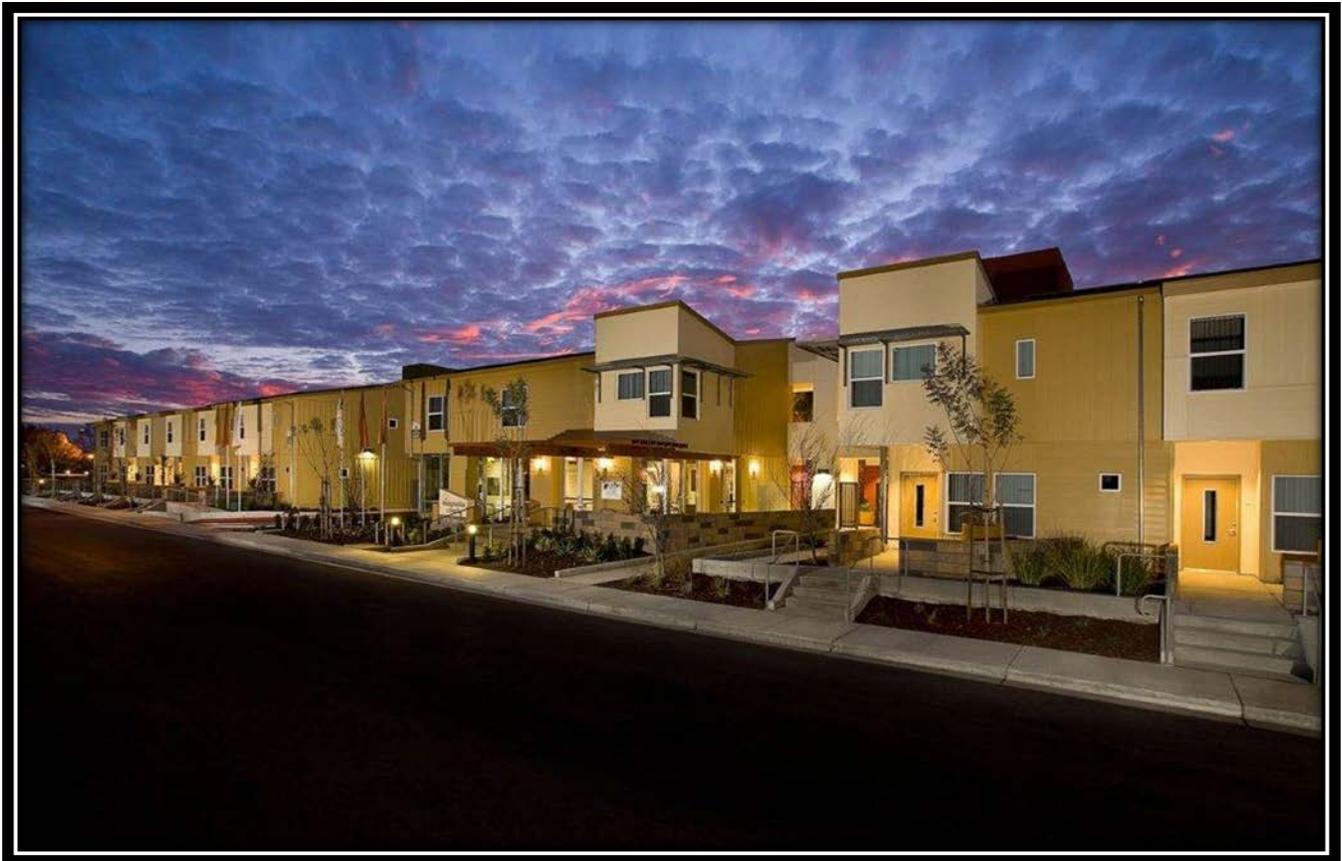


2015 REPORT TO THE LEGISLATURE

Status of the California Green Building Standards Code



**California Department of Housing and
Community Development**

September 2015

A Report on: **CALGreen**[®]

The California Green Building Standards Code

This report provides the California State Legislature information on updates proposed to the California Green Building Standards Code by the Department of Housing and Community Development during the fiscal year 2014-2015, which ended on June 30, 2015.



State of California

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Background

California Code of Regulations, Title 24, Part 11, the California Green Building Standards Code, commonly known as “CALGreen”, was a first-in-the-nation state-adopted green building code. The 2008 California Green Building Standards Code was a voluntary code first authorized by the Department of Housing and Community Development (HCD) and approved by the California Building Standards Commission (CBSC) in January 2008, with an effective date of August 2009.

During Fiscal Year (FY) 2009-2010, HCD proposed during the 2009 Triennial Code Adoption Cycle to make the 2010 version of the CALGreen Code mandatory throughout the State. During this process, HCD solicited public input and reviewed, analyzed and evaluated the 2008 version of the California Green Building Standards Code for necessary updates. CALGreen, works in harmony with California’s other mandatory construction codes and became effective throughout California on January 1, 2011.

There were several noteworthy changes in the 2010 CALGreen Code beyond its reorganization allowing users to easily distinguish low-rise residential provisions from the nonresidential provisions. The most significant amendment was the establishment of mandatory minimum requirements. This is a clear change from the 2008 CALGreen Code, which was a voluntary code; unless adopted as a mandatory requirement by a local enforcing agency. The mandatory provisions of CALGreen have also been identified in the scoping plan developed by the California Air Resources Board (ARB) as one of the tools to implement AB 32, the California Global Warming Solutions Act of 2006. The scoping plan also contains guidance to encourage local jurisdictions to go above the mandatory code minimum.

A voluntary component still exists in CALGreen, but it coincides with the introduction of tiers. Tier 1 and Tier 2 were added to the 2010 CALGreen Code providing local enforcing agencies the ability to adopt consistent and streamlined methods to further enhance their local environment through green building construction beyond the mandatory minimum code requirements.

The voluntary portion of the CALGreen Code will become increasingly popular in more progressive jurisdictions that desire to go above the mandatory code minimum. CALGreen contains voluntary tiers which may be used by local jurisdictions to further reduce greenhouse gas (GHG) emissions and promote even more sustainable construction practices.

During the 2012 Triennial Code Adoption Cycle, which created the 2013 CALGreen Code, HCD expanded the scope of CALGreen to include all residential buildings rather than only low-rise buildings which are 2 stories and less. HCD also expanded the

scope to include additions and alterations which increase the conditioned area, volume or size. This requirement now captures many additions and alterations to existing building which increases the effectiveness of the CALGreen Code in implementing enforceable sustainable building standards which have a positive impact on the environment.

Note: There are no extra fees required to use the CALGreen Code, unlike some rating systems, such as LEED or the Green Globes system which have additional licensing and certification, rating and/or verification costs. The CALGreen Code is enforced by existing local enforcing agencies similar to California's other building codes.

Introduction

CALGreen mandatory building standards have now been in effect for more than four years, since January 1, 2011. HCD continues to improve the CALGreen Code by looking at new technologies being developed to complement current practices that help reduce the overall impact on the earth and to preserve current resources. Maintaining and improving CALGreen continues a process that is environmentally responsible and resource efficient, reducing negative environmental impacts and enhancing positive environmental impacts by encouraging more sustainable construction.

In view of the urgency to conserve California's water resources, as deemed essential by the Governor's Executive Order B-29-15, HCD, in coordination with other state agencies, proposed the emergency adoption of building standards requiring a water budget for landscape irrigation that conforms to the local water efficient landscape ordinance, or to the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. HCD's emergency provisions in CALGreen also included a modification to the formula for calculating allowable water use for residential landscaped areas, thereby reducing even further the use of potable water for landscaped areas beyond the MWELO requirements. These emergency regulations became effective on June 1, 2015.

During FY 2014-15, HCD also proposed amendments to the CALGreen Code as part of the 2015 Triennial Code Adoption Cycle. These amendments, if approved become effective January 1, 2017.

Preface

The following report is prepared in accordance with Health and Safety Code Section 17928(b), which requires HCD to submit a report to each house of the California State Legislature no later than September 1 of each year. Health and Safety Code Section 17928 has been reprinted below for reference and convenience. The following items indicate the specific topic areas discussed in this report:

1. Green building measures proposed as building standards during the prior fiscal year; and
2. Green building guidelines or resources reviewed during the development of green building measures proposed as building standards during the prior fiscal year.

