



SUSTAINABILITY SERIES

- Presentation will begin shortly
- Session will be recorded
- All attendees are muted
- Please be aware of Q&A at bottom of screen – ask your questions there
- We will address questions at various points in the session

www.chulavistaca.gov/clean

Sustainability Webinars

Upcoming Sustainable Building Series:

- November 17: CALGreen Nonresidential Code
- December 8: Indoor air quality and ventilation with a connection to COVID-19
- Summer Sustainability Series recorded webinars

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Sustainable Communities Program



2019 Title 24 Part 11 CALGreen Code

RESIDENTIAL



Colleen FitzSimons

PMP, LFA, LEED AP+, GPR, CALGreen Inspector

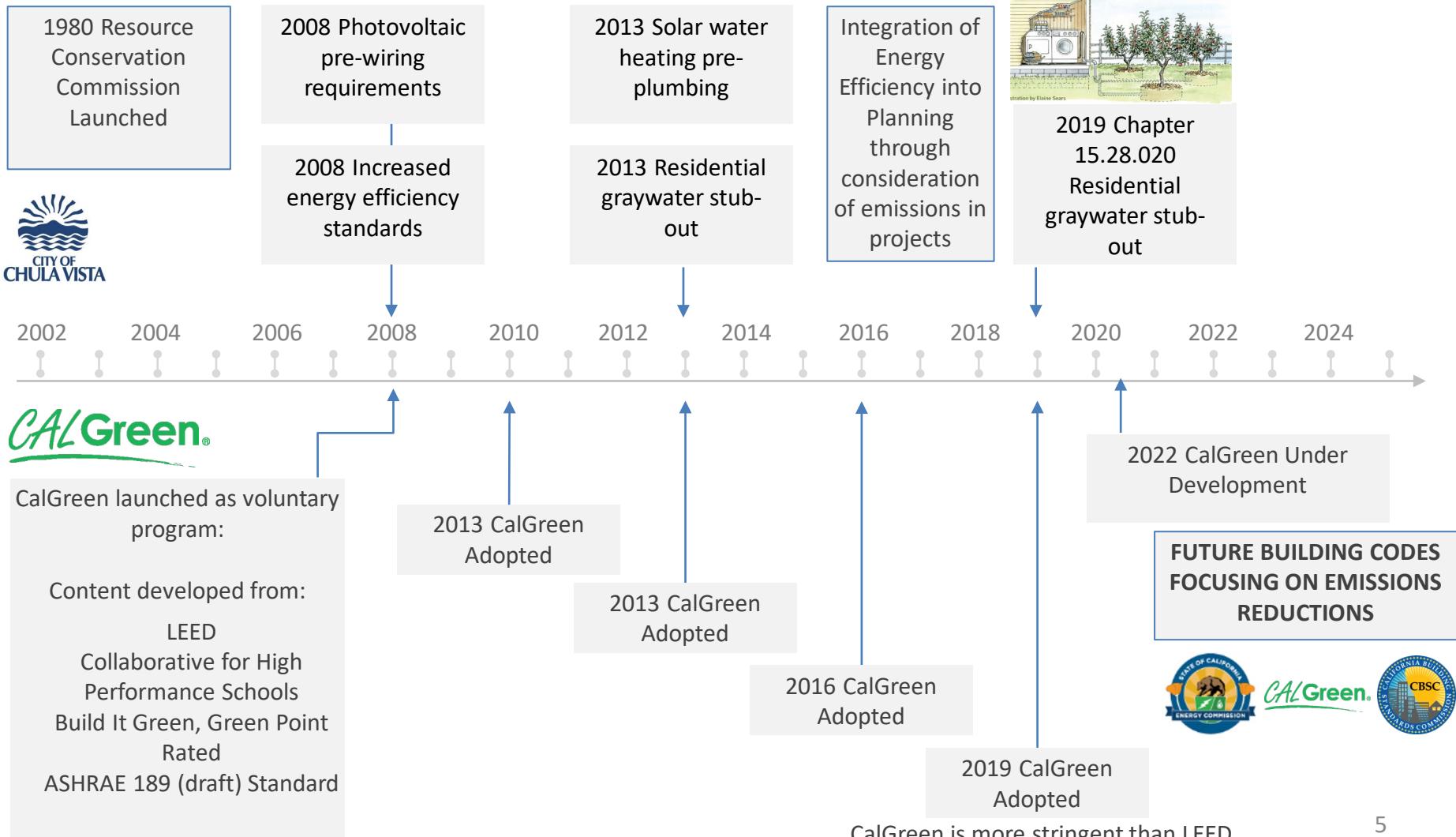
Douglas Kot

AIA, AICP, CEM, LEED AP+

CALGreen Topics

- CALGreen History and the California Building Code
- CALGreen Residential Mandatory Measures
- CALGreen Residential Voluntary Measures 
- City of Chula Vista Adopted Ordinances 

Chula Vista Green Building Ordinance History



CalGreen is more stringent than LEED in Energy and Water Use

CA Building Standards Code (CBC)

Title 24, CA Code of Regulations

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

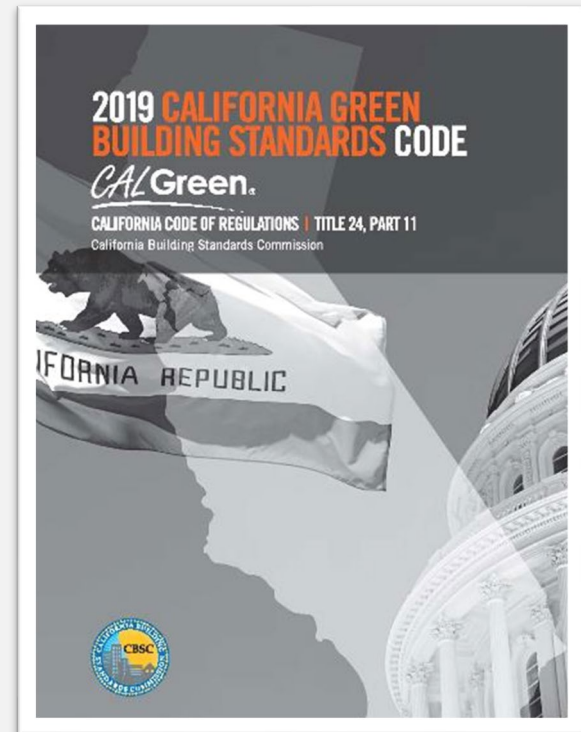
Part 8 California Historical Building Code

Part 9 California Fire Code

Part 10 California Existing Building Code

Part 11 California Green Building Standards Code

Part 12 California Referenced Standards Code



CALGreen is **not** a standalone code

- Enforced like other California codes
- Coordinated with other California codes
- Coordinated with Local Municipal codes
- Maintains current relationship between enforcing agencies and builders
- Establishes Uniformity and Consistency



CALGreen and the City of Chula Vista

Chapter 15.12 GREEN BUILDING STANDARDS

15.12.001 California Green Building Standards Code, 2019 Edition, adopted by reference.

There is hereby adopted by reference the California Green Building Standards Code, 2019 Edition, known as the California Code of Regulations, Title 24, Part 11, as copyrighted by the California Building Standards Commission. Said document is hereby adopted as the green building code of the City of Chula Vista for enhancing the design and construction of buildings, building additions and alterations through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices, excepting such portions as are hereinafter deleted, modified, or amended. Chapter 15.06 CVMC shall serve as the administrative, organizational and enforcement rules and regulations for this chapter. (Ord. 3470 § 1, 2019; Ord. 3386 § 1, 2016; Ord. 3287 § 1, 2013).

CALGreen and the City of Chula Vista

Chapter 15.12 GREEN BUILDING STANDARDS

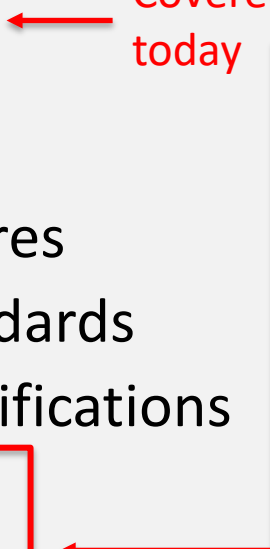
15.12.005 California Green Building Standards Code Subsection 102.4

102.4 Consultant Services. The Building Official may require the applicant to retain the services of a consultant having expertise in Green Building and/or energy efficiency techniques to review and evaluate complex systems and/or alternate methods or materials of construction and provide recommendations as to compliance with the requirements of this code. The cost of such consultant shall be paid by the applicant. (Ord. 3470 § 1, 2019; Ord. 3386 § 1, 2016; Ord. 3287 § 1, 2013).

CALGreen Chapters

- Chapter 1 Administration
- Chapter 2 Definitions
- Chapter 3 Green Building
- Chapter 4 Residential Mandatory Measures
- Chapter 5 Non Residential Mandatory Measures
- Chapter 6 Referenced Organizations and Standards
- Chapter 7 Installer and Special Inspector Qualifications
- Chapter 8 Compliance Forms and Worksheets
- Appendix A4 Voluntary Tiers (Residential)
- Appendix A5 Voluntary Tiers (Nonresidential)

Covered
today

A red line starts from the text 'Covered today', goes down, then left, then up, then left, ending in an arrow pointing to the first box. It then goes down, then left, ending in an arrow pointing to the second box.

