



3.0 Proposed Greenhouse Gas Emissions Reduction Strategies

Achieving the substantial emissions reductions required to meet the targets for 2035 and 2050 will require considerable effort by both government agencies and the community over the next several decades.

3.1 Government Leadership

Santa Cruz County government has a long history of policies and actions that have directly and indirectly resulted in emissions reductions (see Appendix A). Building on this foundation the County can provide leadership and set an example of what can be accomplished by large organizations and the community as a whole.

With over 2,200 employees in 2009 and a wide range of responsibilities carried out by numerous departments, achieving emissions reductions in County government requires activities on a number of fronts. Coordination of these efforts requires representatives of every department to participate in strategy development, implementation, and monitoring. The emissions reductions strategies in the CAS have been developed with assistance from a number of County departments, and this coordination should continue with the establishment of a formal mechanism for each County Department to identify and report to the Board to Supervisors on the strategies that are implemented each year, or within another specified reporting period.

3.2 About the Emissions Reduction Strategies

The results of the emissions inventories indicate that GHG reduction strategies should focus on three areas: Transportation, Energy, and Solid Waste. Strategies to reduce emissions are presented in the tables below, organized by focus area. A series of implementing actions is listed for each strategy. Criteria used to select strategies include the amount of emissions reduction that might be achieved, estimated cost, feasibility, state laws, guidelines and recommendations, and potential for community benefits beyond GHG reduction (“co-benefits”).

3.3 Overall Potential for Emission Reduction

The strategies that follow have the potential to reduce GHG emissions by an amount that would meet 2035 and 2050 goals for the County of Santa Cruz. Actual emissions reductions will depend on the combination of the implementing actions that is pursued and the amount of effort and resources that are dedicated to the challenge. Chapter 4 covers implementation in detail.

3.4 Energy Strategies

Use of electricity and natural gas in the residential and commercial sectors accounted for almost 37 percent of the total community emissions in 2009. Emissions in the energy sector were estimated using energy use data and emissions factors provided by PG&E. The inventory includes electricity and natural gas use throughout the utility service area in the County, but does not include emissions from propane use in rural areas of the County.

Emissions from the energy sector can be reduced by focusing on energy efficiency in existing and new buildings, small and large scale renewable energy development, and increasing local control over energy procurement for the community. State initiatives such as the Renewable Portfolio Standard (RPS), California Solar Initiative (California Air Resources Board, 2008) and building and energy efficiency codes, will accomplish significant emissions reductions through efficiency and renewable energy development. The CAS can therefore focus on



local opportunities that encourage and build on these initiatives through encouraging local renewable energy, local building codes, and financing mechanisms.

Local control over energy procurement for the community is enabled by state law allowing communities to form Community Choice Aggregation (CCA) programs. CCA works by pooling the community’s demand for energy and creating an option for local control of the process of buying energy. CCA agencies purchase power, set rates, and operate a variety of targeted conservation programs, while PG&E continues to be responsible for the transmission system. When there is an alternative to PG&E, the community can choose to buy a higher percentage of renewable power, set the rates that are paid to owners of small commercial and residential solar energy systems, develop shared, local renewable power supplies, operate a transparent process for setting rates, increase reliability by managing peak demand, and address all types of energy-related consumer issues at the local level. Because any residential, businesses and/or industrial consumer can participate in CCA, and the CCA functions on so many levels to buy, produce, and encourage renewable energy and conservation, it is a powerful tool to reduce carbon emissions across all sectors. It is particularly attractive that CCA targets emissions not only in the energy use sector, but also the very challenging transportation sector, by providing a cleaner source of electricity to fuel electric vehicles.

Strategies to reduce emissions in the energy sector could lead to a number of additional community benefits including clean air, less expensive energy, green jobs, a stronger local economy, and energy independence.

