

**October 28, 2009**

## **Executive Summary of Changes for GreenPoint Rated Multifamily New Home Program**

### **Introduction**

The GreenPoint Rated program is updated every three years in conjunction with changes to the California Building Energy Efficiency Standards (Title 24, Part 6). Updated GreenPoint Rated materials will be available for use in unison with the implementation of the 2008 Building Energy Efficiency Standards, which is scheduled for January 1, 2010.

GreenPoint Rated New Home, Single Family, Version series 3.0 and Multifamily Version series 1.0 have been updated to series 4.0 and 2.0 respectively. Policy for use of GreenPoint Rated Version #'s is outlined below.

All measure numbers refer to the updated checklist versions 2.0 unless otherwise noted. The specific criteria for qualification for each measure, and other details, can be found in the GreenPoint Rated Multifamily (2.0) Rating Manual. These manuals will be available for purchase or Rater's download after January 1, 2010.

The update process reviews all of the measures on the checklist, current trends and current code. This analysis results in the following alterations to the checklists:

- Remove measures that have become code required
- Add new measures for current best practices
- Revise, improve and clarify definitions of current measures
- Revise and clarify criteria for qualification of current measures

### **Policy for Use of GreenPoint Rated Checklist Versions**

- Single Family Version 3.7 (Current checklist, applicable to 2005 Title 24 Energy Code)
  - For use with projects permitted under the 2005 Building Energy Efficiency Standards.
  - Applications accepted until January 2011 for projects permitted under 2005 Title 24.
  - Current projects may continue to use up to January 1, 2011. Extended use is allowed for projects in completion under the 2005 Title 24 as identified by Local Jurisdiction permitting.
- Single Family Version 4.0 (Updated checklist, applicable to 2008 Title 24 Energy Code)
  - For use with projects permitted under the 2008 Building Energy Efficiency Standards.
- Multifamily Version 1.7 (Applicable to 2005 Title 24 Energy Code)
  - For use with projects currently in progress
  - Will not be available for use with new projects starting January 1, 2010
  - May be used for current projects until January 1, 2011. Extended use is allowed for projects in completion under the 2005 Title 24 as identified by Local Jurisdiction permitting.

- Multifamily Version 1.8 / 2.0 (Updated checklist, applicable to 2005 and 2008 Title 24 Energy Code)
  - Checklist is programmed with a drop down menu in Measure J1 to accept projects under the 2005 (Version 1.8) or 2008 (Version 2.0) Title 24 Building Energy Efficiency Standards
  - For use with all new projects
  - Version 1.8 (2005 Title 24) may be used for current projects until January 1, 2011. Extended use is allowed for projects in completion under the 2005 Title 24 as identified by Local Jurisdiction permitting.

### **Summary of Updates to GreenPoint Rated Multifamily New Home Program**

The Multifamily Checklist has been significantly reorganized to reflect the structure of the Single Family Checklist. These changes are not reviewed in this summary, as the reorganization of the checklist is quite extensive. Additionally, an Innovations section was added to the multifamily checklist. All measure numbers refer to the updated checklist version 2.0, unless otherwise noted.

The following is a summary of changes to Multifamily Version 1.7 and is organized by the sections in the checklist. There is a separate Executive Summary of Changes for GreenPoint Rated Single Family New Home Measures. No changes to GreenPoint Rated Existing Home checklist have been made at this time.

**AA. Community Design and Planning.** This section includes strategies to utilize existing infrastructure, design for solar access, promote social interaction and community safety, and make homes more accessible to people of all physical abilities.

- Revised - AA3. Alternative Transportation giving credit for access to neighborhood resources has been restructured with tiers structure based on frequency of use.
- Added - AA5c. Public Outdoor Gathering Places have Direct Access to At Least Two Tier 1 Community Services gives credit for direct access to neighborhood services has been added

**A. Sitework.** Site measures include practices for managing the construction process to minimize disruptions to the building site, reduce waste, and prevent pollution of air, soil and waterways.

- Revised - A2. Divert/Recycle Jobsite Construction Waste, for waste diversion has been revised. The minimum requirement of 50% diversion remains the same. Additional points are awarded for diversion of 65% and 80% waste, excluding asphalt and concrete.
- Revised - A3. Construction Environmental Quality Management Plan, has been expanded to include duct sealing and a two week flushout.

