

CITY OF  
**HAYWARD**  
HEART OF THE BAY

**CITY COUNCIL SUSTAINABILITY COMMITTEE MEETING**

Hayward City Hall – Conference Room 2A  
777 B Street, Hayward, CA 94541-5007

February 6, 2008  
4:30 p.m. – 6:00 p.m.

**A G E N D A**

- I. Call to Order
- II. Roll Call
- III. Public Comments: *(Note: For matters not otherwise listed on the agenda. The Committee welcomes public comments under this section, but is prohibited by State Law from discussing items not listed on the agenda. Items brought up under this section will be taken under consideration and referred to staff for follow-up as appropriate. Speakers will be limited to 5 minutes each; organizations represented by more than one speaker are limited to 5 minutes per organization. All public comments are limited to this time period on the Agenda.)*
- IV. Draft Green Building Ordinance  
Presentation by Margret Elliot, Building Official
- V. Review and Adoption of Revised Sustainability Committee Mission Statement, and Goals and Objectives
- VI. Review and Approval of Annotated Monthly Schedule
- VII. Next Meeting: Wednesday, March 5, 2008 – Green Building Ordinance.
- VIII. Adjournment



Assistance will be provided to those requiring accommodations for disabilities in compliance with the Americans with Disabilities Act of 1990. Please request the accommodation at least 48 hours in advance of the meeting by contacting Katy Ramirez at 510/583-4234 or by calling the TDD line for those with speech and hearing disabilities at 510/247-3340.

Department of Community and Economic Development

777 B Street, Hayward, CA 94541-5007  
Tel: 510/583-4250 Fax: 510/583-3650



**DATE:** February 6, 2008

**TO:** Mayor and City Council Sustainability Committee

**FROM:** Director of Community and Economic Development Department

**SUBJECT:** Summary of Proposed Green Building Ordinance

### **RECOMMENDATION**

That the Sustainability Committee comment on this report and draft Green Ordinance, which focuses on the use of the Green Points Checklists and LEED certification.

### **BACKGROUND**

California has a long history dating back to the 1970s of amending building codes in order to combat energy and environmental problems. The energy crisis of the 70s motivated the state to put forth legislation in 1978 to mandate a reduction of its energy consumption through The Energy Efficiency Standards for Residential and Nonresidential Buildings.

Overall, California's regulations have consistently been more stringent than regulations at the national level. For example, California's 2005 Residential Energy Efficiency Standards are approximately 30% more stringent than similar standards at the national level. By increasing our green building standard requirements to apply to all sizes of both residential and commercial projects, the community of Hayward will demonstrate an environmental leadership role in the region.

Some estimates show that buildings account for as much as 40% of greenhouse gas emissions world wide. Across the state, many municipalities see the adoption of Green Building Practices as a means of lowering greenhouse gas emissions. In the City of Hayward, stationary energy use, which is comprised of residential and commercial/industrial sectors, represents 60.5% of total greenhouse gas emissions. Furthermore, buildings account for 22.2% of overall municipal operations emissions. As part of the City of Hayward's endeavor to lower greenhouse gas emissions, efforts are underway to adopt Green Building standards, which will help mitigate a portion of Hayward's overall emissions as well as implementing best construction practices for sustainable buildings.

## DISCUSSION

A number of cities throughout California have adopted a variety of green building ordinances. A chart showing which cities had adopted ordinances and the type of programs adopted was given to the sustainability Committee at the last meeting. Using San Francisco's Green Building Code Requirements as a guide, staff has compiled a set of Green Building standards which can be phased in starting immediately, with the requirements recommended below. San Francisco's draft ordinance was used as a guide because of its phased approach. Many options for sustainable building exist but not all options are applicable to each project. The use of checklists offers developers the flexibility to choose options that are most appropriate to the site and to the project. It will take a while for builders and property owners to become familiar with the concepts of green building. The phased approach is a way to start this process. In the future more stringent requirements will probably be suggested and adopted, if not by the California Building Standards Commission, then at least for the City of Hayward.

As part of the process of compiling a set of standards, we have also taken into consideration the fact that the state is currently devising a new set of Green Building standards which are scheduled to take effect in 2012. Therefore the proposed requirements would be put in place as an interim until the state's Green Building Code Requirements take effect and staff has had time to review them. The plan for Hayward's Green Building Program is divided into 11 building categories based on size and intended use. The following table summarizes the requirements for each category. A list of definitions detailing criteria for each category can be found in the sample Green Building Ordinance and is attached as Appendix A.

The applicant may count points received as a result of compliance with other City of Hayward ordinances. One example of such an ordinance is the Solid Waste Ordinance which deals with the recycling of construction debris. The committee is requested to review and provide comments on the matrix below. Staff will return in March with Hayward's draft ordinance. The definitions of the different types of projects can be found in the draft ordinance.

	<b>Current</b>	<b>2008/2009</b>	<b>2010</b>
<b>HIGH RISE COMMERCIAL</b>		Must submit documentation to achieve LEED "Certified" certification from USGCB	Must submit documentation to achieve minimum LEED "Silver" certification from USGCB
<b>HIGH RISE RESIDENTIAL &gt; 19 Units</b>	Applicant must complete Green Point Multi-family checklist but no mandatory number of points	Must submit documentation to achieve LEED "Certified" certification from USGCB	Must submit documentation to achieve minimum LEED "Silver" certification from USGCB
<b>MIXED USE RESIDENTIAL/ COMMERCIAL &gt; 19 UNITS</b>	Applicant must submit Green Points Multi-Family Checklist – No mandatory number	Applicant must submit Green Points Multi-Family Checklist – 25 points required	Applicant must submit Green Points Multi-Family Checklist – 50 points required

	<b>Current</b>	<b>2008/2009</b>	<b>2010</b>
	of points	Energy, 5 for Resources, 5 points for Finishes, 15 points any category. Each point from Renewable Energy may be counted twice.	10 points for Resources, 10 points for Energy, 10 points for Finishes, 20 points any category. Each point from Renewable Energy may be counted twice.
<b>LARGE COMMERCIAL – NOT INDUSTRIAL</b>		Must submit documentation to achieve LEED “Certified” certification from USGCB	Must submit documentation to achieve minimum of LEED “Silver” certification from USGCB
<b>MAJOR COMMERCIAL ALTERATION</b>		Must submit documentation to achieve LEED “Certified” certification from USGCB	Must submit documentation to achieve minimum of LEED “Silver” certification from USGCB
<b>MID-SIZE COMMERCIAL</b>		Applicant must submit Green Points Multi-Family Checklist – 25 points required 5 points for Resources, 5 Energy, 15 points any category. Each point for renewable energy may be counted twice.	Applicant must submit Green Points Multi-Family Checklist – 50 points required 10 points for Energy Conservation, 10 points for Resources, 30 points any category. Each point for renewable energy may be counted twice.
<b>SMALL COMMERCIAL ALTERATION OR TENANT IMPROVEMENT</b>		Applicant must submit Green Points Multi-Family Checklist – 25 points required 5 points for Resources, 5 Energy, 15 points any category. Each point for renewable energy may be counted twice.	Applicant must submit Green Points Multi-Family Checklist – 50 points required 10 points for Energy, 10 points for Resources, 30 points any category. Each point for renewable energy may be counted twice.
<b>LARGE INDUSTRIAL</b>		Must submit documentation to achieve LEED “Certified” certification from USGCB	Must submit documentation to achieve LEED “Certified” certification from USGCB
<b>MID-SIZE MULTI FAMILY</b>	Applicant must submit Green Points Multi-	Applicant must submit Green Points Multi-	Applicant must submit Green Points Multi-

	<b>Current</b>	<b>2008/2009</b>	<b>2010</b>
<b>&gt; 19 UNITS</b>	Family Checklist – No mandatory number of points	Family Checklist – 25 points required 5 points for Energy, 5 points Resources 15 points any category. Each point for renewable energy may be counted twice.	Family Checklist – 50 points required 10 points for Energy, 10 points for Resources, 30 points any category. Each point for renewable energy may be counted twice.
<b>SMALL RESIDENTIAL – ONE &amp; TWO FAMILY NEW CONSTRUCTION &amp; ADDITONS &gt; 1,000 SQ. FT.</b>		Applicant must submit Green Points New Home Construction Checklist – 25 Points required. 5 points for Energy, Conservation, 5 points for Resources, 15 points any category. Each point for renewable energy may be counted twice.	Applicant must submit Green Points New Home Construction Checklist – 50 Points required 10 points for Energy, 10 points for Resources, 30 points any category. Each point for renewable energy may be counted twice.
<b>RESIDENTIAL REMODEL – ADDITIONS 1,000 SQ FT OR LESS</b>		Applicant must submit Green Points Home Remodeling Construction Checklist – 25 Points required. 5 points for Energy, 5 points for Resources, 15 points any category. Each point for renewable energy may be counted twice.	Applicant must submit Green Points Home Remodeling Construction Checklist – 50 Points required 10 points for Energy, 10 points for Resources, 30 points any category. Each point for renewable energy may be counted twice.

## **FISCAL IMPACT**

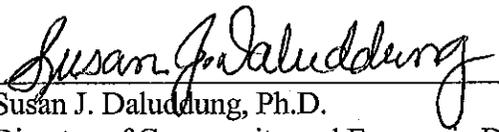
This ordinance would require staff to review additional paperwork by applicant. There would be an impact on permit holders who are required to hire a third party rater to certify a project is Green Point Rated. There would be an impact to permit holders for large projects as the LEED certification process requires the payment of fees for the services from the United States Green Building Council (USGBC). For this reason the Green Point Multi-Family checklist may be used for larger commercial projects during the first three months the Ordinance is in effect, and for small commercial projects until the Build It Green organization develops the appropriate checklists. Those checklists are in progress but no date for their completion has been provided.

**NEXT STEPS**

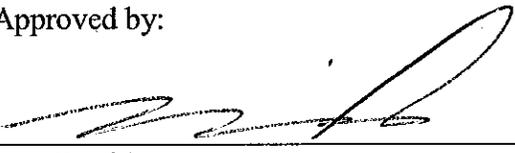
This ordinance is only the first step in what will be an ongoing process. The California Building Standards Commission is now working on a Green Building Code that will be a part of the California Building Code. The California State Building Code draft version is very comprehensive and will supercede the City of Hayward ordinance. The State regulations will likely go into effect in three years during the next Building code adoption cycle in 2012.

The green point building check list contains solar elements in the overall calculation of total points. Staff will return in a future meeting with discussions for a residential solar funding program to assist small projects in meeting solar objectives. Also, staff recommends adding private bay-friendly landscaping as a part of the green building code. This is a step-wise approach which will continue to add elements onto the foundation of green building code. Other elements could include future coordination of all City processes dealing with green building and sustainability. Examples of other elements include adequate space for trash collection and recycling and water pollution prevention for construction sites. This Ordinance applies only to private projects; municipal projects are covered by an existing ordinance.

Recommended by:

  
\_\_\_\_\_  
Susan J. Daluddung, Ph.D.  
Director of Community and Economic Development

Approved by:

  
\_\_\_\_\_  
Fran David  
Assistant City Manager

Attachments: Exhibit A: City of Hayward Draft Ordinance  
Exhibit B: Green Point Checklists from StopWaste.org

## HAYWARD CITY COUNCIL

ORDINANCE NO. \_\_\_\_\_

AN ORDINANCE ADDING ARTICLE 21 TO CHAPTER 10 OF THE HAYWARD MUNICIPAL CODE ESTABLISHING GREEN BUILDING REQUIREMENTS FOR NEW PRIVATE CONSTRUCTION

THE CITY COUNCIL OF THE CITY OF HAYWARD DOES ORDAIN AS FOLLOWS:

SECTION 1. FINDINGS AND PURPOSE. The purpose of this article is to promote the health, safety and welfare of Hayward residents, workers, and visitors by minimizing the use and waste of energy, water and other natural resources in the construction and operation of the City's building stock and by providing a healthy indoor environment. The green building practices required by this Chapter will also further the goal of reducing the City's greenhouse gas emissions over the next few years.

SECTION 2. The City of Hayward's Municipal Code is hereby amended to add Article 21 to Chapter 10 as follows: "GREEN BUILDING REQUIREMENTS".

SECTION 10- 21.100 TITLE. This article shall be known and may be cited as the Green Building Ordinance of the City of Hayward.