Chapter 1: ADMINISTRATION

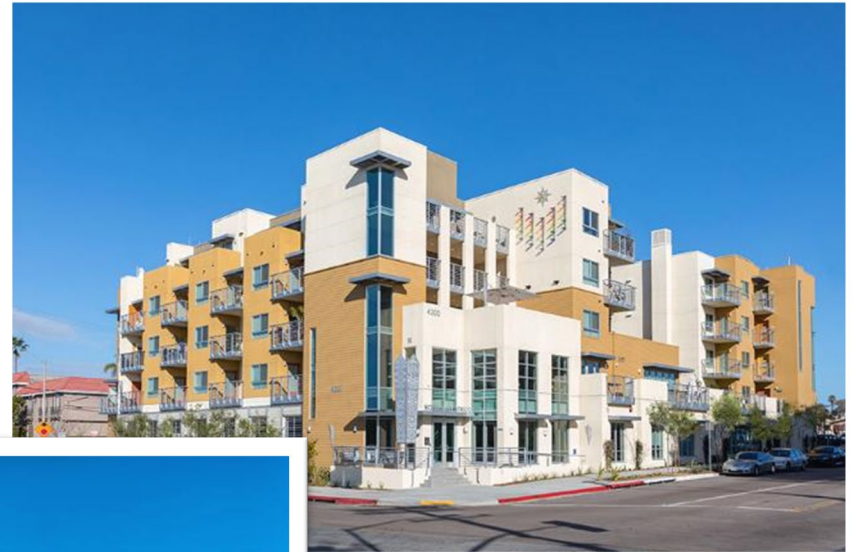
Purpose. The purpose of this code is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in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



Chapter 1: ADMINISTRATION

1. Planning and design.
2. Energy efficiency.
3. Water efficiency and conservation.
4. Material conservation and resource efficiency.
5. Environmental quality.

Chapter 3: GREEN BUILDING



Chapter 4: RESIDENTIAL MANDATORY MEASURES

4.1 Planning and design.

4.2 Energy efficiency.

4.3 Water efficiency and conservation.

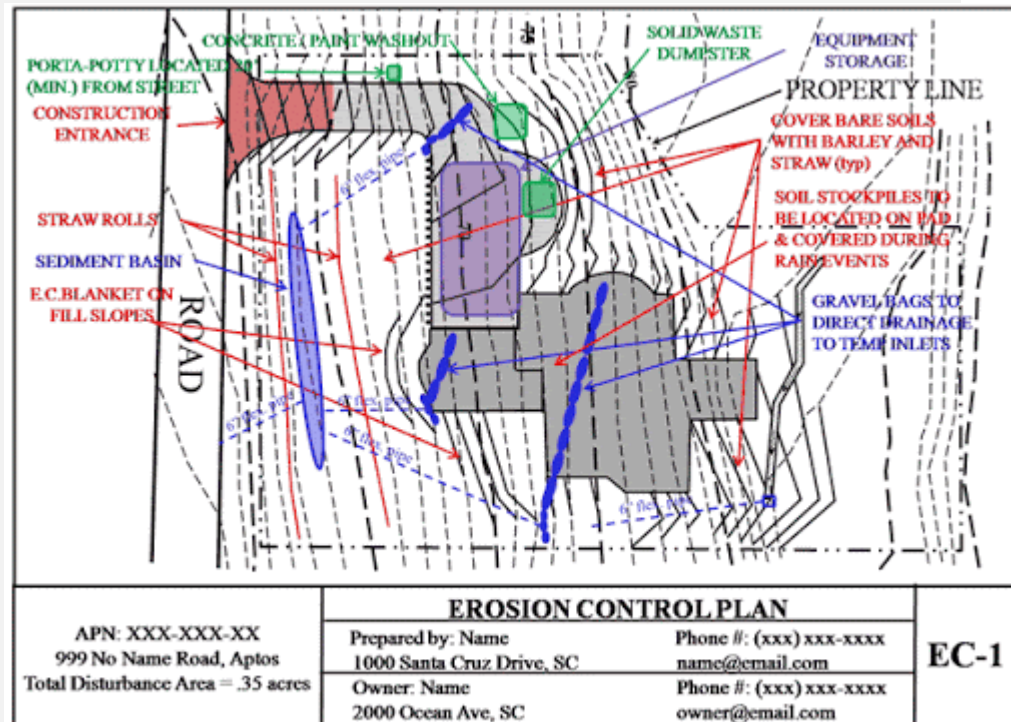
4.4 Material conservation and resource efficiency.

4.5 Environmental quality.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

4.1 Planning And Design

Scope. Proper planning and design helps protect the integrity of the site as well as adjacent properties.



IN THE CODE:

4.101.1 Scope. The provisions of this division 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 the integrity of adjacent properties.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.106 Site Development

Stormwater drainage and retention during construction.

When it rains, the water runs off roofs and driveways into the street. Runoff picks up fertilizer, oil, pesticides, dirt, bacteria and other pollutants as it makes its way through storm drains and ditches - untreated - to our streams, rivers, lakes and the ocean.

These sediment pollutants are the biggest contributors to pollution in receiving bodies of water.



IN THE CODE:

4.106.2 Stormwater drainage and retention during construction. Projects which disturb less than one acre of soil shall manage storm water drainage during construction to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

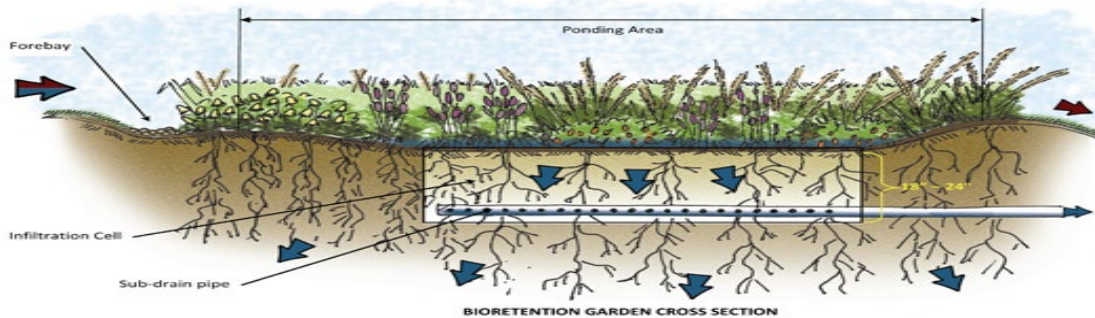
Methods:

1. Retention basins
2. Filtering barrier system or wattle or other approved
3. Lawfully enacted storm water management ordinance

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.106 Site Development

Grading and Paving. Managing surface water flows helps prevent flooding, erosion, damage to adjacent property and pollution from stormwater runoff during construction.



IN THE CODE:

4.106.3 Grading and Paving. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings.

Exception: Additions and alterations not altering the drainage path.

Potential Methods:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water Retention Gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge



Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.106 Site Development

Electric Vehicle charging for new construction.

New one-and two-family dwellings and townhouses with attached garages

Promote the use of clean air vehicles to conserve natural resources and reduce greenhouse gas emissions.



IN THE CODE:

4.106.4 Electric Vehicle charging for new construction.

4.106.4.1 New one-and two-family dwellings and townhouses with attached garages

- Install a listed raceway 208-240 volt branch circuit.
- The service panel and/or subpanel must provide capacity to install a 40 Amp circuit.
- The panel directory and termination location shall be permanently and visibly marked.



Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.106 Site Development

New multifamily EV charging

The primary source of greenhouse gasses in the US is from transportation (28% of all GHG emissions!). Designate electric vehicle (EV) charging spaces to promote clean air vehicles.



IN THE CODE:

4.106.4.2 New multifamily dwellings If residential parking is available, ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE.

4.106.4.2.1. Electric Vehicle charging space (EV space) Construction documents shall indicate the location of proposed EV spaces. At least one shall be located in common use area and available to all residents.

4.106.4.2.1.1 Electric Vehicle charging stations (EVCS) When EV chargers are installed, EV spaces shall be located adjacent to accessible parking (11A) or on an accessible route.

4.106.4.2.2 Electric Vehicle charging space dimensions must have a minimum length of 18 feet and minimum width of 9 feet. One in every 25 (at least one) shall have an 8-foot wide aisle, may be 5 feet if the space is 12 feet wide surface slope for space and aisle is limited to 1:48 in any direction



Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.106 Site Development

Number of required EV spaces based on this table

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

IN THE CODE:

4.106.4.2.3 Single EV space required Install a raceway, space and capacity for a 40 amp circuit

4.106.4.2.3 Multiple EV space required Construction documents shall indicate the raceway termination point electrical load calculations. Components planned to be installed underground shall be installed at time of construction.

4.106.4.2.5 Identification The service or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as “EV CAPABLE”

4.106.4.3 New Hotels and Motels shall provide EV spaces capable of supporting future installation of EVSE (EV supply equipment)

4.106.4.3.1 Number of required EV spaces shall be based on Table 4.106.4.3.1 (pictured above)

Chapter 4: RESIDENTIAL MANDATORY MEASURES

4.1 Planning and design.

4.2 Energy efficiency.

4.3 Water efficiency and conservation.

4.4 Material conservation and resource efficiency.

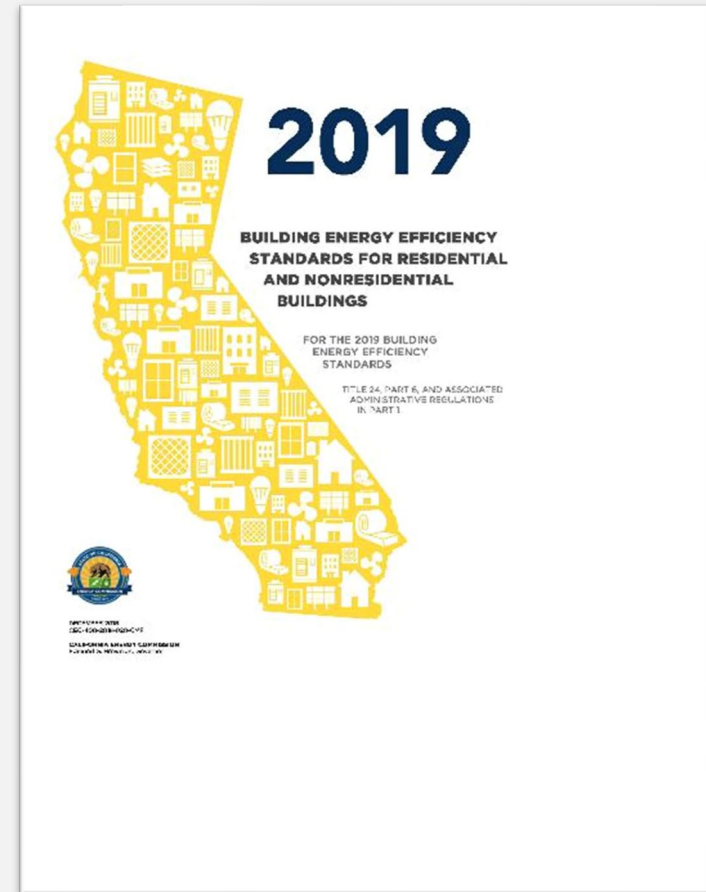
4.5 Environmental quality.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

