

Green Spaces, *Livable* Places



Good Housing Policy is Dynamic Environmental Policy Fall 2010





Introduction

Protecting our environment is more than conserving our natural resources and land; it is also about growing smart and creating livable, environmentally friendly communities. As San Mateo County residents, we have already done a lot to preserve our natural environment. Three-fourths of the County's land is set aside as open space.¹ Also, several cities and the County have recently adopted green building ordinances. These are just two examples. As importantly, many of us are thinking carefully about where people will live in the future. The kinds of buildings we live in, where they are, and the materials used to build them make a huge difference in how current generations influence the environment and health of future generations.

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¹ San Mateo County, 2006. "Housing Our Future," page 2.

Housing and the Environment

Housing policy is a powerful conservation tool. Policies that shape development patterns, housing types, and construction methods can benefit the environment in San Mateo County, the Bay Area, and the planet.

Homes don't grow on trees

For both new and remodeled homes, construction can utilize new techniques and building materials that do not degrade the environment. Durable recycled materials have stood the test of time in homes throughout the country. We can use these materials to make new homes that look great and are healthy for the people who live in them. New state-of-the-art homes are energy-sippers that release fewer climate-changing emissions and save people money on their energy bills. Both old and new homes can literally sip water, given recent advances in the design of gardens and plumbing.

Small is beautiful!

Smaller homes use less materials to build and less energy to operate, be they townhomes, condominiums, or apartments. Since 1950, the average size of a home in the U.S. has doubled, while household size has shrunk by about half.² There are many opportunities in San Mateo County to build compact homes close to shops and jobs. With creative designs, new homes can fit into and enhance existing neighborhoods.



They aren't making any more land

New housing in the past was often built on the outskirts of developed areas. While these homes were more affordable than the existing housing stock, homeowners faced longer commutes, thereby increasing greenhouse gas emissions. This growth pattern is no longer viable. County residents value and protect existing open space, including working farmland. We also value beloved single-family neighborhoods. This leaves only a few places for new housing, mostly in downtowns and along the county's main transportation corridors: El Camino Real, the Caltrain line, and the BART line. These are the same places where environmentally-friendly housing can be built most easily. The people who will call the transportation corridors "home" will be able to walk or take public transportation to work, shop close by, and take advantage of San Mateo County's varied eateries, parks, and entertainment.

² David Owen, *Green Metropolis: Why living smaller, living closer and driving less are the keys to sustainability* (NY: Riverhead Books/Penguin, 2009), page 46.



HOW We Build: Housing Construction

How homes are built and remodeled is critically important to energy and material consumption. In 2008, nearly half of all the energy used in San Mateo County was in residential buildings.³ This energy use translates directly into greenhouse gas emissions, and accounts for 20% of all greenhouse gas emissions in the county.

Material impact

Until recently, when you wanted to remodel your kitchen, a contractor ripped out the old cabinets and appliances, which ended up in a landfill, and then replaced them with all new materials. While this approach results in a nice kitchen, our landfills don't have room for all those discarded materials. Almost 40% of the solid waste produced in the United States – 136 million tons per year – is made up of construction and demolition waste from buildings.⁴ However, more household materials, such as cabinets and tile, are being reclaimed and recycled into use.

Retrofitting existing buildings

Homes built before 1980 are less energy efficient than new homes with more insulation, better windows, and more energy efficient equipment.⁵ Because about 80% of residential units in San Mateo County were built before modern energy-efficiency standards, retrofits of existing homes are extremely important.⁶ Retrofitting reduces energy and water consumption, and utility bills as well. Many of our cities and the county have programs that support energy retrofits as part of their green building programs and climate action plans.

³ Sustainable San Mateo County, Indicators 2010. <http://www.sustainabilityhub.net/2010-indicators/green-buildings/>

⁴ <http://www.epa.gov/region9/waste/solid/pdf/cd1.pdf>

⁵ California Energy Commission, December 2005. *Options for Energy Efficiency in Existing Buildings*, page 12.

⁶ U.S. Census, 2006-2008 American Community Survey 3-Year Estimates, B25034: Year Structure Built.

Reusing existing buildings

As communities evolve, the use of some buildings may need to evolve with them. For example, in downtown San Mateo, a formerly underutilized office building called the Belmont Building was converted into a mixed-use development with six affordable apartment units over ground floor retail space. Each time a building can be reused like this, materials are saved that would have gone into the landfill when the old building was demolished.