SECTION 10-21.110 DEFINITIONS. For the purposes of this article, certain terms are defined as follows:

- a. "Applicant" means any individual, firm, Limited Liability Company, association, partnership, political subdivision, government agency, industry, public or private corporation or any other entity that applies to the City of Hayward for permit(s) to construct a Project subject to the provisions of this article.
- b. "City" means the City of Hayward.
- c. "Commercial" means any building or space used for retail, industrial, office or other non-residential use.
- d. "Green Point Rated", "Green Points" and "Green Points Checklist" mean the residential green building rating system and checklist and certification methodology used by the non-profit organization Build It Green or an equivalent organization and rating system approved by the Building Official in consultation with the Director of Community and Economic Development.

- e. "High Rise Residential Building" means a residential building that is more than 75 feet in height to the highest occupied floor.
- f. "Large Commercial Building" means a commercial building or addition that is 25,000 gross square feet or more, or over 75 feet in height.
- g. "LEED" and "LEED Checklist" mean the leadership in Energy and Environmental Design rating system, certification methodology, and checklist used by the United States Green Building Council (USGBC).
- h. "Major Alteration" means alterations to existing commercial or residential buildings that are 25,000 gross square feet or more in area, where interior finishes are removed and significant upgrades to structural and mechanical, electrical and/or plumbing systems are proposed.
- i. "Mid-size Commercial Building" means a commercial building that is more than 5,000 and less than 25,000 gross square feet, and is not a Large Commercial Building.
- j. "Mid-size Multifamily Residential Building" means a residential building that has five or more dwelling units and is not a High-Rise Residential Building.
- k. "Mixed-Use" means a building with residential and commercial or retail uses, or a combination of residential, commercial and retail uses. If the building is more than 75 feet in height, the High-Rise Residential Building requirements shall apply. If the building is 75 feet or less in height, the Mid-Size Multi-Family Residential Building requirements shall apply.
- l. "Project" means any proposed residential or commercial construction for which a building permit has not been issued as of July 1, 2008.
- m. "Residential Remodel" shall mean any residential remodeling projects including additions that do not increase the existing floor space by more than 50%.
- n. "Small Commercial Building" means a commercial building that is 5,000 or fewer square feet in gross floor area.
- o. "Small Residential Building" means a building that has four or fewer dwelling units and is not a High Rise Residential Building.

SECTION 10- 21.120 APPLICATION.

The provisions of this Article apply to the following projects: All residential or

commercial construction for which a building permit has not been issued as of July 1, 2008.

City Projects are exempt from the provisions of this article.

#### SECTION -10-21.130 GREEN BUILDING REQUIREMENTS.

The following green building requirements shall apply to all Projects subject to this article: Wherever reference is made to the LEED or Green Point Rated systems, a comparable equivalent rating system may be used if approved by the Building Official in consultation with the Director of Community and Economic Development. The applicable LEED or Green Point Rated or equivalent requirements are those in effect at the time a complete application for the project is submitted to the Building or Planning Division.

#### SECTION 10-21.140 REQUIREMENTS FOR NEW RESIDENTIAL PROJECTS

##### Small Residential Building Projects.

Beginning thirty days after the effective date of this article, Applicants for Small Residential Building Projects shall submit a Green Points New Home Construction Checklist but no points are required to be achieved.

Effective July 1, 2008, Applicants shall submit documentation demonstrating that a minimum of 25 Green Points from the Checklist will be achieved. Of these points, five points shall be achieved from the "Resources" column and five points shall be achieved from the renewable "Energy" column. The remaining 15 points to be achieved may be taken from any column or category. Each point in the "Renewable Energy" column may be counted twice.

Effective January 1, 2010 Applicants shall submit documentation to be Green Point Rated and must achieve a minimum of 50 points. Of these points, ten points shall be achieved from the "Resources" column and ten points shall be achieved from the renewable "Energy" column. The remaining 30 points to be achieved may be taken from any column. Each point from the "Renewable Energy" category may be counted twice.

##### Mid-size Multifamily Residential Building Projects.

Beginning thirty days after the effective date of this article, Applicants for Mid-size Multifamily Residential Building Projects shall submit a Green Points New Home Construction Checklist but no points are required to be achieved.

Effective July 1, 2008, Applicants shall submit documentation demonstrating that a minimum of 25 Green Points from the checklist will be achieved. Of these points, five points shall be achieved from the "Resources" column and five points shall be achieved from the "Energy" column. The remaining points may be taken from any column or category. Each point in the "Renewable Energy" category may be counted twice.

Effective January 1, 2010, Applicants shall submit documentation to be Green Point Rated and must achieve a minimum of 50 points. Of these points, ten points shall be achieved from "Resources" column and ten points shall be achieved from the "Energy" column. The

remaining points to be achieved may be taken from any column or category. Each point in the “Renewable Energy” category may be counted twice.

High-Rise Residential Building Projects.

Beginning thirty days after the effective date of this article, Applicants for High Rise Residential Building Projects shall submit documentation to achieve LEED “Certified” certification from the United States Green Building Council(USGBC) or an approved equivalent.

Effective January 1, 2010 and thereafter, Applicants shall submit documentation the achieve LEED “Silver” certification from the USGBC or an approved equivalent.

SECTION 10 -21.150 REQUIREMENTS FOR NEW COMMERCIAL PROJECTS

Small and Midsize Commercial and Mixed-Use Building Projects.

Beginning thirty days after the effective date of this article, the Applicant for Small and Midsize Commercial and Mixed-Use Building Projects shall submit a Green Points Multi-family Checklist but no points are required to be achieved.

Effective July 1, 2008, Applicants shall submit documentation demonstrating that a minimum of 25 Green Points from the Checklist will be achieved. Of these points, five points shall be achieved from the “Resources” column and five points shall be achieved from the “Energy” column. The remaining 10 points may be taken from any column or category. Each point in the “Renewable Energy” category may be counted twice.

Effective January 1, 2010, Applicants shall submit documentation to be Green Point Rated and must achieve a minimum of 50 points. Of these points, ten points shall be achieved from the “Resources” column and ten points shall be achieved from the “Energy” column. The remaining 30 points may be taken from any column or category. Each point in the “Renewable Energy” category may be counted twice.

High-Rise Commercial Buildings.

Beginning thirty days after the effective date of this article, Applicants for high-rise residential buildings shall submit documentation to achieve LEED “Certified” certification from the USGBC or an approved equivalent.

Effective January 1, 2010 and thereafter, Applicants shall submit documentation the achieve LEED “Silver” certification from the USGBC or an approved equivalent.

SECTION 10-21.160 REQUIREMENTS FOR RESIDENTIAL REMODELING PROJECTS

Beginning thirty days after the effective date of this article, Applicants for residential remodeling projects shall submit a Green Points New Home Construction Checklist but no points are required to be achieved.

Effective January 1, 2008, Applicants shall submit documentation demonstrating that a minimum of 15 Green Points from the checklist will be achieved. Of these points, five points shall be achieved from the "Resources" column and five points shall be achieved from the "Energy" column. The remaining five points may be taken from any column or category. Each point in the "Renewable Energy" category may be counted twice.

Effective January 1, 2010, Applicants shall submit documentation to be Green Point Rated and shall achieve a minimum of 30 points. Of these points, eight points shall be achieved from the "Resources" column and eight points shall be achieved from the "Energy" column. The remaining 14 points may be taken from any column or category. Each point in the "Renewable Energy" category may be counted twice.

SECTION 10-21.170 REQUIREMENTS FOR SMALL AND MID-SIZE COMMERCIAL REMODELING PROJECTS INCLUDING TENANT IMPROVEMENTS.

Beginning thirty days after the effective date of this article, the Applicant for a small or mid-size commercial remodeling project shall submit a Green Points Multi-Family Residential Construction Checklist but no points are required to be achieved.

Effective July 1, 2008, Applicants shall submit documentation demonstrating that a minimum of 15 Green Points from the Multi-Family Residential checklist will be achieved. Of these points, five points shall be achieved from the "Resources" column and five points shall be achieved from the "Energy" column. The remaining points may be taken from any column or category. Each point in the "Renewable Energy" category may be counted twice.

Effective January 1, 2009, Applicants shall submit demonstrating that a minimum of 30 points from the Multi-family Residential checklist will be achieved. Of these eight points shall be achieved from the renewable "Resources" column and eight points shall be achieved from the "Energy" column. The remaining 14 points may be taken from any column or category. Each point in the "Renewable Energy" category may be counted twice.

Requirements For Major Alterations to Commercial or Residential Buildings Projects

Beginning thirty days after the effective date of this article, Applicants for Major Alterations to Commercial or Residential Building Projects shall submit documentation to achieve LEED "Certified" certification from the USGBC or an approved equivalent.

Effective January 1, 2010 and thereafter, Applicants shall submit documentation the achieve LEED "Silver" certification from the USGBC or an approved equivalent.

INTRODUCED at a regular meeting of the City Council of the City of Hayward, held the \_\_\_ day of \_\_\_\_, 2008, by Council Member\_\_\_\_\_.

ADOPTED at a regular meeting of the City Council of the City of Hayward held the\_\_ day of \_\_, 2008, by the following votes of members of said City Council.

AYES: COUNCIL MEMBERS:  
MAYOR:

NOES: COUNCIL MEMBERS:

ATTEST: COUNCIL MEMBERS:

ABSENT: COUNCIL MEMBERS:

APPROVED: \_\_\_\_\_  
Mayor of the City of Hayward

DATE: \_\_\_\_\_

ATTEST: \_\_\_\_\_  
City Clerk of the City of Hayward

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney of the City of Hayward

# Green Points Rating System for Remodeling Projects

Due to the diversity of remodeling project types, assigning a "total points" value to a project to be considered environmentally friendly is not feasible. However, 25 measures have been highlighted to signify that every effort should be made to incorporate them into your projects. These items have been chosen based upon their impact on the environment and the health of the home in coordination with ease of implementation and relative low cost. These measures can be used as a starting point for "greening" your project.

	INPUT	Resources	Energy	IAQ/Health
<b>A. Site</b>				
1. Recycle Job Site Construction & Demolition Waste 65% = 1 point; 75% = 2 points; 80% = 4 points	up to 4 Resource pts	0		
2. Salvage Reusable Building Materials	4 Resource pts y=yes	0		
3. Remodel for Mixed Use, Adaptive Reuse, and Historic Preservation	4 Resource pts y=yes	0		
4. Protect Native Soil	2 Resource pts y=yes	0		
5. Minimize Disruption of Existing Plants & Trees	1 Resource pt y=yes	0		
6. Implement Construction Site Stormwater Practices	2 Resource pts y=yes	0		
7. Protect Water Quality with Landscape Design	2 Resource pts y=yes	0		
8. Design Resource-Efficient Landscapes and Gardens	4 Resource pts y=yes	0		
9. Reuse Materials/Use Recycled Content Materials for Landscape Areas	2 Resource pts y=yes	0		
10. Install High-Efficiency Irrigation Systems	2 Resource pts y=yes	0		
11. Provide for On-Site Water Catchment / Retention	2 Resource pts y=yes	0		
		0	0	0

<b>B. Foundation</b>				
1. Incorporate Recycled Flyash In Concrete 25% Recycled Flyash = 2 points; Add 1 point for every 10% increase of flyash, up to 5 points	up to 5 Resource pts	0		
2. Use Recycled Content Aggregate	2 Resource pts y=yes	0		
3. Insulate Foundation/Slab before backfill	3 Energy pts y=yes		0	
		0	0	0

<b>C. Structural Frame</b>				
1. Substitute Solid Sawm Lumber with Engineered Lumber	3 Resource pts y=yes	0		
2. Use FSC Certified Wood for framing (For every 10% of FSC lumber used = 2 points, up to 10)	up to 10 Resource pts.	0		
3. Use Wood I-Joists for Floors and Ceilings	2 Resource pts y=yes	0		
4. Use Web Floor Trusses	2 Resource pts y=yes	0		
5. Design Energy Heels on Trusses 6" or more	2 Energy pts y=yes		0	
6. Use Finger-Jointed Studs for Vertical Applications	2 Resource pts y=yes	0		
7. Use Engineered Studs for Vertical Applications	2 Resource pts y=yes	0		
8. Use Recycled Content Steel Studs for Interior Framing	2 Resource pts y=yes	0		
9. Use Structural Insulated Panels (SIPs)				
a. Floors	3 Energy pts y=yes		0	
b. Wall	3 Energy pts y=yes		0	
c. Roof	3 Energy pts y=yes		0	
10. Apply Advanced Framing Techniques	4 Resource pts y=yes	0		
11. Use Reclaimed Lumber for Non Structural Applications	3 Resource pts y=yes	0		
12. Use OSB				
a. Subfloors	1 Resource pt y=yes	0		
b. Sheathing	1 Resource pt y=yes	0		
		0	0	0

