SANTA BARBARA COUNTY

2010 Sustainability Action Plan

This document is designed to provide accurate and authoritative information in regard to the subject matter covered. The information presented in this document is subject to change. Every effort will be made to make proper notice to affected parties. This plan will be implemented with all available funds identified for those projects outlined herein, but does not represent a commitment on the part of General Services if those funds do not materialize as expected.

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From the County Administrator

The County of Santa Barbara (County) recognizes that local government can play a significant role with respect to state and national policy efforts addressing the effects of Greenhouse Gas (GHG) emissions. As a producer, regulator, and incentivizer of GHG reduction efforts, the County continues implementing a multi-pronged strategy, providing leadership across the region. Through this centrally coordinated effort, the County will engender smart policy that responds to potential regulatory requirements, reduces its own energy use, and incubates cutting-edge economic development programs such as emPowerSBC.

As the County budget continues to tighten, the costs of energy continue to rise. Given current forecasts and broader community expectations, the time to focus on cutting consumptive behaviors is now. Recognizing this inter-connected environment, the Sustainability Action Plan presented here forms the basis for the County's strategic actions to reduce our own energy use. Beyond quantifying and cataloging the sources of GHG emissions associated with County Government operations, the plan also sets out a contextual framework for a number of projects that will be implemented between now and 2020.

Although the County family has taken strides towards increased resource efficiency, more can easily be done. To that end, a dedicated focus on simple solutions that reduce the amount of energy, water and pollution produced by County departments makes sense. Saving natural resources also means saving money and jobs. In combination, the actions being proposed offer a path for the County to capitalize on using newly learned behaviors to make smarter, more sustainable choices.

Mike Brown
County Executive Officer
June 2010

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Executive Summary

On March 17, 2009, the Santa Barbara County Board of Supervisors adopted Resolution 09-059 which committed the County of Santa Barbara to take immediate, cost effective and coordinated steps to reduce the County's collective Greenhouse Gas (GHG) emissions in order to protect the community from the effects of climate change and implement programs to comply with the State of California's GHG reduction goals. The main component of AB 32 was establishing a state goal to reduce GHG emissions by 15% by the year 2020 (thereby reaching 1990 GHG emission levels), and further reduce GHG emissions by 2050 to bring the state 80% below the 1990 levels.

In order to assist the State in meeting the goals of AB 32, to comply with SB 97 and SB 375, and to prepare for any emerging federal climate legislation, the County has prepared a Sustainability Action Plan (SAP). Santa Barbara County recognizes that climate change has the potential to dramatically affect our businesses and residents, as well as other communities around the world. Santa Barbara County also recognizes that local governments play a significant role in the efforts to reduce GHG emissions and mitigate the potential impacts of climate change. There are numerous actions that can lessen the emissions from our governmental operations, including: increasing energy efficiency in our vehicle fleets and buildings; demonstrating the use of clean, renewable energy sources; implementing vehicle transportation plans that reduce usage; encouraging waste reduction; and joining the Santa Barbara SCE and PG&E Partnerships.

The benefits from these actions include lower energy bills, improved air quality, reduced emissions, economic development, and an improved quality of life throughout the County of Santa Barbara.

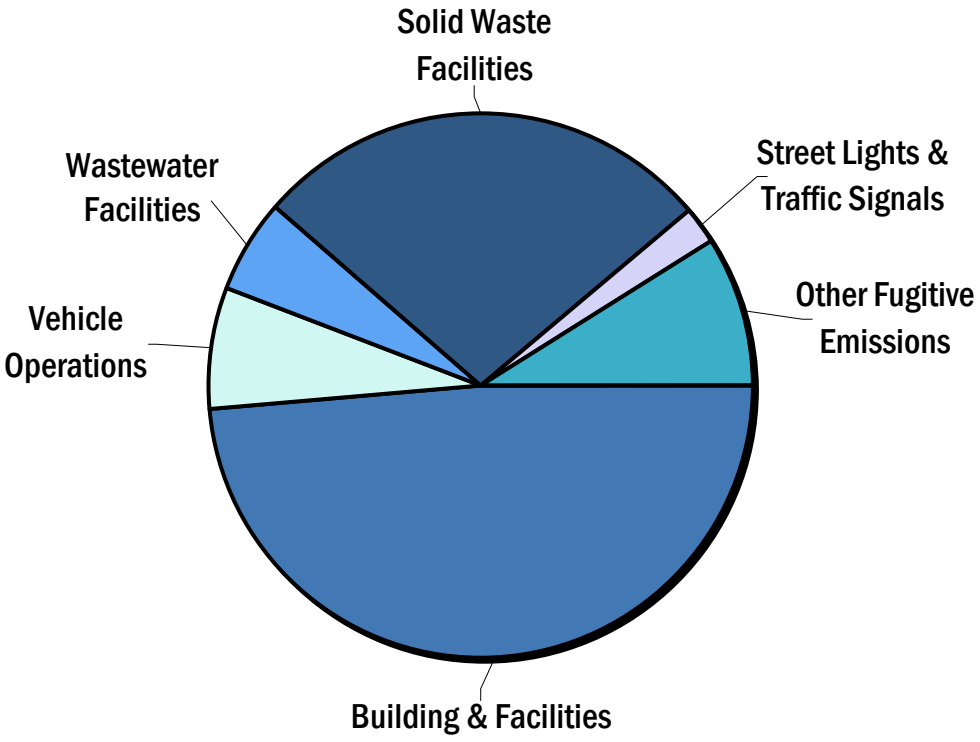
Government Operations Greenhouse Gas Inventory

The primary purpose of a greenhouse gas emissions inventory is to identify and quantify the sources of emissions generated as a result of the Santa Barbara County governmental operations.

Emissions Baseline

In 2008, Santa Barbara operations paid approximately 10 million dollars for energy, emitting approximately 134,003 metric tons (tons) of CO_2.

Emission Category	CO2e
Buildings & Facilities	64,978
Street Lights & Traffic Signals	2,949
Wastewater Facilities	7,573
Vehicle Operations	9,797
Solid Waste Facilities	36,765
Other Fugitive Emissions	11,941
Total	**134,003**



SECTION 1

Introduction

1-1 Purpose of 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:

1. To construct an emissions baseline against which Santa Barbara County government can establish immediate emissions reduction targets and quantify future progress.
2. 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.

1-2 Climate Change Background

The earth's climate has alternated several times over its life span from periods of warmth to ice ages. There are many things that we can not control that affect the earth's climate, such as; volcanoes, the sun's energy, the earth's orbit and other natural phenomena. " However, when the industrial revolution started in the 18th century, humans started contributing to changes in the earth's climate at an ever increasing rate."[1] We can alter these man-made changes by simply adjusting our behavior.

In the last 200 years, the consumption of fossil fuels (oil and gas), the burning of solid waste, deforestation and other activities have created significant increases in concentrations of heat-trapping "greenhouse gases" in our atmosphere. Greenhouse gases get their name because they trap heat in, like the glass of a greenhouse, preventing it from escaping into space. And similar to an agricultural greenhouse, the greenhouse gases in our atmosphere are necessary. They keep the earth's surface warm, allowing for life. The gas concentrations, however, are continuing to increase in the earth's atmosphere and, consequently, the earth's temperature has continued to increase.

"According to NASA (National Aeronautics and Space Administration) and NOAA (National Oceanic and Atmospheric Administration) data, the average surface temperature of the earth has increased approximately 1.2º to 1.4ºF since 1910. The eight hottest years on record (since 1850) took place since 1998, with the hottest year being 2005. A significant amount of the increased heat over the past few decades can be attributed to a rise in GHG emitting human activities." [2]

"Climate models predict the earth's average surface temperature could rise 3.2º to 7.2ºF above 1990 levels by the end of this century if the greenhouse gases in our atmosphere continue to increase."[3] Scientists know that human activities are changing the greenhouse gas composition of the atmosphere, which is changing the earth's climate.

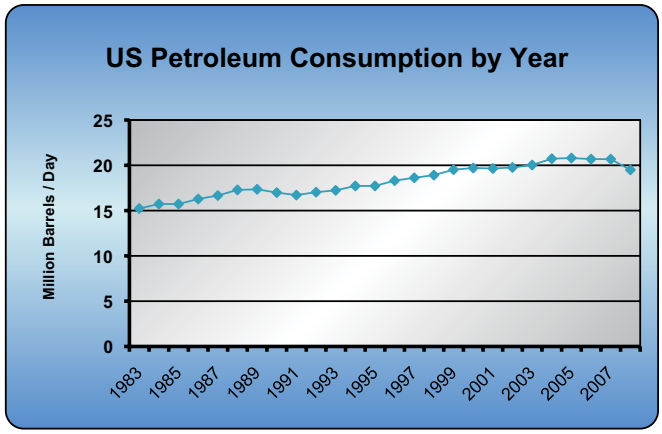
1, 2, 3 NASA and NOAA http://www.epa.gov/climatechange/basicinfo.html

4 http://climate.dot.gov/about/overview/greenhouse-gases.html

"Three-quarters of the greenhouse gas emissions in the United States come from human-generated energy-related activities, primarily carbon dioxide emissions from burning fossil fuels [2]." Most of these emissions come from large power plants, and approximately one-third are generated from transportation.

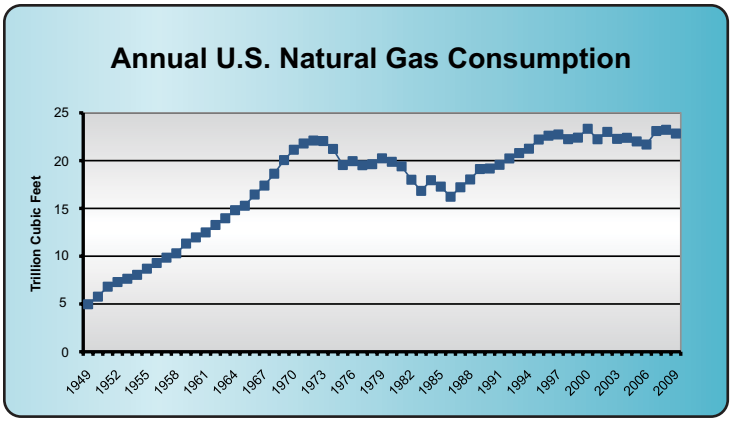
Because people, animals and plants are affected by climate change, scientists are working to better understand the future affects of climate change over time and by geographic areas. Scientific observations of climate change to the earth include: shrinking glaciers, rising sea levels, permafrost thawing, increased growing seasons, trees blooming earlier and a change in the range and distribution of plants and animals.

Local governments need to do their part in reducing greenhouse gas emissions by accepting responsibility and mitigating climate change at the local level. This is accomplished by reducing greenhouse gas emissions in government buildings organic waste decomposition in landfills released to the atmosphere, and fuel consumption of government vehicles. As the effects of climate change become more severe, the adaptation of local government policies will become extremely important in preserving the welfare of local businesses and residents.



http://tonto.eia.doe.gov/country/country_energy_data.cfm?fips=US

U.S. Energy Information Administration
Independent Statistics and Analysis



http://www.eia.doe.gov/dnav/ng/hist/n9140us2a.htm

2 NASA and NOAA http://www.epa.gov/climatechange/basicinfo.html

1-3 Why the Sustainability Action Plan

At the State Level

The Global Warming Solutions Act of 2006, enacted through Assembly Bill (AB) 32, established the State of California as a leader in the climate change policy debate. A primary component of AB 32 was establishing a state goal to reduce GHG emissions by 15% by the year 2020 (thereby reaching 1990 GHG emission levels), and further reduce GHG emissions by 2050 to bring the State 80% below the 1990 levels. To achieve this goal, AB 32 directed the California Air Resources Board (CARB) to develop a Scoping Plan to establish GHG emission reduction measures for all sectors of the economy. Local governments are viewed as essential partners with the State in implementing strategies in the Scoping Plan and ensuring progress towards the GHG reductions. Of the eighteen measures identified in the Scoping Plan, nine have been identified to have potential local government actions associated with them.

Climate protection helps everyone by improving economic vitality and public health and safety; by protecting natural resources, and by ensuring infrastructure stability. Local governments are uniquely positioned to set an example to the community through their own actions and to develop emission reduction strategies that make the most sense for their community

At the County Level

When Resolution 09-059 was adopted by the County Board of Supervisors, it committed 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 reduce the community from the effects of climate change. The Resolution also calls for the implementation of programs to comply with the State of California's greenhouse gas reduction goals. The Resolution maintains that the benefits of creating a coordinated plan (with measurements, evaluation, and reporting requirements) to reduce GHG emissions can outweigh the costs. This Sustainability Action Plan serves as the first step toward regional energy sustainability in Santa Barbara County.

AB 32 Scoping Plan

Measures and Potential Actions Applicable to Local Governments

Measure	Potential Actions	Municipal Relevance	Community Relevance
Energy Efficiency	Increase Utility Energy Efficiency Programs	✓	✓
	Reduce/promote reduction of energy consumption	✓	✓
	Install solar water heating systems for municipal facilities	✓	
	Provide incentives for building owners to participate in the "Million Solar Roofs"		✓
Renewable Portfolio Standard	Achieve a 33% renewable portfolio standard	✓	✓
Green Buildings	Facilitate green building construction, renovation, operation and maintenance at local government owned/operated facilities	✓	
	Implement and provide training for the state adopted green building code		✓
	Transit oriented planning		✓
	Provide incentives to exceed Title 24 standards and lead by example	✓	✓
Recycling and Waste	Control landfill methane emissions	✓	
	Adopt Zero Waste and Environmentally Preferable Purchasing policies	✓	
	Increase diversion from landfills	✓	✓
High GWP (Global Warming Potential) Gases	Ensure proper maintenance of fleet vehicles	✓	
	Ensure proper handling and disposal of waste refrigerants	✓	✓
Sustainable Forests	Promote urban forests		✓
	Make land use decisions that conserve forest lands		✓
Water	Improve efficiency of municipal water system	✓	
	Increase water recycling	✓	✓
	Reuse urban runoff	✓	✓
Transportation	Promote employee transit incentive programs	✓	✓
	Transit oriented planning		✓
Vehicle Efficiency	Provide routine fleet maintenance	✓	

Legislation to Address Climate Change

To complement and, in some cases, implement the provisions of AB 32, additional State legislation has required local governments to address climate change. Notable examples include Senate Bill (SB) 97 and SB 375. SB 97 requires GHG emissions be analyzed and mitigated under the California Environmental Quality Act (CEQA) and provides an option for local governments to develop a Climate Action Plan to streamline the analysis. SB 375, also known as the Sustainable Communities and Climate Protections Act of 2008, can be viewed as implementing legislation to AB 32. SB 375 aims to curb GHG emissions from automobiles and light trucks through the alignment of the Regional Housing Needs Allocation (RHNA) and the Regional Transportation Plan (RTP). This alignment will be conducted through the development of a "Sustainable Communities Strategy" to be adopted by the Santa Barbara County Association of Governments (SBCAG).

State Climate Change Legislation of Local Significance

This matrix discusses recent statewide climate change legislation. While other topic-specific bills have been adopted by the State legislature, the three discussed here present the most immediate impacts and opportunities for local agencies.

State Legislation	Year Approved	Summary	Implementation Milestones	Oversight Agency
AB 32 Sets target to reduce GHG emissions	**2006**	AB 32 requires the California Air Resources Board (CARB) to develop regulations and market mechanisms to reduce California greenhouse gas (GHG) emissions back to 1990 levels by 2020. Mandatory caps on GHG emissions will begin in 2012 to achieve reduction targets. ***County Impacts:*** Specific requirements for local agencies as well as impacts associated with noncompliance are expected to be outlined by 2012.	**2008** - Baseline for mandatory GHG emissions and 2020 statewide cap adopted by CARB. **2009** - CARB adopted Scoping Plan indication how emission reductions will be achieved from significant sources. **2012** - GHG rules and market mechanisms adopted by CARB take effect and are legally enforceable. **2020** - Deadline for emission reduction target.	**CARB OPR**
SB 97 Ties GHG analysis to CEQA	**2007**	SB 97 requires the State Office of Planning and Research(OPR) to develop legal guidelines for analysis and mitigation of GHG emissions, pursuant to CEQA. ***County Impacts:*** Specific requirements for local agencies as well as impacts associated with noncompliance are expected to be outlined by 2012.	**2009** - Preparation of guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emission, as required by CEQA. **2010** - Certification and adoption of guidelines.	**OPR**
SB 375 Implements one protion of AB 32	**2008**	SB 375 addresses one of the eighteen implementation measures called for by AB 32 Through Alignment of the Regional Housing Needs Allocation (RHNA) and the Regional Transportation Plan. This includes development of a Sustainable Communities Strategy (SCS) that would be adopted by SBCAG. Certain types of infill projects that are consistent with the SCS would receive CEQA exemptions and/or streamling under SB 375. ***County Impacts:*** SB 375 calls for a new regional planning process, new requirements for environmental analysis, and strengthens the Housing Element rezone mandate overseen by the State Housing and Community Development Department (SHCD).	**2010** - GHG reduction targets related to SB 375 are estabished by CARB and assigned to Metropolitan Planning Organizations (such as SBCAG). **2013** - Local Regional Transportation Plan updates, including adoption of the SCS & RHNA. **2015-2023** - Housing Element updates.	**CARB SHCD SBCAG**

The County's Response to Legislation

In order to assist the state in meeting the goals of AB 32, to comply with SB 97 and SB 375, and to prepare for any emerging federal climate legislation, the County of Santa Barbara has prepared this *Sustainability Action Plan* and is currently in the process of preparing the C*limate Action Strategy*. Together these two plans address the County's role as a producer of GHG emissions, and as a regulator of community wide production of GHG emissions.

The Sustainability Action Plan (SAP) addresses the first role: that of a producer of GHG emissions. This plan provides a baseline emissions inventory and will be incorporated into the Climate Action Strategy at a later date. By providing the SAP first, the County has positioned itself to provide leadership to the community. The SAP is also the first in the five (5) milestones to reduce greenhouse gases, established to by ICLEI-Local Governments for Sustainability, of which Santa Barbara County is an active member. The five milestones established for local governments to reduce their greenhouse gas emissions are:

1) Conduct a baseline emissions inventory. Regional governments and nations across the world can only manage what they measure. Therefore, the first step in managing greenhouse gas emissions is to establish an inventory of those emissions.

2) Adopt an emissions reduction target. This provides a tangible and specific goal for which progress can be measured.

3) Develop a local Climate Action Plan. This provides a strategy to reduce greenhouse gas emissions and includes measures already implemented.

4) Implement policies and measures. This is the most important part of the process and it generally involves cooperation and coordination among multiple departments.

5) Monitor and verify results. This milestone provides a valuable tool to measure progress towards the reduction goal. It allows for modification of the implemented measures, if they aren't working, and provides a quantification of emissions to be used should an emission trading mechanism be established.

Those Milestone 1 requirements that are not included in this SAP will be provided in the Climate Action Strategy. The Climate Action Strategy will include a community inventory, projections, and recommendations on how to effectively move towards meeting the remaining four milestones set by (ICLEI) International Council for Local Environmental Initiatives.

The AB 32 Scoping Plan identifies energy efficiency as one of the measures with the greatest GHG reduction potential. Therefore, the County of Santa Barbara has placed a strong focus on energy efficiency in its own municipal operations as outlined in this SAP. Not only do energy efficiency improvements have the potential to greatly reduce greenhouse gas emissions, energy efficiency also plays an important role in decreasing the County's operational costs. The wise use of energy resources has both economic and social benefits. Increasing energy efficiency will lead to: cost savings through lower energy bills; reinvestment in the local economy; improved quality of life and public health; increased compliance with state and federal goals; and a more secure future.

SECTION 2

Santa Barbara County Government

2-1 Santa Barbara County Government Profile

To better understand your local government's role in reducing greenhouse emissions, it is important to see the entity as a whole. The table below outlines the components that make up the County of Santa Barbara's government

Number of County employees	**3,875**
Number of vehicles and equipment (e.g., cars, trucks, generators, tractors, trailers and other equipment)	**1,378**
Total building square footage	**2,367,822**
Total number of structures (e.g., buildings, garages, sheds, storage containers and other structures)	**717**
Total number of electric meters	**232**
Total number of gas meters	**88**
Total County recommended budget FY 2010-11	**$864 million**

2-2 Climate Change Mitigation Activities in Santa Barbara

The Santa Barbara County government is comprised of twenty-four (24) different departments with eight primary types of energy consuming groups.

1. Building Energy	5. Landfill Generation
2. Mobile Workforce	6. Resource Recovery
3. Vehicle Fuels	7. Grounds Management & Sequestration
4. Public Works Infrastructure	8. Printing & Reprographics

Due to the many over-lapping uses of energy among departments, this SAP will discuss the eight groups versus each individual department. Each of these groups will illustrate the different ways the County of Santa Barbara is working to save energy now, as well as provide sample projects for future consideration in its efforts to save money and protect the environment.

Santa Barbara County has worked hard to reduce greenhouse gas emissions over the last few years. The following inventory represents the first step in a systems approach to reducing Santa Barbara's emissions.

Money Spent on Electric, Natural Gas, Gasoline and Diesel by Santa Barbara County Operations by Department

Departments	2008 Gas & Electric	2008 Gasoline & Diesel	2008 Total
Public Works	$ 1,536,468	$ 1,463,980	$ 3,000,448
Sheriff	$ 744,976	$ 1,180,384	$ 1,925,360
Fire	$ 199,078	$ 742,717	$ 941,795
Public Health	$ 550,178	$ 155,773	$ 705,951
Parks	$ 369,675	$ 171,045	$ 540,720
Social Services	$ 323,392	$ 155,215	$ 478,607
Probation	$ 307,906	$ 125,305	$ 433,211
Alcohol, Drug & Mental Health	$ 249,259	$ 100,196	$ 349,455
General Services	$ 235,774	$ 95,711	$ 331,485
Planning & Development	$ 84,691	$ 61,058	$ 145,749
Clerk Recorder Assessor	$ 122,243	$ 12,628	$ 134,871
District Attorney	$ 96,401	$ 25,199	$ 121,600
Agricultural Commissioner	$ 35,323	$ 66,442	$ 101,765
Information Technology	$ 63,270	$ 32,098	$ 95,368
Child Support Services	$ 63,514	$ 12,041	$ 75,555
County Counsel	$ 32,759	$ 37,692	$ 70,451
Public Defender	$ 48,134	$ 13,976	$ 62,110
General County Programs	$ 46,366	$ 13,701	$ 60,067
Treasurer Tax Collector	$ 36,795	$ 8,593	$ 45,388
Auditor Controller	$ 43,250	$ 1,624	$ 44,874
County Executive Office	$ 33,731	$ 1,806	$ 35,537
Human Resources	$ 33,784	$ 1,193	$ 34,977
Board of Supervisors	$ 14,244	$ 2,327	$ 16,571
Housing & Community Development	$ 6,483	$ 783	$ 7,266
Total	**$ 5,277,694**	**$ 4,481,487**	**$ 9,759,182**

2.2.1 Building Energy

Santa Barbara County's energy goals include: the increased the use of renewable energy at its various County-owned facilities; promoting clean technology or "green businesses"; and, alleviating the budgetary uncertainty that results from highly volatile electricity and natural gas prices.

The County faces financial constraints and has limited funds for facility upgrades and routine maintenance. To save money in the long-term by reducing energy usage, investment in facility systems upgrades must be made in the short-term. Although this results in limited options, the County has completed several significant projects, including:

- An energy audit at the Veterans Memorial Building in Santa Barbara
- The replacement of T12 fluorescent lighting with energy efficient T8 lighting in County buildings
- The replacement of incandescent lighting with energy efficient compact fluorescent lights at County buildings
- The replacement of exit signs with energy-saving LED signs
- Lighting retrofit at the McDonald Building in Santa Barbara
- Variable Frequency Drive (VFD) pump motors for Santa Barbara Courthouse cooling tower
- The replacement of natural gas powered chiller in the County Administration Building with a more efficient double-effect gas absorption chiller (this improvement created a $15,000 a year savings in natural gas costs)
- Replacement of air conditioner units in Buildings A, B & D in Santa Maria (Betteravia Government Complex) with modern units equipped with economizers and VFDs

To further ensure energy efficiency, several County Facility Maintenance (FM) staff members will be trained by the South County Energy Efficiency Partnership to become "Certified Building Operators." This training will enable the FM staff members to identify and implement energy-saving processes whenever possible.

New high efficiency boilers in the County Mail Jail.

The lighting replacements alone are saving approximately 2.1 million kwh/year Countywide.

Heating, Ventilation and Air Conditioning

NOVAR 963 is a Heating, Ventilation and Air Conditioning (HVAC) controller that the County has begun implementing in the Administration building, Courthouse, Lompoc Administration building, Betteravia building# B, and # D. The software is a monitoring system developed to integrate up to 300 building control systems into one site. From there the operation of the buildings HVAC systems data can be reviewed real time.

- The system gives the ability to monitor each mechanical components operation in the building's HVAC system, 24/7 allowing the technician to remotely make beneficial changes in operations. A technician can plug into the network anywhere in the County and instantly diagnose HVAC problems on any building in the system. This will generate savings from the reductions of labor and vehicle operation costs, by eliminating the need to physically go to each trouble call for diagnosis.

- The interface for the system allows for programming changes to any building or system component by direct or remote connection to the software. It provides a graphic representation of the building's HVAC components along with historical logs, settings and performance.

- One of the features resulting in savings is the ability to schedule multiple operational programs in a building to account for building use after hours, holiday shut downs, seasonal occupation and energy savings or "Peak Shaving" by selective shut downs of individual and multiple zones.

- With this system facilities maintenance will have the ability to audit and change building controls, programming for optimum performance using the data logging feature. This historical data feature allows for reassessment of equipment to make ongoing corrections, for optimum performance.

Novar 963 HVAC Monitoring Software

Reducing Utilities and the ISF

Two years ago the County of Santa Barbara changed the way utilities used by departments are managed. Prior to 2008 General Services paid all utility bills for almost all departments out of a single budget for which General Services was responsible. There was little incentive for departments to reduce the use of utilities because their budgets were not directly impacted by the cost of utilities. This led to the creation of an “Internal Service Fund” (ISF) and now all bills are paid centrally by General Services who in turn bills each department monthly for utilities based on square footage occupied and amount used. This has created awareness for departments to reduce use and occupy only needed square footage. The effect has been a reduction on use.

Most energy related projects that reduce use, require capital investment of some amount and now that the ISF is in place and working it is recommended that a small surcharge (2%) be placed on utilities bills to help fund future cost effective energy related projects in County buildings. The surcharge would generate approximately $80,000 a year to be used only on future projects. Example projects are, automatic sensor controls for lighting, variable frequency drives on large motors, higher quality insulation on roofing. The rebates on energy projects will be reinvested into the utility ISF to complete additional projects. The surcharge and the rebates entering the utility program will help the County reach its goal to reduce energy costs and reduce carbon emissions.

Ozone System at County Jail Laundry

The County Jail currently uses an ozone laundry support system (NuTek NT-400) for its in-house laundry needs, which includes: clothing for inmates at the County jail and overnight patients in Alcohol, Drug & Mental Health programs, uniforms for the Sheriff Deputies and County Firefighters and various linen needs.