Often, existing buildings can be reused without changing their structures. Some people find their homes have become “too large” as the size of their family shrinks. Through the homesharing program of Human Investment Project (HIP) Housing, they can find other people to share their home, thereby reducing the overall demand for new homes and saving residents money.

The great outdoors

The exteriors of buildings can contribute in important ways to environmental conservation. Water-efficient landscaping saves water and money, and recycled water systems can use water from treatment facilities for landscaping, saving potable water for human consumption. Energy demand for summer cooling can be reduced through reflective roofs and trees that shade the home.



HIP Housing Participants



Case Study

Villa Montgomery Apartments⁷



The Villa Montgomery Apartments is a 58-unit affordable housing development on El Camino Real in Redwood City with 1,250 square feet of office and meeting space on the ground floor. The building also has a community room, computer lab, and a play structure for children. This development is certified Leadership in Energy and Environmental Design (LEED) Gold and uses several approaches to achieve energy efficiency under the LEED rating system. All apartment units have energy-efficient windows, green interior finishes and cabinets, and Energy Star equipment. Solar panels cover the roof of the building and help save energy. These are just some of the ways that buildings can become more energy-efficient through LEED criteria.



Additionally, Villa Montgomery offers residual environmental benefits. Residents can walk to a major bus stop in five minutes, Caltrain in 10 minutes, and downtown in 15 minutes. “Eco-pass,” a program for Villa Montgomery residents, provides free annual bus transit, giving all residents access to alternative transportation.

⁷ Developer: First Community Housing.



Green Building Programs

As of September 2010, six cities and San Mateo County have green building programs. These programs are generally based on the GreenPoint Rated system, which was developed by Build It Green, a non-profit organization working to promote healthy, energy-efficient, and resource-efficient homes in California. The GreenPoint Rated system uses a point system and checklist to encourage the use of green building strategies related to home and commercial construction, and landscaping and water use. Homes can get points for being close to transit, using low- or no-VOC paints, using renewable energy such as solar water heating, having or installing energy-efficient equipment such as Energy Star bathroom fans or washer/dryers, or for having or installing water-efficient fixtures such as low-flow toilets and high-efficiency showerheads.



The County’s program requires new home construction and major home remodels earn a minimum GreenPoint rating; applicants exceeding that minimum can earn priority, expedited permit processing.



WHAT We Build: Housing Type



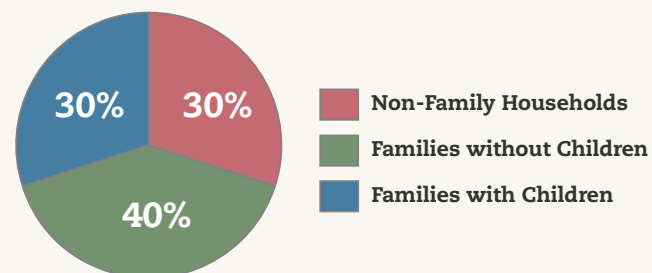
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While energy, water, and other environmental saving techniques can be applied to any type of housing, the *type* of housing itself greatly influences the extent of environmental impacts. Data from the U.S. Energy Information Administration shows that multi-family units tend to be less energy intensive than single-family homes, with a reduction of up to 50% in energy use for heating and cooling. This is not surprising, given the comparatively smaller wall and roof space and the smaller size of units within multi-family buildings. Studies also show that per-household water consumption is lower when housing densities are higher, primarily due to reduced outdoor water use on lawns and landscaping.

Most housing in San Mateo County consists of single-family homes built in new neighborhoods between 1945 and 1965. These neighborhoods are an important part of our community fabric. But single-family homes don't meet everyone's needs. As displayed in the chart above, many households in San Mateo County are not traditional families with children, and these households may be less likely to want the maintenance

San Mateo County Household Types⁸



responsibilities that come with a single-family home, less likely to afford one, and more likely to want to live in the midst of more activity. Cities throughout the county are focusing on expanding options for these segments of the community.

A quart of milk, a train ride, and your kid's school

Another way that housing and the environment interact is through a helpful mix of land uses. Doing so puts homes close to other uses that people need in their daily lives, such as groceries, transportation, and schools. These opportunities give people more options for how they get around. Walking to the grocery store or riding a bike to school is not only good for our health, it's good for the planet. This is because 40% of the Bay Area's greenhouse gas pollution comes from driving. The mix of land uses can be in the same building, or simply in the same part of the neighborhood, leading to complete, walkable neighborhoods.