### D. Exterior Finish

1. Use Sustainable Decking Materials				
a. Recycled content	3 Resource pts y=yes	0		
b. FSC Certified Wood	3 Resource pts y=yes	0		
2. Use Treated Wood That Does Not Contain Chromium/Arsenic	1 IAQ/Health pt y=yes			0
3. Install House Wrap under Siding	1 IAQ/Health pt y=yes			0
4. Use Fiber-Cement Siding Materials	1 Resource pt y=yes	0		
		<b>0</b>	<b>0</b>	<b>0</b>

### E. Plumbing

1. Install Water Heater Jacket	1 Energy pt y=yes		0	
2. Insulate Hot and Cold Water Pipes	2 Energy pts y=yes		0	
3. Retrofit all Faucets and Showerheads with Flow Reducers				
a. Faucets (1 point each, up to 2 points)	Up to 2 Resource pts.	0		
b. Showerheads (1 point each, up to 2 points)	Up to 2 Resource pts.	0		
4. Replace Toilets with Ultra-Low Flush Toilets (1 point each, up to 3 points)	Up to 3 Resource pts.	0		
5. Install Chlorine Filter on Showerhead	1 IAQ/Health pt y=yes			0
6. Convert Gas to Tankless Water Heater	4 Energy pts y=yes		0	
7. Install Water Filtration Units at Faucets (2 points each, up to 4 points)	Up to 4 IAQ/Health pts.			0
8. Install On-Demand Hot Water Circulation Pump	4 Resource pts y=yes	0		
		<b>0</b>	<b>0</b>	<b>0</b>

### F. Electrical

1. Install Compact Fluorescent Light Bulbs (CFLs) (6 bulbs=2 points, 10 bulbs=3 points, 12 bulbs=4 points)	Up to 4 Energy pts.		0	
2. Install IC-AT Recessed Fixtures with CFLs (1 point each, up to 5 points)	Up to 5 Energy pts.		0	
3. Install Lighting Controls (1 point per fixture, up to 4 points)	Up to 4 Energy pts.		0	
4. Install High Efficiency Ceiling Fans with CFLs (1 point each, up to 4 points)	Up to 4 Energy pts.		0	
		<b>0</b>	<b>0</b>	<b>0</b>

### G. Appliances

1. Install Energy Star Dishwasher	1 Energy pt y=yes		0	
2. Install Washing Machine with Water and Energy Conservation Features	1 Energy pt y=yes		0	
3. Install Energy Star Refrigerator	1 Energy pt y=yes		0	
4. Install Built-In Recycling Center	3 Resource pts y=yes	0		
		<b>0</b>	<b>0</b>	<b>0</b>

### H. Insulation

1. Upgrade Insulation to Exceed Title 24 Requirements				
a. Walls	2 Energy pts y=yes		0	
b. Ceilings	2 Energy pts y=yes		0	
2. Install Floor Insulation over Crawl Space	4 Energy pts y=yes		0	
3. Install Recycled-Content, Fiberglass Insulation with No Added Formaldehyde	3 IAQ/Health pts y=yes			0
4. Use Advanced Infiltration Reduction Practices	2 Energy pts y=yes		0	
5. Use Cellulose Insulation				
a. Walls	4 Resource pts y=yes	0		
b. Ceilings	4 Resource pts y=yes	0		
6. Alternative Insulation Products (Cotton, spray-foam)				
a. Walls	4 Resource pts y=yes	0		
b. Ceilings	4 Resource pts y=yes	0		
		<b>0</b>	<b>0</b>	<b>0</b>

		INPUT	Resources	Energy	IAQ/Health
<b>I. Windows</b>					
1. Install Energy-Efficient Windows					
a. Double-Paned	1 Energy pt	y=yes		0	
b. Low-Emissivity (Low-E)	2 Energy pts	y=yes		0	
c. Low-Conductivity Frames	2 Energy pts	y=yes		0	
2. Install Low Heat Transmission Glazing	1 Energy pt	y=yes		0	
			<b>0</b>	<b>0</b>	<b>0</b>
<b>J. Heating Ventilation and Air Conditioning</b>					
1. Use Duct Mastic on All Duct Joints	2 Energy pts	y=yes		0	
2. Install Ductwork within Conditioned Space	3 Energy pts	y=yes		0	
3. Vent Range Hood to the Outside	1 IAQ/Health pt	y=yes			0
4. Clean all Ducts Before Occupancy	2 IAQ/Health pts	y=yes			0
5. Install Solar Attic Fan	2 Energy pts	y=yes		0	
6. Install Attic Ventilation Systems	1 Energy pt	y=yes		0	
7. Install Whole House Fan	4 Energy pts	y=yes		0	
8. Install Sealed Combustion Units					
a. Furnaces	3 IAQ/Health pts	y=yes			0
b. Water Heaters	3 IAQ/Health pts	y=yes			0
9. Replace Wall-Mounted Electric and Gas Heaters with Through-the-Wall Heat Pumps	3 Energy pts	y=yes		0	
10. Install 13 SEER/11 EER or higher AC with a TXV	3 Energy pts	y=yes		0	
11. Install AC with Non-HCFC Refrigerants	2 Resource pts	y=yes	0		
12. Install 90% Annual Fuel Utilization Efficiency (AFUE) Furnace	2 Energy pts	y=yes		0	
13. Retrofit Wood Burning Fireplaces					
a. Install EPA certified wood stoves/inserts	1 IAQ/Health pt	y=yes			0
b. Install/Replace Dampers	1 Energy pt	y=yes		0	
c. Install Airtight Doors	1 Energy pt	y=yes		0	
14. Install Zoned, Hydronic Radiant Heating	3 Energy pts	y=yes		0	
15. Install High Efficiency Filter	4 IAQ/Health pts	y=yes			0
16. Install Heat Recovery Ventilation Unit (HRV)	5 IAQ/Health pts	y=yes			0
17. Install Separate Garage Exhaust Fan	3 IAQ/Health pts	y=yes			0
			<b>0</b>	<b>0</b>	<b>0</b>
<b>K. Renewable Energy and Roofing</b>					
1. Pre-Plumb for Solar Water Heating	4 Energy pts	y=yes		0	
2. Install Solar Water Heating System	10 Energy pts	y=yes		0	
3. Pre-Wire for Future Photovoltaic (PV) Installation	4 Energy pts	y=yes		0	
4. Install Photovoltaic (PV) System (1.2 kw = 6 points, 2.4 kw = 12 points, 3.6 kw = 18 points)	Up to 18 Energy pts			0	
6. Select Safe and Durable Roofing Materials	1 Resource pt	y=yes	0		
7. Install Radiant Barrier	3 Energy pts	y=yes		0	
			<b>0</b>	<b>0</b>	<b>0</b>
<b>L. Natural Heating and Cooling</b>					
1. Incorporate Passive Solar Heating	5 Energy pts	y=yes		0	
2. Install Overhangs or Awnings over South Facing Windows	3 Energy pts	y=yes		0	
3. Plant Deciduous Trees on the West and South Sides	3 Energy pts	y=yes		0	
			<b>0</b>	<b>0</b>	<b>0</b>

	INPUT	Resources	Energy	IAQ/Health
<b>M. Indoor Air Quality and Finishes</b>				
1. Use Low/No-VOC Paint	1 IAQ/Health pts y=yes			0
2. Use Low VOC, Water-Based Wood Finishes	2 IAQ/Health pts y=yes			0
3. Use Low/No-VOC Adhesives	3 IAQ/Health pts y=yes			0
4. Use Salvaged Materials for Interior Finishes	3 Resource pts y=yes	0		
5. Use Engineered Sheet Goods with no added Urea Formaldehyde	6 IAQ/Health pts y=yes			0
6. Use Exterior Grade Plywood for Interior Uses	1 IAQ/Health pts y=yes			0
7. Seal all Exposed Particleboard or MDF	4 IAQ/Health pts y=yes			0
8. Use FSC Certified Materials for Interior Finish	4 Resource pts y=yes	0		
9. Use Finger-Jointed or Recycled-Content Trim	1 Resource pts y=yes	0		
10. Install Whole House Vacuum System	3 IAQ/Health pts y=yes			0
		<b>0</b>	<b>0</b>	<b>0</b>

<b>N. Flooring</b>				
1. Select FSC Certified Wood Flooring	8 Resource pts y=yes	0		
2. Use Rapidly Renewable Flooring Materials	4 Resource pts y=yes	0		
3. Use Recycled Content Ceramic Tiles	4 Resource pts y=yes	0		
4. Install Natural Linoleum in Place of Vinyl	5 IAQ/Health pts y=yes			0
5. Use Exposed Concrete as Finished Floor	4 Resource pts y=yes	0		
6. Install Recycled Content Carpet with Low VOCs	4 Resource pts y=yes	0		
		<b>0</b>	<b>0</b>	<b>0</b>

**Total Points Available:**

<b>140</b>	<b>130</b>	<b>57</b>
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**Total Points Project Received:**

<b>0</b>	<b>0</b>	<b>0</b>
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# Single Family GreenPoint Checklist

date: \_\_\_\_\_



**Build It Green**  
Smart Solutions From The Ground Up

The GreenPoint checklist tracks green features incorporated into the home. The recommended minimum requirements for a green home are: Earn a total of 50 points or more; obtain the following minimum points per category: Energy (11), Indoor Air Quality/Health (5), Resources (6), and Water (3); and meet the prerequisites A.3.a (50% construction waste diversion) and N.1 (Incorporate Green Points checklist in blueprints).

The green building practices listed below are described in the New Home Construction Green Building Guidelines, available at [www.builditgreen.org](http://www.builditgreen.org).

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ENTER PROJECT NAME	Community	Energy	IAQ/Health	Resources	Water
<b>A. SITE</b>					
Possible Points					
<input type="checkbox"/> 1. Protect Native Soil and Minimize Disruption of Existing Plants & Trees					
<input type="checkbox"/> a. Protect Native Topsoil from Erosion and Reuse after Construction	1				1
<input type="checkbox"/> b. Limit and Delineate Construction Footprint for Maximum Protection					1
<input type="checkbox"/> 2. Deconstruct Instead of Demolishing Existing Buildings On Site				3	
<input type="checkbox"/> 3. Recycle Job Site Construction Waste (Including Green Waste)				R	
<input type="checkbox"/> a. Minimum 50% Waste Diversion by Weight (Recycling or Reuse) -Required				2	
<input type="checkbox"/> b. Minimum 65% Diversion by Weight (Recycling or Reuse)				2	
<input type="checkbox"/> c. Minimum 80% Diversion by Weight (Recycling or Reuse)				2	
<input type="checkbox"/> 4. Use Recycled Content Aggregate (Minimum 25%)				1	
<input type="checkbox"/> a. Walkway and Driveway				1	
<input type="checkbox"/> b. Roadway Base				1	
<b>B. LANDSCAPING</b>					
Possible Points					
<input type="checkbox"/> 1. Construct Resource-Efficient Landscapes					
<input type="checkbox"/> a. No Invasive Species Listed by Cal-IPC Are Planted					1
<input type="checkbox"/> b. No Plant Species Will Require Hedging				1	
<input type="checkbox"/> c. 75% of Plants Are California Natives or Mediterranean Species					1
<input type="checkbox"/> 2. Use Fire-Safe Landscaping Techniques	1				
<input type="checkbox"/> 3. Minimize Turf Areas in Landscape Installed by Builder					
<input type="checkbox"/> a. All Turf Will Have a Water Requirement Less than or Equal to Tall Fescue					2
<input type="checkbox"/> b. Turf Shall Not Be Installed on Slopes Exceeding 10% or in Areas Less than 8 Feet Wide					2
<input type="checkbox"/> c. Turf is <33% of Landscaped Area					2
<input type="checkbox"/> d. Turf is <10% of Landscaped Area					2
<input type="checkbox"/> 4. Plant Shade Trees		1			1
<input type="checkbox"/> 5. Implement Hydrozoning: Group Plants by Water Needs					1
<input type="checkbox"/> 6. Install High-Efficiency Irrigation Systems					
<input type="checkbox"/> a. System Uses Only Low-Flow Drip, Bubblers, or Low-flow Sprinklers					1
<input type="checkbox"/> b. System Has Smart (Weather-Based) Controllers					2
<input type="checkbox"/> 7. Apply Two Inches of Compost in the Top 6 to 12 Inches of Soil					2
<input type="checkbox"/> 8. Mulch All Planting Beds to the Greater of 2 Inches or Local Water Ordinance Requirement					1
<input type="checkbox"/> 9. Use 50% Salvaged or Recycled-Content Materials for 50% of Non-Plant Landscape Elements				1	
<input type="checkbox"/> 10. Reduce Light Pollution by Shielding Fixtures and/or Directing Light Downward	1				
<b>C. FOUNDATION</b>					
Possible Points					
<input type="checkbox"/> 1. Incorporate Recycled Flyash in Concrete					
<input type="checkbox"/> a. Minimum 20% Flyash				1	
<input type="checkbox"/> b. Minimum 25% Flyash				1	
<input type="checkbox"/> 2. Use Frost-Protected Shallow Foundation in Cold Areas (C.E.C. Climate Zone 16)				3	
<input type="checkbox"/> 3. Use Radon Resistant Construction (In At-Risk Locations Only)			1		
<b>D. STRUCTURAL FRAME &amp; BUILDING ENVELOPE</b>					
Possible Points					
<input type="checkbox"/> 1. Apply Optimal Value Engineering					
<input type="checkbox"/> a. 2x4 Studs at 24-Inch On Center Framing				1	
<input type="checkbox"/> b. Door and Window Headers Sized for Load				1	
<input type="checkbox"/> c. Use Only Jack and Cripple Studs Required for Load				1	

