



**County of Santa Cruz Board of Supervisors
Agenda Item Submittal**

From: Planning: Sustainability and Special Projects
(831) 454-2580

Meeting Date: April 24, 2018

Recommended Action(s):

Accept and file the Climate Action Strategy Annual Report.

Executive Summary

Implementation of the Climate Action Strategy (CAS) involves a wide variety of activities by many County departments that are addressing the issues of greenhouse gas emissions reduction and preparation for the anticipated impacts of climate change. Periodic evaluation of greenhouse gas emissions shows these efforts are resulting in measurable emissions reductions at major County facilities. Community-wide emissions reductions indicate that energy conservation and energy efficiency as a result of regulatory and non-regulatory programs and individual actions are achieving the desired result.

This report highlights many actions by County Departments that are resulting in emissions reduction. Actions such as energy efficiency projects and installation of solar power systems at County facilities, and transportation and land use planning initiatives, are ongoing multi-year efforts. A major five-year effort to establish a Community Choice Energy (CCE) program in the tri-county area has been successful with the establishment and launch of Monterey Bay Community Power. In addition, staff will continue to work with the Commission on the Environment to evaluate and prioritize additional actions from among those in the CAS that could be pursued in the future.

Background

On February 26, 2013 the Board of Supervisors adopted a resolution approving the Climate Action Strategy (CAS). The Board also directed the Planning Department to oversee implementation of the CAS and to report on implementation of the CAS in April of each year. This effort is led by the Sustainability and Special Projects division of the Planning Department under the direction of the County's Sustainability Manager.

On April 18, 2017 the Board accepted the 2017 CAS Annual Report and directed staff to include in future reports annual emissions reductions at County facilities, savings by the County due to energy projects, and estimated emissions reductions from each activity or strategy.

As staff to the COE, the Planning Department made a presentation on the CAS Annual Report to the COE at its meeting of March 28, 2018, and the COE accepted the report. In addition, the COE has recently submitted a letter to the Board of Supervisors addressing prioritization of strategies to prepare for the impacts of climate change.

This year, in addition to compiling information on the activities of the county

departments that implement the CAS, resources were focused on periodic evaluation of greenhouse gas emissions at eight of the largest County facilities. In the 2017 CAS Annual Report an updated emissions inventory for community emissions showed measurable reductions in energy use and related emissions reductions, and this year's update of the emissions inventory also shows measurable reductions in both energy use and emissions.

Analysis

The CAS lists a number of specific actions to implement each emissions reduction strategy, and a set of possible adaptation actions, or strategies, for each of the climate change vulnerabilities and impacts that have been recognized and evaluated. In addition to the updated greenhouse gas emissions inventory, this report highlights actions by the County and the community that are facilitating the emissions reductions.

Many of the programs and projects included in the CAS were not conceived specifically to implement the CAS, they are the result of longstanding County policies addressing green purchasing, fuel efficiency, and energy conservation, including a Green IT policy, for the purpose of reducing reliance on fossil fuel and reducing emissions of greenhouse gases as well as County costs. These policies in some cases go all the way back to the late 1970s. However, they address various aspects of emissions reduction and climate change adaptation and are also reflected in the CAS.

A list of recent actions of each Department to reduce emissions and prepare for climate change are highlighted in Attachment 1. These actions address reducing emissions through energy efficiency and renewable energy development, reducing emissions in the transportation and solid waste sectors, and adaptation to climate change. The highlights show the County is taking a wide variety of actions to successfully reduce energy use and emissions in the community and from county operations. Through these actions the County is reducing its own energy costs and is also reducing energy costs in the community as a result of the County's leadership in the establishment of Monterey Bay Community Power. These are long-standing and ongoing efforts by a variety of County departments which will continue to be reported on in future CAS Annual Reports.

Emissions Reduction

Monitoring changes in emissions is a way of tracking the County's overall progress toward meeting the greenhouse gas reduction goals for 2020, 2035, and 2050. The overall goal of the CAS is an 80 percent reduction in emissions relative to 1990 levels by 2050. The strategy tables in Chapter 3 of the CAS and the Monitoring Program summarized in Table 4-2 show the performance indicators for each strategy. Using PG&E data for electricity and natural gas usage from 2005 through 2016 (latest available data set), and applying emissions factors that can vary from year to year for electricity but remain constant for natural gas, the greenhouse gas emissions (CO₂) as a result of the use of electricity and natural gas are calculated for each facility for each year (Attachment 2).

