



Green Building – Ten Case Stories

These case stories were compiled in May 2009 in partnership with the California Air Resources Board. Additional climate change information is available at www.ca-ilg.org/climatechange.

1) Community: City of Fremont (Alameda County)

Population: 215,000

Summary

All new residential projects in Fremont subject to discretionary approval must incorporate green building standards as a condition of approval.

Program Highlights

- Green building measures incorporated as a requirement for discretionary approval on new multi-family projects
- New residential developments requiring discretionary approval must earn minimum 50 points on GreenPoint Rated checklist
- Third party rater must certify that the green building measures are successfully incorporated

Lessons Learned

- If the cost of adopting a green building ordinance is not feasible, it's possible to incorporate green building measures through discretionary approval of projects.

Resources to Learn More

- [City of Fremont Community Development Department](#)

Climate Action Connection

Green buildings reduce energy consumption, use water more efficiently and utilize materials with recycled content, thus saving money and natural resources and reducing greenhouse gas emissions.

Green building programs that target large numbers of future new homes, can have a sizable impact on reducing projected carbon emissions.

Fremont seeks to reduce locally generated greenhouse gases by 25 percent by 2020; their green building requirements are aimed at helping them reach this goal.

The Rest of the Story...

Background

Fremont opted to forego formal adoption of a green building ordinance and instead incorporated green building standards as a condition for discretionary approval on new residential projects. Discretionary approval is required for a wide array of development projects in Fremont. The city estimates their approach will enable them to incorporate green measures into the large majority of new homes in coming years.

Fremont is largely built out, but a few large in-fill and under-utilized sites remain available for sizable developments. Many of these are designated for high density, mixed-use, transit-oriented developments. The city relies heavily on the use of planned district approval for large scale developments, and as such, is able to easily incorporate green building requirements as a condition of approval on these projects.

Green Building Measures

Fremont has incorporated Build It Green's GreenPoint Rated checklist as its green building standard. It is expected that these green standards will impact a large number of new residential units in coming years.

The city is also aiming to improve energy efficiency in existing homes. They are working with a local nonprofit to train youth to conduct in-home energy audits. They are also exploring use of AB 811 as part of a regional or statewide consortium for financing to assist with energy improvements to existing homes.

Greenhouse Gas Reduction Goals

Fremont seeks to reduce locally generated greenhouse gases by 25 percent by 2020 and will soon prepare a Climate Action Plan.

Read Fremont climate leadership case stories on [Civic Engagement](#) and [Land Use & Community Design](#).

2) Community: City of Huntington Beach (Orange County)

Population: 202,000

Summary

Huntington Beach offers permit fee waivers for energy efficiency and solar upgrades and provides recognition to homeowners for installing green features in their homes through the Huntington Beach Green Scorecard program.

Program Highlights

- Energy Efficient Fee Waiver Program promotes energy efficiency that exceeds state requirements.
- Huntington Beach Green Scorecard encourages residents who want to install energy efficient appliances and features to do so.

Lessons Learned

- Encourage citizens to go green voluntarily and let them be an example to others.

Resources to Learn More

- [Huntington Beach Green Building](#)
- [Huntington Beach Green Scorecard](#)

The Rest of the Story...

In late 2007, the Huntington Beach City Council adopted the Energy Efficient Permit Fee Waiver Program. The pilot program is voluntary. Homeowners who add energy upgrades, such as high efficiency furnaces and air conditioners, solar electric, solar hot water heating or tankless water heaters are exempt from permit building or planning fees. To date, three homes have participated in the program.

The Huntington Beach Environmental Board, appointed by the city council, proposed the voluntary program as a way to encourage energy efficiency in new and existing homes through a carrot, rather than a stick approach. The program provides recognition for citizens who take specified measures in greening their homes.

Climate Action Connection

Green buildings reduce energy consumption, use water more efficiently and utilize materials with recycled content, thus saving money and natural resources and reducing greenhouse gas emissions.

Small programs that start modestly can help to educate and encourage homeowners to undertake energy efficiency measures and reduce greenhouse gas emissions.