Laundering with ozone at ambient temperatures is the only method that can be used as a total sterilizing agent, thereby eliminating the need for high temperatures. Additionally, pyrogens, the by-products of microbial growth that are toxic to humans, are oxidized (and thus removed) by ozone systems, whereas traditional laundering (with dry heat sterilization) does not eliminate these microbes.

The NuTek system that the County uses is a fully automated, flow controlled, oxygen supported, noninvasive system. It is designed to reduce energy demands, water and sewer usage. It also eliminates the need for harsh and expensive chemicals. The County's ozone laundry system is an on-demand system with an estimated life expectancy of fifteen (15) years. It requires minimal maintenance so that County personnel resources and dollars are freed-up for other projects in the County.

Future Solar and Projects

A goal of Santa Barbara County is to increase the use of renewable energy at various government owned facilities, promote clean technology or "green businesses," spur innovation for job creation in the Santa Barbara County region, and reduce budgetary uncertainty resulting from highly volatile electricity and natural gas prices.

The County is strongly committed to contributing to the growth of green industries; however, often lack the capital resources to install systems at public facilities. The County faces considerable constraints on their annual capital budgets and has limited funds allocated for facility upgrades and routine maintenance, resulting in few options for funding renewable energy generation projects. Additionally, the County currently spends over 5 million dollars for utilities expenses, of which most is attributed to electricity expenses. Generating local solar and wind energy power will offset some of these costs. Therefore, the County is pursuing third party Power Purchase Agreements (PPA) as a means to procure "green power" from Renewable Power Generating (RPG) Systems using a collaborative procurement process. The County has reviewed its property portfolio and has several possible locations as viable RPG System sites. These sites included facilities with existing electrical loads with an estimated renewable power generation yield of over one mega watt.

The County of Santa Barbara General Services department plans to solicit a Request for Proposals (RFP) for a Power Purchase Agreement (PPA) to include design engineering, permitting, installation and operation of a Solar Photovoltaic (PV) System at the Calle Real site. The County plans to reduce its carbon footprint and reduce its electricity expenses through the installation of a solar photovoltaic system.

The County owned property located 4434 Calle Real Santa Barbara, California 93101 is the first site being considered. Other sites in Santa Maria are also being considered. An aerial view of the Calle Real property is shown in Figure 2.1-1 and provides potential locations for the megawatt solar system which is highlighted in yellow (only a portion of the yellow area will be needed).

The County envisions a contractor owning and operating the system after the system is commissioned. Proposals submitted in response to this RFP should assume developer ownership. The County will consider alternate proposals to developer ownership/power purchase agreements, however funding for turnkey projects is not currently available. Any alternate proposals shall be in addition to (not in substitution for) the proposal(s) assuming developer ownership.

HVAC / Building Controls Projects:

Savings are gained by replacing failing and inefficient heating and air conditioning "Package" and "Multi-Zone" units (usually 20-35 years old) with modern units that have been designed to use lower horsepower or variable speed motors. These changes will cut the electrical load used by the unit to distribute heated or cooled air in the building. The modern units also have higher efficiency natural gas burners or cooling coils which reduce the amount of energy used to raise or lower the temperature of the outside air before its distribution in the building. On each of these projects, Facilities surveys the entire building to make sure that each unit specified as a replacement is appropriately sized to meet the heat and cooling load of the building. This load is determined by the volume of the building, the number of staff occupying the building and the equipment used by that staff in each service zone. As part of this survey, Facilities also looks at the existing HVAC controls for the building to determine if an upgrade in the controls equipment would be beneficial. In most cases, additional cost savings can be gained by linking the building controls to the new 963 network software which programs and monitors performance and operations of the HVAC for the County's largest buildings.

Lighting and Electrical Upgrades:

County Buildings use fluorescent lighting systems for interior illumination of work spaces. With the continuing development of lower wattage / higher lumen fluorescent bulbs by the lighting industry, there are many potential cost savings to be gained by changing the existing lighting systems to a lower wattage system or to new lighting such as L.E.D's. Facilities frequently partners with energy suppliers to take advantage of the various programs they offer to either offset the funding for these upgrades, or receive discounted or donated bulbs and other lighting system parts.

Roofing Repairs and Replacement:

The primary function of a buildings roof is to keep the structure dry and sheltered from the elements. But, the roof is also the first line of defense in reducing the heat load in a building. When architecturally possible, Facilities repairs and replaces existing roofing on County buildings with "Cool "or reflective finished systems that meet or exceed California Title 24 Building Energy Efficiency Standards. Installation of a "Cool Roof" system can lower the surface temperature of the roof by 50 to 60 degrees in full exposure to the sun. The lower temperature of the roof reduces the heat load to the building, which in turn lowers the electrical draw for the HVAC system that is cooling the building.

Carpentry and Insulation:

The majority of the buildings owned by the County are between 20 and 90 years old. There has been considerable deterioration of the original insulation and weather proofing used over time since County buildings were constructed. Additionally, the movement of the building, doors and windows is contributing to insulation deterioration. Gaps are created between the doors, windows and their frames, allowing heated or cooled air from the building to escape. Most older buildings were constructed with single pane windows which are relatively poor insulators, and at times it is cost effective to replace these with dual pane windows that incorporate a insulating gas between the panes.

2-2-2 Mobile Workforce

A labor-management team was established in August 2009 and has been meeting since that time to develop a Countywide policy for a Mobile Workforce Program to reduce the County's and its employees "carbon footprint" in an accountable, customer-focused, and efficient manner.

The team is focusing on a wide range of strategies that could assist in reducing the carbon footprint.

Strategies being explored include:

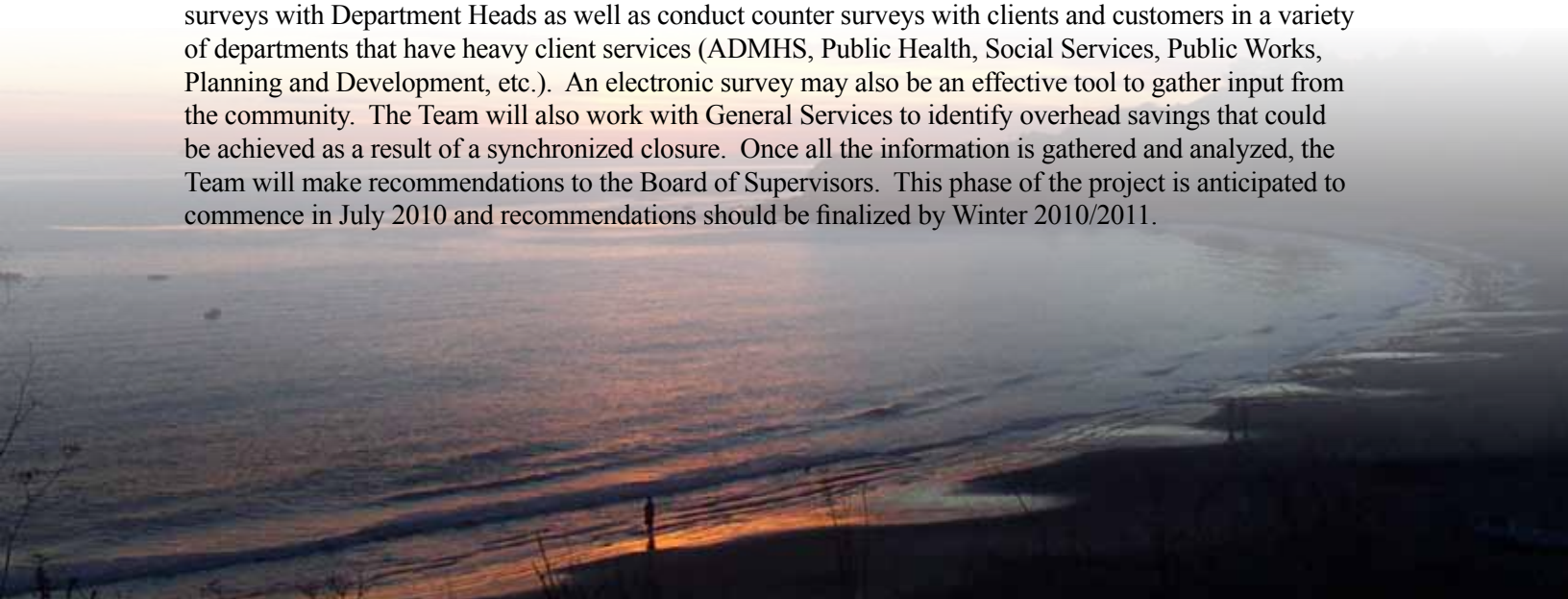
- Strengthening the County's telecommuting policy to encourage and support expanded use of telecommuting; and,
- Reviewing and potentially changing County hours of operation to provide greater access to the public (before 8 a.m. and after 5 p.m.) while potentially closing many County services every Friday or every other Friday; and,
- Reviewing and potentially changing the manner in which departments deploy and manage field staff (i.e., reducing trips to an office or central location; maximizing the use of technology to allow a "work anywhere" approach to field work; establishing satellite office or drop-in centers, etc.)

The first phase of the project was to strengthen the County's existing telecommuting policy. Over many months, the team researched best practices and incorporated them into a draft revised policy. The policy has been reviewed by County Counsel and Risk Management and those edits are in the process of being incorporated and reviewed by the Project Team. It is anticipated that the Telecommuting Policy will be brought to the Board of Supervisors in July/August 2010.

The next phase of the Mobile Workforce Project will be to examine the County's days and hours of operation to determine if it is feasible to close every Friday or every other Friday. A scheduled and synchronized closure would not be possible for some departments; however, most would be able to participate. The advantages of a synchronized closure are many:

- Reduction of vehicle trips to and from work;
- Reduction of business-related vehicle trips on the closure days;
- Reduction in utilities on days facilities are completely closed; and,
- Expanded hours of operation the days County offices are open to the public, which allows working individuals increased access to County services.

To assess the feasibility of a synchronized closure, it is anticipated that the Project Team will conduct surveys with Department Heads as well as conduct counter surveys with clients and customers in a variety of departments that have heavy client services (ADMHS, Public Health, Social Services, Public Works, Planning and Development, etc.). An electronic survey may also be an effective tool to gather input from the community. The Team will also work with General Services to identify overhead savings that could be achieved as a result of a synchronized closure. Once all the information is gathered and analyzed, the Team will make recommendations to the Board of Supervisors. This phase of the project is anticipated to commence in July 2010 and recommendations should be finalized by Winter 2010/2011.



2-2-3 Vehicle Fuels

The County's "Green Fleet" Management Plan, sponsored by the Vehicle Operations department, is a major component of the County's Sustainability Action Plan. The Green Fleet Plan is based on a series of programs to reduce greenhouse gas emissions by improving the overall efficiency of the County's vehicle fleet. The Green Fleet Plan includes policy recommendations, proactive steps towards purchasing more fuel-efficient vehicles, and strategies and goals for fuel reduction. The plan is an on-going effort as Vehicle Operations continues to research and evaluate current and future vehicle and fuel technologies.

Vehicle Operations' Green Fleet Plan has several programs currently in place that have reduced fleet emissions. These programs include:

Fleet "Right Sizing"

It is a simple fact that larger vehicles require more fuel. 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. Right sizing ensures, through logical planning, that the duty requirements of each vehicle matches the smallest possible vehicle for the intended task.

Vehicle Operations has made, and continues to make, considerable improvements to "right sizing" the County's vehicle fleet. Whenever possible, full-size sedans are being replaced with mid-size sedans; mid-size sedans are being replaced with compacts; and trucks are being down-sized to the smallest trucks possible for the intended task.

The Use of Re-refined Oil in County Vehicles

Another successful program in Vehicle Operations' Green Fleet Plan includes the use of re-refined oil. Whenever possible, Vehicle Operations is replacing the virgin petroleum products used in servicing of County-owned vehicles with re-refined oil products.

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 was the first governmental fleet in the tri-county area to use this environmentally friendly product. Re-refined oil has enabled the County to achieve one of its Green Fleet goals without increasing Vehicle operational costs.

Fully Automated Car Share System

Santa Barbara County has successfully implemented California's first fully automated "Car Share" system. Following the County's model for ride sharing, Vehicle Operations has been able to reduce the total number of County owned fleet vehicles by enabling passengers to easily connect and ride share. The Car Share reservation system has a built-in module for "Ride Share" that matches up County employees who are traveling to the same destination at the same time. This successful program has saved the County money while reducing its environmental "footprint".

Benefits of the fully- automated motor pool "Car share" system include:

- Reduction in the total number of County owned vehicles
- Additional motor pool locations are available without the need for more staff
- County employees have 24-7 access to motor pool vehicles
- Easy access to ride sharing as the system automatically matches up employees who are traveling to a common destination

Vehicle Anti-Idling Policy

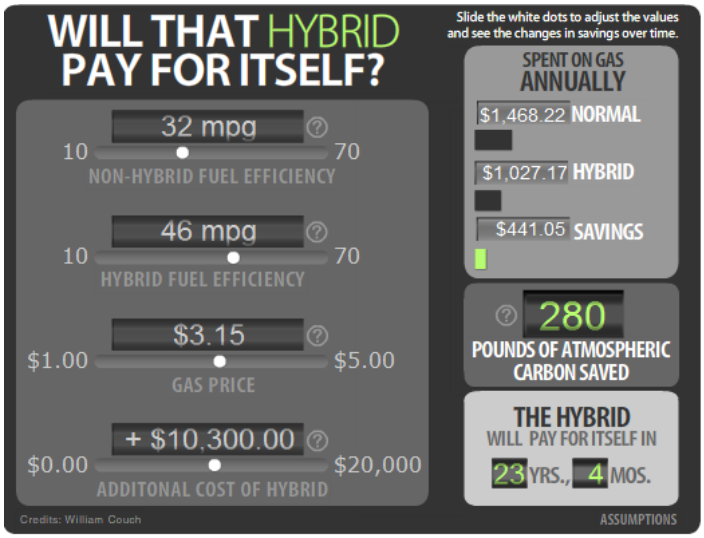
The County has established an anti-idling policy for its vehicles. An idling car uses almost as much fuel, and emits almost as much carbon dioxide, as a car in motion. Therefore, to reach County goals for fuel reductions, as well as comply with new California Air Resources Board (CARB) mandates, the County has established a vehicle anti-idling policy. The CARB (a State entity) mandate required the County to establish and enforce a policy that limited the idling time of all County-owned diesel-powered vehicles and equipment. When the County's anti-idling policy was written, the County elected to include all County vehicles and equipment regardless of fuel type.

Hybrid Vehicles

The County purchased the first of its hybrid vehicles in 2001. Since that time the County's transition from conventional gasoline powered vehicles to hybrid powered vehicles has been conservative. The County currently operates approximately twenty-five hybrid powered vehicles. These vehicles have proven to be very reliable and have performed extremely well. To date, all hybrids originally purchased by the County are still in operation and several of these vehicles have in excess of 120,000 miles.

Part of the Vehicle Operations' conservative approach includes a careful examination of the total operating cost of all fleet vehicles. A vehicle's operational cost (cost per mile to operate the vehicle) is a primary consideration when selecting vehicle types to purchase. In its dedication to responsible vehicle purchasing, Vehicle Operations has resisted making large-quantity hybrid vehicle purchases. For example, in 2008, the County purchased several compact sedans (Ford Focus EPA; 28\36 MPG) for $13,040.98 per vehicle. That same year the County also purchased one hybrid (Toyota Prius EPA 48\45 MPG) for $23,337.57. The cost differential for the Prius compared to the Focus was over $10,000.00.

At today's fuel prices, the County could never recover the additional funds required to purchase the more expensive hybrid vehicles based on the fuel cost savings alone. Vehicle Operations does recognize the environmental benefits of hybrid vehicles and attempts to strike a practical balance between fleet emission reductions and operating the County's fleet in a cost effective manner. As the price of fossil fuel rises and as hybrid vehicles become more price competitive, the operational cost gap between hybrids and conventional compact sedans will narrow.



Other Initiative and Achievements

In its on-going efforts to fully support the County's goals for reducing fuel usage, and the greenhouse gases emitted by that fuel, the Vehicle Operations department has made other, significant changes, including:

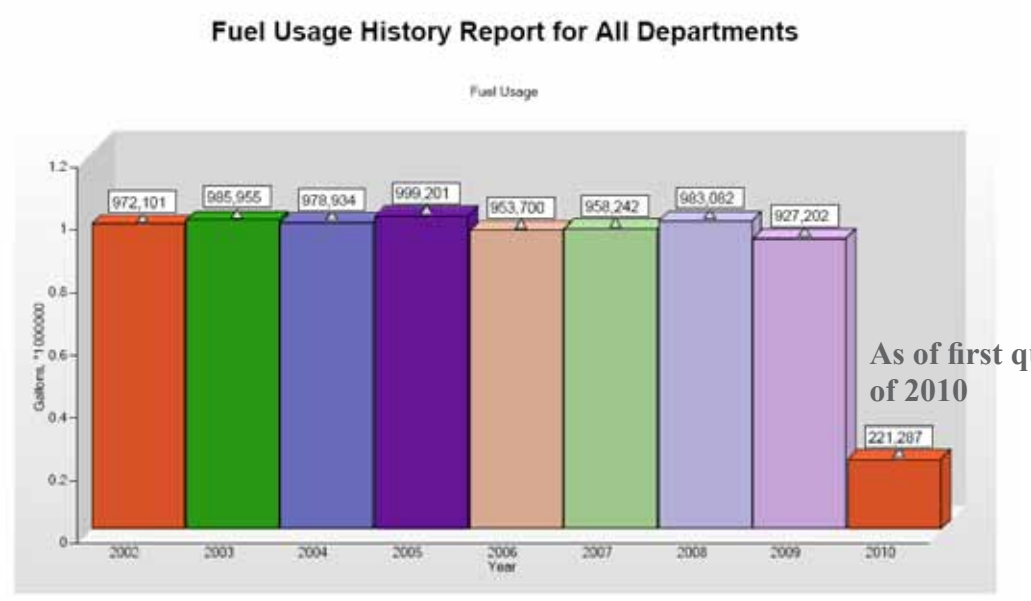
- 100% compliance with mandated smog inspection certifications
- 100% compliance of mandated diesel smoke testing and certifications
- Complete compliance with CARB-mandated on-highway and off-highway diesel particulate trap retrofit programs
- Implementation of a fleet tire inflation program
- Conversion of fleet record keeping from paper to electronic
- Comprehensive recycling programs for all Vehicle Operations facilities (recycled items include: paper, printer toners, batteries, brake linings, oils, filters, coolants, metals and various vehicle parts and components).

County-Wide Fuel Reduction Goals

It is every County department's responsibility to participate in the County's goal to reduce fossil fuel usage, but to achieve a goal, one must first define the goal. To that end, in 2008, the County Executive Office established several fleet cost-reduction policies that included individual fuel-reduction goals for each department.

In 2009, the County used approximately 5% less fossil fuel gallons as compared to 2008. Several factors accounted for this reduction in fuel usage including: policy compliance; right sizing of the County's fleet; success of the County's Ride Share program; and, implementation of a fleet tire inflation program.

Moving forward, Vehicle Operations will continue to offer and evaluate emission-reducing ideas for County departments' vehicle needs. Vehicle Operations realizes that the County's financial resources are limited, therefore, realistic cost-benefit analyses will continue to be performed before reshaping policies or selecting future emission-reduction projects.



Proposal for a Green Fleet Review Committee

As part of its effort to bring changes and improvements to the County's fleet of vehicles, the County's Vehicle Operations recommends a County-wide Green Fleet Review Committee be established.

The proposed Green Fleet Committee will be comprised of representatives from various County departments. The Committee will review current fleet practices, establish comprehensive Green Fleet polices, review future Green Fleet projects and make executive recommendations regarding selections. The Committee's goal will be to ensure the County's success in reducing the fleet related emissions.

Green Fleet Committee Objectives:

- Provide a comprehensive review of current County fleet practices
- Establish comprehensive Green Fleet polices and Green Fleet best practices
- Oversee and enforce current and future fleet polices
- Oversee fleet procurement practices
- Require Green Fleet Committee approval for all vehicle purchases to ensure compliance with policy standards
- Evaluate alternative fuel programs

Background on Alternative Fuels Biodiesel

Biodiesel is an alternate fuel made of renewable organic raw materials as opposed to fossil hydrocarbons. Santa Barbara County has carefully evaluated the use of biodiesel as an alternative to conventional fuel but has currently elected not to convert the County's diesel fleet from its ultra-low sulfur diesel to biodiesel. Although biodiesel does offer some advantages over conventional diesel fuels, there are also some considerable disadvantages, including:

- The additional cost-per-gallon of biodiesel fuels compared to conventional diesel fuels
- Energy loss. Biodiesel has approximately 2% less BTU's* per gallon compared to conventional diesel thus requiring additional fuel consumption and costs by the County
- All or nothing conversion; County fuel sites have a single storage tank per fuel site thus requiring an all or nothing conversion. Such a significant and expensive upgrade makes that unviable at this time.

  * BTU: British Thermal Unit – a measure of the heating value of a fuel

Ethanol

Ethanol is another alternate fuel. Ethanol is made from plants, such as corn, sorghum, potatoes, wheat or sugar cane. When combined with gasoline, it increases octane levels while promoting more complete fuel burning, thereby reducing emissions such as carbon monoxide and hydrocarbons. Although the County owns dozens of "flex-fuel" vehicles that are able to run on ethanol, ethanol fuel is not currently available in the Santa Barbara County area. The County will evaluate the option of using ethanol fuel once an ethanol fueling infrastructure is in place within our local region.

2-2-4 Landfill Generation

Energy is both a national and international issue, but when you get down to the realities of real-life energy need and production, it is most of all local.

With global warming, greater environmental sensitivity and the need to reduce imports of foreign energy supplies, we need every clean, renewable and local energy source we can find. Methane captured from landfills and wastewater treatment facilities are a reliable contributor to the solution.

From its landfill Gas to Energy facility at the Tajiguas landfill in Santa Barbara, the FORTISTAR Methane Group (www.fortistar.com) has been an active participant in addressing these challenges. FORTISTAR'S facility produces 23,000 megawatt hours of electricity year after year, capable of supplying more than 2000 local homes with all their electric power needs.

Utilizing a U.S. made Caterpillar Model G3616 engine generator set, FORTISTAR'S facility consumes over 300 million cubic feet of landfill gas annually, reducing CO2 emissions the equivalent of taking nearly 20,000 cars off local streets and highways each year.

To learn more about Landfill Gas-to-Energy and understand how it works, see the article below by the United States EPA Landfill Methane Outreach Program.

The dedicated professionals of FORTISTAR Methane Group keep the facility operating 24 hours per day, seven days a week, all while complying with stringent federal, state and local environmental regulations.

Plant Metrics and Environmental Benefits

Average of landfill gas consumed each month (average methane content)	26,000,000 scf (52%)
Total methane utilized (CO2 equivalent)	9,693,840 Kg (203,571 MT)
CO2 emitted from Landfill Gas-to-Energy facility (reduction of GHG emissions)	4,071 MT (98%)
Average monthly kilowatt hours produced (average monthly residential use)	1,946,000 (936 kWh)
Equivalent number of homes powered by the Tajiguas site	2,079

The emissions reduced at this facility are roughly the equivalent of:

- The annual greenhouse gas emissions from 18,767 passenger vehicles
- CO2 emissions from 535 railcars worth of coal
- CO2 emissions from 11,631,000 gallons of gasoline consumed
- Carbon sequestered annually by 26,211 acres of pine or fir forest

Methane Emissions from Landfills

By the Landfill Methane Outreach Program, a division of the United States Environmental Protection Agency - www.epa.gov/lmop Municipal solid waste (MSW) landfills are the second-largest source of human-related methane emissions in the United States, accounting for approximately 22 percent of these emissions in 2008. Landfill Gas (LFG) is created as solid waste decomposes in a landfill. This gas consists of about 50 percent methane (the primary component of natural gas), about 50 percent carbon dioxide (CO2), and a small amount of non-methane organic compounds. Methane emissions from landfills represent a lost opportunity to capture and use a significant energy resource.

Converting Landfill Gas to Energy

Instead of escaping into the air, LFG can be captured and used as an energy source. Using LFG helps to reduce odors and other hazards associated with LFG emissions, and it helps prevent methane from migrating into the atmosphere and contributing to local smog and global climate change. LFG is extracted from the landfill using a series of wells with a vacuum system. This system directs the collected gas to a central point where it can be processed and treated depending upon the ultimate use for the gas. From this point, the gas can generate electricity, replace fossil fuels in industrial and manufacturing operations, or be upgraded to pipeline-quality gas where the gas may be used directly or processed into an alternative vehicle fuel.

Electricity Generation

The generation of electricity from LFG makes up about two-thirds of the current LFG operational projects in the United States. Electricity for on-site use or sale to the grid can be generated using a variety of different technologies, including internal combustion engines, turbines, micro turbines, and fuel cells. The vast majority of projects use internal combustion (reciprocating) engines or turbines, with micro turbine technology being used at smaller landfills and in niche applications. Technologies such as Stirling and organic Rankine cycle engines and fuel cells are still in development.

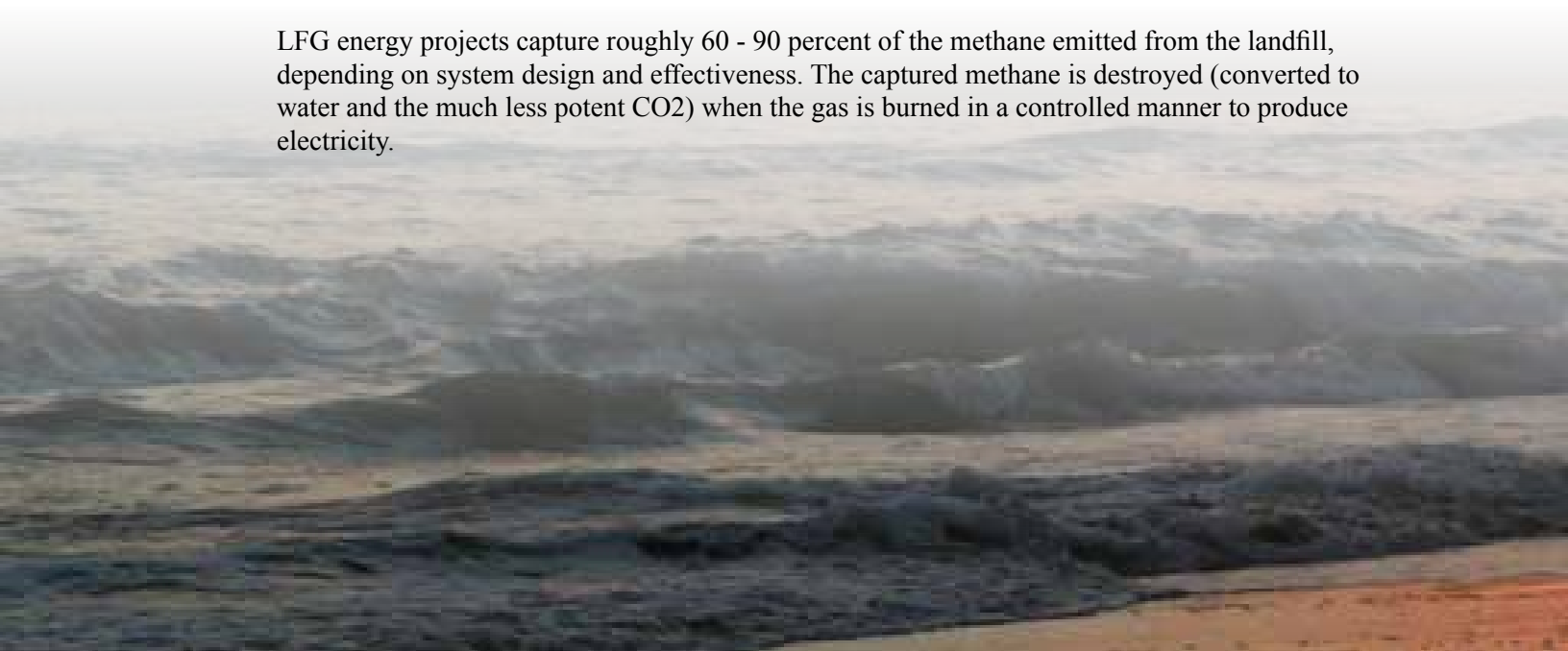
Benefits of Landfill Gas Energy

Using LFG for energy is a win/win opportunity. LFG utilization projects involve citizens, nonprofit organizations, local governments, and industry in sustainable community planning. These projects go hand-in-hand with community and corporate commitments to cleaner air, renewable energy, economic development, improved public welfare and safety, and reductions in greenhouse (global warming) gases. Finding innovative ways to deal with their LFG contributes to the creation of livable communities that enjoy increased environmental protection, better waste management, and responsible community planning.

