February 14, 2007

Humboldt County Planning Commission

Re: General Plan Update (Section 1)

Distinguished Members of the Commission,

Thank you for this opportunity to be involved with the update of the Humboldt County General Plan. First of all, I want to acknowledge the efforts and accomplishments of the Planning Department staff. This has been a monumental task and I feel that they have done an admirable job. I also appreciate how the review process has been orchestrated. It provides the public well defined opportunities to have meaningful input on the various sections of the Plan.

In general, I want to see the General Plan reflect the fact that we (as a Country and a County) are transitioning into an era where energy and natural resources will have a higher value (ie. be less available and more expensive). Our General Plan needs to recognize this and encourage development that helps us adapt and thrive in this era.

Part 1 – Setting

This section of the Plan establishes the "Guiding Principals" that will set the tone for the creation of goals, policies, standards and implementation measures contained in the rest of the Plan. I support Plan Alternative A and want to see principles 13, 14 and 15 incorporated into the document. The following comments provide suggestions on revisions to the Plan Alternatives presented in Table 1-1.

1. The Plan must work to preserve and enhance the unique physical characteristics of Humboldt County and the quality of life that it's inhabitants enjoy.
2. The Plan must provide sufficient developable commercial, industrial and residential land and create policies to encourage the development of affordable housing and prevent scarcity under a range of growth scenarios.
3. Alternative A, with no revisions.
4. No revisions.
5. No revisions.
6. Alternative A, with no revisions.
7. Alternative A, with no revisions.
8. No revisions.
9. No revisions.
10. No revisions.

Humboldt County Planning Commission
February 14, 2007
General Plan Update - Section 1
Comments from Steve Salzman

11. No revisions.
12. No revisions.
13. Promote design concepts and development patterns that allow and encourage pedestrian and bicycle traffic and reduce the need for automobiles. (Affordable housing is already addressed in 2 and 11. Healthy lifestyles is too nebulous.)
14. Delete. The concepts are incorporated into principle 13.
15. Encourage the adoption of "sustainable" building and planning practices and facilitate their implementation through educational programs, initiatives, policies, incentives and technical assistance. Sustainable defined as: The use of ecosystems services (such as water, soil, air and sun) to satisfy the economic, environmental and societal needs of the present population while enhancing the ability of future generations to meet their needs.

I have also attached two documents for your review. They both pertain to establishment of a residential green building program for counties and cities in northern California. They will be quite helpful in the development of such a program for Humboldt County and should be incorporated into the processing of the Energy Element.

Thank you once again for this opportunity to participate in this process. I look forward to providing additional input on the rest of the Plan.

Sincerely,

Steve Salzman, P.E.
40 Glendale Drive
Arcata, CA 95519

Attachments:

Local Green Building Initiatives in Northern California (Build It Green Public Agency Council Member Survey Results)

Build It Green's Municipal Roadmap for Residential Green Building

Build It Green
Smart Solutions From The Ground Up

City Roadmap for Creating a Green Building Program

FINAL • June, 2006

WHAT'S INSIDE

PART 1. HOW CITIES CAN PROMOTE GREEN BUILDING—AN OVERVIEW

This roadmap has been developed to assist California municipalities with promoting green building in their communities. It draws on the experience of green building programs from across the nation and focuses on the strategies that are most relevant to the public sector.

The roadmap provides a framework for developing or expanding green building initiatives within your municipality. It will help you identify your goals, the support you have within your political and staff structure, and the community members and organizations that support or will benefit from this effort. As you use this roadmap, you'll be encouraged to consider questions such as:

- What is green building, and what can your city expect to achieve by promoting it?
- Who will be your partners in this effort?
- What will motivate your agency, your partners and other key stakeholders to create a green building program?
- What tools are available to help ensure success?
- How do you get started?

The beauty of green building is that it benefits everyone involved in the process. The key is helping each stakeholder group understand what they have to gain.

WHAT IS GREEN BUILDING AND WHY DOES IT MATTER?

Building construction represents a huge sector of California's economy, and it has correspondingly large impacts on the quality of our lives and the environment. Across the state, many municipalities are developing green building initiatives or programs to help ensure that the structures built or remodeled today will contribute to a strong economy, vibrant communities and a healthy environment for generations to come.

Although definitions vary, the common denominator is that green buildings are designed, constructed and operated to conserve energy and water, provide a healthier indoor environment, safeguard natural resources, and foster livable communities. Think of green building as an improvement on, rather than a major departure from, conventional design and construction practices.

California already has one of the most stringent building energy codes in the country: the Energy Efficiency Standards for Residential and Nonresidential Buildings, commonly known as Title 24. To be considered green, a new building needs to be even more energy efficient than Title 24

requires. There are many cost-effective design and construction strategies for achieving higher levels of efficiency.

In addition to saving energy, a green building is constructed using practices and products that help protect the health and safety of its occupants and the workers who build it. The precautionary principle, a commonsense approach to decision-making that embraces the adage "an ounce of prevention is worth a pound of cure," is at the heart of green building. If a building or furnishing material has a recognized potential to harm human health, the prudent path is to use safer alternatives.

Green building practices also make wise use of natural resources, including water, forests, mined and quarried resources, open space, and more. Safeguarding these resources is an important responsibility of the public sector. Municipal green building programs encourage architects, designers, builders, building owners and tenants to pay attention to the environmental and health impacts of all resources used to construct and operate buildings.

Green building doesn't end when construction is complete. Green building programs encourage owners and occupants to operate their buildings in environmentally responsible and healthy ways. This includes maintaining heating and air conditioning systems so that they run at peak efficiency, choosing energy- and water-saving equipment and appliances, and reducing the use of toxic maintenance and landscaping chemicals.

THE CITY'S ROLE IN FOSTERING GREEN BUILDING

Ultimately the goal of green building is to ensure that our communities are environmentally, socially and economically sustainable not just today but for generations to come. Local governments play an indispensable role in effecting this transformation, because they have the means to:

- **Facilitate.** Local governments can gather stakeholders from diverse sectors and act as a facilitator in creating cooperative relationships and dialogue. They can also publicize and lend credibility to these cooperative efforts.
- **Provide policy direction.** Local governments can establish policy priorities and community goals to encourage green building practices. They can develop resolutions and endorse green building guidelines, and can remove administrative or regulatory barriers to green building.
- **Provide recognition.** Local governments can offer public recognition of exemplary private sector efforts through public proclamations or awards programs.

