



2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGreen)

TITLE 24, PART 11

By: Scott Blunk

- 2 Scott Blunk is the Strategic Business Planner of Electrification and Energy Efficiency at the Sacramento Municipal Utility District. He is a mechanical engineer, general contractor, real estate broker as well as a BPI Super Proctor and LEED AP. He heads SMUD's long range planning for electrification and energy efficiency. Scott received his Bachelor of Science in Mechanical Engineering from Purdue University and his Master's in Business Administration from Marquette University.
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(916) 826-9369
ssblunk@gmail.com



3 CONTINUING EDUCATION

- **AIA:** Green Technology is an AIA provider (number G515). Both seminars are approved. CalGreen offers 2 HSW (Health, Safety & Welfare) units. Energy Code is 3 Learning Units. Your attendance will be directly reported and a Certificate of Attendance will be emailed.
- **ICC:** Green Technology is a Preferred Provider (number 1170). Both Seminars are approved. CALGreen is 0.2 CEUs & Energy Code is 0.3 CEUs. Self-reporting is required.
- **LEED:** Green Technology is not a provider; however credit can be taken by self-reporting using the certificate of attendance. It is likely that CALGreen will be 2 CEUs & Energy Code will be 3 CEUs.
- **Build It Green:** They do not have a “provider” or endorse any one organization however; For their members to renew their Build It Green membership and certifications, they must fulfill a CEU requirement. One way they can do so is to attend **any** learning event (like a webinar, class, meeting, etc.) that pertains to green building practices. One hour counts as one CEU. Self-reporting is required.
- **CMAA:** They do not have a “provider” or endorse any one organization however; their program is with Renewal Points and one hour counts as one RP. Self-reporting is required.

4 Course Description

- This 2 hour (2 CEUs) course/seminar will cover what's new in CALGreen for both residential and non-residential buildings
- The session will also review challenges that have resulted in implementing the standards, strategies for addressing them, and solutions to these challenges that may be included in the recent revisions.

5 Learning Objectives

- Understand the evolution of the California Green Building Standards Code (CALGreen)
- Know the most impactful changes to the code for 2019
- Understand the impacts of the residential and non-residential voluntary measures (Tier I and Tier II)
- Introduce participants to the checklists for the green building standards code

CALGreen: The Basics

The CALGreen code applies to the planning, design, operation, construction, use and occupancy of every newly constructed building or structure, unless otherwise indicated by this code, throughout the State of California

7 Referenced Codes And Standards

CALGreen is not a stand-alone document and cannot be used solely for building construction. CALGreen must be used in conjunction with other codes adopted in California. The following parts of the California Code of Regulations, Title 24, are applicable to building construction:

- Part 2 California Building Code
- Part 2.5 California Residential Code
- Part 3 California Electrical Code
- Part 4 California Mechanical Code
- Part 5 California Plumbing Code
- Part 6 California Energy Code
- Part 9 California Fire Code
- Part 11 California Green Building Standards Code

8 Assembly Bill 32 (...where it all started)

AB 32 Global Warming Solution Act of 2006

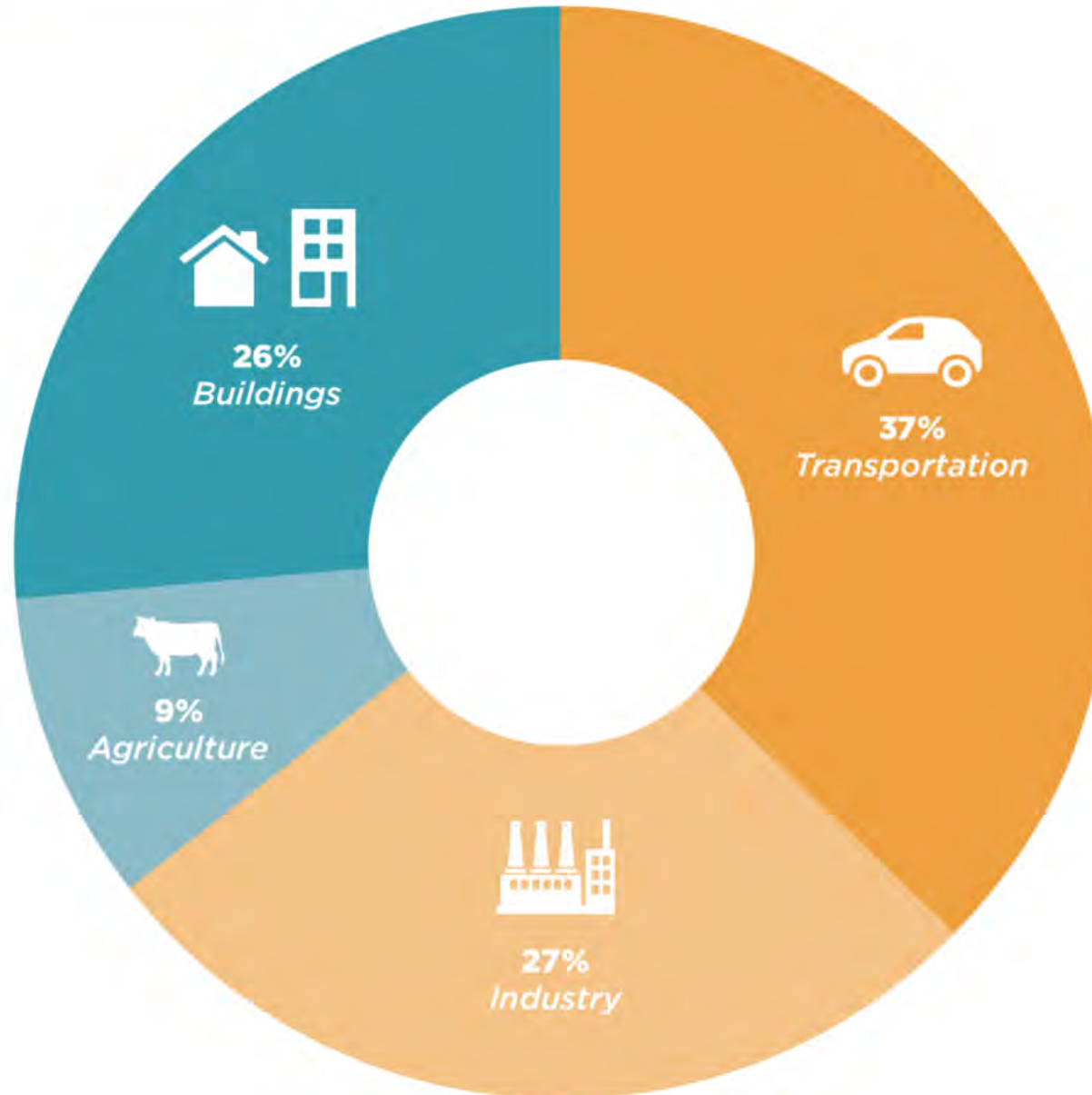
- Reduction of greenhouse gas (GHG) emissions to 1990 levels by 2020 (AB32) – **Accomplished in 2016**
 - 40% below by 2030 (SB32)
 - 0 Carbon (net) by 2045 (Executive Order B-55-18, 2018)
- AB32 is facilitated by the California Air Resources Board (CARB)

