



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

April 2, 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. Approval of Minutes of March 5, 2008
- V. Green Building Ordinance – Discussion
Presentation by Margret Elliot, Building Official
- VI. Introduction of Energy Ordinance
Presentation by Margret Elliot, Building Official
- VII. Earth Day Event: April 19, 2008, 11:00 a.m. -3:00 p.m. - City Hall Plaza
Update by David Rizk, Planning Manager
- VIII. South Alameda County Green Building Developer and Builder Forum
May 28, 2008, 8:00 a.m. – 12:30 p.m. - Ohlone College, Newark
Arlynne J. Camire, Associate Planner
- IX. Next Meeting: Wednesday, May 7, 2008 - Water Conservation and Update on City Current Practices
- X. 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.

CITY COUNCIL SUSTAINABILITY COMMITTEE MEETING

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

March 5, 2008
4:30 p.m. – 6:00 p.m.

MINUTES

I. Call to Order- 4:30 pm

II. Roll Call

Members:

- Michael Sweeney, Mayor
- Olden Henson, Councilmember
- Bill Quirk, Councilmember
- Rodney Loché, Planning Commission
- Julie McKillop, Planning Commissioner (Absent)
- Al Mendall, Planning Commissioner

Staff:

- Fran David, Assistant City Manger
- Vera Dahle-Lacaze, Solid Waste Manager
- David Rizk, Planning Manager
- Michelle Koo, Landscape Architect
- Erik Pearson, Senior Planner
- Steve Osborne, Plan Checker
- Arlynne J Camire, Assoicate Planner (Recorder)

Others:

- Marvin Peixoto, Planning Commission
- Tom Guarino, Pacific, Gas and Electric Company
- Nicole Jordan, Pacific Gas and Electric Company
- Wendy Sommer, Stopwaste.org
- Doug Grandt, Volunteer and Resident
- Justin Johnson, Resident

III. Public Comments:

Energy Efficiency Award presentation to Mayor Sweeny by Pacific Gas & Electric

PG&E in partnership with City of Hayward have completed 2500 energy audits and retrofits that have saved over 1 mw of energy. This is equal the amount of electricity to power 750 homes and save 1,500 tons in green house gas emissions.

Doug Grandt discussed the distributed flyers inviting residents to a presentation by Solar City –Free Solar Seminar. In addition, he informed the Committee about a Climate Change –Local Impact event on Saturday, March 8 at 10 am at the Woodland Estates Community Association Clubhouse. He invited the Committee to observe Earth Hour at 8:00 pm on March 29.

IV. Approval of the Minutes of February 6, 2008

V. Draft Green Building Ordinance

Presentation by Steve Osborne, Plan Checker, Building Division

Plan Checker Steve Osborn presented the report. He explained the changes to the categories in the matrix.

The Committee asked questions regarding the types of buildings that were covered by the regulations in the matrix.

Mayor Sweeney emphasized that he wanted to make sure that the ordinance would maximize our impact on greenhouse gasses (GHG).

Wendy Sommer, Project Manager of Stopwaste.org, stated that Stopwaste.org does not advocate adopted an ordinance that has mandatory requirements for private ownership projects. She also emphasized that cities, such as Pleasanton, who have adopted ordinance and rely on staff to implement are usually overwhelmed. She recommends that the ordinance include a requirement for a third-party rater billable to the applicant. She also said that an additional benefit of a third-party rater review compared to City staff review is that the third-party rater will provide the City with a carbon monoxide report which can be used to track progress of reducing GHG which is a big advantage. She said the cost of services of a third party rater is usually \$150 per single-family home. In addition, she recommended that the ordinance have a hardship exemption.

Ms. Sommer also recommended adoption of an Energy Efficiency Ordinance which would require projects to exceed Title 24 standards. She recommended adopting this ordinance instead of an aggressive Green building ordinance because of possible legal problems. She suggested that the City Attorney contact their legal staff.

Stopwaste.org is currently completing a Cost Effectiveness review of 2008 Title 24 to determine the cost for each percent that a project exceeds the

standards. Stopwaste.org is also working with the California legislature to allow cities to adopt green building ordinances.

Mr. Osborn suggested an incentive based system.

Mr. Quirk inquired why it is easier to adopt an energy efficiency ordinance. Ms. Sommer replied that the California Building Standards Committee must approve findings.

Mayor Sweeney asked if we can use AB 32 and climate change as findings for adopting a green building ordinance.

Ms. Sommer pointed out that San Francisco has used these findings for adopting their ordinance.

Assistant City Manager Fran David suggested that the new energy plant can include as a finding.

Council Member Olden Henson recognized that the City ordinances have to cover a great deal of ground. He pointed out that Governor Schwarzenegger has given many speeches asking compliance to reduce GHG. In addition, Pleasanton's ordinance has mandatory requirements and they have not been legally challenged.

Mr. Osborne stated that our green building ordinance would rely on the established systems for review or the City adopts a review system that relies on Staff and consultant expertise.

Mayor Sweeney wanted City requirements to go above Title 24 standards and require the Green Point and LEED checklist items that would have the greatest impact on GHG. In addition, the ordinance should be simple so we can proceed.