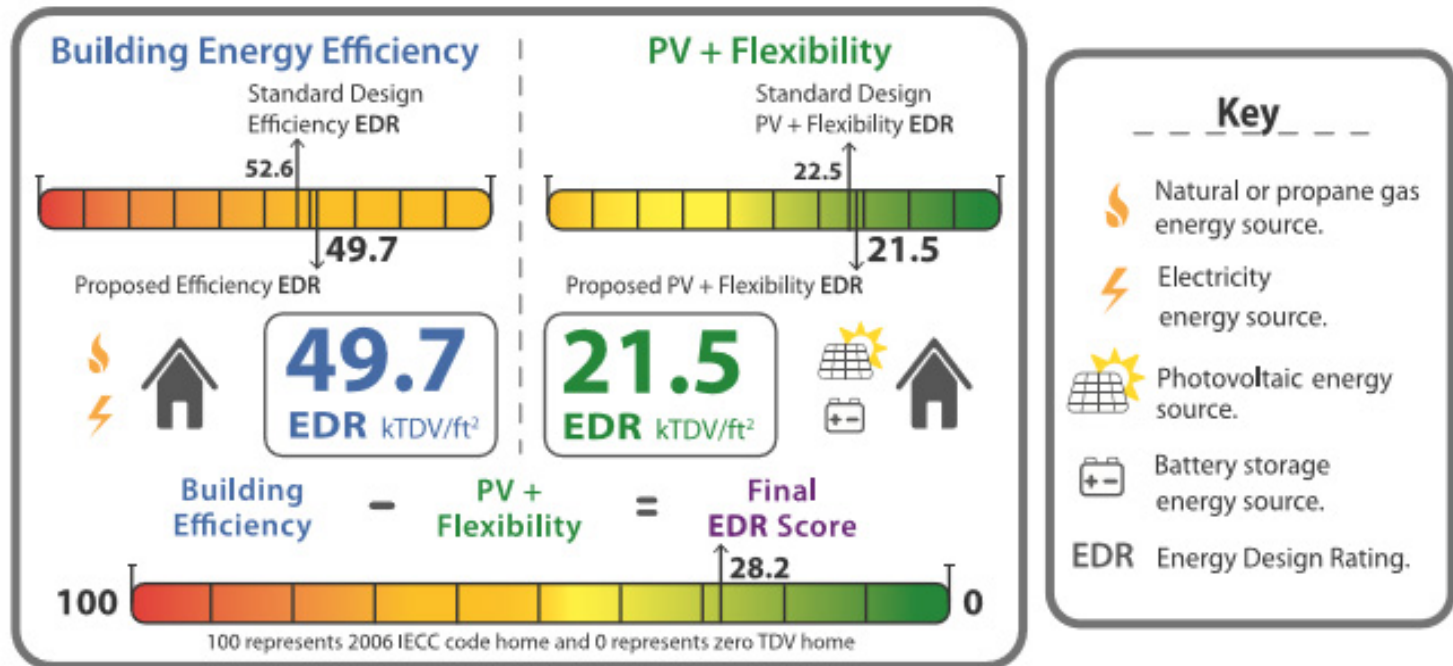


4.2 Energy Efficiency

Scope. For the purposes of mandatory energy efficiency standards in the code, the California Energy Commission will continue to adopt mandatory measures.



California Energy Code



The building complies when the Proposed Building Energy Efficiency EDR is equal to or less than the Standard Building Energy Efficiency EDR.

- Battery can be used towards Building Efficiency EDR.

In addition, the PV + Flexibility EDR is subtracted from the Building Efficiency EDR for the Final EDR score.

- Any Building Efficiency savings, beyond standard, can be used towards the PV + Flexibility EDR.

California Energy Code



SOLAR PHOTOVOLTAIC SYSTEM

Promote installing solar photovoltaic systems in newly constructed residential buildings. The systems include smart inverters with optional battery storage. This will increase the self-utilization of the electricity generated to power the home's electricity loads including plug-in appliances. California is the first state in the nation to require smart systems on homes.



DEMAND RESPONSE COMPLIANCE OPTIONS

Encourage battery storage and heat pump water heaters that shift the energy use of the house from peak periods to off-peak periods. Utilities moving to time-of-use pricing assists the grid to meet the state's climate change goals and helps homes reduce energy bills.



HEALTHY INDOOR AIR QUALITY

Enable using highly efficient filters that trap hazardous particulates from both outdoor air and cooking and improve kitchen ventilation systems. Moving air around and in and out of the home while filtering out allergens and other particles makes the home healthier.



BUILDING ENVELOPE

Strengthen insulation in attics, walls and windows to improve comfort and energy savings. Keeping the heat out during the summer and warm air during the winter makes a home more resilient to climate change.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

4.1 Planning and design.

4.2 Energy efficiency.

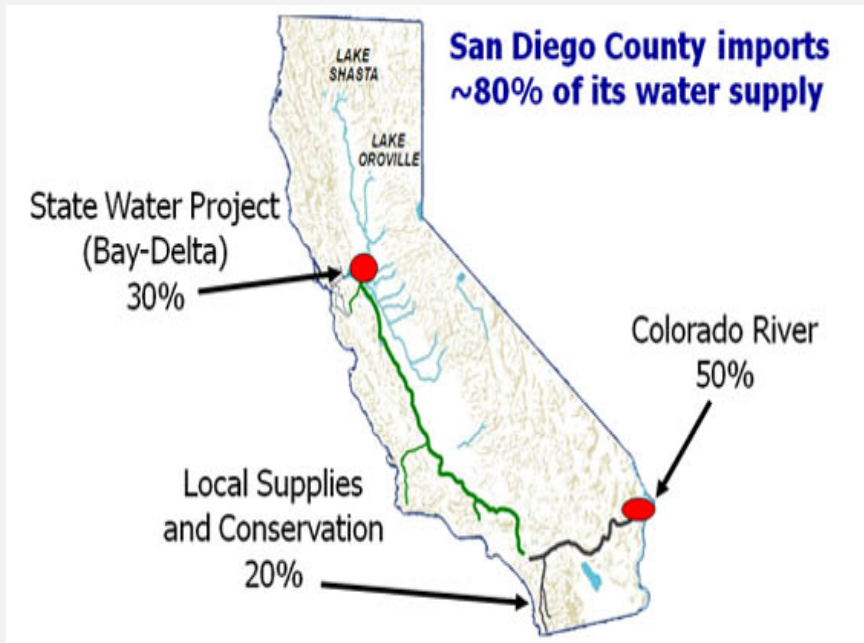
4.3 Water efficiency and conservation.

4.4 Material conservation and resource efficiency.

4.5 Environmental quality.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.3 Water efficiency and conservation



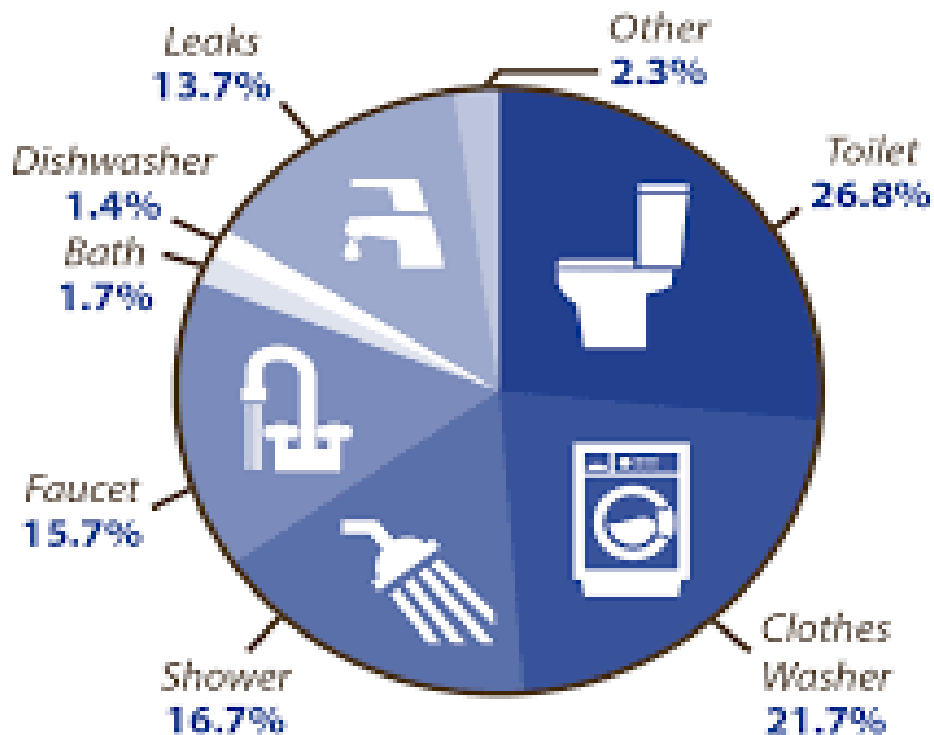
IN THE CODE:

4.301.1 Scope. The provisions of this chapter shall establish the means of conserving water used indoors, outdoors and in wastewater conveyance

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.303 Indoor Water Use

Average Indoor Household Water Use



Source: AWWA Research Foundation, 1999

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.301 Indoor Water Use

Water conserving plumbing fixtures and fittings.