9 Building are Responsible for...

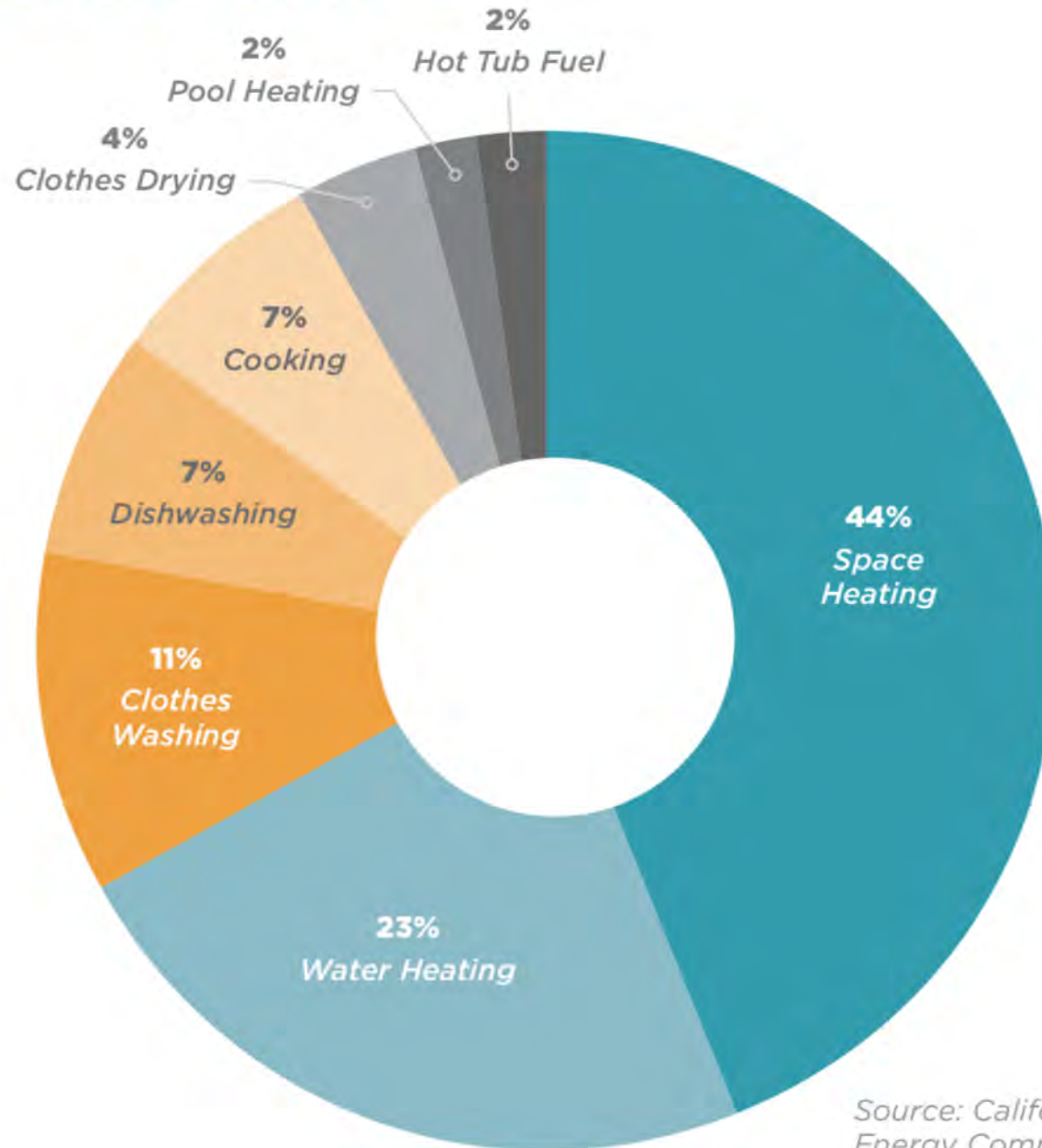
- 40% of Energy Use
- 25% of CO₂ Emissions (13% gas, 12% electricity)
- 40% Global GHG emissions (same in US)
- 14% of Potable Water Consumption
- 30% of Waste Output
- 40% of Raw Material Use
- 72% of Electricity Consumption