Part 2 provides a detailed roadmap that cities can use to create a green building program.

PART 2. CITY ROADMAP FOR CREATING A GREEN BUILDING PROGRAM

This roadmap draws on the experience of green building programs from across the nation and identifies the actions that will provide the best results for the least cost.

An agency's ability to develop and implement green building initiatives is largely a function of available resources, including staff time and expertise, financial resources and relationships with strategic partners. Small cities in particular may find it challenging to delegate staff time to green building efforts.

Fortunately, cities can take advantage of many existing resources, tools and programs. Today a growing pool of municipalities are promoting green building, and this roadmap shows how you can draw support from the larger regional network. Any municipal agency can develop a basic green building program without an overwhelming investment of time and money. The ten steps outlined in this roadmap will show you how.

STEP 1. FORM A GREEN BUILDING TEAM

Depending on the size of the city, you will likely have one point person or a small core group who will begin formulating the green building program and coordinating activities within the city. Invite staff members who work in key building-related functions to join the green team; this will help streamline communication and pave the way for internal support for your green building initiatives. Potential members of the core green team may include staff from departments such as planning, building, city architect, public works, public health and affordable housing.

Usually the green team consists solely of city staff, although in a few cities where community interest in green building is particularly strong, the green team also includes a volunteer task force of local building professionals and representatives of community groups. One of the roles of the green building task force is to make policy and programmatic recommendations to city officials. This task force approach has a couple of advantages: the recommendations have credibility because they're endorsed by key stakeholders, and the task force members are motivated to champion the city's goals and plans in the marketplace and larger community. However, a volunteer task force is only likely to be successful if its members are highly motivated and committed to the green team's goals.

As you're putting together your list of potential green team members, consider these questions:

- What level of organizational or implementation ability does your core team have?
- What level of support might you expect from other government agencies, the construction industry, the business community, utilities and environmental groups? Would it make sense to form a volunteer task force of motivated, influential people from these sectors?
- How knowledgeable and accepting of green building are your city's residents?

Keep in mind that even a green team of one person can be enough to get an initiative started. In fact, that's how some early green building programs got off the ground.

STEP 2. ANALYZE THE MARKET AND IDENTIFY STAKEHOLDERS

With your core green team—and maybe even a volunteer task force—in place, analyze the construction market in your jurisdiction to identify the primary types of building occurring now and over the next ten to fifteen years.

Is it mostly residential remodeling with a smattering of commercial construction? Or are you primarily seeing mass-produced single-family homes in new developments, with very little commercial construction? Is multifamily housing a significant factor, and if so, how much is affordable versus market-rate? Are major civic building projects on the horizon? Is commercial construction mostly limited to renovations of existing buildings, or are you anticipating new corporate campuses or industrial facilities on previously undeveloped land?

This analysis is crucial because the building industry is a multifaceted system with many stakeholders. If your green building program is to be effective, it must be tailored to the specific motivations and needs of the construction sectors that predominate in your community.

Once you've analyzed the market, task your green building team with identifying the pool of stakeholders who need to be involved with your green building initiative. The table below lists typical stakeholders and the reasons they may be interested in green building.

Why key stakeholders care about green building

Stakeholder	Values
Government	▪ Increase economic development and community vitality ▪ Improve jurisdiction's reputation ▪ Add value to the local built environment ▪ Increase citizen satisfaction and retention ▪ Provide public and professional education ▪ Enhance public health and safety ▪ Improve environmental compliance ▪ Promote interdepartmental cooperation ▪ Develop positive relationships with building industry
Construction Industry	▪ Gain competitive marketing edge ▪ Embrace unique educational opportunities ▪ Provide higher quality, higher value product ▪ Build positive relationships with government ▪ Reduce legal exposure ▪ Improve image
Building Owners	▪ Lower operating costs ▪ Provide healthy, productive indoor environment ▪ Attain green seal of approval ▪ Provide higher quality, higher value product ▪ Reduce legal exposure ▪ Increase property value
Building Occupants	▪ Lower operating costs ▪ Live in a healthier indoor environment ▪ Enjoy a higher quality of life ▪ Be a steward of the environment
Affordable Housing Agencies & Nonprofits	▪ Provide housing that is truly affordable ▪ Create sustainable communities ▪ Support environmental equity
Utility	▪ Reduce peak electrical loads ▪ Reduce emissions ▪ Get recognition as environmental stewards ▪ Meet utility restructuring requirements ▪ Reduce resource consumption ▪ Reduce stormwater runoff ▪ Enhance water quality ▪ Lower energy use for water processing/pumping

The better your fledgling program addresses the needs of the key stakeholder groups, the more rapidly it will be accepted. One of your goals should be to provide a framework that enables each stakeholder group to bring their expertise and skills to the table for successful collaboration.

Consider these groups when identifying stakeholders: local home builders; architects; developers; general contractors and remodelers; realtors; landscapers; lumber yards and building-supply retailers; commercial

building owners and managers; homeowners and renters and utility representatives.

Other potential stakeholders include organizations and foundations representing issues such as environmental protection, community interests, economic development, low-income housing and community health. Civic and business groups such as Lion's Clubs, Rotary and Chamber of Commerce are also potentially important allies.

STEP 3. ASSESS CITY POLICIES AND RESOURCES

Most cities have programs that address recycling, waste management, water conservation, demand-side energy management, public health and so on. These programs directly relate to many of the constituent components of green building.

Map the relationship between your city's various policies and programs and your green building goals. If possible, involve staff members from these programs in your green team. Identify how the existing programs relate to green building, and strategize about how to better coordinate activities so that the green building initiative strengthens and supports, rather than replicates, existing programs.

Staff time and budgets are concerns for every city, and establishing even a basic green building initiative will take some effort. By coordinating with other staff members, you will make more efficient use of staff time and financial resources, and be more likely to gain internal support for the green building initiative.

During this assessment you may identify city policies or procedures that may hinder, not address or not support various elements of your green building initiative. Identify the members of your green team who will take responsibility for addressing these barriers. Consider providing educational sessions early on to help municipal staff understand green building and its benefits and overcome misperceptions. This in-house training will help motivate staff to support the city's green building efforts. Also consider early informational sessions for policy makers and other key stakeholders so that everyone clearly understands how a green building program will benefit the city's constituents.

STEP 4. DEVELOP PARTNERSHIPS

With limited staff time and funding, a city's resources could easily be stretched thin if it attempted to create its own green building program from scratch. Fortunately cities can tap into a wealth of green building expertise, tools and resources so that they don't waste time or money replicating work that's already been done.

