

**REVISED EXPRESS TERMS  
FOR  
PROPOSED BUILDING STANDARDS  
OF THE  
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT  
REGARDING CHANGES TO THE  
2013 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)  
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11  
(HCD 04/12)**

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**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 **Repealed text:** All language appears in ~~strikeout~~.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 **Amended, adopted or repealed language after public hearing:** All language is shown in double underline or ~~double strikeout~~.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.
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**1. HCD proposes to amend Chapter 2, Section 202 as follows:**

**CHAPTER 2  
DEFINITIONS**

**SECTION 202  
DEFINITIONS**

**RAINWATER CATCHMENT SYSTEM.** A facility designed to capture, retain, and store rainwater flowing off a building, parking lot, or any other manmade impervious surface rooftop for subsequent onsite use. Rainwater catchment system is also known as “Rainwater Harvesting System” or “Rainwater Capture System.”

**NOTE:**

Authority cited: Health and Safety Code Sections 17921, 17922 and 19990. Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17990 and 19960 through 19997.

**Rationale for Change:**

HCD proposes to amend the definition for “rainwater catchment system” to coordinate with the statutory definition for “rainwater capture system” as now defined in the “Rainwater Capture Act of 2012.” This Act was codified by Assembly Bill 1750 (Solorio; Chapter 537, Statutes of 2012), which was approved by the Governor on September 25, 2012, coinciding with 2013 CALGreen Code 45-day public comment period. These changes are also in coordination with similar changes proposed for the 2013 California Plumbing Code during its 15-day public comment period.

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## **2. HCD proposes to amend Chapter 3, Section 301.1.1 [HCD] as follows:**

### **CHAPTER 3 GREEN BUILDING**

#### **SECTION 301 GENERAL**

**301.1 Scope.** Buildings shall be designed ... (No change to text)

**301.1.1 [HCD] Additions and alterations.** The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

~~**Note:** CALGreen requirements shall be applied to the addition or alteration and not the existing dwelling. Only CALGreen requirements directly associated to the addition or alteration are applicable. Based upon the scope of the addition or alteration, some CALGreen provisions may not be applicable.~~

**Exception:** On and after January 1, 2014, residential buildings undergoing permitted alterations, additions or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1 *et seq.* for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

**NOTE:**

Authority cited: Health and Safety Code Sections 17921, 17922 and 19990. Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17990 and 19960 through 19997.

**Rationale for change:**

HCD has amended proposed new Section 301.1.1 in response to a public comment. The commenter believed that HCD had located regulatory text within the explanatory note found beneath Section 301.1.1. HCD agreed with the commenter and relocated the explanatory language "CALGreen measures apply to only the area of the addition or alteration" into the body of regulatory text.

HCD proposes to include additional information as an "Exception". Senate Bill 407 (Padilla; Chapter 587, Statutes of 2009) requires replacement of noncompliant plumbing fixtures in all existing single-family residential real property by January 1, 2017, and in all existing multifamily residential real property (including residential hotels) and commercial real property (including hotels and motels) by January 1, 2019. In addition, this new legislative requirement mandates the replacement of noncompliant plumbing fixtures in residential buildings on and after January 1, 2014, for a residential alteration, improvement or addition. The exception provides guidance and direction where affected parties can find the specific requirements in the California Civil Code, Section 1101.1 *et seq.*

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## **3. HCD proposes to amend (instead of repeal) Chapter 4, Section 4.302.1 as follows:**

### **Division 4.3 – WATER EFFICIENCY AND CONSERVATION**

**4.301.1 Scope.** ... (No change to text)

#### **SECTION 4.302 DEFINITIONS**

**4.302.1 Definitions.** ~~The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.~~ All definitions are located in Chapter 2.

**NOTE:**

Authority cited: Health and Safety Code Sections 17921, 17922 and 19990. Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17990 and 19960 through 19997.

**Rationale for change:**

HCD proposes amendment of the above referenced section to provide consistency within the code. Reorganization of CALGreen has resulted in defined terms and accompanying definitions be moved into Chapter 2. This change is not a result of a public comment, but for purposes of consistency in code organization to provide accurate instructions to the user. This amendment has not change in regulatory effect.