CALIFORNIA END USE GREENHOUSE GAS EMISSIONS¹

10



SHARES OF RESIDENTIAL GAS USE BY END USE



Source: California
Energy Commission

12 CALGreen - Purpose

The purpose of this code is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practice in the following categories:

- 1) Planning and Design
- 2) Energy Efficiency
- 3) Water Efficiency and Conservation
- 4) Material Conservation and Resource Efficiency
- 5) Environmental Quality

*CALGreen is a mandatory code
and shall not be substituted for
any other green building program*

13 CALGreen - Background

First Statewide Mandatory Green Building Code in the United States

- 2008 Initial, Voluntary Standards (effective August 1st, 2009)
- 2010 Mandatory Standards (effective January 1st, 2011)
 - Part 11 of Title 24
- 2013, 2016 and now 2019 Code (potentially updated every 18 months)

Contributors: Stakeholders and interested parties, building and regulatory officials, representatives from the construction industry, environmental community, and the public

14 CALGreen - Background

Adopting State Agencies:

- California Building Standards Commission (BSC)
- The Department of Housing and Community Development (HCD)
- Division of State Architects (DSA)
- Office of Statewide Health Planning and Development (OSHPD)

15 CALGreen - Overview

Green Building: A holistic approach to design, construction, and demolition that minimizes the building's impact on the environment, the occupants and the community.

16 CALGreen - Overview

Mandatory Requirements and Voluntary Measures

- At a minimum, require all new buildings to:
 - Reduce Water Consumption
 - Divert Construction Waste from Landfills
 - Install Low Volatile Emitting (VOC) Materials
 - Commission New Buildings $\geq 10,000$ s.f.
 - Non-energy systems

17 CALGreen - Overview

Additional Green Strategies are Required Depending on Occupancy and the Governing Agency

- Healthcare – Office of Statewide Health Planning & Development (OSHDP)
- Schools – Division of the State Architect (DSA)
- Residential Housing – Department of Housing and Development (HCD)
- Commercial / NonResidential – California Building Standards Commission (BSC)

18 CALGreen – Table of Contents

Chapter 1: Administration

Chapter 2: Definitions

Chapter 3: Green Building

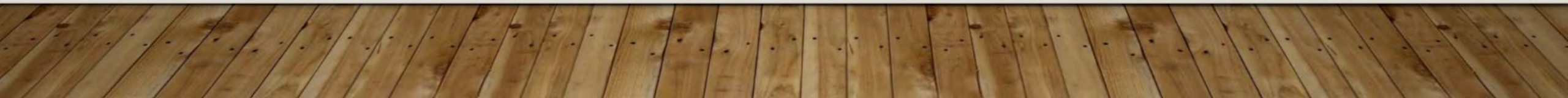
Chapter 4: Residential Mandatory Measures

Chapter 5: NonResidential Mandatory Measures

Chapter 6: Reference Organizations and Standards

Chapter 7: Installer and Special Inspector Qualifications

Chapter 8: Compliance Forms, Worksheets and
Reference Material



19 CALGreen – Table of Contents - continued

Appendix A4: Residential Voluntary Measures

Appendix A5: Nonresidential Voluntary Measures

Appendix A6.1: Voluntary Standards for Health Facilities

*Appendices are voluntary unless
adopted by a city or county*

20 Changes to this Code

- The city, county or city and county shall make express findings for each amendment, addition or deletion based upon the following conditions:
 - Climatic
 - Topographical
 - Geological
 - Environmental (CALGreen Only)