Health and Safety Code Section 17928

17928. (a)(1) The Department of Housing and Community Development shall, for building standards submitted to the California Building Standards Commission for adoption in the 2010 California Building Code or later, do all the following:

(A) Review relevant green building guidelines as deemed necessary by the department when preparing proposed building standards for submittal.

(B) Consider proposing as mandatory building standards those green building features determined by the department to be cost effective and feasible to promote greener construction.

(2) Nothing in this subdivision shall be construed to supplant or otherwise change the existing process for approval and adoption of building standards through the California Building Standards Commission.

(b)(1) The department shall also summarize in a report to the Legislature no later than September 1 of each year, both of the following:

(A) Green building features proposed as building standards during the prior fiscal year.

(B) Green building guidelines reviewed pursuant to subdivision (a) during the prior fiscal year.

(2) For those items required by this subdivision already included in other reports provided to the Legislature or generally available, the department may fulfill this requirement by citing where that information can be found.

Note: The 2013 CALGreen Code, including any updates, HCD's current rulemaking documents and this report can be viewed on HCD's website at <http://www.hcd.ca.gov>.

Hard copies are available upon request. If you have any questions or require clarifications, please contact the State Housing Law (SHL) staff at (916) 445-9471.

HCD reviewed the following green building guidelines, programs and resources related to proposed building standards during the past FY:

- Collaborative for High Performance Schools (CHPS)
- U.S. Green Building Council – Leadership in Energy and Environmental Design (LEED)
- Build it Green – GreenPoint Rated Program
- Green Building Initiative – Green Globes Program
- ANSI/ASHRAE Standard 189.1 – 2014 “Standard for the Design of High-Performance Green Buildings”
- ANSI/ASHRAE Standard 62.2 – 2013 “Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings”
- 2012 ICC 700, National Green Building Standard
- 2015 International Green Construction Code (IgCC)
- IAPMO 2015 Green Plumbing and Mechanical Code Supplement

HCD used an open and transparent process holding focus group meetings on April 2, 2015 and May 7, 2015, to solicit additional input regarding proposed building standards. Numerous State agencies and various other stakeholder groups participated. HCD staff also attended the 2015 Green California Summit and Exposition and provided public outreach and training at other venues throughout the State. A brief summary of participants is listed below:

- Building officials
- Design professionals
- Representatives from the construction industry
- Representatives from building product manufacturers
- Representatives from model code writing bodies
- Representatives from the environmental community
- State agency representatives
- Public members
- Public utility representatives
- Representatives from the disabled access community

Summary of HCD Activities

HCD's State Housing Law (SHL) Program staff have actively participated in the development of the Solar Permitting Guidebook; a Task Force convened by the Governor's Office of Planning and Research (OPR). As an active Task Force member, HCD and other stakeholders reviewed the 1st edition (June 2012) of the *California Solar Permitting Guidebook* for updates to reflect the current standards. The 2nd edition (December 2014) incorporated new guidance for structural permitting of certain solar installations, an inspection guide and a simple eligibility checklist for expedited permitting. An update to the 2nd edition (March 2015) has added updates with information and recommendations for expedited Thermal Solar Water Heating Systems. This edition can be found on OPR's website at http://www.opr.ca.gov/docs/California_Solar_Permitting_Guidebook_2014.pdf.

During the 2013 Intervening Code Adoption Cycle, HCD's proposed regulations for Electric Vehicle (EV) Charging Stations were approved by the Building Standards Commission in July and October of 2014, and became effective on July 1, 2015. These regulations include mandatory provisions for EV Charging infrastructure, including a raceway and electrical panel capacity for future installation of EV Chargers, as well as voluntary provisions for installation of an electrical branch circuit for EV charging. HCD's full proposal for these regulations can be found at <http://www.bsc.ca.gov/Rulemaking/adoptcycle/2013CodeCycle.aspx>

HCD is currently in the midst of the 2015 Triennial Code Adoption Cycle which creates the 2016 CALGreen Code becoming effective on January 1, 2017. HCD is also proposing Emergency Building Standards in CALGreen for coordination with the plumbing fixture flow rates for lavatory faucets and urinals in the California Energy Commission's Appliance Efficiency Regulations in CCR, Title 20 (see Exhibit A, page 11).

During the 2014-2015 California Legislative session, HCD staff continued to review and analyze proposed legislation related to green building standards. Due to the broad scope of CALGreen, the issues that were analyzed varied considerably, e.g., sub-metering of potable water in multifamily dwellings, mandates for WaterSense plumbing fixtures, and for recycled water piping in residential dwellings.

SHL staff attended the California Energy Commission's focus group meetings on proposed changes to the 2016 CALGreen Code as related to energy efficiency. Proposed changes were related to zero-net energy residences and a new proposal for water efficiency and plumbing fixtures.

SHL staff attended and staffed a booth at the 2014 Native American Day event at the State Capitol on September 26, 2014. The 2014 theme was "Water is Sacred" which is supported by CALGreen's focus of reducing potable water use and waste.

SHL staff and Factory-Built Housing (FBH) staff attended a tour of KB Homes' zero net energy homes in El Dorado Hills.

On December 10, 2014, SHL staff attended a one-day conference on California-Australia Dialogue on Drought Solutions. The Conference included discussions of responses to drought emergencies, long-term drought solutions, and innovative water technologies. SHL staff were especially interested in the innovative water technologies discussion and identification of potential water conservation measures for the 2016 CALGreen Code.

On February 5, 2015, SHL staff participated in the BSC's first focus group meeting for the 2016 CALGreen Code.

On February 23, 2015, SHL staff participated in a meeting held at the Governor's Office discussing the 2015 ZEV (Zero Emission Vehicle) Action Plan.

On March 24, 2015, SHL staff attended a presentation by CalRecycle on California's Waste – *Where Does It Go?*

On April 2, 2015, SHL staff conducted a focus group meeting to discuss proposed changes for the 2016 CALGreen Code.

On April 7, 2015, SHL staff offered the presentation *Changes to the 2013 CALGreen Code* at Green Technology's 2015 Green Summit and Exposition in Sacramento. In addition, SHL staff attended the Exposition and answered questions from the public at the CBSC/HCD booth. HCD staff were presenters for the *CALGreen: Present and Future* Workshop. Other SHL Program staff also attended the following meetings:

1. Onsite Water Reuse Systems: Perceptions, Policies and Implementation for Building and District Scale for Non-potable Applications
2. Green Codes for California: A Progress Report
3. CALGreen: Present and Future (workshop presented by HCD/BSC staff). The California Building Standards Commission's 2013 Intervening Code Adoption Cycle produced a CALGreen Supplement (blue pages) in January of this year that has an effective date of July 1, 2015. Staff from the California Building Standards Commission and the Department of Housing and Community Development reviewed these latest updates to the CALGreen Code. Electric vehicle charging station infrastructure, bicycle parking requirements, fixture flow rates, HVAC installer and special inspector qualifications. The 2015 Triennial Code Adoption Cycle, which will produce the 2016 California Building Standards Code was also addressed.

On May 7, 2015 SHL staff conducted a second focus group meeting to discuss proposed changes for the 2016 CALGreen Code.

HCD staff attended all eight meetings of the Division of the State Architect (DSA) EV charging workgroups: Discussion of Electric Vehicle Charging Spaces (EVCS) Issue Alternatives.

Upcoming Activities

During FY 2015-16, HCD will continue to perform the following activities:

- Evaluate and adopt necessary emergency regulations in the CALGreen Code and Plumbing Code to align with the Title 20 Appliance Efficiency Regulations adopted by the California Energy Commission.
- Evaluate necessary amendments to CALGreen for the 2016 Intervening Code Adoption Cycle based on enacted legislation, executive orders, new technology, completed studies and stakeholder input.
- Continue outreach and education to the general public, local enforcing agencies, industry professionals, and other stakeholders throughout the State.
- Consult with local enforcement agencies to verify implementation and enforcement as well as the successes and challenges of CALGreen as the economy continues to improve and demand for single and multifamily dwellings increases.
- Attend Code Advisory Committee (CAC) meetings as part of the 2015 Triennial Code Adoption Cycle.
- Perform further study of CALGreen proposals as recommended by the Code Advisory Committee (CAC) meetings as part of the 2015 Triennial Code Adoption Cycle.
- Prepare and submit proposed building standards for CALGreen as part of the 2015 Triennial Code Adoption Cycle.
- Respond to comments from the public regarding HCD's building standards proposals during the 2015 Triennial Code Adoption Cycle.
- Attend Building Standards Commission Hearings and provide testimony regarding HCD's building standards proposals during the 2015 Triennial Code Adoption Cycle.