Any energy efficiency upgrades, such as adding Energy Star appliances or recycled content flooring, may be counted toward recognition on the Huntington Beach Scorecard. If homeowners meet certain goals on the Huntington Beach Scorecard, they receive a commendation from the mayor as recognition for their greening measures.

A green display board at the plan check counter of city hall provides information about the fee waiver program and the options for greening homes. Information is also presented about various utility rebate opportunities for energy efficiency upgrades.

3) Community: City of Morgan Hill (Santa Clara County)

Population: 39,000

Summary

Morgan Hill incorporates green building measures as part of its annual competitive housing allotment process.

Program Highlights

- Green building ordinance specifies green point requirements for new homes.
- Applications for new homes under the city's annual housing allocation system requires a minimum of 70 points on GreenPoint Rated checklist.
- Higher number of green points makes the individual application stronger and thus more competitive.
- Verification from certified third party green point rater required for final post-construction approval.

Climate Action Connection

Green buildings reduce energy consumption, use water more efficiently and utilize materials with recycled content, thus saving money and natural resources and reducing greenhouse gas emissions.

Morgan Hill's green building programs uses a competitive process that encourages developers to achieve incrementally higher levels of energy efficiency and waste reduction in new homes, thus reducing greenhouse gas emissions.

Lessons Learned

- Be prepared to answer developers' questions about the cost of incorporating green measures.

Resources to Learn More

- [Morgan Hill Green Building](#)
- [Morgan Hill Carbon Calculator](#)
- [Santa Clara County Incentives for Home Owners](#)

The Rest of the Story...

Morgan Hill previously adopted a growth control measure which allowed approval of 150 new homes per year. Developers are required to submit preliminary applications rated on various project characteristics, including quality of construction. Although green building

is included in the construction quality criteria, most developers previously did not include green building components in their projects.

An update of the city's growth control measure revised the criteria for preliminary applications. New homes to be built under the annual housing allocation now must earn at least 70 points on Build It Green's GreenPoint Rated checklist. In addition, developers may now propose incorporating incrementally higher green points in order to receive correspondingly more points toward project final approval.

Steep competition for housing allocation approval has resulted in proposals for extremely green projects. For example, projects now typically incorporate green features that earn 131 points on the GreenPoint Rated checklist. To date, the city has approved over 100 new residences that incorporate 131 points. Project plans must be certified by a GreenPoint rater prior to submission for review and finished homes must be certified again by a GreenPoint rater to receive final inspection approval. Although some developers questioned the incremental cost to "go green", in the end they generally agreed with one experienced developer and found the amount to be manageable.

Communitywide Green House Gas Reduction

Morgan Hill completed a communitywide greenhouse gas inventory and calculated a per capita greenhouse gas emissions based on average transportation, waste and energy usage. The city's website features information on the community wide carbon footprint and includes a customized carbon calculator so Morgan Hill residents can determine their own annual carbon emissions. In addition, the city regularly circulates information to the community on green building opportunities and local residents regularly visit a kiosk in city hall with green building information.

Morgan Hill's goal to reduce locally generated greenhouse gas emissions by 25 percent by 2020 is based in part on its green building efforts. The city plans to consider applying mandatory green building requirements for individual new and remodeled homes, as well as new and remodeled commercial projects. To this end, it now requires completion of the GreenPoint Rated and/or LEED checklists for all projects seeking a building permit, although implementation is currently voluntary.

4) Community: City of Richmond (Contra Costa County)

Population: 100,500

Summary

Richmond's green building ordinance requires mandatory compliance for all new and enlarged single and multi-family residential projects, as well as for new and renovated commercial/industrial projects. The green building requirements vary depending upon the size of the building.

Program Highlights

- Compliance tiers and thresholds based on size of structure.
- Minimum 50 GreenPoint Rated points required for new and expanded residential structures; minimum 60 points for new multi-family.
- Minimum LEED certification required for new commercial buildings; specified percentage of possible LEED points required for commercial renovations.

Climate Action Connection

Green buildings reduce energy consumption, use water more efficiently and utilize materials with recycled content, thus saving money and natural resources and reducing greenhouse gas emissions.

