

## **Attachment A**

### **2006-07 Green Team Annual Update**

The Green Team, whose Project Charter was accepted by your Board on April 20, 1999, is comprised of representatives from General Services, Planning and Development, the Parks Department, the Agricultural Commissioner's Office, and Public Works.

The team continues to create and pursue opportunities to implement programs to increase recycling efforts, conserve natural resources and purchase recycled-content products including environmentally friendly cleaning and pest control products.

This year's annual report provides an update of the Green Team's information and the Integrated Pest Management update for your review. Departments have provided their information to the Green Team for inclusion in the Annual Update.

#### **General Services Facilities**

##### **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 Green Team initiated the County Battery Recycling Program on April 1, 2001. The Battery Recycling Program focuses on diverting dry cell batteries (e.g. 12 volt, 6 volt, and "D" sized batteries and smaller), including alkaline, nickel-cadmium, and lithium batteries from our landfills.

County employees are encouraged to recycle their used batteries from work by sending them through inter-departmental mail to the Mail Services Division. Mailroom staff members then sort the batteries by category and take them to the Community Hazardous Waste Collection Center, located at the University of California at Santa Barbara. During the 2006–2007 reporting period, approximately 2100 Pounds of batteries were collected and diverted from our landfills in this manner.

##### **Energy Conservation**

In July 2001, the Board of Supervisors directed the General Services Department to take steps to reduce energy consumption in County facilities. The County spends over \$3.1 million a year for energy at all County facilities, and each year, energy costs increase. The Green Team and the General Services Department have been working throughout the County to reduce energy usage to the most efficient possible level without affecting the ability of employees to work productively. The following efforts were undertaken in fiscal year 2006-2007 to conserve energy:

## **New Boilers at the Main Jail**

The General Services Department, in conjunction with the Sheriff's Department, has replaced 2 large, old inefficient boilers with 4 smaller high efficiency units that work in conjunction with an existing solar hot water system to supply hot water to the main Jail. The new boilers include automatic digital controls and more efficient pumping systems that allow the use of any one or a combination of the 4 boilers to ensure that only the minimum amount of hot water needed at any given time is produced.

## **Casa Nueva Building Efficiency improvements**



### **Casa Nueva:**

Completed March 2004, is the first sustainable building project executed by the County and was underway while the Facility Policy Framework was in its formulation stage.

The Casa Nueva office building was designed to be an efficient green building. However, the actual performance fell short of expectations.

In fiscal year 2006-2007 General Services in conjunction with the APCD and Southern California Edison undertook the task of evaluating the building systems to identify short comings and areas for improvement.

This resulted in the following:

- A central HVAC control system was implemented.
- Heating and cooling settings in occupied areas were optimized.

- Unoccupied area HVAC settings are set to not turn on until the most extreme (55<sup>0</sup>/90<sup>0</sup>) temperatures are reached.
- HVAC ventilation ducts and registers were repaired and balanced.
- Office dimmable switches and lights have been set for optimal energy savings and comfort.
- Lower wattage fluorescent lights (26w vs. 32w) were installed in the walkways.
- The decorative lighting was reduced from 5 to 2 lights per track.
- Lighting controls were upgraded and optimized.
- Bathroom fan timers were installed so the fans no longer run 24/7.

**The impact on energy usage was dramatic.**

June '07 energy usage was 33% lower than prior years and July '07 was 26% lower. Jun 07's reading, at 25,120Kwh, is the lowest recorded for the building. We anticipate staying at a new 30% lower operating level, on average.

**Energy Partnership Opportunities with Southern California Edison (SCE) and Pacific Gas and Electric (PG&E) occurred this fiscal year:**

**South County (SCE) Energy Partnerships involved the following groups including County residents:**

County of Santa Barbara  
 City of Santa Barbara  
 City of Goleta  
 Carpinteria  
 Southern California Edison

The partnership resulted in the County's participation in a variety of projects focused on energy conservation internally and externally.