# ENTER PROJECT NAME

	Community	Energy	IAQ/Health	Resources	Water
<b>2. Use Engineered Lumber</b>					
<input type="checkbox"/> a. Beams and Headers				1	
<input type="checkbox"/> b. Insulated Engineered Headers		1			
<input type="checkbox"/> c. Wood I-Joists or Web Trusses for Floors				1	
<input type="checkbox"/> d. Wood I-Joists or Rafters				1	
<input type="checkbox"/> e. Engineered or Finger-Jointed Studs for Vertical Applications				1	
<b>3. Use FSC-Certified Wood</b>					
<input type="checkbox"/> a. Dimensional Studs: Minimum 40%				2	
<input type="checkbox"/> b. Dimensional Studs: Minimum 70%				2	
<input type="checkbox"/> c. Panel Products: Minimum 40%				1	
<input type="checkbox"/> d. Panel Products: Minimum 70%				1	
<input type="checkbox"/> 4. Design Energy Heels on Trusses (75% of Attic Insulation Height at Outside Edge of Exterior Wall)		1			
<input type="checkbox"/> 5. Design Trusses to Accommodate Ductwork		1			
<b>6. Use Oriented Strand Board (OSB)</b>					
<input type="checkbox"/> a. Subfloor				1	
<input type="checkbox"/> b. Sheathing				1	
<input type="checkbox"/> 7. Use Recycled-Content Steel Studs for 90% of Interior Wall Framing				1	
<b>8. Use Solid Wall Systems (Includes SIPs, ICFs, &amp; Any Non-Stick Frame Assembly)</b>					
<input type="checkbox"/> a. Floors		2		2	
<input type="checkbox"/> b. Walls		2		2	
<input type="checkbox"/> c. Roofs		2		2	
<input type="checkbox"/> 9. Thermal Mass Walls: 5/8-Inch Drywall on All Interior Walls or Walls Weigh more than 40 lb/cu.ft.		1			
<b>10. Design and Build Structural Pest Controls</b>					
<input type="checkbox"/> a. Install Termite Shields & Separate All Exterior Wood-to-Concrete Connections by Metal or Plastic Fasteners/Dividers				1	
<input type="checkbox"/> b. All New Plants Have Trunk, Base, or Stem Located At Least 36 Inches from Foundation				1	
<b>11. Reduce Pollution Entering the Home from the Garage</b>					
<input type="checkbox"/> a. Tightly Seal the Air Barrier between Garage and Living Area			1		
<input type="checkbox"/> b. Install Separate Garage Exhaust Fan			1		
<b>12. Install Overhangs and Gutters</b>					
<input type="checkbox"/> a. Minimum 16-Inch Overhangs and Gutters				1	
<input type="checkbox"/> b. Minimum 24-Inch Overhangs and Gutters		1			

<b>F. EXTERIOR FINISH</b>		Possible Points			
<input type="checkbox"/> 1. Use Recycled-Content (No Virgin Plastic) or FSC-Certified Wood Decking				2	
<input type="checkbox"/> 2. Install a Drainage Plane (Rain Screen Wall System)				2	
<input type="checkbox"/> 3. Use Durable and Non-Combustible Siding Materials				1	
<input type="checkbox"/> 4. Select Durable and Non-Combustible Roofing Materials				2	

<b>F. PLUMBING</b>		Possible Points			
<b>1. Distribute Domestic Hot Water Efficiently</b>					
<input type="checkbox"/> a. Insulate Hot Water Pipes from Water Heater to Kitchen					1
<input type="checkbox"/> b. Insulate All Hot Water Pipes OR Install On-Demand Hot Water Circulation System in conjunction with F.1.a Insulate Hot Water Pipes from Water Heater to Kitchen		1			1
<input type="checkbox"/> c. Locate the Water Heater within 25 feet of All Hot Water Fixtures and Appliances					1
<input type="checkbox"/> d. Use Engineered Parallel Piping					1
<input type="checkbox"/> 2. Install Only High Efficiency Toilets (Dual-Flush or <=1.3 gpf)					3

<b>G. APPLIANCES</b>		Possible Points			
<b>1. Install ENERGY STAR Dishwasher</b>					
<input type="checkbox"/> a. ENERGY STAR		1			
<input type="checkbox"/> b. Dishwasher Uses No More than 6.5 Gallons/Cycle		1			1
<input type="checkbox"/> 2. Install ENERGY STAR Clothes Washing Machine with Water Factor of 6 or Less		1			3
<b>3. Install ENERGY STAR Refrigerator</b>					
<input type="checkbox"/> a. ENERGY STAR: 15% above Federal Minimum		1			
<input type="checkbox"/> b. Super-Efficient Home Appliance Tier 2: 25% above Federal Minimum		1			
<input type="checkbox"/> 4. Install Built-In Recycling Center					2

ENTER PROJECT NAME		Community	Energy	IAQ/Health	Resources	Water
<b>H. INSULATION</b>		Possible Points				
<input type="checkbox"/>	1. Install Insulation with 75% Recycled Content				1	
<input type="checkbox"/>	a. Walls and/or Floors				1	
<input type="checkbox"/>	b. Ceilings					
<input type="checkbox"/>	2. Install Insulation that is Low-Emitting (Certified Section 01350)			1		
<input type="checkbox"/>	a. Walls and/or Floors			1		
<input type="checkbox"/>	b. Ceilings					
<input type="checkbox"/>	3. Pre-Drywall Inspection Shows Quality Installation of Insulation		1			
<b>I. HEATING, VENTILATION &amp; AIR CONDITIONING</b>		Possible Points				
<input type="checkbox"/>	1. Design and Install HVAC System to ACCA Manual J, D, and S Recommendations		4			
<input type="checkbox"/>	2. Install Sealed Combustion Units			2		
<input type="checkbox"/>	a. Furnaces			2		
<input type="checkbox"/>	b. Water Heaters					
<input type="checkbox"/>	3. No Fireplace or Sealed Gas Fireplace with Efficiency Rating Not Less Than 60%			1		
<input type="checkbox"/>	4. Install ENERGY STAR Ceiling Fans with CFLs in Living Areas and Bedrooms		1			
<input type="checkbox"/>	5. Install Mechanical Ventilation System for Nighttime Cooling (Points are Cumulative up to 3)					
<input type="checkbox"/>	a. Whole House Fan		1			
<input type="checkbox"/>	b. Automatically Controlled Integrated System		2			
<input type="checkbox"/>	c. Integrated System with Variable Speed Control		3			
<input type="checkbox"/>	6. Install Air Conditioning with Non-HCFC Refrigerants		1			
<input type="checkbox"/>	7. Design and Install Effective Ductwork					
<input type="checkbox"/>	a. Install HVAC Unit and Ductwork within Conditioned Space		3			
<input type="checkbox"/>	b. Use Duct Mastic on All Duct Joints and Seams		1			
<input type="checkbox"/>	c. Install Ductwork under Attic Insulation (Buried Ducts)		1			
<input type="checkbox"/>	d. Pressure Balance the Ductwork System for Master Bedroom		1			
<input type="checkbox"/>	e. Protect Ducts during Construction and Clean All Ducts before Occupancy			1		
<input type="checkbox"/>	8. Install High Efficiency HVAC Filter (MERV 6+)			1		
<input type="checkbox"/>	9. Install Zoned, Hydronic Radiant Heating with Slab Edge Insulation		1	1		
<input type="checkbox"/>	10. Install Mechanical Ventilation System					
<input type="checkbox"/>	a. Any Whole House Ventilation System That Meets ASHRAE 62.2		1	2		
<input type="checkbox"/>	b. Install ENERGY STAR Bathroom Fan			1		
<input type="checkbox"/>	c. All Bathroom Fans Are on Timer or Humidistat			1		
<input type="checkbox"/>	11. Use Low-Sone Range Hood Vented to the Outside			1		
<input type="checkbox"/>	12. Install Carbon Monoxide Alarm(s)			1		
<b>J. BUILDING PERFORMANCE</b>		Possible Points				
0%	1. Design and Build High Performance Homes (2 points for each 1% above T-24, up to 30 pts) <i>Enter the percent above Title 24 in the cell at left. Any value over 15% will automatically earn 30 points.</i>		30			
<input type="checkbox"/>	2. House Obtains ENERGY STAR with Indoor Air Package Certification			5	2	
<input type="checkbox"/>	3. Inspection and Diagnostic Evaluations					
<input type="checkbox"/>	a. Third Party Energy and Green Building Review of Home Plans		1	1	1	
<input type="checkbox"/>	b. Blower Door Test Performed		1			
<input type="checkbox"/>	c. House Passes Combustion Safety Backdraft Test			1		
<b>K. RENEWABLE ENERGY</b>		Possible Points				
<input type="checkbox"/>	1. Pre-Plumb for Solar Hot Water Heating		4			
<input type="checkbox"/>	2. Install Solar Water Heating System		10			
<input type="checkbox"/>	3. Install Wiring Conduit for Future Photovoltaic Installation & Provide 200 <sup>sq</sup> ft South-Facing Roof		2			
<input type="checkbox"/>	4. Install Photovoltaic (PV) Panels					
<input type="checkbox"/>	a. 1.2 kW System		6			
<input type="checkbox"/>	b. 2.4 kW System		6			
<input type="checkbox"/>	c. 3.6 kW or more		6			

ENTER PROJECT NAME		Community	Energy	IAQ/Health	Resources	Water
<b>L. FINISHES</b>		Possible Points				
<input type="checkbox"/>	1. Provide Permanent Walk-Off Mats and Shoe Storage at Home Entrances			1		
	2. Use Low/No-VOC Paint					
<input type="checkbox"/>	a. Low-VOC Interior Wall/Ceiling Paints (<50 gpl VOCs (Flat) and <150 gpl VOCs (Non-Flat))			1		
<input type="checkbox"/>	b. Zero-VOC: Interior Wall/Ceiling Paints (<5 gpl VOCs (Flat))			3		
<input type="checkbox"/>	3. Use Low VOC, Water-Based Wood Finishes (<150 gpl VOCs)			2		
<input type="checkbox"/>	4. Use Low-VOC Construction Adhesives (<70 gpl VOCs) for All Adhesives			2		
<input type="checkbox"/>	5. Use Recycled-Content Paint				1	
	6. Use Environmentally Preferable Materials for Interior Finish: A) FSC-Certified Wood, B) Reclaimed Lumber, C) Rapidly Renewable D) Recycled-Content or E) Finger-Jointed At Least 50% of Each Material (1 pt each):					
<input type="checkbox"/>	a. Cabinets				1	
<input type="checkbox"/>	b. Interior Trim				1	
<input type="checkbox"/>	c. Shelving				1	
<input type="checkbox"/>	d. Doors				1	
<input type="checkbox"/>	e. Countertops				1	
	7. Reduce Formaldehyde in Interior Finish (Section 01350) for At Least 50% of Each Material Below:					
<input type="checkbox"/>	a. Cabinets			1		
<input type="checkbox"/>	b. Interior Trim			1		
<input type="checkbox"/>	c. Shelving			1		
<input type="checkbox"/>	d. Subfloor			1		
<input type="checkbox"/>	8. After Installation of Finishes, Test of Indoor Air Shows Formaldehyde Level <27ppb			3		