Exhibit A

HCD 2015 Rulemaking Activity (2016 CALGreen Code)

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
2016 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11

1) Rationale for Necessity

The proposed actions continue to adopt, amend or repeal portions of the 2013 CALGreen into the 2016 CALGreen as part of the 2015 Triennial Code Adoption Cycle established by the California Building Standards Commission (CBSC). The intent of the 2016 triennial version of CALGreen is to:

- (1) Continue reducing greenhouse gas (GHG) emissions from buildings.
- (2) Result in environmental benefits through reduced use of energy, water, and raw materials; improved public and building occupant health due to improved indoor air quality; and overall reduction in detrimental environmental impacts.
- (3) Continue the Administration's directive to adopt green building standards for residential, commercial, and public building construction as part of the building code adoption process.

Proposed amendments in this rulemaking are also intended to provide further clarity, specificity and direction to the code user, and to implement and make specific existing state laws. Proposed amendments are a result of recommendations developed during the public participation period prior to submittal to the CBSC. The rationale for each proposed amendment by chapter and section is listed below.

Specific Proposed Regulatory Actions:

HCD proposes to continue adoption of the 2013 CALGreen with amendments into the 2016 CALGreen. The rationale for each regulatory action is listed below.

Note: There is no model code language associated with CALGreen; therefore, all language consists of California text.

1. CHAPTER 1 ADMINISTRATION

HCD proposes to continue adoption of Chapter 1 from the 2013 CALGreen into the 2016 CALGreen with modifications as follows:

SECTION 101 – GENERAL

Section: 101.5.1 Building.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. Currently Section 101.5.1 refers to the California Building Code and the California Residential Code as the applicable codes related to construction, alteration, movement, enlargement, replacement, repair, use and occupancy, location, maintenance, removal and demolition of every structure in California. The proposed modification provides an additional reference to the California Existing Building Code, which now includes provisions for existing buildings formerly in the California Building Code. The proposed modification provides clarity to the code user. There is no intended change in regulatory effect.

Section: 101.7.1 Findings and filings.

Rationale: HCD proposes to continue adoption of the above referenced section with nonsubstantive editorial modification. The modification provides the code user with the correct address where the HCD headquarters is now located.

SECTION 104 – DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

Section: 104.1 Scope.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. HCD proposes to replace the term “apartment houses” with “apartments,” as proposed in the 2016 California Building Code (CBC). The term “apartment house” was defined and used last in the 2001 CBC, when the Uniform Building Code was the model code in California. The term “Apartment house” has not been used (except in Chapter 1) in the CBC since 2007, when the International Building Code became the model code. The term currently used in the CBC is “apartment.” The proposed modification provides clarity and consistency with the CBC. There is no intended change in regulatory effect.

2. CHAPTER 2 DEFINITIONS

HCD proposes to continue adoption of Chapter 2 from the 2013 CALGreen Code into the 2016 CALGreen Code with modifications as follows:

SECTION 202 – DEFINITIONS

DEMAND HOT WATER RECIRCULATION SYSTEM.

Rationale: HCD proposes to adopt the above referenced definition. The term “Demand Recirculation System” is used in Section A4.303.5, which HCD proposes for adoption.

ELECTRIC VEHICLE (EV) CHARGER.

Rationale: HCD proposes to adopt the above referenced definition. The term “electric vehicle charger” is used in Section 4.106.4, but is not defined. The proposed definition provides clarity to the code user. There is no intended change in regulatory effect.

ELECTRIC VEHICLE CHARGING SPACE (EV SPACE).

Rationale: HCD proposes to adopt the above referenced definition. The term “electric vehicle charging space” (EV space) is used in HCD’s new proposals in Sections 4.106. 4.2 and A4.106.8.2 (HCD proposes to replace the term “electric vehicle charging station” with the term “EV charging space”) and needs to be defined. (See rationale for Sections 4.106.4.2 and A4.106.8.2.) The proposed definition provides clarity to the code user. There is no intended change in regulatory effect.

ELECTRIC VEHICLE CHARGING STATION (EVCS).

Rationale: HCD proposes to amend the above referenced definition. The newly proposed language clarifies that the EVCS is an EV charging space with an EV charger (or other charging equipment) installed to serve this space. This proposal is necessary due to HCD’s proposal to replace the term “electric vehicle charging station,” currently used in Sections 4.106.4.2 and A4.106.8.2, with the term “EV charging space.” The proposed definition is also consistent with the definition, proposed by the Division of State Architect (DSA) in Chapter 2 of the California Building Code. (See rationale for “electric vehicle charging space” and Sections 4.106.4.2 and A4.106.8.2.)

HOT WATER RECIRCULATION SYSTEM.

Rationale: HCD proposes to adopt the above referenced definition. The term “hot water recirculation system” is used in Section A4.303.5, which HCD proposes for adoption.

HYBRID URINAL.

Rationale: HCD proposes to adopt the above referenced definition. The term “hybrid urinal” is used in HCD’s new proposal in Section A4.303.4. The proposed definition is consistent with the definition in the IAPMO Guide Criteria (IGC) 311-2014, which is the current standard for hybrid urinals with high-efficiency drain cleansing feature.

ORGANIC WASTE.

Rationale: HCD proposes to adopt the above referenced definition. The term “Organic waste” is used in Section 4.410.2, which HCD proposes for adoption. The proposed definition is consistent with the definition in the Public Resources Code, Section 42649.8(c).

3. CHAPTER 4 RESIDENTIAL MANDATORY MEASURES

HCD proposes to continue adoption of Chapter 4 from the 2013 CALGreen Code into the 2016 CALGreen Code with modifications as follows:

Division 4.1 – PLANNING AND DESIGN

SECTION 4.106 – SITE DEVELOPMENT

Section: 4.106.4.2 New multifamily dwellings.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. HCD proposes to replace the term “EV charging stations” with “EV charging spaces” since the term “EV charging space” better describes a space available for future installation of EVSE, but with no EV charger installed. The proposed modification in terminology aligns with the terminology used by DSA in Chapter 11B of the California Building Code. (See the definitions of “EV charging space” in Chapter 2 of CALGreen.)

HCD also proposed to repeal the requirement for identification of EVCS on the construction documents. The same requirement is addressed in Section 4.106.4.2.1; there is no reason for the same requirement to be duplicated. The proposed modifications provide clarity to the code user. There is no intended change in regulatory effect.

Sections: 4.106.4.2.1 Electric vehicle charging space (EV space) locations. 4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. 4.106.4.2.3 Single EV space required. 4.106.4.2.4 Multiple EV spaces required.

Rationale: HCD proposes to continue adoption of the above referenced sections with modifications. HCD proposes to replace the term “EVCS” with “EV space” or “EV spaces” since the terms better describe a space available for future installation of EVSE, but with no EV charger installed. The proposed modification in terminology aligns with the terminology used by DSA in Chapter 11B of the California Building Code (See the definition of “EV charging space” in Chapter 2.)

The proposed modifications provide clarity to the code user. There is no intended change in regulatory effect.

Section: 4.106.4.2.5 Identification.

Rationale: HCD proposes to continue adoption of the above referenced section with modification and editorial corrections. HCD proposes to repeal Note 4, and correct the link to the California Manual on Uniform Traffic Control Devices (California MUTCD) in Note 1.

Currently Note 4 refers to the Governor’s Office of Planning and Research (OPR) draft guidelines (Plug-In Electric Vehicles: Universal Charging Access Guidelines and Best Practices), addressing physical accessibility standards and design guidelines for EVs. The guide cited in Note 4 is still available, but the Division of the State Architect is currently developing accessibility standards for EV charging stations. When these standards are adopted (2016 CBC), they become mandatory, and there will be no need for the best practices to be used and for this guide to be referenced.

