

The Capitola Green Economy

Job Creation and a Sustainable Future

October 31, 2011

prepared for:
City of Capitola

Funded by a grant from the Community Development Block
Grant Program of the State of California Department of
Housing and Community Development



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EXECUTIVE SUMMARY

This report defines the green economy, analyzes international, national, and state trends in green job growth and economic development, and assesses Capitola's green job growth potential in the context of the Santa Cruz region. It then presents a list of strategic actions to grow the green economy in Capitola by leveraging the City's role as a residential, retail, and tourism-based economy within a much larger regional economy.

Trends in Green Businesses and Green-Collar Jobs

The green economy encompasses businesses and occupations which improve environmental quality or reduce energy or resource consumption through development and sale of products, services, and practices. The green economy consists of "core" activities and "adaptive" activities.

The *core* green economy drives job growth through creation and sale of new technologies, products, and services, and is most likely to occur in places with research and development activity, access to investment capital, and production facilities. The *adaptive* green economy consists of businesses, households, and public sector agencies which can adopt efficiency and sustainability improvements, thus generating user demand for the green products and services of the core green economy. Meanwhile, changes in land use and transportation patterns can also improve environmental sustainability by reducing automobile use and consumption of water and electricity, while creating construction jobs to build additional infrastructure, housing, and businesses.

The green economy has been rapidly growing throughout the United States and the world due to increased environmental awareness, funding by venture capitalists, and focused government efforts such as components of the recently proposed \$30 billion American Jobs Act. California features the largest share of the United States' green economy and includes a robust base of research universities, venture capital, and clean energy startup companies. California public policy has created demand for green economic activity, while also increasing energy efficiency and decreasing pollution. While the Santa Cruz region has a relatively small base of green economic activity, the nearby San Francisco Bay Area is a state leader.

The Green Economy in Capitola Today

First, it must be understood that economies function at the regional level, and Capitola is a small part of the Santa Cruz regional economy. Capitola's unique niche within the Santa Cruz regional economy includes services for its residents, regional and local retail, and tourism.

Business-level analysis shows virtually no presence of core green economy activities in Capitola since Capitola lacks a major base of research and development and only two blocks of industrial land. Therefore there are weak opportunities to grow core green economy jobs in Capitola, beyond responding to unique and unexpected opportunities.

However, Capitola's residential, retail, and tourism base provides strong potential to grow the adaptive green economy, such as energy efficiency improvements at hotels, stores, and homes. Examples of the adaptive green economy can already be found in Capitola and nearby cities.

The Public Sector Role in Green Economic Development

In general, the public sector creates demand for green economy jobs by providing targeted incentives and enacting regulations requiring environmental improvements. The public sector helps meet demand for those green jobs by ensuring that workers have access to the needed skills and training. The public sector can also encourage growth of the green economy by leading by example, such as implementing efficiency improvements well ahead of the general population.

Capitola's fiscal constraints and broader post-recession economic conditions demand that green economic development efforts be designed in line with five overarching objectives: 1) stimulate economic activity and improve government efficiency, 2) use and reform existing regulatory and economic development tools to promote growth of the green economy, 3) target and focus new efforts to maximize and leverage limited public sector financial resources, 4) engage and involve the community, and 5) lead by example.

Capitola's economic strengths and role within the region as a small economy focused on retail, tourism, and residential services strongly suggest that the City can achieve the greatest and fastest gains by pursuing strategies which create demand for services which adapt existing businesses, homes, and land use patterns to become more environmentally friendly. The City can also support and advocate for regional efforts to grow the regional green economy. Capitola is an unlikely candidate for growth of core green economy jobs – i.e. jobs at research and development or manufacturing facilities – and should focus its efforts on adaptive strategies.

Strategy Recommendations

The report lists 21 recommended strategies for growing the green economy in Capitola and, through regional cooperation, the Santa Cruz region in general. These strategies fall within five categories: 1) preparing the workforce, 2) public policy regulations, requirements, and incentives, 3) land use and transportation reform, 4) public utilities and procurement reform, and 5) promotion and seeding of community engagement and business participation.

Green Economy Gains and Outcomes

Based on implementation of the strategies contained in this report, it is reasonable to project green economy job growth targets of between 150 and 600 new jobs in Capitola between 2010 and 2035. This translates to 35 to 140 businesses in the City over the same period. These jobs reflect Capitola capturing an increasing share of projected regional job growth; that is, a portion of these jobs will exceed those which would otherwise locate in Capitola due to implementation of the strategies. However, outcomes will vary depending on overall market conditions, robustness of Capitola's implementation of the green economy strategies, and the extent to which Capitola can create an appealing environment for the location green businesses and jobs.

I. INTRODUCTION

This report examines the ways in which Capitola can take advantage of the regional, national, and international movement toward building a “green” economy by encouraging the development of local green businesses and jobs. For the purposes of this report, the green economy consists of activity which improves environmental quality or reduces energy or resource consumption through development and implementation of products, services, and best practices.¹ As a result, the economic development strategies outlined in this report also contribute to the City’s goals and obligations for reducing greenhouse gas emissions, as described in Appendix C.

The findings are the result of discussions with local stakeholders and national experts, unique analysis of conditions in Capitola, and review of current literature and practices. Funding for this effort was provided by a Planning and Technical Assistance Community Development Block Grant from the U.S. Department of Housing and Urban Development Planning. Strategic Economics partnered with The Planning Center / Design, Community & Environment and Paladin Law Group LLP to develop this report.

The report opens with an analytical section which examines major international, national, and regional trends in green businesses and related jobs, followed by analysis of the current state of the green economy in Capitola, and the City’s economic role within the Santa Cruz region. The analytical section closes with a description of economic development approaches appropriate for Capitola given the City’s strengths and context, as well as broader economic conditions.

The report then identifies a detailed list of strategies for promoting growth of the green economy in Capitola while making the City a more livable, appealing, and environmentally sustainable community. The recent recession’s lingering effects have placed significant fiscal constraints on Capitola, so the strategies seek to emphasize low-cost, high impact, partnership-driven options in the short-run. Investment in the green economy will have a long-term payoff for Capitola, but the current priority is ensuring effective delivery of day-to-day services.

Finally, the concluding section of this report provides an overview of the benefits resulting from implementing the strategies, including impacts on business growth and job creation in the region and Capitola.

¹ This definition is derived from that used by Karen Chapple in the 2010 report *Innovating the Green Economy in California Regions*.

II. ANALYSIS

TRENDS IN GREEN BUSINESSES AND GREEN-COLLAR JOBS

This section defines the green economy, explains why green business and jobs have become a focus for economic development efforts around the world, and reviews major trends in the green economy.

Defining the Green Economy

The green economy encompasses all economic activity which improves environmental quality or reduces energy or resource consumption through development and implementation of products, services, and practices.

The “green” economy is a broad term encompassing a wide range of innovations, products, services, and practices connected by their positive impact on environmental quality and energy or resource consumption. As a result, researchers have struggled to define and measure the green economy since its activities are spread across many industries and occupations. For example, General Motors, Toyota, and Tesla Motors (an electric car manufacturer) are all automobile manufacturers, yet only Tesla sells purely electric vehicles, while GM and Toyota’s hybrid and plug-in electric vehicles comprise a small portion of their business.

The green economy can be broken down into two major components: “core” activities and “adaptive” activities.

The research and advocacy organization Next10 – similar to other researchers – breaks down the green economy into “core” activities and “adaptive” activities.² The core green economy consists of the creators, producers, and providers of green technologies, products, and services. In contrast, the “adaptive” green economy consists of households and businesses which create demand for products and services by changing methods of production and operation. For example, a researcher into fuel cell technology or seller of wind turbines are part of the core green economy, whereas a household installing energy-efficient light bulbs is adapting its practices to be more efficient while creating demand for a core green economy product.

The core green economy drives economic expansion through innovation, production, and provision of new technologies, products, and services, but is most likely to occur in places with necessary research and development activity, capital access, and/or production facilities.

Innovation is a key driver of economic expansion beyond gains from production efficiency and simple population growth. The core green economy includes research and development and commercialization activities which generate innovation and grow the economy; for this reason, government and popular media attention is often focused on these core activities. Despite this attention, not all locations can capture a large share of the core green economy since it thrives in locations with access to university or private research and development activity, access to startup capital, and/or industrial production facilities. The combination of these factors provides the economic base for growing core green economy businesses, as academic innovations and entrepreneurial ambitions intersect in locations which support production and further research.

² The definition and further explanation can be found in the report *Many Shades of Green: Regional Distribution and Trends in California's Green Economy, 2011*, by Next10.

The adaptive green economy consists of businesses, households, and public sector agencies which can adopt efficiency and sustainability improvements, thus generating end user demand for the green products and services of the core green economy.

Businesses, households, and public sector agencies become a part of the green economy by adapting purchasing and operations to become more environmentally friendly. Ultimately these end users of products and services drive demand for the products of the core green economy through their purchasing decisions. When they elect to make greener decisions – such as installing insulation or purchasing environmentally-friendly and high-efficiency products – these households, businesses and public sector agencies become a part of the adaptive green economy. These adaptive green activities will also have the greatest impact on reducing local greenhouse gas emissions.

Changes in land use and transportation patterns also influence environmental quality and energy consumption.