<b>M. FLOORING</b>		Possible Points				
	1. Use Environmentally Preferable Flooring: A) FSC-Certified or Reclaimed Wood, B) Rapidly Renewable Flooring Materials, C) Recycled-Content Ceramic Tiles, D) Exposed Concrete as Finished Floor or E) Recycled-Content Carpet. <i>Note: Flooring Adhesives Must Have &lt;50 gpl VOCs.</i>					
<input type="checkbox"/>	a. Minimum 15% of Floor Area				1	
<input type="checkbox"/>	b. Minimum 30% of Floor Area				1	
<input type="checkbox"/>	c. Minimum 50% of Floor Area				1	
<input type="checkbox"/>	d. Minimum 75% of Floor Area				1	
<input type="checkbox"/>	2. Thermal Mass Floors: Floor Covering Other than Carpet on 50% or More of Concrete Floors		1			
<input type="checkbox"/>	3. Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum)			2		

<b>N. OTHER</b>		Possible Points				
<input type="checkbox"/>	1. Incorporate Green Points Checklist in Blueprints- Required				R	
<input type="checkbox"/>	2. Develop Homeowner Manual of Green Features/Benefits		1	1		1
	3. Community Design Measures & Local Priorities See the Community Planning & Design section in Chapter 4 of the New Home Guidelines for measures. Maximum of 20 points for suggested measures. Local requirements may also be listed here.					
0	Enter description here					
0	Enter description here					
0	Enter description here					
0	Enter description here					
	4. Innovation: List innovative measures that meet the green building objectives of the Guidelines. Enter up to a maximum combined total of 20 pts. See Innovation Checklist for suggested measures.					
0	Innovation in Community: Enter description here					
0	Innovation in Energy: Enter description here					
0	Innovation in IAQ/Health: Enter description here					
0	Innovation in Resources: Enter description here					
0	Innovation in Water: Enter description here					

<b>Summary</b>					
Points Achieved from Specific Categories			0	0	0
Total Points Achieved			0		
<b>Project has not yet met the recommended minimum requirements</b>					
- Total Project Score of At Least 50 Points					
- Minimum points in specific categories: Energy (11), IAQ/Health (5), Resources (6), Water (3)					
- Required measures A.3.a and/or N.1					

# Single Family GreenPoint Checklist

date: \_\_\_\_\_



**Build It Green**  
Smart Solutions From The Ground Up

The GreenPoint checklist tracks green features incorporated into the home. The recommended minimum requirements for a green home are: Earn a total of 50 points or more; obtain the following minimum points per category: Energy (11), Indoor Air Quality/Health (5), Resources (6), and Water (3); and meet the prerequisites A.3.a (50% construction waste diversion) and N.1 (Incorporate Green Points checklist in blueprints).

The green building practices listed below are described in the New Home Construction Green Building Guidelines, available at [www.builditgreen.org](http://www.builditgreen.org).

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ENTER PROJECT NAME		Community	Energy	IAQ/Health	Resources	Water
<b>A. SITE</b>		Possible Points				
1. Protect Native Soil and Minimize Disruption of Existing Plants & Trees						
<input type="checkbox"/>	a. Protect Native Topsoil from Erosion and Reuse after Construction	1				1
<input type="checkbox"/>	b. Limit and Delineate Construction Footprint for Maximum Protection					1
2. Deconstruct Instead of Demolishing Existing Buildings On Site					3	
3. Recycle Job Site Construction Waste (Including Green Waste)					R	
<input type="checkbox"/>	a. Minimum 50% Waste Diversion by Weight (Recycling or Reuse) -Required				2	
<input type="checkbox"/>	b. Minimum 65% Diversion by Weight (Recycling or Reuse)				2	
<input type="checkbox"/>	c. Minimum 80% Diversion by Weight (Recycling or Reuse)				2	
4. Use Recycled Content Aggregate (Minimum 25%)						
<input type="checkbox"/>	a. Walkway and Driveway				1	
<input type="checkbox"/>	b. Roadway Base				1	
<b>B. LANDSCAPING</b>		Possible Points				
1. Construct Resource-Efficient Landscapes						
<input type="checkbox"/>	a. No Invasive Species Listed by Cal-IPC Are Planted					1
<input type="checkbox"/>	b. No Plant Species Will Require Hedging				1	
<input type="checkbox"/>	c. 75% of Plants Are California Natives or Mediterranean Species					1
2. Use Fire-Safe Landscaping Techniques		1				
3. Minimize Turf Areas In Landscape Installed by Builder						
<input type="checkbox"/>	a. All Turf Will Have a Water Requirement Less than or Equal to Tall Fescue					2
<input type="checkbox"/>	b. Turf Shall Not Be Installed on Slopes Exceeding 10% or in Areas Less than 8 Feet Wide					2
<input type="checkbox"/>	c. Turf is <33% of Landscaped Area					2
<input type="checkbox"/>	d. Turf is <10% of Landscaped Area					2
4. Plant Shade Trees			1			1
5. Implement Hydrozoning: Group Plants by Water Needs						1
6. Install High-Efficiency Irrigation Systems						
<input type="checkbox"/>	a. System Uses Only Low-Flow Drip, Bubblers, or Low-flow Sprinklers					1
<input type="checkbox"/>	b. System Has Smart (Weather-Based) Controllers					2
7. Apply Two Inches of Compost in the Top 6 to 12 Inches of Soil						2
8. Mulch All Planting Beds to the Greater of 2 Inches or Local Water Ordinance Requirement						1
9. Use 50% Salvaged or Recycled-Content Materials for 50% of Non-Plant Landscape Elements					1	
10. Reduce Light Pollution by Shielding Fixtures and/or Directing Light Downward		1				
<b>C. FOUNDATION</b>		Possible Points				
1. Incorporate Recycled Flyash in Concrete						
<input type="checkbox"/>	a. Minimum 20% Flyash				1	
<input type="checkbox"/>	b. Minimum 25% Flyash				1	
2. Use Frost-Protected Shallow Foundation in Cold Areas (C.E.C. Climate Zone 16)					3	
3. Use Radon Resistant Construction (In At-Risk Locations Only)				1		
<b>D. STRUCTURAL FRAME &amp; BUILDING ENVELOPE</b>		Possible Points				
1. Apply Optimal Value Engineering						
<input type="checkbox"/>	a. 2x4 Studs at 24-Inch On Center Framing				1	
<input type="checkbox"/>	b. Door and Window Headers Sized for Load				1	
<input type="checkbox"/>	c. Use Only Jack and Cripple Studs Required for Load				1	

# ENTER PROJECT NAME

	Community	Energy	IAQ/Health	Resources	Water
<b>2. Use Engineered Lumber</b>					
<input type="checkbox"/> a. Beams and Headers				1	
<input type="checkbox"/> b. Insulated Engineered Headers		1			
<input type="checkbox"/> c. Wood I-Joists or Web Trusses for Floors				1	
<input type="checkbox"/> d. Wood I-Joists or Rafters				1	
<input type="checkbox"/> e. Engineered or Finger-Jointed Studs for Vertical Applications				1	
<b>3. Use FSC-Certified Wood</b>					
<input type="checkbox"/> a. Dimensional Studs: Minimum 40%				2	
<input type="checkbox"/> b. Dimensional Studs: Minimum 70%				2	
<input type="checkbox"/> c. Panel Products: Minimum 40%				1	
<input type="checkbox"/> d. Panel Products: Minimum 70%				1	
<input type="checkbox"/> 4. Design Energy Heels on Trusses (75% of Attic Insulation Height at Outside Edge of Exterior Wall)		1			
<input type="checkbox"/> 5. Design Trusses to Accommodate Ductwork		1			
<b>6. Use Oriented Strand Board (OSB)</b>					
<input type="checkbox"/> a. Subfloor				1	
<input type="checkbox"/> b. Sheathing				1	
<input type="checkbox"/> 7. Use Recycled-Content Steel Studs for 90% of Interior Wall Framing				1	
<b>8. Use Solid Wall Systems (Includes SIPs, ICFs, &amp; Any Non-Stick Frame Assembly)</b>					
<input type="checkbox"/> a. Floors		2		2	
<input type="checkbox"/> b. Walls		2		2	
<input type="checkbox"/> c. Roofs		2		2	
<input type="checkbox"/> 9. Thermal Mass Walls: 5/8-Inch Drywall on All Interior Walls or Walls Weigh more than 40 lb/cu.ft.		1			
<b>10. Design and Build Structural Pest Controls</b>					
<input type="checkbox"/> a. Install Termite Shields & Separate All Exterior Wood-to-Concrete Connections by Metal or Plastic Fasteners/Dividers				1	
<input type="checkbox"/> b. All New Plants Have Trunk, Base, or Stem Located At Least 36 Inches from Foundation				1	
<b>11. Reduce Pollution Entering the Home from the Garage</b>					
<input type="checkbox"/> a. Tightly Seal the Air Barrier between Garage and Living Area			1		
<input type="checkbox"/> b. Install Separate Garage Exhaust Fan			1		
<b>12. Install Overhangs and Gutters</b>					
<input type="checkbox"/> a. Minimum 16-Inch Overhangs and Gutters				1	
<input type="checkbox"/> b. Minimum 24-Inch Overhangs and Gutters		1			

<b>E. EXTERIOR FINISH</b>					Possible Points	
<input type="checkbox"/> 1. Use Recycled-Content (No Virgin Plastic) or FSC-Certified Wood Decking				2		
<input type="checkbox"/> 2. Install a Drainage Plane (Rain Screen Wall System)				2		
<input type="checkbox"/> 3. Use Durable and Non-Combustible Siding Materials				1		
<input type="checkbox"/> 4. Select Durable and Non-Combustible Roofing Materials				2		

<b>F. PLUMBING</b>					Possible Points	
<b>1. Distribute Domestic Hot Water Efficiently</b>						
<input type="checkbox"/> a. Insulate Hot Water Pipes from Water Heater to Kitchen						1
<input type="checkbox"/> b. Insulate All Hot Water Pipes OR Install On-Demand Hot Water Circulation System in conjunction with F.1.a Insulate Hot Water Pipes from Water Heater to Kitchen		1				1
<input type="checkbox"/> c. Locate the Water Heater within 25 feet of All Hot Water Fixtures and Appliances						1
<input type="checkbox"/> d. Use Engineered Parallel Piping						1
<input type="checkbox"/> 2. Install Only High Efficiency Toilets (Dual-Flush or <=1.3 gpf)						3

<b>G. APPLIANCES</b>					Possible Points	
<b>1. Install ENERGY STAR Dishwasher</b>						
<input type="checkbox"/> a. ENERGY STAR		1				
<input type="checkbox"/> b. Dishwasher Uses No More than 6.5 Gallons/Cycle		1				1
<input type="checkbox"/> 2. Install ENERGY STAR Clothes Washing Machine with Water Factor of 6 or Less		1				3
<b>3. Install ENERGY STAR Refrigerator</b>						
<input type="checkbox"/> a. ENERGY STAR: 15% above Federal Minimum		1				
<input type="checkbox"/> b. Super-Efficient Home Appliance Tier 2: 25% above Federal Minimum		1				
<input type="checkbox"/> 4. Install Built-In Recycling Center						2