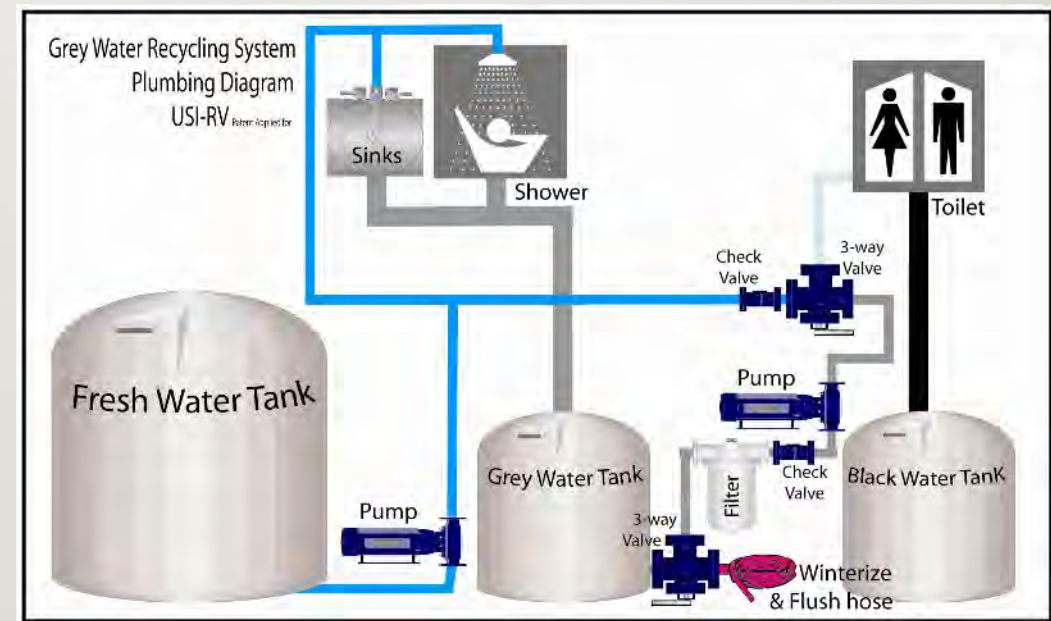
CHAPTER I ADMINISTRATION

These regulations shall be known as the *California Green Building Standards Code* and may be cited as such and will be referred to herein as “this code.” It is intended that it shall also be known as the *CALGreen Code*.

22 Section 103 Building Standards Commission

2. Graywater systems. The construction, installation, and the alteration of graywater systems for indoor and outdoor uses in nonresidential occupancies.

- Application – All occupancies where no state agency has the authority to adopt green building standards applicable to those occupancies.



CHAPTER 2 DEFINITIONS

Scope: Unless otherwise stated, the following words and terms shall, for the purposes of this code, have the meaning shown in this chapter

24 Definitions Added To CALGreen

Many terms associated with greywater have been added including:

- Dewatering – Pumping of uncontaminated or treated groundwater for construction activities
- Disinfected Tertiary Recycled Water – Filtered and subsequently disinfected wastewater that meets the approved method of treatment and minimum level of water quality
- Non-Stormwater Discharges – Discharges that do not originate from precipitation events
- Reclaimed (Recycled) Water – Nonpotable water that meets California State Water Resources Control Board statewide uniform criteria for disinfected tertiary recycled water
- Recycled Water Supply System – The system carrying or supplying reclaimed water

CHAPTER 3

Green Building

Scope: Building shall be designed to include green building measures specified as mandatory. Voluntary measures are not required unless adopted by the city or county.

26 Triggers

- Residential: Additions and Alterations:
 - Mandatory measure apply where conditioned volume increases but only to the new area
 - Plumbing fixtures must be updated per Civil Code Section 1101.3
 - Buildings undergoing permitted alterations, additions or improvement shall replace noncompliant plumbing fixtures with water conserving fixtures.
- Nonresidential: Additions and Alterations:
 - Measures apply with additions \geq 1,000 s.f. or alterations valued at \geq \$200,000
 - Not all new construction mandatory measures apply to additions and alterations
 - Plumbing fixtures must be updated per Civil Code Section 1101.3
 - Waste diversion is required whenever a permit is required

CHAPTER 4

Residential Mandatory Measures

Scope: The provisions outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect adjacent properties.

28 4.103 Site Development

- Goal:
 - Minimize negative effects on the site and adjacent areas
 - Preservation of slopes, management of storm water drainage



29 4.106 Site Development

- Electric Vehicle (EV) Charging (new construction)
 - Single family and Duplexes: For each dwelling unit
 - Install a raceway dedicated for a 240-volt branch circuit from service panel and terminate in a listed enclosure.
 - 40-ampere minimum dedicated circuit reserved and labeled “EV CAPABLE”
 - Multifamily
 - *10% of the total number of parking spaces (always ≥ 1 , rounded up) shall be spaces **capable** of supporting future electric vehicle service equipment (EVSE)*
 - [2016 = 3% and over 17 units]

2019

30 4.106 Site Development

New Hotels and Motels: All newly constructed hotels and motels shall provide EV spaces capable of supporting future installations of electric vehicle service equipment (EVSE)

Notes:

1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.
2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

TABLE 4.106.4.3.1

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED EV SPACES
0–9	0
10–25	1
26–50	2
51–75	4
76–100	5
101–150	7
151–200	10
201 and over	6 percent of total

3 | 4.303 Indoor Water Use

- Water Closets: ≤ 1.28 gpf
- Urinals: ≤ 0.125 gpf (wall mounted) all others should not exceed 0.5 gpf
- Showerheads: ≤ 1.8 gpm (total for single and multiple showerheads, per valve)
- Faucets:
 - Residential Lavatory Faucets: ≤ 1.2 gpm @ 60 psi (min 0.8 gpm @ 20 psi)
 - Common & public use areas, residential and nonresidential faucets: ≤ 0.5 gpm @ 60 psi
 - Metering faucets: shall not deliver more than 0.25 gallons per cycle
 - Kitchen Faucets, residential and nonresidential: ≤ 1.8 gpm @ 60 psi (may have temporary feature allowing 2.2 gpm @ 60 psi)

32 4.304 Outdoor Water Use

- Landscape area ≥ 500 s.f. shall comply with:
 - Local water ordinance
 - Model Water Efficient Landscape Ordinance (MWELO)
 - New water reuse systems added in intervening code cycle

Model Water Efficient Landscape Ordinance



Drought-tolerant plants, mulch, permeable hardscape, and efficient irrigation save water while offering habitat for pollinators.

