

# Joint Venture

Silicon Valley Presents



2010 Updates



# Introduction

## California Building Standards Commission

### Michael L. Nearman

Deputy Executive Director

[michael.nearman@dgs.ca.gov](mailto:michael.nearman@dgs.ca.gov)

### Enrique M. Rodriguez

Associate Construction Analyst

[enrique.rodriquez@dgs.ca.gov](mailto:enrique.rodriquez@dgs.ca.gov)



# Today's Objectives

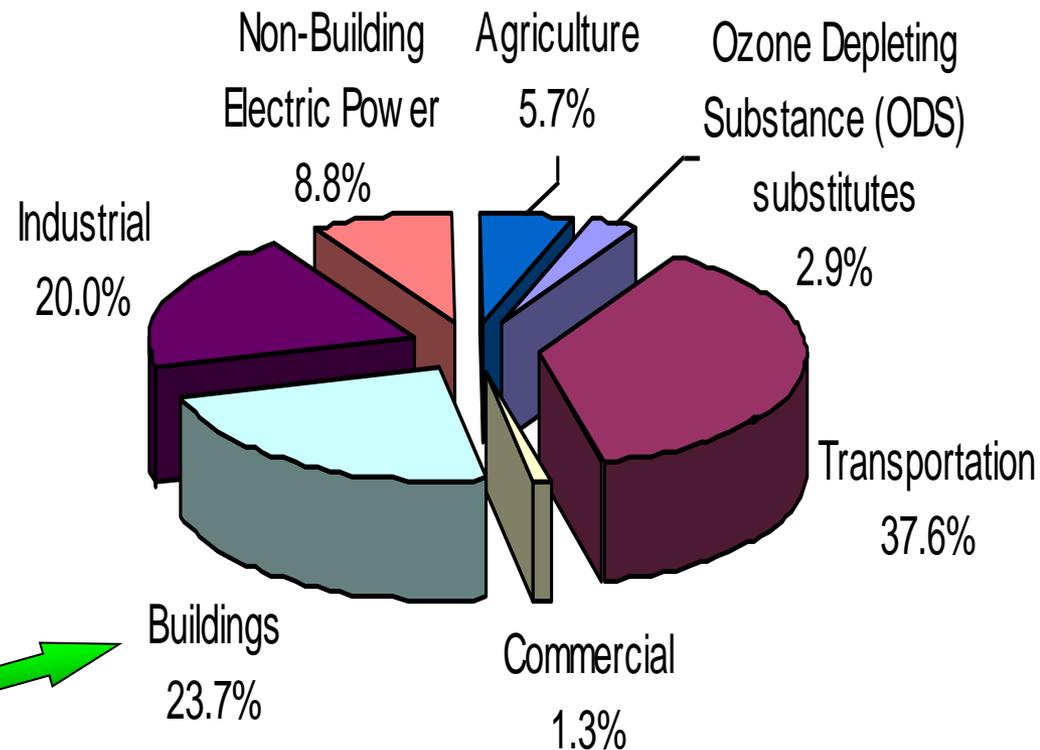
- Overview
  - Why CALGreen?
  - AB 32
- 2010 CALGreen Supplement
  - Overview of Mandatory Code Provisions
- Graywater & Rainwater Update
- Upcoming Code Cycle
- Q&A