David Rizk, Planning Manager stated that the City may not be able to keep it simple. He stated that it would be simple if we rely on established checklists and rely on a third party rater to enforce. He continued that staff can write findings for a green building ordinance; however the ordinance may not be able to address all projects.

The Mayor asked Ms. Sommer to explain the points in the checklists and how they would be reviewed.

Ms. Somers replied that each measure has its own impact and a calculator has been developed for the Green Point rated program which requires review by a third party rater.

Mayor Sweeney emphasized that adopted requirements should make the greatest impact on GHG as possible.

Mr. Osborn said that energy related requirements can be implemented now because they are a known factor. He continued that it is a challenge to write an ordinance that is both simple and all encompassing.

Ms. Sommer said that an energy efficiency ordinance is the simplest to enforce because people are familiar with Title 24 and recommended adoption of an ordinance that requires standards that exceed Title 24. She reiterated that Stopwaste.org does not advocate the adoption of a mandatory green building ordinance and requested that the City work with Stopwaste.org to adopt a defensible green building ordinance.

Planning Commissioner Al Mendall stated his agreement with the Mayor that a suit is not likely. He emphasized that the City should move forward, use the existing checklists and for projects not covered by the existing checklists, adopt simple regulations for instance: insulation, lighting for projects not covered by the existing checklists.

Councilmember Bill Quirk suggested that the City adopt an energy efficiency ordinance by summer and suggested that staff uses Stopwaste.org draft ordinance. He suggested that the ordinance requires that all projects exceed 2008 Title 24 requirements by 20 percent. Water conservation would be the next priority. This would include: landscaping, low-flush toilets, outdoor measures. After adoption of energy efficiency and bay-friendly landscaping ordinances, examine the impact on GHG and then analyze what additional standards are required to further reduce GHG.

Michelle Koo, Landscape Architect pointed out that using the green point checklist, compliance to bay-friendly landscape standards for a single-family project could yield 23 green points.

Planning Commissioner Rodney Loché pointed out that a great deal of work must be completed in a short period of time prior to the adoption of all the ordinances. He suggested that the green building ordinance include use of existing checklists and includes an exemption based on hardship.

Ms. Sommer suggested that the Fire Marshall is involved in the review of any solar ordinance.

The Committee directed staff to bring back options in a month for a Green Building Ordinance that includes: use of existing checklists, standards for new projects that are not regulated by Green Point or LEED, mandatory compliance with a hardship provision for project exemption, and required review and certification by a third party rater. In addition, an Energy

Efficiency Ordinance that requires exceeding 2008 Title 24 standards by 20 percent. The goal is to adopt simple ordinances with requirements that would do the most carbon offsetting. Staff was also directed to meet with the development community to discuss the proposed options.

- VI. Discuss date, time, and content of Green Building Ordinance Workshop for the Development Community

Tabled until the April 2, 2008 meeting.

- VII. Earth Day Event: April 19, 2008, 11:00 a.m. -3:00 p.m. - City Hall Plaza

Erik Pearson, Senior Planner summarized the Earth Day Festival activities. Mr. Rizk requested three judges from the Sustainability Committee to serve as judges of the Children's Multi-Media Art Contest. The Mayor suggested that the Planning Commissioners on the Committee serve as judges.

Planning Commissioner Mendall asked if the Keep Hayward Clean and Green Taskforce would do a booth and suggested a downtown clean-up.

Planning Commissioner Loché inquired if the Youth Commission is involved with the contest and suggested they go to the schools to promote the contest.

Mayor Sweeney suggested that homeowner associations get involved. He also suggested that a Planning Commissioner visit the Youth Commission meeting on 7:00 pm, March 27th in 2A to request their involvement.

Council Member Henson emphasized that the Earth Day Festival should be very interactive with the schools. He suggested that the event be posted on the reader boards at Chabot College and Moreau Catholic High School.

- VIII. Potential Dates for a Tour of the Green Offices of Stopwaste.org - March 10, 17, or 31, 2008

Mayor Sweeney chose March 17, 2008. Staff will send a reminder to the Committee.

- X. Next Meeting: Wednesday, April 2, 2008 – Green Building Ordinance and Energy Efficiency Ordinance.

- IX. Adjournment -- Meeting adjourned at 6:43pm.



DATE: April 2, 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 recommend approval to the City Council of the Green Building Ordinance.

BACKGROUND

Since the last committee meeting, staff has met with StopWaste.org to discuss the process of certification of buildings. Staff has also contacted the California Energy Commission for information on increasing Title 24 Energy conservation measures. This new version of the Green Building ordinance is simplified from the last version. The current version before the committee incorporates the information from StopWaste on the status of green building statewide. Other jurisdictions that have adopted such ordinances have also included exemptions for economic hardship and for preserving historic buildings.

DISCUSSION

A number of cities throughout California have adopted or are in the process of adopting a variety of green building ordinances. Based on the discussion at the last meeting of the Sustainability Committee meeting, staff has completely revised the ordinance, which was presented at last month's meeting, to more completely address the types of projects we can expect to see constructed in the City of Hayward. We have consolidated some of the types of projects and have learned that in June, StopWaste.org will publish a checklist for small commercial projects. The use of checklists offers developers the flexibility to choose options that are most appropriate to the site and to the project.