The proposed modification provides clarity and consistency to the code user. There is no intended change in regulatory effect.

Division 4.3 – WATER EFFICIENCY AND CONSERVATION

SECTION 4.303 – INDOOR WATER USE

Section 4.303.1.2 Urinals.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. HCD proposes to repeal the date, which clarifies that Section 4.303.1.2 becomes effective on January 1, 2016, and also to change the word “The” to a capital letter T, as it is now the beginning of the sentence.

Section 4.303.1.2 was amended during an emergency rulemaking in 2015 (2013 CALGreen) to avoid a conflict between Title 20 (Appliance Efficiency Regulations) and CALGreen. The date was required to clarify that the effective date for enforcing the flush volume of 0.125 for urinals was January 1, 2016. However, this date is no longer required in this section since the 2016 CALGreen will be effective on January 1, 2017.

Section: 4.303.1.4.1 Residential lavatory faucets.

Rationale: HCD proposes to continue adoption of the above referenced section with new modification. HCD proposes to repeal the date, which clarifies that Section 4.303.1.4.1 becomes effective on January 1, 2016, and also to change the word “The” to a capital letter T, as it is now the beginning of the sentence.

Section 4.303.1.4.1 was amended during an emergency rulemaking in 2015 (2013 CALGreen) to avoid a conflict between Title 20 (Appliance Efficiency Regulations) and CALGreen. The date was required to clarify that the effective date for enforcing the maximum flow rate of 1.2 gallons per minute for residential lavatory faucets was January 1, 2016. However, this date is no longer required in this section since the 2016 CALGreen will be effective on January 1, 2017.

Section: 4.303.2 Standards for plumbing fixtures and fittings.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. The proposed modification corrects the reference to the applicable standards in the California Plumbing Code (CPC). Currently Section 4.303.2 clarifies that in addition to the CALGreen Code requirements; plumbing fixtures and fittings shall be installed in accordance with the CPC, and shall meet the applicable standards referenced in Table 1401.1 of the CPC. The modification is necessary due to relocation of the referenced standards to Chapter 17 in the CPC. There is no intended change in regulatory effect.

SECTION 4.304 – OUTDOOR WATER USE

Section: 4.304.2 (Formerly 4.304.1) Irrigation controllers.

Rationale: HCD proposes to continue adoption of the above referenced section with modifications. HCD proposes to repeal the phrase “provided by the builder,” clarifying that Section 4.304.2 applies when landscape is installed at the time of final inspection of a project regardless of the installer (builder, owner, landscape contractor, etc.).

HCD also proposes to replace the existing note with a reference to the HCD’s CALGreen Guide. Currently the note refers to the Irrigation Association for more information regarding irrigation controllers; however, the Irrigation Association is not the only source for obtaining information about irrigation. HCD’s research showed that there are dozens of other sources such as California Department of Water Resources, local enforcing agencies, local water purveyors, the Metropolitan Water District of Southern California, the California Landscape Contractors Association, etc.

HCD developed a “Guide to the California Green Building Standards Code”, which provides commentary, background, questions and answers (Q&A) and some helpful tools for the code user to better understand the CALGreen Code. HCD believes that the Guide provides adequate information for compliance with this section, and refers to different sources of information, not only the Irrigation Association.

The proposed modification provides clarity to the code user. There is no intended change in regulatory effect.

Division 4.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

SECTION 4.408 – CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

Section: 4.408.1 Construction waste management.

Section: 4.408.4 Waste stream reduction alternative.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. The proposed modification increases the percentage of diverted nonhazardous construction and demolition waste from 50-percent to 65-percent, moving the existing Tier 1 voluntary measure (65%) to mandatory. This change represents an increase of 15%. Similarly, HCD proposed to reduce the weight of construction waste by 15% per foot in Section 4.408.4 Waste stream reduction alternative, for consistency. HCD also proposes to increase the verification requirements for Tier 1 and Tier 2, and keep the same percentages (65% and 75%). (See rationale for Section A4.408.1.)

The proposed modification (including Tier 1 and Tier 2 proposals) will aid in CalRecycle’s statewide recycling goal of 75% for 2020 as stated in AB 341 (Chapter 476, Statutes of 2011).

The CBSC proposed similar amendments during the 2013 Intervening Code Adoption Cycle; however, this proposal was withdrawn. The CALGreen Code Advisory Committee recommended that the CBSC reintroduce this proposal for the 2015 Triennial Code Adoption Cycle. Currently, based upon the information from CalRecycle and local enforcing agencies, 65% is an achievable number.

SECTION 4.410 - BUILDING MAINTENANCE AND OPERATION

Section: 4.410.1 Operation and maintenance manual.

Rationale: HCD proposes to continue adoption of the above referenced section with new modifications. HCD proposes to add “photovoltaic systems” and “electric vehicle chargers” to Item 2, clarifying that operation and maintenance instructions for photovoltaic (PV) systems and EV chargers are required in the manual.

Currently Item 2(a) requires operation and maintenance instructions for equipment and appliances. “Photovoltaic systems” and “electric vehicle chargers” fall under this category; therefore, these are covered by Item 2(a) even though not specifically stated in the text. PV systems and EV chargers are systems that play an important role in many households in California, and their importance is increasing every day. HCD proposes to incorporate these two terms in the existing language in order to provide clarity to code users as to other systems requiring operation and maintenance instructions. There is no intended change in regulatory effect.

Section: 4.410.2 Recycling by occupants.

Rationale: HCD proposes to adopt the above referenced section. This measure would require developers and/or owners of multifamily buildings with five or more dwelling units on a building site to provide readily accessible area, adequate in size to accommodate containers for depositing, storage and collection of non-hazardous materials (including organic waste) for recycling. This requirement will assist businesses that will be required to meet AB 1826. Multifamily buildings with five or more dwelling units are also defined as businesses in AB 1826.

Section 4.410.2 was initially proposed by the Department of Resources Recycling and Recovery (CalRecycle). Similar language is currently in Section 5.410.1, but without the organic waste.

AB 341 (Chapter 476, Statutes of 2011) set California’s statewide recycling goal at 75%, and directs CalRecycle to propose statewide strategies to assist in meeting that goal. Organic materials constitute about 40% of the landfilled waste and are the primary source of methane emissions from landfills. Providing adequate space for the storage and collection of organic waste would increase overall recycling and reduce emissions of methane, a potent greenhouse gas.

AB 1826 (Chapter 727, Statutes of 2014), requires, as of April 1, 2016, any business (including some multifamily residential buildings) generating eight (8) cubic yards or more of organic waste to arrange for recycling services specific to that waste. The threshold for required service is reduced to four (4) cubic yards of organic waste on January 1, 2017, and to four (4) cubic yards of commercial solid waste effective January 1, 2019.

Division 4.5 – ENVIRONMENTAL QUALITY

SECTION 4.503 - FIREPLACES

Section: 4.503.1 General.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. HCD proposes to clarify and update the title of the U.S. EPA emission standards, and to clarify that woodstoves or pellet stoves are required to have a permanent label indicating they are certified to meet the emission limits. The proposed modification provides clarity to the code user and consistency with the U.S. EPA New Source Performance Standards (NSPS). There is no intended change in regulatory effect.

SECTION 4.504 - POLLUTANT CONTROL

Section: 4.504.2.3 Aerosol paints and coatings.

Rationale: HCD proposes to continue adoption of the above referenced section with new editorial modification. The proposed modification provides the code user with the correct reference to the California Code of Regulations, Title 17. The modification to the existing language is necessary due to changes in Title 17. There is no intended change in regulatory effect.

Tables: 4.504.1 ADHESIVE VOC LIMIT 4.504.2 SEALANT VOC LIMIT 4.504.3 VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS

Rationale: HCD proposes to continue adoption of the above referenced Tables with editorial modifications. There is no intended change in regulatory effect.

Section: 4.504.5 Composite wood products.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. Currently Section 4.504.5.1 requires a verification of compliance with Section 4.504; Item 4 provides the US, Australian and European standards for exterior grade products. HCD proposes to add four Canadian standards (CSA O121, CSA O151, CSA O153, CSA O325), which is another option for compliance with this section. This proposal was suggested by the California Air Resources Board. There is no intended change in regulatory effect.