# ENTER PROJECT NAME

Community	Energy	IAQ/Health	Resources	Water
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H. INSULATION		Possible Points			
<input type="checkbox"/>	1. Install Insulation with 75% Recycled Content				
<input type="checkbox"/>	a. Walls and/or Floors				1
<input type="checkbox"/>	b. Ceilings				1
<input type="checkbox"/>	2. Install Insulation that is Low-Emitting (Certified Section 01350)				
<input type="checkbox"/>	a. Walls and/or Floors			1	
<input type="checkbox"/>	b. Ceilings			1	
<input type="checkbox"/>	3. Pre-Drywall Inspection Shows Quality Installation of Insulation		1		

I. HEATING, VENTILATION & AIR CONDITIONING		Possible Points			
<input type="checkbox"/>	1. Design and Install HVAC System to ACCA Manual J, D, and S Recommendations		4		
<input type="checkbox"/>	2. Install Sealed Combustion Units				
<input type="checkbox"/>	a. Furnaces			2	
<input type="checkbox"/>	b. Water Heaters			2	
<input type="checkbox"/>	3. No Fireplace or Sealed Gas Fireplace with Efficiency Rating Not Less Than 60%			1	
<input type="checkbox"/>	4. Install ENERGY STAR Ceiling Fans with CFLs in Living Areas and Bedrooms		1		
<input type="checkbox"/>	5. Install Mechanical Ventilation System for Nighttime Cooling (Points are Cumulative up to 3)				
<input type="checkbox"/>	a. Whole House Fan		1		
<input type="checkbox"/>	b. Automatically Controlled Integrated System		2		
<input type="checkbox"/>	c. Integrated System with Variable Speed Control		3		
<input type="checkbox"/>	6. Install Air Conditioning with Non-HCFC Refrigerants		1		
<input type="checkbox"/>	7. Design and Install Effective Ductwork				
<input type="checkbox"/>	a. Install HVAC Unit and Ductwork within Conditioned Space		3		
<input type="checkbox"/>	b. Use Duct Mastic on All Duct Joints and Seams		1		
<input type="checkbox"/>	c. Install Ductwork under Attic Insulation (Buried Ducts)		1		
<input type="checkbox"/>	d. Pressure Balance the Ductwork System for Master Bedroom		1		
<input type="checkbox"/>	e. Protect Ducts during Construction and Clean All Ducts before Occupancy			1	
<input type="checkbox"/>	8. Install High Efficiency HVAC Filter (MERV 6+)			1	
<input type="checkbox"/>	9. Install Zoned, Hydronic Radiant Heating with Slab Edge Insulation		1	1	
<input type="checkbox"/>	10. Install Mechanical Ventilation System				
<input type="checkbox"/>	a. Any Whole House Ventilation System That Meets ASHRAE 62.2		1	2	
<input type="checkbox"/>	b. Install ENERGY STAR Bathroom Fan			1	
<input type="checkbox"/>	c. All Bathroom Fans Are on Timer or Humidistat			1	
<input type="checkbox"/>	11. Use Low-Sone Range Hood Vented to the Outside			1	
<input type="checkbox"/>	12. Install Carbon Monoxide Alarm(s)			1	

J. BUILDING PERFORMANCE		Possible Points			
0%	1. Design and Build High Performance Homes (2 points for each 1% above T-24, up to 30 pts) <i>Enter the percent above Title 24 in the cell at left. Any value over 15% will automatically earn 30 points.</i>		30		
<input type="checkbox"/>	2. House Obtains ENERGY STAR with Indoor Air Package Certification			5	2
<input type="checkbox"/>	3. Inspection and Diagnostic Evaluations				
<input type="checkbox"/>	a. Third Party Energy and Green Building Review of Home Plans		1	1	1
<input type="checkbox"/>	b. Blower Door Test Performed		1		
<input type="checkbox"/>	c. House Passes Combustion Safety Backdraft Test			1	

K. RENEWABLE ENERGY		Possible Points			
<input type="checkbox"/>	1. Pre-Plumb for Solar Hot Water Heating		4		
<input type="checkbox"/>	2. Install Solar Water Heating System		10		
<input type="checkbox"/>	3. Install Wiring Conduit for Future Photovoltaic Installation & Provide 200 <sup>2</sup> of South-Facing Roof		2		
<input type="checkbox"/>	4. Install Photovoltaic (PV) Panels				
<input type="checkbox"/>	a. 1.2 kW System		6		
<input type="checkbox"/>	b. 2.4 kW System		6		
<input type="checkbox"/>	c. 3.6 kW or more		6		

ENTER PROJECT NAME		Community	Energy	IAQ/Health	Resources	Water
<b>L. FINISHES</b>		Possible Points				
<input type="checkbox"/>	1. Provide Permanent Walk-Off Mats and Shoe Storage at Home Entrances			1		
<input type="checkbox"/>	2. Use Low/No-VOC Paint					
<input type="checkbox"/>	a. Low-VOC Interior Wall/Ceiling Paints (<50 gpl VOCs (Flat) and <150 gpl VOCs (Non-Flat))			1		
<input type="checkbox"/>	b. Zero-VOC: Interior Wall/Ceiling Paints (<5 gpl VOCs (Flat))			3		
<input type="checkbox"/>	3. Use Low VOC, Water-Based Wood Finishes (<150 gpl VOCs)			2		
<input type="checkbox"/>	4. Use Low-VOC Construction Adhesives (<70 gpl VOCs) for All Adhesives			2		
<input type="checkbox"/>	5. Use Recycled-Content Paint				1	
<input type="checkbox"/>	6. Use Environmentally Preferable Materials for Interior Finish: A) FSC-Certified Wood, B) Reclaimed Lumber, C) Rapidly Renewable D) Recycled-Content or E) Finger-Jointed At Least 50% of Each Material (1 pt each):					
<input type="checkbox"/>	a. Cabinets				1	
<input type="checkbox"/>	b. Interior Trim				1	
<input type="checkbox"/>	c. Shelving				1	
<input type="checkbox"/>	d. Doors				1	
<input type="checkbox"/>	e. Countertops				1	
<input type="checkbox"/>	7. Reduce Formaldehyde in Interior Finish (Section 01350) for At Least 50% of Each Material Below:					
<input type="checkbox"/>	a. Cabinets			1		
<input type="checkbox"/>	b. Interior Trim			1		
<input type="checkbox"/>	c. Shelving			1		
<input type="checkbox"/>	d. Subfloor			1		
<input type="checkbox"/>	8. After Installation of Finishes, Test of Indoor Air Shows Formaldehyde Level <27ppb			3		

<b>M. FLOORING</b>		Possible Points				
<input type="checkbox"/>	1. Use Environmentally Preferable Flooring: A) FSC-Certified or Reclaimed Wood, B) Rapidly Renewable Flooring Materials, C) Recycled-Content Ceramic Tiles, D) Exposed Concrete as Finished Floor or E) Recycled-Content Carpet. <i>Note: Flooring Adhesives Must Have &lt;50 gpl VOCs.</i>					
<input type="checkbox"/>	a. Minimum 15% of Floor Area				1	
<input type="checkbox"/>	b. Minimum 30% of Floor Area				1	
<input type="checkbox"/>	c. Minimum 50% of Floor Area				1	
<input type="checkbox"/>	d. Minimum 75% of Floor Area				1	
<input type="checkbox"/>	2. Thermal Mass Floors: Floor Covering Other than Carpet on 50% or More of Concrete Floors		1			
<input type="checkbox"/>	3. Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum)			2		

<b>N. OTHER</b>		Possible Points				
<input type="checkbox"/>	1. Incorporate Green Points Checklist in Blueprints- Required				R	
<input type="checkbox"/>	2. Develop Homeowner Manual of Green Features/Benefits		1	1		1
3. Community Design Measures & Local Priorities See the Community Planning & Design section in Chapter 4 of the New Home Guidelines for measures. Maximum of 20 points for suggested measures. Local requirements may also be listed here.						
0	Enter description here					
0	Enter description here					
0	Enter description here					
0	Enter description here					
4. Innovation: List innovative measures that meet the green building objectives of the Guidelines. Enter up to a maximum combined total of 20 pts. See Innovation Checklist for suggested measures.						
0	Innovation in Community: Enter description here					
0	Innovation in Energy: Enter description here					
0	Innovation in IAQ/Health: Enter description here					
0	Innovation in Resources: Enter description here					
0	Innovation in Water: Enter description here					

<b>Summary</b>					
Points Achieved from Specific Categories			0	0	0
Total Points Achieved			0		
<b>Project has not yet met the recommended minimum requirements</b>					
- Total Project Score of At Least 50 Points					
- Minimum points in specific categories: Energy (11), IAQ/Health (5), Resources (6), Water (3)					
- Required measures A.3.a and/or N.1					

# Multifamily GreenPoint Checklist

date: \_\_\_\_\_



This checklist tracks green features in a multifamily project. The recommended minimum requirements for a green home are: Earn a total of 50 points or more; obtain the following minimum points per category: Community (6), Energy (11), Indoor Air Quality/Health (5), Resources (6), and Water (3); and meet the prerequisites A.3.a (50% construction waste diversion), A.10.a. (No shingle roofing) and N.1 (Incorporate GreenPoint checklist in blueprints). The green building practices listed below are described in greater detail in the Multifamily Green Building Guidelines available at [www.multifamilygreen.org](http://www.multifamilygreen.org)

Current Point Total	0

Enter Total Conditioned Floor Area of the Project: \_\_\_\_\_  
 Enter Total Non-Residential Floor Area of Project \_\_\_\_\_  
 Percent of Project Dedicated to Residential Use \_\_\_\_\_

1
100%

ENTER PROJECT NAME	Community	Energy	IAC/Health	Resources	Water	
	Possible Points					
<b>A. PLANNING &amp; DESIGN</b>						
<b>1. Infill Sites</b>						
<input type="checkbox"/> a. Project is Located Within an Urban Growth Boundary & Avoids Environmentally Sensitive Sites	1					
<input type="checkbox"/> b. Project Includes the Redevelopment of At Least One Existing Building				1		
<input type="checkbox"/> c. Housing Density of 15 Units Per Acre or More (1 pt for every 5 u/a) Enter Project Density Number (In Units Per Acre)	10					
<input type="checkbox"/> d. Locate Within Existing Community that has Sewer Line & Utilities in Place	1					
<input type="checkbox"/> e. Project Redevelops a Brownfield Site or is Designated a Redevelopment Area by a City	1					
f. Site has Pedestrian Access Within 1/2 Mile to Neighborhood Services (1 Pt for 5 Or More, 2 Pts for 10 Or More):						
<input type="checkbox"/> 1) Bank	2	<input type="checkbox"/> 2) Place of Worship	<input type="checkbox"/> 3) Full Scale Grocery/Supermarket			
<input type="checkbox"/> 4) Day Care		<input type="checkbox"/> 5) Cleaners	<input type="checkbox"/> 6) Fire Station			
<input type="checkbox"/> 7) Hair Care		<input type="checkbox"/> 8) Hardware	<input type="checkbox"/> 9) Laundry			
<input type="checkbox"/> 10) Library		<input type="checkbox"/> 11) Medical/Dental	<input type="checkbox"/> 12) Senior Care Facility			
<input type="checkbox"/> 13) Public Park		<input type="checkbox"/> 14) Pharmacy	<input type="checkbox"/> 15) Post Office			
<input type="checkbox"/> 16) Restaurant		<input type="checkbox"/> 17) School	<input type="checkbox"/> 18) After School Programs			
<input type="checkbox"/> 19) Commercial Office		<input type="checkbox"/> 20) Community Center	<input type="checkbox"/> 21) Theater/Entertainment			
<input type="checkbox"/> 22) Convenience Store Where Meat & Produce are Sold.						
g. Proximity to Public Transit						
Development is Located Within:						
<input type="checkbox"/> 1/4 Mile of One Planned or Current Bus Line Stop	1					
<input type="checkbox"/> 1/4 Mile of Two or More Planned or Current Bus Line Stops	1					
<input type="checkbox"/> 1/2 Mile of a Commuter Train/Light Rail Transit System	1					
h. Reduced Parking Capacity:						
<input type="checkbox"/> Less than 1.5 Parking Spaces Per Unit	1					
<input type="checkbox"/> Less than 1.0 Parking Spaces Per Unit	1					
<b>2. Mixed-Use Developments</b>						
<input type="checkbox"/> a. At least 2% of Development Floorspace Supports Mixed Use (Non-Residential Tenants)	1					
<input type="checkbox"/> b. Half of Above Non-Residential Floorspace is Dedicated to Neighborhood Services	1					
<b>3. Building Placement &amp; Orientation</b>						
<input type="checkbox"/> a. Protect Soil & Existing Plants & Trees	1					
<b>4. Design for Walking &amp; Bicycling</b>						
<input type="checkbox"/> a. Sidewalks Are Physically Separated from Roadways & Are 5 Feet Wide	1					
<input type="checkbox"/> b. Traffic Calming Strategies Are Installed by the Developer	1					
<input type="checkbox"/> c. Provide Dedicated, Covered & Secure Bicycle Storage for 15% of Residents	1					
<input type="checkbox"/> d. Provide Secure Bicycle Storage for 5% of Non-Residential Tenant Employees & Visitors	1					
<b>5. Social Gathering Places</b>						
<input type="checkbox"/> a. Outdoor Gathering Places for Residents (Average of 50 sf Per Unit Or More)	1					
<input type="checkbox"/> b. Outdoor Gathering Places Provide Natural Elements (For compact sites only; this point not available if A.5a is checked)	1					
<b>6. Design for Safety and Natural Surveillance</b>						
<input type="checkbox"/> a. All Main Entrances to the Building and Site are Prominent and Visible from the Street	1					
<input type="checkbox"/> b. Residence Entries Have Views to Callers (Windows or Double Peep Holes) & Can Be Seen By Neighbors	1					