Putting a maximum threshold on water fixtures can greatly reduce indoor water use, saving water and money.



IN THE CODE:

4.303.1 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets & urinals) and fittings (faucets & showerheads) shall comply with the following:

4.303.1.1 Waters Closets: = 1.28 gal/flush

4.303.1.2 Urinals: =0.125 wall-mounted / 0.5 other gal/flush

4.303.1.3.1 Single Showerheads: = 1.8 gpm @ 80 psi

4.303.1.3.2 Multiple Showerheads: combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gpm @ 80 psi

4.303.1.4.1 Residential Lavatory Faucets: = 1.2 gpm @ 60 psi, the minimum flow rate shall not be less than .8 gpm at 20 psi

4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas of Residential Buildings: = 0.5 gpm @ 60 psi

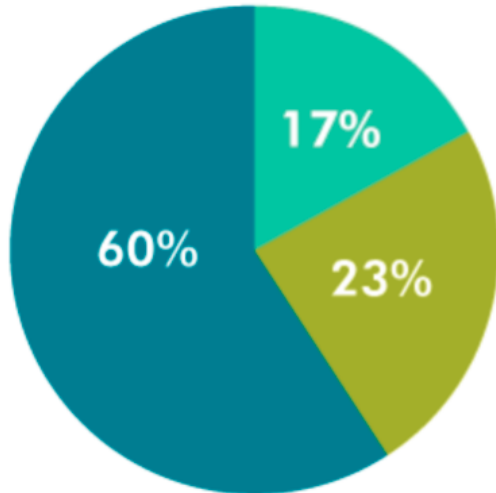
4.303.1.4.3 Metering Faucets: = 0.2 gallons per cycle

4.303.1.4.4 Kitchen Faucets: = 1.8 gpm @ 60 psi; temporary increase to 2.2 gpm allowed but shall default to 1.8 gpm

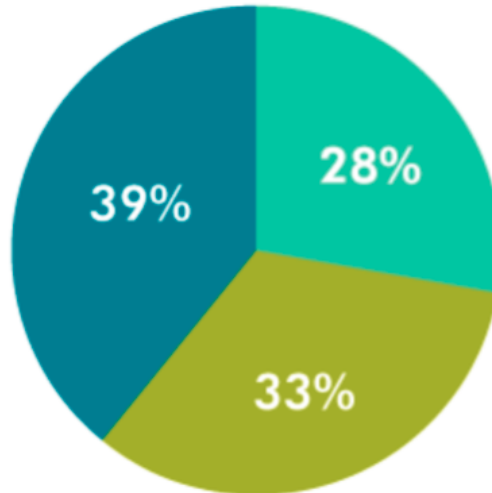
Chapter 4: RESIDENTIAL MANDATORY MEASURES

Outdoor Water Use

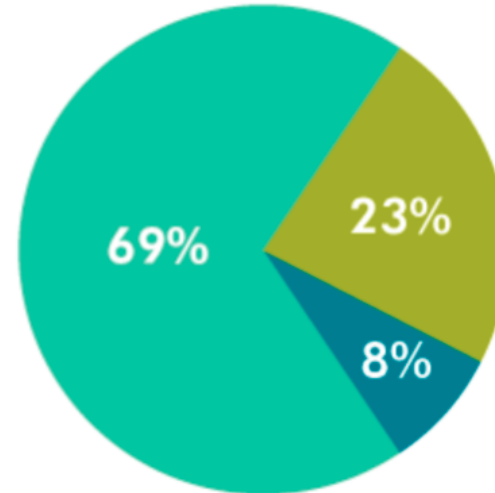
San Diego County



California



Worldwide



 Residential

 Industry

 Agriculture



Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.304 Outdoor Water Use

Outdoor potable water use in landscape areas.
Reducing outdoor water use helps preserve potable (ie drinkable) water.



IN THE CODE:

4.304.1 Outdoor potable water use in landscape areas. New residential developments w/ 500 sf of landscape area shall comply with 1 or 2:

1. Model Water Efficient Landscape Ordinance (MWEL0)

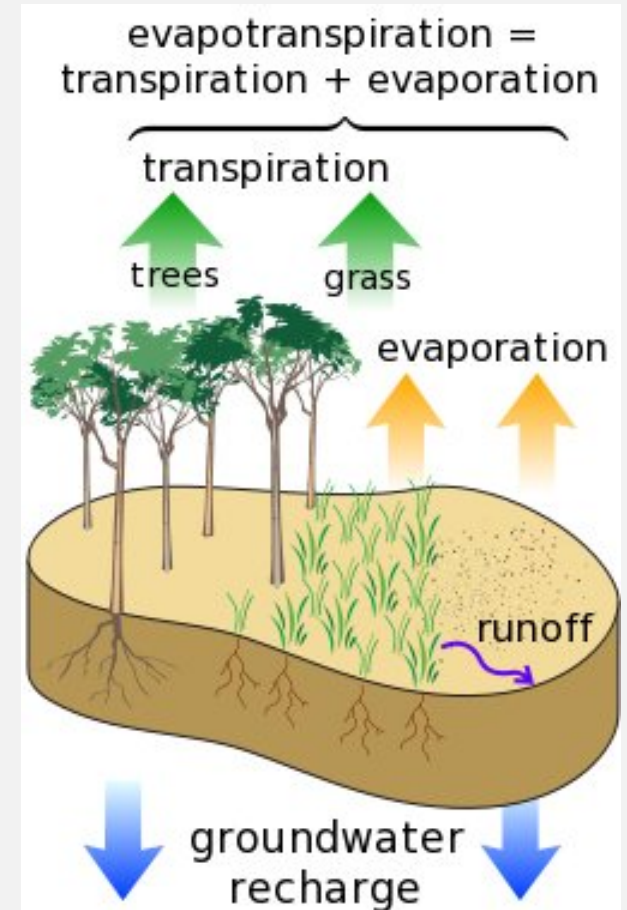
The maximum applied water allowance (MAWA) has been lowered from 70% of the reference evapotranspiration (ET_o) to 55% for residential landscape projects, and to 45% of ET_o for non-residential projects. This water allowance reduces the landscape area that can be planted with high water use plants such as cool season turf.

2. Less than 2500 square feet of landscape may comply with MWEL0 Appendix D

Appendix D. The size threshold for existing landscapes that are being rehabilitated has not changed, remaining at 2500 square feet. Only rehabilitated landscapes that are associated with a building or landscape permit, plan check, or design review are subject to the Ordinance.

City of Chula Vista Green Building Ordinances

Chapter 20.12 Chula Vista Landscape Water Conservation Ordinance



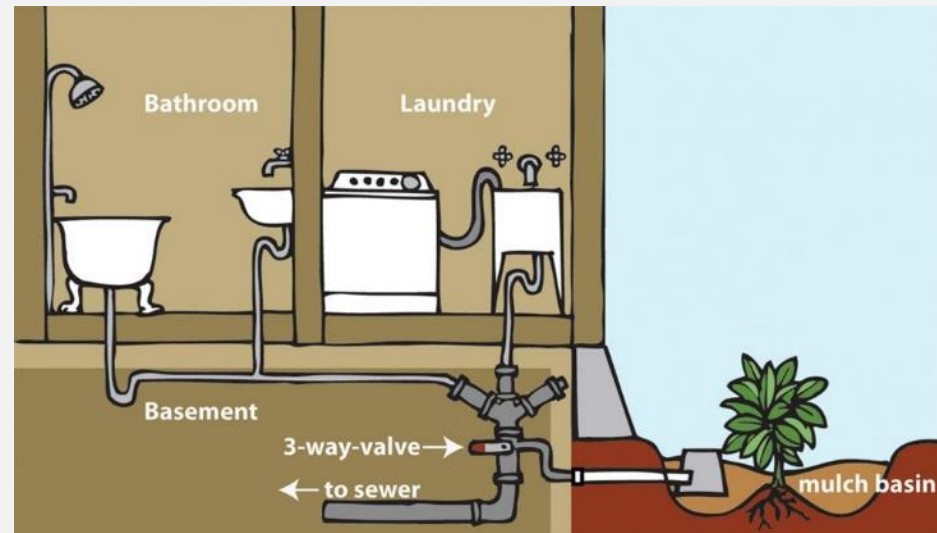
Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.305 Water Reuse Systems



Recycled water supply systems. Newly constructed Recycled water systems use graywater (untreated household waste water that has not come into contact with toilet waste)

such as from bathtubs, showers, clothes washing machines, and laundry tubs or rainwater for landscape irrigation, thus saving potable water.



IN THE CODE:

4.305.1 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 water for residential landscape irrigation systems.

See Chapter 15 of the California Plumbing Code

Chapter 4: RESIDENTIAL MANDATORY MEASURES

4.1 Planning and design.

4.2 Energy efficiency.

4.3 Water efficiency and conservation.

4.4 Material conservation and resource efficiency.

4.5 Environmental quality.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

4.4 Material conservation and resource efficiency



Two major areas of debris make up the great pacific garbage patch.

Smaller versions are present in the North Atlantic and Indian oceans.

Chapter 4: RESIDENTIAL MANDATORY MEASURES



Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.401 General

Division 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

Scope. Buildings are extremely resource intensive – the building process requires tons of energy, water, and materials, and generates significant waste. We can conserve resources by making buildings more durable and reducing waste throughout the construction process.



IN THE CODE:

4.401.1 Scope. The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture; construction waste diversion; employment of techniques to reduce pollution through recycling of materials; and building commissioning or testing, adjusting and balancing.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.406 Enhanced Durability & Reduced Maintenance

Rodent proofing.