- ### Directly Reduces Greenhouse Gas Emissions

  MSW landfills released an estimated 30 million metric tons of carbon equivalent to the atmosphere in 2008 alone. Given that all landfills generate methane, it makes sense to use the gas for the beneficial purpose of energy generation rather than emitting it to the atmosphere. Methane is a very potent greenhouse gas that is a key contributor to global climate change (over 21 times stronger than CO2). Reducing methane emissions from MSW landfills is one of the best ways to achieve a near-term beneficial impact in mitigating global climate change.

  LFG energy projects capture roughly 60 - 90 percent of the methane emitted from the landfill, depending on system design and effectiveness. The captured methane is destroyed (converted to water and the much less potent CO2) when the gas is burned in a controlled manner to produce electricity.



- ## Indirectly Reduces Air Pollution by Offsetting the Use of Non-Renewable Resources

  Producing energy from LFG reduces the need to use non-renewable resources such as coal, oil, or natural gas to produce the same amount of energy. This can avoid or reduce gas end-user and power plant emissions of CO2 and criteria pollutants such as sulfur dioxide (which is a major contributor to acid rain), particulate matter (a respiratory health concern), nitrogen oxides (NOx), and trace hazardous air pollutants.

  Like all combustion devices, LFG electricity generation devices emit some NOx, which can contribute to local ozone and smog formation. However, LFG electricity generation projects significantly improve the environment, because of the large methane reductions, hazardous air pollutant reductions, and avoidance of the use of limited non-renewable resources such as coal and oil that are more polluting than LFG.

- ## Benefits The Local Economy

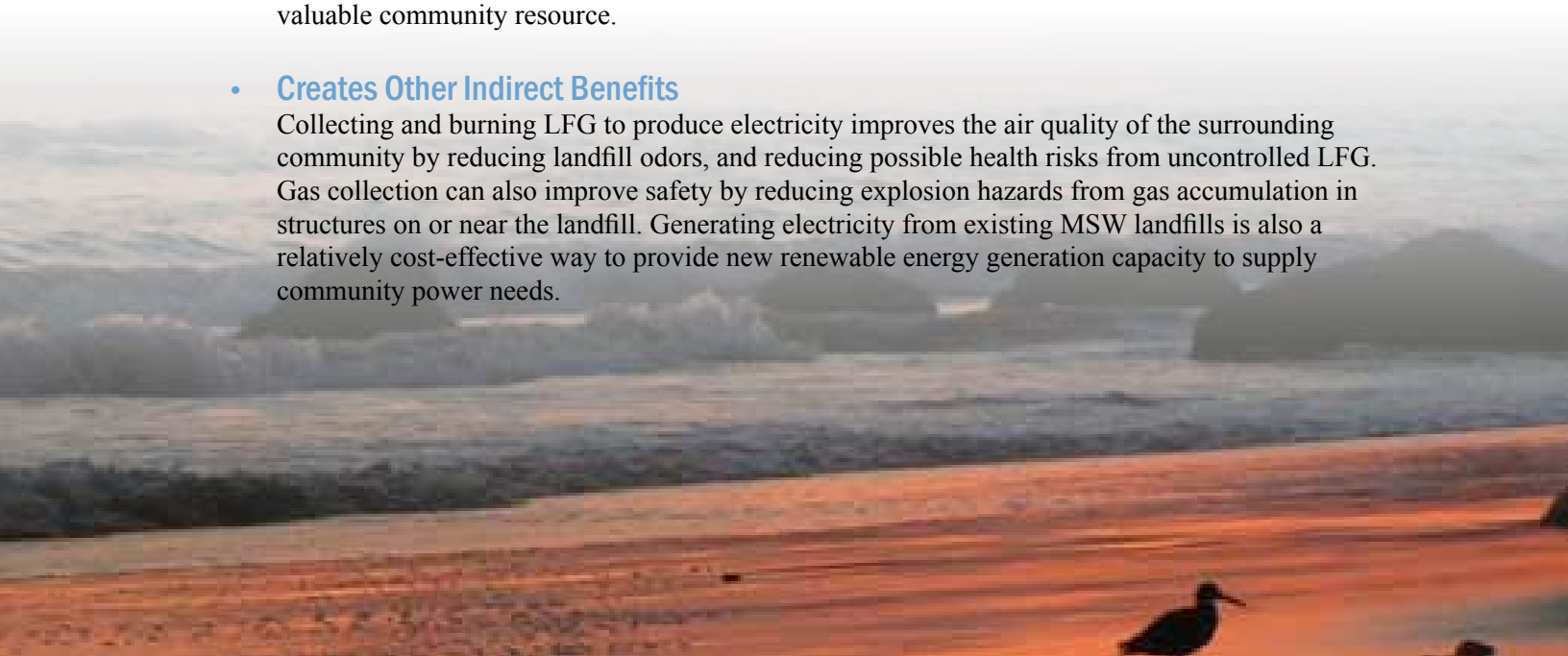
  LFG energy projects generate revenue from the sale of the gas. LFG use can also create jobs associated with the design, construction, and operation of energy recovery systems. LFG energy projects involve engineers, construction firms, equipment vendors, and utilities or end-users of the power produced. Much of this cost is spent locally for drilling, piping, construction, and operational personnel, helping communities to realize economic benefits from increased employment and local sales. Businesses are also realizing the cost savings associated with using LFG as a replacement for more expensive fossil fuels, such as natural gas. Some companies will save millions of dollars over the life of their LFG energy projects. Communities that embrace this technology enjoy increased environmental protection, better waste management, and responsible community planning. For example, the Ecology Club at Pattonville High School in Maryland Heights, Missouri, came up with the idea to use gas from the nearby landfill to heat their school. The school paid $175,000 to run a 3,600-foot pipeline between the landfill and the school's two basement boilers. In turn, the landfill owner donated the methane to the school as a way of "giving back to the community." The school anticipates that it will save $40,000 a year and recapture its investment within five years.

- ## Reduces Environmental Compliance Costs

  Current EPA regulations under the Clean Air Act require many larger landfills to collect and combust LFG. There are several compliance options, including flaring the gas or installing an LFG use system. Only LFG energy recovery gives communities and landfill owners the opportunity to reduce the costs associated with regulatory compliance by using a pollutant as a valuable community resource.

- ## Creates Other Indirect Benefits

  Collecting and burning LFG to produce electricity improves the air quality of the surrounding community by reducing landfill odors, and reducing possible health risks from uncontrolled LFG. Gas collection can also improve safety by reducing explosion hazards from gas accumulation in structures on or near the landfill. Generating electricity from existing MSW landfills is also a relatively cost-effective way to provide new renewable energy generation capacity to supply community power needs.



2-2-5 Resource Recovery

Efforts by the Public Works Department

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.

Commingled Recycling Program

In 1999, the County expanded its recycling program to offer commingled recycling to all County facilities where collection was possible. Each year, more and more facilities have used this service.

With the two-fold goal of reducing the amount of waste sent to landfills each year and increasing the overall diversion rate of recycling at the County of Santa Barbara, the RRWMD is undertaking an effort to accurately determine the number of facilities that are currently participating in recycling programs and their level of participation. Prompted by the request from RRWMD, the County's three franchise waste haulers will be providing data on the trash and recycling services at each County facility. This information will allow RRWMD to help establish recycling programs in those County departments that do not already have one. The RRWMD will also work with all County departments to ensure they are recycling at an optimal level and if they are not, the RRWMD will help to improve their efforts.

To encourage and assist recycling efforts, the RRWMD will continue to offer free recycling containers to County departments. These containers are purchased using grant funds allocated to the County of Santa Barbara from the California Department of Resources Recycling and Recovery (Cal Recycle).

General Outreach Efforts to Promote Reduce, Reuse, and Recycle

The RRWMD publishes its Recycling Resource Guide for Santa Barbara County in both English and Spanish. The English version is also available on the RRWMD's recycling website: LessIsMore.org. Efforts are underway to include the Spanish version on this website as well.

The Guide contains comprehensive information in such areas as the following:

- Recycling terminology
- Information on the different types of plastic
- Waste prevention tips
- A directory of materials for reuse and recycling (this directory lists various categories of materials and locations that will reuse or recycle the materials)
- Recycling drop-off and buyback centers
- How to prevent junk mail
- Composting/mulch program
- Hazardous waste collection facilities
- Used motor oil collection centers
- Places for recycling of smoke detectors
- Sharps collection program
- Directory of recycled content products
- Directions for starting a recycling program
- Green Business Program, Santa Barbara County

County employees and the general public will also find information on a variety of other topics on LessIsMore.org, such as:

- The types of materials that can and cannot be placed in commingled recycling containers in Santa Barbara County
- Tips on how to reduce waste, to reuse products and materials, and to recycle those products and materials that cannot be reused
- Answers to frequently asked questions about recycling
- Information on current and upcoming events and programs and information on the County's various recycling programs

Efforts by the General Services Department

Hazardous Waste Recycling

County employees utilize hundreds of batteries each year for pagers, cameras, calculators, palm pilots, and other electronic equipment. These batteries are hazardous waste and need to be disposed of properly. To address this situation, the County started a program in April 2001 to collect and recycle various types of batteries, such as: 12 volt, 6 volt, 9 volt, A, AA, AAA, C and D sized batteries, including alkaline, nickel-cadmium, and lithium batteries.

County employees are encouraged to recycle their used batteries by sending them through inter-departmental mail to the Mail Services Division. Mailroom staff members regularly drop off the batteries at the Community Hazardous Waste Collection Center, located at the University of California at Santa Barbara. For the past several years, the County has collected the following amounts of used batteries for recycling:

Fiscal Year 2006-07 (July 1, 2006 to June 30, 2007)	1,250 pounds
Fiscal Year 2007-08 (July 1, 2007 to June 30, 2008)	1,400 pounds
Fiscal Year 2008-09 (July 1, 2008 to June 30, 2009)	1,080 pounds
Fiscal Year 2009-10 (July 1, 2009 to March 31, 2010)	900 pounds

Electronic Waste Recycling

Under the Electronic Waste Recycling Act, electronic equipment may not be thrown into the trash. Instead, it must be donated for reuse or recycling. Unused computers generated by the County are donated to Computers for Families program. Under Computers for Families program, boys at the Los Prietos Boys Camp are taught how to repair and upgrade computers. These computers are then donated to needy families who do not have a computer. The following provides a breakdown of the computers donated to Computers for Families:

Fiscal Year 2006-07 (July 1, 2006 to June 30, 2007)	75,000 pounds
Fiscal Year 2007-08 (July 1, 2007 to June 30, 2008)	85,000 pounds
Fiscal Year 2008-09 (July 1, 2008 to June 30, 2009)	71,750 pounds
Fiscal Year 2009-10 (July 1 2009 to March 31, 2010)	20,000 pounds

Other types of electronic equipment and computers, that are not donated to Computers for Families, are collected and either sold for reuse or recycled. The following provides a breakdown of the amount of electronic equipment recycled over the past several fiscal years:

Fiscal Year 2006-07 (July 1, 2006 to June 30, 2007)	4,000 to 5,000 pounds
Fiscal Year 2007-08 (July 1, 2007 to June 30, 2008)	6,000 to 7,000 pounds
Fiscal Year 2008-09 (July 1, 2008 to June 30, 2009)	10,000 pounds
Fiscal Year 2009-10 (July 1, 2009 to March 31, 2010	3,500 to 4,500 pounds

Disposal of Miscellaneous Items

Various types of miscellaneous items are stored in the County's warehouse while efforts are made to donate the material to nonprofit organizations and County departments. If specific items and equipment are not claimed (by non-profits) after several months, they are collected by a liquidator, who attempts to sell the material (generally these items and equipment have a value of $5,000 or more). Below is a breakdown of the volume of material sold by a liquidator over the past several fiscal years:

Fiscal Year 2006-07 (July 1 2006 to June 30, 2007)	5,000 pounds
2007-08 (July 1 2007 to June 30, 2008)	7,000 pounds
2008-09 (July 1 2008 to June 30, 2009)	10,000 pounds
2009-10 (July 1 2009 to March 31, 2010)	3,500 to 4,500 pounds

2-2-6 County Parks Department

The Santa Barbara County Parks Department takes pride in providing people opportunities for wholesome outdoor leisure and recreational pursuits. It proactively maintains a varied landscape of 8,000 acres of parks and open spaces. At the same time, the County Parks continues to foster conservation of natural resources for present and future generations through active stewardship of public lands and energy efficiency. The Santa Barbara County Parks Department has strived to become a leader in using energy in an efficient way.

Work assignments at the Parks Department are organized to provide the right amount of staff and equipment to do the job safely and reduce vehicle usage. The On-Site Park Host Program has also helped reduce vehicle use. All staff coordinate trips to different parts of the Santa Barbara County to reduce fuel cost. Monthly meetings are held with landscape contractors to discuss and plan for water conservation in all open spaces, buildings, and parks.

Located on Mission Canyon Road, near the historic Santa Barbara Mission and Natural History Museum, is the Rocky Nook Park. Not only is Rocky Nook Park a day-use park, it is also home to the Parks Administration Office. In its commitment to conserve energy and participate in the County's goal of reducing GHG, the Parks Department has made some of the following changes:

Energy Efficient Lighting

In 2007, full spectrum lights replaced the old fluorescents at the Parks Administration building. Full spectrum lights last significantly longer than fluorescents and are more energy efficient.

In 2008, the lights along the path at Arroyo Burro were replaced with more energy efficient LED lights. Also replaced were the sodium bulbs in the Arroyo Burro main parking lot. LED bulbs last up to 10 times longer than other lights, helping in maintenance and replacement costs. Also, these lights are quite durable; they are solid and hold up well to jarring and bumping, making them perfect for outside use.

The department is researching the use of solar lighting for the outer parking lot at Arroyo Burro Beach County Park. Solar lights use a second generation LED bulb that uses less energy and gives off more light.

Energy Efficient Insulation

In 2009, a new roof was installed at the Parks head office to improve insulation and increase energy efficiency.

Water Conservation

Rocky Nook, as well as other parks and open spaces, shut off irrigation systems during rainy seasons. During the drier season, irrigation systems are monitored for repairs and/or adjustments to watering times.

Wise Energy Choices at Lake Cachuma

Lake Cachuma Recreation Area is one of two County owned camping parks in Santa Barbara County. Lake Cachuma staff are leaders in energy efficiency for Santa Barbara County Parks and have implemented the following programs and improvements:

- Filtration motors for the swimming pools were replaced with energy efficient motors. Leaking skimmers and pipes were repaired to reduce water usage. During the off seasons, one of the two filtration pumps is shut off, resulting in a 50% saving in energy costs.

- Three new lift station back-up generators were installed to replace the older units. New generators are more efficient and also meet the new particulate matter national air quality standards. These units were also retrofitted with automatic transfer switches, which automatically switch on and off in the event of a power outage, thus preventing long periods of unnecessary running. The new lift station uses new pumps and controls that are more energy efficient. Pumps and motors (high lift and low lift) were changed out at lift stations with more efficient, smaller motors. Several sewer wastewater storm infiltration leaks were repaired and self closing hose bibs were installed, resulting in less water usage.

- The Nature Center building at Lake Cachuma is equipped with on-demand water heaters in the bathrooms. The Naturalists compost their food waste as well as the Nature Center coffee grounds. They also use the clean side of used paper to print out any non-official and draft documents. The Naturalists recycle all allowable products. Staff was given permission to use the County TLC (telecommute) benefit to allow carpooling to Cachuma.

- The visitor service staff at Lake Cachuma has also pitched in to save energy. Computer monitors are turned off at the end of the day, along with unnecessary lights. Co-workers ride together to projects to save on vehicle and gas costs.

Wise Energy Choices at Jalama Beach

Jalama Beach is the second of the two Santa Barbara County camping parks. Jalama Beach has made many "green" changes to help become more energy efficient including:

- Restrooms were retrofitted with waterless urinals

- Domestic water system was retrofitted with variable speed motors

- All the light bulbs were replaced with Compact Florescent Lights (CFL) in the restrooms, residence, lift station, office and gate houses. (CFL use 1/3 less electricity; are four times more efficient; and last up to 10 times longer than incandescent lights. Replacing a single incandescent bulb with a CFL will keep a half-ton of CO2 out of the atmosphere over the life of the bulb).

Wise Energy Choices at Nojoqui Falls

Nojoqui Falls is known for its beautiful waterfall and ability to accommodate large groups. To be more energy efficient, Nojoqui Falls has implemented the following upgrades:

- Domestic water system and conventional pump motors were upgraded to Variable-Frequency Drives (VFD)

- The VFD has been programmed to switch to lower speeds throughout periods of low use

Wise Energy Choices at Waller Park

Waller Park is one of the loveliest parks in Santa Barbara County. This Park has made several improvements in its efforts to meet the highest energy saving standards around. These improvements include:

- Three restrooms were upgraded to replace all incandescent lighting with CFL's
- Low flow plumbing fixtures were installed
- The well water system was updated to a VFD motor
- Drought tolerant landscaping completed (For the past fifteen years, the Parks Department has been able to utilize low water demanding plants in landscape renovation projects. California native plants, once established, require much less water than exotic species traditionally used in landscaping. These plants are watered with drip irrigation systems that deliver water only to the base of the shrubs, further enhancing water conservation. This landscape project was also implemented at Orcutt Community Park and Lake Cachuma.)
- Leaks are repaired upon discovery

Other Upgrades for Energy Efficiency

Weather Tech irrigation controllers were installed at Falcon and Rice Ranch (in Orcutt). These units monitor Evapotranspiration (ET), soil, grasses, and weather to control the water pattern to provide the most efficient water times.

The Cuyama Joseph Centeno Aquatics Complex is a brand new facility, completed just last year. This complex was designed to be energy efficient due to water shortage issues in the area. The Cuyama pools filtration pumps were installed with VFDs to save energy and water. The landscaping contains only drought tolerant plants. The restrooms were retrofitted with waterless urinals (saving an average of 50,000 gallons of fresh water per year). The waterless urinals decrease the need for sewer treatment, making a better choice for the environment.

Day-lighting has been incorporated into the design of new or remodeled Parks buildings. The new emergency generator at the Water Treatment Plant will be running on propane fuel. Low flush toilets and fixtures have been installed to save water and pumping energy.

Pest Management

Integrated Pest Management System promotes sustainable and eco-friendly strategies that allow for the healthy growth of plants, while preventing pests and threats to humans, animals, businesses and the

environment. These systems include the use of groundcovers for weed suppression, water conservation and building soil health, weed wacking, mowing, and manual removal, mechanical trapping for gopher and rodent removal and careful water management to reduce cost, disease and maintenance.

Mulching

The Parks Department reduces water usage with its drought tolerant plants, by mulching planter beds and spreading chips for weed abatement. Mulch is free in Santa Barbara County and also happens to be the number one method for sustainable weed management. The mulch that is used by Santa Barbara County consists of all green materials produced by gardeners in the community. Mulch benefits are vast and include weed suppression, reduced soil erosion, conservation of water, reduction of non-point source pollution, increases the value of your property, builds soil health, increases soil porosity , increases water infiltration, and reduces stress of temperature changes. Mulch is also attractive, eliminates the need for toxic poisons and saves you money by reducing your water, fertilizing and pesticide needs.

The south County Parks operations uses two mulching lawn mowers. Mulching lawn mowers, which return grass clippings to the lawn, reduce green waste and labor as well as build soil health and fertility.

Organic Fertilizer

Organic Fertilizer is currently being reviewed as an option for park needs. It's preferred to conventional formulas because of its soil building properties. Organic fertilizers are formulated to release slowly over a long period of time providing a consistent nutrient supply. Conventional fertilizers build up salt levels and degrade soil health over time.

One local Santa Barbara County park is experimenting with compost tea. Compost tea is a brew made by taking small quantities of biologically active compost and "brewing" it with room temperature water and air bubbles. The resulting mixture is then sprayed directly on plant foliage or on the soil. The idea behind this type of nutrient cycling is that the soil microbes in the compost will be activated and multiplied by the brewing process and when applied to plants will enhance disease resistance and increase nutrient availability.

Santa Barbara County Parks employs a holistic approach that emphasizes integrated pest management, careful stewardship of the land and its natural and cultural resources through energy efficiency. From drought tolerant plants, to water-less urinals, to carpooling and recycling, the Santa Barbara County Parks Department has shown they are the role model for going green.

2-2-7 Printing & Reprographics

Since the days of Ben Franklin's Poor Richard's Almanac the printing arts have long been an environmentally unfriendly collection of practices and processes. With the widespread availability of electricity, the printing business also became a huge user of energy, with machines capable of consuming hundreds (or even thousands) of kilowatt hours each day. In the past ten years the printing industry has seen a technology revolution that can fairly be compared to Gutenberg's invention of movable type. "Old school" printing practices and processes are daily being replaced by energy efficient methods which also help reduce the massive carbon footprint traditionally associated with the printing process. The traditional aluminum plates once used at the County (and still in use elsewhere) required development in a chemical bath that generated both air and water pollution. The plate development equipment required for those aluminum plates needed labor-intensive maintenance on a weekly basis to keep the machine working smoothly and effectively.

The vacuum frame illustrated on the next page required both a high-voltage electrical circuit and a "clean room" in which to operate. Energy consumption, both direct (from high-wattage lamps) and indirect (dedicated HVAC to remove generated heat) was very high.

To replace this older energy-intensive equipment, new technology has been installed in County Reprographics. Replacing the entire collection of older, traditional plate-making equipment is a single, self-contained plate-making system. The new device requires no dedicated clean room or cooling solution, but perhaps more importantly, greatly reduces the amount of material sent into the waste stream. Interface with the unit is entirely digital - saving both materials and labor - and weekly maintenance has been reduced to one-half hour.

Green practices continue to be adopted and implemented in the day-to-day operations of County Reprographics. Current practice utilizes as much recycled paper as possible; today every copy made on 8-1/2 x 11 white bond is made on recycled paper.

Current technology high-speed copiers will be replaced with machines compatible with toner made from products other than petroleum. Though still in the development process, this new toner technology should be widely available in the next two to three years - perfect timing for replacement of the copy machines now in use.

Print on demand is a concept first used in the publishing industry when software documentation became so costly to produce. The idea is rather new to the commercial printing industry, and it's a paradigm shift. The expansion of high-speed internet connections and the proliferation of smaller more affordable printing devices make possible a new way for

the County to better use scarce resources: print only what you need when you need it.

Over the next several years, the day-to-day role of County Reprographics will change from being a provider of simple printed material to providing graphics management that will attempt to unify the "look and feel" across all types of County communication. Taken to an extreme, this graphics management will include the County's internet communication. It may even allow clients to print the documents they need ahead of time and complete required information to receive County services. The impact of this change has enormous potential to save time, and reduce waste. It might even save an extra vehicular trip by a client to a County agency, thereby helping with traffic congestion and fuel use reduction.

The strategic goal has to be kept in mind: develop and implement Green practices. It is our intent to leave a smaller footprint on our environment, and engineer creative ways to use our finite resources to the best advantage for the constituents of beautiful Santa Barbara County.

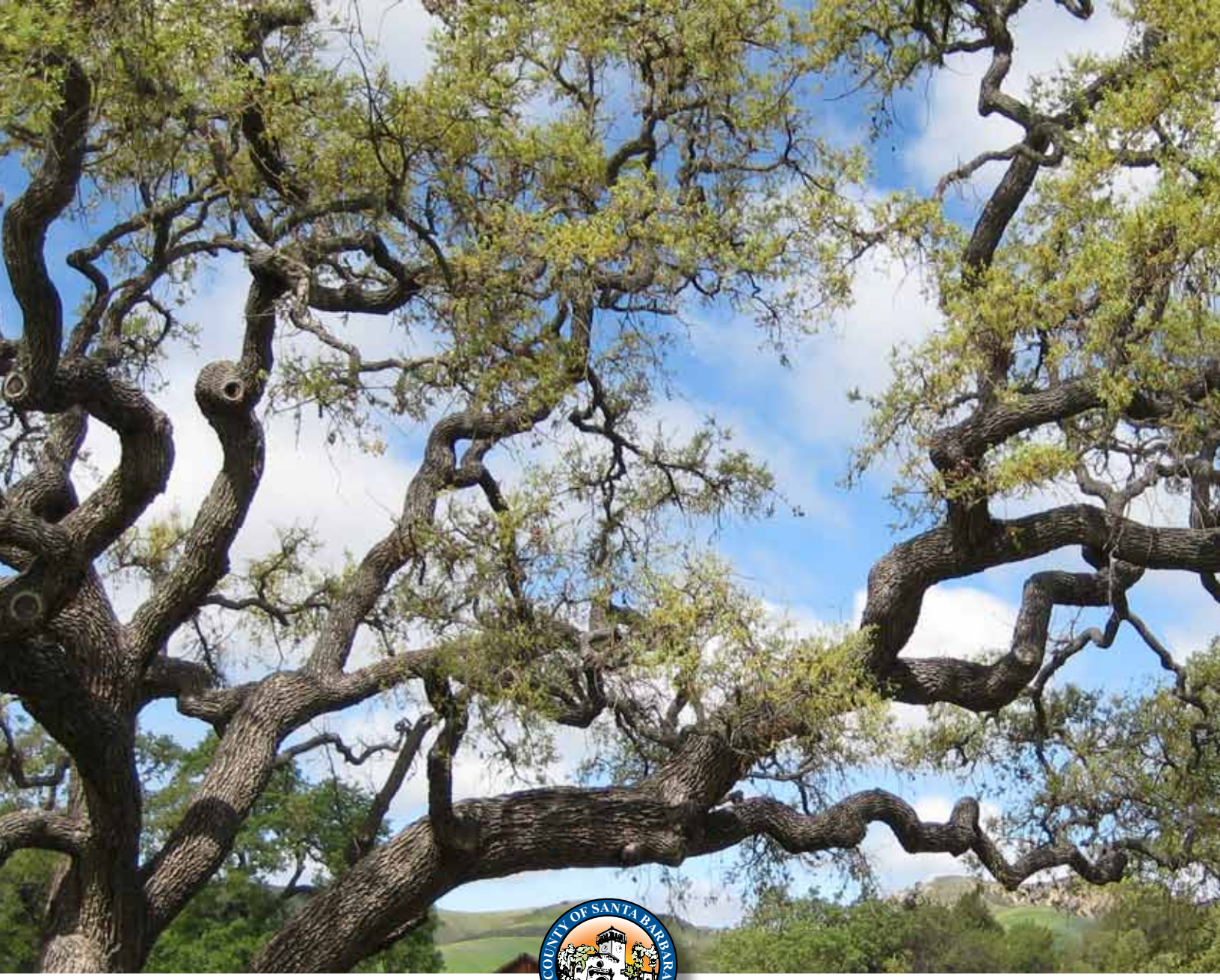
Out with the old

In with the New!

