



2010

SANTA BARBARA COUNTY
Sustainability Action Plan



Overview

- The Sustainability and Conservation Team (SCT) was formed following direction from the Board of Supervisors on December 16, 2008.
- Resolution 09-059 was adopted by the County Board of Supervisors, committing the County of Santa Barbara to take immediate, cost effective and coordinated steps to reduce the County's collective greenhouse gas emissions in order to help protect the community from the effects of climate change.
- The Board directed General Services on September 2009 to generate the Sustainability Action Plan for County Operations.

The Vision

- Reduced Utility & Operating Costs
- Cost-Effective Implementation
- A complete plan that addresses the emission baseline
- Reduced Greenhouse Gas Emissions over time
- Participate in Community Energy Programs

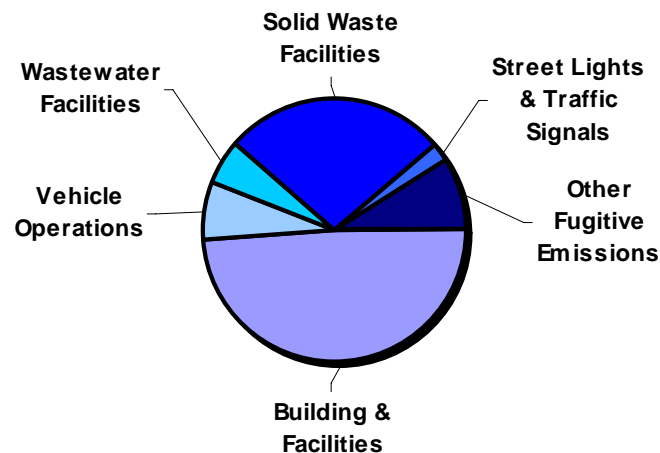
The Sustainability Action Plan is “Managing Resources Today for Tomorrow”

- Building Energy Efficiency & Renewable Power
- Vehicle Operations & Fuel Usage
- Mobile Workforce
- Water Conservation
- Solid Waste & Recycling
- Landfill Management
- Printing & Reprographics
- Parks



Baseline Emissions Inventory

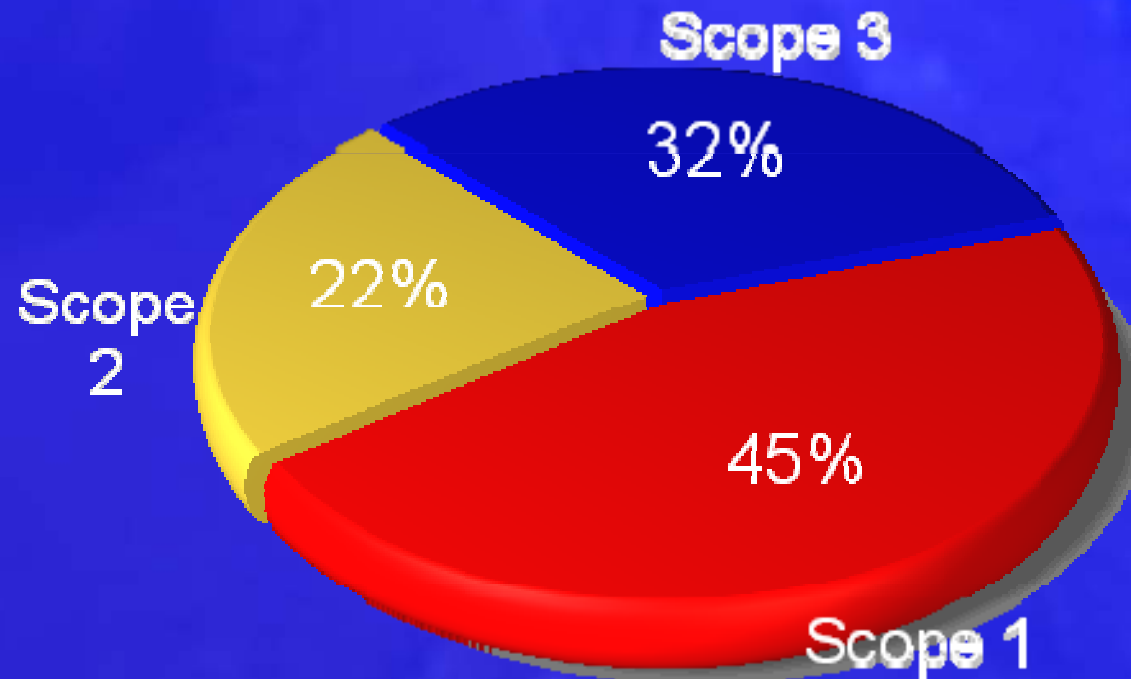
- The primary purpose of the GHG emissions inventory is to identify and quantify the sources of emissions generated by Santa Barbara County governmental operations. This inventory serves two purposes:
 - To construct an emissions baseline against which Santa Barbara County government can establish immediate emissions reduction targets and quantify future progress.
 - To document where the greatest percentages of emissions are generated in Santa Barbara County's internal governmental operations, and thereby identify the greatest opportunities for reductions in emissions.