Land use – i.e. density, proximity, and mix of housing and businesses – and transportation patterns also affect resource consumption and the vibrancy and resiliency of ecosystems. A place can become more “location-efficient” by including higher densities, mixes of land uses, ready access to transit, access to small-scale retail, and a street environment that encourages local residents to walk, bike, or take transit instead of driving private (and often single-person) automobiles. The reduced automobile usage conserves fuel and reduces pollution, while the often smaller living spaces and shared public spaces of such developments require fewer resources for heating, air conditioning, and maintenance per person. These “green” changes to land use and transportation patterns can generate jobs through the additional construction of development projects in existing developed cities, and infrastructure upgrades.

The Growing Importance of the Green Economy

Increases in environmental awareness and funding by venture capitalists and governments have resulted in rapid expansion of the green economy.

The public has become increasingly focused on environmental sustainability over the past decade as concerns have grown about dependence on foreign energy supplies, vulnerability to fuel price spikes, and the impacts of greenhouse gas emissions and climate change. Further, the crash of the “dot-com” bubble in 2000 and housing market crash of 2007-2008 left investors searching for new investments with long-term promise. There is no consistent definition for measuring venture capital investments in the green economy, but a report by Pew Charitable Trusts shows that between 1999 and 2008, venture capital investment in clean energy in the United States increased from \$360.3 million to \$5.9 billion³, and other measurements show a similar increase. The industry is not recession-proof, however; literature indicates that investments and demand have declined in recent years, partly because energy efficiency improvement installations are dependent on a strong housing and development market, and hard-pressed consumers are more likely to opt for short-term cost savings in their purchases overall.

The green economy provides innovation which expands the economy, while also creating local jobs.

As previously described, the green economy generates innovations which expand the economy. High-tech and high value innovations are likely to initially be manufactured in the United States to take advantage of the skilled workforce and robust patent enforcement. As innovations become commoditized and prices drop, production will likely move overseas. However, the green economy also creates local jobs which cannot be outsourced, such as installation and maintenance of renewable power sources, and home and business efficiency upgrades.

³ *The Clean Energy Economy: Repowering Jobs, Businesses, and Investments Across America*, June 2009.

The Green Economy in California

California features the largest share of the United States' green economy.

The Pew Charitable Trusts shows that California leads the nation in numbers of clean technology businesses, employment, and venture capital investment.⁴ The size of the state's economy and population alone ensure that it will contain a large amount of green economy activity, but it has further benefitted from its unique combination of assets, policies, and different strengths between regions.

California includes a robust base of research universities, venture capital, and clean energy startup companies.

California includes several major research universities and a high concentration of venture capital. According to the Next10 report *2010 California Green Innovation Index*, 25 percent of 2009 venture capital investments in California were made in clean technology, with over \$11.6 billion in investments since 2006 (representing nearly a quarter of global venture capital investment in the green economy). The share of venture capital invested in clean technology in California has continued to increase even as total venture capital investments have decreased. California is also the top state for green technology patents.

California public policy has created demand for green economic activity, while also increasing energy efficiency and decreasing pollution.

Next10 also reports that California's energy and environmental policies have had a positive impact on reducing greenhouse gas emissions and increasing efficiency. Energy use per person has rapidly declined relative to the United States overall since 1980. California greenhouse gas emissions per person are half that of the United States overall.

The Santa Cruz region has a relatively small base of green economic activity, though the nearby San Francisco Bay Area is a state leader.

The Santa Cruz region is relatively small and has a relatively small base of research and development and manufacturing activity, but it is located adjacent to the high concentrations of the green economy found in the San Francisco Bay Area. The report *Innovating the Green Economy in California Regions* shows that the East Bay and Silicon Valley are among the top four California sub-regions for green economy activity in California.

⁴ *ibid*

THE GREEN ECONOMY IN CAPITOLA TODAY

As described above, the green economy encompasses multiple components and a wide variety of activities. The sector is a global and national focus, and California is a leader within the United States. This section examines the Capitola economy to identify the City’s most promising pathways for growing the local green economy. The analysis includes a detailed examination of the City’s existing business base, commute patterns, and observations of its role within the Santa Cruz regional economy.

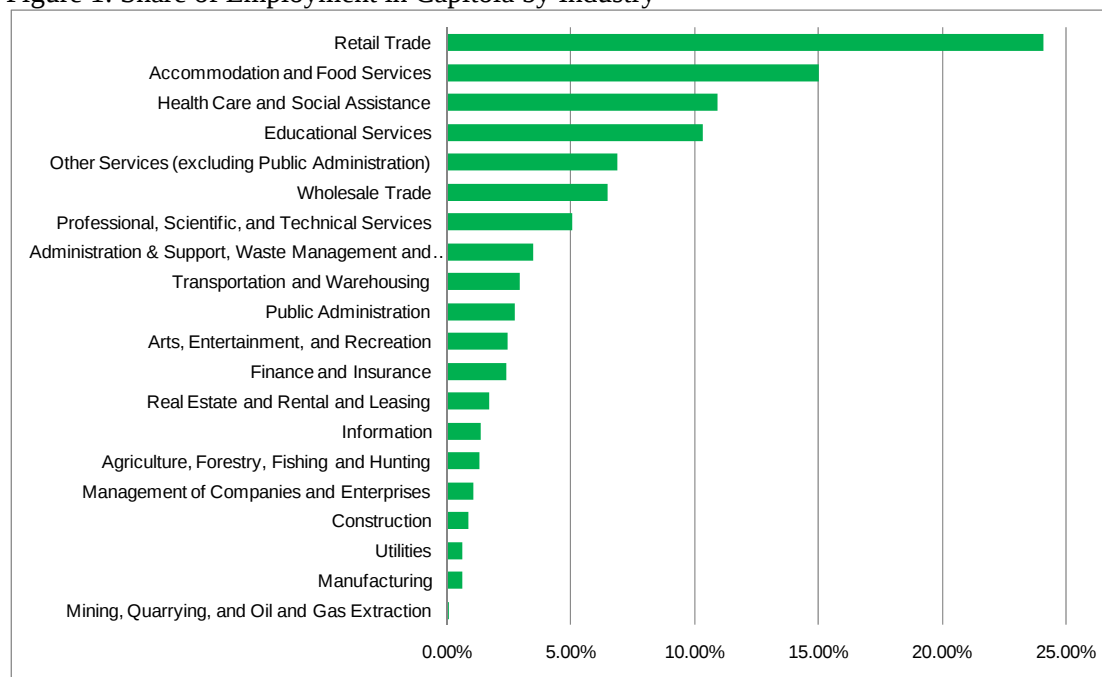
Economies function at the regional level; Capitola is a small part of the Santa Cruz regional economy.

Economic activity is inherently regional, since city boundaries minimally affect the network of business, commute, and human relationships within a region. Workforce development programs generally function at the regional level for this reason. Capitola’s economy is tightly integrated into the wider regional economy encompassing Santa Cruz and Monterey Counties and beyond. Therefore, any strategic approach must first determine Capitola’s role within the regional economy and recognize the diffused impacts that could occur from the local policies of a city of less than 10,000 residents in a county of 262,300.

Capitola’s niche within the Santa Cruz regional economy centers on personal services for its residents, regional and local retail, and tourism.

Strategic Economics previously analyzed the Capitola business market as part of the General Plan “White Paper #2: Economic and Market Conditions.” Research found that Capitola is a largely residential community – which therefore demands related services such as building contractors – with a low concentration of major office or industrial businesses and a heavy concentration of regional retail (41st Avenue), local-serving retail (41st Avenue and Bay Avenue), boutique retail (Capitola Village) and tourism (including hotels and retail supported by tourists). The figure below shows the City’s high concentration of employment in retail, accommodation and food services (hotels and restaurants), and other household-serving industries such as health care and education.

Figure 1: Share of Employment in Capitola by Industry



Source: U.S. Census Longitudinal Employer-Household Dynamics, 2011; Strategic Economics, 2011.

Business-level analysis shows virtually no presence of the core green economy in Capitola; the core green economy is a poor basis for an economic development strategy in Capitola, beyond responding to unique and unexpected opportunities.

Strategic Economics examined Capitola's base of businesses within the core green economy by applying three different filters to a citywide comprehensive, establishment-level database obtained from data service Dun and Bradstreet. These filters identified businesses and organizations within industries which, based on previous research, have a high likelihood of including core green businesses.⁵ Strategic Economics then individually researched all Capitola businesses and organizations within those industry categories. Ultimately only four Capitola businesses and organizations were found to exist within those core green economy categories: three are building contractors with a green emphasis, and one is a regional governmental entity's office, not a business.

Capitola's existing residential, retail, and tourism base provides strong potential to grow the adaptive green economy both within the City and regionally.

While Capitola presently lacks significant opportunity in the core green economy, the City's base of residential-serving, retail, and tourism businesses opens opportunities to cultivate the City's adaptive green economy by improving the resource efficiency of residences, retailers, and hotels. Such a strategy, if comprehensively implemented, can also generate marketing buzz that Capitola is an eco-conscious City – potentially increasing visitors and business. Success in the adaptive green economy could, of course, set the foundation for Capitola developing success in the core green economy in the future.

Examples of the adaptive green economy can already be found in Capitola and nearby cities.

Three examples include:

- Capitola Freight & Salvage: This retailer sells new and used building materials which otherwise would have been sent to landfills.
- Pacific Blue Inn: This Santa Cruz hotel was constructed of sustainable materials, designed to be resource-efficient, and provides complimentary bicycles to guests.
- New Leaf Community Market: This local grocery chain emphasizes organic, sustainably and locally-produced products.