Rodents can squeeze into a home through tiny cracks and holes. Once inside, they can damage the home and spread diseases.



IN THE CODE:

4.406.1 Rodent proofing. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents.



Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.408 Construction waste reduction, disposal, & maintenance

Construction waste management.

Each year close to 9 million tons of construction and demo (C&D) debris is disposed in CA landfills – that’s ~22% of the waste stream. C&D generally consists of wood, drywall, metal, concrete, cardboard and plant debris (green waste). Much of this material can be reused or recycled.



IN THE CODE:

4.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste with either 4.408.2, 4.408.3 or 4.408.4 or meet a more stringent local construction and demolition waste management ordinance.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.408 Construction waste reduction, disposal, & maintenance

Construction waste management plan.

Creating a plan and getting all subcontractors on board will promote recycling efforts and reduce pressure on landfills and the need to harvest new resources.

CONSTRUCTION WASTE MANAGEMENT (CWM) WORKSHEET

Note: This sample form may be used to assist in documenting compliance with the waste management plan.

Project Name: _____
 Job Number: _____
 Project Manager: _____
 Waste Hauling Company: _____
 Contact Name: _____

Waste Material Type	Diversion Method		Projected Diversion Rate
	Commingled and Sorted Off-site	Source Separated Onsite	
Asphalt			
Concrete			
Shotcrete			
Metals			
Wood			
Rigid Insulation			
Fiberglass Insulation			
Acoustic Ceiling Tile			
Gypsum Drywall			
Carpet/Carpet Pad			
Plastic Pipe			
Plastic Buckets			
Plastic			
Hardiplank Siding and Boards			
Glass			
Cardboard			
Pallets			
Job office trash, paper, glass & plastic bottles, cans, plastic			
Alkaline and rechargeable batteries, toner cartridges, and electronic devices			
Other:			
Other:			
Other:			

IN THE CODE:

4.408.2 Construction waste management plan. Submit a construction waste management plan in conformance with Items 1 through 5.

1. Identify waste materials
2. Specify sorted onsite or bulk mixed
3. Identify diversion facilities
4. Identify methods employed to reduce waste
5. Specify amount diverted by weight or volume

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.408 Construction waste reduction, disposal, & maintenance

Waste management company. Find a waste management company that can divert an appropriate % of C&D and make sure to get a diversion receipt.

Waste stream reduction alternative. Ask for the diversion certificate up front.

Documentation.

EDCO WASTE & RECYCLING SERVICES, INC
224 S. LAS POSAS RD
SAN MARCOS, CA 92078
(760) 744-2700

INVOICE

Customer: 0000 Ticket: 14696 In: 10:43 Truck: 0000
Date: 01/11/20 Out: 11:15 Container:
CASH CUSTOMER Route: 08145
Origin: 081 ALL COUNT

AGB 305 HILL CREST ENCINITAS

Commodity	Units	Rate	Extended Charge
45 C & D MIX	.74	66.00 per TON	53.00
[Gross(In): 5,960. lbs Man Wt Tare 4,480. lbs Man Wt Net: 1,480. lbs]			

PAID CHECK# 3420 53.00

Construction & Demolition Diversion Certificate -- Diversion Percentage 88%
This certifies that the company listed above has utilized an EDCO facility to divert construction demolition materials in accordance with LEED requirement. The diversion tonnage is based on an overall tonnage percentage of the respective EDCO facility.

EVERARDO Driver JAN 14 2020
Winty Wood Recycle
74 660

IN THE CODE:

4.408.3 Waste management company. Utilize a waste management company, approved by the enforcing agency.

4.408.4 [LR] Waste stream reduction alternative. Projects that generate C&D waste disposed to landfills that is less than 3.4 pounds per square foot of the building area shall meet the 65% requirement.

4.408.4.1 Waste stream reduction alternative.

Projects that generate C&D waste disposed to landfills that is less than 2 pounds per square foot of the building area shall meet the 65% requirement.

4.408.5 Documentation. Documentation shall be provided.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.410 Building Maintenance and Operation

Operation and maintenance manual. Provide homeowners the info needed to maintain the highest performance of the home's features and other homeownership practices.



IN THE CODE:

4.410.1 Operation and maintenance manual. At the time of final inspection, a manual, compact disc, web-based reference which includes the following shall be placed in the building and remain:

Mechanical and HVAC equipment, appliances, drainage, irrigation, public utilities and local public services.
A template is available at the CALGreen website and linked on the City of Chula Vista website.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.410 Building Maintenance and Operation

Recycling by Occupants.

Promote recycling efforts and reduce pressure on landfills and the need to harvest new resources by providing easily accessible recycling areas.



IN THE CODE:

4.410.2 Recycling by Occupants. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) for all buildings for recycling.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

4.1 Planning and design.

4.2 Energy efficiency.

4.3 Water efficiency and conservation.

4.4 Material conservation and resource efficiency.

4.5 Environmental quality.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

4.5 Environmental quality



Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.5 Environmental Quality

Scope.

Humans spend ~90% of their time indoors. This chapter covers ways to improve indoor air quality which leads to comfort and better health for occupants.



IN THE CODE:

4.501.1 Scope. The provisions of this chapter shall outline means of reducing 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.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.503 Fireplaces

General.

Combustion gasses from fireplaces can compromise indoor air quality and occupants' health.



IN THE CODE:

4.503.1 General. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Woodstoves, pellet stoves and fireplaces shall also comply with U.S EPA New Source Performance Standards (NSPS) emission limits as applicable and labeled, and local ordinances as applicable.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.504 Pollutant Control

Covering of duct openings and protection of mechanical equipment during construction.

Debris and dust from construction can lodge in HVAC units and ductwork if not covered.



IN THE CODE:

4.504.1 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough inspection until final startup of the heating, cooling and ventilation equipment.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.504 Pollutant Control cont'd

Finish material pollutant control.

Caulks, sealants, adhesives, and paints can off-gas toxic compounds for months, creating indoor air pollution and adverse health effects.



IN THE CODE:

4.504.2 Finish material pollutant control. Finish materials shall comply with this section.

4.504.2.1 Adhesives, sealants, and caulks

Table 4.504.1 ADHESIVE VOC LIMIT

Table 4.504.2 SEALANT VOC LIMIT

4504.2.2 Paints and coatings

Table 4.504.3 VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS

4504.2.3 Aerosol paints and coatings

4.504.2.4 Verification. Verification of compliance the enforcing agency. Documentation may include, but is not limited the following:

1. Manufacturer's product specification.
2. Field verification of on-site containers

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.504 Pollutant Control cont'd

Carpet systems.

Carpet can off-gas VOCs and formaldehyde, compromising the indoor air quality.



IN THE CODE:

4.504.3 Carpet systems. All carpet installed in the interior shall meet the testing and product requirements of one of the following:

1. Carpet and Rug Institute's Green Label Plus Program
2. California Dept. of Public Health
3. NSF/ANSI 140 Gold
4. SCSIA Gold

4504.3.1 Carpet cushion

4504.3.2 Carpet adhesive



Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.504 Pollutant Control cont'd

Resilient flooring.

Resilient flooring products can emit formaldehyde and other VOCs. Third party certification systems exist to approve products for low emissions.



IN THE CODE:

4.504.4 Resilient flooring. Where resilient flooring is installed, at least 80% shall comply with one or more of the following:

1. CHPS High Performance Products Database
2. UL Greenguard
3. RFCI FloorScore program
4. California Dept. of Public Health



Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.504 Pollutant Control cont'd

Composite wood products.

Formaldehyde is often used as a binder in building products such as plywood, particleboard, and other composite wood products. Formaldehyde can off-gas and decrease indoor air quality.

TABLE 4.504.5
FORMALDEHYDE LIMITS¹
Maximum Formaldehyde Emissions in Parts per Million

PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard ²	0.13

IN THE CODE:

4.504.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde

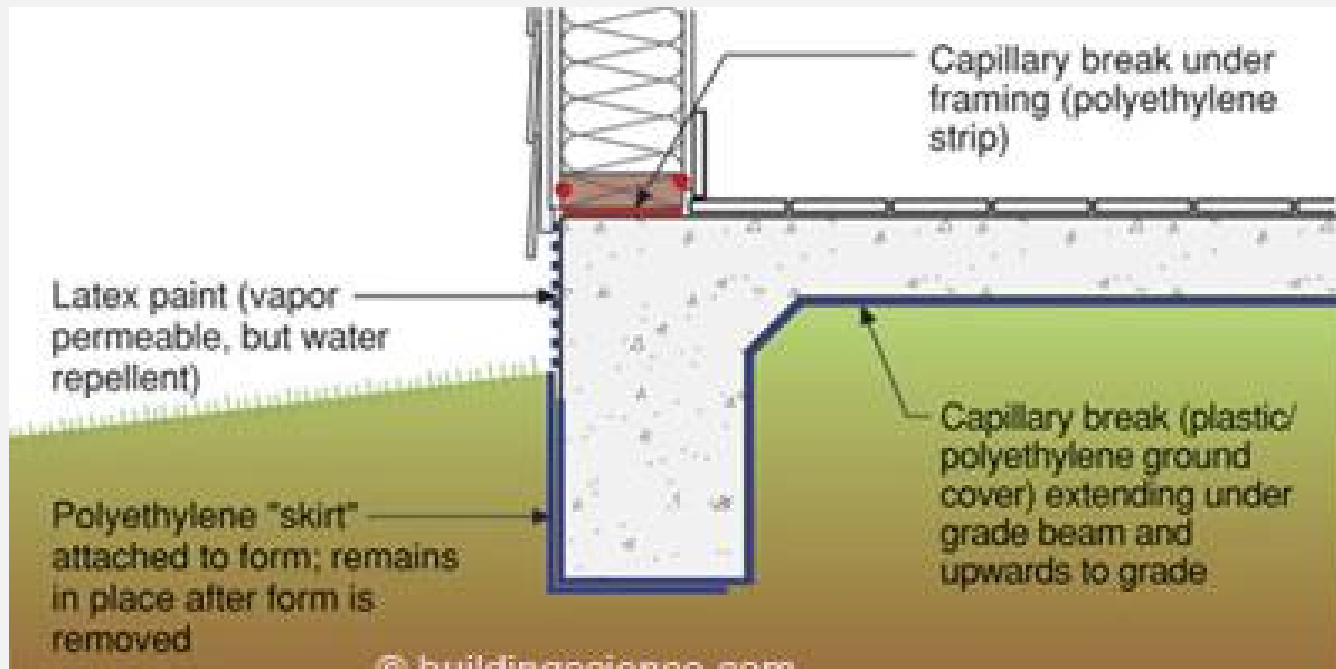
Table 4.504.5 FORMALDEHYDE LIMITS

4.504.5.1 Documentation. Verification of compliance with this section shall include at least one of the following:

1. Product certifications and specifications
2. Chain of custody certifications
3. Product labeled CCR Title 17
4. PS-1, PS-2 EWA, Australian AS/NZS European 6363S
5. Other methods acceptable to the enforcing agency

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.505 Interior Moisture Control



IN THE CODE:

4.505.1 General. Buildings shall meet or exceed the provisions of the California Building Standards Code.

4.505.2 Concrete slab foundations. Concrete slab foundations or concrete slab-on-ground floors required to have a vapor retarder shall also comply with this section.