**B. Landscaping.** These measures offer strategies for creating landscapes that use less water, conserve resources, promote healthy soils, and reduce excessive outdoor lighting. A limited number of points are available for projects with small landscapes areas.

- Removed – (A7gii on checklist Version.1.7) giving credit for turf equal to tall fescue has been removed.

- Added - B1g. Design Landscape to Meet Water Budget, was added in response to the State Water Efficient Landscape Ordinance. This measure has a tier that is equivalent to the performance metric of the Ordinance and a tier that exceeds the Ordinance. This measure has prerequisites of installing mulch for credit for both tiers and installing high efficiency irrigation for the second tier in order to receive credit.

**C. Design Consideration.** This is a new section that includes measures that address acoustics, commissioning and strategies for mixed-use design. All the measures in this section are new.

- Added – C1 Acoustics: Noise and Vibration Control, addressing acoustic noise vibration and control issues for both exterior and interior noise. This measure includes a menu of prescriptive measures to implement for credit.
- Added – C2 Mixed-Use Design Strategies addresses the following three aspects through three separate measures: plans for green tenant improvements for commercial areas, separation of systems between residential and commercial areas, separate commercial loading area.
- Added – C3 a-c Commissioning gives credit to the stages of commissioning in the design phase, construction phase and post construction.

**D. Foundation, Structural Frame and Building Envelope.** This section includes suggestions for incorporating recycled content in concrete, pest control, as well as energy- and resource-efficient strategies for building the structural frame and envelope, including the walls and roof. No new measures were added.

- Removed – (C6a. on the checklist Version 1.7) for recycled content steel framing.

**E. Exterior.** This section focuses on siding, roofing and decking materials that are durable and help protect the home from moisture damage and fire.

- Added - E1b Durable and Fire Resistant Siding was pulled from Single Family Checklist and added to the Multifamily checklist.

**F. Insulation.** The measures in this section encourage the use of insulation products with recycled content.

- Revised - F1. Install Insulation with 75% Recycled Content has been expanded to address wall, floors and ceilings separately.
- Removed - (C9a. on the checklist Version.1.7). for low emitting insulation

**G. Plumbing.** This section addresses designing the plumbing system to distribute hot water efficiently and installing water-efficient faucets, showerheads and toilets. No new measures have been added.

- G2a-e Distribute Domestic Hot Water Efficiently was pulled over from Single Family Checklist and added to the Multifamily Checklist.

**H. Heating, Ventilation and Air Conditioning.** These measures address energy efficiency and better indoor environmental quality through considerations for furnaces, air conditioners, water heaters, mechanical ventilation, ductwork, and fireplaces.

- Revised - H3. Install High Performing Hydronic Radiant Heating has been revised to include best practices for design and installation of the system
- Removed - (C11c. on the checklist Version 1.7) for installing a vented range hood has been removed as this will be required by code under the 2008 Energy Efficiency Standards.
- Revised – H4 a-c. Advanced Mechanical Ventilation for IAQ has been revised from (C11 on checklist Version 1.7) to include
  - Added - 10a Compliance with ASHRAE 62.2 Mechanical Ventilation Standards is a new Required measure
  - Added – 10b Advanced Ventilation Practices (continuous operation, some limit, minimum efficiency, minimum ventilation rate) gives credit for better ventilation practices.
  - Added – 10c Outdoor Air Ducted to Bedroom and Living Areas of Home gives credit for best ventilation practices.

**I. Renewable Energy.** These measures include practices on installing renewable energy systems (solar electricity, solar thermal, and wind energy).

- Removed - (D3a. and D9a. on the checklist Version 1.7) for pre-wiring for photovoltaics and pre-plumbing for solar thermal.
- Revised – I2 Offset a Percentage of the Project's Estimated Electricity Demand with Onsite Renewable Generation gives credit for offsetting a percentage of the electrical load for the common load as well as a percentage of the residential load.

**J. Building Performance.** This section includes practices for designing and building energy-efficient homes that improve upon California's code requirements and recommendations for third-party home performance testing and certification.

- Moved – J1a Quality Insulation Installation has been moved from Section F, Insulation and includes the thermal bypass checklist as well as insulation installation practices.
- Revised – J1 Design and Build Energy Efficient Homes includes programming to address projects permitted under either 2005 Title 24 or 2008 Title 24. When the checklist is used for projects submitted under 2005 T24, it will be considered Version 1.8. When the checklist is used for projects submitted under 2008 Title 24, it will be considered Version 2.0.
- Added - J3. Design and Build Near Zero Energy Homes, gives credit for building an exceptionally high performing building that meets Building America Builder's Challenge or Passive House standards.