Large commercial projects will be required to obtain LEED certification; residential and mixed use projects will have to comply with the appropriate GreenPoint check list and be verified by an outside rater. Smaller commercial projects will comply with the small commercial checklists to be published in June by StopWaste. StopWaste will not provide raters to look at specific

projects. They will, however, train City staff to use these checklists. This checklist will be known as “City of Hayward Checklist For Small Commercial Projects”. Since both LEED and StopWaste issue new checklists with increased requirements every three years, the increase in points required for certification is built into the process.

As part of the process of compiling a set of standards, staff has also taken into consideration the fact that the California Building Standards Commission is currently writing its own Green Building Code, which is scheduled to take effect in 2012. Therefore the proposed requirements are seen as an interim measure until the State’s Green Building Code has been published, and staff has had time to review it. During the review process, the City can decide whether to amend the new code with more stringent requirements.

The following table summarizes the requirements for each type of project. The number of project types and the definitions of project types have been changed from the last version of this matrix presented to the Committee. The table is now divided between projects that must earn LEED certification and projects that must use the Green Points checklists. Energy conservation measures will be dealt with in a separate ordinance.

PROJECT TYPES	7/1/2008
LEED PROJECTS	
<p>NEW BUILDINGS/ADDITIONS and INTERIOR ALTERATIONS > 25,000 sq. ft. Includes: businesses, private schools, churches, shell buildings, retail, warehouses, high rise buildings, mixed use and industrial projects.</p> <p>LEED-CS (core and shell) option may be used for shell buildings, warehouses, shopping centers, industrial and retail buildings. This is designed for projects where the owner is not the primary tenant or the interior use is not compatible with the LEED-NC rating system.</p> <p>LEED-NC (new construction) option shall be used for complete buildings in which the owner will occupy more than 50% of the building and for mixed use projects with residential as the primary component.</p> <p>LEED-CI (commercial interiors) option may be used for renovations within existing</p>	<p>Must Achieve LEED-NC or LEED-CS for new buildings. LEED-CI certification required for interior alterations.</p> <p>Applicants who achieve silver or better rating will receive a recognition award from the City of Hayward</p>

PROJECT TYPES	7/1/2008
buildings. The option to use this lower level of certification shall be based on review by the City of Hayward building official.	
GREEN POINTS PROJECTS	
MULTI-FAMILY RESIDENTIAL Includes mixed-use residential/commercial.	Shall be certified by third-party rater as complying with Green Point checklist for Multi-Family Residential.
NEW SINGLE-FAMILY DWELLINGS of any size + ADDITIONS to EXISTING DWELLINGS Includes: single family detached homes, duplexes, and townhouses.	Shall be certified by third-party rater as complying with Green Point checklist for Single Family Residential.
RESIDENTIAL REMODEL Applicable to residential remodeling projects greater than 500 square feet.	Shall be certified by third-party rater as complying with Green Point checklist for Residential Remodel
SMALL COMMERCIAL PROJECTS	
NEW NON-RESIDENTIAL BUILDINGS AND ALTERATIONS <25,000 sq. ft. These projects may include: businesses, private schools, churches, shell buildings, retail, warehouses, high rise buildings, mixed use and industrial projects. Applicable to new construction as well as tenant improvements and remodels.	Must comply with City of Hayward Small Commercial Projects checklists.

FISCAL IMPACT

This ordinance would require staff to review additional paperwork by applicant for commercial projects less than 25,000 square feet, but an additional fee could be imposed on project applicants to cover the costs of the additional plan check. There would be an impact on permit holders for large projects requiring LEED certification and for Green Point rating.

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 supersede 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 California Energy Commission is reviewing increased energy standards that will likely go into effect in June of 2009.

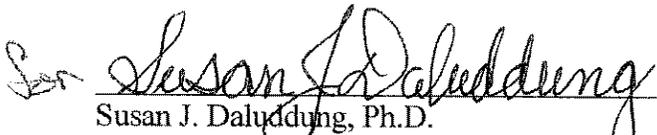
The committee is requested to review and provide comments on the ordinance. The next step for the committee is to host a meeting on the morning of April 18th, for Hayward builders and developers to review and discuss the proposed Green Building Ordinance. Subsequent to the public meeting staff will bring the ordinance to the City Council for review and adoption on May 13, 2008.

Prepared by:



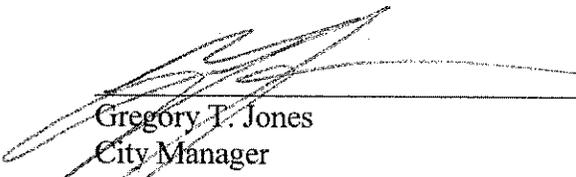
Margret Elliott
Building Official

Recommended by:



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

Approved by:



