters, Division 2, Department of Water Resources, Chapter 2.7 Model Water Efficient Landscape Ordinance, should be consulted for further information on methodology and resources needed for compliance with these regulations. See the following DWR website: <http://www.water.ca.gov/wateruseefficiency/landscapeordinance/>
- DWR is in the process of revising their online calculator for calculating the MAWA (maximum allowable water) and the Estimated Total Water Use (homeowner

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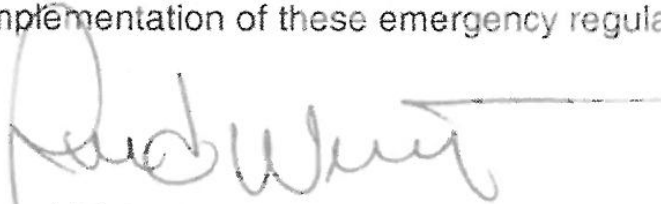
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estimated water use based on types of plantings and landscape area). This calculator should also be available at DWR's website:

<http://www.water.ca.gov/wateruseefficiency/landscapeordinance/>

- The emergency regulations will remain in effect unless superseded by subsequent revisions to the emergency building standards as adopted through the certifying rulemaking process. Code users should subscribe to mailing lists for HCD as well as CBSC to remain updated on the status of these emergency regulations.

Questions or concerns regarding this Information Bulletin and effective dates may be directed to Kyle Krause, State Housing Law Program Manager, at (916) 263-4719. Specific questions related to preparation of water budgets and compliance with water efficient landscape ordinances should be directed to Julie Saare-Edmonds, Senior Environmental Scientist, Landscape and Green Building Program, DWR, at (916) 651-9676. You may also visit the State Housing Law website for general guidelines related to implementation of these emergency regulations.



Richard Weinert
Deputy Director
Division of Codes and Standards

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ATTACHMENT A

EXPRESS TERMS
FOR
PROPOSED EMERGENCY BUILDING STANDARDS
OF THE
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
REGARDING THE 2013 CALIFORNIA GREEN BUILDING STANDARDS CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11
(OUTDOOR POTABLE WATER USE REDUCTION STANDARDS)

The Department of Housing and Community Development (HCD) proposes to make necessary changes to be included in the 2013 edition of the California Green Building Standards Code (CGBC), also known as CALGreen, as presented on the following pages:

LEGEND FOR EXPRESS TERMS:

1. **Existing California text or language being modified:** All language is shown in normal Arial 9 point; modified language is underlined or shown in strikeout.
2. **Existing text not being modified:** All language not displayed in full is shown as "... " (i.e., ellipsis).
3. **Repealed text:** All language appears in strikeout.
4. **Amended, adopted or repealed language after public hearing:** All language is shown in double underline or double-strikeout.
5. **Notation:** Authority and Reference citations are provided at the end of each section.

SUMMARY OF REGULATORY ACTION

HCD PROPOSES TO:

- Adopt new 2013 California Amendments on an emergency basis into the 2013 California Green Building Standards Code.
- Modify existing 2013 California Amendments on an emergency basis to accommodate changes resulting from adoption of mandatory measures in the 2013 California Green Building Standards Code.
- Repeal existing 2013 California Amendments on an emergency basis to accommodate changes resulting from adoption of mandatory measures in the 2013 California Green Building Standards Code.

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1. HCD proposes new California amendments in Chapter 2, Definitions, for adoption into the 2013 California Green Building Code as follows:

CHAPTER 2 DEFINITIONS

ET ADJUSTMENT FACTOR (ETAF). A factor that, when applied to reference evapotranspiration (ET_o), adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape.

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

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

2. HCD proposes new amendments in Chapter 4, Division 4.3 Water Efficiency and Conservation, for adoption into the 2013 California Green Building Code as follows:

CHAPTER 4 DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION SECTION 4.304 OUTDOOR WATER USE

4.304.1 Outdoor potable water use in landscape areas. On or after June 1, 2015, a water budget shall be developed for landscape irrigation use that conforms to the local water efficient landscape ordinance or to the California Department of Water Resources' Model Water Efficient Landscape Ordinance, whichever is more stringent.