Requiring new and renovated residential and commercial structures to comply with green building standards ensures that future construction will contribute to lowering greenhouse gas emissions.

Lessons Learned

- Sometimes it is important to engage staff from different city departments (i.e., planning, public works, environmental) for their input and concurrence before engaging the public.
- Having an energy consultant review recommended green building standards can be useful in determining effectiveness of the proposed program.

Resources to Learn More

- [Richmond Green Building Ordinance](#)
- [Richmond Planning and Building Services](#)

The Rest of the Story...

Richmond is a large San Francisco Bay Area community with a significant number of large commercial and industrial businesses. In March of 2009, Richmond released the results of its municipal and community wide greenhouse gas inventory. The inventory projects that while emissions from residences will increase 9.1 percent by 2020, emissions from commercial and industrial users will increase 31.9 percent. Thus, the green building requirements that apply to both residential and commercial/industrial buildings will be important as part of the city's efforts to reduce greenhouse gas emissions.

Customized Tiered Approach

In July 2009, Richmond adopted its green building ordinance, becoming the first city in Contra Costa County to take such action. Richmond's unique program requirements are based on the size of the structure, as follows:

- Single family residences under 1,750 square feet must earn 50 green points on the GreenPoint Rated checklist; larger buildings must earn 55 points, plus two additional points for every 100 additional square feet over 1,750 square feet.
- Additions to single family and duplexes that are subject to design review must earn 50 green points, plus two more points for each 100 square feet over 1,200 square feet.
- Multi-family projects must earn 60 points on the GreenPoint Rated checklist.
- New commercial buildings between 5,000 – 20,000 square feet must meet LEED certification standards; larger buildings must meet LEED Silver standards.
- Renovations on commercial buildings 5,000 – 20,000 square feet must earn 35 percent of all possible LEED points.
- Renovations on commercial buildings larger than 20,000 square feet must earn 45 percent of all possible LEED points.

Certification of Projects

All employees in Richmond's Planning and Building Services Department are or will be certified green building professionals in the Built It Green program. All residential projects subject to Richmond's ordinance will receive final certification from city staff. This will save building permit applicants the cost of hiring an outside expert for final green certification. Commercial and industrial projects are required to hire LEED accredited professionals to assist with project planning and final certification.

5) Community: City of Riverside (Riverside County)

Population: 300,000

Summary

Riverside has a variety of green building programs, including the Riverside Green Builder program which offers new home builders expedited processing and utility meter approval. In addition, rebates are available through the city's municipal electric and water utilities for energy and water efficiency retrofits on existing residential and commercial buildings.

Program Highlights

- Faster plan, check, and building inspections for new home builders that comply with Riverside Green Builder program.
- Financial rebates for existing homes that undertake energy and water conservation upgrades.
- Active outreach through utility bills and web site to residents and property owners to promote rebates offering.
- Active program to encourage installation of solar photovoltaic.

Lessons Learned

- Talk to other cities and counties to learn what's worked there. If you find a program you like, seek more information from the program implementers. No need to reinvent the wheel.

Resources to Learn More

- [Riverside Energy Conservation Programs](#)
- [Riverside Water Conservation Programs](#)
- [Green Riverside Action Plan](#)

Climate Action Connection

Green buildings reduce energy consumption, use water more efficiently and utilize materials with recycled content, thus saving money and natural resources and reducing greenhouse gas emissions.

In addition to aggressively promoting energy and water efficiency, the goals of Riverside's municipal electric and water utilities are to obtain 33 percent of electricity from renewable sources by 2020 and to reduce potable water usage by 15 percent by 2025.

Since 1999, energy savings in Riverside reflect greenhouse gas emission reductions equivalent to removing over 23,500 cars from the road.

The Rest of the Story...

Riverside operates its own municipal electric and water utilities and actively embraces both energy and water conservation practices. It offers a wide range of utility rebates in tandem with those offered by the state and federal governments. Although Riverside's programs are voluntary, because the financial incentives are significant, there is widespread interest among the residents in the city's rebate programs. This has resulted in reductions in energy and water use.