Gregory T. Jones
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 Article 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. "Large Commercial Project" means a new commercial building, addition, alteration or renovation that is greater than 25,000 square feet.
- f. "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) to encourage and accelerate global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria.
- g. "LEED-CI" (Commercial Interiors) means the LEED rating option to be used for renovations within existing buildings. The option to use this lower level of certification must be approved by the City of Hayward Building Official.
- h. "LEED-CS" (Core and Shell) means the LEED rating option for shell buildings, warehouses, shopping centers, industrial and retail buildings. This system is designed for buildings where the owner is not the primary tenant or the interior use is not compatible with the LEED-NC rating system.
- i. "LEED-NC" (New Construction) means the LEED rating option to be used for complete buildings in which the owner will occupy more than 50% of the building and for mixed use projects with residential as the primary component.
- j. "LEED-ND" (Neighborhood Development) means the integration of principles of smart growth, urbanism and green building into a national standard for green building/neighborhood design.
- k. "Major Residential Tract" means developments consisting of more than one residential building having more than 20 dwelling units in any combination of detached single-family dwellings or multi family dwellings.
- l. "Multifamily Residential Building" means a single residential building that has more than two dwelling units.
- m. "Mixed-Use" means a building with residential and commercial or retail uses, or a combination of residential, commercial and retail uses.
- n. "Project" means any proposed residential or commercial construction for which a building permit has not been issued as of July 1, 2008.

- o. "Small Commercial Project" means a commercial building project, new construction, addition, alteration, renovation or tenant improvement, 25,000 or fewer square feet in gross floor area.

SECTION 10- 21.120 APPLICATION.

The provisions of this Article apply to all private residential or commercial construction for which a building permit has not been issued as of July 1, 2008.

City-owned 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 LEED CERTIFIED PROJECTS

a. Large Commercial Project

1. Effective July 1, 2008, Applicants for Projects consisting of Large Commercial New Construction, additions, alterations or renovations greater than 25,000 square feet, shall use the appropriate LEED-CS, LEED-NC, or the LEED-CI rating options. Applicants who exceed the required rating level will receive an award from the City of Hayward.

b. Major Residential Tracts.

1. Until the LEED-ND Guidelines have been published these Projects will comply with the applicable GreenPoint requirements for single family or multi-family dwellings.

2. Effective January 1, 2010, Applicants for Major Residential Tract Projects shall achieve LEED-ND certification.

SECTION 10 -21.150 GREEN POINTS BASED PROJECTS

a. Multi-Family Residential Buildings

- 1. Effective July 1, 2008, Applicants for Projects consisting of a Multi-Family Residential Buildings shall submit documentation demonstrating that the building has been certified by a third-party rater

as complying with Green Point checklist for Multi-Family Residential.

b. New Single Family Dwellings of Any Size (Includes Detached Single Family Dwellings and Duplexes and Townhouses of two dwelling units or less per building.)

1. Effective July 1, 2008, Applicants for Projects consisting of new single family dwellings of any size shall submit documentation demonstrating the building has been certified by a third-party rater as complying with the GreenPoint checklist for single family dwellings.

c. Residential Additions/Remodels of Any Size

1. Effective July 1, 2008, Applicants for Projects consisting of remodels and/or additions to existing residential single family dwellings of any size shall submit documentation demonstrating that the building has been certified by a third party rater as complying with the GreenPoint checklist for remodeling and existing homes.

d. Small Commercial Projects.

1. Effective July 1, 2008 all Small Commercial Projects including tenant improvements shall comply with the City of Hayward checklist for small commercial projects.

SECTION 3. Severance. Should any part of this ordinance be declared by a final decision by a court or tribunal of competent jurisdiction to be unconstitutional, invalid, or beyond the authority of the City, such decision shall not affect the validity of the remainder of this ordinance, which shall continue in full force and effect, provided that the remainder of the ordinance, absent the unexcised portion, can be reasonably interpreted to give effect to the intentions of the City Council.

SECTION 4. In accordance with the provisions of Section 620 of the City Charter, this ordinance shall become effective 30 days from and after the date of its adoption.

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

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

Current Point Total	0
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0	0	0	0	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