SECTION 4.507 - ENVIRONMENTAL COMFORT

Section: 4.507.2 Heating and air-conditioning system design.

Rationale: HCD proposes to continue adoption of the above referenced section with modifications. The references to ANSI/ACCA 2 Manual J, ANSI/ACCA 1 Manual D, and ANSI/ACCA 3 Manual S are updated to the most recent standards, approved by ANSI. There is no intended change in regulatory effect.

**4. CHAPTER 6
REFERENCED ORGANIZATIONS AND STANDARDS**

HCD proposes to continue adoption of Chapter 6 from the 2013 CALGreen Code into the 2016 CALGreen Code with modifications as follows:

Section: 601.1

Rationale: HCD proposes to continue adoption of the above referenced section with modifications. Some standard references are updated to the most current standards, approved by the applicable organization. There is no intended change in regulatory effect.

**5. APPENDIX A4
RESIDENTIAL VOLUNTARY MEASURES**

Division A4.1 – PLANNING AND DESIGN

SECTION A4.106 - SITE DEVELOPMENT

**Tables: A4.106.5.1(1) TIER 1- LOW-RISE RESIDENTIAL
A4.106.5.1(3) TIER 1- HIGH-RISE RESIDENTIAL BUILDINGS, HOTELS, AND MOTELS**

Rationale: HCD proposes to continue adoption of the above referenced tables with modifications. The proposed modifications are intended to align the values in Tables A4.106.5.1(1) and A4.106.5.1(3) with the prescriptive requirements in the California Energy Code. At the time of development of this document the new proposals for the 2016 California Energy Code are pending approval; changes to the original proposals are possible. Therefore, further coordination with the California Energy Commission may be necessary.

Section: A4.106.8.2 New multifamily dwellings.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. HCD proposes to replace the term “EV charging stations” with “EV charging spaces” since the term “EV charging space” better describes a space available for future installation of EVSE, but with no EV charger installed. The proposed modification in terminology aligns with the terminology used by DSA in Chapter 11B of the California Building Code. (See also the definition of “EV charging space” in Chapter 2 of CALGreen.)

HCD also proposes to repeal the requirement for identification of EVCS on the construction documents. The same requirement is addressed in Section 4.106.4.2.1; there is no reason for the same requirement to be duplicated. HCD additionally proposes to update the website address in note 1.

The proposed modifications provide clarity to the code user. There is no intended change in regulatory effect.

Division A4.3 – WATER EFFICIENCY AND CONSERVATION

SECTION A4.303 INDOOR WATER USE

Section: A4.303.3 Appliances.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. HCD proposes to keep the reference to the ENERGY STAR program for dishwashers and clothes washers, but repeal the requirement for maximum water use. HCD also proposes an editorial modification to this section.

The ENERGY STAR is a U.S. Environmental Protection Agency (EPA) voluntary program that helps businesses and individuals save money and protect the climate through superior energy efficiency. Currently Section A4.303.3 provides an elective measure for appliances, which, if adopted by a jurisdiction or chosen by a builder, would require at least one appliance (dishwasher or clothes washer) to be ENERGY STAR with specified maximum allowed water use.

HCD proposes repeal the requirement for water use because it is part of the criteria required for these products to earn the ENERGY STAR certificate. Without duplicating the water use requirements in CALGreen, if the ENERGY STAR criteria are changed, Section A4.303 3 will automatically refer to the new ENERGY STAR requirement without the need of further modification of CALGreen.

The proposed modification provides clarity to the code users and consistency with the ENERGY STAR program. There is no intended change in regulatory effect.

Section: A4.303.4 Nonwater supplied urinals and waterless toilets.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. HCD proposes to incorporate language, clarifying that hybrid urinals are considered waterless urinals.

The hybrid urinal is a new product currently on the market. These urinals operate as nonwater urinals, but are connected to a water line. The hybrid urinals are able to use a water hook-up for the purpose of flushing, but do not require water to do so. Like waterless urinals, they rely on gravity to bring fluids down into the filter system; but use the water supply line at regular intervals to rinse the inside of the urinal bowl. The proposed modification is consistent with the CBSC proposal in Appendix A5.

Section: A4.303.5 Hot water recirculation systems.

Rationale: HCD proposes to adopt the above referenced section as an elective measure for water conservation. The amount of potable water wasted while waiting for hot water to arrive to the point of use in a sink or other plumbing fixture, depends upon numerous factors – the distance between the point of use and the water heater, the water heater temperature setting, the location of the fixtures, internal pipe diameter, effective length, pipe insulation and user behavior. The Department of Energy estimates that 3,600 to 12,000 gallons of water per year can be saved by the typical household with four points of hot water use.

When energy used to treat municipal water, pump it to households, and then treat wastewater is factored in, the Department of Energy estimates that energy savings per the same household of four range from 800 to 1,600 kilowatt-hours per year.

Demand hot water recirculation systems typically cost \$200 to \$350 up front and cost only \$27 per year in electricity or \$15 a year in natural gas to operate.

SECTION A4.304 - OUTDOOR WATER USE

Section: A4.304.2 Potable water elimination.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. HCD proposes to repeal the phrase “by the builder,” clarifying that Section A3.304.2 applies whenever landscape is provided regardless of whether installed by the builder or the owner.

Division A4.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

SECTION A4.404 - EFFICIENT FRAMING TECHNIQUES

Section: A4.404.1 Lumber size

Rationale: HCD proposes to continue adoption of the above referenced section with modification. The proposed modification provides a reference to Chapter 23 of the California Building Code, and Chapter 6 of the California Residential Code. Currently Section A4.404.1 refers to the California Residential Code, Tables R502.5(1) and R502.5(2), for size and installation requirements for beams, headers, and trimmers. However, the span tables of Chapter 5 have been moved into Chapter 6, Tables R602.7(1) and 602.7(2). HCD proposes to repeal the reference to the tables, and refer to Chapter 6 instead. This proposal is intended to avoid incorrect section references when the

International Code Council (ICC) makes changes to the model codes. When Section A4.404.1 was developed, CALGreen applied to low-rise residential buildings only. During the 2012 Triennial Code Adoption Cycle, the application was expanded to include high-rise residential buildings. However, Section A4.404.1 was not corrected; therefore, high-rise residential buildings are currently not covered. HCD proposes to correct the oversight by referring to the California Building Code, Chapter 23, for size and installation requirements for beams, headers, and trimmers for residential buildings that do not fall under the scope and application of the California Residential Code.

Section: A4.404.2 Dimensions and layouts.

Rationale: HCD proposes to continue adoption of the above referenced section with modification. The proposed modification adds a title (Dimensions and layouts) to the section number, providing clarity and consistency with other sections of CALGreen. There is no intended change in regulatory effect.

SECTION A4.405 - MATERIAL SOURCES

Section: A4.405.3.1.1 Total material cost.

Rationale: HCD proposes to continue adoption of the above referenced table with modification. HCD proposes to repeal Table A4.405.3, and incorporate new language referring to the ICC Building Valuation Data (BVD) or other valuation data approved by the local enforcing agency.

Currently Table A4.405.3 provides the square foot construction cost for one- and two-family dwellings, and multifamily dwellings, pursuant to the International Code Council's (ICC) Building Valuation Data. However, the BVD codified in the 2013 CALGreen is already outdated because it was published in February 2011. ICC updates its BVD every six months; therefore, it is not possible for HCD to keep the data in CALGreen current with 18 months adoption cycle. Instead maintaining the ICC tables in CALGreen, HCD proposes to provide a reference to the ICC data base, or other data approved by the local enforcing agency.

Sections: A4.405.3.1.3 Determination of recycled content value of materials (RCV_M). (Note 2)

A4.405.3.1.4 Determination of recycled content value of assemblies (RCV_A). (Note)

Rationale: HCD proposes to adopt the above referenced sections with modifications. HCD proposes to modify the notes, clarifying that the total recycled content shall be considered preconsumer when the manufacturer reports the total recycled content of a material as one percentage, in lieu of separately reporting preconsumer and postconsumer values. Currently the notes allow the total recycled content to be calculated as 50-percent preconsumer and 50-percent postconsumer when not reported separately by the manufacturer. The proposed modification is intended to encourage manufacturers to designate and report the recycled content in materials as preconsumer and postconsumer, and to provide additional benefits for manufacturers using only postconsumer recycled content in their products.