Table 3-1: Strategies for the Reduction of Greenhouse Gases from Energy Use	
Priority	Strategy
E-1	Develop a Community Choice Aggregation (CCA) Program, if feasible
E-2	Increase energy efficiency in new and existing buildings and facilities
E-3	Enhance and expand the Green Business Program
E-4	Increase local renewable energy generation
E-5	Public education about climate change and impacts of individual actions
E-6	Continue to improve the Green Building Program by exceeding the minimum standards of the state green building code (Cal Green)
E-7	Form partnerships and cooperative agreements among local governments, educational institutions, non-governmental organizations, and private businesses as a cost-effective way to facilitate mitigation and adaptation
E-8	Reduce energy use for water supply through water conservation strategies

Strategy E-1: Develop a Community Choice Aggregation (CCA) Program			
	Action	Responsibility	Performance Indicator
E-1.1	Seek funding to perform a study of the feasibility of Community Choice Aggregation.	County and Stakeholders	<ul style="list-style-type: none"> Feasibility Report
E-1.2	Form a steering committee composed of the County, cities, water districts, waste management districts, and other stakeholders to provide input and guide the CCA feasibility study.	County and Stakeholders	<ul style="list-style-type: none"> Steering Committee
E-1.3	Form a Joint Powers Authority (JPA) composed of the County with partner cities and special districts in order to consider actions necessary to implement a CCA program, if a CCA is determined to be feasible.	County and Partner Agencies	<ul style="list-style-type: none"> JPA



Strategy E-2: Increase energy efficiency in new and existing buildings and facilities			
	Action	Responsibility	Performance Indicator
E-2.1	Promote Energy Upgrade California (EUC) and successor programs (ongoing).	Planning, General Services	<ul style="list-style-type: none"> EUC data
E-2.2	Consider extending the Green Business Program model to the residential sector. Include an awards program.	Public Works, General Services, Environmental Health	<ul style="list-style-type: none"> Program participation rate
E-2.3	Continue membership as a Phase 1 community in the California Communities commercial PACE program to finance solar energy projects on commercial properties and assist with marketing this bond-funded, financing assistance program to local businesses of all sizes (ongoing).	Planning, Treasurer/Tax Collector, General Services	<ul style="list-style-type: none"> Number of financing packages completed and installed capacity of renewable energy
E-2.4	Support state proposals for disclosure regarding use of energy in existing buildings, AB 1103 and AB 531.	Planning, CAO	<ul style="list-style-type: none"> “Benchmark” statistics become available
E-2.5	Consider time-of-sale energy efficiency program that encourages energy retrofit, supplies information about energy use and conservation opportunities. May be used to implement state energy “benchmarking” policies.	Planning, General Services, Community Organizations	<ul style="list-style-type: none"> Number of transactions that include energy efficiency
E-2.6	Incentivize participation in the Green Business Program and use of the emissions calculator.	Public Works	<ul style="list-style-type: none"> Participation rate
E-2.7	Continue the program of upgrading lighting (LEDs), heating and cooling systems, appliances, equipment and control systems by seeking funding sources to complete projects at County facilities (ongoing).	General Services, Public Works	<ul style="list-style-type: none"> Projects completed
E-2.8	Continue the Green Government Certification program for County facilities, and enhance the program by expanding it to all County facilities and improving the standards for recertification (ongoing).	Public Works, All County Departments	<ul style="list-style-type: none"> Recertification and enhanced standards
E-2.9	Amend County street lighting standards to require LED streetlights as feasible, in coordination with PG&E.	Public Works	<ul style="list-style-type: none"> Amended standards
E-2.10	Consider defining categories of development projects that release greenhouse gas emissions below the Monterey Bay Unified Air Pollution Control District adopted thresholds, and for which analysis using the CalEEMod Model is not required to characterize emissions.	Planning	<ul style="list-style-type: none"> Categories established

Strategy E-3: Enhance and expand the Green Business Program			
	Action	Responsibility	Performance Indicator
E-3.1	Consider additional capacity to expand the Green Business Program in Santa Cruz County with additional staff resources, and through the use of the County website.	Public Works	<ul style="list-style-type: none"> Staffing Green Business Program Web site updated
E-3.2	Create and promote a program similar to the Green Business Program, for use by individual residents, households, and neighborhoods.	Planning, Public Works	<ul style="list-style-type: none"> Number of Participants



Strategy E-3: Enhance and expand the Green Business Program			
	Action	Responsibility	Performance Indicator
E-3.3	Consider enhancing the Green Business awards program to recognize and rate exceptional achievements.	Public Works	<ul style="list-style-type: none"> • Number of awards
E-3.4	Continue to enhance standards for Green Business certification and recertification to foster increasing levels of achievement (ongoing). Consider enhancing the Green Business checklist to incorporate benchmarks related to vehicles miles traveled per employee.	Public Works	<ul style="list-style-type: none"> • Enhanced standards