To access these existing resources, start by creating a list of potential strategic partners. Keep your list focused on the predominant construction markets in your industry, whether it's residential remodeling, production homebuilding, civic buildings, commercial construction or other markets.

Your strategic partners may include other agency departments within the city as well as peers working in neighboring city, county and waste management agencies. Look for opportunities to jointly sponsor green building activities with neighboring cities.

Also consider partnering with green building nonprofit groups such as Build It Green and the U.S. Green Building Council. Participate in the Build It Green Public Agency Council, an information-sharing forum attended by representatives of jurisdictions throughout California.

And don't forget partners who may offer specialized technical expertise or provide connections to building professionals and the community, such as universities, professional trade associations, utilities, nonprofit and community groups.

Leverage the strengths of public, private and nonprofit sector partners

The private, public and nonprofit sectors bring different strengths to the table. Your green building program is likely to be more effective in the long run if you develop it in collaboration with the private and nonprofit sectors rather than imposing it on them. Also, collaboration may mean that your city doesn't have to bear all the costs of developing and implementing the program.

The private sector excels at identifying needs in the market and producing goods and services to meet those needs. It also tends to be innovative, quick to adapt to changing demands, and focused on reducing costs and maximizing profits. Look for ways to develop partnerships with interested business leaders and work together on program strategies that are creative, cost effective and beneficial to all sectors.

You are also likely to find valuable partners within the local nonprofit sector. Identify nonprofit leaders who work on housing, environment, health and other issues of community concern, and collaborate with them to leverage the work they are already doing. Also, many nonprofit groups have good relationships with the media, so work with your nonprofit-sector partners to take advantage of press and publicity opportunities.

STEP 5. DEFINE PROGRAM ELEMENTS

Once you've laid the groundwork by establishing a green team, analyzing the local construction markets, evaluating internal and external resources,

and reaching out to strategic partners, give yourselves a round of applause—you've made tremendous progress.

Now it's time to start defining program priorities and elements. Because your time, budget and staffing resources are limited, you must be strategic about where to target your efforts. Start by referring back to your market analysis. Make sure you're clear about what types of construction predominate, who your target audiences are, and what internal and external resources you have access to.

Next, identify potential program elements. While no two green building programs are exactly identical, it makes sense to look to other successful programs to see what has worked for them. Here are some elements common to many established green building programs:

- **City policies and contracts.** Use policies and contracts to establish goals for green building and set consistent standards. Tools include general plan language, civic green building ordinances, and resolutions to adopt green building guidelines as an official city reference. Also consider greening the city's RFQs and RFPs for new facilities and services, and including green building specification language and requirements in service and maintenance contracts. The target audience includes elected officials, city staff and building contractors.

- **Green building guidelines.** Guidelines help debunk myths about the costs and benefits of green building, and establish a consistent framework for defining what green building means. Guidelines help homeowners and building professionals identify specific practices that can be included in any size or scope of project. Residential green building guidelines have been developed for single-family new home construction, home remodeling and multifamily housing in California. For private-sector commercial building construction, the LEED Green Building Rating System Reference Guides can be used as a design resource, although their primary purpose is for achieving LEED certification. The target audience for guidelines includes developers, architects, general contractors, production home builders and building owners.

- **Professional Education.** This helps increase the supply of and demand for green buildings, and develops local expertise by providing how-to information. The city can sponsor educational workshops featuring green building experts. On its own or in conjunction with neighboring cities, the city can host educational events organized by the U.S. Green Building Council or Build It Green. Training opportunities are available for the different building industry sectors, including production homebuilding, remodeling,

multifamily housing and commercial buildings. The target audience includes city staff, builders, remodelers and commercial developers.

- **Incentives.** These can help promote competition within the construction market and reward excellence. Incentives can include publicity and promotion of green projects by the city. Some cities organize an annual awards ceremony to recognize exemplary builders or projects. Builders and developers also value expedited permitting for green projects. The target audience includes architects, builders, and developers.

- **Consumer marketing.** This can help stimulate demand and increase civic involvement. Press releases, case studies, home tours, utility bill inserts and other outreach strategies will raise the level of awareness about green building. The target audience includes homeowners and civic groups.

When defining your program elements, remember that a green building program supports your stakeholders' goals; it is not a diversion from their primary business or values. After all, everyone will benefit from the results of a successful green building program: healthy, safe, comfortable, durable, energy-efficient, cost-effective buildings for all.

STEP 6. LEAD BY EXAMPLE

There's no better way to kick off the transformation of your local building market than to lead by example. Make it a priority to green your next high-profile city project. By doing so, you'll be making a public commitment to the city's green goals and you'll raise the visibility of green building in your community. As an added advantage, you can use the process as a means to promote the benefits of green building and increase the number of green buildings in your community. As contractors gain green building experience on municipal buildings, they carry that knowledge over to other commercial projects.

The biggest hurdle to green building is typically the initial learning curve; green building represents an improvement over conventional building practices and processes, so it requires an investment of time to learn new approaches. Once you have gained experience by greening one city project, your city staff will be familiar with the variety of green building practices. It can then become the standard practice for all new buildings.

Across the country, many cities and states now require that all new construction and major renovations of civic buildings meet the LEED Green Building Rating System standards. The State of California, for example, has adopted a LEED Silver standard for all new state buildings. The state also promotes the Collaborative for High Performance Schools (CHPS) program for all new school construction.

Cities throughout California are adopting civic green building ordinances that require green building on their new municipal projects. Another approach, if your city isn't ready for an ordinance, is to adopt a resolution stating that it is city policy to build green.

Before attempting to pass an ordinance or resolution, make sure you have solid support from city staff and elected officials for green building (see Steps 3 and 4). Many cities hold study sessions for city commissions and councils to review examples of green building, discuss community benefits and explore policy implementation strategies.

STEP 7. DISTRIBUTE EDUCATIONAL MATERIALS

Although your green building program may not include all the elements described in Step 5, it will most certainly include an education component. Public education has always been the purview of the public sector and is critical to accelerating the market transformation to green building.

The building industry builds what the market demands. As more people become educated about the benefits of green building, they will demand that the design and construction industry adopt healthier, more environmentally responsible practices. The greater the demand, the faster the industry will find a way to meet the demand.