SECTION A4.408 - CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

Section: A4.408.1 Enhanced construction waste reduction.

Rationale: HCD proposes to continue adoption of the above referenced section with modifications. The proposed modification increases the verification requirements for Tier 1 and Tier 2, and keeps the same percentages (65% and 75%) for construction waste reduction.

Additional verification requirements for Tier 1 and Tier 2, as a voluntary measures, will aid in CalRecycle's statewide recycling goal at 75% for 2020 as stated in AB 341 (Chapter 476, Statutes of 2011). HCD also proposes to increase the percentage of nonhazardous construction and demolition waste from 50-percent to 65-percent, moving the existing Tier 1 voluntary measure (65%) to mandatory. (See the rationale for Section 4.408.1)

Division A4.6 – TIER I AND TIER 2

SECTION A4.601 - GENERAL

Section: A4.601.4.2 Prerequisite and elective measures for Tier 1.

Rationale: HCD proposes to continue adoption of the above referenced section with modification in Item 3. The proposed modification changes the requirements for achieving Tier 1 status.

Until June 1, 2015, when the emergency proposal for outdoor irrigation was adopted (in 2013 CALGreen), Section A4.601.4.2 required compliance with two prerequisites and two elective measures for residential buildings to achieve Tier 1 status. As part of the emergency rulemaking, the requirement for water budget (prerequisite) was moved to Chapter 4 as mandatory, and Section A4.304.4 (prerequisite), mandating potable water use reduction, was repealed. As a result, currently Tier 1 can be achieved with two electives only.

HCD proposes to increase the required number of electives from two to three in order to provide more opportunities for jurisdictions, builders, and/or owners to conserve water. The proposed modification is consistent with the Governor's Executive Order B-29-15, issued on April 1, 2015.

Section: A4.601.5.2 Prerequisite and elective measures for Tier 2.

Rationale: HCD proposes to continue adoption of the above referenced section with modification in Item 3. The proposed modification changes the requirements for achieving Tier 2 status.

Until June 1, 2015, when the emergency proposal for outdoor irrigation was adopted (in 2013 CALGreen), Section A4.601.5.2 required compliance with two prerequisites and three elective measures for residential buildings to achieve Tier 2 status. As part of the emergency rulemaking, the requirement for water budget (prerequisite) was moved to Chapter 4 as mandatory, and Section A4.304.4 (prerequisite), mandating potable water use reduction, was repealed. As a result, currently Tier 2 can be achieved with two electives only.

HCD proposes to increase the required number of electives from three to four in order to provide more opportunities for jurisdictions, builders, and/or owners to conserve water. The proposed modification is consistent with the Governor's Executive Order B-29-15, issued on April 1, 2015.

Section: A4.602 RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST

Rationale: HCD proposes to adopt the above referenced section with modification. HCD proposes to modify the language in the application checklist to align with the modifications proposed to other sections in the 2016 CALGreen. There is no intended change in regulatory effect.

TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:

(Government Code Section 11346.2(b)(3) requires an identification of each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies in proposing the regulation(s).

None.

STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS:

(Government Code Section 11346.2(b)(1) requires a statement of the reasons why an agency believes any mandates for specific technologies or equipment or prescriptive standards are required.)

HCD is statutorily required to adopt by reference model building codes, which contain prescriptive standards. Prescriptive standards provide the following: explicit guidance for certain mandated requirements; consistent application and enforcement of building standards while also establishing clear design parameters; and ensure compliance with minimum health, safety and welfare standards for owners, occupants and guests.

Performance standards are permitted by state law; however, they must be demonstrated to the satisfaction of the proper enforcing agency.

CONSIDERATION OF REASONABLE ALTERNATIVES

(Government Code Section 11346.2(b)(4)(A) requires a description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific action or procedures, the imposition of performance standards shall be considered as an alternate. It is not the intent of this paragraph to require the agency to artificially construct alternatives or describe unreasonable alternatives.)

None. There were no alternatives available to HCD. HCD is required by statute to adopt model codes by reference, however, there are no model codes addressing green building standards specific to California.

REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.

(Government Code Section 11346.2(b)(4)(B) requires a description of any reasonable alternatives that have been identified or that have otherwise been identified and brought to the attention of the agency that would lessen any adverse impact on small business.)

HCD has determined that this regulatory action would have no significant adverse economic impact on California business enterprises and individuals, including the ability of California businesses to compete with businesses in other states.

FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.

(Government Code Section 11346.2(b)(5)(A) requires the facts, evidence, documents, testimony, or other evidence on which the agency relies to support an initial determination that the action will not have a significant adverse economic impact on business.)

None.

ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION.

(Government Code Sections 11346.3(b)(1) and 11346.5(a)(10)).

HCD has assessed whether or not and to what extent this proposal will affect the following:

- The creation or elimination of jobs within the State of California.
These regulations will not affect the creation, or cause the elimination, of jobs within the State of California.
- The creation of new businesses or the elimination of existing businesses within the State of California.
These regulations will not affect the creation or the elimination of existing business within the State of California.
- The expansion of businesses currently doing business with the State of California.
These regulations will not affect the expansion of businesses currently doing business within the State of California.
- The benefits of the regulations to the health and welfare of California residents, worker safety, and the state's environment.
These regulations will update and improve minimum existing building standards, which will provide increased protection of public health and safety, worker safety and the environment.

ESTIMATED COST OF COMPLIANCE, ESTIMATED POTENTIAL BENEFITS, AND RELATED ASSUMPTIONS USED FOR BUILDING STANDARDS

(Government Code Section 11346.2(b)(5)(B)(i) states if a proposed regulation is a building standard, the initial statement of reasons shall include the estimated cost of compliance, the estimated potential benefits, and the related assumptions used to determine the estimates.)

- No increased cost of compliance for those regulations.
- The potential benefits include, but are not limited to:
 - Continue to reduce greenhouse gas (GHG) emissions.
 - Continue the Administration's directive to adopt green building standards for residential, commercial, and public building construction as part of the building code adoption process.
 - Protection of public health and safety.
 - Environmental benefits through reduced use of energy, water, and raw materials; improved public and building occupant health due to improved indoor air quality; and overall reduction in detrimental environmental impacts.
 - General welfare of California residents.

DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS

(Government Code Section 11346.2(b)(6) requires a department, board, or commission within the Environmental Protection Agency, the Resources Agency, or the Office of the State Fire Marshal to describe its efforts, in connection with a proposed rulemaking action, to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues. These agencies may adopt regulations different from these federal regulations upon a finding of one or more of the following justifications: (A) The differing state regulations are authorized by law and/or (B) The cost of differing state regulations is justified by the benefit to human health, public safety, public welfare, or the environment.)

These regulations do not duplicate nor conflict with federal regulations. The State of California has preemptive authority to adopt more restrictive mandatory standards for the appliances addressed in these regulations.

Exhibit B

HCD 2015 Emergency Rulemaking Activity (2013 CALGreen Code)

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
2013 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11

1) Rationale for Necessity

Necessity for adoption of original emergency regulations.

Governor Brown's Executive Order B-29-15 (April 1, 2015) provided a summary of the ongoing drought conditions in California starting with declarations for a State of Emergency (January 17, 2014) and Continued State of Emergency (April 25, 2014); 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, the Executive Order 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, the Executive Order specified that strict compliance with identified statutes and regulations would prevent, hinder, or delay, or mitigate the effects of the drought.