⁸ U.S. Census, 2006-2008 American Community Survey 3-Year Estimates. B25115: Tenure by Household Type and Presence and Age of Own Children.

Case Study

Laurel Street



Laurel Street is the retail center and the heart of downtown San Carlos. San Carlos has guidelines in place that enhance the downtown's small town, pedestrian-oriented environment and particularly emphasize mixed-use development. The Pacific Hacienda Condominiums – with 89 condominiums, 13 of which (15%) are at below-market rates, all above 6,000 square feet of office space – is a new, successful mixed-use development in San Carlos just one block off of Laurel Street.

Case Study

Moonridge Village⁹



Mid-Peninsula Housing Coalition developed Moonridge Village in Half Moon Bay, consisting of 160 affordable apartments, specifically for households that earn their primary income from agricultural work. The homes are duplexes and four-plexes that reflect the nearby farmhouses built early in the 1900s. The community includes a HeadStart center, educational opportunities for adults, community gardens, and other common area amenities.



TOD: South San Francisco BART Transit Village

The South San Francisco BART Transit Village provides housing near goods and services with excellent access to transportation and transit. Located along El Camino Real and directly across from the BART station, the village reflects the vision of the Grand Boulevard Initiative, a historic inter-jurisdictional collaboration that demonstrates the potential to coordinate the transformation of an urban highway paralleled by two regional rail systems into a sustainable, livable and significant smart growth corridor (www.grandboulevard.net). It features mixed-use development: 361 apartments, 72 of which (20%) are below market rate, the Park Station Lofts with 99 one- and two-bedroom condominiums, a grocery store, a bank, dental offices, and a coffee shop. The village is also linked to South San Francisco and San Bruno BART stations via Centennial Way, an award-winning 3-mile park with walking and biking paths. Transit village residents and BART commuters who work east of Highway 101 can take a shuttle to work using a system operated by Congestion Relief Alliance.

⁹ Architect: David Baker + Partners.



WHERE We Build: Housing Location

Until recently, the answer to “where to build homes” in San Mateo County was “between the mountains and the Bay.” That area has mostly been built out with the types of housing described in the previous section. Even within this area, some places are protected from development to accommodate habitat, recreation, and critical public spaces like schools and airports. This does not leave the county with much room for the housing that current and future residents will need unless some of our buildings “grow up” by using contemporary policies as well as the existing infrastructure to locate homes near jobs and transportation.

The Frontier is here

The final frontier for housing in San Mateo County is easy to get to. It is along our key transportation corridors, including El Camino Real, the BART line, and the Caltrain line. There is land on those corridors that was developed many years ago, some of it for functions that are no longer as important to our community and can be adapted for new housing.

As it happens, those transportation corridors are also very environmentally-friendly places to build housing. They provide easy ways for people to take public transportation, walk, and bike to work, shops, and recreation. Residents of these new homes will drive less, reducing their greenhouse gas emissions and increasing healthy activities like walking and biking. According to the Metropolitan Transportation Commission, 29% of households who live within a ½-mile of rail in the Bay Area own zero cars. Roughly 70% of San Mateo County residents drive alone to work, while 10% take transit. Housing along transportation corridors will help shift those numbers toward transit, reducing energy use, helping the road network last longer, and reducing transportation costs for households.¹⁰

Building on these corridors is not always easy. Zoning regulations can make it difficult to design buildings that work on busy transportation corridors and fit with the existing mix of buildings. However new, more refined zoning techniques that focus more on encouraging what communities want are helping to reduce these barriers.

Case Study

Trestle Glen¹¹

BRIDGE Housing redeveloped an RV park adjacent to the Colma BART station, creating an affordable rental community with 119 apartments and a child care facility. Immediately next door will be a development of 32 townhomes at market rate, which BRIDGE sold to a for-profit developer to offset costs for Trestle Glen. The apartments are for households earning between 30% and 50% of median income.



¹⁰ U.S. Census, 2006-2008 American Community Survey 3-Year Estimates. B08130: Households by Presence of People 65 Years and Over, Household Size and Type.

¹¹ Developer: Bridge Housing.