ENTER PROJECT NAME		Community	Energy	IAQ/Health	Resources	Water
<b>7. Landscaping</b>						
<input checked="" type="checkbox"/>	Check here if the landscape area is <10% of the total site area. Projects with <10% landscape area can only check up to 3 boxes in this section.					
<input type="checkbox"/>	a. No Plant Species will Require Shearing				1	
<input type="checkbox"/>	b. No plantings are Listed on the Invasive Plant Inventory by the California Invasive Plant Council				1	
<input type="checkbox"/>	c. Specify California Native or Mediterranean Species that Require Occasional, Little or No Summer Watering					1
d. Create Drought Resistant Soils:						
<input type="checkbox"/>	i. Mulch All Planting Beds to a Depth of 2 Inches or Greater as Per Local Ordinance					1
<input type="checkbox"/>	ii. Amend with 1 Inch of Compost or as per Soil Analysis to Reach 3.5% Soil Organic Matter					1
e. Design & Install High-Efficiency Irrigation System						
<input type="checkbox"/>	i. Specify Smart (Weather-Based) Irrigation Controllers					1
<input type="checkbox"/>	ii. Specify Drip, Bubblers or Low-Flow Sprinklers for All Non Turf Landscape Areas					1
<input type="checkbox"/>	f. Group Plants by Water Needs (Hydrozones) in Planting Plans & Identify Hydrozones on Irrigation Plans					1
g. Minimize Turf in Landscape Installed by Builder						
<input type="checkbox"/>	i. Do Not Specify Turf on Slopes Exceeding 10% or in Areas Less Than 8 Feet Wide					1
<input type="checkbox"/>	ii. Less Than 33% of All Landscaped Area is Specified as Turf AND All Turf has Water Requirement <= To Tall Fescue					1
<b>8. Building Performance Exceeds Title 24</b>						
Enter the Percent Above the 2005 Version of Title 24 for Residential and Non-Residential Portions of the Project.						
<input checked="" type="checkbox"/>	0%	a. Residences: 2 Points for Every 1% Above 2005 T24 (Weighted Average Up To 30 Total Points for Measure 8 a & b)		30		
<input checked="" type="checkbox"/>	0%	b. Non-Residential Spaces: 2 Points for Every 1% Above 2005 T24 (Up To 30 Total Points for Measure 8 a & b)				
<input type="checkbox"/>		Check here if using 2001 version of Title 24. 1 Point for Every 1% Above 2001 Title 24.				
<b>9. Cool Site</b>						
<input type="checkbox"/>	a. At least 30% of the Site Includes Cool Site Techniques		1			
<b>10. Adaptable Buildings</b>						
a. Include Universal Design Principles in Units						
<input type="checkbox"/>	50% of Units		1			
<input type="checkbox"/>	80% of Units		1			
<input type="checkbox"/>	b. Live/Work Units Include A Dedicated Commercial Entrance		1			
<b>11. Affordability</b>						
a. A Percentage of Units are Dedicated to Households Making 80% or Less of AMI						
<input type="checkbox"/>	10% of All Units		1			
<input type="checkbox"/>	20%		1			
<input type="checkbox"/>	30%		1			
<input type="checkbox"/>	50% or More		1			
<input type="checkbox"/>	b. Development Includes Multiple Bedroom Units (At least 1 Unit with 3BR or More at or Less Than 80% AMI)		2			
<b>B. SITEWORK</b>		<b>Possible Points</b>				
<b>1. Construction &amp; Demolition Waste Management</b>						
Divert a Portion of all Construction & Demolition Waste:						
<input type="checkbox"/>	a. Required: Divert 50%				R	
<input type="checkbox"/>	b. Divert 65%				2	
<input type="checkbox"/>	c. Divert 80% or more				2	
<b>2. Construction Material Efficiencies</b>						
<input type="checkbox"/>	a. Framing Materials are Pre-Cut or Pre-Assembled (80% or More)				1	
b. Components of the Project Are Pre-Assembled Off-Site & Delivered to the Project						
<input type="checkbox"/>	25% of Total Square Footage				2	
<input type="checkbox"/>	50% of Total Square Footage				2	
<input type="checkbox"/>	75% of Total Square Footage or More				2	
<b>3. Construction Indoor Air Quality (IAQ) Management Plan</b>						
<input type="checkbox"/>	a. An IAQ Management Plan is Written & Followed for the Project				2	
<b>C. STRUCTURE</b>		<b>Possible Points</b>				
<b>1. Recycled Aggregate</b>						
<input type="checkbox"/>	a. Minimum 25% Recycled Aggregate (Crushed Concrete) for Fill, Backfill & Other Uses				1	
<b>2. Recycled Flyash in Concrete</b>						
a. Flyash or Slag is Used to Displace a Portion of Portland Cement in Concrete						
<input type="checkbox"/>	20%				1	
<input type="checkbox"/>	30% or More				1	

ENTER PROJECT NAME		Community	Energy	IAQ/Health	Resources	Water
<b>3. FSC-Certified Wood for Framing Lumber</b>						
a. FSC-Certified Wood for a Percentage of All Dimensional Studs:						
<input type="checkbox"/>	40%				2	
<input type="checkbox"/>	70%				2	
b. FSC-Certified Panel Products for a Percentage of All Sheathing (OSB & Plywood):						
<input type="checkbox"/>	40%				1	
<input type="checkbox"/>	70%				1	
<b>4. Engineered Lumber or Steel Studs, Joists, Headers &amp; Beams</b>						
a. 90% or More of All Floor & Ceiling Joists						
<input type="checkbox"/>					1	
b. 90% or More of All Studs						
<input type="checkbox"/>					2	
c. 90% or More of All Headers & Beams						
<input type="checkbox"/>					2	
<b>5. Optimal Value Engineering Framing</b>						
a. Studs at 24" Centers on Top Floor Exterior Walls &/or All Interior Walls						
<input type="checkbox"/>					1	
b. Door & Window Headers Sized for Load						
<input type="checkbox"/>					1	
c. Use Only Jack & Cripple Studs Required for Load						
<input type="checkbox"/>					1	
<b>6. Steel Framing</b>						
a. Mitigate Thermal Bridging by Installing Exterior Insulation (At Least 1-Inch of Rigid Foam)						
<input type="checkbox"/>		2				
<b>7. Structural Insulated Panels (SIPs) Or Other Solid Wall Systems</b>						
a. SIPs Or Other Solid Wall Systems are Used for 80% of All:						
<input type="checkbox"/>	Floors		2		2	
<input type="checkbox"/>	Walls		2		2	
<input type="checkbox"/>	Roofs		2		2	
<b>8. Raised Heel Roof Trusses</b>						
a. 75% of All Roof Trusses Have Raised Heels						
<input type="checkbox"/>			1			
<b>9. Insulation</b>						
a. All Ceiling, Wall & Floor Insulation is 01350 Certified OR Contains No Added Formaldehyde						
<input type="checkbox"/>				1		
b. All Ceiling, Wall & Floor Insulation Has a Recycled Content of 50% or More						
<input type="checkbox"/>					1	
<b>10. Durable Roofing Options</b>						
a. <i>Required:</i> No Shingle Roofing OR All Shingle Roofing Has 3-Yr Subcontractor Guarantee & 20-Yr Manufacturer Warranty						
<input type="checkbox"/>					R	
b. All Sloped Roofing Materials Carry a 40-Year Manufacturer Warranty						
<input type="checkbox"/>					1	
<b>11. Moisture Shedding &amp; Mold Avoidance</b>						
a. Building(s) Include a Definitive Drainage Plane Under Siding						
<input type="checkbox"/>					4	
b. Bathroom Fans are Supplied in All Bathrooms, Are Exhausted to the Outdoors & Are Equipped with Controls						
<input type="checkbox"/>					1	
c. A Minimum of 80% of Kitchen Range Hoods Are Vented to the Exterior						
<input type="checkbox"/>				1		
<b>12. Green Roofs</b>						
a. A Portion of the Low-Slope Roof Area is Covered By A Vegetated or "Green" Roof						
<input type="checkbox"/>	25%	2				2
<input type="checkbox"/>	50% or More	2				2

D. SYSTEMS		Possible Points				
<b>1. Passive Solar Heating</b>						
a. Orientation: At Least 40% of the Units Face Directly South						
<input type="checkbox"/>		2				
b. Shading On All South-Facing Windows Allow Sunlight to Penetrate in Winter, Not in Summer						
<input type="checkbox"/>		1				
c. Thermal Mass: At Least 50% of the Floor Area Directly Behind South-Facing Windows is Massive						
<input type="checkbox"/>		2				
<b>2. Radiant Hydronic Space Heating</b>						
a. Install Radiant Hydronic Space Heating for IAQ purposes (No Forced Air) in All Residences						
<input type="checkbox"/>			2			
<b>3. Solar Water Heating</b>						
a. Pre-Plumb for Solar Hot Water						
<input type="checkbox"/>		1				
b. Install Solar Hot Water System for Preheating DHW						
<input type="checkbox"/>		4				
<b>4. Air Conditioning with Advanced Refrigerants</b>						
a. Install Air Conditioning with Non-HCFC Refrigerants						
<input type="checkbox"/>		1				
<b>5. Advanced Ventilation Practices</b>						
Perform the Following Practices in Residences:						
a. Infiltration Testing by a C-HERS Rater for Envelope Sealing & Reduced Infiltration						
<input type="checkbox"/>		2				
b. Operable Windows or Skylights Are Placed To Induce Cross Ventilation (At Least One Room In 80% of Units)						
<input type="checkbox"/>		1	1			
c. Ceiling Fans in Every Bedroom & Living Room OR Whole House Fan is Used						
<input type="checkbox"/>		1				
<b>6. Garage Ventilation</b>						
a. Garage Ventilation Fans Are Controlled by Carbon Monoxide Sensors (Passive Ventilation Does Not Count)						
<input type="checkbox"/>				1		