- Projects accomplished and on-going:
  1. A Lamp exchange (Fixture & bulbs) took in 7000 lamps which were recycled by the County Transfer station and (fluorescent) bulbs were exchanged for incandescent to introduce the new bulbs to customers.
  2. Christmas lights (incandescent) were exchanged for LED (Light-emitting diode).
  3. Direct installation of new lighting fixtures for small business by contractors paid for by SCE. "Victor the Florist" was one Santa Barbara business recipient of the installation.
  4. Increased energy efficiency from Carpinteria to Goleta was accomplished by SCE performing Lighting retro fits in trailer park

communities (exchange regular lamps with fluorescent) and in County buildings. For example:

- Child Support Services
  1. Lompoc 100% exchanged
  2. Santa Barbara partially exchanged
  3. Santa Maria 100% exchanged

**North County: PG&E**

Meetings have begun for similar programs in North County with PG&E. There is a special project under consideration for Cuyama. More details will be available in the next annual update.

**Reprographics:**

General Services takes special pride in that, unless otherwise specified, reprographics uses recycled paper for printing orders. New equipment is in place that will accommodate recycled paper more easily. The team in Reprographics recycles stock to create notepads and makes them available to departments.

Digital Scanning, as a service, is on the horizon.

**Moving Towards a Green County Fleet**

Over the past several years the County has implemented numerous changes in an attempt to run a more environmentally friendly Fleet Operation.

**Hybrids:**

The County has a total of “13” hybrid sedans that have been in service now for several years. The hybrids, Toyota Priuses and Honda Civics have proven to be extremely reliable and very popular with our employees. Along with being very fuel efficient these vehicles are rated as “Ultra low emission vehicles” by the EPA (Environmental Protection Agency).

**Motor Pool:**

The County has made significant steps towards downsizing the motor pool fleet towards smaller more fuel efficient vehicles. Over the past three years 46 of the County’s 110 motor pool sedans have been down sized from mid-size sedans to compacts. The smaller compacts average 32 MPG vs. 23 MPG for the mid-size sedans representing a 17% savings in fuel usage.

**New Project:**

Santa Barbara County has recently installed the first fully automated Motor Pool System in California located at the Lompoc Administration Building. This exciting new system offers 24/7 access to all County employees to County Pool vehicles. The new automated system has been extended and implemented in Santa Barbara and Santa Maria motor pools.(May 2007)

**Ride Share:**

The County has implemented a new “Ride Share” program. This new program makes it possible for employees to view ride share options prior to booking a motor pool trip reservation. The “Ride Share” program matches employees traveling to a common destination on the same date and time. Employees are encouraged to “Ride Share” whenever possible in an attempt to eliminate duplicate trips thus reducing traffic congestion, vehicle emissions and cost to the taxpayer.

**Down Sizing:**

Departments are being asked to down size their assigned vehicles as appropriate. For example, one large department has elected to down size their standard staff car from full size Crown Victorias to mid size sedans. Going forward as the County purchases replacement vehicles, down sizing and fuel efficiency will be paramount considerations.

**Recycling:**

The County has successfully used “Re-refined motor oil” for over five years now. When County vehicles are serviced re-refined oil is used. Other recycled fleet products include, antifreeze, brake linings, batteries, all oils, oil filter, metal and aluminum.

**Moving Forward:**

The County will continue to evaluate environmental process improvements, future considerations will include

- The evaluation of bio-diesel
- Continued Fleet downsizing efforts
- Cost benefit analysis of hybrid vehicle replacements
- Expansion of the County's “Ride Share” program
- Use of alternative fuel vehicles as appropriate

**Green Buildings**

Santa Barbara County has been committed to greening county-owned buildings since 2001 when the County Board of Supervisors adopted Ordinance 4452, thereby implementing the Facility Policy Framework. The Framework was the result of county departments agreeing to the inclusion of sustainable elements in future project requests. Pursuing sustainable design is an opportunity to use public resources efficiently while creating healthier buildings. Environmentally friendly, conservation-minded approaches to promote resource efficiency, enhance indoor air quality, maximize energy efficiency, and reduce water consumption are considerations in sustainable construction. Santa Barbara County realizes the significance of cutting its energy costs and the resulting savings potential.

