



# Los Angeles World Airports Sustainability Plan

April 2008

Los Angeles World Airports  
**Global Leader in  
Airport Sustainability**

S U S T A I N A B I L I T Y   P L A N



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## **Los Angeles World Airports**

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*Los Angeles World Airports*

**CDM**



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**Global Leader in**  
Airport **Sustainability**

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## INTRODUCTION

In his address on October 13, 2006 to the American Chamber of Commerce in Hong Kong, Mayor Antonio Villaraigosa placed in motion his commitment “to making Los Angeles the cleanest and greenest big city in America.” Supporting this commitment, Mayor Villaraigosa signed Executive Directive No. 10 on July 18, 2007 which calls for the integration of sustainable practices into government activities and the adoption of best sustainable practices and cutting edge sustainable technology for the City of Los Angeles.

As a sustainability leader, Mayor Villaraigosa also vowed to make the City of Los Angeles a leader in reducing greenhouse gas emissions. He is a signatory to the U.S. Conference of Mayors’ Climate Protection Agreement, an agreement where supporting mayors pledge to reduce carbon dioxide emissions by 7% below 1990 levels by 2012. In May 2006—two months before California passed its landmark Global Warming Solutions Act (AB32)—the Mayor pledged to reduce Los Angeles’ greenhouse gas emissions by 35% below 1990 levels by 2030.

Echoing Mayor Villaraigosa’s commitment, Los Angeles City Council, specifically Councilperson for the 11th District, Mr. Bill Rosendahl, introduced a motion that requires Los Angeles International Airport (LAX) to be “built and held to the highest green standards.” In addition, Councilperson Rosendahl requested the Board of Airport Commissioners to:

- Increase reclaimed water use;
- Increase recycling;
- Reduce energy use;
- Reduce emissions from mobile sources;
- Develop a long-range plan for a carbon neutral footprint by 2030;
- Reduce CO<sub>2</sub> emissions;
- Increase public transportation options;
- Build sustainable buildings;

The Los Angeles World Airports (LAWA) has embraced these commitments. Moreover, its history shows that it has been a leader in sustainability for decades. This Sustainability Plan details LAWA’s current sustainability practices and outlines the goals set and actions to be taken by LAWA to implement the initiatives set forth by the Mayor, the City Council and the Board of Airport Commissioners for LAX, LA/Ontario International Airport (LA/ONT), LA/Van Nuys Airport (LA/VNY), and Palmdale Regional Airport (PMD).



This Sustainability Plan is one small but important step in LAWA's commitment to sustainability. The plan highlights sustainability actions that began in the mid-1980s, details LAWA's long-term objectives and targets, and describes the initiatives that LAWA will implement in fiscal year (FY) 2008-2009. The objectives, targets, and initiatives are part of LAWA's long-term commitment to sustainability leadership.





## SUSTAINABILITY VISION

Because of the expanse of sustainability, it must be embraced by all levels of an organization to be effective. In LAWA's case, the Board of Airport Commissioners demonstrated top-down leadership on August 6, 2007 when it adopted LAWA's Sustainability Vision and Principles. A copy of the Sustainable Vision and Principles is included in Appendix A. The Sustainability Vision and Principles form the foundation upon which LAWA's sustainability program is built. The Sustainability Vision and Principles also addresses communicating LAWA's outlook to its employees, tenants, suppliers, passengers, peers, and neighboring communities.

LAWA recognizes the difference between the concepts of green and sustainability. Green practices focus solely on environmental stewardship, such as reducing waste or conserving energy. Sustainability moves beyond environmental stewardship and integrates economic growth (e.g. use of local contractors and suppliers) and social responsibility (e.g. implementing fair labor practices) in LAWA's operations.



LAWA's multi-level embrace of sustainability is enhanced by its use of the Triple Bottom Line philosophy. The Triple Bottom Line philosophy recognizes that in order to be sustainable, LAWA's success should not only be measured by the traditional bottom line of financial performance but also by its impact on the local, regional and global economy, environment, and society. The Triple Bottom Line framework seeks to balance the dimensions of:

1. Environmental Stewardship;
2. Economic Growth; and
3. Social Responsibility.

LAWA's sustainability commitment not only shapes its internal business practices, but also its external relationships with its tenants, contractors, passengers, suppliers, peers and neighboring communities.



## SUSTAINABILITY APPROACH

Building upon the Sustainability Vision and Principles, LAWA adopted the Sustainability Performance Improvement Management System (SPIMS) as its tool for setting sustainability objectives, implementing initiatives focused on those objectives, and providing continuous improvement in its sustainability activities. SPIMS provides a management system framework that facilitates LAWA's ability to enrich its sustainability performance through a process of continuous improvement. Similar to the Sustainability Vision and Principles, SPIMS focuses on the "Triple Bottom Line" approach to sustainability and provides LAWA with the critical foundation for managing and tracking its sustainability performance and achieving its objectives as well as the goals set by the Mayor, City Council, and Board of Airport Commissioners.

The cornerstone of SPIMS is an integrated and coordinated approach across the four LAWA airports to engage all levels of the LAWA organization to establish and prioritize sustainability objectives, establish specific and measurable targets, identify and enable new activities and initiatives, and monitor and report progress. These actions will be performed on a continuous basis to ensure that LAWA meets its long-term and short-term objectives and targets.