This update includes the top eight County facilities in terms of energy use, which represents approximately 95 percent of the emissions from all County facilities. The results show that overall the County has reduced emissions from major facilities by 18

percent in 2016 compared to the baseline year of 2005. This reduction is consistent with the rate of reduction needed in the energy sector to meet the 2050 emissions reduction goals outlined in the CAS. It should be noted the installation of solar power systems on County facilities and the County's participation in Monterey Bay Community Power will significantly accelerate the rate of emission reduction. Because these programs are currently coming on line in phases, quantitative analysis of the results of these actions will be presented in a future report.

There are a number of reasons for the County's success in meeting its emissions reduction goals in 2016 for major County facilities. Ongoing efforts by the General Services Department to implement infrastructure upgrades at major County facilities has reduced energy use and resulted in cost savings. As the County upgrades computer and other energy-using office equipment, the County's green purchasing and green IT policies prioritize energy efficiency. In addition, County employees are recognized for implementing practices to conserve energy, water, and materials, and to prevent pollution and waste in County operations.

Adaptation

The CAS presents a set of possible adaptation actions, or strategies, for each of the vulnerabilities and impacts that were recognized and evaluated. The strategies include a broad range of approaches for protecting people, infrastructure, and natural resources. While adapting to climate change presents significant challenges, the County is taking a number of steps to meet the challenge as highlighted above and described in detail in Attachment 1.

The County of Santa Cruz also developed a Local Hazard Mitigation Plan (LHMP) to create a safer community. The County recently adopted an update of the LHMP and many additional adaptation strategies from the CAS were included. The LHMP represents the County's commitment to reduce risks from natural and other hazards, and serves as a guide for commitment of resources to reduce the effects of potential hazards. The LHMP has been approved by the Federal Emergency Management Agency which qualifies the County for direct disaster assistance and hazard mitigation grant funding. The County takes advantage of this funding in many cases, including recovery from fire and storm related damage and grant funded projects, to become more resilient to natural hazards that will have increasing impacts on the County as the climate changes.

The COE has reviewed and discussed the set of climate change adaptation strategies detailed in the CAS Table 7-1. While encouraged by the efforts to date on climate change adaptation, the COE concludes the scale of the problem is unprecedented and it is important to focus now on preemptive adaptation actions to address climate change impacts. The COE presented a list of priority actions to the Board through a letter dated February 9, 2018, and Planning Department staff is currently working to accomplish one of those priorities with the update of the Safety Element of the General Plan/Local Coastal Program. Following completion of the Safety Element staff will focus on additional priority areas.

Financial Impact

County cost savings from energy efficiency and renewable energy projects as described in the CAS Annual Report and attachments.

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Recommended by:

Carlos J. Palacios, County Administrative Officer

Attachments:

1. Highlights of Emissions Reduction and Adaptation Actions
2. Summary of Municipal Emissions Inventory Update

Highlights

Energy Efficiency and Renewable Energy

- The County led a grant-funded, regional collaboration to establish Monterey Bay Community Power (MBCP) to provide locally-controlled, carbon-free electricity to residents and businesses in Monterey, San Benito and Santa Cruz Counties. MBCP began serving approximately 20,000 commercial, industrial, and agricultural customers on March 1, 2018 and will begin serving approximately 235,000 residential customers on July 1, 2018. MBCP's electricity rates are identical to PG&E rates, but MBCP customers will receive a three percent rebate. MBCP's 2017-2018 budget totals \$186 million, with a projected surplus of \$46 million to be allocated to reserves (\$37 million), customer rebates (\$5 million), and community programs (\$3 million). By 2020 the allocation of surplus funds is expected to be \$21 million to reserves, and \$11 million each to customer rebates and community programs that will reduce greenhouse gas emissions and provide local jobs, economic development, and assistance to low income rate payers. For County facilities, including those analyzed in the CAS Annual Report, the rebate is projected to be at least \$50,000 and the greenhouse gas emissions reductions are projected to be at least 1,300 metric tons annually. (Board of Supervisors, County Administrative Office, General Services, Planning, County Counsel, Economic Development)
- Since June 2015 the General Services Department has served as the lead agency in the Monterey Bay Region Solar Collaborative Procurement Initiative and the Sustainable Energy and Economic Development Fund Program (Seed Fund) to establish solar power at County facilities and throughout the region. Installations are currently underway at eight County sites (Government Center, 1080 and 1400 Emeline, Simpkins Swim Center, Brommer Yard, Animal Services, Center for Public Safety and the Men's Detention Center). The combined size of these systems is 2.25 megawatts of solar power generating capacity. There are no expected net County costs to the financing, installation and operation of the equipment. Net savings to the County over the expected minimum 25-year useful life of the equipment is estimated to be approximately \$17.5 million. This project is expected to reduce greenhouse gas emissions by approximately 660 metric tons in the first full year of operation. (General Services, Public Works)
- The General Services Department continues to implement energy efficiency measures at major County facilities including, but not limited to, the Emeline campus, detention facilities, and the Government Center. All of these projects save the County money and reduce energy use and associated GHG emissions. There are no net County costs to the financing, installation and operation of the equipment with these projects. The projects are typically financed through grants, loans, or on-bill methods with lower utility bills resulting in simple payback periods ranging from 8 to 15 years. Emissions reductions as a result of these projects is reflected in the data for major County facilities, with average annual and overall GHG emissions reductions of 86 and 945 metric tons, respectively time period represented by the 2005 - 2016 PG&E data set. (General Services)

- With additional financial support from the California Green Business Network, the County continues to certify green businesses, including the County itself, as part of the Green Business Program. Since 2015 a total of 19 business and agencies have been certified by the County, among them 2 schools, an auto repair shop, a dentist and several offices and retail stores. (Public Works)
- The County continues to generate electricity with captured landfill gas and make improvements to the gas capture systems to optimize the system and minimize release of methane gas to the atmosphere. (Public Works)
- The County continues to support environmental education programs in local schools through a multi-year contract with a local non-profit organization. These programs promote environmental stewardship including energy conservation and waste reduction. (Green Schools Program). (Public Works)
- The County continues to implement water conservation programs requiring installation of high efficiency plumbing fixtures at time of property transfer and prohibiting wasteful water use, and facilitating greywater and rain catchment systems. (Environmental Health)
- Increased efficiencies in vector control activities using various techniques to reduce the use of petroleum-based mosquitocides and to reduce fuel use in surveillance, applications, and other department practices. (Agricultural Commissioner)
- Designed and launched a job training program to prepare veterans and at-risk youth to be employed in positions related to energy efficiency utilizing a \$50,000 Proposition 39 pre-apprenticeship grant. The first phase resulted in a small group of individuals trained. In Phase II, with Monterey County serving as the lead, a three-county collaborative including Santa Cruz, San Benito, and Monterey County received a \$400,000 training implementation grant from the State of California. Through the grant, the three-county region used the Building Trades Multi-Craft Core Curriculum (MC3) green job skills program to train 57 individuals, targeting at-risk youth, women, veterans, and disadvantaged or disconnected job seekers. The regional goal was for 45 of those served to obtain the industry recognized MC3 certificate; 50 were successful in achieving certification. (Workforce Development Board)

Transportation

- During 2018 and 2019, county staff intends to finalize the project description of the Sustainability Policy and Regulatory Update, and to prepare an Environmental Impact Report (EIR) on the package, which will also include proposed code modernization amendments to the Zoning Ordinance along with the General Plan/Local Coastal Program Sustainability Update. The package will amend and update the Land Use, Circulation and Community Design Elements to incorporate sustainability policies and several new land use designations, many as articulated in the Sustainable Santa Cruz County Plan. The project is expected to address strategies for reducing land use and transportation related greenhouse gas emissions, as required by State Law

(AB 32, SB 375 and SB 743), and as detailed in the County Climate Action Strategy (2013). (Planning)