Energy and Water Conservation Programs

In 2007, Riverside adopted the voluntary Riverside Green Builder program. The framework was developed jointly by the city and the Riverside Building Association and is based upon the California Green Building code. The city allows both production builders and those building individual homes to utilize the Riverside Green Builder program standards. Those that do are entitled to an expedited plan check and their requests for electric and water meter approval are given priority.

The city also provides, through the Riverside Public Utilities, energy and water conservation measures and rebates for existing residential and commercial utility customers. Funds for these rebates come from Public Benefits and the Water Reclamation Surcharge collected by Riverside. The city actively promotes conservation measures and provides a website with information on how to conserve energy and water and take advantage of city, state and federal financial incentives and rebates.

Riverside's efforts have resulted in widespread participation by the community. Since 2001, the city has issued \$2.8 million in rebates, including \$1.3 million alone for air conditioning efficiency upgrades. Its most popular rebate program is the shade tree program. The city offers a \$25 rebate for each tree planted; since 2001, over 68,000 trees have been planted.

Riverside also offers rebates for solar photovoltaic installations on residential and commercial buildings. The \$3 per watt rebate (not to exceed 50 percent of the project cost) has generated over 1,000 kilowatts daily by rooftop solar electricity systems.

Green Riverside Action Plan

Riverside completed a greenhouse gas inventory for municipal operations and is finalizing a communitywide inventory, scheduled for completion by the end of 2009. The city has also prepared a Green Action Plan, involving all departmental resources, from the Utility and Public Works departments to the General Services and Community Development Departments. Each department is responsible for meeting measurable goals and reporting back to the city council on a regular basis.

6) Community: San Mateo County

Population: 730,000

Summary

San Mateo County's green building ordinance requires all new and remodeled residential and commercial projects to earn a minimum number of green points on either the GreenPoint Rated or LEED checklists. Those that earn incrementally more points are entitled to expedited processing time.

Program Highlights

- Residential: minimum green points required for all new and some remodels and additions.
- Commercial: minimum green points required for all new and some remodels.
- Expedited review and permit approval available to stimulate projects exceeding minimum green point requirements.
- A refundable \$5,000 deposit required if occupancy permit precedes final green certification.

Lessons Learned

- Outreach to and education of building community is essential to securing their cooperation in a green building program.

Resources to Learn More

- [San Mateo County Green Building Ordinance](#)
- [San Mateo County Planning and Building Department](#)

The Rest of the Story...

In early 2007, after considerable outreach with the building community and local residents, San Mateo County adopted a green building program, on a one-year trial basis. County building officials monitored the number of projects subject to the green building

Climate Action Connection

Green buildings reduce energy consumption, use water more efficiently and utilize materials with recycled content, thus saving money and natural resources and reducing greenhouse gas emissions.

Green building programs like San Mateo County's that include incentives for incrementally higher green points motivate project applicants to increase energy efficiency and resource conservation in building construction, thus achieving greater greenhouse gas reductions.

standards, as well as concerns and questions by project applicants and staff met monthly to review the program's status. Of 64 residential projects processed during the trial period, over half exceeded the minimum number of required green points in order to take advantage of quicker review and approval.

Green Building Ordinance with Incentives

In March 2008, the county adopted a mandatory ordinance. It covers the following:

- All new single and multi-family residential projects, and those proposing a 50 percent or more expansion, must earn at least 50 points on the GreenPoint Rated checklist.
- All new or remodeled commercial buildings over 3,000 square feet must earn LEED certification.
- Expedited processing is offered as an incentive to projects that exceed the minimum requirements. Residential projects earning 75 points or more on the GreenPoint Rated checklist or seeking LEED for Homes certification are guaranteed staff feedback on the first round building permit applications within 30 days. Residential projects earning at least 100 points are, in addition, guaranteed a building inspection within two days of a request. As a result, most residential applications are proposing 75-100 green points. Similar incentives are offered for commercial projects exceeding the minimum requirements.
- Project applicants must hire third-party raters certified under Build It Green or LEED, as applicable, to perform the final building certification. If a project has received a final occupancy permit prior to final green certification, the county requires a refundable \$5,000 deposit as assurance that the building will meet the green standards stated on the building permit application.