The SPIMS process has six specific activities for integrating sustainability into LAWA's on-going operations. Each the following steps are continuously re-evaluated to ensure that LAWA stays on the leading edge of sustainability. SPIMS fosters awareness and encourages all LAWA employees to become actively involved in continual performance improvement in their day-to-day responsibilities. SPIMS builds upon existing processes and procedures to facilitate and coordinate continual sustainability improvements.

1. **Conduct Sustainability Assessment**—LAWA formed Implementation Teams that assessed the status of LAWA's policies, procedures, programs, and initiatives and identified those areas that could be made more sustainable and encourage more sustainable behavior and practices.
2. **Identify Opportunities**—From the Sustainability Assessment, LAWA's Implementation Teams identified those opportunities that could be more sustainable and encourage more sustainable behavior and practices
3. **Establish Objectives and Targets**—From a review of the first two steps, LAWA established the fundamental objectives for achieving the principles outlined in the Sustainability Vision Statement and Principles, Green LA, the Greening LAX Motion, and Executive Directive #10. From these objectives, LAWA set targets that will lead LAWA into becoming the Global Leader in Airport Sustainability.
4. **Implement Initiatives**—After establishing objectives and setting targets, LAWA's Coordinating Committee reviewed the initiatives identified by the Implementation Teams and chose initiatives that achieve LAWA's objectives.



The Coordination Committee also outlined implementation plans for the chosen initiatives that focused on interdivisional collaboration and the streamlining of time and cost efficiency.

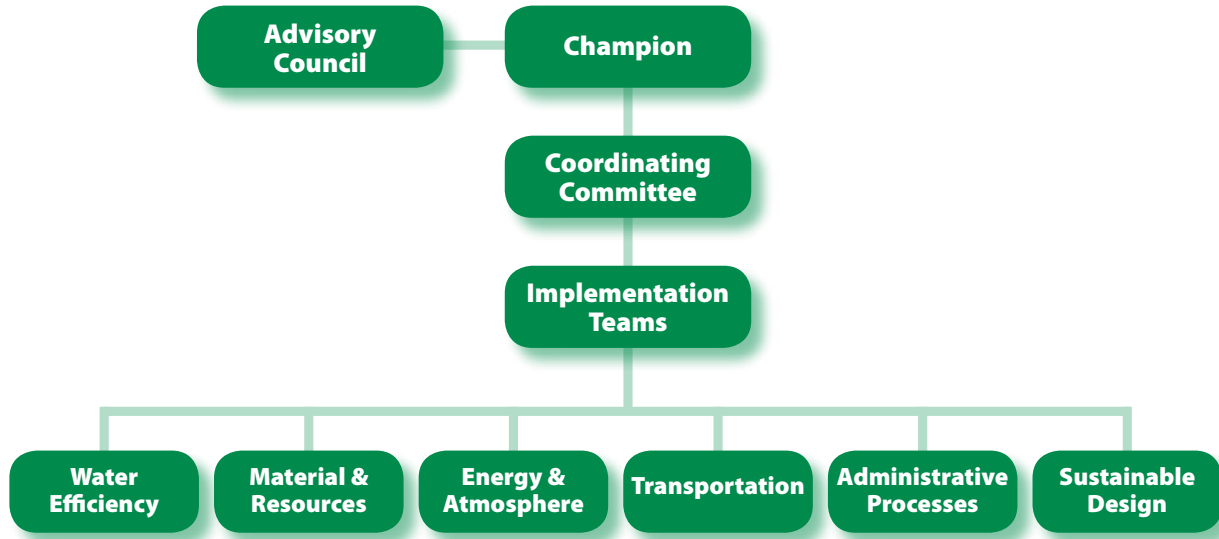
5. **Monitor Progress**—In addition to the new initiatives identified, LAWA, during the assessment phase, identified existing programs, initiatives, and projects that will help to achieve continuous improvement in sustainability performance and meet LAWA's objectives. These programs, initiatives and projects will be monitored on a regular basis to track progress.
6. **Communicate Progress**—As part of addressing the Social Responsibility aspect of sustainability, LAWA takes serious the need to keep everyone aware of the activities performed at LAWA. In addition to the mandate for annual updates to the City Council on "Greening LAX" and the Mayor's annual Sustainability Report, LAWA will use its website, internal and external publications (LAXpectations, Aerogramme, etc.) to communicate progress.



LAWA plans to integrate the SPIMS process outlined in the discussion and figure above into every facet of its operations. Mr. Roger Johnson, Deputy Executive Director of Facilities and Environmental Services and Planning and Ms. Intissar Durham, Chief Airports Engineer champion LAWA's sustainability efforts and the implementation of the SPIMS process. LAWA staff at all levels supports Mr. Johnson and Ms. Durham in capturing the diverse skills and knowledge of LAWA's employees. The SPIMS organization is made up of the Champions, the Advisory Council, the Coordinating Committee, and six Implementation Teams. The Champions, Advisory Council and Coordinating Committee are permanent. The structure of the Implementation Teams is not permanent. The Implementation Teams will meet for specific activities as directed by the Champions and/or the Coordinating Committee. Each of these levels of organization has specific tasks to meet LAWA's sustainability vision.