Saving, not paving

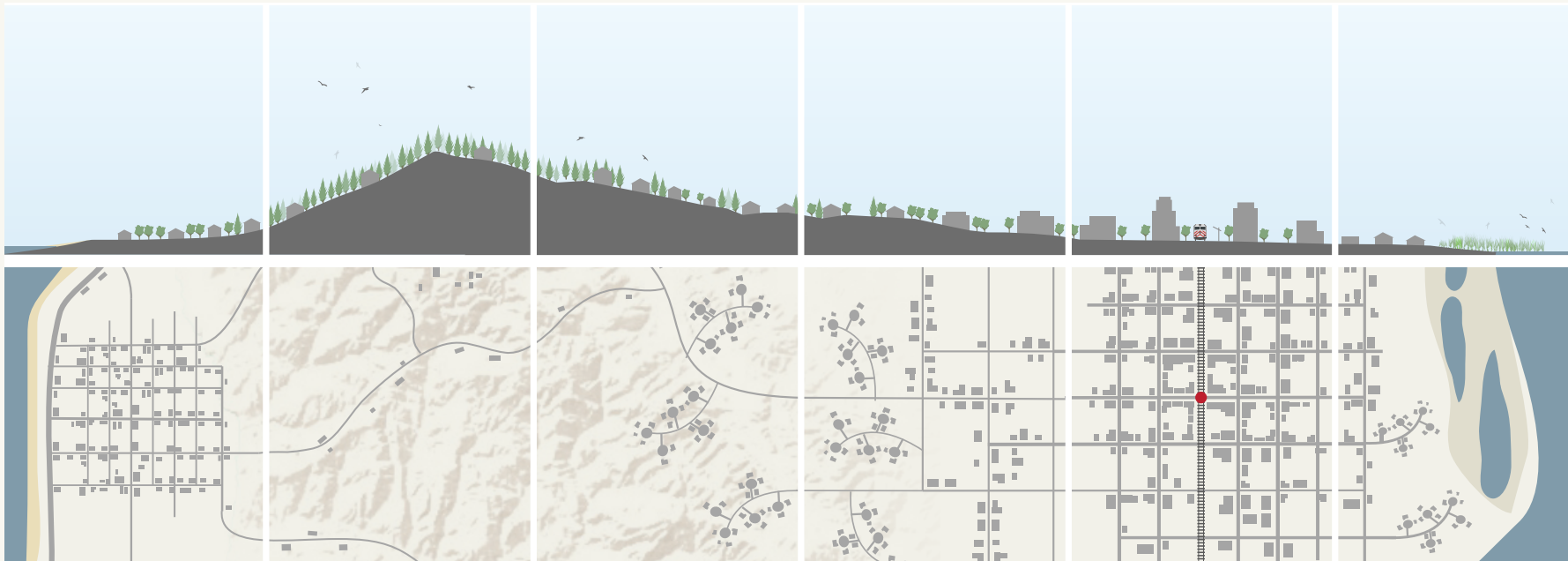
Housing on corridors will take advantage of our existing infrastructure, including existing streets, sewer lines, and other expensive utilities. While these may need to be upgraded, not having to build new infrastructure saves taxpayers money and reduces the environmental impacts of development. A recent study released by the Strategic Growth Council – a committee composed of State agencies working on business, transportation, housing, planning, health, the environment and natural resources – found that infill and compact development using existing infrastructure would save more than \$24,000 per home for a total of over \$4.3 billion per year.¹²

Case Study

City of San Mateo TOD District



The San Mateo Rail Corridor TOD Plan establishes TOD Districts in the vicinity of the Hayward Park and Hillsdale Caltrain Stations. The TOD District provides for mixed-use development at the highest residential densities, encourages lively, transit-oriented and pedestrian-friendly places, and allows for reduced parking requirements. Bay Meadows, the home of a former race track, is an example of an area near the Hillsdale Caltrain Station being developed as TOD on an infill site. It will have a mix of closely knit, single-family homes, apartments, and office space in a walkable environment with small city blocks, parks, and connections to the surrounding area. This mix of uses creates a place where people can easily run errands, visit with neighbors, and get to work.