About half of the urban water is used for landscape irrigation in California. Large water savings can be gained by efficient landscape design, installation, and maintenance. New development and retrofitted landscape water efficiency standards are governed by the Model Water Efficient Landscape Ordinance (MWELO). All agencies must adopt, implement, and enforce the MWELO or a more stringent ordinance.

In 2015, [Executive Order B-29-15](#) (EO) tasked DWR with revising the 2010 updated MWELO to increase water efficiency standards for new and retrofitted landscapes through encouraging the use of more efficient irrigation systems, graywater usage, and onsite storm water capture, and by limiting the portion of landscapes that can be covered in turf. Updating the ordinance to incorporate these

elements will help stretch our limited water supplies. The EO also required that agencies report on their implementation and enforcement of local ordinances by December 31, 2015. DWR's Water Use and Efficiency branch worked with several affected agencies, interested groups, and the public to prepare the current (2015) updated MWELO to improve landscape irrigation water savings in accordance with the EO.

2018 MWELO Report Assistance and Forms:

- [MWELO Reporting Reminder Letter](#)
- [2018 Annual Report MWELO Form](#)
- [2018 New Reporter MWELO Form](#)

For previous submittals and archived public process records, please contact WELo@water.ca.gov.

33 4.305 Water Reuse Systems

- Recycled Water Supply Systems: Newly constructed residential developments, where disinfected tertiary recycled water is available from a municipal source to a construction site, may be required to have recycled water supply systems installed, allowing the use of recycled waste for residential landscape irrigation systems

34 4.4 Material Conservation And Resource Efficiency

- Goal: Material conservation and resource efficiency through protection of building from moisture; construction waste diversion; recycling of materials: commissioning or testing, adjusting and balancing.



35 4.4 Material Conservation And Resource Efficiency

- Recycle and/or salvage for reuse $\geq 65\%$ of nonhazardous waste
- A construction waste management plan must be submitted
- Utilize an approved waste management company
- There are also waste stream reduction alternatives found in Section 4.408.1

36 4.5 Environmental Quality

- Goal: Reduce the quantity of air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors



37 4.5 Environmental Quality

- Pollutant Control:
 - Duct covering

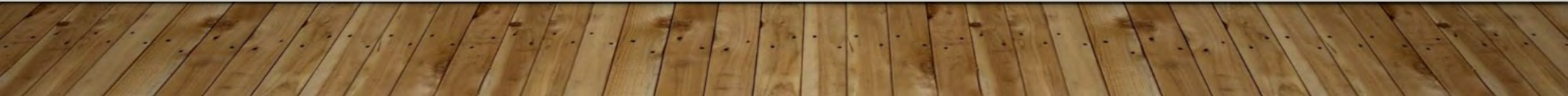
Low VOC emitting materials:

- Adhesives, sealants, caulks, paints, etc.
- Carpet, cushion, resilient flooring, etc.
- Composite wood products i.e. plywood, MDF, OSB, etc.