## SPIMS Organizational Structure



**Champion:** Provides vision and leadership.

**Advisory Council:** Monitors the implementation of SPIMS and sets direction of future activities.

**Coordinating Committee:** Develops objectives, sets targets, prioritizes and coordinates initiatives, and monitors and reports progress,

**Implementation Teams:** Form the heart of LAWA's sustainability program. As previously stated, implementation of SPIMS initiatives requires the engagement of staff throughout LAWA. SPIMS fosters coordination of these efforts and provides added recognition of LAWA staff who work to achieve LAWA's sustainability objectives. The Implementation Teams are comprised of LAWA staff who want to work on a specific improvement initiative. The Coordinating Committee and/or Advisory Council provide direction and guidance, as necessary. The Implementation Teams assemble for a specified duration to achieve the sustainability objectives and implement initiatives. The Coordinating Committee summarizes and communicates the results of the Implementation Team's activities. Initial Implementation Teams chartered are:

**Water Efficiency:** Addresses issues of potable water conservation, water efficient landscaping, and water re-use.

**Materials & Resources:** Addresses issues of materials procurement and waste minimization and recycling.

**Energy & Atmosphere:** Addresses issues of energy use, energy efficiency, and air quality.

**Transportation:** Addresses issues of traffic congestion and non-single occupancy vehicle alternatives.



**Administrative Processes:** Addresses issues relating to sustainable policies, guidelines, and plans.

**Sustainable Design:** Addresses issues of sustainable planning, design, and construction guidelines and green specifications.

As part of their regular duties, the Coordinating Committee and Advisory Council will meet on an annual basis to provide guidance on the development of additional Implementation Teams moving into the future. More information on the Implementation Teams' activities is included in Appendix B.



## INITIAL SUSTAINABILITY OBJECTIVES

LAWA recognizes that, to achieve its goal of being the **Global Leader in Airport Sustainability**, it must establish clear objectives, set achievable targets and implement the actions that are necessary to meet these targets and objectives. In addition, LAWA must strive toward continuous sustainability performance improvement in future years.

In order to further its sustainable practices, the Implementation Teams proposed a number of fundamental sustainability objectives. Based on these initial efforts, LAWA has established the following fundamental objectives:

- 1 INCREASE WATER CONSERVATION IN ALL AIRPORT FACILITIES AND FOR ALL OPERATIONS.**
- 2 INCREASE USE OF ENVIRONMENTALLY AND SOCIALLY RESPONSIBLE PRODUCTS.**
- 3 INCREASE RECYCLING AND SOURCE REDUCTION EFFORTS AT ALL FACILITIES AND FOR ALL OPERATIONS.**
- 4 REDUCE ENERGY USAGE AND INCREASE USAGE OF GREEN POWER AT ALL AIRPORT FACILITIES AND IN ALL OPERATIONS.**
- 5 REDUCE EMISSIONS FROM ALL OPERATIONS INCLUDING STATIONARY AND MOBILE SOURCES.**
- 6 REDUCE SINGLE OCCUPANCY TRIPS TO, FROM, AND WITHIN LAWA AIRPORTS.**
- 7 INCORPORATE SUSTAINABLE PLANNING, DESIGN, AND CONSTRUCTION PRACTICES INTO ALL AIRPORT PROJECTS.**
- 8 PROMOTE SUSTAINABILITY AWARENESS TO AIRPORT EMPLOYEES AND THE GREATER COMMUNITY.**
- 9 INTEGRATE SUSTAINABLE PRACTICES INTO INTERNAL POLICIES, BUSINESS PROCESSES, AND WRITTEN AGREEMENTS.**

Lawa set specific initial targets for each of the above objective and prioritized the initiatives developed by the implementation teams for fy 2008-2009.

The following sections describe the status of LAWA's current sustainability practices with respect to each objective and its associated targets. Moreover, it details the initiatives that will be implemented in FY 2008-2009.



## Objective 1

### **INCREASE WATER CONSERVATION IN ALL AIRPORT FACILITIES AND FOR ALL OPERATIONS.**

Water is a precious resource in Southern California and the Inland Empire. The City of Los Angeles has made great strides in **water conservation**. With a population growth of over 1 million people in the last 25 years, Los Angeles has not increased its overall water use. Moreover, with the consistent drought conditions experienced in recent years, LAWA recognizes that it must be proactive in its water conservation efforts. Therefore, LAWA strives to reduce water consumption in its everyday operations. Moreover, it must find ways to re-use water from treatment sources.

LAWA has taken advantage of LAX's proximity to the LA's Hyperion Wastewater Treatment Plant in El Segundo to use **reclaimed water** from Hyperion to irrigate LAX's landscaped areas.

LAWA currently uses reclaimed water to irrigate approximately **35%** of its landscaped acres. To support Objective #1, LAWA developed targets to increase the use of reclaimed water at all facilities. These include increasing landscaped acreage that is irrigated by reclaimed water by 50% in 2012 and increasing non-potable/reclaimed water use by 10% by 2010.

**TARGET 1A**  
Increase by 50% landscaped acreage irrigated by reclaimed water by 2012

LAWA has developed the following initiatives for putting in place the infrastructure needed to increase the use of reclaimed water at LAX.

- Work with affected agencies to extend the reclaimed water line to Manchester Blvd. for use at the Westchester Golf Course.
- Work with affected agencies to extend the reclaimed water line to Sepulveda/Imperial gateway and the Central Terminal Area (CTA).

**TARGET 1B**  
Increase by 10% use of non-potable/reclaimed water by 2010.

In addition to striving to increase the amount of reclaimed water for irrigation, LAWA is also committed to efficiently use reclaimed water. An example of this policy is having the majority of the irrigation systems at LAX computer controlled so that the landscaped areas are only irrigated when needed.