When considering the types of educational materials to make available, be sure to devote attention to both the supply side (the building industry) and the demand side (building owners, homeowners and tenants):

- **Supply side:** Materials should explain the business benefits of green building, which may include a more streamlined approvals process, competitive market advantages, reduced liability or increased profits. The materials should also help builders and developers increase their green building know-how so they are willing and able to offer greener buildings.
- **Demand side:** The materials should explain the personal, business and community benefits so that owners and tenants will insist on greener buildings. Make sure to focus on the benefits, not the features. A product does not impress someone, but what it delivers does. The demand-side benefits of green building include comfort, health, cost savings, employee satisfaction, and more.

Residential green building guidelines: An indispensable tool for education

As part of your program's education efforts, you'll likely want to introduce green building guidelines to your target audiences. There's no need to develop guidelines from scratch. Well-established guidelines are readily available for cities to use as is or modify to suit their needs. Guidelines explain what green building is, why it is of value, and how to

do it (for architects, builders and developers) or how to get it (for homeowners and tenants).

Take advantage of guidelines such as the *New Home Construction, Home Remodeling* and *Multifamily Green Building Guidelines.* Now distributed by Build It Green, these were originally developed by Green Building in Alameda County in a collaborative effort with homebuilders, developers, architects, municipalities, state agencies, nonprofit housing associations, and other interested parties.

This series of green building guidelines is targeted toward mainstream builders and homeowners and describes how green building practices can be applied to every residential construction project, not just niche or demonstration homes. These guidelines describe cost-effective, proven green building practices; explain the benefits to consumers, builders and communities; and demystify the materials and methods used to build green homes.

One simple action that your city can take is to adopt a resolution declaring the *New Home Construction Green Building Guidelines* as an official reference guide. This costs the city nothing, but demonstrates to architects, builders and other stakeholders that the city is committed to green building. This policy can take the form of a resolution that references the city's general plan goals or other policies.

The *Green Building Guidelines* include a Green Points checklist that allows the architect, developer or builder to rate how green a particular project is. Some cities now require that the Green Points checklist be included with each project submitted for a building permit. This simple step has proven to be very effective in getting the community to take notice of green building.

Guidelines for Commercial and Civic Buildings

For commercial and civic construction, there aren't design guidelines that lay out, step by step, how to build green. However, many people use the LEED Green Building Rating System's Reference Guides as *de facto* design guidelines. Although the Reference Guides' primary purpose is to explain how to achieve LEED certification, they can be mined for valuable green-building strategies and practices applicable to most commercial and civic construction practices.

Beyond guidelines

Your program's education element should offer a combination of tools rather than a single tool or one-dimensional strategy. In addition to guidelines, resources to consider offering include printed materials such as program brochures or fact sheets that can be displayed at agency permit counters, mailed to residents, distributed at community events, and made

available on your Web site; green building tours; articles placed in local newsletters; booths at community fairs and events; paid and word-of-mouth advertising; and so on.

Always make sure that the materials you make available are well matched to the needs of your target audiences.

STEP 8. OFFER IN-DEPTH TRAINING

Distributing guidelines is an important first step in educating your constituency about the benefits and methods of building green. But guidelines alone aren't enough to transform the market.

Established green building programs have found that it's critical to provide continuing education opportunities to building professionals, building owners, and city staff.

Your green team does not have to develop a training curriculum from scratch. Build It Green, the U.S. Green Building Council and other groups provide can provide training for your jurisdiction's building professionals, consumers and city staff. However, your green team or point person will need to organize the events so that the message gets out to the right audiences. Build It Green trainers or other consultants can deliver the content of these educational sessions, but the city plays a critical role in convening the appropriate stakeholders and lending credibility to the initiative.

Continuing education for building professionals

Training building industry professionals is an essential component of a successful green building program. Architects need to know how to design high performance buildings. Interior designers need to know how to find healthier finishes and furnishings. Remodelers of residential and commercial buildings need to know how to integrate green features into existing buildings. Builders of new homes need to understand the economics of green building and how to include green features into their plans and developments. Building inspectors need to understand green designs, products and installations and how they relate to the codes.

If you are targeting the residential construction market, consider hosting the Build It Green Certified Green Building Professional training. Encourage contractors who have pulled permits in your city to attend this training. If you have limited resources, partner with neighboring jurisdictions to offer this training.

Your city can also sponsor LEED workshops in conjunction with local chapters of the U.S. Green Building Council. This will ensure that training is available for contractors and developers of commercial buildings.

Reaching out to homeowners

Homeowner and tenant education is also valuable to help them become better informed consumers. For example, you can organize special workshops and seminars for homeowners who want to lower their utility bills and make their homes healthier and more comfortable.

Keeping municipal staff ahead of the curve

When planning your continuing education programs, don't forget one of your most important audiences: municipal staff and others who make decisions about civic buildings. Internal training is indispensable for building support for your program and for developing expertise so that civic buildings can lead the way toward a greener community.

A number of groups provide green building training for municipalities. Build It Green currently offers presentations for municipal staff and decision makers in all Bay Area cities.

Existing green building programs have come up with varied ways to educate city staff, including providing financial support for staff to obtain professional accreditation from the U.S. Green Building Council's LEED program, attend Build It Green Certified Green Building Professional trainings, or green building conferences.

Some programs pay for department subscriptions to green building publications such as *Environmental Building News.* Kiosks in the building department or other highly visible locations can display product samples and printed resources. Staff can be encouraged to participate in organizations such as the local chapter of the U.S. Green Building Council or the Build It Green Public Agency Council, an information-sharing forum attended by representatives of jurisdictions throughout California. It may also be useful to hold regular staff meetings or brownbag sessions to discuss new green building topics or programs.

STEP 9. GENERATE PRESS AND PUBLICITY

Get your messages out to your target audiences and raise your program's visibility by generating press and publicity. Seek opportunities for co-marketing, media coverage and free advertising.

Be creative. Marketing and publicity can take many forms, including:

- Using municipal communication strategies like information pamphlets inserted into water and solid waste bills to educate residents about green building
- Creating an educational display at the permit center
- Organizing an awards ceremony to recognize teams that built exemplary projects

- Placing articles in neighborhood association, civic and business newsletters
- Sponsoring building tours
- Integrating green building messages into public officials' presentations and speeches

To support cities' publicity and marketing efforts, Build It Green is developing sample articles and other marketing materials.

STEP 10. ENCOURAGE USE OF THIRD-PARTY RATING PROGRAMS

Another effective way to foster green building is to encourage the private sector to participate in third-party rating programs, which set quantifiable standards for what green means. A rating program helps builders benchmark their internal progress as they expand their green building expertise. It also provides a way for cities to track local green building activity, and gives building owners and tenants assurance that they're actually getting healthier, more environmentally responsible buildings.