Figure 2: Pacific Blue Inn and New Leaf Community Market



Source: pacificblueinn.com, 2011; waymarking.com, 2011.

Capitola's land use and transportation patterns can also be improved.

Capitola is a small city and contains pockets of areas in which bicycling and walking is easy and comfortable, especially around the Capitola Village. However, much of the City is arranged in a manner making it challenging for residents who walk or bike for errands or work, with poor direct pedestrian connections, intimidating automobile traffic along and near 41st Avenue, and obstructions or indirect road connections between destinations. Currently, for many residents and visitors in Capitola the automobile is the transportation option of choice, but pedestrian and bicycle access improvements in Capitola can

⁵ See Appendix A for detailed information and methodology.

encourage residents and visitors to reduce automobile use for local trips. A major focus of the Capitola General Plan Update is to identify and prioritize land use, pedestrian access and transportation modifications that will improve local sustainability. Notably, 81% of all local jobs projected for Capitola in 2035 by the Association of Monterey Bay Area Governments (see Appendix B, table B-1) will be in the largely lower-wage retail and service industries (though a small portion of service jobs will include professional services). A local commitment to the development and preservation of workforce housing affordable to this income group within residential land use areas will also significantly reduce Capitola's employee commutes.

HOW TO GROW THE GREEN ECONOMY IN CAPITOLA

This section describes how the process of economic development – i.e. the creation or growth of businesses and jobs – functions in the green economy. It then explains how Capitola’s economic niche influences the types of strategies most likely to succeed in the City.

The Public Sector Role in Green Economic Development

*The public sector creates **demand** for green economy jobs through incentives and regulations.*

The public sector is able to create demand for green economy jobs through incentives and regulations which increase the interest or need for households and businesses to invest in resource-efficient technologies, products, and practices. For example, expedited permitting approval for a more efficient new building development is an incentive which can encourage a property developer to save time and money by including sustainable materials and highly-efficient products; this can increase demand for workers with additional skills to design and install such materials. The regulatory version of this example is a green building ordinance, which requires that all building developments meet sustainability and efficiency targets.

*The public sector helps meet demand for green jobs by ensuring that the labor **supply** is well-equipped for those jobs.*

The public sector invests in worker skills through a variety of means, including all levels of public education and the activities of workforce investment boards. The public sector can prepare the workforce to meet demand for green jobs by analyzing career pathways and opportunities and tailoring training and placement activities to match. These activities are typically implemented at higher levels of government (regional and above) since labor is not tied to a specific location. Examples in the Santa Cruz region include the Cabrillo College Green Technology Center for workforce training, and the Green Careers Partnership for aligning resources and placing trainees into green job openings.

The public sector can also encourage growth of the green economy by leading by example.

The public sector can lead by example by following policies requiring resource-efficient purchasing, operations, and facilities development/rehabilitation. In doing so, the public sector creates demand for green products and services while also demonstrating how the green economy can benefit households and businesses.

Green Economic Development Strategy Objectives and Directions for Capitola

Capitola’s fiscal constraints and broader post-recession economic conditions demand that green economic development efforts conform to five overarching objectives.

Capitola has experienced a significant drop in sales tax and other revenues since 2007. Local businesses continue to suffer from on-going consumer caution and should not be burdened by additional requirements that increase the cost of doing business; participation in programs should be voluntary in the short run. While the City must continue to undertake long-term efforts to grow its economy – green or otherwise – the current priority is to maintain city services. Therefore, the green economic development strategies in the following section follow five key objectives:

- Stimulate economic activity and improve government efficiency
- Use and reform existing tools to promote growth of the green economy

- Target and focus new efforts to maximize limited economic resources
- Engage and involve the community
- Lead by example

Under these objectives, the strategies appropriate for Capitola emphasize low-cost and highly cost-effective measures in the next several years, and partnerships with organizations better-positioned to implement some of the strategies. Further, the strategies seek to incentivize economic growth rather than place additional burdens which may slow recovery in the City.

Capitola should focus on building demand within the adaptive green economy and improving land use patterns, while supporting and advocating regional efforts to resolve regional green economy needs.

As stated earlier, Capitola lacks an existing base of research and development and industrial land area to justify focusing on growing businesses within the core green economy. Instead, green economic development strategies for Capitola should focus on the City's strengths: the adaptive green economy (households and businesses), reformation of land use and transportation patterns, and public sector operations. Efforts which are more effectively implemented at the regional level should focus on finding the right partners and City advocacy or assistance, such as partnering with Workforce Investment Board Santa Cruz County and the non-profit organization Ecology Action.

III. STRATEGY RECOMMENDATIONS

This section consists of a matrix showing strategy recommendations for growing the green economy in Capitola and, as a result, improving the City’s environmental sustainability and reducing greenhouse gas emissions.

- Each strategy is followed by a description, recommended implementation actions, and an example of a similar strategy from elsewhere.
- The “Lead Implementing Party” – in most cases Capitola city staff – will be the primary initiator of the strategy. The strategies attempt to maximize implementation efficiency through partnerships and low-cost solutions, but they will inevitably involve an investment and focus of staff time.
- “Partner Organizations” are possible organizations for assistance in carrying out the strategy, since many strategies require resources beyond those available to the City.
- “Timeframe” describes the envisioned time required to implement the strategy. Roughly, “short-term” strategies can be implemented in the next one to three years, “mid-term” strategies in three to six years, and “long-term” strategies in six years or beyond.
- “Priority” is based on the extent to which staff resources should be immediately dedicated to the strategy, since some strategies may require long ongoing effort or higher effort relative to likelihood of success.

Tracking Progress

Strategies within this report will be incorporated into the City’s updated General Plan and Climate Action Plan, which will include metrics to monitor their effectiveness over time. Metrics will identify measurable outcomes to help the City evaluate whether the strategies are producing desired results. These metrics will help the City to make any necessary adjustments to the strategies to better help Capitola attract and retain green businesses and jobs.

	Strategy	Lead Implementing Party	Timeframe	Priority	Partner Organizations
#	Actions/Example				
Preparing the Workforce					
1	Promote regional workforce development programs locally	City staff	Short-term	High	Workforce Investment Board Santa Cruz County, Green Careers Partnership, Cabrillo College, Central Coast Energy Services, Ecology Action, Community Action Board
	Description	Since Capitola is part of a regional economy, workforce issues - and funding - function at the regional level. Capitola can support regional workforce development programs related to green jobs through ongoing participation in and promotion of regional workforce organizations.			
	Actions	City staff must actively participate in and be aware of the activities of regional workforce development organizations - such as via the Comprehensive Economic Development Strategy Committee - and determine how best to publicize these efforts locally. Publication outlets include city websites, brochures, including those listed below. Consider or build on existing outreach and regular events to inform business owners and entrepreneurs of available resources.			
	Example	The Green Careers Partnership is a regional collaboration of workforce, educational, and environmental organizations seeking to link workforce development activities with environmental initiatives. Current sponsoring partners include the Santa Cruz and Monterey County Workforce Investment Board, Cabrillo College, Central Coast Energy Services, Ecology Action, and the Community Action Board of Santa Cruz County.			
2	Facilitate small business connections to green economic development and business development programs	City staff	Short-term	High	Central Coast Small Business Development Center (Cabrillo College), Santa Cruz SCORE, Workforce Investment Board Santa Cruz County, Green Careers Partnership, environmental organizations, Capitola Commission on the Environment
	Description	Capitola currently lacks in-house capability to directly assist small businesses with improving their operations, but can instead direct business owners to available resources such as the Central Coast Small Business Development Center. Over time, Capitola can encourage embedding of cost-saving sustainability advice within the programs available to small businesses, and focus on linking green businesses within the City to appropriate resources.			
	Actions	Identify small business assistance programs, especially those with an environmental focus. Publicize availability of this assistance via local partners and the City's own website and other economic development outlets. Consider use of interns to coordinate and promote green programs and pursue grant funding applications.			
	Example	The Central Coast Small Business Development Center at Cabrillo College provides a wide range of services in assisting small businesses with start-up needs, administrative improvements, and connections to loan programs.			

	Strategy				
#	Actions/Example	Lead Implementing Party	Timeframe	Priority	Partner Organizations
3	Pursue green business incubator opportunities	City staff	Long-term	Low	UC Santa Cruz, Cabrillo College, venture capital organizations, business and environmental non-profit organizations, other educational institutions
	Description	A green business incubator would provide space, support services, and/or advice about pursuing seed funding for new businesses featuring products or services related to the green economy. No such incubator currently exists in the region and Capitola's current options may be limited given the limited existing base of such businesses and lack of a major educational institution, but Capitola can participate in a broader effort to attract such an incubator to the region. Alternately, Capitola could apply the same efforts to a regional incubator effort designed to grow established but small green businesses, or to grow non-core green businesses in a green and sustainable manner.			
	Actions	Monitor interest and availability of resources for creating a green small business incubator. Assess demand for such an incubator via strategy #2 and other efforts by Capitola; participate in any broader efforts to attract an incubator to the region. Advocate for regional resources to be available for such an effort. Develop the technical assistance and finance linkages resulting from strategy #2 to be prepared for capturing opportunities for siting a business incubator in the region. Attract local and regional banks and Small Business Administration representatives to present and mentor at green business development activities and, eventually, the incubator. Develop land use policies that can quickly and easily adapt to demand should a regional center wish to locate in Capitola			
	Examples	The Venture Greenhouse of Dominican University in California (in San Rafael) provides one year of space, funding, administrative mentoring, and financing connections for new "environmentally and socially beneficial ventures." The business incubator operates in partnership with the City of San Rafael and Marin Economic Forum and complements the university's "Green MBA" program. The incubator has existed for less than a year. Other examples include the four-year-old Sonoma Mountain Village in Rohnert Park and the well-established 500 Start-Ups in San Francisco.			