Coastal

Open Space

Suburban

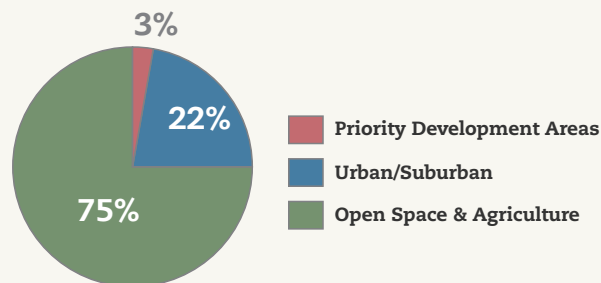
Hillside to
Town Centers

High Density
Transit Area

Bay

¹² Vision California, May 12, 2010. "Charting Our Future," page 2.

San Mateo County Land Types



Getting our priorities straight

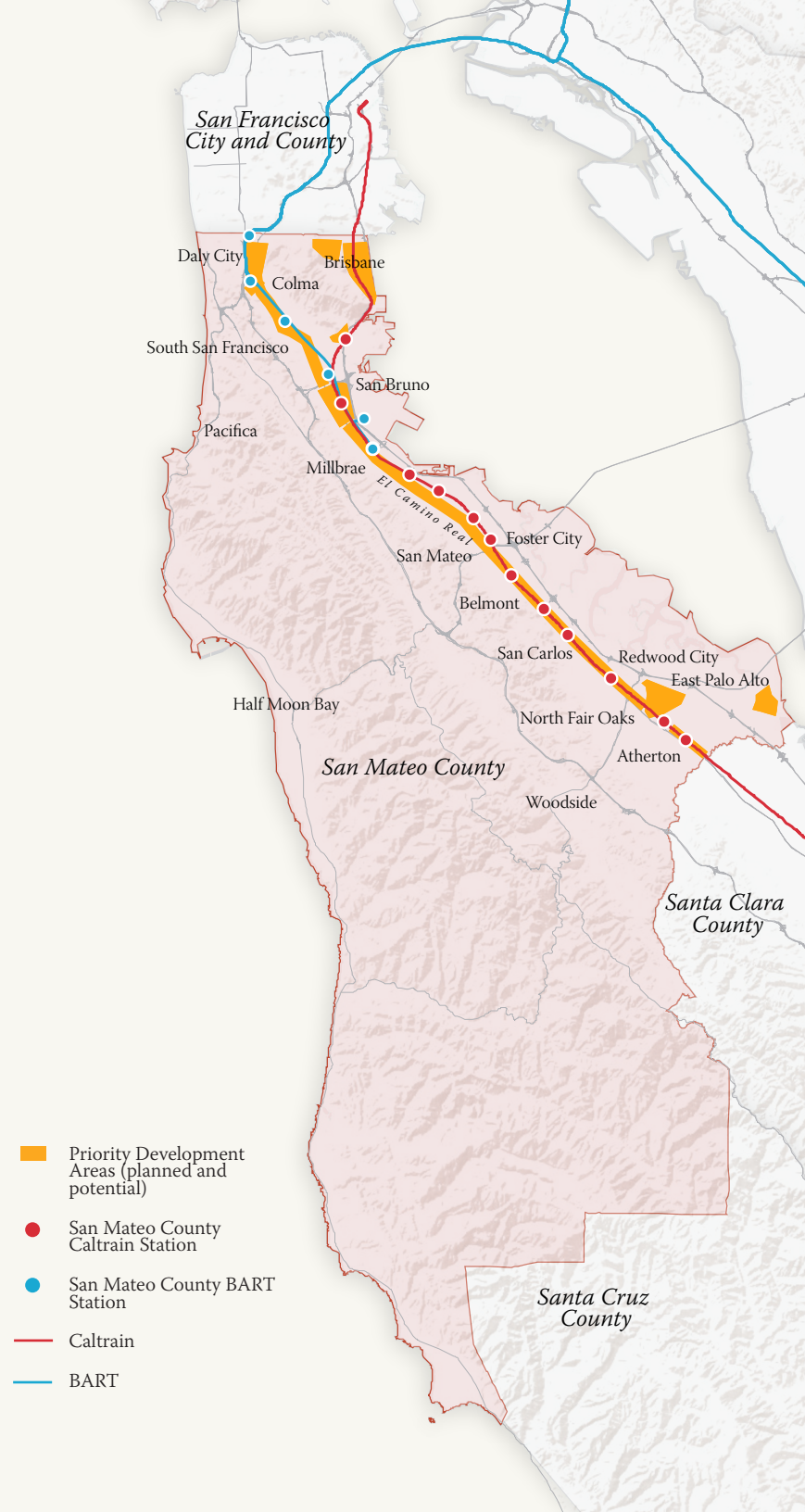
In a new effort called FOCUS, regional agencies, local governments, and communities have been collaborating to encourage development of complete, livable communities in areas served by transit. FOCUS also promotes conservation of the region's most significant open space lands. Through FOCUS, regional agencies agree to support local governments' commitment to these goals by working to direct existing and future incentives to Priority Development Areas and Priority Conservation Areas.¹³