At the time of development and approval of the emergency regulations, existing Government Code, Water Conservation in Landscaping Act, Section 65591 *et seq.*, requires cities, counties and charter cities and counties to adopt landscape water conservation ordinances by January 1, 2010. DWR has implemented the Act by preparing a Model Water Efficient Landscape Ordinance (MWELo) effective September 10, 2009, for use by local agencies. The MWELo provides a framework for development of water budgets for landscapes ensuring that a landscape is allowed sufficient water for a specific design based on climate and type of plants. The MWELo applies to landscaped areas at least 2,500 square feet (developer-installed); or 5,000 square feet (homeowner-provided), requiring a building or landscape permit, plan check and design review. DWR has acknowledged that an essential component to reducing potable water consumptions for landscaping is the implementation of the MWELo. History has identified that full implementation of the MWELo has not been achieved largely because it has been a local planning issue at project conception, and has not been implemented at the local building department permitting and inspection level. DWR has no authority to propose building standards, nor mandate local building departments to verify compliance with MWELo. The proposed regulations would provide additional visibility of the MWELo requirements in building standards, provide additional oversight of compliance, and amend the maximum applied water allowance formula to decrease the amount of allowable water for landscape purposes.

Given the extensive code adoption process, adherence to the current 2015 Triennial Code Adoption Cycle schedule would make the proposed building standards effective at the local level on January 1, 2017. Deadlines for proposed changes in the 2013 Intervening Code Cycle have already passed. The approved changes, which became effective July 1, 2015, have already been published.

A delay of nearly 18 months in the effective date for measures reducing outdoor use of potable water in building standards does not address the Governor's declared emergency for the effective conservation of California's limited water resources. In view of the urgency to conserve California's water resources, as deemed essential by the Governor's Executive Order and prior proclamations, HCD proposes the adoption of these building standards through the emergency adoption process.

Necessity for permanent adoption of emergency regulations.

Emergency regulations are effective for a period of 180 days after filing with the Secretary of State. The original drought emergency conditions necessitating the emergency regulations are still ongoing; therefore, it is essential that the outdoor water reduction measures in CALGreen and MWELo continue to be enforced. In addition, it is necessary to solicit public comment from stakeholders, enforcing agencies, and other state agencies to ensure that the proposed regulations are still relevant in light of a revised MWELo adopted by the California Water Commission on July 15, 2015.

Specific Proposed Regulatory Actions:

In response to State of Emergency proclamations issued by Governor Brown in January and April of 2014, and in particular Executive Order B-29-15 (issued April 1, 2015), HCD has proposed emergency building standards

pertaining to the reduction of potable water use for exterior landscape irrigation for newly constructed residential buildings. HCD, in coordination with the California Building Standards Commission (CBSC), Department of Water Resources (DWR), the Division of the State Architect (DSA), and other stakeholders, developed the following emergency regulations that amend the 2013 California Green Building Standards Code (Part 11, Title 24, California Code of Regulations, also known as “CALGreen”) as follows:

- Amendment of Section 4.304 pertaining to Outdoor Water Use
- Amendment and repeal of sections from A4.304 pertaining to Outdoor Water Use
- Amendment of Sections A4.601 and A4.602 to reflect changes proposed in the above two actions

HCD proposes the same adoptions, amendments, and repeals for this rulemaking to submit the emergency regulations to a certifying rulemaking process.

1. CHAPTER 2 DEFINITIONS

HCD proposes to continue adoption of Chapter 2 from the 2013 CALGreen Code with modifications as follows:

SECTION 202 – DEFINITIONS

ET ADJUSTMENT FACTOR (ETAF).

Rationale: HCD proposes adoption of the above referenced definition since it will be referenced in proposed new Section 4.304.1 and is a technical term that is specifically used when calculating the required water budget proposed in new Section 4.304.1.

HYDROZONE.

Rationale: HCD proposes repeal of the above referenced definition since this term is not used in the current sections of CALGreen related to Outdoor Water Use. This provides consistency with the format of CALGreen and other building standards codes. There is no intended change in regulatory effect.

LANDSCAPE (PLANT) COEFFICIENT (K).

Rationale: HCD proposes repeal of the above referenced definition since this term is not used in the current sections of CALGreen related to Outdoor Water Use. This provides consistency with the format of CALGreen and other building standards codes. There is no intended change in regulatory effect.

2. CHAPTER 4 RESIDENTIAL MANDATORY MEASURES

HCD proposes to continue adoption of Chapter 4 from the 2013 CALGreen Code with modifications as follows:

Division 4.3 – WATER EFFICIENCY AND CONSERVATION

SECTION 4.304 – OUTDOOR WATER USE

Section: 4.304.1 Outdoor potable water use in landscape areas (formerly Irrigation controllers).

Rationale: HCD proposes adoption of the above referenced new mandatory section effective June 1, 2015, to help mitigate and alleviate current and future impacts of California’s multi-year drought and increase compliance with the Department of Water Resources’ Model Water Efficient Landscape Ordinance (MWELo) as described in prior sections for Rationale for Necessity and Specific Proposed Regulatory Actions.

In order to reduce the amount of water, especially potable water, to be used for planned landscape areas and to assist other state agencies in complying with the Governor’s Executive Order B-29-15, HCD proposed adoption of mandatory requirements that water budgets be prepared for landscaped areas that conform to the MWELo. MWELo’s water budget calculations provide an objective estimation of the amount of water that would be used in a region-specific landscaped area (square feet) based on climate and a “reference” plant type; and then compares this maximum allowable water use to what is estimated for a planned landscape based on the specific square footage and type of plants selected. Compliance with the water budget requirements in the MWELo would ensure that appropriate plants are selected for the area to avoid excess water use. As part of these calculations, the MWELo

provides an average evapotranspiration rate adjustment factor (ETAF) 0.71 which adjusts for plant factors (numerical values based on plant water needs) and irrigation efficiency.

HCD's proposed adoption of a reduced ETAF from 0.7 to 0.55 for landscaped areas (as defined in MWELo) and corresponding ETAF from 0.3 to 0.45 for special landscaped areas (as defined by MWELo). These rates were developed in coordination with the Department of Water Resources (who was simultaneously conducting workgroups for update of the MWELo), the California Building Standards Commission, Division of State Architect, Department of General Services, Office of Statewide Health Planning and Development, California Government Operations Agency and others. Compliance with this change is regulatory effect will result in a lower amount of maximum allowable water use for a specified size of landscaped area and selection of lower water use plantings to arrive at estimated water use numbers lower than the maximum allowable use. For example, this may reduce lawn areas in favor of lower water use or drought tolerant plantings.

HCD also proposes adoption of notes providing information to the code user for online access to the MWELo as well as to the water budget interactive calculator provided by the Department of Water Resources.

Section: 4.304.1.1 Methods to reduce potable water use.
4.304.1.2 Authorized potable water use.

Rationale: HCD proposes adoption of the above referenced new mandatory sections to provide recognition of other methods to reduce potable water use and to clarify when it is permissible to use potable water. The methods of water use reduction were formerly recognized as an elective measure in voluntary Section A4.304.4 and have been revised to clarify permitted use of potable water when needed for back-up water supply for on-site recycling or reuse systems. HCD also proposes adoption of text recognizing the allowed use of potable water when necessary for immediate health and safety needs or required a condition of state permits pursuant to regulations adopted by the State Water Resources Control Board.

Section: 4.304.2 (Formerly 4.304.1) Irrigation controllers.

Rationale: HCD proposes renumbering of this section to Section 4.304.2 to accommodate a new Section 4.304.1. There is no intended change in text or regulatory effect.

3. APPENDIX A4

RESIDENTIAL VOLUNTARY MEASURES

Division A4.3 – WATER EFFICIENCY AND CONSERVATION

SECTION A4.304 - OUTDOOR WATER USE

Section: A4.304.1 Low-water consumption irrigation system.

Rationale: HCD proposes repeal of this section due to lack of specificity on the term "low-water consumption irrigation system" and focus on outdoor potable water reduction based on measureable standards such as the MWELo, which focuses of amount of water needed for appropriate plantings. The existing language includes some types of irrigation devices, but without recommendations or requirements related to flow rates or length of time used; therefore, may not result in water savings. This is an elective measure in the 2013 CALGreen; therefore, repeal has no intended change in regulatory effect.

Section: A4.304.1 Rainwater catchment systems. (formerly Section A4.304.2)

Rationale: HCD proposes renumbering of this section to Section A4.304.1 to accommodate repeal of Section A4.304.1. There is no intended change in text or regulatory effect.

Section: A4.304.3 Water budget.

Rationale: HCD proposes repeal of this section since it has been revised and moved to Chapter 4, Division 4.3, Section 4.304.1.

Section: A4.304.4 Potable water reduction.