2-3 The Santa Barbara Energy Partnerships

The Santa Barbara County Energy Partnership Programs are designed to assist the local governments (City of Carpinteria, City of Goleta, Santa Barbara County, City of Santa Barbara, City of Santa Maria, City of Solvang, City of Buellton, City of Guadalupe) effectively lead their communities to increase energy efficiency, reduce greenhouse gas emissions, increase renewable energy usage, protect air quality and ensure that their communities are more livable and sustainable. The Programs, with (CEC) Community Environmental Council and the Santa Maria Valley Chamber of Commerce assisting, provide a performance based opportunity from SCE (Southern California Edison), PG&E (Pacific Gas and Electric) and The Gas Company to access all programs and incentives for the Program Participants to demonstrate energy efficiency leadership in its community through energy saving actions. These actions included the retrofitting of municipal facilities as well as providing opportunities for constituents to take action in their homes and businesses. By implementing measures in its own facilities, the Program Participants will lead by example as the Program Participants and the Utilities work together to increase community awareness of energy efficiency and to build sustainable local government capacity in energy management practices. The Program will provide marketing, outreach, education, training and community sweeps to connect the community with opportunities to save energy, money and help the environment. The Program Participants will leverage the strengths of each other to efficiently deliver energy and demand savings.

Delivering sustainable energy savings, promoting energy efficiency lifestyles, and achieving an enduring leadership role for each Program Participant through these Programs design is rooted in an effective relationship among the Program Participants, their constituents, and the Utilities.



SECTION 3

Government Operations Inventory

3-1 Legislative Requirements and Greenhouse Gas Inventory Methodology

The Governor of California signed an Executive Order in 2006 directing all California State Agencies to begin the reduction of greenhouse gases and transform their respective agencies into sustainable (green) operations. That Executive Order further directed that regulatory agencies begin to prepare for changes in the myriad of rules, regulations and policies that effect the reduction of greenhouse gases, state-wide. Within a short period of time, the California Legislator began enacting laws requiring the reduction of greenhouse gases, widely known as Assembly Bill (AB) 32. Other legislation followed, that is targeted toward land-use, energy reduction incentives and assistance for the residential market.

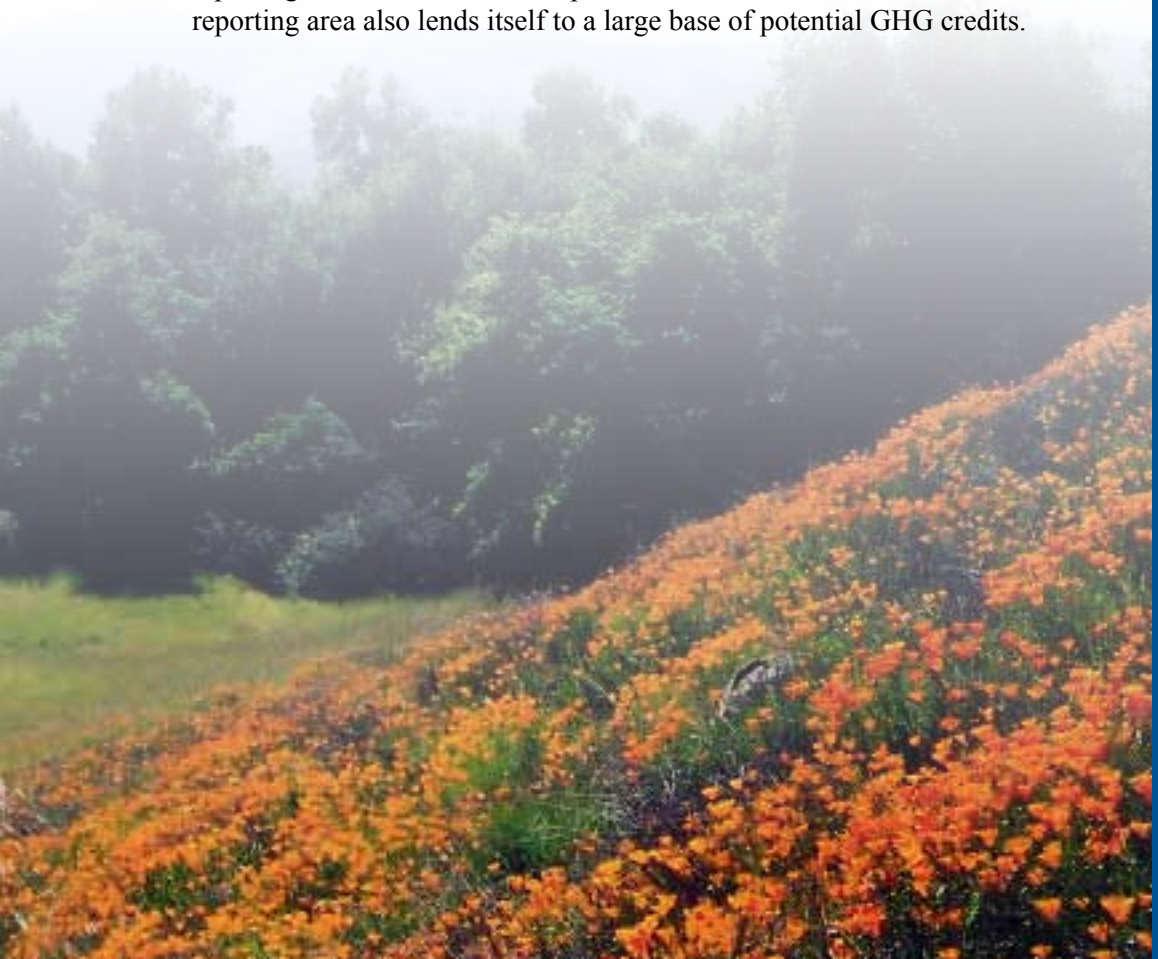
With respect to the governments own operations, it has been challenging to determine just how to catalog, track and report emission inventories. The California Climate Registry was formed as a result of AB 32. The registry is a non-governmental, non-profit agency, to collect, track and report on the greenhouse inventories of those entities now under the reporting regulation of AB 32 (primarily those entities that generate energy versus consumers of that energy). In recent months those regulations have broadened to include consumers of energy as well.

To achieve the consistent reporting of emission data, the California Climate Registry, with the collaboration of the State Regulatory Agencies, have developed reporting protocols. The protocols outline the framework to be used by those under the regulatory structure of AB 32 in their reporting of emissions data.

While the general reporting protocols are comprehensive, it has been determined that those protocols are exceedingly difficult to apply to government sector operations.

As reporting greenhouse gas inventories has broadened, it became apparent that a tailored set of protocols was required for governmental operations. The reasoning for this is based upon the reporting boundary used. Simply put, the reporting boundary is how the three scopes of reporting data are cataloged. In the government sector, those boundaries are complicated by the variety and diversity of the agencies that are comprised of the local government entities; as an example, not all local governments have Port, Airport or Water Distribution Operations; yet the General Reporting Protocols had no rational method for reporting on these or other agency anomalies. What resulted was the creation and adoption of the Local Government Reporting Protocols, and for the first time local governments could collect and report on their emissions data in a consistent fashion.

Since the creation of the Local Government Reporting Protocols and the broadening of the reporting entities, the California Climate Registry has morphed into the Climate Registry-now supporting the emissions reporting of North America and parts of South America. The broader reporting area also lends itself to a large base of potential GHG credits.



3-2 Quantifying Emissions

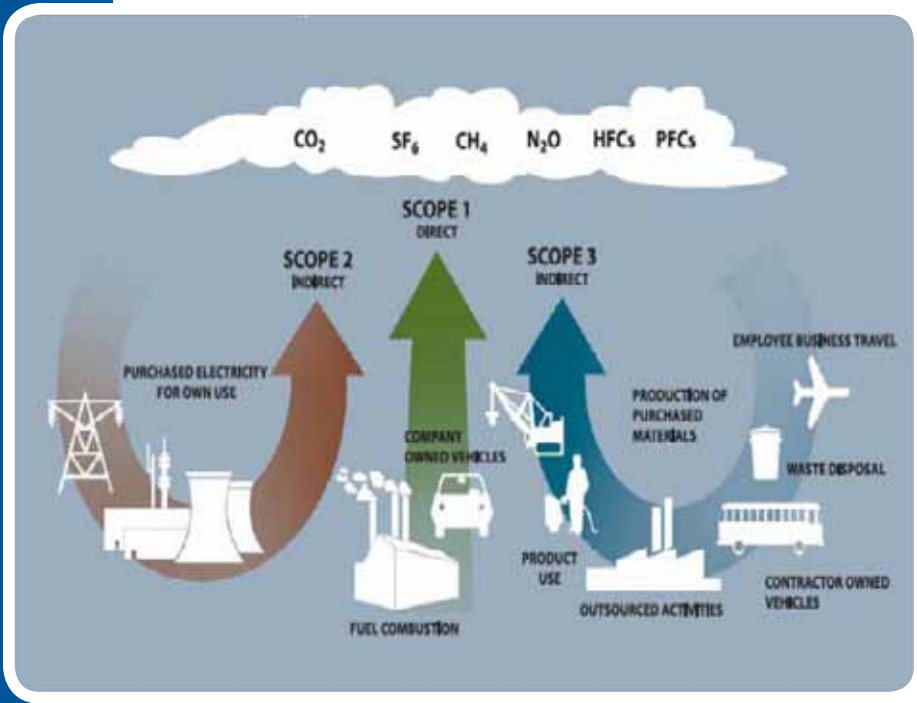
According to the EPA and the state of California, there are several internationally recognized greenhouse gases. The primary atmospheric greenhouse gases created by human activities are:

- Carbon Dioxide (CO2). Carbon Dioxide builds up in the atmosphere through the burning of fossil fuels (natural gas, oil, and coal), trees, solid waste, and plant products. It also occurs from chemical reactions (the manufacture of cement, for example, and others).

- Methane (CH4). Methane is expelled from the production of natural gas, coal, and oil. Methane emissions are created in municipal solid waste landfills as a result of the decay of organic waste. Methane is also generated by agricultural practices and livestock.

- Nitrous Oxide (N2O). N2O is generated during industrial and agricultural operations. It also occurs during combustion of solid waste and fossil fuels.

- Fluorinated Gases (HCFCs, CFCs, and halons) of perfluorocarbons, hydrofluorocarbons, and sulfur hexafluoride. These gases are synthetic, strong greenhouse gases that are generated during industrial processes. Sometimes Fluorinated gases are used as substitutes to ozone depleting chemicals. These gases are considered to have a high impact on climate change.



3-3 Government Operations Inventory Summary

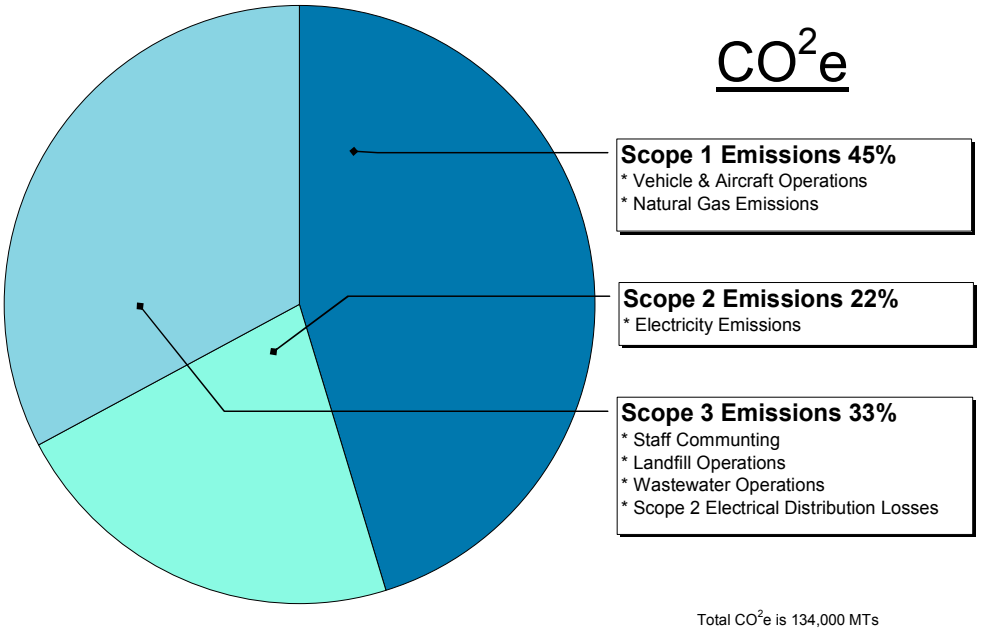
In this section a brief summary of the inventory and resulting emissions of operations by the County of Santa Barbara is provided. The tables below outline the categories of emissions as required by the Local Government Reporting Protocol. A fuller discussion and detailed report on this Inventory is included in the Appendix A.

The County of Santa Barbara, like many local governments has a diverse organization with numerous departments responsible for various aspects of operations. The General Services Department is primarily responsible for buildings and their operations. The Public Works Department is primarily responsible for public transportation infrastructure, including street and traffic lights and the public road system. They are also responsible for wastewater and landfill operations. Other departments are responsible for their individual operations, which contribute to the overall emissions footprint. To separately account for direct and indirect emissions, to improve transparency, and to provide clarity on the different types of climate policies and goals, protocols for a reporting structure were created and based around major categories as follows:

The Local Government Reporting Protocol requires the reporting of Scope 1 and Scope 2 emissions (see Appendix A). The calculated total CO2 of these two scopes is 90,055.8 MT (Metric Tons). The Scope 3 emissions (see Appendix A) are voluntary and represent 33% of total emissions for the year 2008.

Santa Barbara County government operations produced 134,003 metric tons of CO2. This number includes all Scope 1 emissions which are from the on-site combustion of fuels in facilities and vehicles and other processes. Scope 2 emissions are from the purchase of electricity generated by utility companies and used by Santa Barbara County facilities. Scope 3 emissions are from waste generated by operations and employee commuting.

Total Emissions	%	CO2e	CO2	CH4	N20	HFCs	PFCs	SF6	Unit
Scope 1	45	60,601.6	60,254,019.0	6,267.0	687.4	0.0	0.0	0.0	Metric Tons
Scope 2	22	29,454.1	29,428,882.6	144.7	74.1	0.0	0.0	0.0	Metric Tons
Scope 3	33	43,947.5	8,921,029.0	1,507,185.5	418.0	0.0	0.0	0.0	Metric Tons
Total	**100**	**134,003.3**	**98,603,930.6**	**1,513,597.1**	**1,179.5**	**0.0**	**0.0**	**0.0**	**Metric Tons**



Santa Barbara County government operations produced 134,003 metric tons of CO2. This number includes all Scope 1, Scope 2, and Scope 3 emissions. The emission inventory does not include Scope 3 emissions from employee business travel, production emissions of goods used by government operations, or emissions generated by contracted services. Although not included in this rollup number, these emissions are discussed in the complete report, found in Appendix A.

3-4 Ten Year Energy Efficiency Plans

The current plans for the County in the up coming years to reduce greenhouse gas emissions and reduce utility costs are as follows. The project titles include the expected year that they will start if funding is realized.

2011 North County Parks HQ – Waller Park

Convert previous park ranger residence to office and meeting space for the department. Energy efficient lighting will be installed, along with water saving technology. This project is currently in the planning phase.

2011 Solar Energy – Laguna County Sanitation District

The goal of the Solar Energy Project at Laguna County Sanitation District is to generate sufficient electricity, to reduce or eliminate the Districts electrical needs.

2011 Green Fleet Committee

The committee will review current fleet practices, establish comprehensive Green Fleet policies, review future Green Fleet projects and make executive recommendations regarding selections.

2011 Betteravia Building

Replacement of all HVAC and Controls system on Betteravia Building # C in Santa Maria. Connect to 963 network controls.

2011 Courthouse

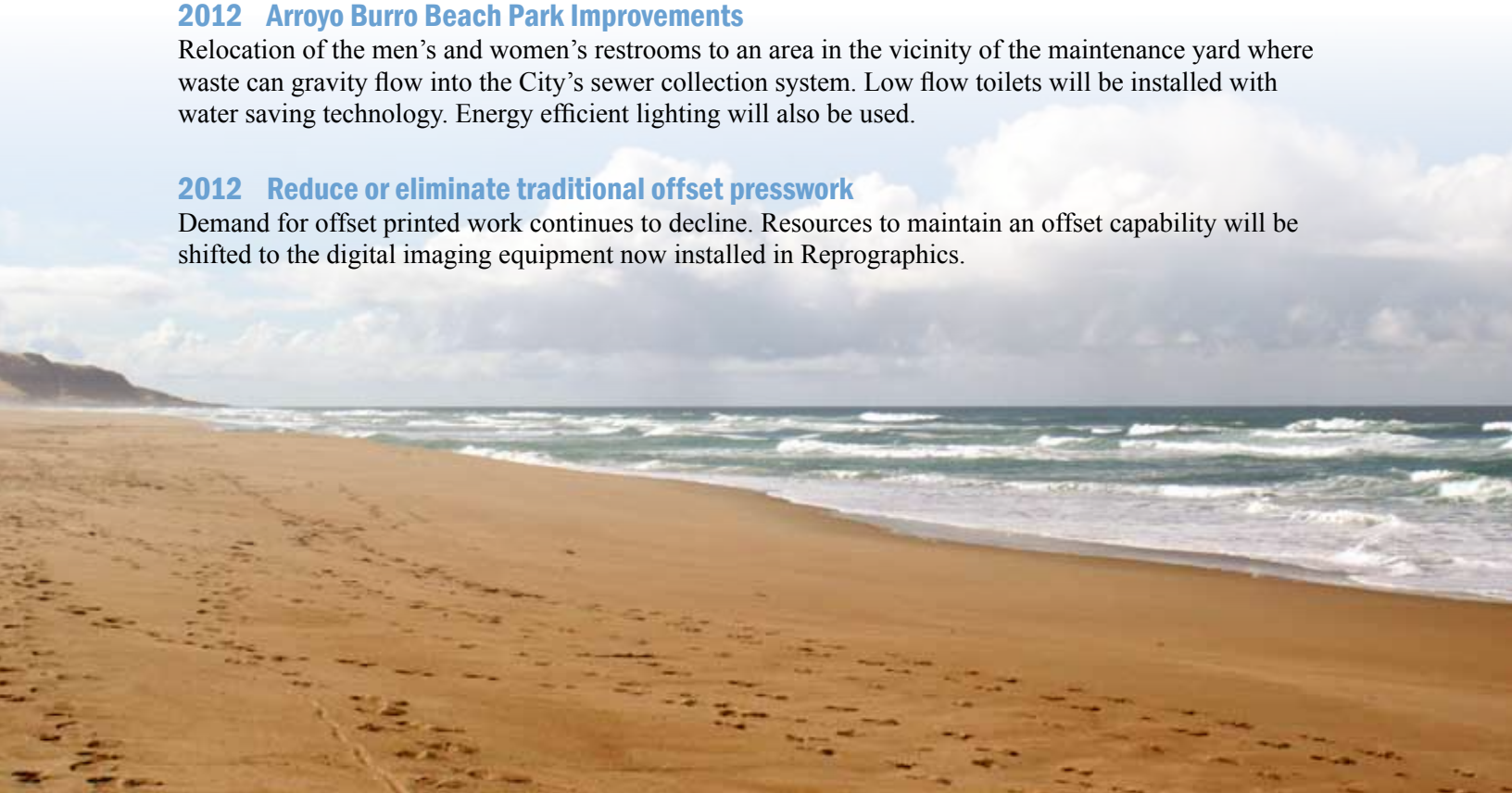
Engineering design for the Courthouse HVAC Replacement Project. This design will replace the main boiler / chiller plant, air handlers, and controls at the Court house. Initial design is for the use of a “Ground Loop” system as used on the Hall of Records.

2012 Arroyo Burro Beach Park Improvements

Relocation of the men’s and women’s restrooms to an area in the vicinity of the maintenance yard where waste can gravity flow into the City’s sewer collection system. Low flow toilets will be installed with water saving technology. Energy efficient lighting will also be used.

2012 Reduce or eliminate traditional offset presswork

Demand for offset printed work continues to decline. Resources to maintain an offset capability will be shifted to the digital imaging equipment now installed in Reprographics.



2012 Rincon Beach Park Upgrade
Many day use improvements will be made, including a new drip type irrigation system that delivers water to the base of the plants, further enhancing conservation. New drought tolerant landscape will be planted as well. The conversion of a septic tank to sewer will also take place. This project is only partially funded.

2012 Mental Health Building
Replacement of all HVAC units and building controls on the Mental Health building. Connect to 963 network controls.

2012 911 Dispatch Center
Replacement of all HVAC units and building controls on the 911 Dispatch Center. Connect to 963 Network Controls.

2012 Social Services Building
Replacement of roofing system on the Social Services Building to Title 24 requirements.

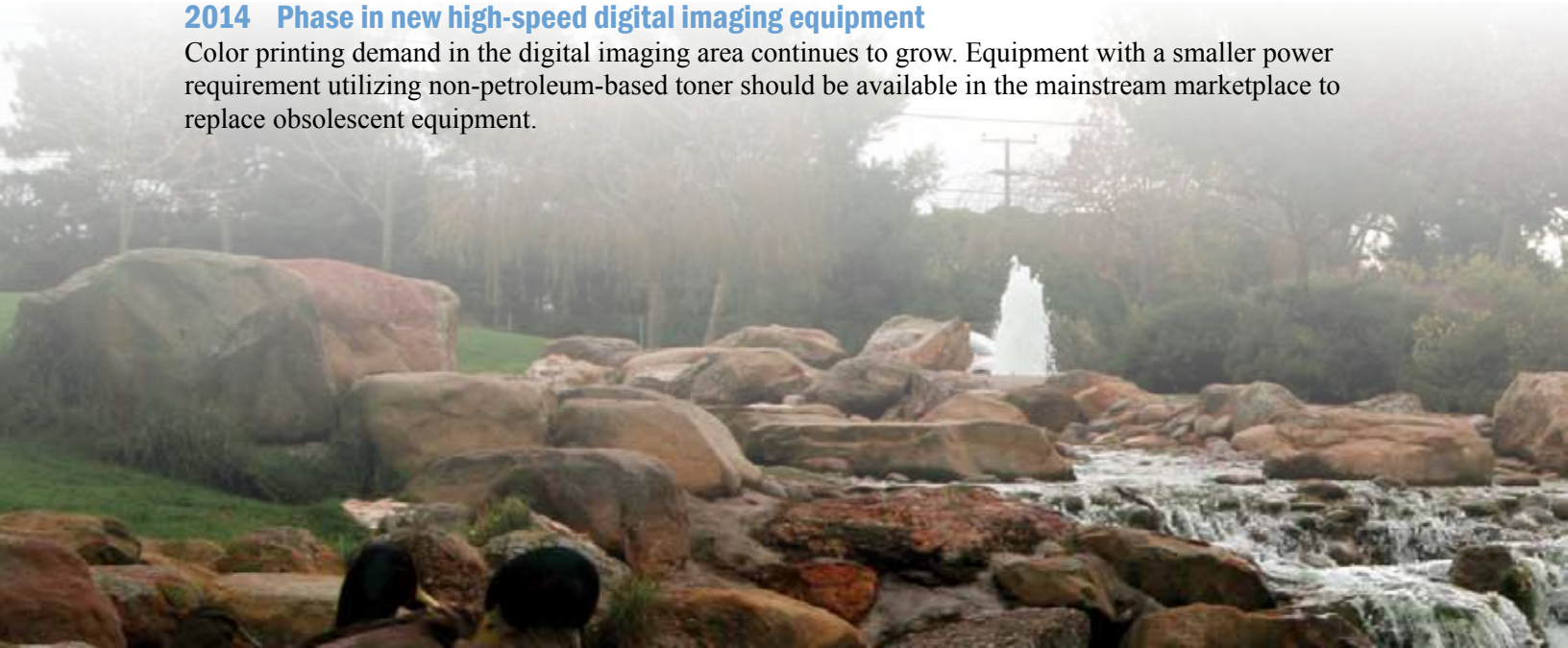
2013 Live Oak Camp Improvements
Improvements consist of installation of a permanent restroom building, which will include energy efficiency lighting and low flow toilets. There will be electrical upgrades of the main stage, dining area, showers and camp host site. This project is partially funded.

2013 Social Service Building
Replacement of all HVAC units and building controls on the Social Services Building. Connection to 963 Network controls.

2013 Betteravia Building # D
Replacement of roofing system on Betteravia Building # D

2014 2010-2011 Park Restroom ADA Upgrade Program
This project consists of the remodel of restrooms within County parks to meet deferred maintenance needs and to bring buildings into compliance with the Americans with Disabilities Act. All restrooms will be retrofitted with energy efficiency lighting, low flow toilets and water saving technology.

2014 Phase in new high-speed digital imaging equipment
Color printing demand in the digital imaging area continues to grow. Equipment with a smaller power requirement utilizing non-petroleum-based toner should be available in the mainstream marketplace to replace obsolescent equipment.



2014 Park Infrastructure Repairs Program 2009-14

This project will upgrade Park infrastructure, equipment and facilities countywide. Infrastructure facilities and equipment include; pumps, motors, plumbing systems, electrical systems, and conveyance systems. These improvements will be energy efficient and will have cost savings.

2014 Courthouse

Replacement of Courthouse HVAC and Controls replacement.
Construction Phase

2015 Solid Waste Conversion

Waste conversion to energy of municipal solid waste disposed at the Tajiguas Landfill. Waste conversion technology has the ability to further process waste pulling out recyclables and converting remaining waste to energy. Public Works is working with Cities of Buellton, Goleta, Santa Barbara and Solvang to pursue a waste conversion technology facility. The project could generate 5 to 10 megawatts.

2015 Cachuma Lake Recreation Area Improvements

This project includes infrastructure and revenue enhancement improvements to the recreation area. There will be sanitation plant and lift station upgrades, water plant relocation and upgrades, vault toilet buildings to replace portables; restroom renovations; erosion and drainage improvements; sewer main relining; automated irrigation system; new water main and fire protection system; new water storage reservoir and improvements to existing reservoir. This project is partially funded.