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**4. HCD proposes to amend Chapter 6 “Referenced Organizations and Standards” as follows:**

**CHAPTER 6  
REFERENCED ORGANIZATIONS AND STANDARDS**

**601.1** This chapter lists the organizations and standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard.

	STANDARD	REFERENCED SECTION
<b>AHAM</b> Association of Home Appliance Manufacturers 1111 19 <sup>th</sup> Street NW, Suite 402 Washington, D.C. 20026-3627 <a href="http://www.aham.org">http://www.aham.org</a>	<u>ANSI/AHAM DW-1-2010</u>	<del>A4302</del> <del>A4303.2</del> <u>202</u>

...

<b>ANSI</b> American National Standards Institute Operations Office 25 West 43rd Street, Fourth Floor New York, NY 10036 <a href="http://www.ansi.org">http://www.ansi.org</a>	<u>ANSI A190.1-2002</u> <u>ANSI Z124.9-2004</u> <u>ANSI/AHAM DW-1</u> NSF/ANSI 140-2007 ANSI/ACCA 2 Manual J-2004 ANSI/ACCA 1 Manual D-2009 ANSI/ACCA 3 Manual S-2004	4.502 Table 4.303.3 <del>A4.30.202</del> 4.504.3, 5.504.4.4 4.507.2 4.507.2 4.507.2
<b>ASHRAE</b> American Society of Heating, Refrigeration and Air Conditioning Engineers Inc. 1791 Tullie Circle, NE Atlanta, GA 30329 <a href="http://www.ashrae.org">http://www.ashrae.org</a>	52.1-92 <del>52.2-99</del> <u>2007</u> 62.2 90.1	A5.504.1 <del>A4.502.202</del> A5.504.1 5.108.8

... (No change to text)

<b>ASTM</b> ASTM International		
100 Barr Harbor Drive West Conshohocken, PA 19428-2859 <a href="http://www.astm.org">http://www.astm.org</a>	ASTM C 33 ASTM C 150 ASTM C 595 ASTM C 618 ASTM C 989 ASTM C 1157 ASTM C 1240 ASTM C 1371-98 ASTM C 1549 ASTM C 1602 ASTM C 1697 ASTM E 90 ASTM E 408-02 ASTM E 413 ASTM E 1332 ASTM E 1333-02 <del>ASTM E 1500-04</del> ASTM E 1903-97 ASTM E 1918 ASTM E 1980-01	A 5.405.5.3.2 A 5.405.5.1 A 5.405.5.1 A 5.405.5.2.1 A 5.405.5.2.1 A 5.405.5.1 A 5.405.5.2.1 A4.205.1, A5.106.11.2.2 <u>A4.106.7</u> , A5.106.11.1 A5.405.5.3.2.3 A5.405.5.2.1 5.507.4 A4.205.1, A5.10, 6.11.2.2 5.507.4 5.507.4 Tables 4.504.5 & 5.504.4.5 <del>4.503.5</del> A5.103.4 <u>A4.106.7</u> , A5.106.11.1 A4.106.5.3, A5.106.11.2.3

... (No change to text)

<del>UL Underwriters Laboratories, Inc.</del>		
<del>333 Pfingsten Road Northbrook, IL 60062 <a href="http://www.ul.com">http://www.ul.com</a></del>	<del>UL 1482 UL 127</del>	<del>4.503.3 4.503.4</del>

**NOTE:**

Authority cited: Health and Safety Code Sections 17921, 17922 and 19990. Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17990 and 19960 through 19997.

**Rationale for change:**

HCD proposes to amend the table for “Referenced Organizations and Standards” to correlate with the latest proposed regulations. Reorganization of regulatory text, such as moving all definitions into Chapter 2 and removal of some earlier proposed regulatory language, has necessitated revisions of this table for purposes of accurate reference. This table is a listing of referenced standards; therefore, changes in this table have no intended change in regulatory effect.

**5. HCD proposes to repeal Section A4.303.1, withdraw formerly proposed Section A4.303.1 “Ten percent savings”, and adopt a new Section A4.303.1 “Kitchen faucets” as follows:**

**SECTION A4.303  
INDOOR WATER USE**

**A4.303.1 Kitchen faucets and dishwashers.** Kitchen faucets and dishwashers in Tier 1 and Tier 2 buildings shall comply with this section.

**Tier 1.** The maximum flow rate at a kitchen sink faucet shall not be greater than 1.5 gpm at 60 psi.

**Note:** Rated flow rates for the default function of the faucet shall be used to demonstrate compliance with this section.