The County is taking steps to strengthen its policy on greening county-owned buildings by creating a broad policy document known internally as the *Sustainable Public Architecture Directive*. The Directive will provide further

direction set forth in the Facility Policy Framework of 2001. The Directive sets the general design standards, requirements for commissioning, reduction of energy consumption, recycled content use in construction projects, and the ability of projects to become LEED (Leadership in Energy and Environmental Design) certified if desired at the minimum of Silver. The “no cost” LEED components will be required in all new projects and major renovations.

Additionally, the long-term costs to operate and maintain county facilities are being reviewed using a Life-Cycle-Cost modeling application. New buildings and major renovations will be required to demonstrate how they reduce long-term operating costs and reduce the projects carbon footprint. It is expected that the Sustainable Public Architecture Directive will come back to the Board on early Spring 2008.



### **The County of Santa Barbara’s Carbon Footprint:**

In recent years, the issue of climate change and the greenhouse gas emissions that buildings contribute to climate change have gained global public attention. The debate as to the degree of responsibility for anthropogenic contributions is not likely to be settled anytime soon. However, there is little debate about the fact that buildings do, by way of their demand on energy sources, contribute to the level of CO<sub>2</sub> emissions.

Assembly Bill 32, signed by the Governor in 2006, requires that the State return to its 1990 greenhouse gas emissions by 2020 and then to 80% of the 1990 levels by 2050. About 50% of US emissions and almost 40% of our county's emissions come from buildings and can be attributed to the operation of buildings. To the degree that the energy demand of our buildings can be reduced, this can result in lowering the CO<sub>2</sub> emissions locally and thus a collective and measurable drop in accumulated global greenhouse gases (GHG). The County of Santa Barbara, like other public agencies is committed to being fiscally responsible and environmentally smart. Reducing our energy demand and usage will accomplish both fiscal savings and emissions reductions resulting in a better future for all county residents.

Our first step toward a better future is to understand how big our footprint on the environment is. It is expected that the County will have its total carbon footprint calculated and certified by the Climate Action Registry by 2008.

The buildings in the County of Santa Barbara that were constructed with the concept and strategies talked about in the text above, include: the new Public Works building in Santa Maria, The Lompoc Health Clinic, the District Attorney Office Building, the Hall of Records historic restoration, and the ADMHS Children's Center.



**The Public Works building in Santa Maria:**

Completed in January 2006, makes a considerable leap forward in green construction with the use of photovoltaic panels that convert sunlight (photons) into electricity (voltage). It is the first building in the County of Santa Barbara to have solar panels. The project also incorporates other sustainable building components in its construction. The use of the photovoltaic panels is intended to reduce peaks and spikes in electrical energy usage, creating a significant cost savings. It is anticipated that at full capacity, energy will be sent back to the power grid to further increase savings through credits received from the utility company. The utility costs are \$1.65/sf/year.



**The Lompoc Health Clinic:**

Completed in July 2004, utilizes a geothermal ground loop system to control heating and cooling equipment in the building. In addition, the system provides for extraction of excess heat from the geothermal ground loop to heat the domestic hot water needs of the clinic. Rather than the thermodynamic energy found in a gas fired furnace, the system works by moving heat through a fluid distribution system that reduces electrical costs and eliminates natural gas consumption.



**The District Attorney Building:**

Designed by a LEED certified architect. The use of exterior usable roof top space, operable exterior windows and a water based HVAC system are all sustainable elements. The water based HVAC system could be connected to a



geothermal ground loop system at any time which would result in significant utility savings.



**The Hall of Records Rehabilitation:**

Restored an historic space to near original condition. This included returning an abandoned 50 foot diameter skylight to service. The installation of modern heating and cooling equipment connected to a 32-well geothermal ground loop system and the installation of additional lighting.



### **ADMHS Children's Center:**

The Children's Center on the Calle Real Campus is a combination of new construction and recycling of an existing building. The design of the new space creates two important "green" features; first the building is narrow which affords its users and visitors a view to the outside; and second, the shape incorporates an existing structure that forms a much needed quiet courtyard. Because the building is completely open, in that the users can open the windows, energy costs can be kept to a minimum. Extensive use of recycled materials were designed into the building and its interiors by a LEED certified Interior Designer and Architect.