A. PLANNING & DESIGN

		Community	Energy	IAQ/Health	Resources	Water
		Possible Points				
1. Infill Sites						
<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	
0	c. Housing Density of 15 Units Per Acre or More (1 pt for every 5 u/a) <i>Enter Project Density Number (In Units Per Acre)</i>	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				
2. Mixed-Use Developments						
<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				
3. Building Placement & Orientation						
<input type="checkbox"/>	a. Protect Soil & Existing Plants & Trees	1				
4. Design for Walking & Bicycling						
<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				
5. Social Gathering Places						
<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 (<i>For compact sites only; this point not available if A.5a is checked</i>)	1				
6. Design for Safety and Natural Surveillance						
<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
7. Landscaping						
<input 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
8. Building Performance Exceeds Title 24						
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.				
9. Cool Site						
<input type="checkbox"/>	a. At least 30% of the Site Includes Cool Site Techniques		1			
10. Adaptable Buildings						
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			
11. Affordability						
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. SITEWORK						
						Possible Points
1. Construction & Demolition Waste Management						
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	
2. Construction Material Efficiencies						
<input type="checkbox"/>	a. Framing Materials are Pre-Cut or Pre-Assembled (80% or More)				1	
<input type="checkbox"/>	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	
3. Construction Indoor Air Quality (IAQ) Management Plan						
<input type="checkbox"/>	a. An IAQ Management Plan is Written & Followed for the Project			2		
C. STRUCTURE						
						Possible Points
1. Recycled Aggregate						
<input type="checkbox"/>	a. Minimum 25% Recycled Aggregate (Crushed Concrete) for Fill, Backfill & Other Uses				1	
2. Recycled Flyash in Concrete						
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
3. FSC-Certified Wood for Framing Lumber						
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	
4. Engineered Lumber or Steel Studs, Joists, Headers & Beams						
<input type="checkbox"/>	a. 90% or More of All Floor & Ceiling Joists					1
<input type="checkbox"/>	b. 90% or More of All Studs					2
<input type="checkbox"/>	c. 90% or More of All Headers & Beams					2
5. Optimal Value Engineering Framing						
<input type="checkbox"/>	a. Studs at 24" Centers on Top Floor Exterior Walls &/or All Interior Walls					1
<input type="checkbox"/>	b. Door & Window Headers Sized for Load					1
<input type="checkbox"/>	c. Use Only Jack & Cripple Studs Required for Load					1
6. Steel Framing						
<input type="checkbox"/>	a. Mitigate Thermal Bridging by Installing Exterior Insulation (At Least 1-Inch of Rigid Foam)					2
7. Structural Insulated Panels (SIPs) Or Other Solid Wall Systems						
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	
8. Raised Heel Roof Trusses						
<input type="checkbox"/>	a. 75% of All Roof Trusses Have Raised Heels					1
9. Insulation						
<input type="checkbox"/>	a. All Ceiling, Wall & Floor Insulation is 01350 Certified OR Contains No Added Formaldehyde					1
<input type="checkbox"/>	b. All Ceiling, Wall & Floor Insulation Has a Recycled Content of 50% or More					1
10. Durable Roofing Options						
<input type="checkbox"/>	a. <i>Required:</i> No Shingle Roofing OR All Shingle Roofing Has 3-Yr Subcontractor Guarantee & 20-Yr Manufacturer Warranty					R
<input type="checkbox"/>	b. All Sloped Roofing Materials Carry a 40-Year Manufacturer Warranty					1
11. Moisture Shedding & Mold Avoidance						
<input type="checkbox"/>	a. Building(s) Include a Definitive Drainage Plane Under Siding					4
<input type="checkbox"/>	b. Bathroom Fans are Supplied in All Bathrooms, Are Exhausted to the Outdoors & Are Equipped with Controls					1
<input type="checkbox"/>	c. A Minimum of 80% of Kitchen Range Hoods Are Vented to the Exterior					1
12. Green Roofs						
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				
1. Passive Solar Heating						
<input type="checkbox"/>	a. Orientation: At Least 40% of the Units Face Directly South					2
<input type="checkbox"/>	b. Shading On All South-Facing Windows Allow Sunlight to Penetrate in Winter, Not in Summer					1
<input type="checkbox"/>	c. Thermal Mass: At Least 50% of the Floor Area Directly Behind South-Facing Windows is Massive					2
2. Radiant Hydronic Space Heating						
<input type="checkbox"/>	a. Install Radiant Hydronic Space Heating for IAQ purposes (No Forced Air) in All Residences					2
3. Solar Water Heating						
<input type="checkbox"/>	a. Pre-Plumb for Solar Hot Water					1
<input type="checkbox"/>	b. Install Solar Hot Water System for Preheating DHW					4
4. Air Conditioning with Advanced Refrigerants						
<input type="checkbox"/>	a. Install Air Conditioning with Non-HCFC Refrigerants					1
5. Advanced Ventilation Practices						
Perform the Following Practices in Residences:						
<input type="checkbox"/>	a. Infiltration Testing by a C-HERS Rater for Envelope Sealing & Reduced Infiltration					2
<input type="checkbox"/>	b. Operable Windows or Skylights Are Placed To Induce Cross Ventilation (At Least One Room In 80% of Units)					1
<input type="checkbox"/>	c. Ceiling Fans in Every Bedroom & Living Room OR Whole House Fan is Used					1
6. Garage Ventilation						
<input type="checkbox"/>	a. Garage Ventilation Fans Are Controlled by Carbon Monoxide Sensors (Passive Ventilation Does Not Count)					1