For civic and commercial building construction, the LEED Green Building Rating System has become a widely accepted national standard for evaluating a building's environmental performance.

For residential construction, however, there is no nationwide rating system, although a number of national green building programs are currently being piloted. These include LEED for Homes, Energy Star Indoor Air Quality, and Environments for Living. The requirements and costs for participating in these programs vary, but they all require third-party verification.

Since homebuilding practices vary significantly across the country, more so than commercial building practices, numerous regional residential programs have been successfully established, such as EarthCraft House in the Southeast, Built Green Colorado, Built Green Washington and Vermont Builds Greener, to name just a few.

Here in California, our unique regulatory and policy environment (for example, the nation's most stringent building energy code, stormwater regulations, construction defect legislation, and so on) makes it likely that California-specific residential programs will continue to be more useful than national ones. The two most widely known California-specific programs are the California Green Builder program from the California Building Industry Association (CBIA), and the Green Points program, which is based on the previously mentioned *Green Building Guidelines*.

The CBIA program is administered by Consol, a private energy consulting firm. Targeted to new single-family production homebuilding projects,

this program requests that municipalities provide incentives to projects that meet its standards.

The residential *Green Building Guidelines* were developed to be compatible with all the third-party rating programs, so a builder employing the recommended strategies in the Guidelines could also choose to have projects rated under a national system, such as LEED for Homes or utilize the California Green Builder program.

However, many California builders who use the residential *Green Building Guidelines* also use the Green Points checklist. This rating system, which was mentioned earlier in Step 7, was specifically developed to accompany the Guidelines. Builders can have their project rated by a third-party Green Points rater. Build It Green administers the training program and quality assurance for third-party Green Points raters. Projects types include single-family remodeling and new construction as well as multifamily projects. A Green Points checklist for existing homes will be added soon.

PART 3. ENHANCING YOUR GREEN BUILDING PROGRAM

If your city is seriously committed to green building and has sufficient resources, you can continue to strengthen and expand your green building program. The most successful programs are run by green teams that listen to and learn from stakeholders, and that gradually raise the bar and make changes as the program and market matures.

This section describes longer-term action items to take once your basic program is established. It also gives suggestions for evaluating your program's strategies and achievements, and presents lessons learned from existing programs.

LONGER-TERM ACTION ITEMS

- **Work with the Build It Green Public Agency Council.** This forum, which began with local government programs in the San Francisco Bay Area, includes representatives of jurisdictions throughout California. Public agency staff attend the Council's meetings to learn about the regional and statewide green building scene and to share information with other representatives of city and county waste agencies and waste management authorities.

- **Remove internal barriers to green building.** In most cities, there will be some challenging internal obstacles to overcome. For civic construction projects, for example, the budgets for new construction and ongoing operations come from different departments. An energy-efficient building design would reduce the city's maintenance costs, but those savings wouldn't necessarily be reflected in the capital budget. Ensuring that the benefits of green building are appropriately accounted for requires leadership and persistence. This makes it particularly important that your green team includes, or at least has support from, all relevant departments. Ongoing education of staff, managers and elected officials is also key so that green building initiatives have internal champions.

- **Provide additional green building services and staff support.** Offer Build It Green "Ask an Expert" cards at permit counters and refer applicants to this hotline. Contract with Build It Green or other third-party consultants to provide detailed project consultations for large projects. Assign dedicated staffing to the green building initiative. Consider hiring a green building coordinator (Build It Green provides a sample job description). Hold ongoing town meetings for staff to coordinate program activities, evaluate progress, reinforce values and objectives, and provide continuing education.

- **Contribute to the Build It Green Materials Database.** This searchable online database of regionally available green products is maintained and hosted by Build It Green. Various city and county agencies have funded the expansion of the database listings to cover their jurisdictions.

- **Provide incentives.** Promote green building policies with incentives such as streamlining the permitting and review processes, providing density bonuses, offering rebates, discounts, special financing, and so on. Also consider awards programs and other types of public recognition to draw attention to builders and developers who are successfully building green.

  For developers, time is money, thus they value expedited review processes or at least more certainty about the length of the review process. Grants are not a very effective method of promoting market transformation in the private sector because they are not financially sustainable for a local government over the long run. Also, the amount of grant funding is often too small to make a difference to a developer.

- **Consider restrictions or penalties.** Only if absolutely necessary to achieve specific policy objectives, consider employing mandates such as regulations, ordinances, zoning requirements, conditions of approval, and so on. Consider instituting fees or taxes to discourage undesirable practices. But don't undertake any restrictive or penalizing strategies without seriously evaluating their potential impacts, because they can discourage private-sector collaboration.

PROGRAM EVALUATION

If you can't measure your program's success, how will you know when you've achieved your goals? And how will you make effective decisions going forward? Without a doubt, quantifying results takes some effort, but it will be easier if you plan for how you'll do it at the same time that you're developing your program elements. Here's an overview of the types of evaluation activities undertaken by successful green building programs:

1. Evaluate your efforts to know what changes you need to make

a. Track participation, including:
   - Number of program members or number of builders involved in the program
   - Participation in professional and consumer education workshops and events
   - Construction affected (total number of units and square feet of green homes/apartments/buildings built and remodeled)

b. Track education and marketing outreach, including:
   - Education and outreach activities (number of mailings, Web site hits, guidelines or other printed materials distributed, displays placed, attendance at presentations and trade shows, viewer/listener/reader outreach on TV/radio/print/billboard spots, public relations exposure received, etc.)
   - Consumer and professional perceptions through surveys and focus groups
c. Analyze all green improvements over standard practice (electricity, gas, water use, material use, outdoor pollution avoided, costs reduced, waste reduced, etc.). Analysis methods include:
   - Computer simulation modeling that compares green designs versus conventional designs and shows improvement over code requirements
   - Side-by-side comparisons of green-built and conventional buildings
   - Testing and monitoring of completed buildings
   - Analysis of utility bills
d. Track changes in industry practices, including:
   - Product/service supply affected (number and volume of new businesses involved in green building business, new green products/services offered and sold, etc.)
   - Changes in industry practice (implementation of green design, construction, and maintenance; reduction in non-green practices, job creation in green businesses)

2. Understand that some benefits are more difficult to evaluate

Many of the benefits of green building are difficult to quantify, including:

- Improved health
- Reduced medical costs
- Improved indoor environmental quality
- Increased comfort
- Improved marketability
- Increased worker productivity
- Higher profits

3. Recognize when the market is transformed

Be alert to these signs that your green building program is succeeding:

- Higher level of marketing and education
- Organized, well-used clearinghouse of information
- Active, engaged partners
- Government programs/policies/codes facilitating green building
- Educated professionals and aware owners/tenants
- True implementation among the professionals and deliberate choices in favor of green by owners/tenants

- Advanced evaluation and continuous improvement (such as carbon tracking, emissions trading, VOC/ozone measurement, life-cycle assessment, health effects, environmental cause/effect relationships)
- Use of advanced technologies such as zero-net energy buildings, renewable energy systems, fuel cells, co-generation, water recycling, daylighting

LESSONS LEARNED FROM OTHER GREEN BUILDING PROGRAMS

Over the past ten years or so, a number of green building programs have been established in California and across the nation. Some of these were started by local government agencies, while others were spearheaded by a utility, home builders association, or a nonprofit group.

No two programs are exactly alike. However, many successful, well-established green building programs have found these approaches to be effective:

Work with private sector stakeholders to:

- achieve lasting buy-in through partnership and progress towards mutual goals
- promote an accessible, voluntary program
- conduct effective training for building professionals
- reward increasing levels of achievement

Mobilize demand by:

- conducting extensive consumer outreach and education
- providing useful information and resources

Experience has shown that persuasion and enticement are generally much more effective than coercion (think carrots, not sticks). Attitudes and approaches such as those described below may alienate potential allies in the business community, may appeal to only the early adopters rather than the mainstream community, and may fail to leverage market forces.

Avoid these pitfalls:

- Blaming the construction industry for building conventional housing, even though they are meeting all applicable codes and standards.
- Preaching to the choir by working exclusively with environmental groups that may not understand the construction business or the desires of mainstream consumers.
- Assuming that green approaches will be readily adopted because their benefits seem obvious to you.
- Forcing change through government regulation when private sector or collaborative efforts may be more effective.

- Committing inadequate resources to educating the design and construction industry about green building.
- Believing that a fee-for-service system should be avoided (on the contrary, if a service is free, people often devalue it).
- Inadequately documenting efforts and results; lack of documentation weakens arguments supporting the program and wastes time.
- Inadequately documenting and analyzing non-energy benefits, which are often the most compelling reasons to go green
- Falling into the payback black hole: the payback period is nonexistent or impossible to quantify for many of the most compelling green building benefits, such as creating a healthier building or increasing comfort.
- Promoting green building features (such as the type of equipment used) rather than benefits (such as lower operating costs, or increased comfort or durability). Building owners and tenants do not typically relate to features, but they do understand benefits.
- Depending on singular champions who may eventually change jobs, duties, lose interest, move or be promoted.

PART 4. HOW BUILD IT GREEN CAN HELP

Build It Green is a professional non-profit membership organization whose mission is to promote healthy, energy and resource-efficient buildings in California. Supported by a solid foundation of outreach and education, Build It Green connects consumers and building professionals with the tools and technical expertise they need to build quality green buildings. Build It Green fosters collaboration with key stakeholder groups to accelerate the adoption of green building practices, policies, and programs.

Partnering with public agencies, building industry professionals, manufactures suppliers and nonprofits, Build It Green offers education, unbiased product information, technical assistance and training. Build It Green provides a critical link between consumers, building professionals and green product manufacturers.

- **Public Agency Council:** The Public Agency Council (PAC) is a unique collaborative effort of over 70 participating public agencies that meet quarterly to create consistent green building standards, share information, and support each others' programs and initiatives. **Green Remodelers Guilds:** The Green Remodelors Guild (GRG) formed in 2003 in the East Bay and has created an excellent venue for building professionals to get green building education and training and share their direct experience with green materials and practices. Every month between 30 and 50 building professionals attend a presentation on specific aspects of green building and engage in lively discussion. There are now 3 additional GRG's forming in San Francisco, the South Bay and the North Bay.
- **Non-Profit Network:** The Non-Profit Network (NPN) is a unique institutional platform that fosters effective collaboration between more than 40 diverse environmental non-profit organizations. The purpose is to advance each organization's individual goals by focusing on their common ground. This unique platform allows the non-profit environmental community to speak with a strong unified voice and work together to lead the dialogue, set the agenda, and promote more environmentally friendly and socially equitable development in our neighborhoods and cities. The NPN meets quarterly, and BIG leads the planning and coordination of the meetings and activities.
- **Builders Council:** The Builders Council (BC) provides a forum for production home builders to provide input into the development of green building guidelines and green building programs in California. Participation in the BC allows builders direct access to public agencies and other building industry stakeholders.
- **Green Affordable Housing Coalition:** The Green Affordable Housing Coalition (GAHC) is made up of San Francisco Bay Area

public-sector and private-sector professionals committed to incorporating green building practices into the design, construction, operation, and maintenance of affordable housing. The coalition promotes Green Building through education and outreach with the aim of producing economic and quality-of-life benefits for tenants, improving the financial bottom line for property owners, and generating economic and environmental benefits for the local, regional, and world community. Build It Green and Local Initiatives Support Corporation (LISC) have recently entered into an MOU to jointly provide ongoing organizational support to the coalition.

- **Suppliers Council:** The Suppliers Council is a unique forum for manufacturers, distributors and retailers to participate in effective dialogue to improve green building product availability and accelerate demand for green building products and materials.
- **Real Estate Council:** The Real Estate Council is dynamic group of lenders, realtors, & appraisers working together to educate real estate professionals and stimulate consumer demand for healthy, energy & resource efficient buildings in California.

PROGRAMS AND SERVICES

Build It Green offers an array of technical and educational services.

- **Green Home Tours:** Build It Green organizes home tours for building professionals and the general public to visit a range of homes that showcase green building design strategies, products and technologies.
- **Certified Green Building Professional Training:** Build It Green offers a 16-hour training program and proficiency exam for general contractors, architects, and other residential building professionals. Contractors who successfully complete the course earn a Green Building Professional certification and may join Build It Green's Green Remodelers Guild and get listed on the contractor referral web page.
- **Home Rating Program:** Build It Green offers third-party ratings for single-family and multifamily new construction projects. The program will eventually include remodeling projects and existing homes.
- **Technical Assistance to Building Projects:** Build It Green offers project-specific technical support on a fee-for-service basis via telephone/in-person consultation, edit/review of technical materials, and on-site technical consultation visits to builders' projects.
- **Ask An Expert Hotline:** The Ask An Expert green building hotline delivers free customized phone and email consultations to home owners and building professionals to obtain project advice, product/materials recommendations, and contractor referrals. Questions are submitted by phone, e-mail, in person at the Build It Green office, or at an event.