**TARGET 1C**  
Increase acres of native or drought resistant vegetation to 10% of landscaped areas by 2012.

In response to recent drought conditions in the Los Angeles region, LAWA is re-evaluating the types of plants used in its landscaped areas. LAWA is committed to increasing the acreage covered with native and more drought tolerant plants, which require less water, by 10% by 2012. This target will be supported by LAWA's initiative to plant native or drought resistant vegetation in new landscaping projects.

In addition to the use of reclaimed water, LAWA recognizes that the need to minimize the amount of potable water used in all facilities is a key factor to sustainable operations. LAWA has taken steps to reduce water usage including the installation of **low flow fixtures** on all toilets and sinks in all LAX terminals



**TARGET 1D**  
 Reduce potable  
 water use by 10%  
 per passenger and/or  
 cargo tonnage by  
 2012.

and buildings. In addition, LAX's fleet vehicle car wash recycles water through a treatment system for continuous re-use. Fresh water is added only to make up for losses due to evaporation. To further its water reduction efforts, LAWA will evaluate the feasibility of installing waterless urinals in LAWA buildings. Furthermore, LAWA will install centralized controls to monitor and regulate irrigation, and thereby reduce water usage, at LA/ONT and LA/VNY airports.

LAWA's commitment to improving water conservation practices throughout its facilities is demonstrated by the target of decreasing water use by 10% per passenger and/or cargo tonnage by 2012.

***The following tables list the water conservation current practices and initiatives for FY 2008-2009***

**Table 1-1 Water Conservation Current Practices**

- Thirty-five percent (35%) of landscaped areas are irrigated by reclaimed water at LAX.
- LAX car wash facility uses recycled water.
- LAX's landscape irrigation systems are computer controlled.
- All toilets and sinks have been converted to low flow fixtures in all LAX terminals and buildings.

**Table 1-2 Water Conservation Initiatives**

- LAWA will work with affected agencies to extend the reclaimed water line to Manchester Blvd. for use at the Westchester Golf Course.
- LAWA will work with affected agencies to extend the reclaimed water line to Sepulveda/Imperial gateway and the Central Terminal Area.
- LAWA will plant native or drought resistant vegetation in all new landscaping projects.
- LAWA will install centralized controls to monitor and regulate irrigation at LA/ONT and LA/VNY.
- LAWA will evaluate the feasibility of installing waterless urinals in LAWA buildings.



## Objective 2

### How Much Paper is in One Tree?

*It really all depends on the size of the tree.*

*According to paper manufacturer Boise Cascade, however, a cord of wood (wood stacked 4 feet by 4 feet by 8 feet, or 128 cubic feet) produces nearly 90,000 sheets of paper or 2,700 copies of a 35-page newspaper! (www.ecology.com)*

## INCREASE USE OF ENVIRONMENTALLY AND SOCIALLY RESPONSIBLE PRODUCTS.

LAWA has a 10+ year history of promoting the use of environmentally and socially responsible products in its operations. In 2006 alone, LAX purchased over 235 tons of recyclable, reusable and recycled-content materials. LAWA is committed to increasing its use of environmentally and socially responsible products. Other examples of LAWA's use of products with high recycle content include:

- One hundred percent (100%) of paper towels used at LAX are made from 40% post consumer recycled paper, saving 438,977 pounds of paper.
- One hundred percent (100%) of paper used in printers and copiers is 30% post-consumer recycled paper.
- Approximately 45% of toilet paper used at LAX is made from 45% post consumer recycled paper.
- Approximately 30% of toilet seat covers at LAX are made from 45% post consumer recycled paper.
- One hundred percent (100%) of trash bags are made from 30% post consumer plastic.

To ensure that **recycled-content paper** is purchased when economically feasible, LAWA includes green procurement language in custodial chemical and paper product requests for proposals.

**TARGET 2A**  
Develop and implement a Sustainable Procurement Program by January 2009.

To meet its objective of increasing the use of environmentally and socially responsible products, LAWA is committed to revising its procurement system to allow bidders to include environmentally and socially responsible products in all bids. The new procurement program will be in place by January 2009. LAWA's use of environmentally and socially responsible products will be furthered by the following initiatives:

- Specify only purchases of duplex copiers and printers, where feasible.
- Convert hand soap used throughout LAWA facilities to an environmentally friendly alternative, where feasible.

**TARGET 2B**  
Increase use of recyclable content products as outlined by the City Council.

In addition to developing a comprehensive system of purchasing sustainable products, LAWA will continue to increase its use of recycled content paper and will purchase more recycled-content products. Moreover, LAWA will continue to expand its monitoring and tracking of environmentally and socially responsible products.



***The following tables list the sustainable procurement current practices and initiatives for FY 2008-2009***

**Table 2-1 Sustainable Procurement Current Practices**

- LAWA uses 30% recycled content paper in all printers and copiers.
- LAWA includes green procurement language in custodial chemical and paper product RFPs.
- LAWA performed a Sustainability Assessment.
- LAWA uses recycled content paper in its paper towels and toilet paper.
- LAWA uses 30% post consumer recycled content plastic trash bags.