ENTER PROJECT NAME		Community	Energy	IAQ/Health	Resources	Water
<input type="checkbox"/>	7. Low-Mercury Lamps					
<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	
<input type="checkbox"/>	8. Light Pollution Reduction					
<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				
<input type="checkbox"/>	9. Onsite Electricity Generation					
<input type="checkbox"/>	a. Pre-Wire for Photovoltaics & Plan for Space (Clear Areas on Roof & In Mechanical Room)				1	
<input type="checkbox"/>	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				
<input type="checkbox"/>	10. Elevators					
<input type="checkbox"/>	a. Gearless Elevators Are Installed		1			
<input type="checkbox"/>	11. ENERGY STAR® Appliances					
<input type="checkbox"/>	a. Install ENERGY STAR Refrigerators in All Locations					
<input type="checkbox"/>	ENERGY STAR-Qualified		1			
<input type="checkbox"/>	ACEEE-Listed Refrigerators		1			
<input type="checkbox"/>	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		
<input type="checkbox"/>	12. Central Laundry					
<input type="checkbox"/>	a. Central Laundry Facilities Are Provided for All Occupants				1	
<input type="checkbox"/>	13. Water-Efficient Fixtures					
<input type="checkbox"/>	a. All Showerheads Use 2.0 Gallons Per Minute (gpm) or Less		1			1
<input type="checkbox"/>	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
<input type="checkbox"/>	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
<input type="checkbox"/>	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
<input type="checkbox"/>	14. Source Water Efficiency					
<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				
<input type="checkbox"/>	1. Construction Indoor Air Quality Management					
<input type="checkbox"/>	a. Perform a 2-Week Whole Building Flush-Out Prior to Occupancy			1		
<input type="checkbox"/>	2. Entryways					
<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		
<input type="checkbox"/>	3. Recycling & Waste Collection					
<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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4. Use Low/No-VOC Paints & Coatings				
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	
5. Use Recycled Content Exterior Paint				
<input type="checkbox"/>	a. Use Recycled Content Paint on 50% of All Exteriors			1
6. Low-VOC Construction Adhesives				
<input type="checkbox"/>	a. Use Low-VOC Construction Adhesives (<70 gpl VOCs) for All Adhesives		1	
7. Environmentally Preferable Materials for Interior Finish				
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
8. Reduce Formaldehyde in Interior Finish Materials				
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
9. Environmentally Preferable Flooring				
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
10. Low-Emitting Flooring				
<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
<input type="checkbox"/>	11. Durable Cabinets Install Durable Cabinets in All:					
<input type="checkbox"/>	a. Residences				1	
<input type="checkbox"/>	b. Non-Residential Areas				0	
<input type="checkbox"/>	12. Furniture & Outdoor Play Structures					
<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		
<input type="checkbox"/>	13. Vandalism Deterrence					
<input type="checkbox"/>	a. Project Includes Vandalism Resistant Finishes and Strategies	1				

F. OTHER		Possible Points				
<input type="checkbox"/>	1. Incorporate GreenPoint Checklist in Blueprints					
<input type="checkbox"/>	a. <i>Required:</i> Incorporate GreenPoint Checklist in Blueprints	R				
<input type="checkbox"/>	2. Operations & Maintenance Manuals					
<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
<input type="checkbox"/>	3. Transit Options					
<input type="checkbox"/>	a. Residents Are Offered Free or Discounted Transit Passes	2				
<input type="checkbox"/>	4. Educational Signage					
<input type="checkbox"/>	a. Educational Signage Highlighting & Explaining the Project's Green Features is Included	1				
<input type="checkbox"/>	5. Vandalism Management Plan					
<input type="checkbox"/>	a. Project Includes a Vandalism Management Plan for Dealing with Disturbances Post-Occupancy	1				
6. Innovation: 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				
Project has not yet met the recommended minimum requirements						
- 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						

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.

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ENTER PROJECT NAME	Community	Energy	IAQ/Health	Resources	Water
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A. SITE	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)					
<input type="checkbox"/> a. Minimum 50% Waste Diversion by Weight (Recycling or Reuse) - Required				R	
<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. LANDSCAPING	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				

C. FOUNDATION	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		

D. STRUCTURAL FRAME & BUILDING ENVELOPE	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
2. Use Engineered Lumber					
<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	
3. Use FSC-Certified Wood					
<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			
6. Use Oriented Strand Board (OSB)					
<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	
8. Use Solid Wall Systems (Includes SIPs, ICFs, & Any Non-Stick Frame Assembly)					
<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			
10. Design and Build Structural Pest Controls					
<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	
11. Reduce Pollution Entering the Home from the Garage					
<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		
12. Install Overhangs and Gutters					
<input type="checkbox"/> a. Minimum 16-Inch Overhangs and Gutters				1	
<input type="checkbox"/> b. Minimum 24-Inch Overhangs and Gutters		1			

E. EXTERIOR FINISH		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	

F. PLUMBING		Possible Points			
1. Distribute Domestic Hot Water Efficiently					
<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

G. APPLIANCES		Possible Points			
1. Install ENERGY STAR Dishwasher					
<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
3. Install ENERGY STAR Refrigerator					
<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			
1. Install Insulation with 75% Recycled Content					
<input type="checkbox"/>	a. Walls and/or Floors			1	
<input type="checkbox"/>	b. Ceilings			1	
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			
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			
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			
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		
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			
<input type="checkbox"/>	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	
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 ft² of South-Facing Roof	2			
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
L. FINISHES		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	
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		

M. FLOORING		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 <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		

N. OTHER		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					

Summary						
Points Achieved from Specific Categories			0	0	0	0
Total Points Achieved			0			
Project has not yet met the recommended minimum requirements						
- 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						

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
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A. Site

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

B. Foundation

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			
2. Use Recycled Content Aggregate	2 Resource pts y=yes			
3. Insulate Foundation/Slab before backfill	3 Energy pts y=yes			
		0	0	0

C. Structural Frame

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

D. Exterior Finish

1. Use Sustainable Decking Materials
 - a. Recycled content
 - b. FSC-Certified Wood
2. Use Treated Wood That Does Not Contain Chromium/Arsenic
3. Install House Wrap under Siding
4. Use Fiber-Cement Siding Materials

INPUT	Resources	Energy	IAQ/Health
3 Resource pts y=yes	0		
3 Resource pts y=yes	0		
1 IAQ/Health pt y=yes			0
1 IAQ/Health pt y=yes			0
1 Resource pt y=yes	0		
	0	0	0