- **AccessGreen Directory:** AccessGreen provides an extensive listing of over 600 green products and technologies available at over 500 locations in the nine-county San Francisco Bay Area. This directory allows building professionals and residents to conveniently locate suppliers and installers of green building products and materials, ranging from foundation materials to finishing touches. Plans are under development to extend the Directory to serve all of California.
- **Other Training:** Build It Green organizes, sponsors, and delivers workshops, trainings and brownbag presentations on a variety of green building topics. These events are tailored to meet the goals and abilities of each audience, including homeowners, building professionals, public agency staff, and elected and appointed officials.
- **Market Research:** Build It Green conducts in-depth market research and analysis of consumer trends relating to green building practices and products. Build It Green can provide customized reports that aid local governments, manufacturers, contractors, and suppliers in increasing effectiveness of green building programs or product marketing.
- **Point-of-purchase displays:** Build It Green distributes POP materials supporting its green building programs and services to at public agency permit counters and in retail outlets.
- **Green Materials Displays:** Build It Green develops content for educational green building materials exhibits. Displays are a hands-on educational tool that provides an effective way to educate visitors on green building practices, products, and technologies.
- **Program Development Assistance:** Build It Green offers program development support to public agencies and other change agents in the green building arena.

Local Green Building Initiatives in Northern California

Build It Green Public Agency Council Member Survey Results

Final

March 23, 2006

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Acknowledgements

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I. Introduction

This report summarizes results of the Build It Green Public Agency Council member survey fielded in late 2005. The report is intended to serve as a resource tool for Council members and policy makers seeking information about public agency green building programs in Northern California and particularly the San Francisco Bay Area. The intent of the survey was to

(1) Identify model practices for green building initiatives in the public sector;

(2) Facilitate the exchange of information resources and experiences between agencies; and

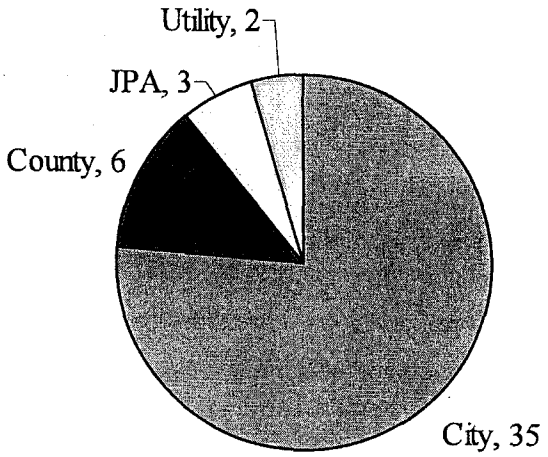
(3) Benchmark the current state of green building in the public sector.

This report should not be interpreted as a comprehensive or general study of all public agencies in Northern California. The agencies contacted represent a small fraction of all public agencies in the region and they were not selected at random. Rather, they were contacted due to their participation in the Public Agency Council and their leadership in advancing green building in their communities.

A total of 46 public agencies responded to the Public Agency Council survey, including virtually all agencies with longstanding green building initiatives in the region. Most respondents were cities but counties, joint powers authorities (JPAs), and utilities are also represented. The City/County of San Francisco was coded as a county for tally purposes. Likewise, City of Palo Alto was coded as a utility to distinguish it from cities that do not provide utility services.

Three agencies, Green Building in Alameda County, County of Contra Costa, and County of San Mateo, have been particularly proactive in supporting green building initiatives among member cities within their agency jurisdictions. Those agencies were able to provide additional information about green building initiatives among agencies that were not surveyed. That information is generally incorporated into the report narrative, though not in the statistical tabulations.

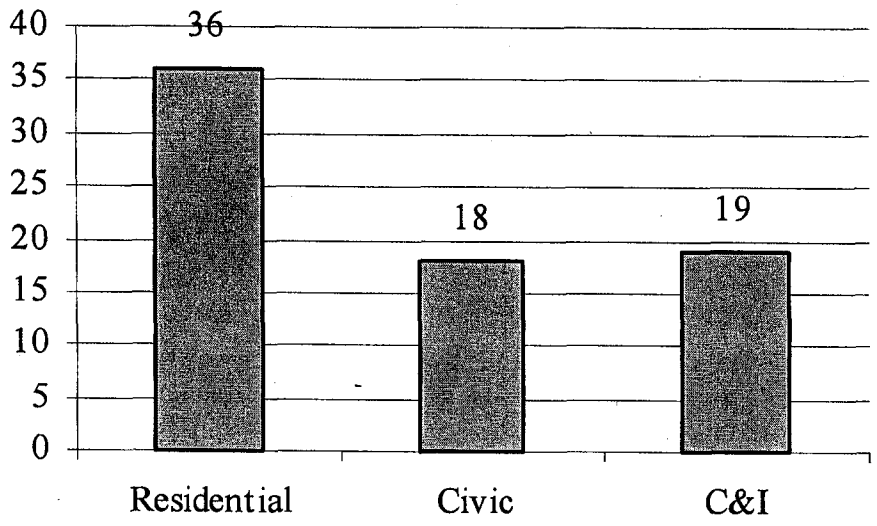
Figure 1. Number of Survey Responses, by Agency Type



The survey tool was organized into four main sections. The first three sections examined initiatives in the residential, civic, and commercial and industrial (C&I) sectors. The concluding section reviewed program resources and implementation. Due to time and resource constraints, the survey probed into more detail for the residential section, which explored public agency policies, incentives, and educational initiatives. The civic section focused on relevant agency policies while the C&I section addressed agency policies and incentives.

Of the 46 agencies surveyed, 39 indicated that they currently have some type of green building-related initiative in place or under development, whether in the residential, commercial, or civic sector. The number of initiatives by sector is shown in Figure 2. The commercial/industrial sector is shortened to C&I.

Figure 2. Number of Programs and Initiatives by Sector



II. Residential Sector Results

As Table 1 illustrates, educational programs or initiatives are the most common public agency approach to residential green building. This may be because educational initiatives can often be implemented by staff within their scope of their existing duties. For agencies considering green building for the first time, informal education initiatives are a good place to start because they can start small and then scale up as community priorities and resources permit. They create an opportunity to educate agency staff and policy makers and they help increase green building capacity in the community, which can translate into a set of stakeholders supportive of more formal policies and incentives.