2015 Print on demand throughout all County buildings

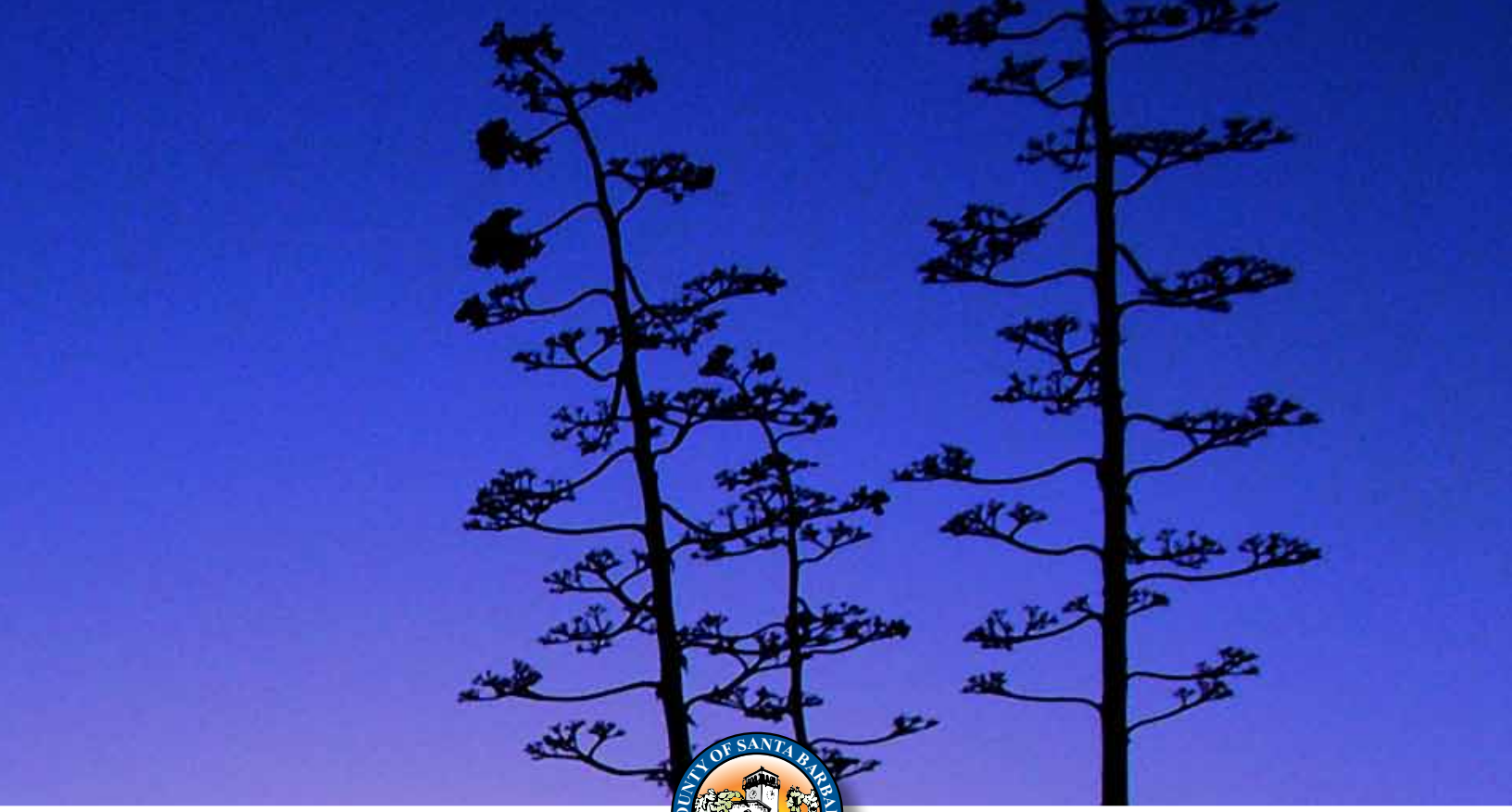
Personal imaging devices continue to evolve, and should be available to replace existing copy machines throughout the County. It is anticipated that new generation machines will be far more energy efficient and more environmentally friendly, as well as being far easier to use. This will enable the County to implement a true “Print on Demand” policy, greatly reducing the carbon footprint countywide.

2015 Betteravia Center

Replacement of all HVAC units and building controls in the Probation building at the Betteravia Center. Connection to 963 Network controls.

2020 Jalama Beach Park Master Plan – New Leach Field

There will be many septic improvements, which will include installation of a new shower leach field system and storm water treatment facilities. The remaining septic tanks (8) require replacement to increase waste retention time and reduce loads on existing leach fields. The failing leach field will be upgraded and a new one will be added. Also, a new water source from existing well on Vandenberg Base to supplement existing well supply during low flow conditions. This project is partially funded.



Conclusion

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Conclusion

AB32 is upon us; and budgets are constraining our local governments. However, these issues present opportunities to improve the local government operations. The County ensures that each of its policy decisions and programs adhere to the common goal of long-term sustainability as expressed in its guiding principles. In this Plan's GHG emissions inventory, the County has identified sources of emissions and established a baseline of emission levels against which future progress can be measured.

Santa Barbara County has applied many technologies and approaches that take advantage of emerging trends and resources in Building Energy, Mobile Workforce, Vehicle Fuels, Public Works Infrastructure, Resource Recovery, Grounds Management & Sequestration, and Printing & Reprographics to do its part to reduce the amount of greenhouse gas emissions emitted by the County operations.

Past examples of the County Operations included:

- County buildings were retrofitted with energy-efficient internal lighting saving thousands of dollars a year.
- Vehicle Operations replaced the virgin petroleum products used in servicing of County-owned vehicles with re-refined oil products.
- For the past 2.5 years, FORTISTAR Methane Group has operated a Landfill Gas-to-Energy facility at the Tajiguas Landfill in Santa Barbara. The landfill produced over 23,000 megawatt hours of electricity last year; enough to power approximately 2,079 homes.
- The Nature Center building at Lake Cachuma was equipped with on-demand water heaters in the bathrooms.
- In 1999, the County expanded its recycling program to offer commingled recycling to all County facilities where collection was possible.
- The Print shop switched to an environmentally-friendly low energy consumption system for polyester printing plates.

Current examples of the County Operations include:

- The County Jail is switching to an ozone system for its laundry which saves natural gas by using cold water with the same, or better, sanitizing effects of hot water.

- The County Executive Office has instituted several fleet cost-reduction policies, including individual fuel-reduction goals for each department.

- Unused computers generated by the County are donated to the Computers for Families program. Under the Computers for Families program, boys at the Los Prietos Boys Camp are taught how to repair and upgrade computers.

- Nojoqui Falls and Waller Parks electrical systems use Variable Frequency Drive motors to save energy.

Future examples of the County Operations will include:

- The County is pursuing 3rd party "Power Purchase Agreements" (PPA) to help bring solar and/or wind power to the County of Santa Barbara.

- A Green Fleet Committee will review current fleet practices, establish comprehensive Green Fleet polices, review future Green Fleet projects and make executive recommendations regarding fleet selections.

- The CEO's Human Resources will implement a new policy for a "Mobile Workforce" that puts fewer cars on the road and reduces the fuel consumption of the County's employees.

All County departments have made strides in energy-use reductions. In most cases, these actions have been driven by the need to reduce costs and increase efficiencies. Emissions reductions are already being seen as a result. The examples in this Sustainability Action Plan demonstrates how Santa Barbara County operates and strives to be smarter and more resourceful about the manner in which its buildings use energy, people, transportation, and waste management . The Energy and Environmental Inventory created here will be used to determine what, and where, energy is being used throughout the County and the amount of greenhouse gas emissions emitted, as a whole, by all County departments. These efforts by County departments will help curb the effects of climate change on our planet and help to ensure a more ssustainable environment for our children.

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Appendices

Appendix A

Greenhouse Gas Emission Inventory

Local Government Operations Report

2008 Baseline Year





COUNTY OF SANTA BARBARA

This document is designed to provide accurate and authoritative information in regard to the subject matter covered. The information presented in this document is subject to change and represents data for the 2008 calendar year. Every effort will be made to notify those affected by such changes.

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Data Compiled by
County of Santa Barbara
General Services Department
Public Works Department
Sheriff Department

July 2010

Cover Graphics
Santa Ynez Valley
SBC Facility Insets
(Fire Station 11, Cachuma Park, Administration Bldg, SB Courthouse and SM Juvenile Hall)

GREENHOUSE GAS EMISSIONS INVENTORY
LOCAL GOVERNMENT OPERATIONS REPORT
SANTA BARBARA COUNTY
2008 BASELINE YEAR

JULY 2010

Department of General Services
Office of the County Architect

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CONTENTS

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1 ABSTRACT

This report identifies and catalogs estimates for greenhouse gas (GHG) emissions generated from the business functions and facility operations of the County of Santa Barbara. There are numerous facility locations, vehicle operations and business functions carried out by the County of Santa Barbara over an area of 2,774 square miles on behalf of its roughly 422,000 residents. Of the 2,774 square mile land area, one-third is comprised of the Los Padres National Forest and another portion, the Vandenberg Air Force Base. The GHG emissions inventory for Santa Barbara County indicates a total of 134,003 metric tonnes of CO^2e. A summary table and chart are below with detailed tables offered in Chapter 2.5 of this report.

In 2005 the California Governor signed an *Executive Order* directing state agencies to begin the process of changing state regulations to include criteria in an effort to reduce the effects of GHG emissions in California. The California Legislature has also taken action to provide public law changes to implement stronger requirements on major sources of emissions, like utility companies, major manufacturing and similar major source generators. California State Agencies responsible for regulating these sources are now required to implement stronger emission rules beginning in 2008 and make them enforceable by 2010. These new requirements are not mandatory for consumers of energy, yet. It is felt by many who are watching this unfold, that the regulatory structure will extend to consumers of energy in the near future.

In general, the regulatory structure calls for the energy source generators located in California to return to emission levels of 1990. This is to be accomplished by the year 2020 with further reductions to 80% of the 1990 emission levels by 2050. These targets were identified in the State's 2008 Scoping Plan, which is now being implemented by state agency regulations.

For non-generators, voluntary reporting of emission is still the case. However, it is anticipated that by 2010, the benefits of mandatory reporting and reductions will out weigh the cost to comply with these regulations. It is therefore in the best interest of the County of Santa Barbara to voluntarily comply now. This will enable the organization to implement strategies that not only help it to comply under mandatory requirements, but also help it to realize energy savings. Some organization-wide restructuring of data will be required to insure transparency of reporting going forward.

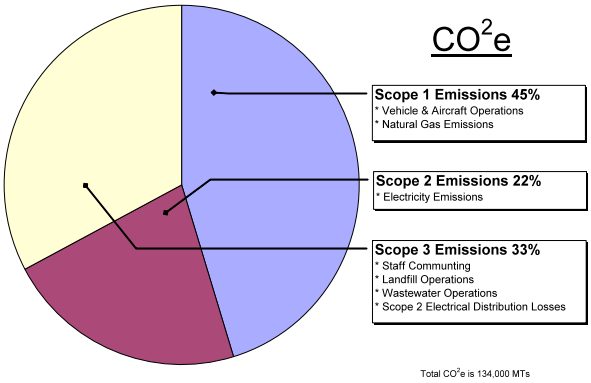


Figure 1: Emissions by Reporting Scope, County of Santa Barbara

This report has two main components, this document and its accompanying appendix. This report is structured to provide general information regarding the operations of the County of Santa Barbara and its GHG emissions. This report will also serve to comply with the California Air Resources Board—*Local Government Operations Protocol*. The appendix contains all the raw data used in the various tables, charts and strategies of the document you are reading.

Summary Total Emissions	%	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6	Unit
Scope 1	45	*60,601.6*	*60,254,019.0*	*6,267.0*	*687.4*	*0.0*	*0.0*	*0.0*	Metric Tons
Scope 2	22	*29,454.1*	*29,428,882.6*	*144.7*	*74.1*	*0.0*	*0.0*	*0.0*	Metric Tons
Scope 3	33	*43,947.5*	*8,921,029.0*	*1,507,185.5*	*418.0*	*0.0*	*0.0*	*0.0*	Metric Tons
Total	100	134,003.3	98,603,930.6	1,513,597.1	1,179.5	0.0	0.0	0.0	Metric Tons

1.1 REGULATORY FRAMEWORK

There are myriad regulations across multiple state and local agencies that have oversight of organizations that generate emissions, buildings that use energy and vehicle emissions. Not all regulations are applicable to all emission sources; it depends upon the emission source. As an example, for office buildings, the California Energy Code (Title 24) applies. If the office building uses a gas-fired boiler to produce a heating source, the California Air Resources Board has regulatory oversight and places controls upon the operation of the boilers.

For vehicle operations, the California Air Resources Board will have regulations on the emissions of vehicles in addition to any Federal Standards applicable to the manufacture of the vehicle. The regional authority for air quality is the local *Santa Barbara County Air Pollution Control District* (APCD). This agency has oversight of emissions made from the fueling of vehicles, other emitters like gas-fired boilers and diesel back-up generators.

An increasing area of emission regulation is the California Environmental Quality Act (CEQA). Beginning in 2009, environmental documents need to address green-house gas emissions in the analysis and mitigations of calculated emissions. The California Attorney General has been successful litigating a California Municipal Agencies when submitting an updated *General Plan* for certification if that general plan fails to address how the potential impacts of green-house gas emissions resulting from increased development were not incorporated into the environmental document associated with the implementation of the general plan. Environmental review that includes a discussion of green-house gas emissions and their mitigation will be required going forward for project meeting the threshold of environmental review.

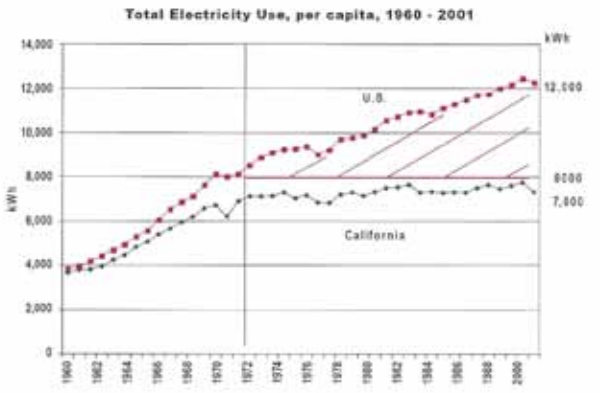


Figure 2: Electricity Use (per capita)

In 2005 the California Governor signed *Executive Order S-20-04* which established California's *Green Building Initiative*. This order committed the state to a series of actions that should result in a 20% reduction of energy use in state-owned facilities by the year 2015. The Order also calls for the same reductions of energy use in privately-held facilities. Further, in 2005, the Governor established targets to reduce California's greenhouse gas emissions through a series of strategies including additional energy efficiency investments and the use of alternate energy sources.

The California Legislature has been active in the passage of new laws that echo Executive Orders issued by the Governor or driven by individual Legislator's belief that human events contribute to the accumulation of greenhouse gases and therefore have an effect on climate change. While some of these regulations will have an effect on how the County of Santa Barbara operates its business, constructs its

facilities and manages its resources, AB32 is not yet a requirement upon consumers of energy. When the Governor signed AB32 into law, it became known as the *California Global Warming Solutions Act of 2006*. The Act calls for greenhouse gas reduction targets that return the state to its 1990 levels by 2020 and 80% of that target by the year 2050. As already stated, it is mandatory for generators of greenhouse gas emissions. It is not yet mandatory for consumers of energy in California.

The California Energy Commission is charged with the oversight of the states energy resources. In 1974 the *Warren-Alquist Act* was signed into law, this Act created the Energy Commission and set into motion the creation of Building and Appliance Standards. These Standards have been strengthened over time as a result of the various energy crisis events since 1979. The current version of the Standards have set new targets for energy efficiency for both new and remodeled buildings as required by AB 549. Gaining greater efficiency in buildings like: sealing air ducts, higher window thermal transmission qualities, helps to reduce energy costs; and thus emissions.

State Legislation	Year Approved	Summary	Implementation Milestones	Oversight Agency
AB 32 Sets target to reduce GHG emissions	**2006**	AB 32 requires the California Air Resources Board (CARB) to develop regulations and market mechanisms to reduce California greenhouse gas (GHG) emissions back to 1990 levels by 2020. Mandatory caps on GHG emissions will begin in 2012 to achieve reduction targets. ***County Impacts:*** Specific requirements for local agencies as well as impacts associated with noncompliance are expected to be outlined by 2012.	**2008** - Baseline for mandatory GHG emissions and 2020 statewide cap adopted by CARB. **2009** - CARB adopted Scoping Plan indication how emission reductions will be achieved from significant sources. **2012** - GHG rules and market mechanisms adopted by CARB take effect and are legally enforceable. **2020** - Deadline for emission reduction target.	**CARB** **OPR**
SB 97 Ties GHG analysis to CEQA	**2007**	SB 97 requires the State Office of Planning and Research(OPR) to develop legal guidelines for analysis and mitigation of GHG emissions, pursuant to CEQA. ***County Impacts:*** Specific requirements for local agencies as well as impacts associated with noncompliance are expected to be outlined by 2012.	**2009** - Preparation of guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emission, as required by CEQA. **2010** - Certification and adoption of guidelines.	**OPR**
SB 375 Implements one protion of AB 32	**2008**	SB 375 addresses one of the eighteen implementation measures called for by AB 32 Through Alignment of the Regional Housing Needs Allocation (RHNA) and the Regional Transportation Plan. This includes development of a Sustainable Communities Strategy (SCS) that would be adopted by SBCAG. Certain types of infill projects that are consistent with the SCS would receive CEQA exemptions and/or streamling under SB 375. ***County Impacts:*** SB 375 calls for a new regional planning process, new requirements for environmental analysis, and strengthens the Housing Element rezone mandate overseen by the State Housing and Community Development Department (SHCD).	**2010** - GHG reduction targets related to SB 375 are estabished by CARB and assigned to Metropolitan Planning Organizations (such as SBCAG). **2013** - Local Regional Transportation Plan updates, including adoption of the SCS & RHNA. **2015-2023** - Housing Element updates.	**CARB** **SHCD** **SBCAG**

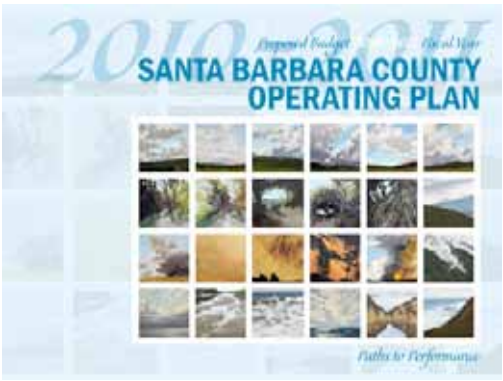
2 COUNTY OF SANTA BARBARA PROFILE

2.1 GENERAL OVERVIEW

Santa Barbara County was established by an act of the State Legislature on February 18, 1850. The County is a general law county and political subdivision of the State of California. The constitution and laws of the State establish the County's rights, powers, privileges, authority, functions, and duties. The powers granted to California counties by State statute include the power to: sue and be sued; purchase, receive by gift or bequest and hold land within its limits, or elsewhere when permitted by law; make contracts, purchase and hold personal property necessary to the exercise of its powers; manage, sell, lease, or otherwise dispose of its property as the interest of its inhabitants require; levy and collect taxes authorized by law; and exercise such other and further powers as may be especially conferred by law, or as may be necessarily implied from those expressed. There are eight incorporated cities and many unincorporated communities with the county.

There are numerous facility locations, vehicle and aircraft operations and business functions carried out by the County of Santa Barbara over an area of 2,774 square miles on behalf of its roughly 422,000 residents. Of the 2,774 square mile land area, one-third is comprised of the Los Padres National Forest.

Budget at a Glance				
Dollars In Millions	2008-09 Actual	2009-10 Adopted	2009-10 Estimated	2010-11 Recommend
Total Revenues	$725.7	$761.8	$757.7	$745.3
Other Financing Sources	$101.5	$95.6	$103.3	$119.0
Total Sources	$827.2	$857.4	$861.0	$864.3
Total Expenditures	$733.2	$795.3	$777.5	$831.5
Designated for Future Use	$94.0	$62.1	$83.5	$32.8
Total Uses	$827.2	$857.4	$861.0	$864.3
Staffing FTEs	4,172.2	4,045.6	4,099.5	3,875.1



Historically, the County of Santa Barbara constructs a number of new facilities approximately on a ten-year cycle. During any given ten-year cycle there are numerous major or minor facility remodels as operations change to the needs of the citizens. These projects range from office buildings, clinics, fire stations, storage facilities and other types of facilities that support the various departmental functions.

Facility inventory is tracked by both the Real Estate Services Group and the Facility Management Group of the General Services Department. On a five-year cycle, the County Architect evaluates department needs, staffing and facilities occupied to determine future facilities needs. A complete

facility listing can be found in the Appendix and more detailed assessments can be reviewed at the Office of the County Architect. The county's lease holdings are maintained in a database application specifically prepared by the Real Estate Group. A current listing of leases can be found in the Appendix.

For approximately the last 15 years, the County of Santa Barbara has been implementing energy saving projects in an effort to reduce utility operating costs. These projects have primarily been the replacement of old lighting equipment, controllers and HVAC motors. Recently, the Vehicle Operations Group has replaced some of the motor-pool vehicles with hybrids. To date, there are no plans to use BioDiesel in any vehicles that currently use diesel.

In terms of implementing technologies of alternative energy, there are three projects: two that installed geothermal fields and one project that installed photovoltaic. There have been many attempts to install additional photovoltaic, geothermal and other renewable sources but because of the high initial capital cost and long pay back periods, no other projects have been funded.

With the recent global focus on climate change and the increased regulatory activity by the California Legislature to strengthen emissions regulations, it has become important to understand how county operations contribute to regional climate change. In addition to reducing emissions through replacement of old, out dated technologies, the fiscal impacts of energy costs can be minimized.

2.2 COUNTY SERVICES

2.2.1 Geographic Characteristics

The County of Santa Barbara is located within California Climate Zones 5 & 6, with the following population centers:

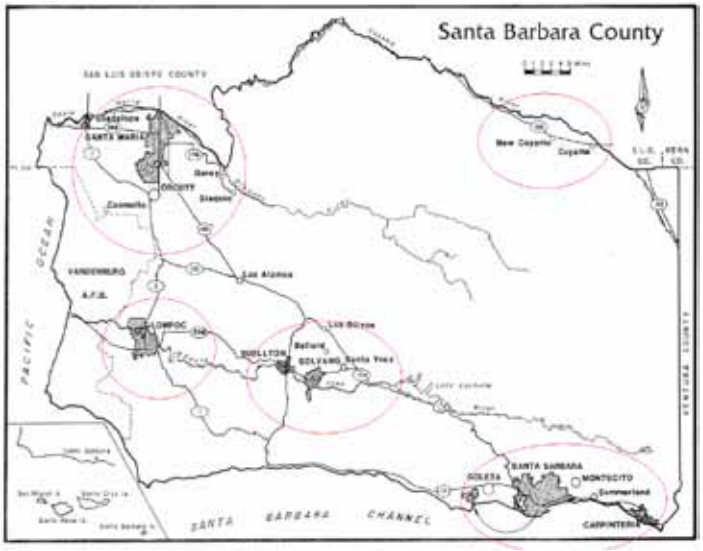


Figure 4: Population Centers, County of Santa Barbara

Santa Barbara Coast: Located in the southern portion of the County, this area is bordered on the south by the Pacific Ocean and on the north by the Santa Ynez Mountain range, one of the few mountain systems in North America that run east-west rather than north-south. This area includes the communities of Carpinteria, Montecito, Summerland, Santa Barbara and Goleta. Because of the unique north and south borders, and its year round mild 'Mediterranean' climate, Santa Barbara has been described by many as the American Riviera.

Santa Ynez Valley: Located in the central portion of the County, nestled between the Santa Ynez and San Rafael mountain ranges, this area includes the communities of Buellton, Solvang, and Santa Ynez, as well as the Chumash Reservation. Lake Cachuma is also nestled between the mountain ranges, offering recreational activities and a water supply to the County. The Valley's climate has attracted many winemakers to the area, adding vast vineyards to the rolling hills that lead to the Los Padres National Forest.

Santa Maria Valley: Located in the northern portion of the County, this area is bordered by San Luis Obispo County to the north and includes the communities of Orcutt, Sisquoc, Casmalia, Garey ,Guadalupe and Santa Maria. Much of the new development within the County has taken place here and, as a result, the area has experienced considerable change.

Lompoc Valley: Located in the western portion of the County includes the Vandenberg Air Force Base, which is a major contributor to the local economy. Lompoc Valley is the least populated area within the County; yet, it is attracting many new residents desiring to relocate to a community that is still in its growth and development stage.

Figure 5: Santa Barbara, Climate Zones

Together these areas contribute to the unique profile of the County, blending the characteristics of each area into one world-class county.

2.2.2 Administration and Management

The Board of Supervisors (Board) is vested with legislative authority and the responsibility to set operational and land use policy. The Board is responsible for, among other things, passing ordinances, adopting the annual operating and capital budgets, appointing committee members, approving federal and state grants, and various land use matters. The County Executive Officer (CEO) reports to the Board with appointed department heads reporting to the CEO. Elected department heads are accountable directly to the Electorate with indirect oversight provided by the Auditor-Controller, Treasurer-Tax Collector, Board of Supervisors or the Chief Executive Office.

The County has 24 departments responsible for all County services (see organization chart) and is comprised of about 3,875 (FTE) employees. Five departments are lead by elected officials, they are: Auditor-Controller, Clerk-Recorder-Assessor-Registrar of Voters, District Attorney, Sheriff, and Treasurer-Tax Collector-Public Administrator. The Chief Probation Officer and the Court Executive Officer are appointed by the Presiding Judge of the Superior Court. All other department heads, except County Counsel (appointed by the Board) are appointed by the County Executive Officer.

The County Executive Officer works with departments, constituents, and community entities to analyze particular issues that arise within respective areas of responsibility, and submits recommendations for Board consideration or action. In addition, the County Executive Office is responsible for preparing and presenting the operating and capital budgets to the Board and making recommendations for the overall administration of the County. Numerous other boards, commissions, and committees assist the Board and departments in the execution of their services to the public. All department heads, elected or appointed, are ultimately responsible for their respective department's daily operations and are legally responsible for controlling spending.