**Tier 2.** In addition to the kitchen faucet requirements for Tier 1, dishwashers in Tier 2 buildings shall be ENERGY STAR qualified and not use more than 5.8 gallons of water per cycle.

**A4.303.1 Ten percent savings.** A schedule of plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) that will reduce the overall use of potable water within the building by at least 10 percent shall be provided. The reduction shall be based on the maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code. The 10 percent reduction shall be demonstrated by one of the following methods:

1. **Prescriptive Method.** Each plumbing fixture and fitting shall not exceed the Maximum Flow Rate at  $\geq$  10 Percent Reduction column in Table A4.303.2; or

2. **Performance Method.** A calculation demonstrating a 10 percent reduction in the building “water use” baseline as established in Table A4.303.1 shall be provided.

**Exception:** Lavatory faucets and metering faucets installed pursuant to Sections 4.303.1.4.2 and 4.303.1.4.3 need not comply with the 10 percent flow reduction requirements of Section A4.303.1.

**A4.303.1 Kitchen faucets.** The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minutes at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi.

**Note:** Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

**NOTE:**

Authority cited: Health and Safety Code Sections 17921, 17922 and 19990. Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17990 and 19960 through 19997.

**Rationale for change:**

HCD initially proposed to repeal the above referenced section (see ISOR), which currently provides a voluntary (prerequisite) measure for kitchen faucets (Tier 1) and both kitchen faucets and dishwashers (Tier 2). Instead, HCD had proposed to adopt a new Section A4.303.1, providing an elective measure for 10 percent indoor water use reduction.

During the 45-day public comment period, HCD received a comment from Plumbing Manufacturers International (PMI) requesting the voluntary measures for 10 percent water reduction to be removed from HCD’s proposal. The commenter expressed a concern based on lack of consumer research and health and safety issues with the low flow rate. Concern was also expressed about issues related to enforcement such as the need to create products for individual towns or regulating products that are imported into the town from nearby sources.

HCD does not wholly agree with PMI’s conclusions. However, upon review, HCD determined that health and safety concerns, expressed by PMI, as well as potential consumer frustration, should be taken into account, and further consumer research and additional technical data may be beneficial before additional

measures for further reduction of indoor water conservation are to be adopted in the CALGreen Code. Therefore, HCD proposes to withdraw the elective measure for 10 percent indoor water use reduction. This withdrawal will not result in any change in regulatory effect since this is a new measure proposed for the 2013 CALGreen Code.

As a result of the decision to withdraw provisions for 10 percent indoor potable water use reduction, HCD proposes to retain existing provisions for reduced flow rate for kitchen faucets (1.5 gpm at 60 psi). This existing provision is identified as a Tier 1 prerequisite, however, it is still a viable and implementable elective measures. Therefore, HCD proposes to continue adoption of the specific reduced flow rate for the kitchen faucets as an elective measure. Additional revisions provide consistency with proposed Section 4.303.3, which addresses required flow rates for kitchen faucets.

The withdrawal of HCD's proposal for 10 percent indoor water use reduction affects three other proposals (see Rationale for Section A4.303.2, Tables A4.303.1 and A4.303.2, and Section A4.303.3).

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## **6. HCD proposes to NOT adopt Sections A4.303.1.1 and A4.303.1.2, and to adopt Section A4.303.2 as follows:**

~~**A4.303.1.1 Multiple showerheads serving one shower.** When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed the Maximum Flow Rate at  $\geq$  10 Percent Reduction column in Table A4.303.2, or the shower shall be designed to allow only one shower outlet to be in operation at a time.~~

~~**Exception:** The maximum flow rate for showerheads when using the performance method specified in Section A4.303.1, Item 2, is 2.0 gallons per minute at 80 psi.~~

~~**A4.303.1.2 Alternate water sources for nonpotable applications.** Alternate nonpotable water sources for indoor use may be included in the calculations demonstrating 10 percent reduction. Alternate nonpotable water sources shall comply with the *California Plumbing Code*.~~

**A4.303.2 Alternate water sources for nonpotable applications.** Alternate nonpotable water sources are used for indoor potable water reduction. Alternate nonpotable water sources shall be installed in accordance with the *California Plumbing Code*.

### **NOTE:**

Authority cited: Health and Safety Code Sections 17921, 17922 and 19990. Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17990 and 19960 through 19997.