The program is deemed a success, and county staff plan to propose a program expansion to include smaller remodels and a wider variety of building projects.

Countywide Coordination

San Mateo County initiated its green building program to spearhead green building not only in the unincorporated areas, but also as a means to encourage consistency among the 20 cities in the county. It was the county's intention to approve a program that other local cities could adopt. Thus, the county has brought together cities within the county to provide education about the potential of green building programs to reduce greenhouse gas emissions. County officials report that coordination and discussion among cities regarding adoption of green building programs has been very successful. Since the county adopted its ordinance, several cities in the county are working on developing their own green building programs.

7) Community: City of Santa Cruz (Santa Cruz County)

Population: 56,300

Summary

In order to receive a building permit, all new construction and most remodeling projects in Santa Cruz are required to earn a minimum number of green points from the city's customized green building program. Projects that exceed the minimum point requirement are eligible for an accelerated building permit or special council recognition, depending upon the number of points earned.

Program Highlights

- Mandatory green building requirements apply to new construction, additions, and renovations for residential, commercial and industrial projects above a minimum size.
- Residential and commercial projects earn city's own customized green building points based on city checklists.
- Tiered processing and recognition incentives encourage incrementally higher usage of green measures.

Lessons Learned

- Utilize the building trades and architectural expertise in your community to create a green building program.
- Take time for community education and outreach before deciding on a specific approach.
- It takes a champion within the community or city hall to lead the green building program to fruition.
- Regular program maintenance and community outreach are integral to continued success.

Resources to Learn More

- [Santa Cruz Green Building Program](#) - (scroll down to Green Building tab)
- [Santa Cruz Green Building Program Binder](#)

Climate Action Connection

Green buildings reduce energy consumption, use water more efficiently and utilize materials with recycled content, thus saving money and natural resources and reducing greenhouse gas emissions.

Tiered incentives to incorporate green building and energy efficiency measures into new and existing buildings are effective in reducing community-wide energy use and thus greenhouse gas emissions.

The Rest of the Story...

In 2002, the Santa Cruz City Council established a 17-member Green Building Working Group, including representatives from the construction trades and residents, to evaluate the feasibility of a green building program. In 2006, although the city's green building program began as a voluntary one, it required that all applicants for a building permit complete the city's custom green building checklist to educate applicants and assist the city with program improvements. In 2007, the program became mandatory for all new residential, commercial and industrial projects, as well as for remodels and additions over 350 square feet for residential and over 1,000 square feet for non-residential projects.

Customized Green Point Program

Projects must earn a baseline number of green points to receive a building permit. The green point system is tiered, offering three categories for both residential and non-residential projects:

- Minimum number of green points required to receive a building permit;
- An incrementally higher number of green points earns an accelerated building permit; and
- Highest number of green points earns the city's green building award.

For single and multi-family residential projects, a wide-ranging checklist of green measures offers a total of 461 points. Applicants may choose those measures that work best for their project in order to earn the minimum or higher number of points required for an accelerated building permit or a green building award, as appropriate. The minimum number of required points is based on the size of the structure; the larger the unit the more points required.

For non-residential projects, Santa Cruz utilizes LEED. A total of 75 points are possible with 7 points required for a building permit, 33 points required for an accelerated permit and 40 points required for a green building award, regardless of project size.

All green measures must be indicated on construction plans and are monitored for compliance at both the intermediate and final building inspection stages.

Funding and Participation

The education and administrative costs of the Santa Cruz green building program is funded by a fee equal to .0025 percent of the value of the building project. In the first two years since the program became mandatory, the city approved over 300 building permits, including 230 residential and 70 non-residential permits. A total of 14 projects have received the city's green building award.

Energy Evaluation and Greenhouse Gas Inventory

Work is underway to assess the individual and cumulative energy savings achieved from green building projects. In addition, the city has completed a greenhouse gas inventory and is preparing a climate action plan.

8) Community: City of Santa Rosa (Sonoma County)

Population: 158,000

Summary

Santa Rosa's green building program covers new and existing residential and commercial buildings to assist the city in achieving its greenhouse gas reduction goal of 25 percent below 1990 levels by 2015.