	Strategy				
#	Actions/Example	Lead Implementing Party	Timeframe	Priority	Partner Organizations
Public Policy Regulations, Requirements, and Incentives					
4	Update the Green Building Ordinance	City staff	Short-term	High	Capitola Planning Commission, Capitola Commission on the Environment
	Description	Capitola currently has a Green Building Ordinance, which needs to be revised in order to meet the new state CALGreen requirements. This strategy proposes making the sustainability standards for new construction or major renovation of buildings in Capitola fully in compliance with state requirements, and strengthening it using an incentive approach to reward exemplary projects which go beyond requirements. The incentive would be public recognition with a new designation, without mandating the additional cost and time burden of LEED Certification. The approach is to style the requirements as LEED-Ready.			
	Actions	Continue Capitola's current revisions to the building code under the requires CALGreen requirements and implementation of an incentive program to reward exemplary projects.			
	Example	The City of Seattle's "Priority Green" program provides incentives for meeting or exceeding sustainability requirements; Seattle also provides assistance in connecting developers of green projects to other sources of low-cost financing for green projects.			
5	Encourage use of grants and loans for efficiency upgrades	City staff	Short-term	High	Environmental organizations
	Description	At any given time there exists a confusing array of grant, loan, and tax incentive options for various resource efficiency upgrades via the government, utility providers, and other sources. The City, in partnership with a local environmental organization, can facilitate connections between residents and businesses with these options.			
	Actions	Partner with a knowledgeable organization to publicize availability of these financing options via the internet, pamphlets, workshops, etc. Work with the county and other regional government entities to ensure that Capitola is included in programs, such as the Property Assessed Clean Energy financing program (PACE).			
	Example	Non-profit organization Ecology Action is leading an element of the Energy Upgrade California program, aimed at coordinating incentives and financing outreach and education of available assistance with resource efficiency improvements.			

	Strategy				
#	Actions/Example	Lead Implementing Party	Timeframe	Priority	Partner Organizations
6	Require building efficiency improvements upon sale	City staff	Mid-term	Low	Capitola Commission on the Environment, Environmental organizations, Soquel Creek Water District, City of Santa Cruz
	Description	This strategy would require that all commercial and residential buildings be upgraded to meet resource efficiency requirements upon transfer of ownership. Capitola currently has a similar water efficiency requirement for home sales. At a minimum upgrades should include roof insulation, weatherization and heater efficiency upgrades. An expanded program could include whole house efficiency evaluations and solar installations.			
	Actions	Assess the market impact of implementing this requirement. Pass ordinance and set standards for compliance.			
	Example	The City of Berkeley's Residential Energy Conservation Ordinance and Commercial Energy Conservation Ordinance require that energy efficiency improvements are made when structures are sold or significantly renovated; the intent is that the seller pays, but responsibility can be transferred to a buyer (with consent) one time.			
7	Renew the City/Redevelopment Agency's home repair and weatherization program	City staff	Short-term	High	Housing Authority of Santa Cruz County
	Description	Although currently unfunded, Capitola has a housing rehabilitation assistance program that provided assistance through loans and grants to low and moderate-income homeowners. Improvements targeted health and safety, toxic (mold and lead) abatement, handicap access, and energy efficiency. The program helps preserve existing affordable housing and improve residential energy efficiency.			
	Actions	Identify and obtain new funding sources, including the City's Housing Trust Fund and state and federal grants. Expand program to also serve lower-income rental properties.			
	Example	Capitola's existing program has a successful ten year history in collaboration with the Housing Authority. Funding for the program remains the key challenge.			

	Strategy				
#	Actions/Example	Lead Implementing Party	Timeframe	Priority	Partner Organizations
Land Use and Transportation Reform					
8	Construct safe pedestrian pathways and bikeways	City staff	Long-term	High	Real estate developers
	Description	Safe pedestrian pathways and bikeways will encourage alternatives to automobile use and increase recreational options in Capitola, while also creating construction jobs. Incremental block-by-block improvements to the rail trail could be part of this program with priority given to key lower-cost sections, such as the connection between Jade Street Park and 41st Avenue, and between Bay Avenue and New Brighton State Beach.			
	Actions	Include policies for construction of pedestrian and bicycle improvements in the General Plan, including visions for new pathways connecting destinations and parkland in/near Capitola. Finish complete streets update of the City's Circulation Element and pursue funding from federal, state, and regional sources.			
	Example	The City of Fort Collins, Colorado has increased its bike path mileage by nearly 300% through a clever combination of federal, private sector, and foundation funding.			
9	Encourage adherence to sustainable neighborhood design standards via the General Plan and other policies	City staff	Mid-term	Medium	Capitola Planning Commission, Capitola Commission on the Environment
	Description	The General Plan can present a vision focused on ensuring future projects contribute to sustainable neighborhoods with transportation options, strong linkages between places, and sufficient density to enable concentration of services and retail within convenient distance. Greater density can increase incentives for redevelopment, which can help generate jobs while making Capitola a more sustainably designed city.			
	Actions	Implement the General Plan's sustainable neighborhood design requirements.			
	Example	Background and examples can be found in the document "A Local Government Guide to LEED for Neighborhood Development," available online from the U.S. Green Building Council (usgbc.org).			

	Strategy				
#	Actions/Example	Lead Implementing Party	Timeframe	Priority	Partner Organizations
10	Examine economic development opportunities for resolving parking concerns in a sustainable manner	City staff	Mid-term	Medium	Capitola Chamber of Commerce, business/property owners, Capitola Business Improvement Area, Santa Cruz Metropolitan Transit District, Capitola Commission on the Environment
	Description	A parking management program is being prepared for Capitola Village as part of the General Plan process. Based on the analysis, this program may include options for resolving parking concerns while also providing jobs. Examples could include valet parking for off-site lots, circulator shuttles, or improved transit service.			
	Actions	Use the findings of the parking analysis to develop the parking management program with sustainable alternatives.			
	Example	The Santa Barbara Downtown-Waterfront Shuttle is a circulator shuttle which allows visitors to park once and then navigate the entire downtown and waterfront area without a car.			
11	Allow co-working collaborative spaces in Capitola	City staff	Long-term	Low	Capitola Planning Commission, Capitola Commission on the Environment, relevant funders and education partners
	Description	"Co-working" spaces provide shared workstations for the use of clients, ideally providing low-cost office space for entrepreneurs while encouraging creativity through the interactions of the users. Capitola could leverage this concept in the pursuit of green business entrepreneurs by reforming existing permitting and zoning policies to ensure that such spaces are allowed.			
	Actions	Review parking and zoning requirements for shared multi-tenant office space. Reform as needed to allow co-working spaces.			
	Examples	NextSpace and Cruzeioworks are two examples of co-working spaces in Santa Cruz. Both offer spaces for members and, more importantly a collaborative and creative environment for networking and exchanges of ideas. Other examples include Hub San Francisco and Hub Berkeley.			

Strategy		Lead Implementing Party	Timeframe	Priority	Partner Organizations
#	Actions/Example				
12	Develop a Transportation Demand Management Plan for City and local employees	City staff	Mid-term	Medium	Transportation consultants, Santa Cruz METRO
	Description	A Transportation Demand Management (TDM) Program would offer incentives to encourage the use of alternative modes of transportation by City and local (Village, Bay Ave. & 41st Ave.) employees. Free bus passes, reimbursement for not using a parking space, emergency cab services, etc. will help reduce parking demand and reduce greenhouse gas emissions through reduced commuter traffic.			
	Actions	Obtain funding and hire transportation consultants to complete a TDM study. Implement recommendations of the study.			
	Examples	Warner Center, in the San Fernando Valley of Los Angeles, includes a concentration of office, retail, industrial, and residential uses. The area's Specific Plan has mandated a Transportation Improvement Mitigation Program since the 1990s. The program coordinates shared-ride vans, carpools, and encourages transit use through promotions and subsidies.			
Public Utilities and Procurement Reform					
13	Implement eco-friendly city procurement, construction, and procedure policies	City staff	Mid-term	High	Capitola Commission on the Environment, environmental organizations
	Description	"Eco-friendly procurement policies" require that city purchases, facilities operations, and new facilities all meet resource-efficiency requirements for types of products, materials, construction techniques, etc. Capitola already operates under an "Environmentally Preferred Purchasing Policy" as part of its green business certification, but the extent to which the policy is known and followed is uncertain. Capitola can also include policies regarding use of day-to-day cleaning products and materials (paper, soaps, paint, etc.) used in the maintenance of all City properties; this program could have beneficial results in terms of environmental safety for the City's employees and contracted maintenance staff as well as improved interior air quality in work and meeting spaces.			
	Actions	Implement and ensure adherence to policies requiring that city purchases, procedures, and public facilities meet sustainability and health standards. Renew and maintain Green Business Certification.			
	Example	The City of Portland Sustainable Procurement Policy was passed in 2008 and sets forth guidelines requiring that goods and services purchased by the City "minimize negative environmental impacts, are fair and socially just, and make economic sense."			