- Moved - J5. Title 24 Prepared and Signed by CABEC CEPE and J6. Participation in Utility Incentive Program with Third Party Plan Review, were moved from Section P, Innovations.

**K. Finishes.** Measures in this section describe healthier and environmentally preferable options for paints, trim, cabinets, countertops, and other interior finishes.

- Revised - The thresholds for K3 a-c Low/No-VOC Paints & Coatings K2 Use Low-VOC and K4. Low-VOC Adhesives and Sealants Meet SCAQMD Rule 1168 now reference the South Coast Air Quality Management District Thresholds.
- Added – K6 Reduce Formaldehyde in Interior Finish – Meet Current CARB Airborne Toxic Control Measure (ATCM) for Composite Wood Formaldehyde Limits by Mandatory Compliance Dates (Required) is a new required measure to address formaldehyde levels in composite wood products. This measure applies to composite wood products including medium density fiberboard, plywood, and particle board.
- Revised - The threshold for K7. Reduced Formaldehyde for Interior Finishes including shelving, subfloor, trim and cabinets and countertops has been changed and now references the California Air Resources Board Air Toxic Control Measure. Credit is awarded for materials that exceed current required thresholds for appropriate products.

**L. Flooring.** This section includes measure for a wide range of flooring materials that are durable and environmentally preferable. No new measures have been added to this section.

**M. Appliances and Lighting.** This section includes measures addressing efficient appliances, built-in recycling/composting centers, and high efficacy lighting.

- Revised – The threshold for M1 Install ENERGY STAR Dishwasher now includes a water factor. The measure giving credit for a minimum water factor of a dishwasher was removed.
- Added - M5. Install High-Efficacy Lighting and Design Lighting System has been added to award credit for installing 100% high efficacy lighting (measure M5a.) and for having the lighting system designed by a lighting professional or using lighting design standards (measure M5b.).

**N. Other.** This section includes a variety of green building measures that are not included in the other sections.

- Added - N2. Pre-construction Kick-off Meeting with Rater and Subs, credits for holding a pre-construction team meeting with the project team and GreenPoint Rater.
- Added – N6 Install Home Monitors gives credit for including either an energy and water monitoring system or participate in a demand response program to encourage a reduction in consumption of resources.
- Revised – N7 Use Vandalism Deterrence Practices and Develop Management Plan now combines creating a vandalism management plan and implementing vandalism deterrent practices into a single measure.

**P. Innovation.** Several measures that were previously listed in the innovations section have been moved to the main list. The following new measures rewarding innovative practices have been added.

- Added - PA1 Stormwater Control: Prescriptive Path and PA2 Stormwater Control: Performance Path: Perform Soil Percolation Test and Capture and Treat 85% of Total Annual runoff give credit for addressing stormwater either by using prescriptive practices (measure PA1) or a performance based approach (measure PA2.).
- Added – PD1 Radon Resistant Construction, PD2 Install a Foundation Drainage System, PD3 Moisture Controlled Crawlspace and PD4 Use FSC Certified Engineered Lumber were pulled from the Single Family checklist and added to the Multifamily checklist.
- Added - PE1. Flashing Installation Techniques Specified and Third Party Verified was pulled from the Single Family checklist and added to the Multifamily checklist.
- Added - PH1. Design and Install HVAC System to Manual J, D, and S, PH2. Pressure Relieve the Duct System and PH3. Install a High Efficiency HVAC Filter were pulled from the Single Family checklist and added to the Multifamily checklist.
- Added – PJ1 Obtain EPA Indoor airPlus Certification and PJ2 Third-Party Testing of Mechanical Ventilation Rates for IAQ were pulled from the Single Family checklist and added to the Multifamily checklist.
- Added – PK1 Use Moisture-Resistant Material in Wet Areas: Kitchens, Utility Rooms and Basements was pulled from the Single Family checklist and added to the Multifamily checklist.
- Added – PH1 Materials Meet SMaRT Criteria gives credit for the used of products included in the SMaRT criteria, a sustainable product evaluation and certification tool. ([http://mts.sustainableproducts.com/SMART\\_Building\\_Product\\_Standard](http://mts.sustainableproducts.com/SMART_Building_Product_Standard))