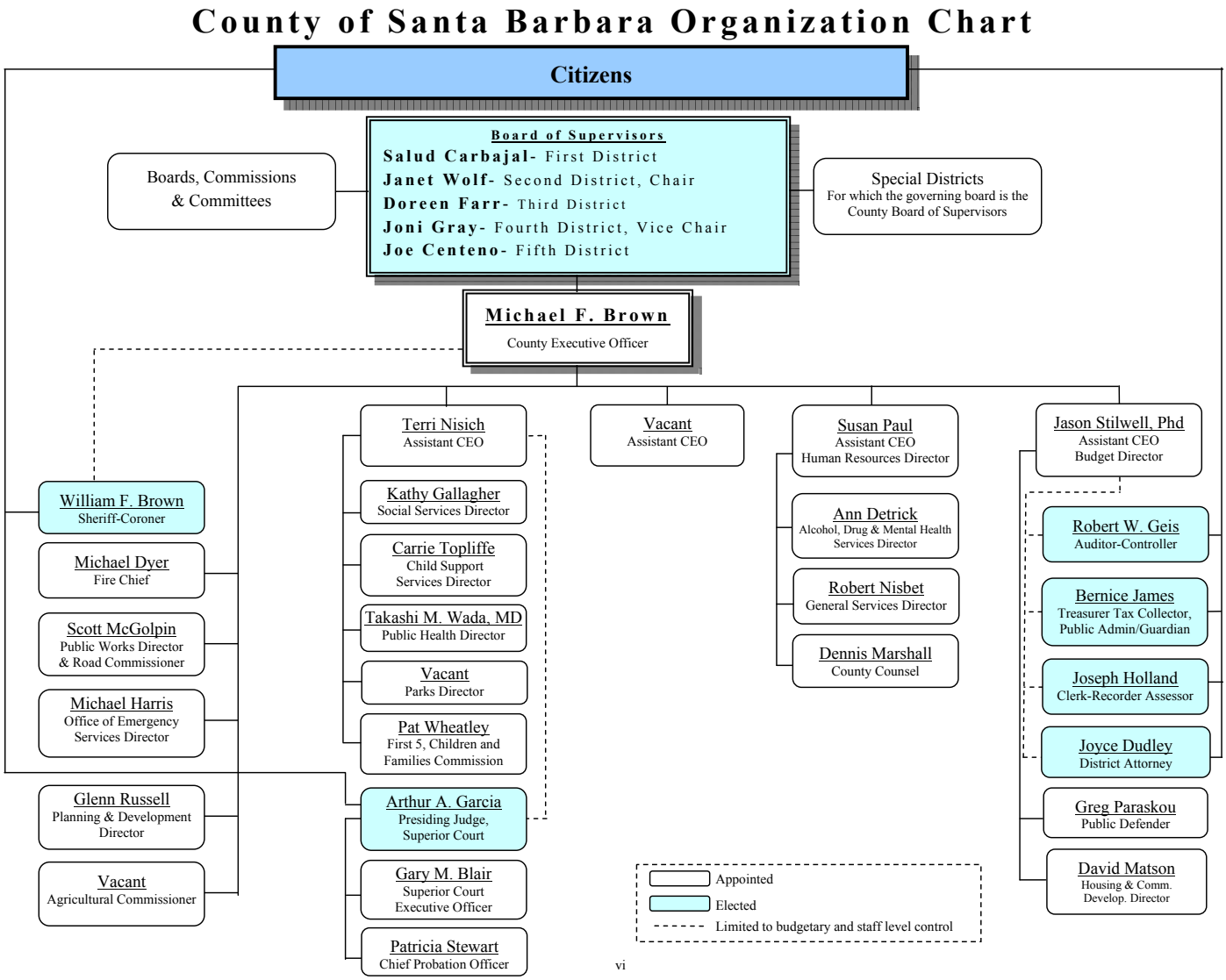


Figure 6: Santa Barbara County – 2010 Organizational Chart

Figure 7: Santa Barbara County – Supervisorial Boundaries

Cities are primarily charged with providing municipal services such as public safety, parks and recreation, planning and public works to their residents. In Santa Barbara County, the County provides these services to residents that do not live within cities (the unincorporated areas) or through contracts with individual cities. As the local arm of State government, the County is required by the State to make available health, safety and welfare services to every person in the county regardless of residency.

2.2.3 Services Provided Countywide

The County provides assessment, collection, and distribution of all property taxes gathered from all property owners in the county. The County then distributes designated taxes to all local governments, including: cities, school districts and special districts. The County provides the following services[1] to all residents of the County, regardless of residency:

- Agricultural Protection and consumer assurance (Agricultural Commissioner)
- Child support services (Child Support Services)

[1] For a complete description of department services, please review the County Operating Budget, D Section (by department). A copy of the Operating Budget can be obtained via the County Executive Officers website (http://www.countyofsb.org/ceo/budgetresearch/budget0708.asp).

- Criminal prosecution (District Attorney) and defense of underprivileged or indigent residents (Public Defender)
- Flood protection and control (Public Works)
- Foster care, "welfare to work", support services (Social Services)
- Health services (Alcohol, Drug and Mental Health, Public Health)
- Juvenile detention/treatment, monitoring of Adult offenders (Probation)
- Library services (General County Programs)
- Jail Operations (Sheriff)
- Parks, beaches and open space maintenance (Parks Department)
- Veteran affairs (Treasurer-Tax Collector-Public Administrator)

2.2.4 Services to Unincorporated Areas

The County provides the following specific services to only those residents residing in the unincorporated County areas:

- Affordable Housing (Housing and Community Development)
- Building Permit Processing (Planning and Development)
- Fire Protection (Fire)
- Planning and Zoning (Planning and Development)
- Roads (Public Works)
- Sheriff Patrol (Sheriff)
- Street Lights (Public Works)
- Trash and Recycling Collection (Public Works)

2.2.5 Services to Incorporated Cities

The County provides services to some residents residing within cities, via service contracts with those cities, they area:

Service	City
Animal Control- Field and Shelter	All Cities (except Santa Barbara, Carpinteria)
Animal Control - Shelter	Santa Barbara, Carpinteria
Building Permit Processing	Buellton, Solvang
Fire	Solvang
Library	Santa Maria, Lompoc, Goleta, Santa Barbara
Sheriff Patrol	Buellton, Solvang, Goleta, Carpinteria

2.3 REPORTING AND ORGANIZATIONAL BOUNDARIES

2.3.1 Background

The *Local Government Operations Protocol* (Protocol) is designed to provide a standardized set of guidelines to assist local governments in quantifying and reporting Greenhouse Gas (GHG) emissions associated with their own operations. The Protocol was developed in partnership of the California Air Resources Board (ARB), California Climate Action Registry (CCAR), and Local Governments for Sustainability (International Council for Local Environmental Initiatives or ICLEI), in collaboration with The Climate Registry and dozens of agency stakeholders. Through this Protocol, the partners have sought to enable local governments to measure and report GHG emissions associated with government operations in a harmonized fashion. The Protocol facilitates the standardized and rigorous inventorying of GHG emissions, which can help track emissions reduction progress over time and in comparison to

GHG reduction targets. The Protocol provides the principles, approach, methodology, and procedures needed to develop a local government operations GHG emissions inventory. It is designed to support the complete, transparent, and accurate reporting of a local government's GHG emissions. The Protocol guides participants through emissions calculation methodologies and reporting guidance applicable to all U.S. local governments.

2.3.2 Purpose

The purpose of the *Local Government Operations Protocol* is to:

- Enable local governments to develop emissions inventories following internationally recognized GHG accounting and reporting principles defined below with attention to the unique context of local government operations;
- Advance the consistent, comparable and relevant quantification of emissions and appropriate, transparent, and policy-relevant reporting of emissions;
- Enable measurement towards climate goals;
- Promote understanding of the role of local government operations in combating climate change; and
- Help to create harmonization between GHG inventories developed and reported to multiple programs.

The Protocol is a tool for accounting and reporting GHG emissions across a local government's operations. Reductions in emissions are calculated by comparing changes in a local government's emissions over time. By tracking emissions over time, local governments should be able to measure the GHG reduction benefits from policies and programs put in place to reduce emissions within their operations. The following are key components to an agency inventory:

Relevance: The greenhouse gas inventory should appropriately reflect the greenhouse gas emissions of the local government and should be organized to reflect the areas over which local governments exert control and hold responsibility in order to serve the decision-making needs of users.

Completeness: All greenhouse gas emission sources and emission-causing activities within the chosen inventory boundary should be accounted for. Any specific exclusion should be justified and disclosed.

Consistency: Consistent methodologies should be used in the identification of boundaries, analysis of data and quantification of emissions to enable meaningful trend analysis over time, demonstration of reductions, and comparisons of emissions. Any changes to the data, inventory boundary, methods, or any relevant factors in subsequent inventories should be disclosed.

Transparency: All relevant issues should be addressed and documented in a factual and coherent manner to provide a trail for future review and replication. All relevant data sources and assumptions should be disclosed, along with specific descriptions of methodologies and data sources used.

Accuracy: The quantification of greenhouse gas emissions should not be systematically over or under the actual emissions. Accuracy should be sufficient to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

2.3.3 Organizational Boundaries

Local governments vary in their legal and organizational structures, and may contain a diverse number of departments, boards, facilities, joint ventures, etc. The Protocol should account for and report all emissions according to one of two control approaches: operational control or financial control. Under both control approaches, a local government accounts for 100 percent of the GHG emissions from operations over which it has control. It does not account for GHG emissions from operations in which it owns an interest but has no control. However, there are situations where the control approach choice will determine whether a source falls within the reporting organizational boundary. Once a choice in control approach has been made it will be applied consistently across all operations and future reporting goring forward.

2.3.3.1 Control Approach Recommendation

The Protocol strongly encourages local governments to utilize operational control when defining their organizational boundary. The stakeholders involved in the development of this Protocol believe that operational control most accurately represents the emission sources that local government's can influence. Operational control is also the consolidation approach required under AB 32's mandatory reporting program and is consistent with the requirements of many other types of environmental and air quality reporting.

2.3.3.2 Operational Control

A local government has operational control over an operation if the local government has the full authority to introduce and implement its operating policies on the facility or function. This approach is consistent with the current accounting and reporting practice of many organizations that report on emissions from facilities, which they operate (i.e., for which they hold the operating license). It is expected that except in very rare circumstances, if the local government is the operator of a facility, it will have the full authority to introduce and implement its operating policies and thus has operational control. One or more of the following conditions establishes operational control:

Santa Barbara County Facility Inventory[2]

Region	Square Feet
North County	**851,067**
South County	**1,475,345**
Total	**2,326,412**
Maintained Inventory by other departments (SF)	534,243
GS Maintained Inventory (SF)	1,792,169
Leased Facilities	160,403

- Wholly owning an operation, facility, or source; or
- Having the full authority to introduce and implement operational and health, safety and environmental policies (including both GHG- and non-GHG- related policies). In many instances, the authority to introduce and implement operational and health, safety, and environmental (HSE) policies is explicitly conveyed in the contractual or legal structure of the partnership or joint venture. In most cases, holding an operator's license is an indication of your organization's authority to implement operational and HSE policies. However, this may not always be so. If your organization holds an operating license and you believe you do not have

[2] See Appendix for a complete inventory of Santa Barbara County Facilities.

operational control, you will need to explicitly demonstrate that your authority to introduce operational and HSE policies is significantly limited or vested with a separate entity.

It is often the case that autonomous departments like municipal utilities, ports and airports are managed by their own board of commissioners or executives. If this board is appointed by local government officials (e.g. appointed by the Board of Supervisors or CEO and confirmed by the Board) and the local government officials have some level of oversight of the Board (e.g. the local government can help guide policy decisions of the department, the actions of the Board can be reviewed and overturned by the CEO or Board of Supervisors, etc.), then the local government is considered to have operational control over the department and should report the emissions associated with the municipal utility/port/airport as part of the local government's GHG inventory.

2.3.4 LEASED FACILITIES/VEHICLES AND LANDLORD/TENANT ARRANGEMENTS

Annual emission reports shall account for and report emissions from leased facilities and vehicles according to the type of lease associated with the facility or source and the organizational boundary approach selected.

There are two types of leases:

- Finance or capital lease. If there are assets under a finance or capital lease, the Registry considers this asset to be wholly owned.
- Operating lease. If you have an asset under an operating lease, such as a building or vehicle, the Registry considers this asset to be under your operational control but you do not have any financial risk or reward from owning the asset.

The Registry considers any lease that is not a finance or capital lease to be an operating lease. In most cases, operating leases cover rented office space and leased vehicles, whereas finance or capital leases are for large industrial equipment, real estate acquisitions and similar transactions.

2.4 ESTABLISHING EMISSIONS BASELINE

A baseline is a datum or reference point against which to measure GHG emission increases or decreases going forward. Baselines are used in a regulatory context to establish a clear threshold for compliance or non-compliance. Submitting the emission baseline for certification to the Climate Registry is an important step in emission reduction accountability. As an example, the State of California has committed "*to use its best efforts to ensure that organizations that establish greenhouse gas emissions baselines and register emissions results that are certified in accordance with Registry Criterion receive appropriate consideration under any future international, federal, or state regulatory schemes relating to greenhouse gas emissions*."
As of the date of this report, there is no commitment to join the Climate Registry or of having the County of Santa Barbara emission inventory certified.

Additionally, setting a baseline also allows the county to scale structural changes to its organization back to a benchmark emission profile. This aspect of a baseline is called "normalization". To account for the impact on its emissions profile due to acquisition, the county would adjust its baseline to incorporate the additional emissions associated with the acquired asset, thereby showing that the change in emissions occurred because of structural changes. In the Registry's program, the county would select its baseline according to the year that best represents its standard emissions profile. The baseline year will serve as the benchmark to which the county will compare future reporting years.

The county may begin reporting emissions to the Registry for any year from 1990 forward; likewise it can establish as its baseline any reporting year from 1990 forward. After establishing a baseline, the county should report certified emissions results for each subsequent year from that baseline year. If the county's participation in the Registry lapses temporarily, it must report emissions for all intervening years upon renewing its participation, or establish a new baseline. If its boundaries do not change significantly, the baseline will remain fixed over time.

2.4.1 RATIONALE FOR SETTING A BASELINE

There are several issues to consider when deciding a baseline year, including:

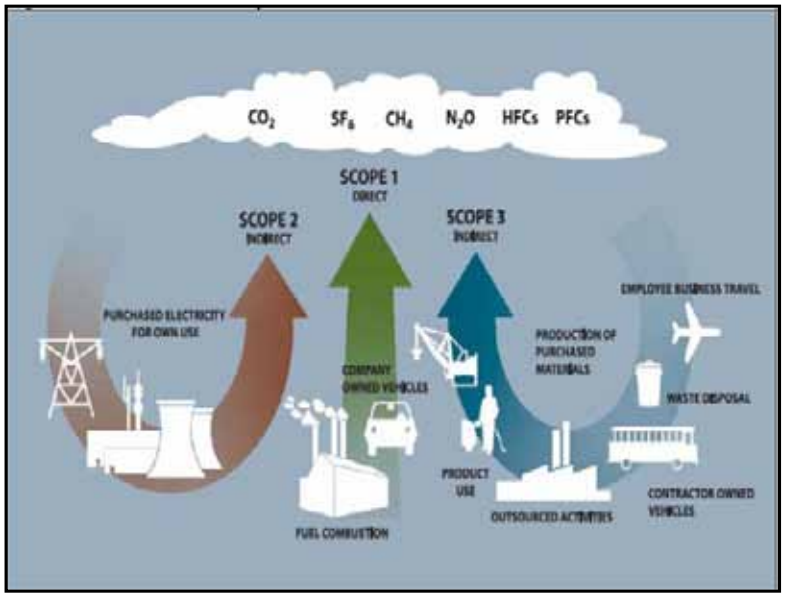
- Data certainty – does the county have sufficient data to certify its emissions against the requirements in the *Local Government Reporting Protocol* for the baseline year?
- Comparable organizational structure – is the county's organization sufficiently comparable in its composition and structure to support a meaningful comparison with the baseline year? and,
- Relative emission levels – which year minimizes or maximizes the county emissions relative to most recent levels, and what are the benefits of doing so?

The county baseline should not be adjusted for the organic growth or decline of its organization. Organic growth or decline refers to the increase or decrease in production output, changes in product mix, facility closures or the opening of new facilities that are not the result of changes in the structure of the county's organization or the result of shifting operations.

Many government organizations experience growth or reductions and thus their total absolute emissions will either increase or decrease from year to year, regardless of their organization's operational efficiency. Such organizations, in addition to reporting their total emissions, may also elect to report an efficiency metric, that measures GHG emissions per unit of performance or output compared to the baseline ratio (e.g., CO2/ft2 of office space, CO2/customer, CO2/kWh, CO2/$ of revenue, etc.).

2.4.2 GHG EMISSION SCOPES

To separately account for direct (Scope 1) and indirect emissions (Scopes 2 & 3), to improve transparency, and to provide utility for different types of climate policies and goals, the Local Government Protocol follows the WRI/WBCSD GHG Protocol Corporate Standard in categorizing direct and indirect emissions into "scopes" as follows:



Scope 1: All direct GHG emissions (with the exception of direct CO2 emissions from biogenic sources).

Scope 2: Indirect GHG emissions associated with the consumption of purchased or acquired electricity, steam, heating, or cooling.

Scope 3: All other indirect emissions not covered in Scope 2, such as emissions resulting from the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity (e.g., employee commuting and business travel), outsourced activities, waste disposal, etc.

The model used to calculate the County of Santa Barbara's emissions (CO^2_e) was developed by the University of New Hampshire and Clean-Air Cool Planet on the Microsoft Excel platform. The original modeling tool was constructed for use by the nations Universities and modified by the County Architect to allow input under the Local Government Reporting Protocols (see circled elements in graphic below).

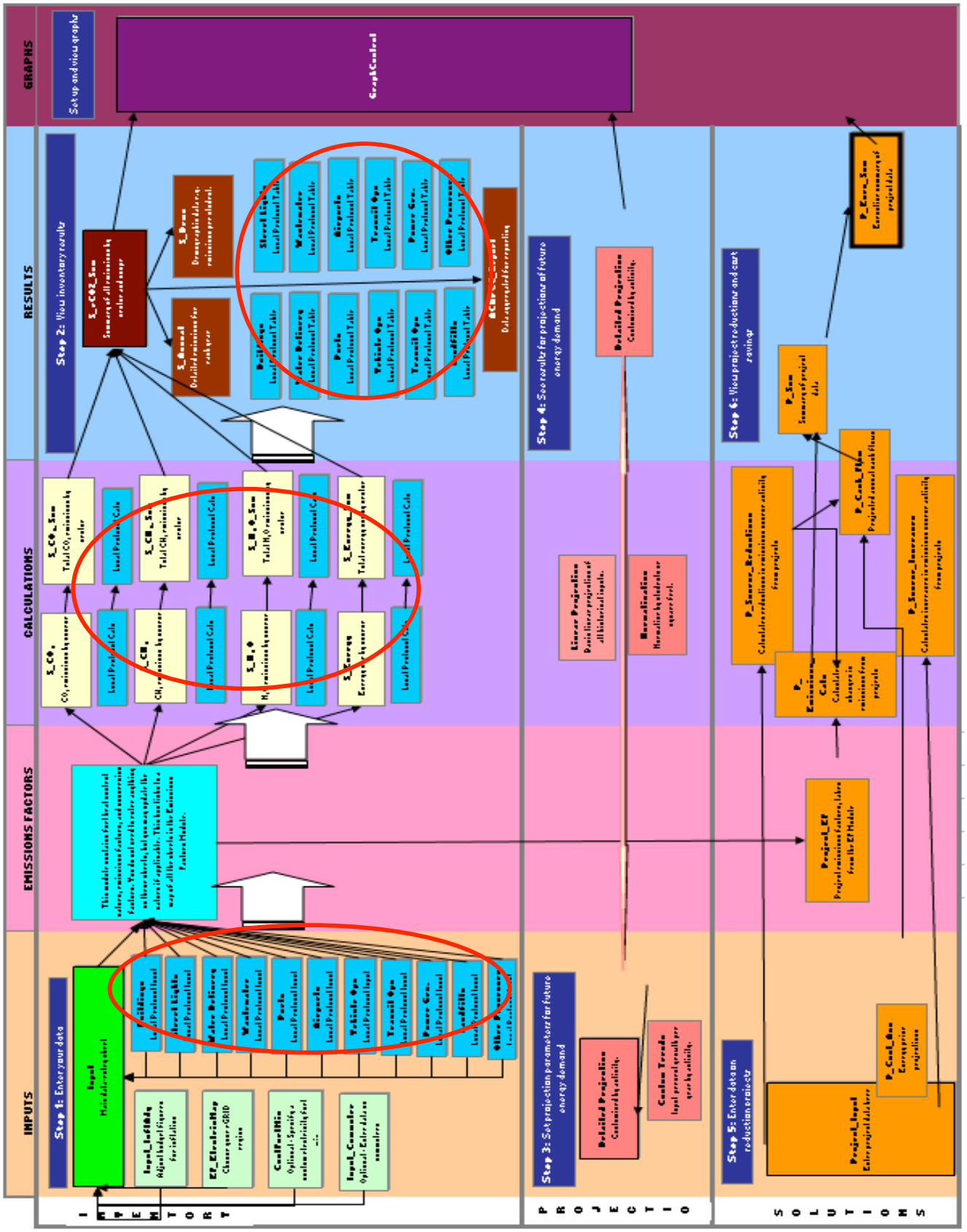


Figure 8: GHG Emissions Modeling Tool--Functional Mapping

2.5 COUNTY CO^2E EMISSION ESTIMATES

The County of Santa Barbara, like many local governments has a diverse organization with numerous departments responsible for the various aspects of operations. The General Services Department is primarily responsible for buildings and their operations. The Public Works Department is primarily responsible for public transportation infrastructure, including street and traffic lights and the public road system. They are also responsible for wastewater and landfill operations. Other departments are responsible for their individual operations, of which contribute to the overall emissions footprint. To separately account for direct and indirect emissions, to improve transparency, and to provide utility for different types of climate policies and goals, the Protocol has developed a reporting structure based around major catagories as follows:

The Local Government Reporting Protocol requires the reporting of Scope 1 and Scope 2 emissions. The calculated total CO^2e of these two scopes is 90,055.8 MT. The Scope 3 emissions are voluntary and represent 33% of total emissions.

Table 1: Total Emissions	%	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6	Unit
Scope 1	45	*60,601.6*	*60,254,019.0*	*6,267.0*	*687.4*	*0.0*	*0.0*	*0.0*	Metric Tons
Scope 2	22	*29,454.1*	*29,428,882.6*	*144.7*	*74.1*	*0.0*	*0.0*	*0.0*	Metric Tons
Scope 3	33	*43,947.5*	*8,921,029.0*	*1,507,185.5*	*418.0*	*0.0*	*0.0*	*0.0*	Metric Tons
Total	100	134,003.3	98,603,930.6	1,513,597.1	1,179.5	0.0	0.0	0.0	Metric Tons

Table 2: Informational Items			
CO^2 from BioMass Combustion	CO^2e:		
Carbon Offsets Retired	CO^2e:		
Carbon Offsets Generated & Sold	CO^2e:		
Renewable Energy Certificates (Green Power) Retired	MWH:		
Percentage of Total electricity used offset by Green Power	%:	CO^2e:	
Renewable Energy Certificates (Green Power) Generated and Sold	MWH:	CO^2e:	
Total Indirect			

As stated in previous sections of this report, Scope 1 & 2 are the required reporting scopes. Scope 3 is informational only and therefore a voluntary reporting component. That said, of the Scope 3 emissions, those generating the largest number are Landfill and Wastewater operations. Staff commuting is generally thought to generate a significant emission level. Given the employee population of the County of Santa Barbara, this number is only 14% of Scope 3 total emissions and 5% of total GHG emissions. Under the de-minimis rules, emissions generated by employee commuting could be dropped from the report.

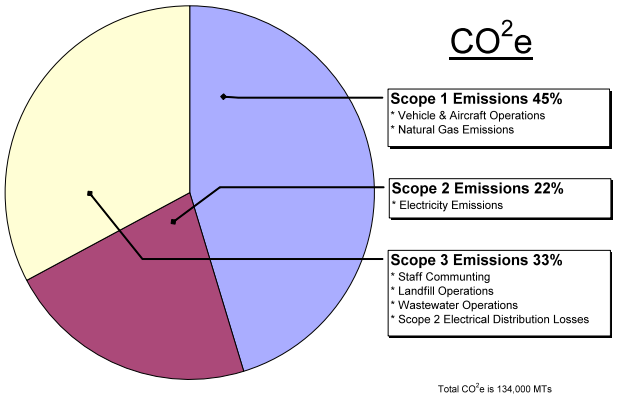
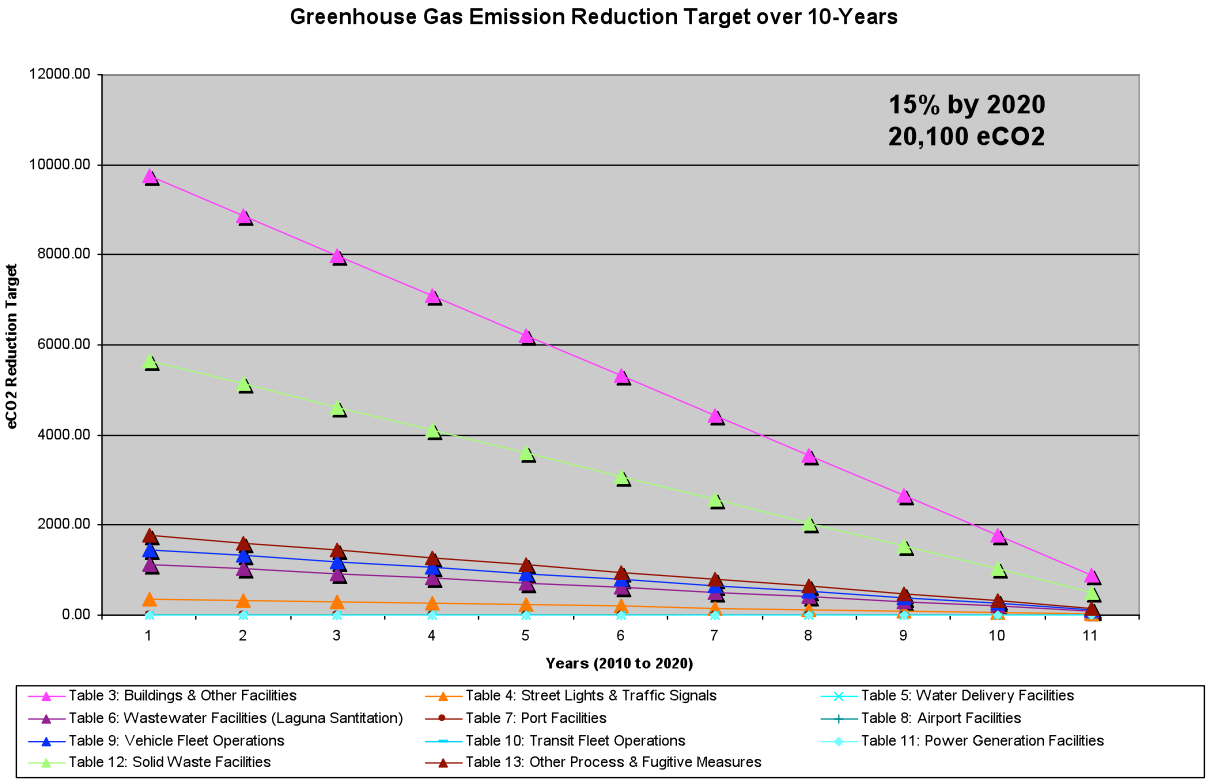


Figure 9: Emissions by Reporting Scope, County of Santa Barbara



The chart above represents the following 11 tables. While general reporting protocols only require that emission inventories be reported by Scopes only, the Local Government Protocols require reporting by Scopes and Functional Categories. Santa Barbara County emissions data has been collected and calculated for functional groups under its control. The County does not operate an air or sea port, water distribution system, power distribution system or public transit system. While those tables are included in an effort to provide full disclosure, they are noted with "no reportable emissions". The summary table can be found on page 15.