Strategy		Lead Implementing Party	Timeframe	Priority	Partner Organizations
#	Actions/Example				
14	Advocate for utility provider requirements and incentives for efficiency improvements	City staff	Mid-term	Low	Santa Cruz County, utility providers, environmental organizations
	Description	Capitola should continue to support the implementation of utility provider requirements and incentives for residential and business energy efficiency upgrades.			
	Actions	Join regional partners in advocating for continuation and expansion of utility provider incentive programs to improve energy efficiency, and advocating for sustainable practices by the providers themselves. Support the County's investigation into implementation of Community Choice Aggregation. Capitola is currently involved with such efforts at the county level.			
	Example	Marin County implemented community choice aggregation, a program in which the county purchases power from its selected sources and the local utility provider handles transmission and billing. The program is estimated to have had millions of dollars in economic impact in the first year alone, as it focused on purchasing power from local renewable sources and encouraging development of more such sources.			
Promotion and Seeding of Community Engagement and Business Participation					
15	Establish a one-stop web resource for available green economic development programs	City staff	Mid-term	High	Environmental organizations; Chamber of Commerce; Capitola Business Improvement Area
	Description	Navigating myriad economic development and incentive programs can be extremely difficult; a one-stop web resource will allow homeowners and business owners an easy way to survey the available options, and can be an outlet for publicizing green efforts in Capitola. Any regular outreach events can also be used to facilitate these connections.			
	Actions	Work with a local environmental organization to establish a one-stop web resource for connecting businesses and citizens to green programs available. Several of the other listed strategies can be supported via this resource. Capitola may also collaborate with other cities to develop a regional resource.			
	Examples	The City of Santa Monica Office of Sustainability and the Environment maintains a website with similar information, as does the City of Cupertino "Cupertino Green Resources" site.			

	Strategy				
#	Actions/Example	Lead Implementing Party	Timeframe	Priority	Partner Organizations
16	Promote local business use of the Monterey Bay Area Green Business Program	City staff	Mid-term	High	Environmental organizations, Chamber of Commerce, Capitola Business Improvement Area, business and property owners, Monterey Bay Area Green Business Program Task Force
	Description	Businesses certified under a rigorous green certification program have proven that they incorporate sustainable practices into their operations, purchasing, and other actions. A large collection of certified businesses can reflect positively on the local community and is likely to increase business from customers interested in environmental sustainability.			
	Actions	Promote the Monterey Bay Area Green Business Program and publicize businesses in Capitola which have been certified. Over time, consider whether it will be advantageous to develop a program specific to Capitola. Consider whether to support the program via contributions to technical assistance and marketing.			
	Example	The Monterey Bay Area Green Business Program is promoted on the website of the City of Santa Cruz; the program itself is promoted on its own website and the statewide website www.greenbusinessca.org .			
17	Attract a farmers market to Capitola	City staff	Short-term	High	Business organizations, environmental organizations, community supported agriculture, farmers market organizers
	Description	Farmers markets are a visible commitment and personal connection to locally-grown produce, while also helping to create additional demand and jobs for local producers. A farmers market would be a major signal that Capitola is interested in sustainable, organic sourcing of food and provide a means of publicizing other green efforts.			
	Actions	Persist in ongoing efforts to attract a regular farmers market to Capitola. Consider partnering directly with local community supported agriculture (CSA) or regional CSA accelerators like Farm Connection.			
	Example	Santa Cruz Farmers Market organizes and manages five different farmers markets in the Santa Cruz region.			

	Strategy				
#	Actions/Example	Lead Implementing Party	Timeframe	Priority	Partner Organizations
18	Support green consumer education programs at local events	City staff	Short-term	Medium	Chamber of Commerce, Capitola Business Improvement Area, environmental organizations, Cabrillo College, University of California Santa Cruz
	Description	Green consumer education outreach can create demand for additional services, but must be accessible to be effective. This strategy proposes that Capitola support the addition of green consumer education programs at local events, possibly in conjunction with interested business and environmental organizations.			
	Actions	Communicate to business and non-profit organizations that the City is interested in participating in outreach at major events, including possible appearances/mentions by elected officials and staff.			
	Example	The Capitola Water Festival and other environmentally-focused events exist in Capitola and the Santa Cruz region, but larger events such as the Art and Wine Festival are an opportunity to promote green consumer programs to a much larger and possibly less-aware audience.			
19	Seed citizen engagement through green jobs micro-grant campaigns	City staff	Mid-term	Medium	Envrionmental organizations, business organizations
	Description	Provide a high-visibility green jobs micro-grant program to solicit and fund new citizen and organization ideas for growing green jobs in Capitola, possibly as part of a high-visibility contest. The most promising applicants would receive a modest grant to launch the ideas.			
	Actions	Include funding for this program in the budget for the existing community grants program. Establish rules and goals for selecting recipients and use and monitoring of grants. Publicize and implement the contest and micro-grants.			
	Example	Minneapolis Climate Change Grants were funded through the American Recovery and Reinvestment Act. Beginning in 2007, Minneapolis awarded grants between \$7,500 and \$10,000 to organizations of all kinds to fund ideas for improving environmental sustainability.			

	Strategy				
#	Actions/Example	Lead Implementing Party	Timeframe	Priority	Partner Organizations
20	Promote recreational activities that engage with Capitola's natural resources	Business organizations	Mid-term	Medium	Chamber of Commerce, Santa Cruz County Conference and Visitors Council, Capitola Recreation Department
	Description	Recreational activities which take advantage of Capitola's scenic beauty can help grow the City's green reputation overall.			
	Actions	Explore options for the beach, Soquel Creek, connections to New Brighton State Beach, and the wharf for the General Plan. Allow recreational uses for high-potential areas under the General Plan.			
	Example	The San Francisco Bay Trail is an effort to create a 500-mile network of bicycling and hiking trails encircling the waterways of the region; numerous gaps still exist in the extensive trail, but efforts have been ongoing since inception in 1987. The Bay Trail provides a connection and recreational traffic to numerous recreational areas, opening new opportunities for businesses offering kayaking, bike rental, and other offerings.			
21	Develop a local business coupon program for transit users and cyclists	Business organizations	Mid-term	Low	City staff, environmental organizations
	Description	Persons arriving to select areas of the City via bicycle or transit are provided discounts or gift certificates to local businesses.			
	Actions	Gauge the support of local business organizations. Partner with those organizations to implement a coupon program.			
	Example	Santa Barbara COOL Car Free discounts are offered to persons with an Amtrak ticket, bus ticket, or bicycle. The discounts are offered by a wide range of businesses in Santa Barbara. The program is run by a consortium led by the Santa Barbara County Air Pollution Control District in conjunction with over 100 business and community partners.			

IV. GREEN ECONOMY GAINS AND OUTCOMES

This document has walked through the green economy's definition, broad trends in the green economy, analysis of its current positioning within the Capitola economy, green economic development opportunities and approaches in Capitola, and strategies for growing the City's green economy while also improving environmental quality. Per grant requirements, Strategic Economics has estimated a range of business growth and job creation outcomes from the listed strategies, including openings for Targeted Income Group workers.

Based on implementation of the strategies contained in this report, it is reasonable to project green economy job growth targets of between 150 and 600 new jobs in Capitola between 2010 and 2035. Based on current numbers of employees per business, this translates to 35 to 140 businesses in the City over the same period. These jobs and businesses will be a mix of employment growth already expected to occur in the City, and additional regional jobs captured in Capitola beyond projections for the City due to the City's increasingly attractive location for green economy jobs.

The table below shows low, medium, and high scenarios for green economy job growth target projections. The outcomes vary depending on overall market conditions, robustness of Capitola's implementation of the green economy strategies, and uncertainty regarding whether businesses and jobs serving Capitola's green economy choose to locate in Capitola or another nearby location.

The green economy job growth target projections assume that Capitola's green economy strategies will result in the City attracting an increased share of green job growth relative to Santa Cruz County by 2035; countywide projections were based on those created by the Association of Monterey Bay Area Governments. Countywide job growth was held constant since the projections are calibrated to capture all growth in the regional economy; AMBAG projections assumed growth in the green economy as part of larger macro-economic trends. The strategies in the Green Economy Report are an important way to help make sure that the region achieves this potential, and to enable Capitola to attract its share of these jobs. Detailed methodology notes, Targeted Income Group benefits, and additional information are included in Appendix B.

Table 1: Green Economy Job and Business Growth Target Projections, 2010 to 2035

	Low		Medium		High	
Industry	Jobs	Businesses	Jobs	Businesses	Jobs	Businesses
Retail	0	0	14	1	42	4
Service	96	26	192	51	288	77
Industrial	7	1	25	3	39	5
Public	26	2	51	4	102	9
Construction	24	9	73	28	122	46
Agriculture	0	0	0	0	0	0
Total	152	38	355	88	593	141

Source: Association of Monterey Bay Area Governments, 2008. Strategic Economics, 2011.

Conclusion

The green economy can prosper in Capitola if the City builds on the strengths of its economy, continues to develop a culture focused on environmental sustainability, and engages in collaborations and partnerships. The strategies in this report emphasize this approach. Their implementation will result in green job and business growth in Capitola by cultivating the adaptive possibilities presented by Capitola's

healthy base of households and businesses, and allowing Capitola to support and share in countywide green economic growth.