E. Plumbing

1. Install Water Heater Jacket
2. Insulate Hot and Cold Water Pipes
3. Retrofit all Faucets and Showerheads with Flow Reducers
 - a. Faucets (1 point each, up to 2 points)
 - b. Showerheads (1 point each, up to 2 points)
4. Replace Toilets with Ultra-Low Flush Toilets (1 point each, up to 3 points)
5. Install Chlorine Filter on Showerhead
6. Convert Gas to Tankless Water Heater
7. Install Water Filtration Units at Faucets (2 points each, up to 4 points)
8. Install On-Demand Hot Water Circulation Pump

1 Energy pt y=yes		0	
2 Energy pts y=yes		0	
Up to 2 Resource pts.	0		
Up to 2 Resource pts.	0		
Up to 3 Resource pts.	0		
1 IAQ/Health pt y=yes			0
4 Energy pts y=yes		0	
Up to 4 IAQ/Health pts.			0
4 Resource pts y=yes	0		
	0	0	0

F. Electrical

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

Up to 4 Energy pts.		0	
Up to 5 Energy pts.		0	
Up to 4 Energy pts.		0	
Up to 4 Energy pts.		0	
	0	0	0

G. Appliances

1. Install Energy Star Dishwasher
2. Install Washing Machine with Water and Energy Conservation Features
3. Install Energy Star Refrigerator
4. Install Built-In Recycling Center

1 Energy pt y=yes		0	
1 Energy pt y=yes		0	
1 Energy pt y=yes		0	
3 Resource pts y=yes	0		
	0	0	0

H. Insulation

1. Upgrade Insulation to Exceed Title 24 Requirements
 - a. Walls
 - b. Ceilings
2. Install Floor Insulation over Crawl Space
3. Install Recycled-Content, Fiberglass Insulation with No Added Formaldehyde
4. Use Advanced Infiltration Reduction Practices
5. Use Cellulose Insulation
 - a. Walls
 - b. Ceilings
6. Alternative Insulation Products (Cotton, spray-foam)
 - a. Walls
 - b. Ceilings

2 Energy pts y=yes		0	
2 Energy pts y=yes		0	
4 Energy pts y=yes		0	
3 IAQ/Health pts y=yes			0
2 Energy pts y=yes		0	
4 Resource pts y=yes	0		
4 Resource pts y=yes	0		
4 Resource pts y=yes	0		
4 Resource pts y=yes	0		
	0	0	0

			INPUT	Resources	Energy	IAQ/Health
I. Windows						
1. Install Energy-Efficient Windows						
a. Double-Paneled	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	
				0	0	0
J. Heating Ventilation and Air Conditioning						
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
				0	0	0
K. Renewable Energy and Roofing						
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	
				0	0	0
L. Natural Heating and Cooling						
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	
				0	0	0

			INPUT	Resources	Energy	IAQ/Health
M. Indoor Air Quality and Finishes						
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
				0	0	0
N. Flooring						
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		
				0	0	0

Total Points Available:

140	130	57
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Total Points Project Received:

0	0	0
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DATE: April 2, 2008

TO: Mayor and City Council Sustainability Committee

FROM: Director of Community and Economic Development Department

SUBJECT: Summary of Proposed Energy Efficiency Ordinance

RECOMMENDATION

That the Sustainability Committee reviews this report and the draft Energy Efficiency Ordinance, which provides for measures to increase energy conservation over and above those imposed by California Title 24 Energy Conservation measures. Due to considerations discussed below staff recommends the Sustainability Committee delay any recommendation for adopting increased energy conservation standards until the California Energy Commission has adopted the 2008 Title 24 Energy Conservation standards.

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 70's 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", commonly referred to as "Title 24 Energy Conservation Standards".

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.

DISCUSSION

In order to enhance the State of California's Title 24 Energy Conservation measures, City of Hayward staff prepared an Energy Conservation Ordinance. City staff then met with members of Stopwaste.org and contacted the California Energy Commission. As a result of discussions with those contacted staff has learned the following:

Energy conservation measures must be reviewed by the California Energy Commission, which will look for a technical analysis (base case / enhanced case for various building types), as well as a cost analysis of the effectiveness of the enhanced requirements. This sort of analysis is usually done by an outside consultant and is beyond the means of City staff to provide. In addition, the CEC is working on new 2008 Title 24 energy conservation standards to go into effect in July of 2009. The proposed standards will incorporate many of the items staff considered for the energy portion of the proposed Green Building Ordinance. If the Sustainability Committee desires to implement any increases in the new 2008 requirements, the City will have to provide the CEC with the same type of analysis of these measures.

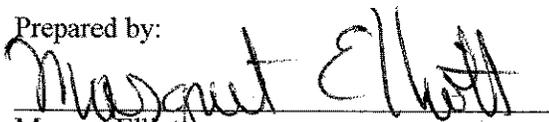
FISCAL IMPACT

Implementation of energy conservation measures beyond those adopted by the CEC will require analysis of the cost effectiveness and the technical basis for such requirements. Such an analysis is beyond the capability of current staff to provide and, in other jurisdictions, has been done by an outside consultant. Most of the measures recommended in the current proposal will be incorporated into the new Title 24 standards.