Table 3: Buildings & Other Facilities	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6
Scope 1							
Stationary Combustion	*43,106*	*42,981,949*	*4,298*	*86*	-	-	-
Fugitive Emissions	-	-	-	-	-	-	-
Subtotal Scope 1	43,106	42,981,949	4,298	86	-	-	-
Scope 2							
Purchased Electricity	*19,903*	*19,884,648*	*98*	*54*	-	-	-
Purchased Steam	-	-	-	-	-	-	-
District Heating/Cooling	-	-	-	-	-	-	-
Subtotal Scope 2	19,903	19,884,648	98	54	-	-	-
Scope 3							
Scope 2: Transmission/Distribution Losses	*1,968*	*1,966,614*	*10*	*5*	-	-	-
Subtotal Scope 3	*1,968*	*1,966,614*	*10*	*5*	-	-	-
Total Buildings & Other Facilities	64,978	64,833,210	4,405	145	-	-	-
Indicators							

Table 4: Street Lights & Traffic Signals	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6
Scope 1							
Stationary Combustion	-	-	-	-	-	-	-
Fugitive Emissions	-	-	-	-	-	-	-
Subtotal Scope 1	-	-	-	-	-	-	-
Scope 2							
Purchased Electricity	*2,137*	*2,137,257*	*11*	-	-	-	-
Purchased Steam	-	-	-	-	-	-	-
District Heating/Cooling	-	-	-	-	-	-	-
Subtotal Scope 2	2,137	2,137,257	11	-	-	-	-
Scope 3							
Scope 2: Transmission/Distribution Losses	*211*	*211,377*	-	-	-	-	-
Subtotal Scope 3	*211*	*211,377*	-	-	-	-	-
Total Buildings & Other Facilities	2,349	2,348,635	11	-	-	-	-
Indicators							

Street and traffic light systems are under the management of the Santa Barbara County Public Works Department and are administered through *Community Service Areas* (CSA) or Special Districts organized for that purpose. There are six such CSA's or Special Districts.

Table 5: Water Delivery Facilities (No Reportable Emissions)	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6
Scope 1							
Stationary Combustion	-	-	-	-	-	-	-
Fugitive Emissions	-	-	-	-	-	-	-
Subtotal Scope 1	-	-	-	-	-	-	-
Scope 2							
Purchased Electricity	-	-	-	-	-	-	-
Purchased Steam	-	-	-	-	-	-	-
District Heating/Cooling	-	-	-	-	-	-	-
Subtotal Scope 2	-	-	-	-	-	-	-
Scope 3							
Subtotal Scope 3	-	-	-	-	-	-	-
Total Buildings & Other Facilities	-	-	-	-	-	-	-
Indicators							

At the time of this report, the County of Santa Barbara does not operate a public or private water distribution system.

Table 6: Wastewater Facilities	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6
Scope 1							
Stationary Combustion	*4,411*	*4,398,141*	*440*	*9*	-	-	-
Fugitive Emissions	*446*	*439,477*	*50*	*19*	-	-	-
Subtotal Scope 1	4,857	4,837,617	490	28	-	-	-
Scope 2							
Purchased Electricity	*2,531*	*2,528,715*	*12*	*7*	-	-	-
Purchased Steam	-	-	-	-	-	-	-
District Heating/Cooling	-	-	-	-	-	-	-
Subtotal Scope 2	2,531	2,528,715	12	7	-	-	-
Scope 3							
Scope 2: Transmission/Distribution Losses	*185*	*184,413*	*1*	*1*	-	-	-
Subtotal Scope 3	*185*	*184,413*	*1*	*1*	-	-	-
Total Buildings & Other Facilities	7,573	7,550,746	503	35	-	-	-
Indicators							

The County of Santa Barbara operates two wastewater treatment plants. The largest operates in the Orcutt Community (near Santa Maria) and serves residential and commercial customers. The other provides service to the Cachuma Lake Recreational area off State Highway 154 (roughly in the middle of the geographic area of the county).

Table 7: Port Facilities (No Reportable Emissions)	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6
Scope 1							
Stationary Combustion	-	-	-	-	-	-	-
Fugitive Emissions	-	-	-	-	-	-	-
Subtotal Scope 1	-	-	-	-	-	-	-
Scope 2							
Purchased Electricity	-	-	-	-	-	-	-
Purchased Steam	-	-	-	-	-	-	-
District Heating/Cooling	-	-	-	-	-	-	-
Subtotal Scope 2	-	-	-	-	-	-	-
Scope 3							
Subtotal Scope 3	-	-	-	-	-	-	-
Total Buildings & Other Facilities	-	-	-	-	-	-	-
Indicators							

At the time of this report, the County of Santa Barbara does not operate a public or private port.

Table 8: Airport Facilities (No Reportable Emissions)	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6
Scope 1							
Stationary Combustion	-	-	-	-	-	-	-
Fugitive Emissions	-	-	-	-	-	-	-
Subtotal Scope 1	-	-	-	-	-	-	-
Scope 2							
Purchased Electricity	-	-	-	-	-	-	-
Purchased Steam	-	-	-	-	-	-	-
District Heating/Cooling	-	-	-	-	-	-	-
Subtotal Scope 2							
Scope 3							
Subtotal Scope 3	-	-	-	-	-	-	-
Total Buildings & Other Facilities	-	-	-	-	-	-	-
Indicators							

Table 9: Vehicle Fleet Operations	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6
Scope 1							
Stationary Combustion	-	-	-	-	-	-	-
Fugitive Emissions	*9,747*	*9,556,822*	*1,480*	*528*	-	-	-
Subtotal Scope 1	9.747	9,556,822	1,480	528	-	-	-
Scope 2							
Purchased Electricity	-	-	-	-	-	-	-
Purchased Steam	-	-	-	-	-	-	-
District Heating/Cooling	-	-	-	-	-	-	-
Subtotal Scope 2	-	-	-	-	-	-	-
Scope 3							
Subtotal Scope 3	-	-	-	-	-	-	-
Total Buildings & Other Facilities	9,747	9,556,822	1,480	528	-	-	-
Indicators							

Table 10: Transit Fleet Operations (No Reportable Emissions)	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6
Scope 1							
Stationary Combustion	-	-	-	-	-	-	-
Fugitive Emissions	-	-	-	-	-	-	-
Subtotal Scope 1	-	-	-	-	-	-	-
Scope 2							
Purchased Electricity	-	-	-	-	-	-	-
Purchased Steam	-	-	-	-	-	-	-
District Heating/Cooling	-	-	-	-	-	-	-
Subtotal Scope 2							
Scope 3							
Subtotal Scope 3	-	-	-	-	-	-	-
Total Buildings & Other Facilities	-	-	-	-	-	-	-
Indicators							

At the time of this report, the County of Santa Barbara does not operate a public or private Transit Fleet system.

Table 11: Power Generation Facilities (No Reportable Emissions)	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6
Scope 1							
Stationary Combustion	-	-	-	-	-	-	-
Fugitive Emissions	-	-	-	-	-	-	-
Subtotal Scope 1	-	-	-	-	-	-	-
Scope 2							
Purchased Electricity	-	-	-	-	-	-	-
Purchased Steam	-	-	-	-	-	-	-
District Heating/Cooling	-	-	-	-	-	-	-
Subtotal Scope 2	-	-	-	-	-	-	-
Scope 3							
Subtotal Scope 3	-	-	-	-	-	-	-
Total Buildings & Other Facilities	-	-	-	-	-	-	-
Indicators							

At the time of this report, the County of Santa Barbara does not operate a public or private power generation or distribution system.

Table 12: Solid Waste Facilities	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6
Scope 1							
Stationary Combustion	-	-	-	-	-	-	-
Fugitive Emissions	*1,624*	*1,611,493*	-	*43*	-	-	-
Subtotal Scope 1	1,624	1,611,493	-	43	-	-	-
Scope 2							
Purchased Electricity	-	-	-	-	-	-	-
Purchased Steam	-	-	-	-	-	-	-
District Heating/Cooling	-	-	-	-	-	-	-
Subtotal Scope 2	-	-	-	-	-	-	-
Scope 3							
Scope 2: Transmission/Distribution Losses	-	-	-	-	-	-	-
Landfill Operations	*34,638*	-	*1,505,980*	-	-	-	-
Subtotal Scope 3	*34,638*	-	*1,505,980*	-	-	-	-
Total Buildings & Other Facilities	36,262	1,611,493	1,505,980	43	-	-	-
Indicators							

Table 13: Other Process & Fugitive Measures	CO^2e	CO^2	CH^4	N^20	HFCs	PFCs	SF^6
Scope 1							
Stationary Combustion	-	-	-	-	-	-	-
Fugitive Emissions	-	-	-	-	-	-	-
Subtotal Scope 1	-	-	-	-	-	-	-
Scope 2							
Purchased Electricity	*4,797*	*4,792,141*	*24*	*13*	-	-	-
Purchased Steam	-	-	-	-	-	-	-
District Heating/Cooling	-	-	-	-	-	-	-
Subtotal Scope 2	4,797	4,792,141	24	13	-	-	-
Scope 3							
Scope 2: Transmission/Distribution Losses	*474*	*473,948*	-	-	-	-	-
Staff Commuting	*6,226*	*6,076,160*	*1,194*	*412*	-	-	-
					-	-	-
Subtotal Scope 3	*6,937*	*6,550,108*	*1,194*	*412*	-	-	-
Total Buildings & Other Facilities	11,734	11,342,249	1,218	425	-	-	-
Indicators							

3 GLOSSARY OF TERMS

AB 32 California Assembly Bill 32 (passed September 27, 2006)
Btu British thermal unit(s)
CARB California Air Resources Board
CARROT Climate Action Registry Reporting Online Tool
CEC California Energy Commission
CEMS Continuous Emissions Monitoring Systems
CHP combined heat and power
CH_4 methane
COP coefficient of performance
CO_2 carbon dioxide
CO_2e carbon dioxide equivalent
EIA U.S. Energy Information Administration
EIIP Emissions Inventory Improvement Program
EPA U.S. Environmental Protection Agency
g gram(s)
GCV gross caloric value
GHG greenhouse gas
GRP General Reporting Protocol
GWP global warming potential
ha hectare(s)
HDV heavy duty vehicle
HFC hydrofluorocarbon
HHV higher heating value
IPCC Intergovernmental Panel on Climate Change
IPP independent power producer
kg kilogram(s)
kWh kilowatt-hour(s)
lb pound
LDT light duty truck
LHV lower heating value
LPG liquefied petroleum gas
Mcf thousand cubic feet
mi mile(s)
MMBtu one million British thermal units
MWh megawatt-hour(s)
NCV net caloric value
NOx oxides of nitrogen
N_2O nitrous oxide
PFC perfluorocarbon
RFA Request for Applications
SAR IPCC Second Assessment Report (1996)
SB 1771 California Senate Bill 1771 (passed August 31, 2000)
SB 527 California Senate Bill 527 (passed September 14, 2001)
SF6 sulfur hexafluoride
TAR IPCC Third Assessment Report (2001)
T&D transmission and distribution
UNFCCC United Nations Framework Convention on Climate Change
WBCSD World Business Council for Sustainable Development
WRI World Resources Institute

Key Terms	Definition
Baseline	Datum against which to measure GHG emissions performance over time.
Base Year	The first year in which GHG emissions are reported.
Batch Certification	Simultaneous certification process arranged by the Registry for multiple participants with simple GHG emissions (typically only indirect emissions from electricity consumption and direct emissions from stationary combustion at a single site and/or direct emissions from a small number of vehicles).
CO_2-equivalent*	(CO_2e) The quantity of a given GHG multiplied by its total global warming potential. This is the standard unit for comparing the degree of warming which can be caused by different GHGs.
Certification	The process used to ensure that a given participant's greenhouse gas emissions inventory (either the baseline or annual result) has met a minimum quality standard and complied with the Registry's procedures and protocols for calculating and reporting GHG emissions.
Certified Member Certifier	A Registry participant that has a current certified annual emissions report to the Registry. A firm or team of firms that has been State- and Registry-approved to conduct certification activities under the Registry program. A certifier may also refer to a single employee within a State- and Registry-approved firm who conducts certification activities
Datum	A reference or starting point.
De Minimis	A quantity of GHG emissions from one or more sources, for one or more gases, which, when summed equal less than 5% of an organization's total emissions.
Direct Emissions	Emissions from sources that are owned or controlled by the reporting organization.
Emission Factor*	A factor relating activity data and absolute GHG emissions.
Equity Share	Fractional percentage or share of an interest in an entity based either on ownership interest, or on some other contractual basis negotiated among the entity's stakeholders.
Fugitive Emissions*	Intentional and unintentional releases of GHGs from joints, seals, gaskets, etc.
Global Warming Potential*	(GWP) The ratio of radiative forcing (degree of warming to the atmosphere) that would result from the emission of one unit of a given GHG compared to one unit of CO_2.
Greenhouse Gases	(GHG) For the purposes of the Registry, GHGs are the six gases identified in the Kyoto Protocol: Carbon Dioxide (CO_2), Nitrous Oxide (N_2O), Methane (CH_4), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulphur Hexafluoride (SF_6).
Indirect Emissions	Emissions that are a consequence of the actions of a reporting entity, but are produced by sources owned or controlled by another entity.
Leakage	A situation where emissions shift from one location to another resulting in a direct increase in emissions.
Management Control	The ability of an entity to govern the operating policies of another entity or facility so as to obtain benefits from its activities.
Material	Means any emission of greenhouse gas that is not de minimis.
Material Discrepancy	With respect to verifying an entity's emission inventory, a material discrepancy occurs when a difference in reported emissions between an entity and a certifier exceeds 5% of the reported emissions. A difference is immaterial if it is less than 5% of reported emissions.

Mobile Combustion*	Burning of fuels by transportation devices such as cars, trucks, airplanes, vessels, etc.
Member	An entity that is preparing its annual GHG Emission Report, but does not have a current certified Emission Report with the Registry.
Outsourcing*	The contracting out of activities to other businesses.
Process Emissions*	Emissions generated from manufacturing or other activity processes, such as cement or ammonia production.
Project Baseline	Datum against which to measure GHG emissions performance of a specific emissions reduction project over time, usually annual emissions measured from a base year.
Significance Threshold	Significance, in the context of the Registry, is defined as including all sources that are not de minimis. For the purposes of the Registry, the significance threshold is set at 95%.
Stationary Combustion*	Burning of fuels to generate electricity, steam, or heat.

Appendix B

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Appendix B

GLOSSARY

Alternative fuel vehicles
Vehicles that operate on fuels other than gasoline or diesel. Alternative fuel vehicles include those that operate using compressed natural gas (CNG), liquid natural gas (LNG), propane, electricity, a hybrid of gasoline and electricity, and hydrogen.

Alternative (and/or sustainable) modes of transportation
For the purpose of this document, alternative (and/or sustainable) modes of transportation include transportation by public transit (bus or rail), bicycle, walking, or alternative fuel vehicles.

Assembly Bill (AB) 32
Authored by Fabian Nunez (D-Los Angeles). Supports the California Global Warming Solutions Act of 2006.

Building square footage
The outside dimensions of length multiplied by width produces the total square feet of a building.

California Environmental Quality Act (CEQA)
A statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible.

CAS
Climate Action Strategy

California Air Resources Board (CARB)
Established in 1967, CARB is the "clean air agency" in the government of California. The Mulford-Carrell Act combined the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board to create CARB. CARB is a department within the cabinet-level California Environmental Protection Agency.

Clean distributed generation
Distributed generation refers to generation of electricity at or near the location where that electricity will be used. This differs from traditional electricity generation, which occurs at centralized power plants and is distributed over hundreds of miles to millions of customers through the electricity "grid". For the purpose of this document, clean distributed generation (in order of preferred technology type) refers to 1) renewable distributed generation, including electricity generated by solar photovoltaic systems, fuel cells (powered by hydrogen generated from solar, wind, or other non-fossil fuel, renewable energy technologies), and small wind generators; 2) electricity generated by high efficiency (i.e., meeting or exceeding efficiency of large natural gas power plants) natural gas generators and fuel cells using hydrogen generated through a natural gas catalyst; and 3) medium scale, high-efficiency co-generation systems (powered by natural gas) serving many properties located within close proximity of each other. Clean distributed generation does not include electricity generated by gasoline or diesel powered generators.

CH4
Methane (CH4) is expelled pursuant to the transportation and production of natural gas, coal, and oil. Methane emissions are created in municipal solid waste landfills as a result of the decay of organic waste, additionally from agricultural practices and livestock.

CO2
Carbon dioxide (CO2) builds up in the atmosphere while burning fossil fuels (natural gas, oil, and coal), trees, solid waste, and plant products, and also as from chemical reactions (manufacture of cement, and others).

Diversion
In reference to solid waste, diversion refers to waste that is kept out of a landfill through recycling, beneficial reuse, composting, or other means.

Ecological footprint
The ecological footprint is a tool to help measure human impacts on local and global ecosystems. The ecological footprint of a given population (household, community, country) is the total area of ecologically productive land and water used exclusively to produce all the resources (including food, fuel, and fiber) consumed and to assimilate all the wastes generated by that population. Since resources are used from all over the world and since far-away places are affected by the waste from those resources, the footprint is a sum of all of the ecological areas. Thus the ecological footprint of Santa Barbara is that area of productive land inside and outside its borders that is appropriated for its resource consumption or waste assimilation.

Environmentally preferable
A product, service, activity or process that has a lesser or reduced effect on human health and the environment when compared to other products, services, activities or processes that serve the same purpose.

Environmental Protection Agency (EPA)
The EPA, or sometimes USEPA, is an agency of the federal government of the United States charged to protect human health and the environment by writing and enforcing regulations based on laws passed by Congress.

Fluorinated gases
Perfluorocarbons, hydrofluorocarbons, and sulfur hexafluoride are synthetic, strong greenhouse gases that are generated during several industrial processes. Sometimes fluorinated gases are used as substitutes to ozone-depleting chemicals like HCFCs, CFCs, and halons. These gases are considered to have a high global warming potential.

Greenhouse gas (GHG)
Greenhouse gases are natural and manmade gases in the earth's atmosphere that allow incoming solar radiation to pass through the atmosphere and warm the earth but trap radiant heat given off by the earth. The radiant heat absorbed by these gases heats the atmosphere. This is a natural process known as the "greenhouse effect" that keeps the earth habitable. The four primary greenhouse gases are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O) and chlorofluorocarbons (CFCs). Since the onset of the industrial period, human activities have lead to sharp increases in the levels of GHGs in the atmosphere, enhancing the greenhouse effect and contributing to rising global temperatures.

Hazardous material
A material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant, or potentially significant, hazard to human health and safety or to the environment if released into the environment.

Hazardous waste
A waste (or combination of wastes) that, because of its quantity, concentration, or physical, chemical or infectious characteristics, may cause, or significantly contribute to, an increase in serious, irreversible, or incapacitating illness. A defined hazardous waste product may pose a substantial present hazard, or potential hazard, to human health and safety (or to the welfare of the environment) when improperly treated, stored, transported, used or disposed of, or otherwise managed.

HVAC
HVAC is an acronym for the closely related functions of "Heating, Ventilating, and Air Conditioning". HVAC involves the technology of indoor, or other enclosed area, environmental comfort.

International Council for Local Environmental Initiatives (ICLEI)
Local Governments for Sustainability is an international association of local governments and national and regional local government organizations that have made a commitment to sustainable development of resources.

Kilowatt (KW)
The kilowatt is equal to one thousand watts.

Kyoto Protocol
A protocol to the United Nations Framework Convention on Climate Change (UNFCCC or FCCC), aimed at combating global warming.

LFG
Landfill Gas

LED
A Light-Emitting Diode is a semiconductor light source.

Leadership in Energy & Environmental Design (LEEDTM) certification
A rating system developed by the United States Green Building Council (USGBC) that sets definitive standards for what constitutes a green or environmentally preferable building. The certification system is self-assessing and is designed for rating new and existing commercial, institutional, and high-rise residential buildings. It evaluates environmental performance of the entire building over the building's life cycle. LEED certifications are awarded at various levels (certified, silver, gold, and platinum) according to a point-based scoring system.

Mixed-use projects
Developments which incorporate both residential and commercial uses.

Megawatt (MW)
The megawatt is equal to one million watts.

N2O
Nitrous oxide (N2O) is generated in both industrial and agricultural operations through the combustion of solid waste and fossil fuels.

NASA
The National Aeronautics and Space Administration is an Executive Branch agency of the United States government; responsible for the nation's civilian space program and aeronautics and aerospace research.

Native species
Plant or animal species native to the southern California bioregion.

Natural function/wildlife habitat
Geographic areas that provide life supportive functions associated with atmospheric, biological, biochemical and hydrological processes that keep our air and water clean, process waste and support survival and reproduction of plant and animal life.

NOAA
The National Oceanic and Atmospheric Administration is a scientific agency within the United States Department of Commerce focused on the conditions of the oceans and the atmosphere.

Non-renewable resources
Natural resources that have a finite availability worldwide. Examples include coal, oil and other petroleum products.

Open space
For the purpose of this document, open space refers to all land uses defined as open space in the City of Santa Barbara's General Plan. These include beaches, parks, public gathering places, usable green open space in street medians, scenic highway corridors, gardens, and other publicly accessible land.

Passive recreation
Recreational opportunities that occur in a natural setting which require minimal development or facilities, and the importance of the environment or setting for the activities is greater than in developed or active recreation settings.

PG&E
Pacific Gas and Electric

PPA
A Power Purchase Agreement (PPA) is a legal contract between an electricity generator (provider) and a power purchaser (host).

Qualified low emission / alternative fuel vehicles
Vehicles recognized by the State of California as being low emission and/or alternative fuel vehicles. These vehicles exceed the basic standards all new vehicles must meet to be sold in California and include low emission vehicles (LEVs), ultra low emission vehicles (ULEVs), super ultra low emission vehicles (SULEVs) and zero emission vehicles (ZEVs).

RHNA
Regional Housing Needs Allocation

RTP
Regional Transportation Plan

Renewable limits
Harvesting resources within renewable limits refers to a rate of harvest that is lower than the rate the resource can replace itself; e.g. catching fish at a rate that will allow the fish population to be maintained over time. If too many fish are caught, exceeding renewable limits, the fish population will decline. The terms renewable limits and sustainable limits are synonymous.

Renewable resources
Natural resources that have an unlimited supply (such as solar radiation) or that can be renewed indefinitely if ecosystem health is maintained (e.g. fisheries or forests).

RRWMD
Resource Recovery and Waste Management Division of Public Works

RPG
Renewable Power Generating

Routine
When describing generation of hazardous waste by government operations for the purpose of this document, routine refers to regular and consistent operational practices, such as: vehicle maintenance, regular cleaning procedures, etc. Non-routine refers to hazardous waste generated during unanticipated events such as chemical spills or leaks.

SBCAG
Santa Barbara County Association of Governments

SAP
Sustainability Action Plan

SCE
Southern California Edison; a utility company

Scope 1 GHG Emissions
Direct GHG emissions from sources that are owned or controlled by the reporting entity. This can include emissions from fossil fuels burned on site, emissions from agency-owned or agency-leased vehicles, and other direct sources.

Scope 2 GHG Emissions
Indirect GHG emissions resulting from the generation of electricity, heat, or steam generated off site but purchased by the reporting agency.

Scope 3 GHG Emissions
Indirect GHG emissions from sources not owned or directly controlled by the reporting agency but related to the agency's activities such as vendor supply chains, delivery services, outsourced activities, and employee travel and commuting.

Senate Bill (SB) 97
Chapter 185, 2007. SB 97 required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions.

Senate Bill 375
Provides emission-reducing goals for which regions can plan; integrates disjointed planning activities, and provides incentives for local governments and developers to follow new conscientiously-planned growth patterns. SB 375 enhances the Air Resources Board's (ARB) ability to reach AB 32 goals.

Significant emissions source
Sources of toxic air contaminants and other air emissions that pose a threat to human health and the environment. A specific list of significant emission sources within Santa Barbara will be developed in the course of tracking this indicator.

Sustainable
Has slightly difference definitions depending on the context in which it is used. For the purpose of this document, the following definitions are used:

Sustainable (in reference to resource use)
A method of harvesting or using a resource so that it is not depleted or permanently damaged.

Sustainable landscapes
An approach to ornamental landscaping that emphasizes plantings that closely approach a "natural system" and do not rely on unnecessary input of natural resources (fuel, water, chemical fertilizers, toxic substances) or excessive output of green waste, toxic run-off, and groundwater pollutants. Sustainable landscapes also embrace the ethos of using locally-derived and/or recycled materials for constructed elements.

Sustainable procurement
Procurement of environmentally preferable goods and services in a way that also takes into consideration social responsibility and sustainable economic development issues in the manufacture, transportation, sale and use of those goods and services.

T8
One inch diameter tube fluorescent lamp tube that is gas-discharge lamp and uses electricity to excite mercury vapor.

T12
One and one-half inch diameter tube fluorescent lamp tube that is gas-discharge lamp and uses electricity to excite mercury vapor.

The Global Warming Solutions Act of 2006
An environmental law in California, signed into law by Governor of California Arnold Schwarzenegger on September 27, 2006.

Toxic material
A chemical or poisonous substance that causes illness, injury or death when ingested or contacted.

Toxic air contaminants (TACs)
Air pollutants which may cause or contribute to an increase in mortality or serious illness; or which may pose a present or potential hazard to human health.

Variable-Frequency Drive (VDF)
A variable-frequency drive (VFD) is a system for controlling the rotational speed of an alternating current (AC) electric motor by controlling the frequency of the electrical power supplied to the motor.

Zero waste
Recycling or reusing all natural and man made materials back into nature or the marketplace rather than sending those materials to landfills or similar disposal options.

