



Introduce the Humboldt County Quick Guide to the New 2011 Cal Green Building and Standards Commission Code

The Redwood Coast Energy Authority and PLAN IT GREEN, in a joint effort have developed for the county of Humboldt a quick guide to the new California Green Building Code. The contents of this packet have been organized to help the local; builder, engineer, architect, official, and other individuals or entities involved in the local building industry, better understand and incorporate into their building business practices these new [mandatory Cal Green codes](#).

Notes:

Code becomes effective January 1st 2011, portions not effective till July 2011.

Code is only concerning new residential and commercial construction.

It is highly recommended that the code in its entirety be reviewed. It can be found at <http://www.bsc.ca.gov/CALGreen/default.htm> then by clicking on the 2010 pdf. version.

The Cal Green Building Code document is the 11th of 12 parts of the official compilation and publication of adoptions, amendments and repeal of regulations to California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This Part is known as the California Green building Standards Code, and it is intended that it shall also be known as the **CALGreen Code**.

The California Building Standards Code is published in its entirety every three years by order of the California Legislature. The California Legislature delegated authority to various State agencies, boards, commissions and departments to create building regulations to implement the State's statutes. These building regulations or standards have the same force of law, and take effect 180 days after their publication unless otherwise stated. The California Building Standards Code applies to all occupancies in the State of California.

A city, county or city and county may establish more effective more restrictive standards reasonably necessary because of local climatic, geological or topographical conditions. For the purpose of this code, these conditions include local environmental conditions as established by a city, county or city and county, Findings of the local conditions and the adopted local building standard(s) must be filed with the

California Building Standards Commission to become effective and may not be effective sooner than the effective date of this edition of the California Building Standards Code.

The 2010 California Green Building Standards Code was developed through the outstanding collaborative efforts of the Department of Housing and Community Development, the Division of State Architect, the Office of the State Fire Marshal, the Office of Statewide Health Planning and Development, the California Energy Commission and the Building Standards Commission.

Mandatory code forms found in the **Humboldt County Cal Green** quick guide to compliance.

- * Waste Management
- * Baseline water usage
- * VOC limits of Finish Materials, Adhesives and Sealants
- * Irrigation Controller
- * Erosion and Sediment Control Plan
- * Certification of Duct Covering
- * All additional Contractor (Documentation Author's /
- * Responsible Designer's Declaration Statements)

2010 CALIFORNIA GREEN BUILDING STANDARDS CODE

The following is a brief summary of some of *the more-significant requirements found in the new 2010 CALGreen Code which becomes effective January 1, 2011*

Section 4.1 - Planning and Design

4.106.2 Site Development – Management of storm water drainage and retention during construction is required for all projects disturbing less than 1 acre. (Those projects disturbing more than 1 acre will continue to be subject to NPDES requirements.) Measures shall be implemented to prevent flooding of adjacent property, prevent erosion, and retain soil runoff on the site. This shall be accomplished by one of the following methods:

1. On-site retention basins.
2. Where storm water is conveyed to a public drainage system, water shall be filtered by a barrier system, wattles, etc approved by the jurisdiction.
- 3) Compliance with a legal Storm Water Management Ordinance

106.3 Surface Drainage – The site shall be planned and developed to prevent surface water from entering buildings. Plans shall show grading/drainage requirements and identify swales, drains, retention basins, etc.

Section 4.2 - Energy Efficiency

4.201.1 Scope – Department of Housing and Community Development (HCD) does not regulate mandatory energy standards in residential buildings. The California Energy Commission will continue to adopt mandatory building standards. The CEC believes a green building should achieve at least a 15 percent reduction in energy usage when compared to the State’s mandatory energy efficiency standards. However there are no mandatory requirements beyond the CEC’s.\

Section 4.3 – Water Efficiency and Conservation

4.303.1 Twenty Percent Savings – A schedule of plumbing fixtures and fittings that reduces the overall use of potable water within the building by at least 20 percent shall be provided. The reduction is based on the maximum allowable water use per plumbing fixture per the California Building Standards Code. This shall be demonstrated by one of the following methods:

1. Prescriptive Method – Each plumbing fixture shall meet the flowrates specified in table 4.303.2

2. Performance Method – Provide calculations demonstrating a 20% reduction in the building “water use” baseline established in Table 4.303.1. For low rise residential occupancies, the calculations need only include water closets, urinals, lavatory faucets and showerheads.