- In 2015 the Office of Economic Development was created within the County Administrative Office. An increased effort to create local jobs is expected to reduce vehicle miles traveled to out of county job centers, with associated reductions in transportation related emissions. (Economic Development)
- According to the 2017-18 County Capital Improvement Program (CIP) development fees and other funding sources are being used to fund the planning, design, right-of-way acquisition or construction of a total of 11 pedestrian safety improvement projects and 4 road improvement projects that will also improve bike safety, with a total funding commitment for these projects of \$4,535,109. Recently completed projects and projects that are under construction include the Boulder Creek Elementary School Safe Routes to School project, construction of a bus turnout on Soquel Drive near 41st Avenue, and road surface repairs on Freedom Blvd. (Public Works)
- Continued promotion of alternative commuting by bicycle, bus, and vanpool. Bike lockers are continually maintained and upgraded for security and weather protection. Zero interest bike loans and emergency ride home services are offered to encourage the use of alternative modes of transportation. (General Services)
- On December 15, 2017, Caltrans announced the Fiscal Year (FY) 2017-18 Senate Bill (SB) 1 Sustainable Communities and Adaptation Planning Grant awards. Caltrans received a statewide total of 157 Sustainable Communities Competitive and Adaptation Planning grant applications, requesting \$44.6 million in grants (summaries below). Of these applications, 64 transportation planning projects were selected for grant awards, totaling \$19.38 million. The County's application was selected for a grant award in the amount of \$366,504. The Health Services Agency and the Department of Public Works will partner on the project which will conduct audits of parent/student impediments to walking or biking to school, garner community support and feedback, create mapping of school transportation routes, and identify priority projects that encourage increased active transportation. (Health Services Agency, Public Works)
- Currently there are two EV charging stations at the Government Center at 701 Ocean Street, one charging station at the Sheriff Center in Live Oak, one dual port charging station at the Emeline campus and another dual port charging station at the Freedom campus. These charging stations are available to the general public. There are two additional charging stations at the Government Center reserved for charging County fleet vehicles. Plans are in the works for the installation of four dual port charging stations at County of Santa Cruz work locations and 2 dual port charging stations at destination sites. The County has been adding electric and hybrid vehicles to the County fleet as part of normal turnover in the fleet and with the help of grant funding. Currently the fleet includes 71 hybrid vehicles and 2 electric vehicles (the Sheriff also has 2 GEM-type EVs) out of a total fleet of approximately 400 cars (including Sheriff vehicles). The Public Works

Department manages its own fleet, with four EVs and four GEM-type EVs. The County is also exploring participation in a new PG&E program promoting installation of multiple EV charging stations at major employment centers and multi-unit housing sites. (General Services)

Solid Waste

- The County has met its 75% waste reduction goal and continues to be a leader in recycling and the reduction in the amount of waste being disposed, as well as spearheading efforts to minimize upstream impacts on materials through sustainable manufacturing and consumerism. In 2016 the Board of Supervisors adopted the Zero Waste Plan to serve as a guide for future efforts. The recently update solid waste franchise contract includes a whole new fleet of modern trucks that will run on biodiesel fuel. (Public Works)

Adaptation

- Staff is preparing General Plan/Local Coastal Program amendments related to safety and protection from hazards related to climate change and sea level rise, including updated policies in the Safety Element addressing coastal bluffs and beaches, erosion control, flood hazards, fire hazards, and environmental justice. County staff collaborates with other agencies and institutions in grant-funded projects studying sea level rise vulnerability in the Monterey Bay. (Planning)
- Staff continues to work with the U.S. Army Corps of Engineers, County of Monterey, and City of Watsonville to develop a feasible flood control alternative for the Pajaro River. (Public Works)
- Staff continued to work on drainage improvements at the Rio Del Mar Esplanade with a grant of nearly \$1 million. (Public Works)
- Continued County efforts to provide a comprehensive and integrated approach to countywide water resources management at the local level as detailed in the 2017 Water Resources Annual Report. (Environmental Health)
- Continued activities involved with prevention, preparation, and response to fire emergencies, with emphasis on prevention measures in light of increased fire risk due to climate change. Collaboration with the Resource Conservation District provides County residents with educational and cost share assistance to reduce wildfire threat and to identify high priority areas for fire breaks as outlined in the Community Wildfire Protection Plan. The RCD's Fire Prevention and Fuel Load Management Program provides a number of services to Santa Cruz residents, including: chipping, fuel load reduction around homes and structures, fuel load reduction/fire breaks in wildlands, and promoting wildfire awareness and prevention. (Fire Agencies, Resource Conservation District)
- Continued coordination amongst area fire chiefs to assure that staffing, training, exercise, planning and equipment needs are addressed. (Office of Emergency Services)

- Operation of the County Emergency Operations Center during emergency events. (Office of Emergency Services)
- Continued research, outreach and education to assist the agricultural community to adapt to climate change. (University of California Cooperative Extension)