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Appendix C

Appendix C

SOURCES

Cool Counties

"U.S. counties join global warming fight with 'Cool Counties' declaration"
Posted 23 July 2007 in EDITOR'S CHOICE | United States | Climate Change | Governance | News
Published 16 July 2007 by Sierra Club (original article)
On July 16th, twelve large U.S. counties and the Sierra Club launched the "Cool Counties Climate Stabilization Declaration", a major new initiative

Other Sources

AB 32 Scoping Plan, California Air Resources Board, October 2008
Energy Aware Planning Guide, California Energy Commission, December 2009
U.S. Mayors Handbook; Climate Protection Agreement and Climate Action Handbook, ICLEI and the City of Seattle and the U.S. Conference of Mayors.
Cities for Climate Protections Milestone Guide, ICLEI, EPA, State of California

Appendix D

Appendix D

RESOLUTION OF THE BOARD OF SUPERVISORS
COUNTY OF SANTA BARBARA, STATE OF CALIFORNIA

IN THE MATTER OF ADOPTING SANTA BARBARA)
COUNTY'S CLIMATE CHANGE GUIDING PRINCIPLES)
AND SUPPORTING COUNTY EFFORTS TO REDUCE) RESOLUTION NO. 09- 059
GREENHOUSE GAS EMISSIONS)

WITH REFERENCE TO THE FOLLOWING:

WHEREAS, as a result of scientific research and growing public awareness and concern regarding climate change, in 2005, Governor Arnold Schwarzenegger unveiled his plan to reduce California's greenhouse gas emissions. This led to a series of recent climate laws, which present a new policy framework in which all segments of the economy will be required to undertake efforts to reduce Statewide greenhouse gas emissions; and,

WHEREAS, the most comprehensive of these State policies, Assembly Bill (AB) 32, states that climate change "poses a serious threat to the economic well-being, public health, natural resources, and the environment of California" and "will have detrimental effects on some of the State's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry." AB 32 established a benchmark for greenhouse gas emission reductions to 1990 levels by 2020 (15% or 169 million metric tons) and to 80 percent below 1990 levels by 2050, and outlined a process of regulatory and market mechanisms to achieve these benchmarks, including implementation of an eighteen-point emission reduction plan; and,

WHEREAS, Subsequent to AB 32, more than a dozen implementing laws have been adopted and many more are expected to be enacted in the near term. Notable bills include Senate Bill 375, which aligns housing, transportation and greenhouse gas planning to reduce vehicle miles traveled, and Senate Bill 97, which requires local jurisdictions to address and mitigate greenhouse gas emissions during CEQA review. Many of these laws contain requirements, implications and opportunities for local jurisdictions; and,

WHEREAS, emerging State and Federal legislation, including H.R.1, the American Recovery and Reinvestment Act of 2009 ("Federal Economic Stimulus") enacted on February 17, 2009, is poised to reward communities that incentivize investment in energy efficiency and "green" infrastructure improvements, while simultaneously providing opportunity to protect and preserve components vital and unique to regional economic stability; and,

WHEREAS, local governments play an important role in reducing greenhouse gas emissions through operating practices in public facilities and assets, effective land use and transportation planning, integrated waste management services, protection of natural habitat and rural agricultural resources, promotion of renewable energy, efficient use of energy, and other means to achieve a larger cumulative change; and,

WHEREAS, the 2009 California Planners' Book of Lists, published by the Governor's Office of Planning and Research, indicates that over 135 jurisdictions, including a third of Counties in California have already adopted policies and/or programs to address climate change and the effects of greenhouse gases; and,

WHEREAS, Santa Barbara County has a long tradition of environmental stewardship, specifically in promoting the preservation of agricultural land and open space, an important component of greenhouse gas mitigation. Additionally, the County has already begun to engage in activities to reduce greenhouse gas emissions such as regional housing and transportation planning, the County Carbon Footprint Project, the Innovative Building Review Program, the Sustainable Public Architecture Directive, Tajiguas Landfill Gas Collection System and the recently approved Lompoc Wind Energy development; and,

WHEREAS, in November 2008, the Board of Supervisors reconstituted the County Sustainability and Conservation Team, charged with increasing energy efficiency and reducing greenhouse gas emissions from municipal operations; and,

NOW, THEREFORE, IT IS HEREBY RESOLVED that:

1. The above recitation is true and correct.

2. In acknowledgement of the growing and urgent concerns regarding global climate change and the expanding regulatory environment, the Santa Barbara County Board of Supervisors will:
    a. Adopt Exhibit 1, The Santa Barbara County Climate Change Guiding Principles.
    b. Take immediate, cost effective and coordinated steps to reduce the County's collective greenhouse gas emissions.
    c. Direct County staff to seek funding, including grants and rebates, to offset general fund costs of preparing the County's greenhouse gas emission reduction strategy and implementing programmatic actions that support climate protection.

PASSED, APPROVED, AND ADOPTED by the Board of Supervisors of the County of Santa Barbara, State of California, this 17th day of March, 2009, by the following vote:

AYES: Supervisors Carbajal, Wolf, Farr, Gray and Centeno

NOES: None

ABSTAIN: None

ABSENT: None

JOSEPH CENTENO
Chair, Board of Supervisors
County of Santa Barbara

ATTEST:

MICHAEL F. BROWN
Clerk of the Board of Supervisors

By: _____
Deputy Clerk

APPROVED AS TO FORM:

DENNIS A. MARSHALL
County Counsel

By: _____
Deputy County Counsel

EXHIBIT 1: SANTA BARBARA COUNTY CLIMATE CHANGE GUIDING PRINCIPLES

1. Protecting the community from the effects of climate change is a high priority for Santa Barbara County (County).

2. The County recognizes the State of California's climate change goals, regulations, and requirements set forth by AB 32 to reduce Statewide greenhouse gas (GHG) emissions and will implement programs to comply with these requirements.

3. As outlined in the State's AB 32 Scoping Plan, the benefits of investing in actions to reduce GHG emissions can outweigh the costs in numerous ways, including: economic vitality; public health and safety; natural resource protection; and infrastructure stability.

4. In order to maintain long-term regional well-being, health and prosperity of current residents, as well as future generations of residents, the County will preserve and balance our shared social wellbeing, economic prosperity, environmental resources, and biodiversity.

5. The County recognizes that challenges associated with climate change are regional in nature and can best be addressed in partnership with both public and private sectors.

6. The County has three strategic roles to play in reducing GHG emissions: 1) a producer of GHG emissions, 2) a regulator of GHG emitting activities, and 3) an incentivizer of communitywide enhancements to reduce GHG emissions.

7. The County will preserve its fiscal health by conserving resources and promoting renewable resources, thereby reducing costs.

8. The County will enhance our local economy through the incubation of clean technology, by attracting innovative firms and talent through private sector incentives, and by creating opportunities for local residents to attain jobs and training in the growing regional green economy.

9. A key component in a successful climate strategy is the development of an effective and inclusive decision making process that promotes the sharing of information and encourages diverse public input.

10. Through coordinated planning, measurement, evaluation, and reporting, the County will continue to address state requirements, capitalize on economic opportunities, and protect the regional quality of life while strategically progressing towards regional sustainability.

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Appendix E

Appendix E

Assembly Bill No. 32

CHAPTER 488

An act to add Division 25.5 (commencing with Section 38500) to the Health and Safety Code, relating to air pollution.

[Approved by Governor September 27, 2006. Filed with Secretary of State September 27, 2006.]

LEGISLATIVE COUNSEL'S DIGEST

AB 32, Nunez. Air pollution: greenhouse gases: California Global Warming Solutions Act of 2006.

Under existing law, the State Air Resources Board (state board), the State Energy Resources Conservation and Development Commission (Energy Commission), and the California Climate Action Registry all have responsibilities with respect to the control of emissions of greenhouse gases, as defined, and the Secretary for Environmental Protection is required to coordinate emission reductions of greenhouse gases and climate change activity in state government.

This bill would require the state board to adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with this program, as specified. The bill would require the state board to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020, as specified. The bill would require the state board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions, as specified. The bill would authorize the state board to adopt market-based compliance mechanisms, as defined, meeting specified requirements. The bill would require the state board to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism adopted by the state board, pursuant to specified provisions of existing law. The bill would authorize the state board to adopt a schedule of fees to be paid by regulated sources of greenhouse gas emissions, as specified.

Because the bill would require the state board to establish emissions limits and other requirements, the violation of which would be a crime, this bill would create a state-mandated local program.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

The people of the State of California do enact as follows:

SECTION 1. Division 25.5 (commencing with Section 38500) is added to the Health and Safety Code, to read:

DIVISION 25.5. CALIFORNIA GLOBAL WARMING SOLUTIONS ACT OF 2006

PART 1. GENERAL PROVISIONS

Chapter 1. Title of Division

38500. This division shall be known, and may be cited, as the California Global Warming Solutions Act of 2006.

Chapter 2. Findings and Declarations

38501. The Legislature finds and declares all of the following:

(a) Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

(b) Global warming will have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the state.

(c) California has long been a national and international leader on energy conservation and environmental stewardship efforts, including the areas of air quality protections, energy efficiency requirements, renewable energy standards, natural resource conservation, and greenhouse gas emission standards for passenger vehicles. The program established by this division will continue this tradition of environmental leadership by placing California at the forefront of national and international efforts to reduce emissions of greenhouse gases.

(d) National and international actions are necessary to fully address the issue of global warming. However, action taken by California to reduce emissions of greenhouse gases will have far-reaching effects by encouraging other states, the federal government, and other countries to act.

(e) By exercising a global leadership role, California will also position its economy, technology centers, financial institutions, and businesses to benefit from national and international efforts to reduce emissions of greenhouse gases. More importantly, investing in the development of innovative and pioneering technologies will assist California in achieving the 2020 statewide limit on emissions of greenhouse gases established by this division and will provide an opportunity for the state to take a global economic and technological leadership role in reducing emissions of greenhouse gases.

(f) It is the intent of the Legislature that the State Air Resources Board coordinate with state agencies, as well as consult with the environmental justice community, industry sectors, business groups, academic institutions, environmental organizations, and other stakeholders in implementing this division.

(g) It is the intent of the Legislature that the State Air Resources Board consult with the Public Utilities Commission in the development of emissions reduction measures, including limits on emissions of greenhouse gases applied to electricity and natural gas providers regulated by the Public Utilities Commission in order to ensure that electricity and natural gas providers are not required to meet duplicative or inconsistent regulatory requirements.

(h) It is the intent of the Legislature that the State Air Resources Board design emissions reduction measures to meet the statewide emissions limits for greenhouse gases established pursuant to this division in a manner that minimizes costs and maximizes benefits for California's economy, improves and modernizes California's energy infrastructure and maintains electric system reliability, maximizes additional environmental and economic co-benefits for California, and complements the state's efforts to improve air quality.

(i) It is the intent of the Legislature that the Climate Action Team established by the Governor to coordinate the efforts set forth under Executive Order S-3-05 continue its role in coordinating overall climate policy.

Chapter 3. Definitions

38505. For the purposes of this division, the following terms have the following meanings:

(a) "Allowance" means an authorization to emit, during a specified year, up to one ton of carbon dioxide equivalent.

(b) "Alternative compliance mechanism" means an action undertaken by a greenhouse gas emission source that achieves the equivalent reduction of greenhouse gas emissions over the same time period as a direct emission reduction, and that is approved by the state board. "Alternative compliance mechanism" includes, but is not limited to, a

flexible compliance schedule, alternative control technology, a process change, or a product substitution.

(c) "Carbon dioxide equivalent" means the amount of carbon dioxide by weight that would produce the same global warming impact as a given weight of another greenhouse gas, based on the best available science, including from the Intergovernmental Panel on Climate Change.

(d) "Cost-effective" or "cost-effectiveness" means the cost per unit of reduced emissions of greenhouse gases adjusted for its global warming potential.

(e) "Direct emission reduction" means a greenhouse gas emission reduction action made by a greenhouse gas emission source at that source.

(f) "Emissions reduction measure" means programs, measures, standards, and alternative compliance mechanisms authorized pursuant to this division, applicable to sources or categories of sources, that are designed to reduce emissions of greenhouse gases.

(g) "Greenhouse gas" or "greenhouse gases" includes all of the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexaflouride.

(h) "Greenhouse gas emissions limit" means an authorization, during a specified year, to emit up to a level of greenhouse gases specified by the state board, expressed in tons of carbon dioxide equivalents.

(i) "Greenhouse gas emission source" or "source" means any source, or category of sources, of greenhouse gas emissions whose emissions are at a level of significance, as determined by the state board, that its participation in the program established under this division will enable the state board to effectively reduce greenhouse gas emissions and monitor compliance with the statewide greenhouse gas emissions limit.

(j) "Leakage" means a reduction in emissions of greenhouse gases within the state that is offset by an increase in emissions of greenhouse gases outside the state.

(k) "Market-based compliance mechanism" means either of the following:

(1) A system of market-based declining annual aggregate emissions limitations for sources or categories of sources that emit greenhouse gases.

(2) Greenhouse gas emissions exchanges, banking, credits, and other transactions, governed by rules and protocols established by the state board, that result in the same greenhouse gas emission reduction, over the same time period, as direct compliance with a greenhouse gas emission limit or emission reduction measure adopted by the state board pursuant to this division.

(*l*) "State board" means the State Air Resources Board.

(m) "Statewide greenhouse gas emissions" means the total annual emissions of greenhouse gases in the state, including all emissions of greenhouse gases from the generation of electricity delivered to and consumed in California, accounting for transmission and distribution line losses, whether the electricity is generated in state or imported. Statewide emissions shall be expressed in tons of carbon dioxide equivalents.

(n) "Statewide greenhouse gas emissions limit" or "statewide emissions limit" means the maximum allowable level of statewide greenhouse gas emissions in 2020, as determined by the state board pursuant to Part 3 (commencing with Section 38850).

Chapter 4. Role of State Board

38510. The State Air Resources Board is the state agency charged with monitoring and regulating sources of emissions of greenhouse gases that cause global warming in order to reduce emissions of greenhouse gases.

PART 2. MANDATORY GREENHOUSE GAS EMISSIONS REPORTING

38530. (a) On or before January 1, 2008, the state board shall adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with this program.

(b) The regulations shall do all of the following:

(1) Require the monitoring and annual reporting of greenhouse gas emissions from greenhouse gas emission sources beginning with the sources or categories of sources that contribute the most to statewide emissions.

(2) Account for greenhouse gas emissions from all electricity consumed in the state, including transmission and distribution line losses from electricity generated within the state or imported from outside the state. This requirement applies to all retail sellers of electricity, including load-serving entities as defined in subdivision (j) of Section 380 of the Public Utilities Code and local publicly owned electric utilities as defined in Section 9604 of the Public Utilities Code.

(3) Where appropriate and to the maximum extent feasible, incorporate the standards and protocols developed by the California Climate Action Registry, established pursuant to Chapter 6 (commencing with Section 42800) of Part 4 of Division 26. Entities that voluntarily participated in the California Climate Action Registry prior to December 31, 2006, and have developed a greenhouse gas emission reporting program, shall not be required to significantly alter their reporting or verification program except as necessary to ensure that reporting is complete and verifiable for the purposes of compliance with this division as determined by the state board.

(4) Ensure rigorous and consistent accounting of emissions, and provide reporting tools and formats to ensure collection of necessary data.

(5) Ensure that greenhouse gas emission sources maintain comprehensive records of all reported greenhouse gas emissions.

(c) The state board shall do both of the following:

(1) Periodically review and update its emission reporting requirements, as necessary.

(2) Review existing and proposed international, federal, and state greenhouse gas emission reporting programs and make reasonable efforts to promote consistency among the programs established pursuant to this part and other programs, and to streamline reporting requirements on greenhouse gas emission sources.

PART 3. STATEWIDE GREENHOUSE GAS EMISSIONS LIMIT

38550. By January 1, 2008, the state board shall, after one or more public workshops, with public notice, and an opportunity for all interested parties to comment, determine what the statewide greenhouse gas emissions level was in 1990, and approve in a public hearing, a statewide greenhouse gas emissions limit that is equivalent to that level, to be achieved by 2020. In order to ensure the most accurate determination feasible, the state board shall evaluate the best available scientific, technological, and economic information on greenhouse gas emissions to determine the 1990 level of greenhouse gas emissions.

38551. (a) The statewide greenhouse gas emissions limit shall remain in effect unless otherwise amended or repealed.

(b) It is the intent of the Legislature that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020.

(c) The state board shall make recommendations to the Governor and the Legislature on how to continue reductions of greenhouse gas emissions beyond 2020.

PART 4. GREENHOUSE GAS EMISSIONS REDUCTIONS

38560. The state board shall adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions from sources or categories of sources, subject to the criteria and schedules set forth in this part.

38560.5. (a) On or before June 30, 2007, the state board shall publish and make available to the public a list of discrete early action greenhouse gas emission reduction measures that can be implemented prior to the measures and limits adopted pursuant to Section 38562.

(b) On or before January 1, 2010, the state board shall adopt regulations to implement the measures identified on the list published pursuant to subdivision (a).

(c) The regulations adopted by the state board pursuant to this section shall achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions from those sources or categories of

sources, in furtherance of achieving the statewide greenhouse gas emissions limit.

(d) The regulations adopted pursuant to this section shall be enforceable no later than January 1, 2010.

38561. (a) On or before January 1, 2009, the state board shall prepare and approve a scoping plan, as that term is understood by the state board, for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions from sources or categories of sources of greenhouse gases by 2020 under this division. The state board shall consult with all state agencies with jurisdiction over sources of greenhouse gases, including the Public Utilities Commission and the State Energy Resources Conservation and Development Commission, on all elements of its plan that pertain to energy related matters including, but not limited to, electrical generation, load based-standards or requirements, the provision of reliable and affordable electrical service, petroleum refining, and statewide fuel supplies to ensure the greenhouse gas emissions reduction activities to be adopted and implemented by the state board are complementary, nonduplicative, and can be implemented in an efficient and cost-effective manner.

(b) The plan shall identify and make recommendations on direct emission reduction measures, alternative compliance mechanisms, market-based compliance mechanisms, and potential monetary and nonmonetary incentives for sources and categories of sources that the state board finds are necessary or desirable to facilitate the achievement of the maximum feasible and cost-effective reductions of greenhouse gas emissions by 2020.

(c) In making the determinations required by subdivision (b), the state board shall consider all relevant information pertaining to greenhouse gas emissions reduction programs in other states, localities, and nations, including the northeastern states of the United States, Canada, and the European Union.

(d) The state board shall evaluate the total potential costs and total potential economic and noneconomic benefits of the plan for reducing greenhouse gases to California's economy, environment, and public health, using the best available economic models, emission estimation techniques, and other scientific methods.

(e) In developing its plan, the state board shall take into account the relative contribution of each source or source category to statewide greenhouse gas emissions, and the potential for adverse effects on small businesses, and shall recommend a de minimis threshold of greenhouse gas emissions below which emission reduction requirements will not apply.

(f) In developing its plan, the state board shall identify opportunities for emission reductions measures from all verifiable and enforceable voluntary actions, including, but not limited to, carbon sequestration projects and best management practices.

(g) The state board shall conduct a series of public workshops to give interested parties an opportunity to comment on the plan. The state board shall conduct a portion of these workshops in regions of the state that have the most significant exposure to air pollutants, including, but not limited to, communities with minority populations, communities with low-income populations, or both.

(h) The state board shall update its plan for achieving the maximum technologically feasible and cost-effective reductions of greenhouse gas emissions at least once every five years.

38562. (a) On or before January 1, 2011, the state board shall adopt greenhouse gas emission limits and emission reduction measures by regulation to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions in furtherance of achieving the statewide greenhouse gas emissions limit, to become operative beginning on January 1, 2012.

(b) In adopting regulations pursuant to this section and Part 5 (commencing with Section 38570), to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:

(1) Design the regulations, including distribution of emissions allowances where appropriate, in a manner that is equitable, seeks to minimize costs and maximize the total benefits to California, and encourages early action to reduce greenhouse gas emissions.

(2) Ensure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.

(3) Ensure that entities that have voluntarily reduced their greenhouse gas emissions prior to the implementation of this section receive appropriate credit for early voluntary reductions.

(4) Ensure that activities undertaken pursuant to the regulations complement, and do not interfere with, efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminant emissions.

(5) Consider cost-effectiveness of these regulations.

(6) Consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.

(7) Minimize the administrative burden of implementing and complying with these regulations.

(8) Minimize leakage.

(9) Consider the significance of the contribution of each source or category of sources to statewide emissions of greenhouse gases.

(c) In furtherance of achieving the statewide greenhouse gas emissions limit, by January 1, 2011, the state board may adopt a regulation that establishes a system of market-based declining annual aggregate emission limits for sources or categories of sources that emit greenhouse gas emissions, applicable from January 1, 2012, to December 31, 2020, inclusive, that the state board determines will achieve the maximum

technologically feasible and cost-effective reductions in greenhouse gas emissions, in the aggregate, from those sources or categories of sources.

(d) Any regulation adopted by the state board pursuant to this part or Part 5 (commencing with Section 38570) shall ensure all of the following:

(1) The greenhouse gas emission reductions achieved are real, permanent, quantifiable, verifiable, and enforceable by the state board.

(2) For regulations pursuant to Part 5 (commencing with Section 38570), the reduction is in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.

(3) If applicable, the greenhouse gas emission reduction occurs over the same time period and is equivalent in amount to any direct emission reduction required pursuant to this division.

(e) The state board shall rely upon the best available economic and scientific information and its assessment of existing and projected technological capabilities when adopting the regulations required by this section.

(f) The state board shall consult with the Public Utilities Commission in the development of the regulations as they affect electricity and natural gas providers in order to minimize duplicative or inconsistent regulatory requirements.

(g) After January 1, 2011, the state board may revise regulations adopted pursuant to this section and adopt additional regulations to further the provisions of this division.

38563. Nothing in this division restricts the state board from adopting greenhouse gas emission limits or emission reduction measures prior to January 1, 2011, imposing those limits or measures prior to January 1, 2012, or providing early reduction credit where appropriate.

38564. The state board shall consult with other states, and the federal government, and other nations to identify the most effective strategies and methods to reduce greenhouse gases, manage greenhouse gas control programs, and to facilitate the development of integrated and cost-effective regional, national, and international greenhouse gas reduction programs.

38565. The state board shall ensure that the greenhouse gas emission reduction rules, regulations, programs, mechanisms, and incentives under its jurisdiction, where applicable and to the extent feasible, direct public and private investment toward the most disadvantaged communities in California and provide an opportunity for small businesses, schools, affordable housing associations, and other community institutions to participate in and benefit from statewide efforts to reduce greenhouse gas emissions.

PART 5. MARKET-BASED COMPLIANCE MECHANISMS

38570. (a) The state board may include in the regulations adopted pursuant to Section 38562 the use of market-based compliance mechanisms to comply with the regulations.

(b) Prior to the inclusion of any market-based compliance mechanism in the regulations, to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:

(1) Consider the potential for direct, indirect, and cumulative emission impacts from these mechanisms, including localized impacts in communities that are already adversely impacted by air pollution.

(2) Design any market-based compliance mechanism to prevent any increase in the emissions of toxic air contaminants or criteria air pollutants.

(3) Maximize additional environmental and economic benefits for California, as appropriate.

(c) The state board shall adopt regulations governing how market-based compliance mechanisms may be used by regulated entities subject to greenhouse gas emission limits and mandatory emission reporting requirements to achieve compliance with their greenhouse gas emissions limits.

38571. The state board shall adopt methodologies for the quantification of voluntary greenhouse gas emission reductions. The state board shall adopt regulations to verify and enforce any voluntary greenhouse gas emission reductions that are authorized by the state board for use to comply with greenhouse gas emission limits established by the state board. The adoption of methodologies is exempt from the rulemaking provisions of the Administrative Procedure Act (Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code).

38574. Nothing in this part or Part 4 (commencing with Section 38560) confers any authority on the state board to alter any programs administered by other state agencies for the reduction of greenhouse gas emissions.

PART 6. ENFORCEMENT

38580. (a) The state board shall monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism adopted by the state board pursuant to this division.

(b) (1) Any violation of any rule, regulation, order, emission limitation, emissions reduction measure, or other measure adopted by the state board pursuant to this division may be enjoined pursuant to Section 41513, and the violation is subject to those penalties set forth in Article 3 (commencing with Section 42400) of Chapter 4 of Part 4 of, and Chapter 1.5 (commencing with Section 43025) of Part 5 of, Division 26.

(2) Any violation of any rule, regulation, order, emission limitation, emissions reduction measure, or other measure adopted by the state board pursuant to this division shall be deemed to result in an emission of an air contaminant for the purposes of the penalty provisions of Article 3 (commencing with Section 42400) of Chapter 4 of Part 4 of, and Chapter 1.5 (commencing with Section 43025) of Part 5 of, Division 26.

(3) The state board may develop a method to convert a violation of any rule, regulation, order, emission limitation, or other emissions reduction measure adopted by the state board pursuant to this division into the number of days in violation, where appropriate, for the purposes of the penalty provisions of Article 3 (commencing with Section 42400) of Chapter 4 of Part 4 of, and Chapter 1.5 (commencing with Section 43025) of Part 5 of, Division 26.

(c) Section 42407 and subdivision (i) of Section 42410 shall not apply to this part.

PART 7. MISCELLANEOUS PROVISIONS

38590. If the regulations adopted pursuant to Section 43018.5 do not remain in effect, the state board shall implement alternative regulations to control mobile sources of greenhouse gas emissions to achieve equivalent or greater reductions.

38591. (a) The state board, by July 1, 2007, shall convene an environmental justice advisory committee, of at least three members, to advise it in developing the scoping plan pursuant to Section 38561 and any other pertinent matter in implementing this division. The advisory committee shall be comprised of representatives from communities in the state with the most significant exposure to air pollution, including, but not limited to, communities with minority populations or low-income populations, or both.

(b) The state board shall appoint the advisory committee members from nominations received from environmental justice organizations and community groups.

(c) The state board shall provide reasonable per diem for attendance at advisory committee meetings by advisory committee members from nonprofit organizations.

(d) The state board shall appoint an Economic and Technology Advancement Advisory Committee to advise the state board on activities that will facilitate investment in and implementation of technological research and development opportunities, including, but not limited to, identifying new technologies, research, demonstration projects, funding opportunities, developing state, national, and international partnerships and technology transfer opportunities, and identifying and assessing research and advanced technology investment and incentive opportunities that will assist in the reduction of greenhouse gas emissions. The committee may also advise the state board on state, regional, national, and

international economic and technological developments related to greenhouse gas emission reductions.

38592. (a) All state agencies shall consider and implement strategies to reduce their greenhouse gas emissions.

(b) Nothing in this division shall relieve any person, entity, or public agency of compliance with other applicable federal, state, or local laws or regulations, including state air and water quality requirements, and other requirements for protecting public health or the environment.

38593. (a) Nothing in this division affects the authority of the Public Utilities Commission.

(b) Nothing in this division affects the obligation of an electrical corporation to provide customers with safe and reliable electric service.

38594. Nothing in this division shall limit or expand the existing authority of any district, as defined in Section 39025.

38595. Nothing in this division shall preclude, prohibit, or restrict the construction of any new facility or the expansion of an existing facility subject to regulation under this division, if all applicable requirements are met and the facility is in compliance with regulations adopted pursuant to this division.

38596. The provisions of this division are severable. If any provision of this division or its application is held invalid, that invalidity shall not affect other provisions or applications that can be given effect without the invalid provision or application.

38597. The state board may adopt by regulation, after a public workshop, a schedule of fees to be paid by the sources of greenhouse gas emissions regulated pursuant to this division, consistent with Section 57001. The revenues collected pursuant to this section, shall be deposited into the Air Pollution Control Fund and are available upon appropriation, by the Legislature, for purposes of carrying out this division.

38598. (a) Nothing in this division shall limit the existing authority of a state entity to adopt and implement greenhouse gas emissions reduction measures.

(b) Nothing in this division shall relieve any state entity of its legal obligations to comply with existing law or regulation.

38599. (a) In the event of extraordinary circumstances, catastrophic events, or threat of significant economic harm, the Governor may adjust the applicable deadlines for individual regulations, or for the state in the aggregate, to the earliest feasible date after that deadline.

(b) The adjustment period may not exceed one year unless the Governor makes an additional adjustment pursuant to subdivision (a).

(c) Nothing in this section affects the powers and duties established in the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code).

(d) The Governor shall, within 10 days of invoking subdivision (a), provide written notification to the Legislature of the action undertaken.

SEC. 2 No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that

may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.