Strategy E-4: Increase local renewable energy generation			
	Action	Responsibility	Performance Indicator
E-4.1	Seek funding for a study to identify renewable energy resources in the County and advise on how the amount of renewable energy generated within the County may be increased over short-, medium-, and long-term.	Planning, General Services	<ul style="list-style-type: none"> • Study progress
E-4.2	Promote neighborhood and industry equipment and services “group buy” programs by facilitating contacts among groups of neighbors or businesses and solar energy system contractors and financing entities.	Planning, Community Organizations	<ul style="list-style-type: none"> • Installed capacity of renewable energy
E-4.3	Review ordinances for opportunities to remove barriers to the installation of renewable energy projects. Use the California State Association of Counties (CSAC) model solar ordinance as a resource.	Planning	<ul style="list-style-type: none"> • Amended ordinances
E-4.4	Identify areas that contain renewable energy resources such as wind and solar.	Planning	<ul style="list-style-type: none"> • Zoning overlays
E-4.5	Review and strengthen solar access ordinance to ensure protection of solar resources; consider incentives and exceptions.	Planning	<ul style="list-style-type: none"> • Amended ordinance
E-4.6	Review County ordinances to identify potential barriers that may exist to the installation of solar thermal and photovoltaic systems.	Planning	<ul style="list-style-type: none"> • Amended ordinance
E-4.7	Consider amending the Zoning Ordinance to require or incentivize new parking lots to be covered with structures that support solar production facilities, where feasible. Encourage similar installations on existing parking lots.	Planning	<ul style="list-style-type: none"> • Installed capacity
E-4.8	Review ordinances and design guidelines for opportunities to ensure roof orientation and other measures such as strategic tree planting to reflect active and passive solar energy principles.	Planning	<ul style="list-style-type: none"> • Amended ordinances
E-4.9	Support the Santa Cruz County solar energy project to install photovoltaic panels and associated equipment at the former Ben Lomond landfill.	Public Works	<ul style="list-style-type: none"> • Installed generation capacity
E-4.10	Increase renewable energy generation on other County facilities, as feasible (ongoing).	General Services	<ul style="list-style-type: none"> • Installed capacity



Strategy E-5: Public education about climate change and individual actions			
	Action	Responsibility	Performance Indicator
E-5.1	Promote climate change education programs in local schools by maintaining energy conservation curriculum in the green schools program.	Public Works	<ul style="list-style-type: none"> Participating schools Contracts with local non-profit organizations
E-5.2	Create a Climate Action web site with access to tools for calculating and tracking energy use, emissions, and carbon footprint, and information to promote low carbon lifestyles, including information about rebates and other available incentives.	Planning, Information Services	<ul style="list-style-type: none"> Web application, number of visitors
E-5.3	Promote home energy audits and commercial benchmarking to help building owners target appropriate energy efficiency and renewable energy projects.	Planning	<ul style="list-style-type: none"> Program data as available

Strategy E-6: Continue to improve the Green Building Program by exceeding the minimum standards of the state green building code (Cal Green)			
	Action	Responsibility	Performance Indicator
E-6.1	During each code adoption cycle consider exceeding Cal Green mandatory measures by adopting all or some elements of Cal Green Tier 1 and 2 voluntary elective measures to increase energy efficiency in new buildings, remodels and additions. Specifically consider requiring solar generation facilities on new buildings and pre-wiring of buildings to accommodate photovoltaics and electric vehicle charging. Consider local amendments to remove code obstacles to the use of photovoltaic systems.	Planning	<ul style="list-style-type: none"> Updated building code
E-6.2	Establish green building awards program.	Planning	<ul style="list-style-type: none"> Number of awards
E-6.3	Research incentives for achieving a higher level of green building than required by current code standards.	Planning	<ul style="list-style-type: none"> Establishment of incentives