APPENDIX A: CAPITOLA CORE GREEN ECONOMY

ESTABLISHMENT ANALYSIS

This appendix describes Strategic Economics’ method for measuring the existing base of core green economy jobs and businesses in Capitola, as described on page 6 of this report. Classifying and quantifying the extent of the green economy has proven challenging since “green” activities occur within nearly every industry and occupation classification. Nevertheless, several published studies have examined the industry sectors in which green activities are most likely to be found.

Strategic Economics examined the core green economy in Capitola by using the findings of three oft-cited studies. Only the *core* green economy was examined, as opposed to the *adaptive* green economy. Despite the greater promise of the latter in Capitola, statewide and national surveys by the California Employment Development Department and United States Bureau of Labor Statistics are of limited applicability to Capitola since they used a very broad definition of green economic activity and produced varying results. Application of their results to Capitola’s local economy would involve unreasonable presumptions.

Each study of the core green economy produced findings of industry sectors – classified as standardized NAICS or SIC industry codes – which contain the greatest concentrations of green economic activity. These industry codes were used to filter Capitola establishment-level data purchased from data service Dun & Bradstreet. The resulting establishments were then individually vetted through internet research to determine whether they were primarily green businesses.

The source studies and differences between them are described below:

1. **Method One:** *Innovating the Green Economy in California Regions*, 2010, by Karen Chapple and Malo Hutson, The Center for Community Innovation at University of California, Berkeley. Upon review of 25 other studies, the authors selected a narrow definition of the green economy focused on energy, environmental services, green building, manufacturing, transportation, and recycling and remediation.
2. **Method Two:** *The Clean Energy Economy: Repowering Jobs, Businesses, and Investments Across America*, 2009, by The Pew Charitable Trusts in conjunction with Collaborative Economics. Collaborative Economics has spent several years defining and researching the green economy. The authors used a stringent definition of the clean energy economy for their national analysis, focused on core green economy sectors categorized under clean energy, energy efficiency, environmentally friendly production, conservation and pollution mitigation, and training and support.
3. **Method Three:** *Jobs in L.A.’s Green Technology Sector*, 2006, by Patrick Burns and Daniel Flaming, Economic Roundtable. This older report used a broader definition of green technology focused on clean energy, green construction, manufacturing and distribution, utilities, and waste disposal. This broad definition produced many more results in Capitola, requiring careful review to determine if businesses were significantly a part of the green economy.

Results

Method One

Two establishments were identified:

1. Santa Cruz County Resource Conservation District (public agency)
2. Bonjardim & Associates

Method Two

Zero establishments were identified.

Method Three

Forty-nine establishments were identified; of these, three appeared to have green credentials:

1. Santa Cruz County Resource Conservation District (public agency)
2. Friday Construction
3. Earth Works Paving

Conclusion

The results indicate the lack of core green economic activity in Capitola, which is unsurprising given the City's minimal supply of industrial land and primary role as a residential, retail, service, and tourism-focused economy. However, these filters do not identify adaptive green economic activity, as focused on in this report.

APPENDIX B: GREEN ECONOMY JOB GROWTH

TARGET PROJECTION METHODOLOGY, AND

TARGETED INCOME GROUP BENEFIT

Strategic Economics developed green economy job growth target projections and quantified Targeted Income Group Benefit in accordance with grant funding requirements. As described on page 22, the outcomes will vary depending on overall market conditions, the robustness of Capitola's implementation of the green economy strategies, and uncertainty regarding whether businesses and jobs serving demand for green products and services from Capitola's residents will choose to locate in Capitola or another nearby location. Given these uncertainties, Strategic Economics developed low, medium, and high scenarios based on assumptions of greater or lesser capture of job growth in Santa Cruz County from 2010-2035. The scenarios assume that implementation of this report's strategies will help grow the regional economy and also increase the likelihood that green businesses and jobs will be located in Capitola. This section describes the methodology for determining green economy job growth target projections, and an explanation and methodology for determining opportunity for Targeted Income Group Benefit.

1. Job growth projections for Capitola and Santa Cruz County were obtained from the Association of Monterey Bay Area Governments (AMBAG). These are the authoritative projections for the region reviewed by the state; Capitola's economic growth was examined in the context of Santa Cruz County because it is most closely tied to this regional economy, although linkages also exist to San Benito and Monterey Counties. The projections are grouped by large industry categories.

Table B-1: AMBAG Capitola and Santa Cruz County Employment Projections, 2010-2035

Geography	Industry	2010	2015	2020	2025	2030	2035
Capitola							
	Retail	2,060	2,205	2,249	2,292	2,336	2,383
	Service	4,340	4,669	4,987	5,331	5,699	6,096
	Industrial	154	159	163	168	174	179
	Public	1,148	1,185	1,241	1,299	1,362	1,427
	Construction	340	353	368	383	399	415
	Agriculture	0	0	0	0	0	0
	TOTAL	8,042	8,571	9,008	9,473	9,970	10,500
Santa Cruz County							
	Retail	14,060	14,570	15,110	15,670	16,250	16,850
	Service	47,390	50,980	54,450	58,210	62,220	66,560
	Industrial	16,070	16,540	17,040	17,570	18,110	18,680
	Public	21,100	21,770	22,800	23,880	25,020	26,220
	Construction	10,930	11,380	11,850	12,340	12,840	13,370
	Agriculture	5,520	5,560	5,620	5,680	5,720	5,780
	TOTAL	115,070	120,800	126,870	133,350	140,160	147,460

Note: "Public" includes employees of all levels of government, including education.

Source: AMBAG, 2008; Strategic Economics, 2011.

2. The AMBAG projections were used to determine baseline employment growth by comparing projected growth in Capitola to growth in Santa Cruz County.

Table B-2: AMBAG Projected Share of Santa Cruz County Employment Growth in Capitola

	2010-2035 Job Growth		Capitola Share of Growth
	Capitola	Santa Cruz County	
Retail	323	2,790	11.6%
Service	1,756	19,170	9.2%
Industrial	25	2,610	1.0%
Public	279	5,120	5.4%
Construction	75	2,440	3.1%
Agriculture	0	260	0.0%
TOTAL	2,458	32,390	7.6%

Source: AMBAG, 2008; Strategic Economics, 2011.

3. Based on projected shares and possible outcomes for green jobs growth based on Capitola's implementation of green jobs strategies and growth of green jobs in Santa Cruz County in general, Strategic Economics created assumptions of percentages of new jobs in the County which would be green and attracted to Capitola under three growth target scenarios. These shares differed based on the likelihood that jobs in a particular industry sector could be green. For example, construction jobs are far more likely to grow as part of the green economy, whereas retail jobs will only have a small adaptive component to job growth. Shares were checked against total County growth for reasonableness. By capturing higher shares of job growth in Capitola, the City will expand its employment base beyond that which would otherwise occur, as projected by AMBAG. By starting from the total countywide job growth, this study assumes regional job growth is already accurately projected, but city projections fail to account for future green economic development policies which make Capitola more competitive.

Table B-3: Capitola Green Economy Job Growth Assumptions by Scenario: Capitola Share of Total Job Growth in Santa Cruz County

Industry	AMBAG Total Growth Share Projection	Capitola Green Job Share of Total Growth		
		Low	Medium	High
Retail	11.58%	0.0%	0.5%	1.5%
Service	9.16%	0.5%	1.0%	1.5%
Industrial	0.96%	0.3%	1.0%	1.5%
Public	5.45%	0.5%	1.0%	2.0%
Construction	3.07%	1.0%	3.0%	5.0%
Agriculture	0.00%	0.0%	0.0%	0.0%

Source: AMBAG, 2008; Strategic Economics, 2011.

4. The shares of growth were multiplied by projected employment growth in Santa Cruz County to determine the number of new green jobs under the scenarios. These were translated to numbers of businesses by dividing by the average business size by industry category, based on current average sizes found in the Dun & Bradstreet establishment data for Capitola.

Table B-4: Average Business Size by Industry in Capitola

Industry	Employees	Businesses	Average Firm Size
Retail	2,837	266	10.7
Service	2,069	554	3.7
Industrial	579	75	7.7
Public	239	21	11.4
Construction	194	73	2.7
Agriculture	5	3	1.7
TOTAL	5,923	992	6.0

Note: Does not include 65 employees at 42 unclassified establishments.

Source: Dun & Bradstreet, 2011; Strategic Economics, 2011.

Table B-5: Capitola Green Economy Job and Business Growth Projection Scenario Outcomes

Industry	Low		Medium		High	
	Jobs	Businesses	Jobs	Businesses	Jobs	Businesses
Retail	0	0	14	1	42	4
Service	96	26	192	51	288	77
Industrial	7	1	25	3	39	5
Public	26	2	51	4	102	9
Construction	24	9	73	28	122	46
Agriculture	0	0	0	0	0	0
Total	152	38	355	88	593	141

Source: Strategic Economics, 2011.

TARGETED INCOME GROUP BENEFIT

Per funder requirements, this study meets the national objective of primarily benefiting “Targeted Income Group” (TIG) persons, and the “public benefit” is job creation. TIG is defined as “families, households, and individuals whose incomes do not exceed 80 percent of the county median income.” The Capitola green economy strategies enhance these opportunities with their focus on regional workforce advocacy, land use, development, construction, and energy efficiency installations.

Strategic Economics collected 2010 Santa Cruz County wage data by industry from the California Employment Development Department’s Quarterly Census of Employment and Wages (QCEW) and created a weighted average annual wage for the broad industry categories created for the projections. The 2011 HUD Low Income limit for a family of four in Santa Cruz County is **\$80,650**. As shown in the table below, all of the average industry wages fall below this limit, suggesting that the majority of jobs generated under the green economy projection targets will easily fall within TIG requirements. Retail, Public Sector, Construction, and Mining average annual wages also fall below the **\$56,500** low-income limit for a single-person household.