**Table 2-2 Sustainability Procurement Initiatives**

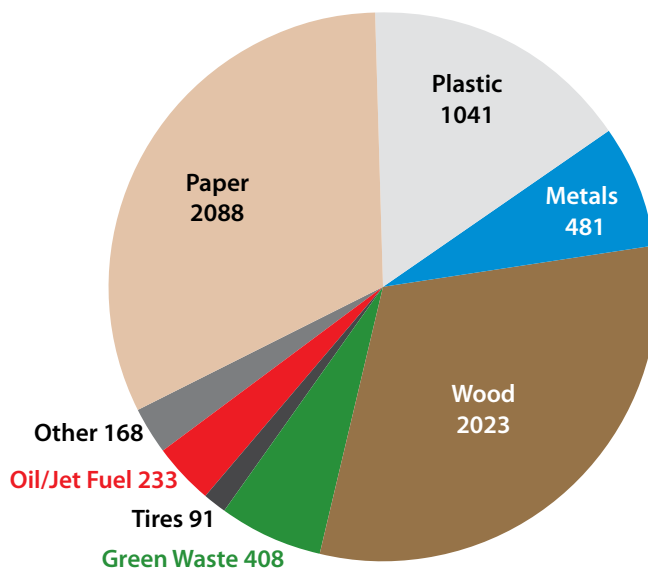
- LAWA will develop and receive approval of a sustainable procurement program.
- LAWA will specify only purchases of copiers and duplex printers, where feasible.
- LAWA will convert hand soap used throughout LAWA facilities to an environmentally friendly alternative, where feasible.
- LAWA will expand its monitoring and tracking of recyclable content product use.



**Objective 3****INCREASE RECYCLING AND SOURCE REDUCTION EFFORTS AT ALL FACILITIES AND FOR ALL OPERATIONS.**

**Recycling** is an important initiative in LAWA's drive to be a sustainability leader. LAWA's recycling efforts have paid off in many ways including maintaining a waste diversion rate of **64%** at LAX. LAWA must continue its efforts to increase recycling. LAWA provides recycling services to tenants at no charge;

- In 2006, LAX diverted over 20,000 tons of materials from landfills or incineration;
- In 2006, LAX donated almost 4 tons of consumable food to local homeless shelters and composted over 400 tons of yard wastes for use at LAX; and
- In 2006 over 13,500 tons of construction debris were diverted from entering Southern California's landfill.

**2006 LAX Recycling (tons)**

In 2005, LA/ONT, recycled or re-used approximately 5,300 tons of materials, resulting in a diversion of approximately 65% of waste from landfills and incineration.

In addition to recycling, LAWA also strives to reuse materials. In 2006, LAX's source reduction efforts totaled over 1,350 tons of material—including re-using pallets and glass and donating equipment to charitable organizations for their use.

LAWA also strives to **reduce the use of harmful materials** at its facilities. LAX became the first commercial airport in the U.S. to voluntarily reduce mercury—a cumulative poison that causes kidney and brain damage—through

the U.S. Environmental Protection Agency's National Partnership for Environmental Priorities Program. LAWA removed mercury flow meters from the LAX's Central Utilities Plant and installed mercury-free electronic transmitters, thereby eliminating 2,200 pounds of mercury. U.S. EPA honored LAWA for its commitment.

As part of its on-going efforts to meet Los Angeles' goal to be a zero waste city by 2030, LAWA continuously evaluates the products that are purchased and generated as waste to find ways to recycle and re-use them. These efforts are demonstrated by LAWA's commitment to divert 70% of waste from landfill disposal by 2015.





**TARGET 3A**  
Divert 70% of waste from landfill disposal by 2015 (using 1998 baseline).

LAWA has committed to continue to implement initiatives that will systematically increase its successful waste diversion so that it will surpass its and Los Angeles' 70% waste diversion target. This systematic approach will encompass all members of the LAWA community—tenants, passengers, airlines, and LAWA staff.

#### **Tenants**

LAWA's tenants which include concessionaires, airlines, and cargo companies generate wastes that enter the LAWA waste stream. To increase recycling, LAWA will update requirements for tenant recycling and increase education about the no-charge LAWA recycling program. Moreover, LAWA will develop an off-site composting facility for food waste that cannot be donated to local charities.

#### **Passengers**

Over 68 million passengers travel through LAX, LA/ONT, LA/VNY and PMD on a yearly basis. These passengers purchase products that can be recycled including beverage bottles, paper, and plastics. To increase passenger recycling, LAWA will continue to develop new programs to collect recyclables from terminals.

#### **Airlines**

In order to increase in-flight airline recycling, LAWA began a pilot program with United Airlines to recycle material on their daily shuttles to San Francisco Airport. In addition, LAX is working with Delta and Alaska to develop methods to recycle their in-flight waste. These programs will be used to understand the complications inherent with recycling on airplanes and between airports. LAWA will continue to expand its relationship with airlines and is committed to expanding the in-flight recycling program to six additional airlines by December 2009.

#### **LAWA Staff**

LAWA staff has developed many successful programs to recycle and minimize wastes as evidenced by the 64% waste diversion efforts. LAWA staff will continue their successes with the following initiatives:

- Continue the development of a database inventory of all material flows through LAWA;
- Educate employees to decrease use of disposable beverage containers and utensils;
- Increase recycling of batteries, toner cartridges, computers, light bulbs and other electronic equipment; and
- Increase and encourage use of electronic documents.