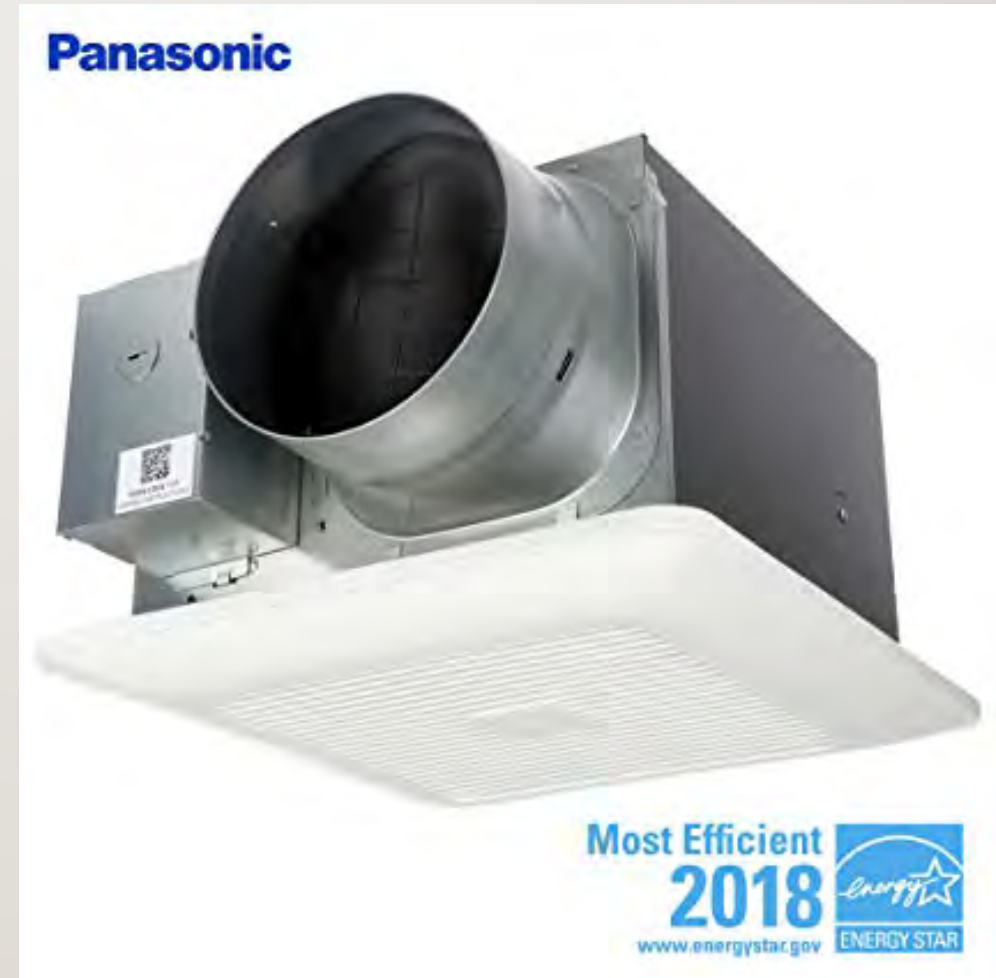
38 4.5 Environmental Quality

- Interior Moisture Control
 - Concrete slabs
 - Vapor retarder
 - Capillary break, etc.
 - Building material moisture content
 - Materials with signs of water damage are not allowed
 - Framing member $\leq 19\%$ moisture content



39 4.5 Environmental Quality

- Indoor Air Quality and Exhaust
 - Bathroom Exhaust Fans – Required in CALGreen
 - ENERGY STAR complaint
 - Humidity controlled (range $\leq 50\%$ to a maximum of 80%)
 - Manual or automatic controls are allowed



CHAPTER 5

Nonresidential Mandatory Measures

Scope: The provisions outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect adjacent properties.

41 5.1 Planning and Design

- Storm Water Pollution Prevention
- Bicycle Parking
- Clean Air Vehicle Parking
- Electric Vehicle (EV) Charging
- Light Pollution Reduction – amended to align with Energy Code
- Grading and Paving



42 5.106 Site Development

Stormwater

- New requirement when < 1 acre is disturbed and ≥ 1 acre
 - < 1 acre for new projects and additions not part of a larger common plan development
 - ≥ 1 acre (or are part of a larger common plan) must comply with all lawfully enacted stormwater discharge regulations



43 5.106 Site Development

- Electric Vehicle Charging
 - Raceways are required to be installed
 - Electrical planning must include allowance for future 40-amperes per required parking space including transformers.

TABLE 5.106.5.3.3

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CHARGING SPACES
0-9	0
10-25	1
26-50	2
51-75	4
76-100	5
101-150	7
151-200	10
201 and over	6 percent of total ¹

1. Calculation for spaces shall be rounded up to the nearest whole number.

44 5.3 Water Efficiency and Conservation

Recycled Water Supply Systems: Shall be installed in accordance with section 5.305.1.1, 5.305.1.2 and the *California Plumbing Code*

- Outdoor recycled water supply systems are required for all newly constructed nonresidential developments, where disinfected tertiary recycled water is available from a municipal source to a construction site, shall provide both a potable water supply system and a recycled water supply system.

45 5.3 Water Efficiency and Conservation

Recycled Water Supply Systems (continued)

Exceptions:

1. Areas in which the only reclaimed water is used for potable purposes
2. Access to recycled water is no feasible
3. Potable water supply is not required when the landscape irrigation system is supplied with recycled water at the time of final inspection
4. Potable water may be used with the recycled water supply system on a temporary basis as approved by the authority having jurisdiction

46 5.3 Water Efficiency and Conservation

- Submeters – New Construction or Additions $\geq 50,000$ s.f.
 - Each individual (tenant) space
 - Where submeters for tenant spaces are unfeasible then they shall be installed on:
 - Cooling tower makeup water where flow through ≥ 500 gpm
 - Evaporative coolers makeup water ≥ 6 gpm
 - Steam and hot-water boilers with input ≥ 500 kBtu/hr

47 5.4 Material Conservation and Resource Efficiency

- Water Resistance and Moisture Management
- Construction Waste Reduction Disposal and Recycling
- Building Maintenance and Operation
 - Commissioning for new buildings $\geq 10,000$ s.f.
 - For non-energy systems such as renewable energy systems, landscape irrigation systems and water reuse systems
 - Energy related systems are subject to the requirements of the *California Energy Code*

APPENDIX A4

Residential Voluntary Measures

The measures contained in this appendix are not mandatory unless adopted by the city, county, or the city and county and provide additional measures that designers, builders and property owners may wish to consider during the planning, design and construction process.

49 Voluntary Measures – A4 and A5

- Voluntary measures are just that – Voluntary
- However, when a local jurisdiction adopts CALGreen Tier I or Tier II
 - If that happens some measures become mandatory, some are still voluntary

50 Voluntary Measures – A4 and A5

- CALGreen Tier I and II are NOT the same as the the “Reach Codes” developed by the investor owned utilities that are made available to local jurisdictions for adoption
- “Reach Codes” only address energy usage in buildings

51 CALGreen Tier I and II

- Two higher levels of green building standards than statewide legally mandated
- Must be adopted by local jurisdictions
- Includes more stringent requirements in all areas of green building standards included in CALGreen
 - Including energy