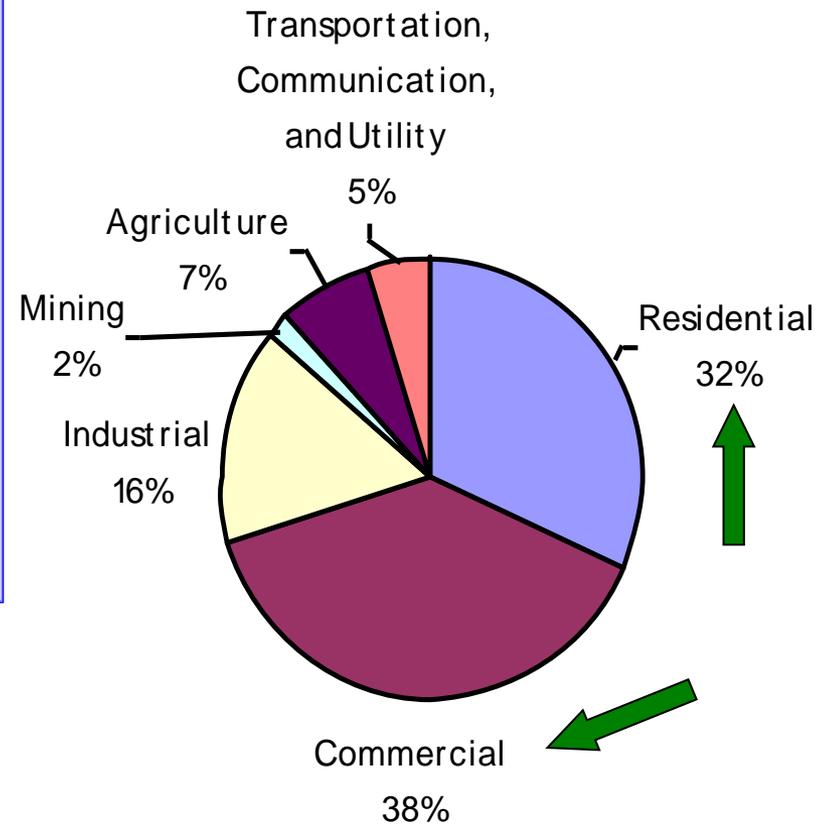
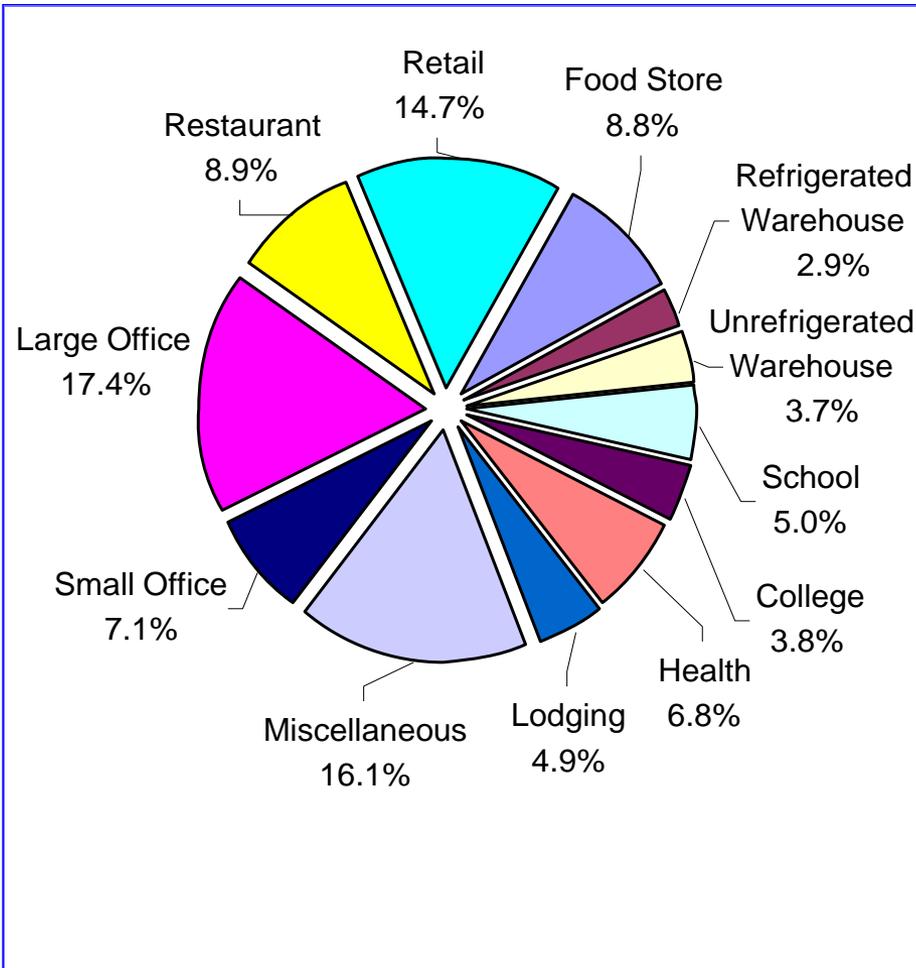
# California Green Building Initiative & Global Warming Solutions Act of 2006 (EO S-20-04 & AB32)

- Buildings are 2nd largest contributor (23.7%) to GHG emissions
- EO S-20-04: Reduce grid-based electricity by 20% in state-owned buildings by 2015; reduce associated greenhouse gas emissions
- **AB 32: Reduce GHG emissions to 1990 levels by 2020**