ENTER PROJECT NAME		Community	Energy	IAQ/Health	Resources	Water
<b>7. Low-Mercury Lamps</b>						
<input type="checkbox"/>	a. Low-Mercury Products Are Installed Wherever Linear Fluorescent Lamps Are Used				1	
<input type="checkbox"/>	b. Low-Mercury Products Are Installed Wherever Compact Fluorescent Lamps Are Used				2	
<b>8. Light Pollution Reduction</b>						
<input type="checkbox"/>	a. Exterior Luminaires Emit No Light Above Horizontal OR Are Dark Sky Certified	1				
<input type="checkbox"/>	b. Control light Trespass Onto Neighboring Areas Through Appropriate Fixture Selection & Placement	1				
<b>9. Onsite Electricity Generation</b>						
<input type="checkbox"/>	a. Pre-Wire for Photovoltaics & Plan for Space (Clear Areas on Roof & in Mechanical Room)				1	
b. Install Photovoltaics to Offset a Percent of the Project's Total Estimated Electricity Demand						
<input type="checkbox"/>	10%	2	2			
<input type="checkbox"/>	20%	2	2			
<input type="checkbox"/>	30% or more	2	2			
<input type="checkbox"/>	c. Educational Display is Provided in a Viewable Public Area	1				
<b>10. Elevators</b>						
<input type="checkbox"/>	a. Gearless Elevators Are Installed		1			
<b>11. ENERGY STAR® Appliances</b>						
a. Install ENERGY STAR Refrigerators in All Locations						
<input type="checkbox"/>	ENERGY STAR-Qualified		1			
<input type="checkbox"/>	ACEEE-Listed Refrigerators		1			
b. Install ENERGY STAR Dishwashers in All Locations						
<input type="checkbox"/>	All Dishwashers Are ENERGY STAR-qualified		1			
<input type="checkbox"/>	Residential-grade Dishwashers Use No More than 6.5 Gallons Per Cycle		1			1
<input type="checkbox"/>	c. Install ENERGY STAR Clothes Washers In All Locations		1			2
<input type="checkbox"/>	d. Install Ventless Natural Gas Clothes Dryers in Residences			1		
<b>12. Central Laundry</b>						
<input type="checkbox"/>	a. Central Laundry Facilities Are Provided for All Occupants				1	
<b>13. Water-Efficient Fixtures</b>						
<input type="checkbox"/>	a. All Showerheads Use 2.0 Gallons Per Minute (gpm) or Less		1			1
b. High-Efficiency Toilets Use 1.28 gpf or Less or Are Dual Flush						
<input type="checkbox"/>	In All Residences					3
<input type="checkbox"/>	In All Non-Residential Areas					3
c. Install High Efficiency Urinals (0.5 gpf or less) or No-Water Urinals Wherever Urinals Are Specified:						
<input type="checkbox"/>	Average flush rate is 0.5 gallons per flush or less					1
<input type="checkbox"/>	Average flush rate is 0.1 gallons per flush or less					1
d. Flow Limiters Or Flow Control Valves Are Installed on All Faucets						
<input type="checkbox"/>	Residences: Kitchen - 2.0 gpm or less		1			1
<input type="checkbox"/>	Non-Residential Areas: Kitchen - 2.0 gpm or less		0			0
<input type="checkbox"/>	Residences: Bathroom Faucets- 1.5 gpm or less		1			1
<input type="checkbox"/>	Non-Residential Areas: Bathroom Faucets - 1.5 gpm or less		0			0
<input type="checkbox"/>	e. Non-Residential Areas: Install Pre-Rinse Spray Valves in Commercial Kitchens - 1.6 gpm or less					1
<b>14. Source Water Efficiency</b>						
<input type="checkbox"/>	a. Use Recycled Water for Landscape Irrigation or to Flush Toilets/Urinals					2
<input type="checkbox"/>	b. Use Captured Rainwater for Landscape Irrigation or to Flush 5% of Toilets &/or Urinals					4
<input type="checkbox"/>	c. Water is Submetered for Each Residential Unit & Non-Residential Tenant					4

E. FINISHES AND FURNISHINGS		Possible Points				
<b>1. Construction Indoor Air Quality Management</b>						
<input type="checkbox"/>	a. Perform a 2-Week Whole Building Flush-Out Prior to Occupancy			1		
<b>2. Entryways</b>						
<input type="checkbox"/>	a. Provide Permanent Walk-Off Mats and Shoe Storage at All Home Entrances			1		
<input type="checkbox"/>	b. Permanent Walk-Off Systems Are Provided at All Main Building Entrances & In Common Areas			1		
<b>3. Recycling &amp; Waste Collection</b>						
<input type="checkbox"/>	a. Residences: Provide Built-In Recycling Center In Each Unit				2	

# ENTER PROJECT NAME

Community	Energy	IAQ/Health	Resources	Water
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<b>4. Use Low/No-VOC Paints &amp; Coatings</b>				
a. Low-VOC Interior Paints (<50 gpl VOCs (Flat) and <150 gpl VOCs (Non-Flat))				
<input type="checkbox"/>	In All Residences		1	
<input type="checkbox"/>	In All Non-Residential Areas:		0	
b. Zero-VOC: Interior Paints (<5 gpl VOCs (Flat))				
<input type="checkbox"/>	In All Residences		1	
<input type="checkbox"/>	In All Non-Residential Areas:		0	
c. Low-VOC Wood Coatings (<250 gpl VOCs)				
<input type="checkbox"/>	In All Residences		2	
<input type="checkbox"/>	In All Non-Residential Areas:		0	
d. Low-VOC Wood Stains (<250 gpl VOCs)				
<input type="checkbox"/>	In All Residences		2	
<input type="checkbox"/>	In All Non-Residential Areas:		0	
<b>5. Use Recycled Content Exterior Paint</b>				
<input type="checkbox"/>	a. Use Recycled Content Paint on 50% of All Exteriors			1
<b>6. Low-VOC Construction Adhesives</b>				
<input type="checkbox"/>	a. Use Low-VOC Construction Adhesives (<70 gpl VOCs) for All Adhesives		1	
<b>7. Environmentally Preferable Materials for Interior Finish</b>				
Use Environmentally Preferable Materials for Interior Finish: A) FSC-Certified Wood, B) Reclaimed Lumber, C) Rapidly Renewable D) Recycled-Content or E) Finger-Jointed				
a. Residences: At Least 50% of Each Material:				
<input type="checkbox"/>	i. Cabinets			1
<input type="checkbox"/>	ii. Interior Trim			1
<input type="checkbox"/>	iii. Shelving			1
<input type="checkbox"/>	iv. Doors			1
<input type="checkbox"/>	v. Countertops			1
b. Non-Residential Areas: At Least 50% of Each Material:				
<input type="checkbox"/>	i. Cabinets			0
<input type="checkbox"/>	ii. Interior Trim			0
<input type="checkbox"/>	iii. Shelving			0
<input type="checkbox"/>	iv. Doors			0
<input type="checkbox"/>	v. Countertops			0
<b>8. Reduce Formaldehyde in Interior Finish Materials</b>				
Reduce Formaldehyde in Interior Finish Materials (Section 01350) for At Least 50% of Each Material Below:				
a. Residences:				
<input type="checkbox"/>	i. Cabinets		1	
<input type="checkbox"/>	ii. Interior Trim		1	
<input type="checkbox"/>	iii. Shelving		1	
<input type="checkbox"/>	iv. Subfloor		1	
b. Non-Residential Areas:				
<input type="checkbox"/>	i. Cabinets		0	
<input type="checkbox"/>	ii. Interior Trim		0	
<input type="checkbox"/>	iii. Shelving		0	
<input type="checkbox"/>	iv. Subfloor		0	
<b>9. Environmentally Preferable Flooring</b>				
Use Environmentally Preferable Flooring: A) FSC-Certified or Reclaimed Wood, B) Rapidly Renewable Flooring Materials, C) Recycled-Content Ceramic Tiles, D) Exposed Concrete as Finished Floor or E) Recycled-Content Carpet. Note: Flooring Adhesives Must Have <50 gpl VOCs.				
a. Residences:				
<input type="checkbox"/>	i. Minimum 15% of Floor Area			1
<input type="checkbox"/>	ii. Minimum 30% of Floor Area			1
<input type="checkbox"/>	iii. Minimum 50% of Floor Area			1
<input type="checkbox"/>	iv. Minimum 75% of Floor Area			1
b. Non-Residential Areas:				
<input type="checkbox"/>	i. Minimum 15% of Floor Area			0
<input type="checkbox"/>	ii. Minimum 30% of Floor Area			0
<input type="checkbox"/>	iii. Minimum 50% of Floor Area			0
<input type="checkbox"/>	iv. Minimum 75% of Floor Area			0
<b>10. Low-Emitting Flooring</b>				
<input type="checkbox"/>	a. Residences: Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum)		1	
<input type="checkbox"/>	b. Non-Residential Areas: Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum)		0	

ENTER PROJECT NAME		Community	Energy	IAQ/Health	Resources	Water
<b>11. Durable Cabinets</b>						
Install Durable Cabinets in All:						
<input type="checkbox"/>	a. Residences				1	
<input type="checkbox"/>	b. Non-Residential Areas				0	
<b>12. Furniture &amp; Outdoor Play Structures</b>						
<input type="checkbox"/>	a. Play Structures & Surfaces Have an Overall Average Recycled Content Greater Than 20%				1	
<input type="checkbox"/>	b. Environmentally Preferable Exterior Site Furnishings				1	
<input type="checkbox"/>	c. At Least 25% of All newly Supplied Interior Furniture has Environmentally Preferable Attributes			1		
<b>13. Vandalism Deterrence</b>						
<input type="checkbox"/>	a. Project Includes Vandalism Resistant Finishes and Strategies	1				

F. OTHER		Possible Points				
<b>1. Incorporate GreenPoint Checklist in Blueprints</b>						
<input type="checkbox"/>	a. <i>Required:</i> Incorporate GreenPoint Checklist in Blueprints	R				
<b>2. Operations &amp; Maintenance Manuals</b>						
<input type="checkbox"/>	a. Provide O&M Manual to Building Maintenance Staff		1			
<input type="checkbox"/>	b. Provide O&M Manual to Occupants		1			1
<b>3. Transit Options</b>						
<input type="checkbox"/>	a. Residents Are Offered Free or Discounted Transit Passes	2				
<b>4. Educational Signage</b>						
<input type="checkbox"/>	a. Educational Signage Highlighting & Explaining the Project's Green Features is Included	1				
<b>5. Vandalism Management Plan</b>						
<input type="checkbox"/>	a. Project Includes a Vandalism Management Plan for Dealing with Disturbances Post-Occupancy	1				
<b>6. Innovation:</b> List innovative measures that meet the green building objectives of the Multifamily Guidelines. Enter up to a 4 Points in each category. Points will be evaluated by local jurisdiction or GreenPoint rater.						
0	Innovation in Community: Enter up to 4 Points at left. Enter description here					
0	Innovation in Energy: Enter up to 4 Points at left. Enter description here					
0	Innovation in IAQ/Health: Enter up to 4 Points at left. Enter description here					
0	Innovation in Resources: Enter up to 4 Points at left. Enter description here					
0	Innovation in Water: Enter up to 4 Points at left. Enter description here					

Summary						
Points Achieved from Specific Categories		0	0	0	0	0
Current Point Total		0				
<b>Project has not yet met the recommended minimum requirements</b>						
- Total Project Score of At Least 50 Points						
- Minimum points in specific categories: Community (6), Energy (11), IAQ/Health (5), Resources (6), Water (3)						
- Required measures B.1a, C.10a, and/or F.1a						
- Enter Total Conditioned Floor Area and Non-Residential Floor Area of the Project at the Top of this Checklist						

## **Sustainability Committee Mission Statement Goals and Objectives**

**Mission:** Make Hayward a more sustainable community in order to ameliorate negative impacts of climate change, conserve natural resources and promote a clean environment.

**Goals:** Adoption of policies and standards that would have a positive impact on a sustainable Hayward community.

**Objectives:**

- 1) Require the use of alternative energy resources when possible.
- 2) Reduce the use of energy through conservation.
- 3) Assure that all new construction and remodels will be GreenPoint rated and/or LEED certified emphasizing energy efficiency (and compliance with Green Building and Bay-Friendly Landscape standards).
- 4) Reduce green house gas (GHG) emissions.
- 5) Require reduction in waste generation.
- 6) Encourage transit-oriented development.
- 7) Support sustainability measures in all aspects of City business.
- 8) Address and encourage energy efficient technology including vehicle technology.
- 9) Develop standards and establish measurable targets for all categories of green building and sustainable development
- 10) Build awareness, and engage and educate the community.

## **Sustainability Committee Tentative Monthly Meeting Topics**

<b>Dept</b>	<b>Date</b>	<b>Topic</b>
CED/FIN	January 17	Emissions Inventory
CED	February 6	Green Building Standards Development
CED	March 5	Green Building Standards Development
PW	April 2	Water Conservation and Update on City Current Practices
PW	May 7	Explore Mechanism for Residential Solar Funding Program
CED	June 4	Climate Action Plan Briefing/TOD Presentation
FIN	July 2	Bay-Friendly Landscape/ Private Development/Facilities Discussion
	August	Summer Break
PW	September 3	Solid Waste and Recycling
FIN	October 1	City's Use of LEEDs, energy audit for city buildings
PW	November 5	Water Recycling Presentation
CED	December 3	Climate Action Plan