Strategy E-7: Participate in collective action and cooperative agreements among local governments, educational institutions, non-governmental organizations, and private businesses as a cost-effective way to facilitate mitigation and adaptation			
	Action	Responsibility	Performance Indicator
E-7.1	Participate in the Climate Action Compact (CAC) to implement regional energy efficiency and renewable energy programs in partnership with CAC members (ongoing).	Planning	<ul style="list-style-type: none"> Program implementation
E-7.2	Form a regional energy authority or other organizational structure to study, promote, develop, conduct, operate, and manage energy and energy-related climate change programs.	Planning, General Services, CAO	<ul style="list-style-type: none"> Action progress
E-7.3	Continue to support the efforts of the Workforce Investment Board to promote green jobs and training for green jobs (ongoing).	Human Services Department	<ul style="list-style-type: none"> Continued availability of training options for green job related occupations



Strategy E-8: Reduce energy use for water supply through water conservation strategies			
	Action	Responsibility	Performance Indicator
E-8.1	Consider adoption of water conservation ordinance to update and expand the County's water conservation measures. Explore the possibility of including a water conservation impact fee on new development to mitigate additional water demand and fund conservation programs.	Environmental Health Services	<ul style="list-style-type: none"> • New ordinance
E-8.2	Adopt a water efficient landscape ordinance (WELO) that meets or exceeds the standards of the state model ordinance	Planning	<ul style="list-style-type: none"> • New ordinance
E-8.3	To reduce demand for potable water, promote the use of residential greywater irrigation in a manner that is protective of public health and safety and the environment. Work with the Greywater Alliance to establish procedures and to conduct trainings (ongoing).	Planning, Environmental Health Services	<ul style="list-style-type: none"> • Systems installed

3.5 Transportation and Land Use Strategies

The transportation sector accounts for almost 60 percent of the total 2009 GHG emissions produced in Santa Cruz County. Emissions in the transportation sector were estimated using published data on VMT on local roads and state highways in the unincorporated area of the County, corrected to account for fuel efficiency variations among classes of vehicles. Reducing emissions from VMT is a high priority, which can be approached either by reducing the number of miles traveled, using various land use, economic development, alternative transportation and public outreach strategies; or by reducing the impact of the miles traveled, by increasing fuel efficiency in the fleet, reducing the carbon content of fuel, or increasing traffic efficiency.

Alternative transportation to reduce VMT can be encouraged in many ways. Local land use strategies can encourage compact and mixed use development that supports transportation modes such as biking, walking, transit and carpooling. Employee commutes can be influenced by economic development strategies that create local employment opportunities and provide affordable housing so employees can reside locally.

State initiatives such as the Clean Car Standards and Low Carbon Fuel Standards will reduce emissions through increased fuel efficiency and lower fuel carbon content. The CAS can therefore focus on local opportunities, such as developing the infrastructure needed to accommodate the expected increase in plug-in electric, hybrid, and fuel cell vehicles and obtaining access to cleaner electricity to fuel them.

Strategies to reduce emissions in the transportation sector lead to a number of associated community benefits including improved mobility, a stronger economy, monetary savings, improved air quality, improved public health, and social equity.

Table 3-2: Strategies for the Reduction of Greenhouse Gases from Transportation	
Priority	Strategy
T-1	Reduce vehicle miles traveled (VMT) through County and regional long range planning efforts
T-2	Increase bicycle ridership and walking through incentive programs and investment in bicycle and pedestrian infrastructure and safety programs
T-3	Provide infrastructure to support zero and low emissions vehicles (plug in, hybrid plug-in vehicles)
T-4	Increase employee use of alternative commute modes: bus transit, walking, bicycling, carpooling, etc.
T-5	Reduce County fleet emissions