**California GHG Emissions**



# Energy Use in California



# Water Use in California

Executive Order S-06-08

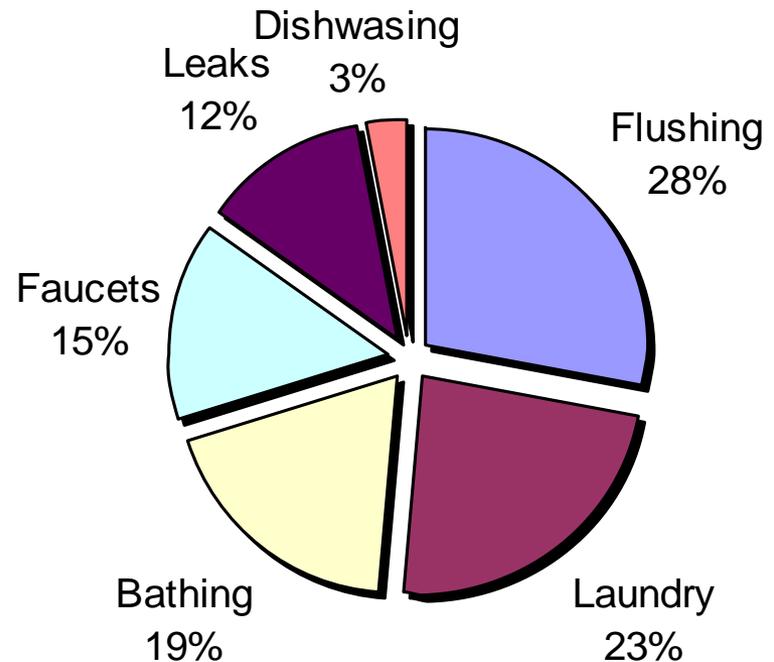
Governor's 2009 Proclamation

Water-related uses account for 19% of California's electricity, 30% of its natural gas and 88 billion gallons of diesel fuel every year.

Water-efficiency measures can reduce water and sewer costs by up to **30 percent**.

Significant savings in energy, chemical and maintenance expenses typically follow.

SOURCE - USGS



**Typical Residential Water Use**  
(Indoor use)

**50 to 300 gpcd – landscape 50%**

Source - Water Education Foundation

# Why CALGreen

- Uniformity and Consistency
  - Jurisdictions adopting many different programs
  - Works with other California codes
  - Sustainability
- Governor's Directive



# Adopting State Agencies

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



# 2007/2008 Legislative Cycle

- Governor's message

- Supports the development of green building standards and shared the goals of this bill
- The Building Standards Commission was created to ensure an open public adoption process allowing experts to develop standards and periodic updates to the building codes
- Allowing private entities, such as proposed in this bill, to dictate California's building standards usurps the state's authority to develop and adopt those standards
- Directed specified state agencies with authority to develop green building standards for residential, commercial, and public building construction for the 2010 code adoption process



# Next Steps

- The California Building Standards Commission directed CBSC staff to develop green building standards for new construction of buildings under its authority.
- The appointed members of the CBSC also requested HCD and the other proposing agencies to work together to develop green building standards for new construction of buildings under their respective authority.
- HCD responded to the Governor's message and joined other state agencies in development of the California Green Building Standards Code now known as CALGreen.



# Result – California Green Building Standards Code or CALGreen

- Enforced like other California codes
- Does not require third party inspection or verification
- Maintains current relationship between enforcing agencies and builders
- Uniformity and Consistency
  - Jurisdictions using different programs
  - Coordinated with other California codes



# CALGreen Milestones

- Initial Voluntary Standards
  - Effective August 1, 2009
- Became Mandatory
  - Effective January 1, 2011
- **2010 Supplement**
  - **Effective July 1, 2012**
- 2013 Code Cycle
  - Effective January 1, 2014



# Executive Order B-18-12

- Issued by Governor Brown on April 25, 2012:
  - [Effective immediately] Take actions to reduce greenhouse gas emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline.



# 2010 California Building Standards Codes – Title 24, CCR

- Part 1 California Administrative Code
- 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 7 Vacant
- Part 8 California Historical Building Code
- Part 9 California Fire Code
- Part 10 California Existing Building Code
- **Part 11** **California Green Building Standards Code**
- Part 12 California Referenced Standards Code



# Code Format

- 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 and Worksheets
- Appendix A4 Residential Voluntary Measures
- Appendix A5 Nonresidential Voluntary Measures
- Appendix A6 Commissioning



# California Green Building Standards Code

- **Chapter 1 - Administration**

Purpose

- Minimize impact of construction and improve construction practices

Scope

- Application
- Not intended to be identified as meeting the requirements of a point rated system