4303.3 Plumbing fixtures and fittings shall meet the standards listed in Table 4.303.3, which references US EPA WaterSense label that could be used to meet the 20% reduction criteria.

Cal Green Building Code Section 4.304 Outdoor Water Use

Irrigation Controllers. Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final shall comply with the following:

1. Controller shall be weather –or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants’ needs as weather conditions change.
2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicate with the controllers(s) Soil Moisture-based controllers are not required to have rain sensor input.

Division 4.4- Material Conservation and Resource Efficiency

Section 4.406 Enhanced Durability and reduced maintenance

4.406.1 Joints and Openings. Openings in the building envelope separating conditioned space from unconditioned space needed to accommodate gas, plumbing, electrical cables, conduits, and other necessary penetrations must be sealed in compliance with the California Energy Code.

Exception: Annular space around pipes, electric cables, conduits, or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.

Construction Waste Reduction, Disposal and Recycling

Section 4.408

Construction waste reduction of at least 50 percent. Recycle and/or salvage for reuse a minimum of 50 percent of the non-hazardous construction and demolition debris, or meet a local construction and demolition waste management ordinance, whichever is more stringent.

Exceptions:

1. Excavated soil and land-clearing debris
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonable close to the jobsite.

*** The below must be submitted by the contractor to the local authority.**

4.408.2 Construction waste management plan.

Where a local jurisdiction does not have a construction and demolition waste management ordinance, a construction waste management plan shall be submitted for approval to the enforcing agency that:

1. Identifies the materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specifies if materials will be sorted on –site or mixed for transportation to a diversion facility.
3. Identifies the diversion facility
4. Identifies construction methods used to reduce the amount of waste generated.
5. Specifies that the amount of materials diverted will be calculated by weight or volume, but not by both.

4.408.2.1 Documentation shall be provided to the enforcing agency to demonstrate compliance. The management plan shall be updated accordingly and made accessible to the enforcing agency. Forms and worksheets are available in CalGreen to assist in demonstrating compliance.

Section 4.5 – ENVIRONMENTAL QUALITY

4.503.1 Installed gas fireplaces shall be a direct-vent sealed-combustion type. All fire places shall also comply with current local regulations.

4.504.1 During construction until start-up, duct opening and mechanical equipment shall be covered with tape, plastic, etc to reduce the amount of dust or debris which may collect in the system.

4.504.2.12/3 Adhesives primers, sealants and caulks used on a project shall meet stringent air pollution control rules. Paints and coatings shall comply with VOC limits. Aerosol paints and coatings shall meet MIR limits. Verification shall be in the form of manufacturer’s specifications, or field verification of on-site product containers.

4.504.3 Carpet systems (carpet, pad, adhesives) must meet specific criteria.

4.504.4 Where resilient flooring is installed, at least 50% of it shall meet specific VOC- emissions limits.

4.504.5 Composite wood products used on the interior or exterior of the building shall meet certain requirements for formaldehyde limits. Some of the limits are reduced over the next couple of years.

4.505.2 Concrete slab foundations shall have a vapor barrier and shall also have a capillary break in accordance with one of the following.

1. A 4-inch thick base of ½ inch aggregate with a vapor barrier in direct contact with concrete and a concrete mix design which will address bleeding, shrinkage, and curling.
2. A slab design specified by a licensed design professional.
3. **4.505.3** Building materials with visible signs of water damage shall not be installed. ***Wall and floor framing shall not be enclosed when moisture content exceeds 19%***. Moisture content shall be verified by a probe or contact-type moisture meter in a specific manner. Wet insulation products shall be replaced or allowed to dry completely prior to enclosing.

4.506.1 Bathroom (with shower and or tub) exhaust fans shall comply with the following:

1. ENERGY STAR compliant and ducted directly to the outside.
2. Unless functioning as a component of a whole house ventilation system, fans, must be controlled by a readily accessible humidistat. Humidistat controls shall be capable of a relative humidity range between 50 to 80 percent.

4.507.1 Whole house exhaust fans shall have insulated (R 4.2) louvers or covers, which ***close when the fan is off***

4.507.2 HVAC systems shall be sized, designed and equipment selected using the following methods:

1. Heat loss and gain according to ACCA Manual J. ASHRAE
2. . Duct systems sized according to ACCA 29-D Manual D. ASHRAE.
3. Select heating and cooling equipment according to ACCA 36-S Manual S. ASHRAE.