### **Rationale for change:**

HCD proposes to withdraw Section A4.303.1.1 "Multiple showerheads serving one shower". This section is related to HCD's proposal for 10 percent indoor water use reduction, which is now proposed for withdrawal (see Rationale for proposed Section A4.303.1). There is no reason for Section A4.303.1.1 to be adopted without the related provisions for 10 percent reduction. This withdrawal will not result in any change in regulatory effect since this is a new measure proposed for the 2013 CALGreen Code.

HCD proposes to renumber Section A4.303.1.2 "Alternate water sources for nonpotable applications" to Section A4.303.2 for organizational purposes. HCD also proposes to further amend the section to delete reference to "10 percent reduction." Section A4.303.1.2 was originally proposed to clarify that alternate water sources for nonpotable applications (nonpotable water) may be used for demonstrating 10 percent potable water use reduction. Although HCD proposes to withdraw the measures for 10 percent reduction, HCD believes that it is beneficial for this elective measure (providing an option for indoor water use reduction) to be adopted into the 2013 CALGreen Code.

**7. HCD proposes to NOT adopt Table A4.303.1 and Table A4.303.2 as follows:**

**TABLE A4.303.1  
WATER USE BASELINE<sup>1</sup>**

<b>FIXTURE TYPE</b>	<b>BASELINE FLOW RATE</b>	<b>DURATION</b>	<b>DAILY USES</b>	<b>OCCUPANTS<sup>2</sup></b>
Showerheads	2.0 gpm @ 80 psi	8 min.	4	
Lavatory faucets, residential	1.5 gpm @ 60 psi	.25 min.	3	
Kitchen faucets	1.8 gpm @ 60 psi	4 min.	4	
Gravity tank type water closets	1.28 gallons/flush	1 flush	1 male <sup>3</sup> 3 female	
Flushometer tank water closets	1.28 gallons/flush	1 flush	1 male <sup>3</sup> 3 female	
Flushometer valve water closets	1.28 gallons/flush	1 flush	1 male <sup>3</sup> 3 female	
Electromechanical hydraulic water closets	1.28 gallons/flush	1 flush	1 male <sup>3</sup> 3 female	
Urinals	0.5 gallons/flush	1 flush	2 male	

**Fixture "Water Use" – Flow rate x Duration x Occupants x Daily uses**

1. Use Worksheet [HCD] WS-1 to calculate baseline water use and Worksheet [HCD] WS-2 to calculate the 10 percent reduction water use. Both worksheets can be found in "A Guide to the California Green Building Standards Code" located at [www.hcd.ca.gov/CALGreen.html](http://www.hcd.ca.gov/CALGreen.html). Interactive worksheets which allow user input and automatic calculation are also available.
2. For residential occupancies, the number of occupants shall be based on two persons for the first bedroom, plus one additional person for each additional bedroom.
3. The daily use number shall be increased to three if urinals are not installed in the room.

**TABLE A4.303.2  
FIXTURE FLOW RATES**

<b>FIXTURE TYPE</b>	<b>BASELINE FLOW RATE</b>	<b>MAXIMUM FLOW RATE AT ≥ 10 PERCENT REDUCTION</b>
Showerheads	2.0 gpm @ 80 psi	1.8 gpm @ 80 psi
Lavatory faucets, residential	1.5 gpm @ 60 psi	1.35 gpm @ 60 psi <sup>1</sup>
Kitchen faucets	1.8 gpm @ 60 psi	1.5 gpm @ 60 psi <sup>2</sup>
Gravity tank type water closets	1.28 gallons/flush	1.12 gallons/flush <sup>3</sup>
Flushometer tank water closets	1.28 gallons/flush	1.12 gallons/flush <sup>3</sup>
Flushometer valve water closets	1.28 gallons/flush	1.12 gallons/flush <sup>3</sup>
Electromechanical hydraulic water closets	1.28 gallons/flush	1.12 gallons/flush <sup>3</sup>
Urinals	0.5 gallon/flush	0.4 gallons/flush

1. Lavatory faucets shall not have a flow rate less than 0.8 gpm at 20 psi.
2. When the prescriptive method is used, kitchen faucets may temporarily increase flow above the maximum rate, but not above 1.8 gpm @ 60 psi, and must default to a maximum flow rate of 1.5 gpm @ 60 psi.
3. Includes single and dual flush water closets with an effective flush of 1.12 gallons or less.

