

Department of Housing & Community Development

Draft Residential Green Building Standards

(Summary List)

SITE DEVELOPMENT

Storm Water Drainage and Retention during Construction:

Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall develop a plan to manage storm water drainage during construction. A plan to manage storm water drainage during construction shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site. **One or more of the followings methods shall be utilized to manage storm water drainage.**

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter, or similar disposal method, water shall be filtered by use of a barrier system, **wattle**, or other method approved by the enforcing agency.
3. Compliance with a lawfully enacted storm water management ordinance.

ENERGY EFFICIENCY

Minimum energy performance for Low-rise residential buildings: Low-rise residential buildings shall meet or exceed the minimum standard design required by the California Energy Standards currently in effect. *Note: The new CEC Standards that take effect in June of 2009 are approximately 20% more stringent than the CEC's current "2005 Residential Energy Efficiency Standards".*

Air Sealing Package:

- **Joints and openings.** Openings in the building envelope separating conditioned space from unconditioned space needed to accommodate gas, plumbing, electrical lines and other necessary penetrations must be sealed in compliance with the California Energy Standards currently in effect.

Exception: Annular spaces 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.

- **Other openings.** Whole house exhaust fans shall have insulated louvers or covers which tightly seal when the fan is off.

ENVIRONMENTAL (INDOOR) AIR QUALITY

Pollutant Control:

Adhesives and sealants: Adhesives and sealants used on the project shall meet the requirements of the following standards.

1. Adhesives, adhesive bonding primers, adhesive primers, sealants and sealant primers shall comply with Table 804.1.1.
2. Aerosol adhesives shall meet the requirements of California Code of Regulations, Title 17, commencing with Section 94507, <http://ccr.oal.ca.gov/>

Paints and coatings: Architectural paints and coatings shall comply with Table 804.1.2. For additional information see South Coast Air Quality Management District (SCAQMD) Rule #1113 at http://www.aqmd.gov/rules/reg/reg11_tofc.html.

NOTE: {Tables 804.1.1 and 804.1.2 not included here}

Particleboard and Medium Density Fiberboard: Particleboard and medium density fiberboard (MDF) used in interior finish systems shall be certified and comply with ANSI A208.1 and A208.2 respectively.

Hardwood Plywood: Hardwood plywood used in interior finish systems shall be certified and comply with ANSI/HPVA HP-1-2204 and U.S. HUD Title 24, Part 3280.

{Language related to ARB Tier I Formaldehyde Regulations will probably be inserted here}

Indoor Moisture:

Indoor moisture control: Buildings shall meet or exceed the provisions of California Building Code, CCR, Part 2, Sections 1203 and Chapter 14.

Concrete slab foundations: Concrete slab foundations required to have a vapor retarder by California Building Code, CCR, Part 2, Chapter 19 shall also comply with the section:

Capillary Break: A capillary break between the slab and subgrade shall be installed in compliance with at least one of the following:

1. A 4 inch clean aggregate base shall be provided between the sub-grade and the vapor barrier. The vapor barrier shall be in direct contact with the concrete.
2. **Other equivalent methods approved by the enforcing agency.**

Moisture content of building materials: Building materials with visible signs of water damage shall not be installed. Interior walls and floors shall not be enclosed if the framing members exceed **19%** moisture content or if insulation materials are wet or have a high moisture content.

Air Quality and Exhaust Fans:

Bathroom exhaust fans: Except when a whole house ventilation system is used a mechanical exhaust fan shall be provided from each room containing a bathtub, shower, or tub/shower combination. Mechanical exhaust fans shall comply with the following.

1. Exhaust system shall comply with ASHRAE 62.2, Section 5.
2. Exhaust fans shall be ENERGY STAR compliant and terminate outside the building.
Exceptions: Multiple bathrooms using a common multiple port fan.

HVAC Filters: Heating, Ventilation and Air conditioning Filter shall be rated at MERV 6 or higher. Filter grills and duct systems shall be sized to prevent pressure drop across the filter.

MATERIAL CONSERVATION & RESOURCE EFFICIENCY

Pollutant Control during Construction:

Covering of Ducts and Mechanical Equipment during Construction: At the time of rough installation and until final startup of the heating and cooling equipment, all ducting and other related air distribution components shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust or debris which may collect in the system.

Construction Waste Reduction, Disposal and Recycling:

50% construction waste: Reduce through efficient usage, recycle and/or salvage for reuse a minimum of 50% of non-hazardous construction and demolition debris, or [CIWMB] meet local construction and demolition waste management ordinance, whichever is more stringent.