Rationale: HCD proposes repeal of this section since compliance with MWELo has been adopted as a mandatory measure in Section 4.304.1. Although at the time of preparation of these emergency regulations, it was anticipated that DWR's update to the MWELo would result in increased irrigation efficiency and reduced potable water use, however, the exact level of reduction was unknown. Therefore, HCD proposed, in Section 4.304.1, specific levels of outdoor water reduction by revising the evapotranspiration adjustment factor (ETAF) in the maximum applied water allowance calculations in the MWELo. This effectively reduced the water allowance to a quantity lower than the existing CALGreen voluntary Tier 1 and Tier 2 levels.

Section: A4.304.2 Potable water elimination. (formerly Section A4.304.5)

Rationale: HCD proposes renumbering of this measure to Section A4.304.2 to accommodate renumbering and repeal of prior sections. There is no intended change in text or regulatory effect.

Section: A4.304.3 Irrigation metering device. (formerly Section A4.304.6)

Rationale: HCD proposes renumbering of this measure to Section A4.304.6 to accommodate renumbering and repeal of prior sections. There is no intended change in text or regulatory effect.

Division A4.6 – TIER I AND TIER 2

SECTION A4.601 - GENERAL

Section: A4.601.4.2 Tier 1.

Rationale: HCD proposes amendment of Item 3 of the above referenced section. The proposed amendment changes the requirements for achieving Tier 1 status. Currently, in addition to the mandatory measures for water efficiency and conservation, compliance with two prerequisites and two elective measures are required for residential buildings to achieve Tier 1 status. As part of the emergency rulemaking, HCD proposes to move the requirement for water budget (currently in Section A4.304.3) to Section 4.304.1 as mandatory, and repeal Section A4.304.4, mandating potable water use reduction (see rationale for Sections 4.304.1, A4.304.3 and A4.304.4). Therefore, there is no reason for current Items 3.1 and 3.2 to remain in the code. Correspondingly, HCD proposes renumbering of Item 3.3 to 3.1 to accommodate the repeal of preceding items.

Section: A4.601.5.2 Tier 2.

Rationale: HCD proposes amendment of Item 3 of the above referenced section. The proposed amendment changes the requirements for achieving Tier 2 status. Currently, in addition to the mandatory measures for water efficiency and conservation, compliance with two prerequisites and three elective measures are required for residential buildings to achieve Tier 2 status. As part of the emergency rulemaking, HCD proposes to move the requirement for water budget (currently in Section A4.304.3) to Section 4.304.1 as mandatory, and repeal Section A4.304.4, mandating potable water use reduction (see rationale for Sections 4.304.1, A4.304.3 and A4.304.4). Therefore, there is no reason for current Items 3.1 and 3.2 to remain in the code. Correspondingly, HCD proposes renumbering of Item 3.3 to 3.1 to accommodate the repeal of preceding items.

HCD does not propose new prerequisites for this rulemaking. However, HCD intends to propose new electives in Division A4.3 and increase the required number of electives for Tier 1 and Tier 2 compliance in order to comply with the Governor's Executive Order B-29-15 (issued on April 1, 2015), and to provide more opportunities for jurisdictions, builders, and/or owners to conserve water.

Section: A4.602 RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST

Rationale: HCD proposes amendment of the above reference section (checklist) to align with the modifications proposed to other sections in this rulemaking. There is no intended change in regulatory effect.

TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:

(Government Code Section 11346.2(b)(3) requires an identification of each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies in proposing the regulation(s).

The Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELo) adopted in the California Code of Regulations, Title 23, Division 2, Chapter 2.7, Section 492 *et seq.*

STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS:

(Government Code Section 11346.2(b)(1) requires a statement of the reasons why an agency believes any mandates for specific technologies or equipment or prescriptive standards are required.)

HCD is statutorily required to adopt by reference model building codes, which contain prescriptive standards, however, CALGreen is not based on a model code. Prescriptive standards provide the following: explicit guidance for certain mandated requirements; consistent application and enforcement of building standards while also establishing clear design parameters; and ensure compliance with minimum health, safety and welfare standards for owners, occupants and guests. In this rulemaking, the prescriptive standards referenced are part of the Model Water Efficient Landscape Ordinance (MWELo) adopted in the California Code of Regulations, Title 23, Division 2, Chapter 2.7, Section 492 *et seq.*

Performance standards are permitted by state law; however, they must be demonstrated to the satisfaction of the proper enforcing agency. The MWELo also provides for a performance approach for compliance.

CONSIDERATION OF REASONABLE ALTERNATIVES

(Government Code Section 11346.2(b)(4)(A) requires a description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific action or procedures, the imposition of performance standards shall be considered as an alternate. It is not the intent of this paragraph to require the agency to artificially construct alternatives or describe unreasonable alternatives.)

These regulations were developed and adopted on an emergency basis in response to State of Emergency proclamations issued by Governor Brown in January and April of 2014, and in particular Executive Order B-29-15 (issued April 1, 2015) and to immediately implement reduction of potable water use for exterior landscape irrigation for newly constructed residential buildings. These measures were developed in coordination with the California Building Standards Commission (CBSC), Department of Water Resources (DWR), the Division of the State Architect, and other stakeholders after consideration of other alternatives that would result in less immediate impact.

The determination of these meetings was that it is imperative that building standards be adopted within the California Building Standards Code to ensure that compliance with the MWELo is identified as associated with new residential construction. In addition, HCD and the other state agencies would be increasing compliance with a science-based method of ensuring appropriate water use for residential landscapes and to avoid waste of potable water.

REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.

(Government Code Section 11346.2(b)(4)(B) requires a description of any reasonable alternatives that have been identified or that have otherwise been identified and brought to the attention of the agency that would lessen any adverse impact on small business.)

HCD has determined that this regulatory action would have no significant adverse economic impact on California business enterprises and individuals, including the ability of California businesses to compete with businesses in other states. These regulations may result in changes in demand of low-water using plants or turf grass at retail and wholesale businesses but these are not necessarily adverse impacts.

FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.

(Government Code Section 11346.2(b)(5)(A) requires the facts, evidence, documents, testimony, or other evidence on which the agency relies to support an initial determination that the action will not have a significant adverse economic impact on business.)

None.

ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION.

(Government Code Sections 11346.3(b)(1) and 11346.5(a)(10)).

HCD has assessed whether or not and to what extent this proposal will affect the following:

- The creation or elimination of jobs within the State of California.
These regulations will not affect the creation, or cause the elimination, of jobs within the State of California.
- The creation of new businesses or the elimination of existing businesses within the State of California.
These regulations will not affect the creation or the elimination of existing business within the State of California.
- The expansion of businesses currently doing business with the State of California.
These regulations will not affect the expansion of businesses currently doing business within the State of California.
- The benefits of the regulations to the health and welfare of California residents, worker safety, and the state's environment.

These regulations will update and improve minimum existing building standards, which will provide increased protection of public health and safety, worker safety and the environment.

ESTIMATED COST OF COMPLIANCE, ESTIMATED POTENTIAL BENEFITS, AND RELATED ASSUMPTIONS USED FOR BUILDING STANDARDS

(Government Code Section 11346.2(b)(5)(B)(i) states if a proposed regulation is a building standard, the initial statement of reasons shall include the estimated cost of compliance, the estimated potential benefits, and the related assumptions used to determine the estimates.)

The proposed regulatory changes related to mandatory requirements in CALGreen do not require any additional mandates than the MWELo regulation adopted by the DWR. Any cost increases will result as a change in the MWELo and direct impacts of implementation by local agencies and not from the reference in the CALGreen Code. The additional compliance with MWELo should result in reduction of potable water use, reduced waste of potable water, and savings in water treatment and delivery costs.

DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS

(Government Code Section 11346.2(b)(6) requires a department, board, or commission within the Environmental Protection Agency, the Resources Agency, or the Office of the State Fire Marshal to describe its efforts, in connection with a proposed rulemaking action, to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues. These agencies may adopt regulations different from these federal regulations upon a finding of one or more of the following justifications: (A) The differing state regulations are authorized by law and/or (B) The cost of differing state regulations is justified by the benefit to human health, public safety, public welfare, or the environment.)

These regulations do not duplicate nor conflict with federal regulations.