San Mateo County has 11 designated Priority Development Areas (PDAs) encompassing about 9,160 acres (14 square miles), which is 13% of the County's urban land or approximately 3% of the entire County. These PDAs were established by local governments themselves and represent places where we are committed to infill development. In particular, the PDAs are found along the key transportation corridors shown to the right. Importantly, the Grand Boulevard Initiative along El Camino Real fits right into this effort.¹⁴ If more compact homes are not built along these transportation corridors and near job centers, they will get built somewhere else – most likely on working farmland, forcing people to endure long commutes to get to work and services.¹⁵ This contributes to air pollution, allocation of precious resources, and a loss of the working landscapes that contribute to the high quality of life we enjoy in the Bay Area.

¹³ FOCUS, developed by ABAG, MTC, BAAQMD, and the Bay Conservation and Development Commission (BCDC). <http://www.bayareaevision.org/aboutus/>

¹⁴ Grand Boulevard Initiative. <http://www.grandboulevard.net>

¹⁵ Greenbelt Alliance, 2006 Edition. *At Risk: The Bay Area Greenbelt*, page 23.



Conclusion



Location, location, location

When we're trying to reduce the environmental impacts of housing, location is huge. It can put people closer to transit and daily needs, reduce energy use and greenhouse gas emissions, and lessen the pressure to pave and develop natural open spaces and working farms.



Choices

Many households prefer multi-family housing in mixed-use areas, especially residents who are younger, older, or are empty-nesters. This type of housing can have major environmental benefits and better meet the needs of residents.



Many shapes and sizes

Environmentally friendly housing comes in many forms. Existing homes can be remodeled to result in significant energy and water use savings, while new homes can get these same benefits in addition to the use of new, green construction materials.



Want to help improve San Mateo County's environment while housing its people? Here are some things to do:

- ❑ **Be a model**
Update your own home to save energy and water.
- ❑ **Support a development**
Look for housing developments coming up in your community and think about whether they reflect the spirit of environmentally friendly housing. If they do, say so, and ask your neighbors to do the same.
- ❑ **Get the rules right**
Building housing requires following a lot of rules. Look for ways to support zoning and other local regulations that will help make it easier to build more environmentally friendly housing.
- ❑ **Plan ahead**
It takes years to change the way we build housing. The development process takes a long time, but if we look ahead by creating the right land use plans and infrastructure to support housing where we want it, bring recycled water to new places, and finance long-term approaches, we can continue to make progress.





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Resources

FOCUS, developed by ABAG, MTC, BAAQMD, and the Bay
Conservation and Development Commission (BCDC). <http://www.bayareavision.org>.

Grand Boulevard Initiative. (April 2007). *The Grand Boulevard
Initiative Guiding Principles*: www.granboulevard.net.

Grand Boulevard Initiative. (June 2010). *Grand Boulevard Multimodal
Transportation Corridor Plan*: www.granbboulevard.net.

Greenbelt Alliance. (Spring 2009). *Grow Smart Bay Area*: www.growsmartbayarea.org.

San Mateo County Health Department. (2007). *San Mateo County
Aging Model: Better Planning for Tomorrow*: www.smhealth.org/hpp.

San Mateo County Health Department. (Winter 2010). *Building Health
Into San Mateo County Cities*: www.smhealth.org/hpp.

San Mateo County Department of Housing. (Spring 2009). *Building for
the Boom: Creating Communities that Work for All Generations*:
www.smchousing.org.

San Mateo County Department of Housing. (Spring 2008).
Filling in the Gaps: www.smchousing.org.

San Mateo County Department of Housing. *Housing Our Future: 2006
San Mateo Housing Needs Study*: www.smchousing.org.

Sierra Club, Loma Prieta Chapter. (2005). *Building Climate Friendly
Communities*: www.lomaprieta.sierraclub.org.

Sustainable San Mateo County. (April 2010). *Indicators for a
Sustainable San Mateo County*: www.sustainablesanmateo.org.