## **Public Works**

### **Resource Recovery**

#### **Commingled Recycling Program**

In 1999, the County Green Team began expanding the County's recycling program to include commingled recycling in facilities where commingled recycling was available. More recently, in March 2007, the County Green Team announced an expansion in the materials that were accepted for recycling i.e. hard plastics nos. 1 through 7 could now be placed in commingled recycling containers. Presently, most County facilities have commingled recycling service,

however, limited access and leasing situations make it difficult to implement commingled recycling in the remaining buildings. The Green Team and the Resource Recovery and Waste Management Division (RRWMD) of the Public Works Department will continue their efforts to implement recycling at these remaining facilities in order to reduce the amount of waste sent to landfills each year and to increase the overall diversion rate for the County of Santa Barbara.

During fiscal year 2006-07 (July 1, 2006 through June 30, 2007), seven County departments received various types of recycling containers to enable them to expand their participation in the County's commingled recycling program. The RRWMD worked with each department to provide the requested number of recycling containers (e.g. carts and cardboard boxes). Both the RRWMD and the County Green Team continue to analyze the trash and recycling service levels at County facilities to ensure that the service levels are both adequate and cost effective.

## **Water Pollution Prevention**

### **Project Clean Water**

Project Clean Water is an urban run-off program managed within the Water Resources Division of the Public Works Department and includes staff members from the Environmental Health Services Division of the Public Health Department.

At the direction of the Santa Barbara County Board of Supervisors in 1998, the Project Clean Water program was established to identify and implement solutions to creek and ocean water pollution on the South Coast. The County is supported in this effort by members of groups such as the Urban Creeks Council, the Audubon Society, the Surfrider Foundation, Heal the Ocean, CURE, Coalition of Labor, Agriculture & Business, Santa Barbara Channelkeeper, and the Community Environmental Council, as well as many community members.

Through Project Clean Water, the County implements its responsibilities under the NPDES General Permit Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (State Water Quality Order No. 2003-005-DWQ). The permit implementation plan is contained in the Storm Water Management Program with outcomes published in the Annual Report. One example of the progress that is being made is through implementation of treatment control measures.

Programs implemented under Project Clean Water include:

- Regular meetings of the Project Clean Water Stakeholders Committee
- Ongoing creek walks to assess conditions and identify sources of pollution
- Bio-assessment of creek conditions

- Monitoring of water quality limited streams
- Water quality complaint investigations and follow-up
- Enforcement of the Storm Water Discharge Ordinance (Chapter 29 Article IV), which regulates the discharge of pollutants into the storm drain system.
- Implementation of numerous outreach / education programs
- Public event participation (Creek Week, Earth Day, business fairs, etc)
- Youth education curriculum
- Review of new and redevelopment projects for measures that treat storm water runoff.

In addition, Project Clean Water is responsible for several treatment systems along the south coast that treat polluted runoff before the water reaches creeks and the ocean. These include several trash removal systems (four of which are in Isla Vista), three bioswales, and an ultraviolet radiation system to combat bacteria in storm drain discharges.



Photo: Turnpike Bioswale

For more information on the program and the County's activities to protect water quality and improve urban runoff, contact Robert Almy (568-3542) Water Agency Manager.

## Other County Water Quality Activities:

**Beach Monitoring**: Santa Barbara County Environmental Health Services implements many programs that protect surface water quality for public health. These include liquid waste discharges, septic system regulation, food service inspections, and ocean water monitoring. The beach monitoring program provides regular beach water quality testing for bacteria. The results are posted on their website - both the status of all beaches tested and the raw data.

**2007 California Coastal Cleanup Day**; Santa Barbara County Resource Recovery Division implements many programs that reduce pollution. One major annual event is Coastal Cleanup Day.



Photo by Steve Trainoff, Paradise Dive Club

This year, 556 volunteers removed 1604 pounds of trash, 1017 pounds of recyclables over 17 beaches countywide. The number of volunteers rose nearly 10% from last year as did the amount of trash the volunteers removed.

Resource Recovery provided bags made of recycled materials for the Coastal Cleanup Day. Jody Rundle, Santa Barbara Public Works, coordinates this event for Santa Barbara County.