52 2019 CALGreen Code Changes

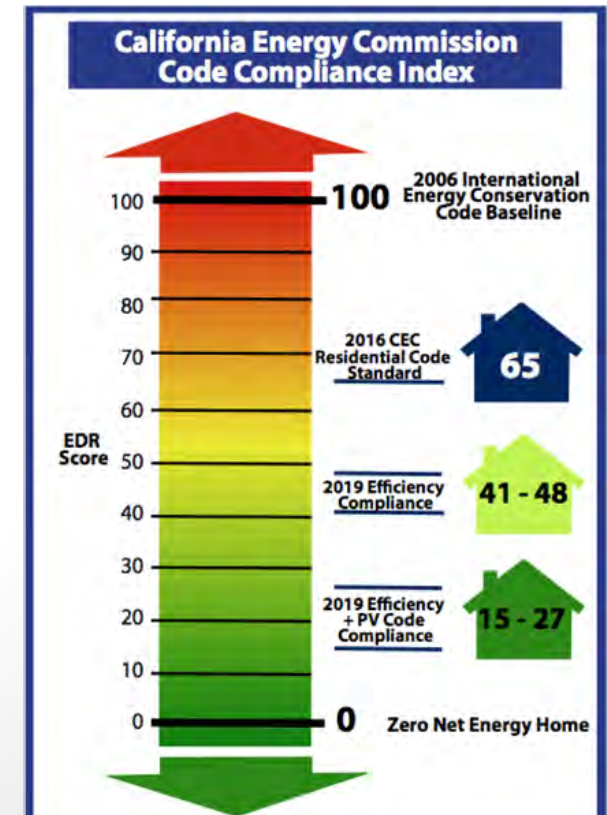
- The majority of the change to CALGreen for 2019 have occurred in Appendix 4 and Appendix 5
 - These are the voluntary standards
 - Many changes in the energy sections

53 Tier I and Tier II Changes – A4.2

- Changes center around the Energy Design Rating (EDR)
 - EDR will be covered more in the afternoon class

54 Tier I and Tier II Changes – A4.2

- EDR – shows how close a home is to ZNE target
 - Aligned with RESNET
 - Reference home is 2006 IECC compliant Home, EDR = 100
 - A score of 0 means it is a ZNE building



55 Tier I and Tier II Changes – A4.2

- Total EDR = Efficiency EDR – (PV+Flex) EDR
- Efficiency EDR = EDR of efficiency alone
- PV + Flexibility EDR = EDR associated with PV and energy storage

56 Tier I and Tier II Changes – A4.2 – Prescriptive Option

- Quality Insulation Installation (QII) is required
- One of the follow is required
 - Roof Deck Insulation or Ducts In Conditioned Space
 - High Performance Walls
 - Compact Water Distribution System with Drain Water Heat Recovery

57 Tier I and Tier II Changes – A4.2 – Performance Option

- Based on target EDR
 - No longer percent better
- Comply with the appropriate tier in Table A4.203.1.1.1

Table A4.203.1.1.1

<u>Recommended EDR Targets by Climate Zones</u>				
<u>CZ</u>	<u>Tier 1</u>		<u>Tier 2</u>	
	<u>Mixed Fuel</u>	<u>All-Electric</u>	<u>Mixed Fuel</u>	<u>All-Electric</u>
<u>1</u>	<u>23</u>	<u>36</u>	<u>13</u>	<u>0</u>
<u>2</u>	<u>12</u>	<u>16</u>	<u>5</u>	<u>0</u>
<u>3</u>	<u>10</u>	<u>14</u>	<u>0</u>	<u>0</u>
<u>4</u>	<u>8</u>	<u>12</u>	<u>0</u>	<u>0</u>
<u>5</u>	<u>10</u>	<u>16</u>	<u>0</u>	<u>0</u>
<u>6</u>	<u>10</u>	<u>12</u>	<u>0</u>	<u>0</u>
<u>7</u>	<u>5</u>	<u>7</u>	<u>0</u>	<u>0</u>
<u>8</u>	<u>10</u>	<u>10</u>	<u>0</u>	<u>0</u>
<u>9</u>	<u>13</u>	<u>13</u>	<u>0</u>	<u>0</u>
<u>10</u>	<u>10</u>	<u>11</u>	<u>0</u>	<u>0</u>
<u>11</u>	<u>11</u>	<u>12</u>	<u>0</u>	<u>0</u>
<u>12</u>	<u>12</u>	<u>13</u>	<u>0</u>	<u>0</u>
<u>13</u>	<u>11</u>	<u>13</u>	<u>0</u>	<u>0</u>
<u>14</u>	<u>15</u>	<u>16</u>	<u>5</u>	<u>0</u>
<u>15</u>	<u>11</u>	<u>8</u>	<u>0</u>	<u>7</u>
<u>16</u>	<u>22</u>	<u>39</u>	<u>14</u>	<u>10</u>

Note: Community shared options complying with Title 24, Part 1, Section 10-115 may be used to achieve Total EDR targets.

58 Tier I and Tier II Changes – A4.2 – Performance Option

PATHS CONSIDERED FOR TIER 1:

- Energy efficiency measures
- Demand management
- On-site battery or thermal storage
- Minor oversizing of photovoltaic systems
 - PV oversizing factor of 1.0 for mixed fuel
 - PV oversizing factor of 1.1 for all-electric
 - TOU battery controls

PATHS CONSIDERED FOR TIER 2:

- Electrifying space and water heating
- Advanced battery controls
- Modest oversizing of photovoltaic systems
 - PV oversizing factors up to 1.4 for mixed fuel
 - PV sized to offset annual kWh for all-electric
 - TOU battery controls

59 Tier I and Tier II Changes – A5.2

- There is no EDR for nonresidential at this time
- Performance Approach
 - Energy Compliance Tier I: 95% of energy budget
 - Energy Compliance Tier II: 90% of energy budget
 - High Rise residential and Hotel/Motel buildings match above

60 Tier I and Tier II Changes – A5.2

- Additional 2019 changes to certain occupancies include:
 - Outdoor lighting
 - Warehouse doors (Dock Seal Doors)
 - Daylighting (PAF)
 - Exhaust Air Heat Recovery

**CALGreen VERIFICATION GUIDELINES
 MANDATORY CHECKLIST**

Application: This checklist shall be used for nonresidential projects that meet the following: new construction, or building additions of 1,000 sq. ft. or greater, or building alterations with a permit valuation of \$200,000 or more pursuant to *CALGreen* Section 5.301.3 AND do not trigger a Tier 1 or Tier 2 requirement.