4.505.2.1 Capillary break. A capillary break shall be installed with one of the following:

1. A 4-inch-thick (101.6 mm) base of $\frac{1}{2}$ inch or larger aggregate shall be provided with a vapor retarder in direct contact with concrete
2. Other equivalent methods
3. A slab design specified by a licensed design professional

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.505 Interior Moisture Control cont'd

Moisture content of building materials.

Reduce the potential for rot, growth of mold, or other biological growth in moist enclosed areas



IN THE CODE:

4.505.3 Moisture content of building materials. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19-percent moisture content.

1. Moisture content shall be determined with either a probe-type or contact-type moisture meter.

4.505.3 Moisture content of building materials.

1. Moisture readings (< 19% to comply) shall be taken at a point 2 feet to 4 feet from the grade stamped end.
2. At least three random moisture readings.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.506 Indoor Air Quality & Exhaust

Bathroom exhaust fans. Indoor moisture can accumulate in buildings due to insufficient ventilation, especially in wet areas such as the bathroom. Bath fans reduce probability of mold/mildew and improve air quality.



IN THE CODE:

4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:

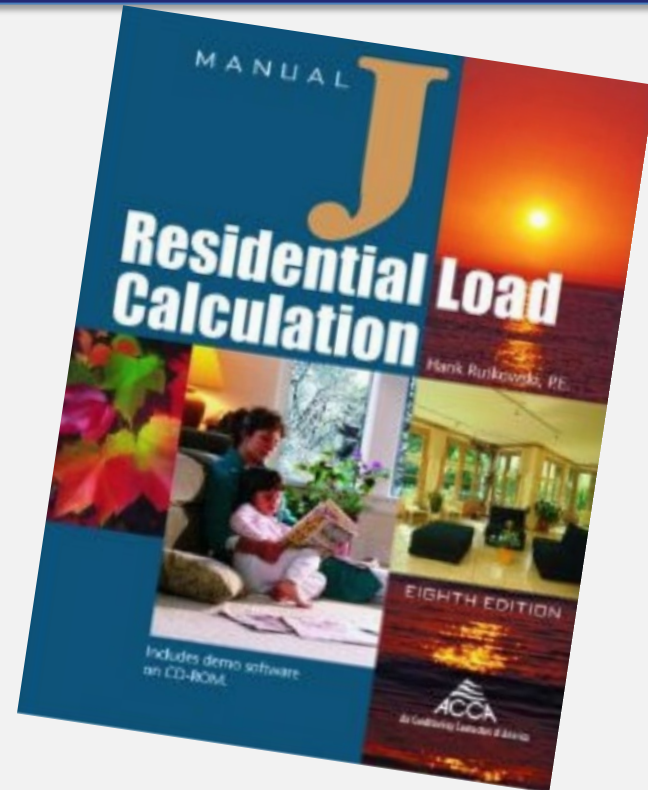
1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Humidity controls are required unless functioning as part of whole house ventilation system.

Chapter 4: RESIDENTIAL MANDATORY MEASURES

Section 4.506 Indoor Air Quality & Exhaust

Heating and air-conditioning system design.

Sizing HVAC equipment and ducts properly is essential in improving performance, energy efficiency, and comfort.



IN THE CODE:

4.507.2 Heating and air-conditioning system design. Heating and air-conditioning systems shall be sized, designed and have their equipment selected using the following methods:

1. Heat loss and heat gain ANSI/ACCA 2 Manual J, ASHRAE or equivalent
2. Duct systems sized/ANSI/ACCA 1 Manual D, ASHRAE or equivalent
3. Select equipment ANSI/ACCA 3 Manual S, ASHRAE or equivalent

Chapter 8: COMPLIANCE FORMS, WORKSHEETS AND REFERENCE MATERIAL

SAMPLE WORKSHEETS (PC 8)

PAINTS AND COATINGS - PRODUCT INFORMATION SHEET (PC 5) Page 1 of 1

1. Insert product information below. 2. Insert the item #'s for each product listed below into the appropriate boxes on ROOM/LOCATION MATRIX. 3. Attach all product specification sheets or labels. 4. Use additional sheets if necessary.

Item #1	Description of Product	VOC grams/liter	
Color/Product #:	Calm White - Flat Green California Series - White Base Paints 4 U	CAL Green Limit*	Proposed Product
Series/Collection:		50	0
Manufacturer:			
Other:			
Item #2	Description of Product	VOC grams/liter	
Color/Product #:	Clean White - Eggshell Enamel Green California Series Acrylic Paints 4 U	CAL Green Limit*	Proposed Product
Series/Collection:		100	< 100
Manufacturer:			
Other:			

* See Appendix 4-504.2.3 and Table 4-504.2 for paints and coatings. See Section 4-504.2.5 for aerosol paints and coatings.

...

PAINTS AND COATINGS - ROOM/LOCATION MATRIX (PC 6) Page 1 of 1

1. Insert production Item # (1,2,3, etc.) from PRODUCT INFORMATION SHEET in the boxes below to indicate type of finish used in each room or location. 2. Attach additional sheets if necessary.

LOCATION	Entryway	Kitchen	Bathroom	Dining	Bedroom 1	Bedroom 2	Family	Living	Hallway	Garage	Staircase	Bedroom 3	Bedroom 4	Bathroom	Bathroom 2	Bathroom 1	Nursery 1	Nursery 2	Utility	Laundry	Garage	
COATING																						
Flat	1		1	1	1	1	1	1	1	1	1	1	1				1	1				1
Eggshell		2												2	2				2	2		

...

Chapter 8: COMPLIANCE FORMS, WORKSHEETS AND REFERENCE MATERIAL



AIA
California

2019 CALIFORNIA GREEN BUILDING STANDARDS RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2020, Includes All

Y	NA	RESPON PARTY		Y	NA	RESPON PARTY		Y	NA	RESPON PARTY								
			<p>CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL</p> <p>301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.17.</p> <p>301.1.1 Additions and alterations. [HCD] 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.</p> <p>Note: 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.</p> <p>301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.</p> <p>SECTION 302 MIXED OCCUPANCY BUILDINGS</p> <p>302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.</p> <p>ABBREVIATION DEFINITIONS: HCD Department of Housing and Community Development BSC California Building Standards Commission DSA-SS Division of the State Architect, Structural Safety OCHPD Office of Statewide Health Planning and Development LR Low Rise HR High Rise AA Additions and Alterations N New</p> <p>CHAPTER 4 RESIDENTIAL MANDATORY MEASURES DIVISION 4.1 PLANNING AND DESIGN SECTION 4.102 DEFINITIONS 4.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference)</p> <p>FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.</p> <p>WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.</p> <p>4.106 SITE DEVELOPMENT</p>															
							<p>4.106.4.2.1.1 Electric Vehicle Charging Stations (EVCS) When EV chargers are installed, EV spaces required by Section 4.106.2.2, Item 3, shall comply with at least one of the following options:</p> <ol style="list-style-type: none"> 1. The EV space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space. 2. The EV space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building. <p>Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.1.1 and Section 4.106.4.2.2, Item 3.</p> <p>Note: Electric Vehicle charging stations serving public housing are required to comply with the California Building Code, Chapter 11B.</p> <p>4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV space shall be designed to comply with the following:</p> <ol style="list-style-type: none"> 1. The minimum length of each EV space shall be 18 feet (5486 mm). 2. The minimum width of each EV space shall be 9 feet (2743 mm). 3. One in every 25 EV spaces, but not less than one EV space, shall have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm). <p>a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.</p> <p>4.106.4.2.3 Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV space. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.</p> <p>4.106.4.2.4 Multiple EV spaces required. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on ampereage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated ampereage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in congested areas and spaces shall be installed at the time of original construction.</p> <p>4.106.4.2.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.</p> <p>4.106.4.3 New hotels and motels. All newly constructed hotels and motels shall provide EV spaces capable of supporting future installation of EVSE. The construction documents shall identify the location of the EV spaces.</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. Construction documents are intended to demonstrate the project's capability and capacity or facilitating future EV charging. 2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed. 											
											<p>DIVISION 4.3 WATER EFFICIENCY 4.303 INDOOR WATER USE 4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS (faucets and showerheads) shall comply and 4.303.4.4.</p> <p>Note: All noncompliant plumbing fixtures in any residential re plumbing fixtures. Plumbing fixture replacement is req completion, certificate of occupancy, or final permit ap Code Section 1101.1, et seq., for the definition of a no buildings affected and other important enactment date.</p> <p>4.303.1.1 Water Closets. The effective flush volume of all v flush. Tank-type water closets shall be certified to the perfor Specification for Tank-type Toilets.</p> <p>Note: The effective flush volume of dual flush toilets is of two reduced flushes and one full flush.</p> <p>4.303.1.2 Urinals. The effective flush volume of wall mount The effective flush volume of all other urinals shall not exce</p> <p>4.303.1.3 Showerheads.</p> <p>4.303.1.3.1 Single Showerhead. Showerheads shall gallo per minute at 80 psi. Showerheads shall be ce WaterSense Specification for Showerheads.</p> <p>4.303.1.3.2 Multiple showerheads serving one sho showerhead, the combined flow rate of all the shower a single valve shall not exceed 1.8 gallons per minute allow one shower outlet to be in operation at a time.</p> <p>Note: A hand-held shower shall be considered</p> <p>4.303.1.4 Faucets.</p> <p>4.303.1.4.1 Residential Lavatory Faucets. The ma not exceed 1.2 gallons per minute at 60 psi. The mini not be less than 0.8 gallons per minute at 20 psi.</p> <p>4.303.1.4.2 Lavatory Faucets in Common and Publ faucets installed in common and public use areas (out buildings shall not exceed 0.5 gallons per minute at 60</p> <p>4.303.1.4.3 Metering Faucets. Metering faucets whe more than 0.2 gallons per cycle.</p> <p>4.303.1.4.4 Kitchen Faucets. The maximum flow rat per minute at 60 psi. Kitchen faucets may temporarily to exceed 2.2 gallons per minute at 60 psi, and must o minute at 60 psi.</p> <p>Note: Where complying faucets are unavailable, aera reduction.</p> <p>4.303.2 STANDARDS FOR PLUMBING FIXTURES AND FITTING in accordance with the California Plumbing Code, and shall n 1701.1 of the California Plumbing Code.</p>							