Strategy T-1: Reduce vehicle miles traveled (VMT) through County and regional long range planning efforts			
	Action	Responsibility	Performance Indicator
T-1.1	Support the viability of rail transit through land use planning using a range of transportation, housing and commercial land use strategies.	Planning	<ul style="list-style-type: none"> • Specific planning initiatives
T-1.2	Study and consider adjusting transportation and roadside impact fees to promote multimodal transportation infrastructure improvements.	Planning, Public Works	<ul style="list-style-type: none"> • Updated fee structure
T-1.3	Complete the Santa Cruz County Sustainable Communities and Transit Corridor Plan (underway).	Planning	<ul style="list-style-type: none"> • Plan is adopted
T-1.4	Participate in Regional planning efforts, including the Regional Traffic Model Improvement Plan, Regional Sustainable Communities Plan, Regional Transportation Plan, and the Regional Housing Needs Assessment, with a focus on climate action goals and emission reduction (ongoing).	Planning, Public Works	<ul style="list-style-type: none"> • Participation
T-1.5	Develop mixed use and infill ordinances that incorporate sustainable communities concepts.	Planning	<ul style="list-style-type: none"> • Ordinance adoption
T-1.6	Develop a reuse plan for the Davenport cement plant property that incorporates public transit, pedestrian and bicycle access, and renewable energy elements.	Planning, Property Owner	<ul style="list-style-type: none"> • Reuse plan
T-1.7	Prepare a County Economic Vitality Strategy and promote economic development activities that create local jobs to reduce employee commute trips out of the County (ongoing).	Planning, Workforce Investment Board	<ul style="list-style-type: none"> • Economic vitality and development initiatives; improved jobs/housing balance
T-1.8	Promote the development of affordable housing to reduce employee commute trips from surrounding counties into Santa Cruz County (ongoing).	Planning, Developer	<ul style="list-style-type: none"> • New and retained affordable housing; improved jobs: housing balance
T-1.9	Incorporate complete streets concepts into the Zoning Ordinance and into developments (ongoing).	Planning, Public Works	<ul style="list-style-type: none"> • Ordinance amended as necessary; Projects incorporate complete streets design concepts
T-1.10	Ensure that development projects contain measures that enhance multi-modal transportation options (ongoing).	Planning, Developers	<ul style="list-style-type: none"> • Approved site and building plans include these measures
T-1.11	Review site design criteria in the Zoning Ordinance for opportunities to emphasize pedestrian and bicycle amenities and connections between and among neighborhoods, commercial areas, schools and recreation sites.	Planning, Public Works	<ul style="list-style-type: none"> • Zoning Ordinance is revised as necessary
T-1.12	Consider unbundling parking costs as part of Transportation Demand Management programs (i.e. require that parking is paid for separately and is not included in rent for residential and commercial space).	Planning, Developers and Property Managers	<ul style="list-style-type: none"> • Planning policies include this TDM tool
T-1.13	Implement the policies of the Sustainable Community and Transportation Corridor Plan when it is completed.	Planning, Developers, RTC, SC Metro	<ul style="list-style-type: none"> • Ordinance and General Plan Amendments completed; Development projects implement policies



Strategy T-1: Reduce vehicle miles traveled (VMT) through County and regional long range planning efforts			
	Action	Responsibility	Performance Indicator
T-1.14	Plan and implement reasonable infrastructure and other improvements (e.g. signal timing) that reduce traffic congestion to maximize fuel efficiency (ongoing).	Public Works, Developers, RTC, SC Metro	<ul style="list-style-type: none"> Projects funded and completed

Strategy T-2: Increase bicycle ridership and walking through incentive programs and investment in bicycle and pedestrian infrastructure and safety programs			
	Action	Responsibility	Performance Indicator
T-2.1	Consider funding an infrastructure network using development fees that is dedicated to bicycle and pedestrian infrastructure.	Planning, Public Works	<ul style="list-style-type: none"> Fund is Established
T-2.2	Work with the Santa Cruz County Regional Transportation Commission (RTC) to support and implement the Monterey Bay Sanctuary Scenic Trail project.	Planning, Public Works	<ul style="list-style-type: none"> Funding and completion of Monterey Bay Sanctuary Scenic Trail projects
T-2.3	Increase the effectiveness of the County Bicycle Plan by seeking funding to develop bicycle infrastructure prioritized in the Plan.	Planning, Public Works	<ul style="list-style-type: none"> Projects funded and completed
T-2.4	Continue to seek opportunities to implement the Safe Routes to School Program locally by seeking grant funding under the Program for applicable projects (ongoing).	Planning Public Works	<ul style="list-style-type: none"> Projects funded and completed
T-2.5	Continue to support the Community Traffic Safety Coalition (CTSC) in the Health Services Agency with funding from the RTC (ongoing).	Health Services Agency	<ul style="list-style-type: none"> Ongoing CTSC program
T-2.6	Work with the RTC and Public Works to implement the recommendations of the RTC’s Safe Paths of Travel report regarding pedestrian travel.	Planning, Public Works	<ul style="list-style-type: none"> Projects funded and completed
T-2.7	Review site design criteria in the Zoning Ordinance for opportunities to emphasize pedestrian amenities and connections between and among neighborhoods, commercial areas, schools and recreation sites.	Planning, Public Works	<ul style="list-style-type: none"> Zoning Ordinance is revised as necessary
T-2.8	Install and continue to upgrade bike lockers at County facilities.	General Services	<ul style="list-style-type: none"> Number of new bicycle lockers
T-2.9	Install and upgrade shower and changing facilities at County facilities.	General Services	<ul style="list-style-type: none"> Upgraded facilities
T-2.10	Support loan programs administered by GSD to promote bicycle ridership.	General Services	<ul style="list-style-type: none"> Number of loans