The following factors shall be effective until subsequent revision of the MWELO by the California Department of Water Resources (DWR).

1. ET Adjustment Factor (ETAF) - 0.55.
2. Special Landscape Areas (SLA) - 0.45. (The resulting total ETAF for SLA shall be 1.0).

Notes:

1. Prescriptive measures to assist in compliance with the water budget are available in the Model Water Efficient Landscape Ordinance which may be found at:
<http://www.water.ca.gov/wateruseefficiency/docs/WaterOrdSec492.cfm>
2. The water budget calculator for use with the 0.55 ETAF is available at: [Web address to be established]

4.304.1.1 Methods to reduce potable water use. Other methods to reduce potable water use in landscape areas include but are not limited to:

1. Use of captured rainwater, recycled water, or graywater designed per the California Plumbing Code.
 - a. The use of potable water may be used as a back-up water supply for on-site water recycling and/or reuse systems may be allowed by the Authority Having Jurisdiction (AHJ), provided that it can be demonstrated to the AHJ that the amount of potable water used as back-up in the water recycle or reuse system is less than that which would have been used by other means authorized by the AHJ.
2. Water treated for irrigation purposes and conveyed by a water district or public entity.

4.304.1.2 Authorized potable water use. The use of potable water shall be authorized where necessary to address an immediate health and safety need or to comply with a term or condition in a permit issued by a state or federal agency.

4.304.1.4 4.304.2 Irrigation controllers. Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:

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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.

3. HCD proposes new amendments to Appendix A4, Division A4.3 Water Efficiency and Conservation, for adoption into the 2013 California Green Building Code as follows:

APPENDIX A4 RESIDENTIAL VOLUNTARY MEASURES DIVISION A4.3 WATER EFFICIENCY AND CONSERVATION

SECTION A4.304 OUTDOOR WATER USE

A4.304.1 Low-water-consumption irrigation system. Install a low-water-consumption irrigation system which minimizes the use of spray-type heads. Spray-type irrigation may only be used at turf areas. The remaining irrigation systems shall use only the following types of low-volume irrigation systems:

1. Drip irrigation.
2. Bubblers.
3. Drip emitters.
4. Soaker hose.
5. Stream-rotator spray heads.
6. Other systems acceptable to the enforcing agency.

A4.304.2 A4.304.1 Rainwater catchment systems. An approved rainwater catchment system is designed and installed to use rainwater generated by at least 65 percent of the available roof area. Rainwater catchment systems shall be designed and installed in accordance with the *California Plumbing Code*.

A4.304.3 Water budget. When landscaping is provided by the builder, a water budget shall be developed for landscape irrigation use that 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.

A4.304.4 Potable water reduction. When landscaping is provided by the builder, a water-efficient landscape irrigation system shall be installed that reduces potable water use. The potable water use reduction shall be calculated beyond the initial requirements for plant installation and establishment. Calculations for the reduction shall be based on the water budget developed pursuant to Section A4.304.3.

- Tier 1. Reduce the use of potable water to a quantity that does not exceed 65 percent of ETo times the landscape area.
Tier 2. Reduce the use of potable water to a quantity that does not exceed 60 percent of ETo times the landscape area.

Note: Methods used to comply with this section must be designed to meet the requirements of the other parts of the California Building Standards Code and may include, but are not 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.

A4.304.5 A4.304.2 Potable water elimination. When landscaping is provided by the builder and as allowed by local ordinance, 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. 1. Use of captured rainwater.
4. 2. Use of recycled water.
5. 3. Water treated for irrigation purposes and conveyed by a water district or public entity.

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6.4. Use of graywater.

A4.304.6 A4.304.3 Irrigation metering device. For new water service connections, landscaped irrigated areas more than 2,500 square feet shall be provided with separate submeters or metering devices for outdoor potable water use.