Chapter 8: COMPLIANCE FORMS, WORKSHEETS AND REFERENCE MATERIAL



2019 California Green Building Standards

**FORM
GRN 4**

**MANDATORY REQUIREMENTS CHECKLIST
NEWLY CONSTRUCTED RESIDENTIAL BUILDINGS**

(COMPLETE AND INCORPORATE THIS FORM INTO THE PLANS)

Project Address: _____

Date: _____

ITEM #	CODE SECTION	REQUIREMENT	REFERENCE SHEET (Sheet # or N/A)	COMMENTS (e.g. note #, detail # or reason for N/A)
PLANNING AND DESIGN				
1	4.106.2	Storm water drainage and retention during construction		
2	4.106.3	Grading and paving		
3	4.106.4	Electric vehicle (EV) charging		
ENERGY EFFICIENCY				
4	CA Energy	Meet requirements for solar-ready buildings.		
5	Code 110.10			
WATER EFFICIENCY & CONSERVATION				
6	4.303.1	Water conserving plumbing fixtures and fittings		
7	4.303.1.3.2	Multiple showerheads serving one shower		
8	4.304.1	Outdoor potable water use in landscape areas		
9	CV 15.28.02d	Residential graywater stub-out		
MATERIAL CONSERVATION & RESOURCE EFFICIENCY				
10	4.406.1	Rodent proofing		
11	4.408.1	Construction waste reduction of at least 65%		
12	CV8.25.095	C and D waste management report		
13	4.410.1	Operation and maintenance manual		
14	4.410.2	Recycling by occupants (multifamily)		
ENVIRONMENTAL QUALITY				
15	4.503.1	Fireplaces and woodstoves		
16	4.504.1	Covering of duct openings and protection of mechanical equipment during construction		
17	4.504.2	Finish material pollutant control		
	4.504.2.1	- Adhesives, sealants, caulks		
	4.504.2.2	- Paints and coatings		

Chapter 8: COMPLIANCE FORMS, WORKSHEETS AND REFERENCE MATERIAL



Permit and documentation procedure for Multi-Family Dwellings (3 or more units per Building)

Provide 3 ring binders for every building permit. In the binder provide tabs to section the binder for the following documents:

PERMIT

Inspection Record Card
Inspection Continuation sheet

SPECIAL INSPECTION

- 1) Property Owner/Contractor Agreement (Form 4540)
- 2) Application to Perform Off-Site Fabrication (Form 4541)
- 3) Certificate of Compliance for Off-Site Fabrication (Form 4542)
- 4) Special Inspector Start Work Notification (Form 4545) for each Special Inspector assigned to project
- 5) Daily Special Inspection Reports (organize reports with most current report on top and categorize by soil, concrete, structural steel/welding/bolting, spray applied fireproofing)
- 6) Structural Observation Reports from Engineer of Record
- 7) Special Inspection Agency Final Letter of Approval for Inspection/Testing (Form 4543) or Agency Final Letter
- 8) Final Letter of Approval from Owner (Form 4544)

DOCUMENTS FOR FINAL INSPECTION (as necessary)

- 1) Project RFI's
- 2) City of Chula Vista Checklist for Energy Code and Green Building Code for Field Inspection
- 3) City of Chula Vista form for Certification of CPVC and PEX piping systems installation
- 4) Otay Water Meter Certification for Potable water
- 5) Copy of SDGE Work Order
- 6) City of Chula Vista Circuit Card (Form 4537)
- 7) Ground Fault Certification (Electrical over 1000A/150V to ground)
- 8) City of Chula Vista Roof Covering Certification (Form 4534)
- 9) City of Chula Vista Insulation Certificate (Form 4550)
- 10) Glue Lam Beam Certification
- 11) State Elevator Certification
- 12) Title 24 Energy Code documentation (MECH/LTG and HERS rating)

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Appendix A4: RESIDENTIAL VOLUNTARY MEASURES

SECTION		REQUIREMENTS
DIVISION A4.1 – PLANNING AND DESIGN		
A4.106.2.3	Topsoil protection	Displaced topsoil shall be stockpiled for reuse in a designated area and covered or protected from erosion. Note: Protection from erosion includes covering with tarps, straw, mulch, chipped wood, vegetative cover, or other means acceptable to the enforcing agency to protect the topsoil for later use.
A4.106.4	Water permeable surfaces	Not less than 20% of the total parking, walking or patio surfaces shall be permeable.
A4.106.5	Cool roof for reduction of heat island effect	Roofing materials for Tier 1 buildings shall comply with this section. Exceptions: <ol style="list-style-type: none"> 1. Roof constructions that have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25lbs/sf. 2. Roof areas covered by building integrated solar photovoltaic panels and solar thermal panels.





CalGreen Tier 1 and 2
 There are voluntary packages of above minimum green practices, called Tiers. These **include all the mandatory** CALGreen measures **plus additional required practices**, and a set number of **optional measures**

Appendix A4: RESIDENTIAL VOLUNTARY MEASURES



Electric Vehicles Tier 1

Increase quantity and/or increase equipment infrastructure

EV Capable 		Raceway (conduit), electrical capacity (breaker space)
EV Ready		Raceway (conduit), electrical service capacity, overcurrent protection devices, wire, and suitable termination points such as junction box (i.e. full circuit)
EV Charger Installed		All the equipment needed to deliver electrical energy from an electricity source to a Plug-in Electric Vehicle (PEV's) battery

This list focuses on TIER 1 measures only. See specific referenced sections for complete details on CALGreen requirements.	
2019 CALGREEN CODE	
SECTION	REQUIREMENTS
Electric vehicle (EV) charging for new construction	
A4.106.8	New construction shall comply with Section A4.106.8.1, A4.106.8.2 or A4.106.8.3, to facilitate future installation and use of electric vehicle chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.
New one- and two-family dwellings and townhouses with attached private garages	
A4.106.8.1	For each dwelling unit, a dedicated 208/240-volt branch circuit shall be installed in the raceway required by Section 4.106.4.1. The branch circuit and associated overcurrent protective device shall be rated at 40 amperes minimum. Other electrical components, including a receptacle or blank cover, related to this section shall be installed in accordance with the California Electrical Code.
Identification	
A4.106.8.1.1	Service panel or subpanel circuit directory shall identify the overcurrent protective device designated for future EV charging purposes as "EV READY" in accordance with the California Electrical Code. Receptacle or blank cover shall be identified as "EV READY."
New multifamily dwellings	
A4.106.8.2 & A4.106.8.2.1	<ul style="list-style-type: none"> 15% of the total number of parking spaces provided for all types of parking facilities, but in no case less than one, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for EV spaces shall be rounded up to the nearest whole number. See Section 4.106.4.2 for additional requirements related to EVCS for multifamily dwellings.
New hotels and motels	
A4.106.8.3 & A4.106.8.3.1	<ul style="list-style-type: none"> Number of required EV spaces shall be based on the total number of parking spaces provided for all types of parking facilities in accordance with Table A4.106.8.3.1. Calculations for EV spaces shall be rounded up to the nearest whole number. See Section 4.106.4.3 for additional requirements related to EVCS for hotels and motels.
Required elective measures	
A4.601.4.2	Comply with at least 2 elective measures selected from Division A4.1.