Local amendments based on findings

- Climate
- Topography
- Geology

Alternate Materials and Methods

Construction Documents

Application and State Agency Authorities



# California Green Building Standards Code

- Chapter 2 - Definitions
  - If used in more than one location in the code a defined term will be located in Chapter 2. This is changing.
  - Italics, definitions and California amendments
  - Banners
    - CONDITIONED FLOOR AREA. [BSC, HCD]
  - Matrix Tables



# California Green Building Standards Code

- Chapter 3 - Green Building

- Scope

- Newly constructed low rise residential buildings

- Newly constructed nonresidential buildings, alterations and additions

- Mixed Occupancy Buildings

- Shall comply with appropriate requirements for each separate occupancy type

- Phased Projects

- Voluntary Tiers

- Tier 1 and Tier 2



# California Green Building Standards Code

## Chapter 4 - Residential Mandatory Measures

- Planning and Design- Division 4.1
- Energy Efficiency- Division 4.2
- Water Efficiency and Conservation- Division 4.3
- Material Conservation and Resource Efficiency- Division 4.4
- Environmental Quality- Division 4.5



# California Green Building Standards Code

## Chapter 5- Nonresidential Mandatory Measures

- Planning and Design – Division 5.1
- Energy Efficiency – Division 5.2
- Water Efficiency and Conservation – Division 5.3
- Material Conservation and Resource Efficiency – Division 5.4
- Environmental Quality – Division 5.5
- **Additions and Alterations – Division 5.7**
  - **New- Effective July 1, 2012**



# California Green Building Standards Code

## Chapter 6- Referenced Organizations and Standards

- This chapter lists the organizations and standards that are referenced in various sections of the code;

## Chapter 7- Installer and Special Inspector Qualifications

- HVAC systems installers shall be trained and certified in the proper installation of HVAC systems



# California Green Building Standards Code

## Chapter 8- Compliance Forms and Worksheets

- Water Use Calculation Forms
- Construction Waste Management Forms
- Building Maintenance and Operation Forms
- Pollutant Control Forms
- Documentation and Verification Forms
- Recycled Content Calculator



# 2010 California Green Building Standards Code

## RESIDENTIAL VOLUNTARY MEASURES

- Appendix A4
  - The measures contained in the appendix are not mandatory unless adopted by a city, county, or city and county. Appendix provisions may also be used voluntarily by designers, builders, and property owners.
  - *CALGreen* Tier 1 and Tier 2 are intended for adoption by cities, counties, and cities and counties to help California meet its goals for greenhouse gas emission reduction.



# 2010 California Green Building Standards Code

## NONRESIDENTIAL VOLUNTARY MEASURES

- Appendix A5
  - The measures contained in the appendix are not mandatory unless adopted by a city, county, or city and county. Appendix provisions may also be used voluntarily by designers, builders, and property owners.
  - *CALGreen* Tier 1 and Tier 2 are intended for adoption by cities, counties, and cities and counties to help California meet its goals for greenhouse gas emission reduction.



# 2010 California Green Building Standards Code

## NONRESIDENTIAL VOLUNTARY MEASURES

- Appendix A6: Standards for compliance with Building Commissioning



Category	Environmental Performance Goal	Tier 1	Tier 2
All	Minimum Mandatory	Meet all of the provisions of Chapter 5	Meet all of the provisions of Chapter 5
Planning and Design	Designated Parking for Fuel Efficient Vehicles	10 percent of total spaces	12 percent of total spaces
	Cool Roof to Reduce Heat Island Effect	Roof Slope < 2:12 SRI 64 Roof Slope > 2:12: < 5 lb/s.f. SRI 16 ≥ 5 lb/s.f. SRI 10	Roof Slope < 2:12 SRI 78 Roof Slope > 2:12: < 5 lb/s.f. SRI 23 ≥ 5 lb/s.f. SRI 30
		1 additional Elective from Division A5.1	3 additional Electives from Division A5.1
Energy Efficiency	Energy Performance	Exceed 2010 CA Energy Code by 15 percent	Exceed 2010 CA Energy Code by 30 percent
Water Efficiency and Conservation	Indoor Water Use	30 percent Savings	35 percent Savings
	Outdoor Water Use	Not exceed 60 percent of ETo times the landscape area	Not exceed 55 percent of ETo times the landscape area
		1 additional Elective from Division A5.3	3 additional Electives from Division A5.3
Material Conservation and Resource Efficiency <sup>2</sup>	Construction Waste Reduction	At least 65 percent reduction	At least 80 percent reduction
	Recycled Content	Utilize recycled content materials for 10 percent of total material cost	Utilize recycled content materials for 15 percent of total material cost
		1 additional Elective from Division A5.4	3 additional Electives from Division A5.4
Environmental Quality	Low-VOC Resilient Flooring	80 percent of flooring meets VOC limits	90 percent of flooring meets VOC limits
	Low-VOC Thermal Insulation	Comply with VOC limits	Install no-added formaldehyde insulation & comply VOC limits
		1 additional Elective from Division A5.5	3 additional Electives from Division A5.5
Additional Measures	Added measures shall be achieved across at least 3 categories	1 Additional Elective	3 Additional Electives
Approximate Total Measures		14	24