Formal policies require a more involved development process that engages the agency policy-making body, senior management, and the community so it is not surprising that fewer agencies have adopted policies than have initiated education activities. On the other hand, policy-making is a core public agency function and policies do not automatically entail substantial staff and financial resources to implement. Incentives generally must compete with other agency priorities for access to limited financial and staff resources so one would expect that category to rank lowest in terms of agency adoption rates.

Table 1. Residential Initiatives by Agency and Initiative Type

Agency Type	Agencies with Res *Policies*	Agencies with Res *Incentives*	Agencies with Res *Education* Programs	Total Agencies with Res Initiatives	Total Agencies Surveyed
City	16	4	26	28	35
County	3	1	5	5	6
JPA	1	1	2	2	3
Utility	1	2	2	2	2
Total	21	8	35	37	46

Residential-Sector Policies

Policy Development Phase

We asked respondents to characterize their residential-sector policies as one of three developmental phases:

- **Planning:** policy content is still being developed or finalized.
- **Initial:** policy has been developed but is in early stages of implementation, perhaps in a pilot phase. Policy results or efficacy are not yet known.
- **Established:** Policy has been fully implemented and reviewed for efficacy.

Twenty agencies have policy initiatives in the established or initial stage of development. Of those, three agencies are counties, one is a JPA, one is a utility, and the remainder are cities. Ten additional agencies are planning to adopt a residential green building policy in the reasonably near future.

Table 2. Residential Policy Development Stage

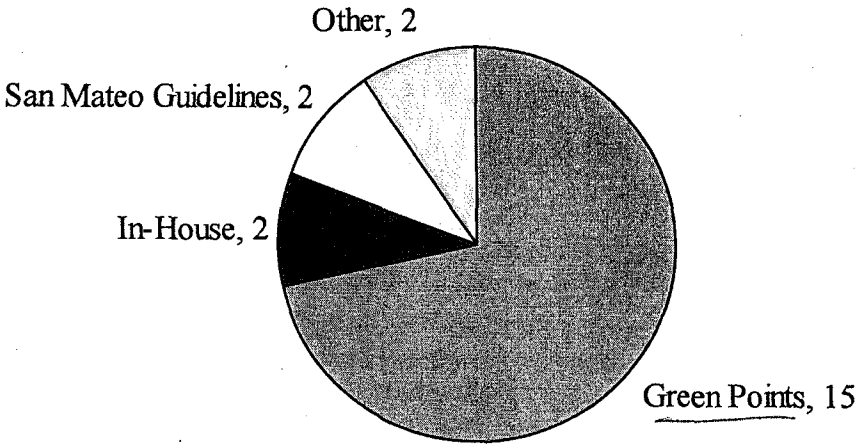
Agency	Established	Initial	Planning
City of Antioch		✓	
City of Berkeley	✓		
City of Brentwood		✓	
City of Brisbane			✓
City of Cotati	✓		
City of Dublin		✓	
City of Emeryville		✓	
City of Livermore		✓	
City of Novato	✓		
City of Oakland			✓
City of Pacifica			✓
City of Palo Alto Utility		✓	
City of Pleasanton		✓	
City of Rohnert Park		✓	
City of Sacramento			✓
City of San Jose	✓		
City of San Leandro			✓
City of San Mateo			✓
City of Santa Rosa	✓		
City of Sebastopol	✓		
City of Sunnyvale	✓		
City of Union City			✓
City of Winters		✓	
County of Contra Costa		✓	
County of Marin	✓		
County of San Mateo	✓		
County/City of San Francisco			✓
Green Building in Alameda County	✓		
Town of Portola Valley	✓		
Truckee-Donner PUD			✓
Total	**11**	**10**	**9**

Residential Policy Definitions of "Green"

An essential element of a sound policy is a clear definition of "green." A relatively detailed set of guidelines is a common approach to defining "green" in operational terms.

Figure 3 summarizes the types of green guidelines agencies reference in support of their policies.

Figure 3. Residential Guidelines Referenced by Agency Policies



All twenty-one policy initiatives reference guidelines in some fashion and eighteen of twenty refer specifically to green building guidelines. The City of Winters' policy initiative incorporates a photovoltaic requirement and references ENERGY STAR energy efficiency standards.

Housing Types and Industry Segments

All housing types and industry segments are well represented among agency policies.

Table 3. Housing Types and Industry Segments Addressed

Housing Types and Industry Segments	Number of Policies
Single-family Remodel	14
Single-family New Construction	18
Multifamily Remodel	13
Multifamily New Construction	17
Total policy initiatives	21

Residential Policy Types

The policy options available depend on the type of agency. Cities exercise substantial control over local land use issues and have primary responsibility for enforcing state building codes. Policy options include general plan language, ordinances (either with or without mandatory provisions), conditions of approval and development agreements (typically with a mandatory component), and resolutions (typically voluntary recommendations). Counties exercise the same type of land use control in unincorporated areas and have comparable policy tools at their disposal. In addition, counties often play a coordinating function around specific issues and thus have an opportunity to advocate policies to cities within their geographic boundaries. JPAs lack local land use authority so their policy options are limited to model policies their member agencies can voluntarily adopt.

Twenty agencies have adopted one or more green building-related policies (not counting construction and demolition ordinances). Three agencies are counted under multiple policy type categories.

Table 4. Types of Residential Policies Adopted

Policy Type	Cities	Counties	JPAs	Utility	Total Agencies
Model Policy	-	1	1	-	2
General Plan Element	3	1	-	-	4
Ordinance	7	1	-	1	9
Condition of Approval	5[1]	1	-	-	6
Resolution	5	1	-	-	6

Model Policies

One county (San Mateo) and one JPA (Green Building in Alameda County, a program of Stopwaste.org) have developed model green building guidelines. In addition, Green Building in Alameda County has developed a model resolution for cities wishing to adopt the Alameda County Residential Green Building Guidelines (for New Construction, Home Remodeling and Multifamily) as a City reference document.

The League of California Cities adopted a Resolution relating to voluntary statewide residential green building guidelines at its 2005 Annual Conference in October. The Resolution establishes League policy to

- Support the voluntary inclusion of green building design and strategies in public and private development projects;

[1] Includes one agency that establishes energy efficiency requirements through development agreements