Initial Excel Emission Modeler

WORKSHEET	Overview of Annual Emissions					
Organization	County of Santa Barbara					
Reporting Year	2008	Energy Consumption	CO ₂	CH ₄	N ₂ O	eCO ₂
		MMBtu	kg	kg	kg	Metric Tonnes
Scope 1	Co-gen Electricity	-	-	-	-	-
	Co-gen Steam	-	-	-	-	-
	Facility Natural Gas	922,103.0	48,646,227.0	4,864.1	97.3	48,786.9
	Transportation (Vehicle Operations)	167,691.6	11,607,792.0	1,641.7	602.3	11,823.8
	Refrigerants & Chemicals	-	-	-	-	-
	Agriculture	-	-	-	-	-
Scope 2	Purchased Electricity	362,796.5	29,428,882.6	144.7	79.9	29,455.9
	Purchased Steam / Chilled Water	-	-	-	-	-
Scope 3	Staff Commuting	86,587.5	6,076,159.6	1,194.2	412.0	6,225.6
	Staff Business Travel (Air)	-	-	-	-	-
	Staff Business Travel (Ground)	-	-	-	-	-
	Abroad Air Travel	-	-	-	-	-
	Solid Waste (Landfill Operations)	-	-	1,505,980.3	-	34,637.5
	Wastewater (Laguna Sanitation)	-	-	2.3	3.1	1.0
	Paper (Recycled)	-	-	-	-	237.5
	Scope 2 T&D Losses	35,881.0	2,844,869.4	14.3	7.9	2,847.5
Offsets	Additional					-
	Non-Additional					-
Totals	Scope 1	1,089,794.6	60,254,019.0	6,505.8	699.6	60,610.7
	Scope 2	362,796.5	29,428,882.6	144.7	79.9	29,455.9
	Scope 3	122,468.5	8,921,029.0	1,507,191.2	423.0	43,949.1
	All Scopes	1,575,059.6	98,603,930.6	1,513,841.6	1,202.5	134,015.7

Santa Barbara County Emission Data



Data Modeling Application

Clean Air and Climate Protection 2009 Software © Version 2.2, January 2010

File Year Record Report Assistants Settings Help

Community Analysis Community Measures Government Analysis Government Measures

Government Analysis for Year 2008

Buildings and Facilities Streetlights & Traffic Signals Port Facilities Airport Facilities Water Delivery Facilities Wastewater Facilities Solid Waste F

Name of Building or Facilities Group

Type	Units	Quantity	Energy Cost (\$)
Electricity (Grid Average)	(kWh)	0	0
Commercial Coal	(tons)	0	0
Fuel Oil (#1 2 4)	(US gal)	0	0
Kerosene	(US gal)	0	0
Landfill Gas or biogas	(MMBtu)	0	0
Natural Gas	(therms)	0	0
Propane	(US gal)		
Stationary Gasoline	(US gal)		
Stationary LPG	(US gal)		
Wood 12 pct moisture	(tons)		

Record Controls

Insert Select Delete

Report

Assistants Categories Indicators Coefficients

Forecast Builder

Energy Consumption (MMBtu) 0

Equivalent CO₂ Production (tons) 0

Notes Regarding Buildings and Other Facilities D:

Clean Air and Climate Protection 2009 Software © Version 2.2, January 2010

File Settings Help

Community Analysis Community Measures Government Analysis Government Measures

CACP 2009
Clean Air & Climate Protection Software

A Greenhouse Gas Accounting System to Support the Local Government Operations Protocol

ICLEI
Local Governments for Sustainability USA

In collaboration with NACAA

© 2009 ICLEI USA, Inc. All rights reserved.

1/1

Building Energy



- Upgraded air conditioning in the County Administration Building with a more efficient system saving the County \$15,200 per year.
- Installation of web based building automation system (NOVAR 963) for controlling Heating, Ventilation and Air Conditioning (HVAC) systems. Connected buildings to date are: Administration building, Courthouse, Lompoc Administration building, Betteravia building # B, and # D.
- Energy Audit at the McDonald building in Santa Barbara
 - Replaced T12 with new T8s that are 28 watt, “instant on” light fluorescents saving 150 kwh/year or 1.3 metric tones CO2
- Betteravia Buildings A,B & D
 - Replaced the air conditioner units in 3 buildings with energy efficient units with economizers and VFDs
- Energy Audit completed at Betteravia campus.
 - Potential savings of 504,777 kwh/year, \$69,985 in utility costs per year, or 363 metric tons of CO2 (Cost of upgrade \$196,159).