Appendix A4: RESIDENTIAL VOLUNTARY MEASURES



Example of Tiering

Mandatory

Tier Prerequisite

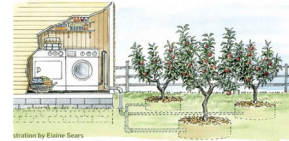
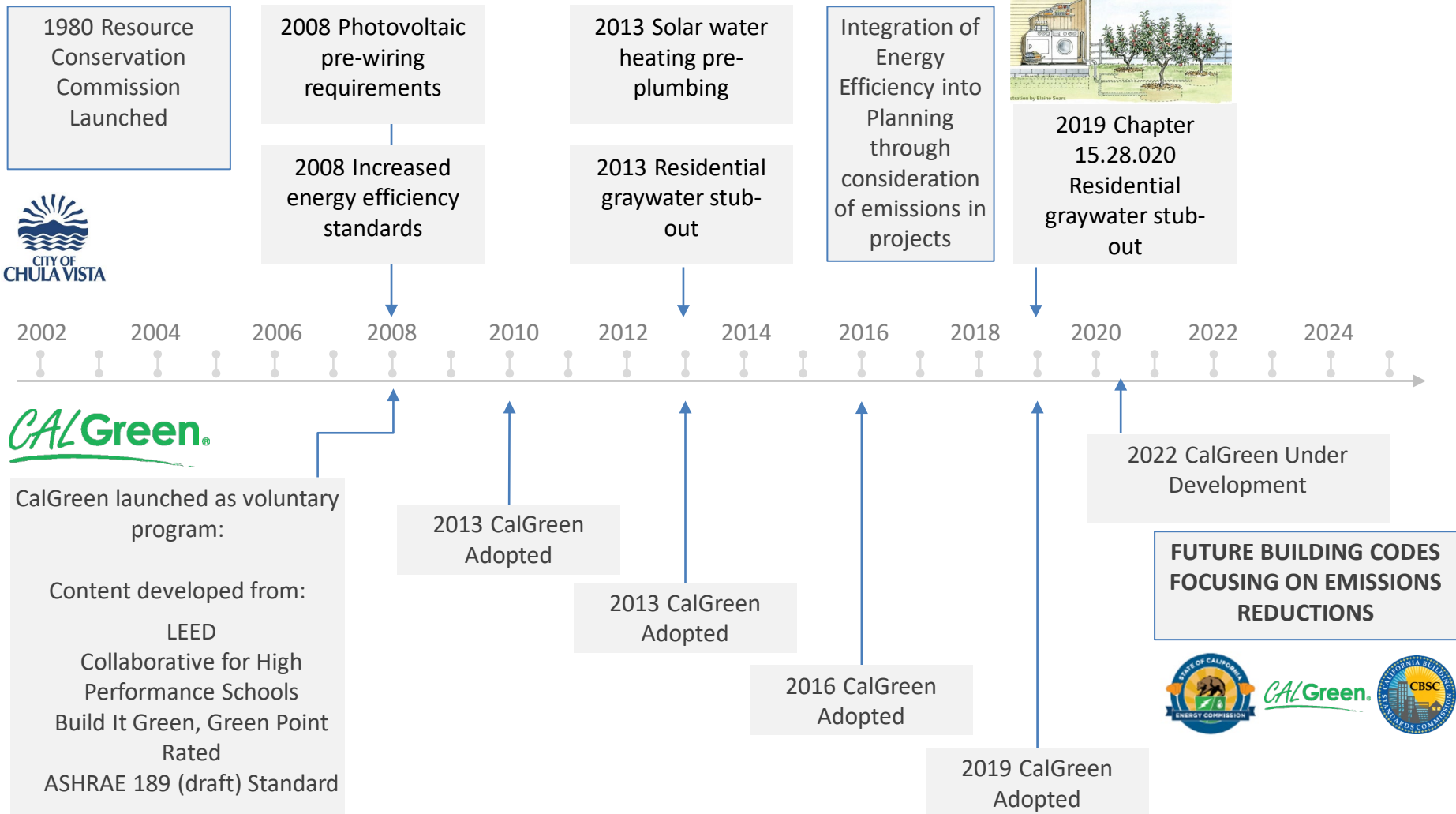
Tier Elective

DIVISION 5.2 Energy Efficiency	Mandatory	Meet the minimum Energy Efficiency Standard	5.201.1				
	<i>Tier 1 Prerequisite</i>	<i>Energy Performance Outdoor lighting power 90% of Part 6</i>	<i>A5.203.1.1.1</i>				
	<i>Tier 1 Prerequisite</i>	<i>If applicable, Service for water heating in restaurants 8,000 sf or greater</i>	<i>A5.203.1.1.2</i>				
	<i>Tier 1 Prerequisite</i>	<i>Energy Budget 95% or 90% of Part 6 calculated value of allowance</i>	<i>A5.203.1.2.1</i>				
SELECT ONE ELECTIVE	<i>Elective</i>	<i>On-site renewable energy w/ documentation</i>	<i>A5.211.1 A5.211.1.1</i>				
	<i>Elective</i>	<i>Green power</i>	<i>A5.211.3</i>				
	<i>Elective</i>	<i>Elevators w/ car lights and fan</i>	<i>A5.212.1.1 A5.212.1.1.1</i>				
	<i>Elective</i>	<i>Escalators w/ controls</i>	<i>A5.212.1.2</i>				
	<i>Elective</i>	<i>Controls that reduce energy</i>	<i>A5.212.1.4</i>				
	<i>Elective</i>	<i>Steel framing</i>	<i>A5.213.1</i>				

Chula Vista Green Building Ordinance History

- 1980 Resource Conservation Commission
- 2008 Chapter 15.24.065 Photovoltaic pre-wiring requirements
- 2008 Chapter 15.26.030 Increased energy efficiency standards
- 2013 Chapter 15.28.015 Solar water heating pre-plumbing
- 2013 Chapter 15.28.020 Residential graywater stub-out
- 2019 Chapter 15.28.020 Residential graywater stub-out

Chula Vista Green Building Ordinance History



CalGreen is more stringent than LEED in Energy and Water Use

Chula Vista Green Building Ordinance History

- 2012 Program Highlights

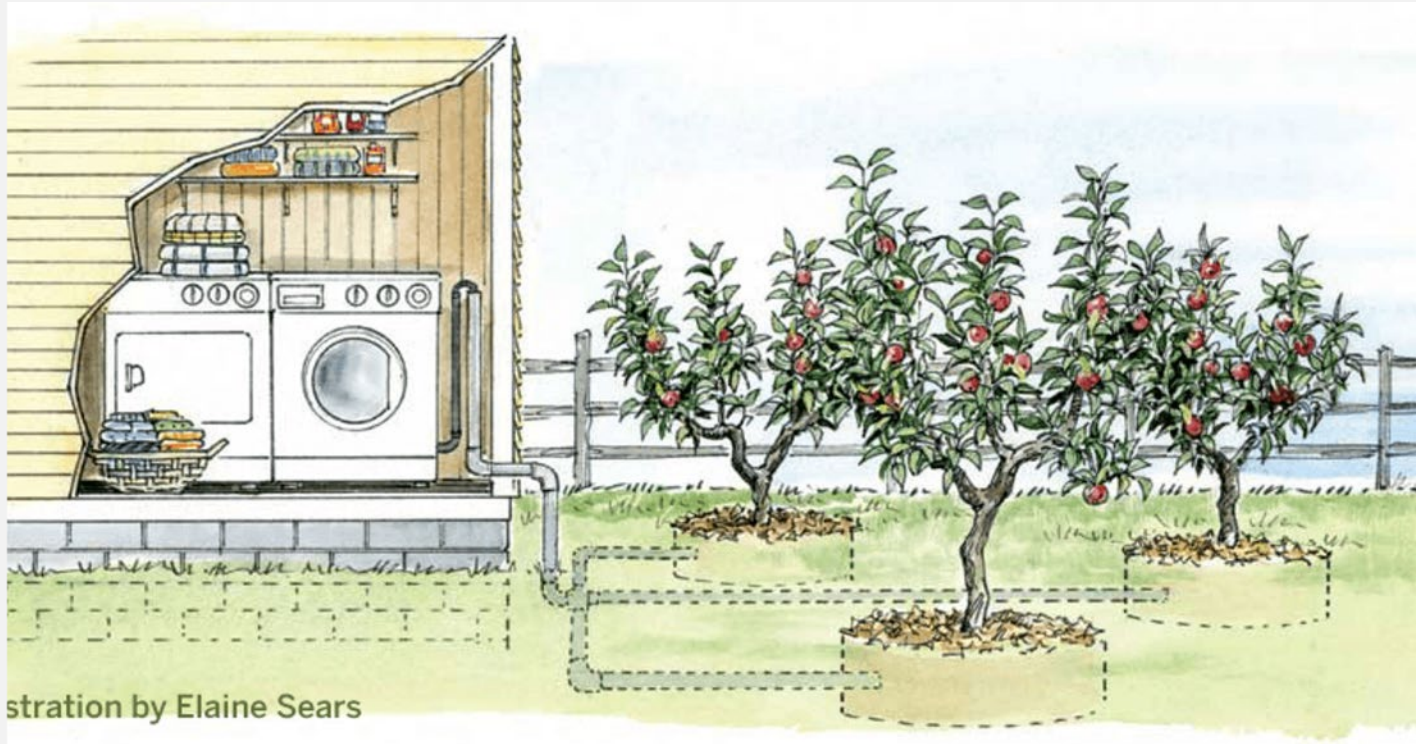
PROGRAM HIGHLIGHTS

- California Energy Code training for plans examiners and building inspectors.
- Reach code adopted at 15-20% higher efficiency than California's Title 24.
- Expedited permitting for CalGreen's Tier 2 (30% more efficient than Title 24).
- Pre-wiring/plumbing required for solar electric and solar thermal systems.
- Updated guidelines for Air Quality Improvement Plans for large projects.
- Integration of sustainability considerations into the City's Design Manual.
- Development of site- and community-planning evaluation tools (underway).

Chula Vista has distinguished itself as a local government leader by integrating energy efficiency, green building, and other sustainable planning principles into every aspect of the development design review, project approval, and construction inspection process.

Chula Vista Green Building Ordinance History

- 2019 Chapter 15.28.020 Residential graywater stub-out



CALGreen 2019

Residential Compliance

QUESTIONS?



Thank you for attending.

Information for this presentation was taken from the 2019 California Green Building Standards Code, the Guide to the 2019 California Green Building Standards Code and the CALGreen website:

<https://www.hcd.ca.gov/building-standards/calgreen/index.shtml>