Table B-6: Weighted Average Annual Wages by Industry in Santa Cruz County, 2010

Industry	Average Annual Wage
Retail	\$21,800
Service	\$69,900
Industrial	\$60,300
Public	\$34,600
Construction	\$48,400
Agriculture	\$25,000

Source: California Employment Development Department, 2011; Strategic Economics, 2011.

Based on the wage data shown above and previous findings for Capitola by consulting firm Applied Development Economics showing that 76 percent of industrial jobs, 57 percent of office jobs, and 90 percent of retail jobs qualify for TIG benefit in Capitola, resulting job growth of the medium scenario is likely to result in 67 percent of jobs providing benefits to TIG workers, or 238 TIG jobs out of 355 total.

As shown, the described jobs will serve as employment opportunities for lower-income households. These jobs can also be linked to providing "decent housing and a suitable living environment". Within the construction industry the City can continue to participate in the development and preservation of affordable housing that will serve lower-income households through land use planning and financial investments. Affordable housing developers and local weatherization/rehabilitation programs can lead the way in terms of green-related construction and can target the housing needs of lower-income households.

APPENDIX C: CAPITOLA GREENHOUSE GAS EMISSIONS INVENTORY SUMMARY

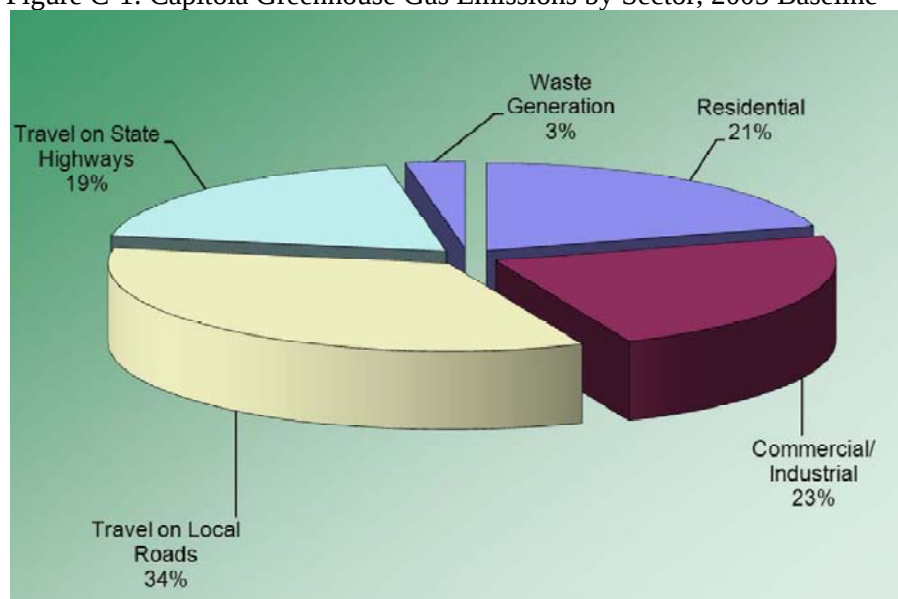
This appendix briefly summarizes the findings of the *City of Capitola Greenhouse Gas Emissions Inventory 2005 Baseline Report*, completed in 2011 by the Association of Monterey Bay Area Governments (AMBAG) under its Energy Watch program. The inventory was completed to inform the development of Capitola's Climate Action Plan (CAP), which will assist in meeting greenhouse gas emission reduction target requirements under AB 32 and SB 375. Inclusion of this summary is required by grant funder guidelines.

The strategies included within the preceding report will contribute to reductions in greenhouse gas emissions by increasing energy efficiency through environmental awareness, increased demand for energy efficient products and services, growth of environmentally-friendly power sources, and increased shares of trips made via foot and bicycle rather than automobile. The Climate Action Plan, when completed in 2012, will include concrete strategies for meeting greenhouse gas reduction targets. This section includes descriptions of how various strategies described in this report will also help the City to reduce its greenhouse gas emissions.

Community Emissions Inventory Findings

The figure and table below summarize 2005 baseline greenhouse gas emissions attributable to residential, commercial/industrial, transportation, and waste sources in Capitola. Note that "waste generation" quantifies future greenhouse gas emissions resulting from the decomposition of Capitola refuse sent to landfills in 2005. The largest contributor to greenhouse gas emissions is transportation/travel, which is addressed by the strategies categorized as Land Use and Transportation Reform. Commercial/Industrial, Residential, and Waste Generation Emissions can be reduced as businesses and households embrace efficiency improvements and become a part of the adaptive green economy.

Figure C-1: Capitola Greenhouse Gas Emissions by Sector, 2005 Baseline



Source: AMBAG Energy Watch, 2011.

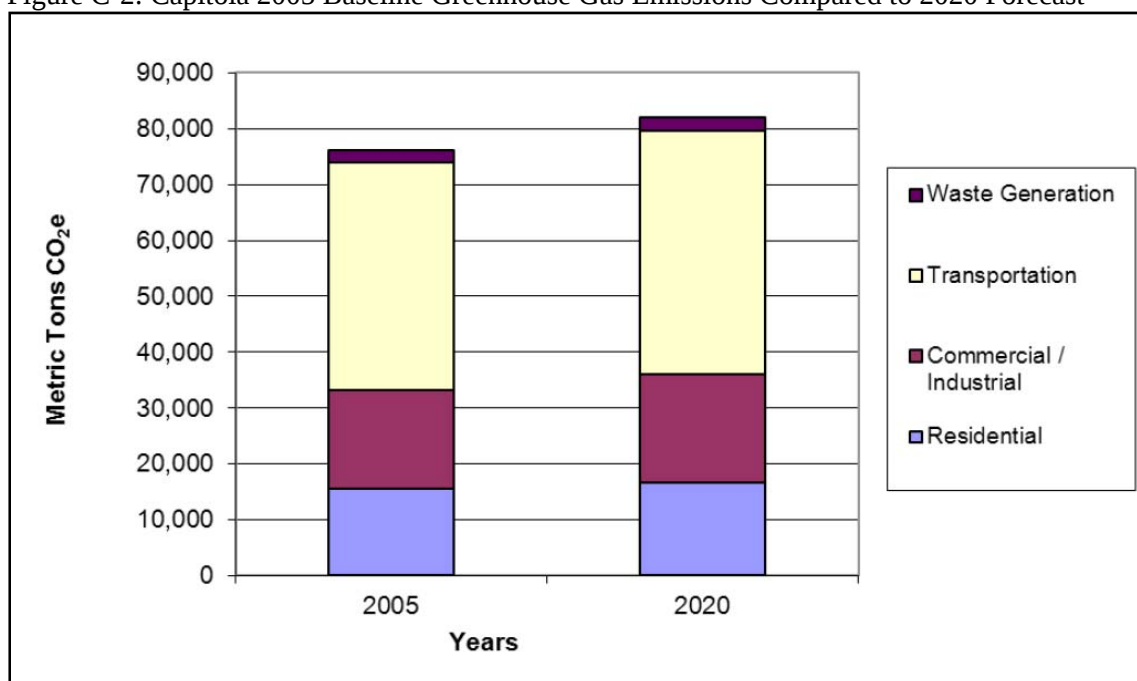
Table C-1: Capitola Greenhouse Gas Emissions by Sector, 2005 Baseline (metric tons of CO2 emitted)

2005 Community Emissions by Sector	Residential	Commercial/ Industrial	Travel on Local Roads	Travel on State Highways	Waste Generation	TOTAL
CO2e (metric tons)	15,590	17,564	26,011	14,705	2,150	76,020
% of Total CO2e	21%	23%	34%	19%	3%	100%

Source: AMBAG Energy Watch, 2011.

The figure and table below compare the Capitola 2005 greenhouse gas emissions baseline against a 2020 “business as usual” scenario based on AMBAG growth projections.

Figure C-2: Capitola 2005 Baseline Greenhouse Gas Emissions Compared to 2020 Forecast



Source: AMBAG Energy Watch, 2011.

Table C-2: Capitola 2005 Baseline Greenhouse Gas Emissions Compared to 2020 Forecast (metric tons of CO2 emitted)

2005 Community Emissions Growth Forecast by Sector	2005	2020	Annual Growth Rate	Percent Change from 2005 to 2020
Residential	15,590	16,678	0.0045	7%
Commercial / Industrial	17,564	19,466	0.0069	11%
Transportation	40,716	43,558	0.0045	7%
Waste Generation	2,150	2,318	0.0050	8%
TOTAL	76,020	82,020	--	8%

Source: AMBAG Energy Watch, 2011.

The following list shows how selected strategies from this report will help reduce the community-generated greenhouse gas emissions from the identified sources.