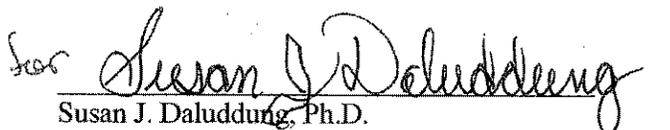
NEXT STEPS

Once the California Energy Commission publishes the 2008 energy standards, staff will review these and report to the Sustainability Committee on any suggestions for increases to the new standards. Although credit for solar energy is given by both the GreenPoint checklists and the LEED certification process, staff will return to a future meeting with discussions for a residential solar funding program to assist small projects in meeting solar objectives.

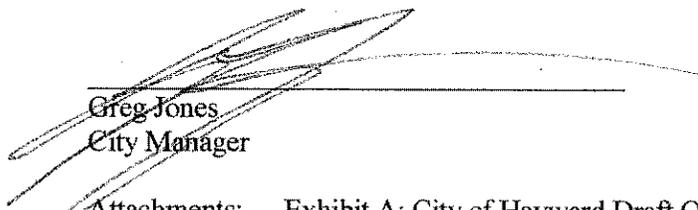
Prepared by:


Margaret Elliott
Building Official

Recommended by:

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

Approved by:


Greg Jones
City Manager

Attachments: Exhibit A: City of Hayward Draft Ordinance

HAYWARD CITY COUNCIL

ORDINANCE NO. _____

AN ORDINANCE ADDING ARTICLE 21 TO CHAPTER 10 OF THE HAYWARD MUNICIPAL CODE ESTABLISHING ENERGY EFFICIENT BUILDING REQUIREMENTS FOR 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.

This Article adopts increased energy standards for construction in the City of Hayward. It is designed to be consistent with the California Title 24 Energy Standards and to allow permit applicants flexibility in meeting the ordinance requirements using either the Performance or Prescriptive methods of calculating Title 24 Energy Conservation measures.

SECTION 2. The City of Hayward's Municipal Code is hereby amended to add Article 22 to Chapter 10 as follows:

"ENERGY EFFICIENCY REQUIREMENTS"

SECTION 10-22.110 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. "Multifamily Residential Building" means a single residential building that has more than two dwelling units.

- e. "Performance Method" means showing Title 24 compliance by comparing the Time Dependent Valuation (TDV) energy use of the proposed design and the TDV energy for the standard design. The method requires the use of California Energy Commission-approved software.
- f. "Prescriptive Method" means showing Title 24 energy compliance by meeting all applicable prescribed requirements.
- g. "Tailored Method" means a method of calculating allowable watts when special task lighting is used.
- h. "Standard Design Budget" means the efficiency standards to which proposed projects are compared by the software required when calculating energy consumption using the Performance Method.
- i. "Solar Heat Gain Coefficient (SHGC)" means the relative amount of heat gain from sunlight that passes through a fenestration product.
- j. "U-factor" means how much heat passes through a fenestration product.
- k. "Vacancy Sensor" means a device that automatically turns lights off soon after an area is vacated, but does not allow the luminaire to be turned on automatically.

SECTION 10- 22.120 APPLICATION.

The provisions of this Article apply to all private residential or commercial construction for which a building permit has not been applied as of July 1, 2008.

City-owned Projects are exempt from the provisions of this Article.

SECTION 10- 22.130 NON-RESIDENTIAL PROJECTS:

Beginning July 1, 2008 all non-residential projects shall meet a 10% adjusted allotted Watts for applications using Complete Building Method and Area Category Method for Title 24 lighting compliance calculation. When using Tailored Method, such reduction cannot be used in the "Design Watts" columns.

SECTION 10- 22.140 RESIDENTIAL PROJECTS USING PERFORMANCE METHOD:

- a. As of July 1, 2008 Residential Projects using the Performance Method for calculating Title 24 Energy Efficiency requirements shall comply with the

following:

- i. Single family homes or additions less than 1500 square feet shall meet a -10% adjusted Standard Design Budget.
- ii. Single family homes or additions greater than 1500 square feet and less than 2500 square feet shall meet a -12% adjusted Standard Design Budget.
- iii. Single family homes or additions greater than 2,501 square feet shall meet a -14% adjusted Standard Design budget.

b. SECTION 10- ADDITIONAL REQUIREMENTS:

- a. As of July 1, 2008 all Residential Additions or renovations with a valuation of greater than \$50,000 shall comply with the following:
 - i. Effective July 1, 2008, Applicants for residential additions of greater than 500 square feet shall insulate all accessible areas of the existing dwelling, including attics and crawl spaces, to R-30 in roof, R-13 in walls, and R-19 in raised floor.
 - ii. All permanent light fixtures in all rooms other than kitchens shall be high efficacy fixtures or controlled by vacancy sensors
Exception: Permanently installed fixtures in bedrooms, hallways, living rooms, and family rooms may be controlled by dimmers.

SECTION 3. Severance. Should any part of this ordinance be declared by a final decision by a court or tribunal of competent jurisdiction to be unconstitutional, invalid, or beyond the authority of the City, such decision shall not affect the validity of the remainder of this ordinance, which shall continue in full force and effect, provided that the remainder of the ordinance, absent the unexcised portion, can be reasonably interpreted to give effect to the intentions of the City Council.

SECTION 4. In accordance with the provisions of Section 620 of the City Charter, this ordinance shall become effective 30 days from and after the date of its adoption.

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