**TARGET 3B**  
Expand in-flight recycling pilot programs to six airlines by Dec. 2009.



***The following tables list the source reduction/recycling current practices and initiatives for FY 2008-2009***

**Table 3-1 Source Reduction/Recycling Current Practices**

- LAX removed and disposed 2,200 pounds of mercury from equipment.
- LAX diverted 21,400 tons of recyclable materials from landfill disposal in 2006
- LAWA donated 7,950 pounds of consumable food to homeless shelters.
- LAWA recycled grass clippings and tree branches into compost in 2006.
- LAX developed a pilot program with UAL and SFO to recycle trash on the LAX-SFO flights.
- LAWA developed a computer recycling program to minimize the amount of e-waste.

**Table 3-2 Source Reduction/Recycling Initiatives**

- LAWA will develop an off-site composting facility for food waste.
- LAWA will develop new programs to collect recyclables from passenger areas.
- LAWA will work with airlines to expand airline recycling program.
- LAWA will continue its development of a database inventory to track all material flows.
- LAWA will educate employees to decrease use of disposable beverage containers and utensils.
- LAWA will increase recycling of batteries, toner cartridges, computers, light bulbs and other electronic equipment.
- LAWA will increase and encourage use of electronic documents.

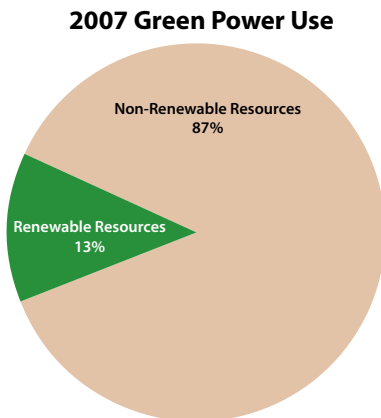


**Objective 4****REDUCE ENERGY USAGE AND INCREASE USAGE OF GREEN POWER AT ALL AIRPORT FACILITIES AND IN ALL OPERATIONS.**

**TARGET 4A**  
 Increase green  
 power use to 25%  
 by Dec. 2008.

With the cost of fossil fuels skyrocketing, the increasing instability in the oil-producing world, and the need to minimize greenhouse gases, the efficient use of energy and the incorporation of green power are critical factors in developing and maintaining sustainable operations at LAWA's facilities. LAWA has a long history of investing in green power and energy saving programs as demonstrated by its use of cogeneration for steam and electricity at the LAX Central Utilities Plant (CUP) for more than 20 years. The CUP's cogeneration facility **reduces fuel usage** by 10% to 30% compared to separate electricity and heat processes. In addition to providing utilities for LAX facilities, excess electricity is sold at a reduced rate to Los Angeles Department of Water and Power for community use. Operations at LA/ONT also have incorporated energy saving measures. When LA/ONT opened its new terminal in 1998, it included energy efficient windows and ceiling system that maximized light distribution without radiating heat in the terminal. These are two important examples of LAWA's commitment to reducing energy consumption.

LAWA also invests in **green power** from wind and solar to minimize pollutants that lower the quality of life for Southern California residents including greenhouse gases which cause global warming. In October 1999, the Board of Airport Commissioners adopted a resolution establishing LAWA's participation in the DWP's "Green Power for LA" program to purchase electricity from renewable resources. Now, LAWA purchases 13% of its power from renewable energy resources. LAWA has committed to expanding its purchasing of green power from DWP to 25% by December 2008.



In addition to producing and purchasing green and energy efficient power, LAWA has dedicated substantial effort to reducing the amount of energy needed to operate and maintain LAWA's facilities. Using new technologies and retrofitting existing heating and cooling units, LAWA has reduced the amount of energy needed on a per passenger basis. These efforts have included:

- Retrofitting 90% of light fixtures at LAX to higher efficiency light fixture—including compact fluorescents;
- Upgrading building air-handling units with variable speed drives and soft-start controls;
- Installing light-emitting diode (LED) lights on runways, signs, and other lights; and
- Installing light sensors in LAWA administrative buildings.



Building upon its long history of energy conservation, LAWA is committed to further reductions in energy use in all of its facilities and operations and has established a target of reducing energy use by 10% per passenger and/or cargo tonnage by 2010.

In order to meet its targets for reducing energy usage, LAWA will perform these following initiatives:

- Install energy efficient light fixtures when changing burned out bulbs;
- Install new or increase efficiency of existing heating and cooling equipment;
- Purchase more energy efficient computer servers and consolidating servers;
- Install energy efficient variable speed motors during replacement;
- When replacing older building-related process energy systems and equipment, upgrade with energy efficient systems; and
- Install Variable Fan Drives, where needed.



***The following tables list the Energy Conservation and Green Power current practices and initiatives for FY 2008-2009***

**Table 4-1 Energy Conservation and Green Power Current Practices**

- LAWA retrofitted existing buildings with energy efficient lighting fixtures, ballasts and bulbs.
- LAWA upgraded building air-handling units with variable speed drives and soft-start controls.
- 13.5% of LAX's power is green power.
- LAX's Central Utilities Plant co-generates steam to heat and air-condition LAX's passenger terminals and offices.

**Table 4-2 Energy Conservation and Green Power Initiatives**

- LAWA will purchase green power from DWP.
- LAWA will install energy efficient light fixtures when changing burned out bulbs.
- LAWA will install new or increase efficiency of heating and cooling equipment.
- LAWA will purchase more energy efficient computer servers and consolidate existing servers.
- LAWA will install energy efficient variable speed motor loads during replacement.
- LAWA will replace older building-related process energy systems and equipment with energy efficient systems.
- LAWA will install Variable Fan Drives, where needed.