Program Highlights

- Mandatory green building requirements for all new residential and commercial structures.
- New residential construction must earn 50 points on GreenPoint Rated checklist; new commercial buildings must earn 20 points on LEED.
- Program expansion to include energy retrofits of existing homes and may increase required points for existing program.

Climate Action Connection

Green buildings reduce energy consumption, use water more efficiently and utilize materials with recycled content, thus saving money and natural resources and reducing greenhouse gas emissions.

Green building programs that focus on both new and existing buildings have the greatest potential for overall carbon reduction.

Lessons Learned

- Talk to all sectors affected by the proposed green building standards.
- Builders and residents want to be more energy efficient but they need be shown the way.
- Builders are more readily persuaded by green building's financial benefits because green building is cost effective over the long term.

Resources to Learn More

- [Santa Rosa Green Building](#)
- [Santa Rosa Community Development Department](#)

The Rest of the Story...

Santa Rosa was one of the first cities in California to adopt a green building program. Preceded by two years of planning, the program initially was voluntary when it was first adopted in 2004. Approximately 100 homes were built to green standards during the

voluntary phase. In January 2008, green building standards became mandatory for all new residential and commercial buildings.

Santa Rosa initiated its green building program in conjunction with other cities in Sonoma County. While all the cities within Sonoma County have adopted the same greenhouse gas reduction goal of 25 percent of 1990 levels by 2015, not all have adopted the same green building program.

Santa Rosa adopted Build It Green and LEED. New residential building must earn a minimum of 50 points on the GreenPoint Rated checklist and commercial structures must earn 20 points on LEED's checklist. Project applicants must hire a certified rater for project design and final certification. Currently the program does not apply to remodeled projects.

Going Beyond Basic Requirements

The Santa Rosa City Council has indicated an interest in moving beyond minimum requirements for both new residential and new commercial structures. Staff is currently evaluating the possibility of requiring new residential structures to earn 100 points on the GreenPoint Rated checklist (effectively requiring 15 percent greater energy efficiency than the 2009 Title 24 energy requirements) and commercial structures to earn 26 points on LEED (the equivalent of LEED certified).

Recognizing that existing buildings represent a large part of citywide energy use, Santa Rosa also is actively exploring an energy retrofit program for existing buildings. This includes a possible mandatory audit of all existing 85,000 homes in the city. The city may use U.S. Department of Energy money it receives from the federal stimulus program to help finance the energy efficiency retrofits.

g) Community: City of West Hollywood (Los Angeles County)

Population: 37,500

Summary

West Hollywood requires all new and remodeled development to meet minimum green building standards. Commercial and multi-family residential earn points and are offered non-monetary incentives to encourage greater use of green measures.

Program Highlights

- Customized green development standard establishes minimum green requirements for all new and remodeled construction projects.
- Customized green building point system specifically for all new commercial and new residential projects with three or more units.
- Minimum number of points must be earned with incentives for those that earn at least 50 percent above minimum.
- Reduced parking, density bonus and flexible open space among incentives offered.

Climate Action Connection

Green buildings reduce energy consumption, use water more efficiently and utilize materials with recycled content, thus saving money and natural resources and reducing greenhouse gas emissions.

Comprehensive green building programs that emphasize interior and exterior green measures, as well as provisions for bike parking and for future solar, can reduce energy use, vehicle travel, and thus greenhouse gas emissions.

Lessons Learned

- Take time to assess unique aspects of your own city or county; don't assume what works in another community will work in yours.
- Set a green point threshold at a level that is attainable by all, but still pushes the envelope beyond business as usual.

Resources to Learn More

- [West Hollywood Green Building](#)
- [West Hollywood Green Building Manual](#)
- [West Hollywood Green Building Ordinance](#)
- [West Hollywood Community Development Department](#)

The Rest of the Story...

In 2005, West Hollywood established a Green Ribbon Committee to explore green building options. After investigating programs in several other cities, the city developed its own customized green standards and point system. It also consolidated and amended several existing green requirements in various existing city codes.