Strategy T-3: Provide infrastructure to support zero and low emission vehicles (plug in electric, hybrid plug in vehicles)			
	Action	Responsibility	Performance Indicator
T-3.1	Consider incentives and requirements to install EV charging stations in parking lots for new development and substantial remodel/addition of existing buildings.	Planning/Building	<ul style="list-style-type: none"> Number of charging stations and fuel cell infrastructure
T-3.2	Require pre-wiring of buildings to accommodate electric vehicle charging.	Planning/Building	<ul style="list-style-type: none"> Requirements are in the County Code
T-3.3	Support the goals of the Monterey Bay Electric Vehicle Alliance (MBEVA) through pursuit of funding for installation of publicly-available EV charging stations; supportive policies, including streamlined EV charging station permit processing, and increased number of EVs in the county fleet; attracting electric vehicle businesses to the County.	Planning, General Services	<ul style="list-style-type: none"> Number of alternative fuel vehicles, charging stations, and fuel cell infrastructure

Strategy T-4: Increase employee use of alternative commute modes.			
	Action	Responsibility	Performance Indicator
T-4.1	Help raise the community profile of Commute Solutions and other bicycle services provided by the RTC, and CTSC by including a link to their websites on the Climate Action Strategy webpages and on other high profile County of Santa Cruz web pages.	Planning, Public Works	<ul style="list-style-type: none"> Links established
T-4.2	Encourage employers to implement voluntary trip reduction measures in the Trip Reduction Ordinance (County Code 5.52) (ongoing), and consider updating the Zoning Ordinance with a new trip reduction-transportation demand management ordinance.	Planning	<ul style="list-style-type: none"> Employer participation Zoning Ordinance is revised as necessary
T-4.3	Continue to provide alternative commute programs for County employees including vanpools, emergency ride home voucher, fleet bikes, bus passes, and bike lockers for County employees who commute to work using alternative modes (ongoing).	General Services Department	<ul style="list-style-type: none"> Number of bus passes, Number of van riders
T-4.4	Look for funding sources to fully implement the RideSpring ⁴ service with incentives for choosing alternative commute modes (ongoing).	General Services Department	<ul style="list-style-type: none"> RideSpring statistic on “miles saved” and number participants
T-4.5	Consider the feasibility of additional flexible work hours to support employee use of alternative commute modes.	All County Departments	<ul style="list-style-type: none"> Availability of flexible work hours
T-4.6	Continue to provide staff resources in the General Services Department for alternative transportation programs for County employees (ongoing).	General Services Department	<ul style="list-style-type: none"> Staffing levels

⁴ RideSpring is a web-based database to provide both employers and employees with convenient alternative commute modes.



Strategy T-5: Reduce County fleet emissions			
	Action	Responsibility	Performance Indicator
T-5.1	Continue to follow through on results of the pilot program (Networkfleet) to improve fleet fuel efficiency through improved vehicle maintenance and fuel efficient driving habits.	General Services, County Employees Who Drive County Vehicles	<ul style="list-style-type: none"> Fleet fuel savings
T-5.2	Continue to upgrade the County fleet with strategic purchases of fuel efficient vehicles, including zero and low emission vehicles (ongoing).	General Services	<ul style="list-style-type: none"> Fleet vehicle mix, fuel savings
T-5.3	Look for opportunities to expand the use of compressed natural gas (CNG) (ongoing).	General Services	<ul style="list-style-type: none"> CNG use
T-5.4	Upgrade the Public Works diesel fleet as required to comply with state and federal mandates for more fuel efficient diesel engines (ongoing).	Public Works, General Services	<ul style="list-style-type: none"> Compliance with diesel truck rules
T-5.5	Consider incorporating more biodiesel in diesel vehicles as equipment and state law permits.	Public Works, General Services	<ul style="list-style-type: none"> Biodiesel use