**Objective 5****REDUCE EMISSIONS FROM ALL OPERATIONS INCLUDING STATIONARY AND MOBILE SOURCES.**

With the San Gabriel, San Bernardino, and Santa Rosa Mountains ringing the Los Angeles Basin and the Inland Empire pollutants from airplanes, cars, power generation, and myriad of maintenance and operation activities are trapped in these regions. These harmful pollutants include particulates from diesel engines, smog producing chemicals—such as volatile organic compounds from chemicals, nitrogen oxides (NOx) and sulfur oxides (SOx) from cars, and greenhouse gases (GHG) from the burning of fossil fuels. Each of these pollutants contribute to lowering air quality and quality of life.

**TARGET 5A**  
Reduce GHG  
emissions levels to  
35% below 1990  
levels by 2030.

LAWA is committed to reducing GHG emissions from its operations to meet the requirements of AB 32 and the Green LA initiative. Mirroring the requirements of these important GHG programs, LAWA has established a target of reducing its GHG emissions levels to 35% below 1990 levels by the year 2030. In order to quantify its emissions, identify areas for improvement, and the effectiveness of its reduction measures, LAWA is performing a comprehensive GHG emission inventory. This GHG inventory will be used to plan and implement methods of reducing LAWA's carbon footprint and to assist in achieving Los Angeles' GHG reduction goals.

In addition to GHG, LAWA is also committed to reducing the emission of harmful pollutants from its operations. In addition to reducing its energy consumption, which reduces the emission of harmful air pollutants, LAWA is implementing programs that reduce emissions of air pollution. Recognizing that VOC emissions contribute to the generation of harmful air quality conditions for the Los Angeles region, LAWA performs the following activities that evaluate and reduce its air quality impacts:

- Tracks criteria pollutant emissions from its LAX operations;
- Tracks VOC emissions from its LA/ONT operations;
- Purchases only low-VOC emitting adhesives, sealants, paints and coatings in compliance with California Air Quality Management District Regulation 11; and
- Enforces the construction vehicle idling policy.

**TARGET 5B**  
Reduce VOC  
emissions 10% by  
2010.

LAWA is committed to reducing its VOC emissions by 10% by 2010. To help meet its target of a 10% reduction in VOC emissions, and reduce other air quality impacts, LAWA will initiate the following measures:

- Specify low VOC products, where applicable.
- Establish and enforce a commercial vehicle idling policy.



In addition to directly reducing the direct emissions of air pollutants, LAWA purchases alternative fuel vehicles for its fleet, converts equipment from diesel to less polluting electrical systems, and uses lower polluting chemicals in operation and maintenance activities.

One hundred percent (100%) of LA/ONT's gates and 100% of LAX's gates have electric power which allows planes to shutoff auxiliary power and 55% of LAX and LA/ONT gates use pre-conditioned air to reduce harmful pollutants from the combustion of jet fuel. LAWA is committed to upgrading electric power and installing pre-conditioned air to 100% of LAX's gates by 2015.

LAWA's commitment to improving air quality is also demonstrated by its initiation of an **Air Quality Apportionment Study (AQAS)** for LAX. The AQAS is a comprehensive air monitoring, modeling, and data analysis program. It will identify and monitor sources of criteria pollutants, including nitrogen dioxide, carbon monoxide, particulate matter, and sulfur dioxide; toxic air pollutants including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs); metals; and other inorganic compounds. The study is a coordinated effort that involves the California Air Resources Board, the South Coast Air Quality Management District, the Federal Aviation Administration and the U.S. Environmental Protection Agency. The AQAS will provide an updated baseline against which LAWA can measure the effectiveness of its efforts to reduce adverse impacts to air quality.

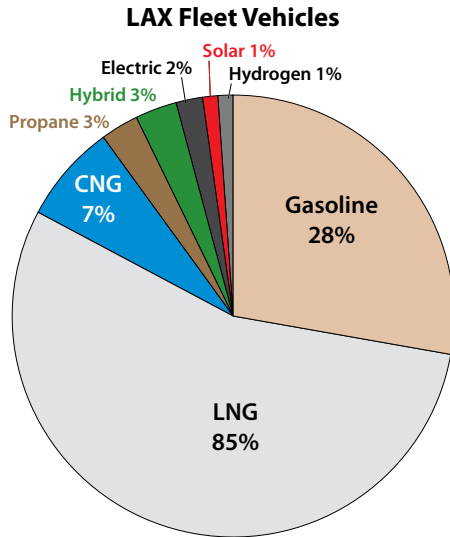
An important component of reducing air impacts from aviation operations includes increasing the use of **alternative fuel vehicles (AFVs)**. LAWA has a long history of integrating AFVs into its fleet and ground service equipment. LAWA currently uses a wide variety of alternative fuels to power its fleet vehicles including: liquid natural gas (LNG); compressed natural gas (CNG); gasoline/electric hybrids; electric; solar; and hydrogen. In addition to the above fuels, LAWA plans to begin using cleaner-burning Hythane—a mixture of methane and LNG—to fuel its fleet vehicles in 2009.