Exception: Excavated soil and land-clearing debris

Building Maintenance and Operation:

Operation and maintenance manual: At the time of occupancy a manual which includes all of the following shall be provided.

1. Operation, and maintenance instructions for the following.
 - a. Equipment and appliances.
 - b. Roof and yard drainage including gutters and downspouts.
 - c. Air filters.
 - d. Landscape irrigation systems.
2. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption and recycle.
3. Public transportation and or carpool options available in the area.
4. Educational material on the positive impacts of a interior relative humidity between 30-60% and what methods an occupant may use to maintain the relative humidity level in that range.
5. Information about water conserving landscape and irrigation design and controllers which conserve water.
6. Instructions for maintaining gutters and downspouts and importance of diverting water at least five feet away from foundation.
7. The manual shall include directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
8. Information on required routine maintenance measures, including but not limited to, caulking, painting, grading around building, etc.

WATER CONSERVATION

Indoor Water Use:

Savings: A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 20% shall be provided. The reduction shall be based on the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code.

The 20% reduction in potable water use shall be demonstrated by one of the following methods:

1. Each plumbing fixture and fitting shall meet the 20% reduced flow rate specified in Table 603.2, or
2. A calculation demonstrating a 20% reduction in the building "water use" baseline as established in Table 603.1 shall be provided. For low-rise residential occupancies the calculation shall be limited to the following plumbing fixture and fitting types: water closets, urinals, lavatory faucets, showerheads and kitchen faucets.

TABLE 603.2
FIXTURE FLOW RATES

<u>Fixture Type</u>	<u>Flow-rate</u>	<u>Maximum flow rate at 20% Reduction</u>
<u>Showerheads</u>	<u>2.5 gpm @ 80 psi</u>	<u>2 gpm @ 80 psi</u>
<u>Lavatory Faucets Residential</u>	<u>2.2 gpm @ 60 psi</u>	<u>1.8 gpm @ 60 psi</u>
<u>Kitchen Faucets</u>	<u>2.2 gpm @ 60 psi</u>	<u>1.8 gpm @ 60 psi</u>
<u>Wash Fountains</u>	<u>2.2 (rim space(20 in.)) gpm @ 60 psi</u>	<u>1.8 (rim space(20 in.)) gpm @ 60 psi</u>
<u>Metering Faucets</u>	<u>0.25 gallons/cycle</u>	<u>0.2 gallons/cycle</u>
<u>Metering Faucets for Wash Fountains</u>	<u>2.2 (rim space(20 in.)) gpm @ 60 psi</u>	<u>1.8 (rim space(20 in.)) gpm @ 60 psi</u>
<u>Gravity tank type Water Closets</u>	<u>1.6 gallons/flush</u>	<u>1.28 gallons/flush</u>
<u>Flushometer Tank Water Closets</u>	<u>1.6 gallons/flush</u>	<u>1.28 gallons/flush</u>
<u>Flushometer Valve Water Closets</u>	<u>1.6 gallons/flush</u>	<u>1.28 gallons/flush</u>
<u>Electromechanical Hydraulic Water Closets</u>	<u>1.6 gallons/flush</u>	<u>1.28 gallons/flush</u>
<u>Blowout Water Closets</u>	<u>3.5 gallons/flush</u>	<u>2.8 gallons/flush</u>
<u>Urinals</u>	<u>1.0 gallons/flush</u>	<u>.8 gallons/flush</u>



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California Green Building Standards Tentative Administrative Timeline

- October 24, 2007:** Final Meeting of the Building Standards Commission (BSC) Focus Group
- November 14, 2007:** BSC selects members of the Green Building Code Advisory Committee
- November 21, 2007:** Agencies submit draft “green building” adoption packages to BSC Staff
- December, 2007:** Monograph of proposed code-changes made available for public review
- Feb 13-14, 2008:** Code Advisory Committee Meetings
- April-May, 2008:** 45-Day public review and comment period
- July 17 or Sept 11:** Anticipated adoption by Building Standards Commission
- Nov - Dec., 2008:** Publication (three months after adoption)

Statewide Effective Dates:

- June, 2009:** CEC 2008 Update of the Energy Efficiency Standards
- Summer/Fall, 2010:** HCD Green Building Standards (except for plumbing provisions)
- July, 2011:** Plumbing Provisions of HCD Green Building Standards

THESE ARE ONLY TENTATIVE ESTIMATES!!!