Y = Yes (section has been selected and/or included)

N/A = Not Applicable (Code section does not apply to the project, mainly used for additions and alterations)

O = Other (provide explanation)

[N] = New construction pursuant to Section 301.3

[A] = Additions and/or alterations pursuant to Section 301.3

CHAPTER 5 DIVISIONS		SECTION TITLE	CODE SECTION	Y	N/A	O	Plan sheet, Spec or Attach Reference
DIVISION 5.1 Planning and Design	Mandatory	Storm Water Pollution Prevention for projects that disturb less than 1 acre of land	5.106.1 through 5.106.2				
	Mandatory	Short Term Bicycle Parking (with exception)	5.106.4.1.1				
	Mandatory	Long Term Bicycle Parking	5.106.4.1.2 Through 5.106.4.1.5				
	Mandatory	Designated Parking for clean air vehicles	5.106.5.2				
	Mandatory	Parking stall marking	5.106.5.2.1				
	Mandatory	Single (EV) Charging space requirements	5.106.5.3.1				
	Mandatory	Multiple (EV) Charging space requirements [N]	5.106.5.3.2				
	Mandatory	EV charging space calculation [N] (with exceptions)	5.106.5.3.3				
	Mandatory	[N] Identification	5.106.5.3.4				
	Mandatory	[N] Future charging spaces (with notes 1-3)	5.106.5.3.5				
	Mandatory	Light Pollution Reduction [N] (with exceptions and note)	5.106.8				
	Mandatory	Grading and Paving (exception for additions and alterations not altering the drainage path)	5.106.10				

**CALGreen VERIFICATION GUIDELINES
 TIER 1 CHECKLIST**

Application: This checklist shall be used for nonresidential projects that meet the following: new construction, or building additions of 1,000 sq. ft. or greater, or building alterations with a permit valuation of \$200,000 or more pursuant to *CALGreen* Section 5.301.3, AND are adopting Tier 1 voluntary measures.

Note: All applicable mandatory requirements in chapter 5 shall be met prior to applying Tier 1 voluntary measures.

Instructions:

Comply with all Tier 1 (prerequisite) measures from the various categories shown on the table below.

Add a "Y" to all Mandatory and Tier 1 mandatory provisions in the appropriate columns.

Select the required number of additional electives from those categories shown on the table below and add a "Y" on the selected elective and add an "N" on the rest.

Count the total number of Tier 1 (prerequisite) measures plus the additional electives and write down the total number at the end of the checklist. Determine if the required number of Tier 1 measures have been selected to achieve Tier 1 compliance.

Y = Yes (section has been selected and/or included)

N = No (section has not been selected and/or included)

O = Other (provide explanation)

[N] = New construction pursuant to Section 301.3

[A] = Additions and/or alterations pursuant to Section 301.3

CHAPTER 5 DIVISIONS		SECTION TITLE	CODE SECTION	Y	N	O	Plan sheet, Spec or Attach Reference
DIVISION 5.1 Planning and Design	Mandatory	Storm Water Pollution Prevention for projects that disturb less than 1 acre of land	5.106.1 Through 5.106.1.2				
	Mandatory	Short Term Bicycle Parking (with exceptions)	5.106.4.1.1				
	Mandatory	Long Term Bicycle Parking	5.106.4.1.2 Through 5.106.4.1.5				
	Mandatory	Designated Parking for clean air vehicles	5.106.5.2				
	Tier 1 Prerequisite	Designated Parking - 10% of Parking Capacity w/ parking stall markings and stall identification	A5.106.5.1 A5.106.5.1.1 A5.106.5.1.3 A5.106.5.1.4				
	Mandatory	Parking stall marking	5.106.5.2.1				
	Mandatory	Single (EV) Charging space requirements	5.106.5.3.1				
	Mandatory	Multiple (EV) Charging space requirements[N]	5.106.5.3.2				
	Tier 1 Prerequisite	Electric Vehicle (EV) Charging [N] w/ associated electrical panel identification and designated parking allowance	A5.106.5.3 A5.106.5.3.1 A5.106.5.3.3 A5.106.5.3.4				
	Mandatory	EV charging space calculation [N] (with exceptions)	5.106.5.3.3				
	Mandatory	[N] Identification	5.106.5.3.4				
	Mandatory	[N] Future charging spaces (with notes 1-3)	5.106.5.3.5				
	Mandatory	Light Pollution Reduction [N] (exceptions and note)	5.106.8				
	Mandatory	Grading and Paving, w/exception for Additions and Alterations not altering the drainage path	5.106.10				
	Tier 1 Prerequisite	Cool Roof (Table A5.106.11.2.2): SRI 75 when < or = 2:12 SRI 15 when >2:12	A5.106.11.2				

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QUESTIONS?

Scott Blunk
ssblunk@gmail.com
(916) 826-9369