4. HCD proposes new amendments to Appendix A4, Division A4.6 Tier 1 and Tier 2, for adoption into the 2013 California Green Building Code as follows:

**APPENDIX A4 RESIDENTIAL VOLUNTARY MEASURES
DIVISION A4.6 TIER 1 AND TIER 2**

**SECTION A4.601
GENERAL**

A4.601.1 Scope. (No change to text)

A4.601.2 Prerequisite measures. (No change to text)

A4.601.3 Elective measures. (No change to text)

A4.601.4 Tier 1.

To achieve Tier 1 status a project must comply with the following:

A4.601.4.1 Mandatory measures for Tier 1. (No change to text)

A4.601.4.2 Prerequisite and elective measures for Tier 1. In addition to the mandatory measures, compliance with the following prerequisite and elective measures from Appendix A4 is also required to achieve Tier 1 status:

1. From Division A4.1, Planning and Design. (No change to text)
2. From Division A4.2, Energy Efficiency. (No change to text)
3. From Division A4.3, Water Efficiency and Conservation.
 - 3.1—Comply with the landscape irrigation water budget requirement in Section A4.304.3.
 - 3.2—Comply with the Tier 1 potable water use reduction for landscape irrigation design in Section A4.304.4.
 - 3.3 3.1 Comply with at least two elective measures selected from Division A4.3.
4. From Division A4.4, Material Conservation and Resource Efficiency. (No change to text)
5. From Division A4.5, Environmental Quality. (No change to text)

A4.601.5 Tier 2. To achieve Tier 2 status a project must comply with the following.

Note: (No change to text)

A4.601.5.1 Mandatory measures for Tier 2. (No change to text)

A4.601.5.2 Prerequisite and elective measures for Tier 2. In addition to the mandatory measures, compliance with the following prerequisite and elective measures from Appendix A4 is also required to achieve Tier 2 status:

1. From Division A4.1, Planning and Design. (No change to text)
2. From Division A4.2, Energy Efficiency. (No change to text)
3. From Division A4.3, Water Efficiency and Conservation.
 - 3.1—Comply with the landscape irrigation water budget requirement in Section A4.304.3.
 - 3.2—Comply with the Tier 2 potable water use reduction for landscape irrigation design in Section A4.304.4.
 - 3.3 3.1 Comply with at least three elective measures selected from Division A4.3.
4. From Division A4.4, Material Conservation and Resource Efficiency. (No change to text)
5. From Division A4.5, Environmental Quality. (No change to text)

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5. HCD proposes new amendments to the Residential Occupancies Application Checklist for adoption into the 2013 California Green Building Code as follows:

RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST (APPENDIX A4, SECTION A4.602)

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD		
	Mandatory	Prerequisites and electives ¹		Enforcing Agency	Installer or Designer	Third party
		Tier 1	Tier 2	<input type="checkbox"/> All	<input type="checkbox"/> All	<input type="checkbox"/> All
WATER EFFICIENCY AND CONSERVATION						
Outdoor water Use						
4.304.1 When landscaping is provided, a water budget (calculations) shall be developed for landscape irrigation use that conforms to the local water efficient landscape ordinance or to the California Department of Water Resources Model Water Efficient Landscape Ordinance, whichever is more stringent. Applies to landscaped areas for buildings for which building permits have been submitted on or after June 1, 2015 until future revision of the MWELO by Dept. of Water Resources (DWR).	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.304.1 4.304.2 Automatic irrigation systems controllers installed at the time of final inspection shall be weather or soil moisture-based.	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A4.304.1 Install a low-water consumption irrigation system which minimizes the use of spray type heads.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A4.304.2 A4.304.1 A rainwater capture, storage and re-use system is designed and installed		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A4.304.3 A water budget shall be developed for landscape irrigation.		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A4.304.4 Provide water efficient landscape irrigation design that reduces the use of potable water. Tier 1- Does not exceed 65 percent of ET _o times the landscape area. Tier 2- Does not exceed 60 percent of ET _o times the landscape area.		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A4.304.5 A4.304.2 A landscape design is installed which does not utilize potable water.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A304.6 A4.304.3 For new water service connections, landscaped irrigated areas more than 2,500 square feet shall be provided with separate submeters or metering devices for outdoor potable water use.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>