# California Building Standards Commission

- Proposed Regulations
  - Anticipated Effective Date January 2014
  - Graywater
  - Rainwater Catchment



# California Building Standards Commission

- Codes Online: [www.bsc.ca.gov](http://www.bsc.ca.gov)
  - Newly reformatted CBSC website for easier access to code information
    - Rulemaking Process
    - Code Cycles
    - Current Codes
    - Guidebooks and other resources
    - Information Bulletins
    - Meeting Notices



Office of Governor  
**Edmund G. Brown Jr.**  
Visit his Website

SCSA Secretary  
**Anna Caballero**  
Visit SCSA Website

BSC Executive Director  
**Jim McGowan**



## BUILDING SAFETY MONTH

# MAY 2012

<b>WEEK ONE</b> May 7-13 <small>Energy &amp; Green Building</small>	<b>WEEK TWO</b> May 14-20 <small>Disaster Safety &amp; Mitigation</small>	<b>WEEK THREE</b> May 21-27 <small>Fire Safety &amp; Awareness</small>	<b>WEEK FOUR</b> May 28-30 <small>Backyard Safety</small>
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### FEATURED LINKS

- [CALGreen](#)
- [Bulletins](#)
- [Notices](#)
- [SB1473](#)
- [Feedback](#)
- [Related Sites](#)
- [Database](#)
- [Archives](#)

Welcome to the California Building Standards Commission (CBSC) website! Click [here](#) for helpful tips on how to navigate the CBSC website.

The CBSC is responsible for the administration of California's building codes (California Code of Regulation, Title 24), which includes the adoption, approval, publication, and implementation of codes and standards.

California's building codes are published on a triennial basis. Supplements and errata are issued throughout the cycle. Review the [current code cycle](#) here.

The 2010 codes are available online both on this website and on the submitting agencies websites:

**Residential construction:** California Department of Housing and Community Development, [www.hcd.ca.gov](http://www.hcd.ca.gov)

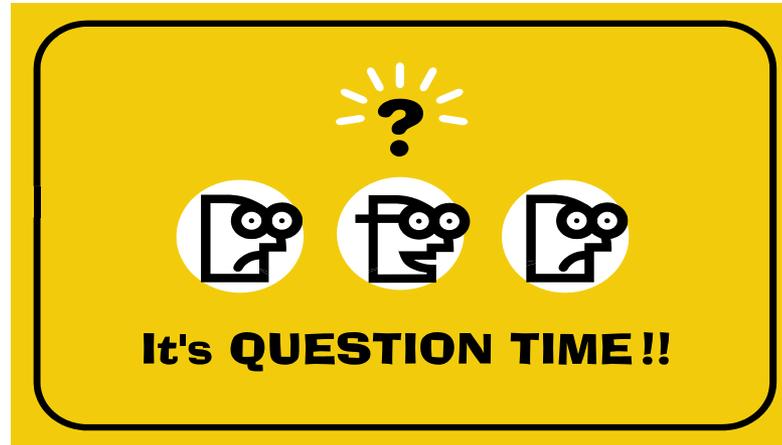
**Schools Construction:** California Department of General Services, Division of the State Architect, [www.dgs.ca.gov/dsa](http://www.dgs.ca.gov/dsa)

**Access Compliance:** California Department of General Services, Division of the State Architect, [www.dgs.ca.gov/dsa/Programs/progAccess](http://www.dgs.ca.gov/dsa/Programs/progAccess)

**Hospitals and clinic construction:** California Office of Statewide Health Planning and Development, <http://www.oshpd.ca.gov/>

**Fire and Panic Safety:** Office of the State Fire Marshal, <http://www.osfm.fire.ca.gov/>

Thank you...



[cbsctraining@dgs.ca.gov](mailto:cbsctraining@dgs.ca.gov)

Phone: 916.263.0916