In late 2007, the city adopted the green building point system and green building ordinance. It includes mandatory standards for all development, including new residential buildings, remodels and tenant improvements. In addition, it adopted a point system for new commercial and new residential projects of three or more units.

Customized Green Standards

West Hollywood's customized green standards and incentives are tailored to the needs of the community. The basic green standards apply to all projects and require construction and waste demolition diversion, promote indoor air quality through the use of low volatile organic compound (VOC) paints and finishes, increase energy efficiency through the use of Energy Star appliances, and include bicycle parking in residential projects and accommodation of future solar photovoltaic systems.

The city's customized green building point system offers up to 160 points in 12 categories, with a minimum requirement of 60 points. Projects that earn at least 90 points (or 50 percent more than required) are eligible for a variety of incentives unique to building issues in the city. These incentives include:

- Allowing open space requirements to be met with a rooftop garden
- Flexibility in meeting open space requirements, such as using side setbacks as open space
- Allowing one additional unit not to exceed 700 square feet
- Parking reductions for commercial projects
- Increased floor-to-area ratios (FAR) for commercial projects
- Expedited permit processing

Designed to Respond to Local Development Conditions

West Hollywood's green point system is intended to address development conditions and issues in this urban city, where infill development and remodeling on small lots is the norm. The city's program is designed to allow development trade-offs in return for more sustainably built projects.

In designing its green building program, the city considered local circumstances, such as available materials, infill and development trends in the city, how best to work within existing zoning code requirements, as well as existing procedural opportunities and constraints.

As of May 2009, West Hollywood processed over one million square feet of residential and commercial space using the green building ordinance.

10) Community: City of Windsor (Sonoma County)

Population: 27,000

Summary

Windsor's green building program is based upon Build It Green and LEED and applies to both new and expanded residential and commercial projects. To be approved under the city's annual housing allocation, homes must meet the green building requirements.

Program Highlights

- Program initially voluntary but became mandatory in 2008; applies to all new residential and commercial construction, as well residential additions above certain size.
- Permits for new homes each year under annual housing allocation system must meet or exceed green building requirements.
- Many city staff certified to conduct green building verification.

Lessons Learned

- Spend time with applicants up front to educate them about green building; this helps demonstrate that green measures are not costly.
- Try to align the green building program with other cities in the county so developers are not subjected to multiple municipal requirements.

Resources to Learn More

- [Windsor Green Building Program](#)
- [Windsor Green Building Ordinance](#)

The Rest of the Story...

The Windsor town council first adopted its green building program in March of 2006 as a voluntary one. Due to low participation, the program became mandatory January 1, 2008 and applies to all new residential and commercial construction.

Climate Action Connection

Green buildings reduce energy consumption, use water more efficiently and utilize materials with recycled content, thus saving money and natural resources and reducing greenhouse gas emissions.

Windsor building officials plan to develop a green building tracking process to evaluate the number of projects and the types of measures utilized to better determine the energy and greenhouse gas savings from the program.

When Windsor incorporated in 1992, in response to growth demands on this largely suburban town, the newly elected town council adopted a growth ordinance limiting the number of new homes to 150 per year. The green building ordinance applies to homes approved through the allocation process, as well as to residential remodels and new commercial projects.

Green Building Program Criteria

Developers requesting approval to build residential units in Windsor must first apply under the town's "merit process." Green building is now one of the scoring criteria in this selection process and green building features in a project are one of the most heavily weighted. New homes are required to achieve 50 points on the GreenPoint Rated checklist.

The city's green building ordinance was amended in 2008 to include energy and water conservation requirements for residential remodels that add 500 square feet or more than 50 percent to the original size.

Currently, new commercial projects are required to meet green building standards, which require 20 points on the LEED checklist. Windsor is considering strengthening the green building requirements for new commercial buildings and may include commercial remodels and tenant improvements, as well.

City Staff is Green Building Certified

Windsor planning and building staff are qualified to certify project compliance with Build It Green/GreenPoint Rated and LEED. Using city staff, as opposed to outside experts, saves applicants the cost of outside hiring experts for verification.