Building Energy

Energy Efficiency Facilities Training Program

(Subsidized by the Partnership with Southern California Edison)

Building Operator Certification (BOC)

- Nationally recognized training and certification program for building operators
- Courses include all facets of “Building Energy Efficiency” (facility electrical, HVAC, lighting systems, indoor air quality, environmental health and safety, and energy conservation).
- Enabling operators to be proactive in compliance with environmental regulations



Mobile Workforce Program

- Strengthening the County's telecommuting policy to encourage and support expanded use of telecommuting.
- Reviewing and potentially changing County hours of operation to provide greater access to the public (before 8 a.m. and after 5 p.m.) while potentially closing many County services every Friday or every other Friday.
- Reviewing and potentially changing the manner in which departments deploy and manage field staff.



Vehicles

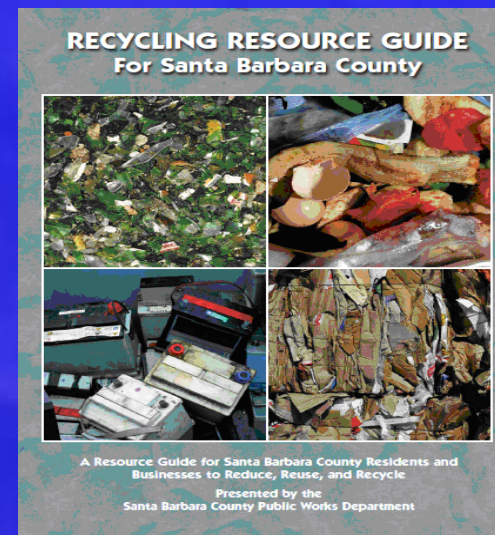
- The Use of Re-refined Oil in County Vehicles Re-refined oil is an effective and cost-saving alternative to virgin petroleum products. Vehicle Operations has successfully used re-refined oil products for County vehicles for over nine years.
- Santa Barbara County has successfully implemented California's first fully automated "Car Share" system.
- Proposal for a Green Fleet Review Committee
- To ensure fuel efficiency and support the County's goal to reduce greenhouse gas emissions, Vehicle Operations introduced "right sizing" for the County's vehicle fleet.
- Hybrid Vehicles
- County-Wide Fuel Reduction Goals



Resource Recovery & Waste Management

(reducing the amount of waste sent to landfills)

- The Resource Recovery and Waste Management Division (RRWMD) of the Public Works Department participates in the County's goal to reduce GHG by promoting the philosophy of waste reduction, reusing products and materials, and recycling.
- RRWMD publishes its Recycling Resource Guide for Santa Barbara County



Resource Recovery & Waste Management

Fiscal Year 2008-09	Pounds
Electronic equipment recycled	10,000
Computers donated to “Computers for Families Santa Barbara”	71,750
Hazardous Waste Recycling batteries	1,080



Landfill Gas Conversion

- Utilizing a Caterpillar Model G3616 engine generator set, Public Works in conjunction with FORTISTAR'S equipment converts over 300 million cubic feet of landfill gas annually into electricity which is fed back in to the grid system.
- Average monthly kilowatt hours produced 1,946,000 kWh
- This reduction in CO2 emissions is the equivalent of taking 20,000 cars off local streets and highways each year or the electricity consumed by 2079 homes.



Parks Department

- Nojoqui Falls: Domestic water system and conventional pump motors upgraded to variable-frequency drives (VFDs).
- Lake Cachuma: Filtration motors for swimming pools replaced with energy efficient motors.



Parks Department

- “Mulching” lawn mowers: benefits are, reduced green waste, reduced labor, builds healthy fertile soil by returning grass clippings to the lawn.
- Arroyo Burro Beach: Certain lamps replaced with energy efficient LED lights.



Energy Efficiency Partnership Programs

- **Santa Barbara Energy Efficiency Partnership Program**

- The partners are the cities of Santa Barbara, Goleta, and Carpinteria.

- Provides outreach to Santa Barbara businesses
- Lighting retrofits
- Holiday Light Exchange,
- Refrigerator and Freezer Pickup,
- Lamp Exchange and
- Compact Fluorescent Giveaways.



- **North County Energy Watch Partnership Program**

- The partners are the County of Santa Barbara the cities of Santa Maria, Buellton, and Guadalupe and the Santa Maria Valley Chamber of Commerce

- Provides outreach to Santa Barbara businesses
- Lighting retrofits
- Compact Fluorescent Giveaways



Photovoltaic



- The County currently spends over \$5 million per year on utilities, most of which is attributed to electricity.
- Public Works and General Services are currently working on photovoltaic projects .
- Financing options



Thank You!

Sustainability & Conservation
is our common goal