3.6 Solid Waste Strategies

As solid waste decomposes in the landfill it produces methane gas, a powerful GHG. Emissions from solid waste can be reduced by collecting and recycling as much of the methane as can be captured with current technology (which is on the order of 75-95 percent), but it is a superior strategy to reduce waste in the first place by limiting use of material that cannot be recycled and which generates waste. The current average capture rate for the Buena Vista Landfill is 85 percent.

The emissions level in the inventory is the estimated amount of methane that bypasses the gas collection systems at the landfills. The landfills in Santa Cruz County are well-controlled by the existing collection systems and a relatively small percentage of methane escapes. The landfill gas that is collected at the Buena Vista landfill is burned in engine generators that produce electricity that is connected to the electric grid.

Regarding reducing waste in the first place, the Public Works Department is a leader in the state in terms of waste diversion and recycling efforts, including construction and demolition waste diversion, composting, and “take back” programs for medicines and sharps, fluorescent lamps, and household hazardous waste. In addition, Public Works funds or participates in education programs in the community covering various topics including recycling and waste reduction. Further efforts to reduce waste have included the adoption of several ordinances, to include a bag ordinance that restricts the distribution of single-use plastic carry-out shopping bags and charges a fee for paper carry-out shopping bags, a polystyrene ordinance that restricts the distribution of polystyrene by retail food establishments and vendors, and an electronic waste ordinance. Anticipated future planning for a Zero-Waste Eco-Park responds to the fact that the Buena Vista landfill is reaching capacity and even more aggressive waste reduction and recycling, including pursuing feasible “waste-to-energy” technologies, would be desirable.

Although further emissions reductions in the solid waste sector are certainly possible, and will be achieved through the ongoing efforts of Public Works and the community, the effect of that strategy on the overall emissions inventory is expected to be rather minimal because of the relatively small percentage of the overall emissions that is produced by municipal solid waste.



Table 3-3: Strategies for the Reduction of Greenhouse Gases from Solid Waste

Priority	Strategy
W-1	Pursue “waste to energy” capacity at County landfill through acquiring existing capacity and investigating new technology
W-2	Improve existing landfill gas capture system to increase percentage capture of landfill gases
W-3	Reduce the amount of solid waste, particularly recyclable and compostable materials, in the commercial and residential waste stream

Strategy W-1: Pursue “waste to energy” capacity at County landfill through improving existing capacity and investigating new technology			
	Action	Responsibility	Performance Indicator
W-1.1	Pursue installation of “waste-to-energy” technology that meets environmental standards, and supports and enhances recycling efforts.	Public Works	Technology evaluated
W-1.2	Utilize the electric power produced by landfill gas at the Buena Vista landfill for the County of Santa Cruz instead of the current scenario in which the electricity production is purchased by other jurisdictions.	Public Works	Determine likely remaining lifetime of landfill gas energy generation capacity and evaluate best strategies for generating energy during this period

Strategy W-2: Improve existing landfill gas capture system to increase percentage capture of landfill gases			
	Action	Responsibility	Performance Indicator
W-2.1	Seek funding for design and installation of improved landfill gas capture system at Buena Vista Landfill.	Public Works	Project funded
W-2.2	Install system improvements by 2020.	Public Works	System upgraded

Strategy W-3: Reduce the amount of solid waste, and recyclable and compostable materials in the commercial and residential waste stream			
	Action	Responsibility	Performance Indicator
W-3.1	Continue planning for implementation of a Zero Waste Eco Park to meet the County’s long term zero waste goal (ongoing).	Public Works, Planning	<ul style="list-style-type: none"> • Project status
W-3.2	Continue to advocate for Extended Producer Responsibility (EPR) through membership in the California Product Stewardship council and other actions that encourage and achieve EPR (ongoing).	Public Works	<ul style="list-style-type: none"> • EPR in state law
W-3.3	Continue to partner with and support other local and regional waste reduction programs, and consider enhancements that would further the zero waste goals of the County (ongoing).	Public Works	<ul style="list-style-type: none"> • Program status and statistics



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