**NOTE:**

Authority cited: Health and Safety Code Sections 17921, 17922 and 19990. Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17990 and 19960 through 19997.

**Rationale for change:**

HCD proposes to withdraw Table A4.303.1 and Table A4.303.2. These tables are related to HCD's proposal for 10 percent indoor water use reduction which HCD is proposing for withdrawal. (See Rationale for Section A4.303.1) There is no reason for these tables to be adopted without the provision for 10 percent reduction. This withdrawal will not result in any change in regulatory effect since this is a new measure proposed for the 2013 CALGreen Code.

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**8. HCD proposes to renumber Section A4.303.2 to Section A4.303.3 as follows:**

~~A4.303.2~~ A4.303.3 Appliances. ... (No change to text)

**NOTE:**

Authority cited: Health and Safety Code Sections 17921, 17922 and 19990. Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17990 and 19960 through 19997.

**Rationale for change:**

This proposed section is being renumbered to provide a logical numerical sequence following Section A4.303. There are no changes to the text.

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**9. HCD proposes to renumber Section A303.2 (later Section A4.303.3) to Section A4.303.4. as follows:**

~~A4.303.2~~ A4.303.4 Nonwater supplied urinals and waterless toilets. ... (No change to text)

**Rationale for change:**

This existing section is being renumbered to provide a logical numerical sequence following Section A4.303. There are no changes to the text.

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**10.HCD proposes to amend the “Residential Occupancies Application Checklist” (Appendix A4, Section A4.602) 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 <sup>1</sup>		Enforcing Agency <input type="checkbox"/> All	Installer or Designer <input type="checkbox"/> All	Third party <input type="checkbox"/> All
		Tier 1	Tier 2			

... (No change to text)

<p><del><b>A4.303.1</b> Kitchen faucets and dishwashers shall comply with this section.</del></p> <p><del><b>Tier 1.</b> The maximum flow rate at a kitchen sink faucet shall not be greater than 1.5 gallons per minute at 60 psi.</del></p> <p><del><b>Tier 2.</b> In addition to the kitchen faucet requirements for Tier 1, dishwashers in Tier 2 building shall be ENERGY STAR qualified and not use more than 5.8 gallons of water per cycle.</del></p> <p><u><b>A4.303.1 Kitchen faucets.</b> The maximum flow-rate of kitchen faucets shall not exceed 1.5 gallons per minutes at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi.</u></p> <p><u><b>Note:</b> Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.</u></p>	<input checked="" type="checkbox"/> <sup>2</sup>	<input checked="" type="checkbox"/> <sup>2</sup>	<input checked="" type="checkbox"/> <sup>2</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>A4.303.2</b> Nonwater supplied urinals or waterless toilets are installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u><b>A4.303.2 Alternate water sources for nonpotable applications.</b> Alternate nonpotable water sources are used for indoor potable water reduction. Alternate nonpotable water sources shall be installed in accordance with the California Plumbing Code.</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<p><b><u>A4.303.2 A4.303.3</u></b> Dishwashers and clothes washers in residential buildings shall comply with the following:</p> <p>Install at least one qualified ENERGY STAR appliance with maximum water use as follows:</p> <ol style="list-style-type: none"> <li>1. <u>Standard Dishwashers - 4.25 gallons per cycle.</u></li> <li>2. <u>Compact Dishwashers - 3.5 gallons per cycle.</u></li> <li>3. <u>Clothes Washers - water factor of 6 gallons per cubic feet of drum capacity.</u></li> </ol>		<input type="checkbox"/>   <input type="checkbox"/>   <input type="checkbox"/>				
<p><b><u>A4.303.3 A4.303.4</u></b> Nonwater supplied urinals or waterless toilets are installed.</p>		<input type="checkbox"/>				

... (No change to text)

**NOTE:**

Authority cited: Health and Safety Code Sections 17921, 17922 and 19990. Reference: Health and Safety Code Sections 17000 through 17060, 17910 through 17990 and 19960 through 19997.

**Rationale for change:**

HCD proposes to further revise the “Residential Occupancies Application Checklist” to correspond with other changes reflected in the proposed 2013 CALGreen Code. Reference to proposed changes in Section A4.303.1 were inadvertently left out of the original Express Terms and are incorporated into the revised table.