Table C-3: Community Strategies and Greenhouse Gas Emission (GHG) Reductions

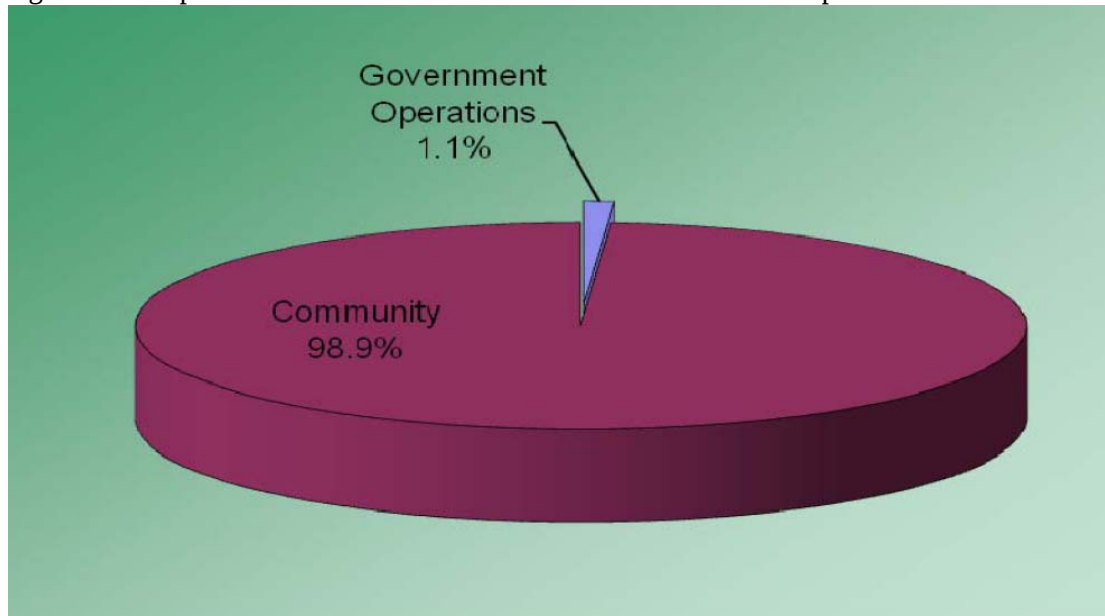
Strategy Number and Name		GHG Sources Affected	Means of Achieving GHG Reduction
1	Promote regional workforce development programs locally	Residential, Commercial/Industrial	Increased emphasis on and knowledge of efficiency techniques/products among workers performing installations and services
2	Facilitate small business connections to green economic development and business development programs	Commercial/Industrial	Increased emphasis on and knowledge of efficiency techniques/products among workers performing installations and services
4	Strengthen the Green Building Ordinance	Residential, Commercial/Industrial	Energy-efficient buildings demand less power, resulting in lower emissions
5	Encourage use of grants and loans for efficiency upgrades	Residential, Commercial/Industrial	Energy-efficient buildings demand less power, resulting in lower emissions
6	Require building efficiency improvements upon sale	Residential, Commercial/Industrial	Energy-efficient buildings demand less power, resulting in lower emissions
7	Renew the City/Redevelopment Agency's home repair and weatherization program	Residential	Energy-efficient buildings demand less power, resulting in lower emissions
8	Construct safe pedestrian pathways and bikeways	Travel on Local Roads	Increased walking and bicycling trips generate lower emissions than automobile use
9	Encourage adherence to sustainable neighborhood design standards via the General Plan and other policies	Travel on Local Roads, Travel on State Highways	Increased walking, bicycling, and transit trips generate lower emissions than automobile use
10	Examine economic development opportunities for resolving parking concerns in a sustainable manner	Travel on Local Roads	Increased walking, bicycling, and transit trips generate lower emissions than automobile use
12	Develop a Transportation Demand Management Plan for City and local employees	Travel on Local Roads, Travel on State Highways	Increased walking, bicycling, and transit trips generate lower emissions than automobile use
14	Advocate for utility provider requirements and incentives for efficiency improvements	Residential, Commercial/Industrial	Energy-efficient buildings demand less energy, resulting in lower emissions
15	Establish a one-stop web resource for available green economic development programs	Residential, Commercial/Industrial	Increased awareness and use of funding for efficiency improvements reduce energy demands, lowering emissions
16	Promote local business use of the Monterey Bay Area Green Business Program	Commercial/Industrial	Growth of energy-efficient practices reduce demand for energy, resulting in lower emissions
18	Support green consumer education programs at local events	Residential	Increased awareness and use of funding for efficiency improvements reduce energy demands, lowering emissions
21	Develop a local business coupon program for transit users and cyclists	Travel on Local Roads, Travel on State Highways	Increased bicycling and transit trips generate lower emissions than automobile use

Government Operations Emissions Inventory Findings

The emissions inventory deals with government operations separately from other sources. These emissions will be particularly influenced by strategy recommendation number 11, “implement eco-friendly city procurement and construction policies.” Capitola has direct and immediate control over the environmental implications of City decisions regarding construction of facilities, purchasing, and operations management.

As shown below, nearly 99 percent of Capitola’s greenhouse gas emissions are generated by non-government sources. However, Capitola can lead by example in attempting to shrink its share of emissions.

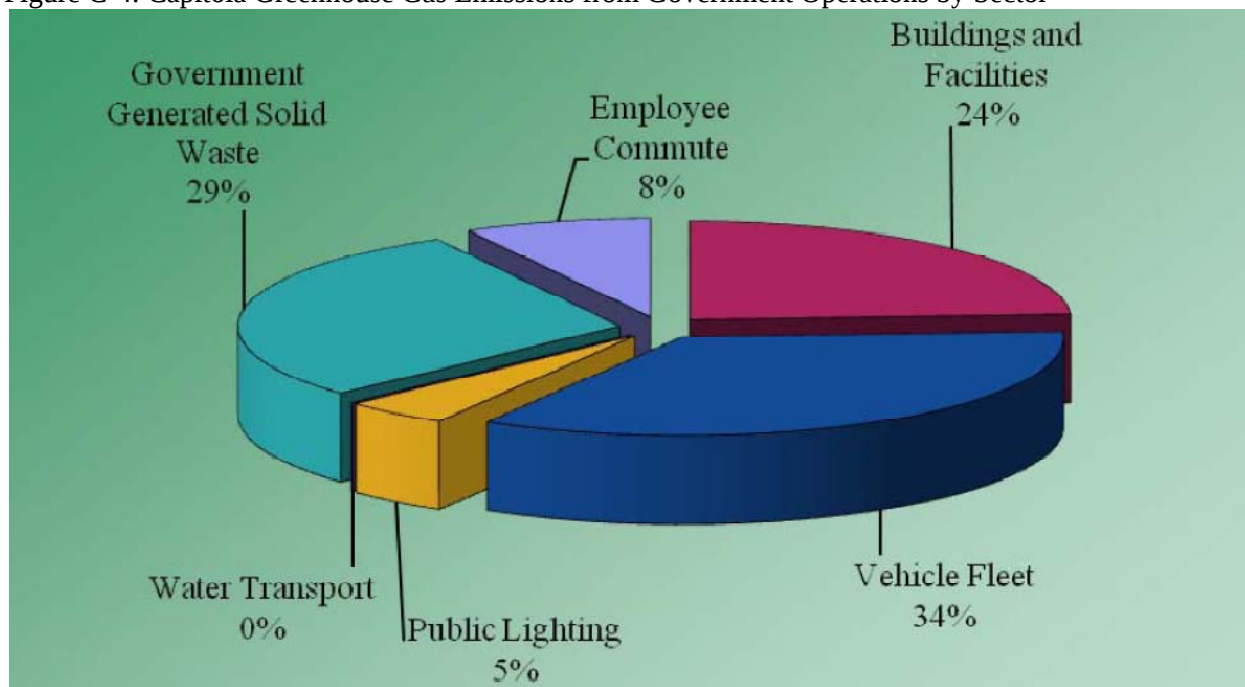
Figure C-3: Capitola Greenhouse Gas Emissions from Government Operations versus the Community



Source: AMBAG Energy Watch, 2011.

The following figure and table show that the greatest contributors to government-generated greenhouse gas emissions are the vehicle fleet, solid waste, and buildings and facilities.

Figure C-4: Capitola Greenhouse Gas Emissions from Government Operations by Sector



Source: AMBAG Energy Watch, 2011.

Table C-4: Capitola Greenhouse Gas Emissions from Government Operations by Sector (metric tons of CO₂ emitted)

Sector	Greenhouse Gas Emissions (metric tons CO ₂ e)
Buildings and Facilities	202
Vehicle Fleet	288
Public Lighting	37
Water Transport	0.10
Government Generated Solid Waste	244
Employee Commute	66
TOTAL	838

Source: AMBAG Energy Watch, 2011.

Table C-5: Government Operations Strategies and Greenhouse Gas Emission Reductions

Strategy Number and Name		GHG Sources Affected	Means of Achieving GHG Reduction
12	Develop a Transportation Demand Management Plan for City and local employees	Employee Commute	Increased walking, bicycling, and transit trips generate lower emissions than automobile use
13	Implement eco-friendly city procurement, construction, and procedure policies	Buildings and Facilities, Vehicle Fleet, Public Lighting, Government Generated Solid Waste	Energy efficiency and emissions reductions can be achieved through energy efficient buildings, energy efficient vehicle fleets, energy efficient public lighting, and policies dictating diversion of waste from landfills where gases are emitted
16	Promote local business use of the Monterey Bay Area Green Business Program	Building and Facilities, Government Generated Solid Waste	Presumably the City would maintain its own certification, requiring certain efficiency practices

Appendix C Conclusion

The greenhouse gas emissions inventory sets forth a useful understanding of the primary contributors to greenhouse gases in Capitola and a “business-as-usual” future growth scenario. The results are useful for understanding how the strategies in this report can address greenhouse gas emission reduction in conjunction with the Climate Action Plan.