**TARGET 5C**  
Demonstrate  
Hythane powered  
vehicles by 2009.

LAWA began the conversion to AFVs as early as 1991 when the Board of Airport Commissioners adopted a resolution authorizing the testing of two electric vans for use at LAX. Since then, the Board of Airport Commissioners has approved five resolutions pertaining to AFVs and LAWA has made a significant progress towards its target of converting 100% of its fleet vehicles to alternative fuels, or vehicles with comparable emissions, by 2015. Currently, the LAX fleet is and comprised of approximately 72% alternative fuel vehicles. LAWA will also continue to develop methods to convert the remainder of its fleet to AFVs or comparable emission vehicles.

**TARGET 5D**  
Convert 100%  
of LAWA fleet  
vehicles to AFVs or  
comparable emission  
vehicles by 2015.





To further increase the use of AFVs associated with its operations, LAWA is working with its tenants and airport service providers to develop requirements and incentives for incorporating cleaner vehicles into their fleets. Two of the major contributors to vehicle traffic at LAWA facilities are passenger shuttle buses and taxis. LAWA has developed and is implementing an AFV policy with a target of converting 50% of the larger vehicles (over 8,500 pounds gross weight) fleets to AFVs by December of 2010 and 100% by 2015. To assist in converting 10% of taxis, LAWA will work with the taxi concessionaires at LA/ONT to develop a program to require AFVs for taxis.

Another major source of vehicle emissions at airports is the **ground service equipment (GSE)**. GSE includes all ground equipment that service aircraft, including tugs, baggage loaders, catering trucks, and fueling vehicles. LAWA and its tenants have made a concerted effort to convert GSEs to more efficient and less polluting models.

The success of LAWA's conversion programs is demonstrated by the following statistics:

- 100% of LA/ONT's tenant GSEs are electrically powered;
- Approximately 24% of LAX's tenant GSEs are zero-emission vehicles; and
- Approximately 17% of LAX's tenant GSEs use compressed natural gas (CNG) or LNG.

At LAX, LAWA is committed to further reducing impacts from its operations by converting all on-airport GSE to the cleanest technology available by 2015.

To further reduce emissions from GSE and other airside activities, LAWA will undertake the following initiatives:

- Continue to implement LAWA's GSE conversion policy;
- Install quick charging stations at all terminals and cargo areas; and
- Install 100% electric powered equipment in indoor facilities.

**TARGET 5E**  
Convert 50% of airport shuttles and 10% of taxis to AFVs by Dec. 2010.

**TARGET 5F**  
Convert 100% diesel based ground equipment to electrical equipment or cleanest technology available by 2015.





***The following tables list the pollution reduction current practices and initiatives for FY 2008-2009***

**Table 5-1 Pollution Reduction Current Practices**

- The LAX Air Quality Apportionment Study Pilot Program will monitor criteria pollutants and toxic air pollutants, including VOCs, SVOCs, metals and other inorganic compounds.
- LAWA has identified sources of GHG emissions and is establishing plans for mitigating GHG emissions.
- 60% of LAWA vehicles are alternative fuel vehicles.
- LAX has an Alternative Fuels Conversion Policy for vehicles over 8,500 pounds gross or larger.
- LAWA tracks criteria pollutants emissions at LAX and VOC emissions at LA/ONT.
- LAX has a hydrogen generation station.

**Table 5-2 Fiscal Year 2008-2009 Pollution Reduction Initiatives**

- LAWA will specify low VOC products.
- LAWA will establish and enforce a commercial vehicle idling policy.
- LAWA will continue its program to upgrade electric power and install pre-conditioned air to LAX gates
- LAWA will perform a demonstration of Hythane fuel to power LAWA fleet vehicles.
- LAWA will work with LA/ONT taxi concessionaires to develop a program to require alternative fuel vehicles for taxis.
- LAWA will continue to initiate a ground service equipment conversion policy.
- LAWA will install quick charging stations at all terminals and cargo areas.
- LAWA will install 100% electric power equipment in all indoor systems.



**Objective 6****REDUCE SINGLE OCCUPANCY TRIPS TO, FROM, AND WITHIN LAWA AIRPORTS.**

In 2006, approximately 68 million people traveled through LAX, LA/ONT, LA/VNY, and PMD. Along with the approximately 70,000 people who work on or near the four airports, these facilities are convergence points for commuters, employees, and passengers. Moreover, LAX's ever-expanding air cargo system handled more than 2.1 million tons of goods in 2007—ranked 4th in the country for air cargo movements. With the large number of vehicles that travel to, from and within the four airports, LAWA is in a unique position to seek efficiencies in its on and off-site transportation systems. Improvements in traffic flow, mass transport, and shuttle service will decrease the traffic congestion and enhance the quality of life of the people who work and live near each of the airports. To this end, LAWA is committed to reducing the number of single occupancy trips associated with its operations.

In the long term, LAWA is an active member of the **Green Line Task Force**. LAWA and Metro re-formed the Green Line Task Force to conduct a study to determine the feasibility of extending the Green Line to LAX. This task force includes California Department of Transportation, Metro, and local community groups to develop integrative approaches to relieve congestion around LAX.

**TARGET 6A**  
Increase Rideshare participation to 30% by 2010.

LAWA has developed internal programs to decrease its transportation footprint at its airports. For close to 10 years, LAWA's **Rideshare and Carpool programs** have eliminated millions of commuter miles and reduced congestion during peak morning and evening commuting hours and is considered by the U.S. Environmental Protection Agency to be one of the most comprehensive programs offered by an employer in Southern California. Approximately 21% of LAWA employees use the multi-faceted Rideshare and Carpool Program, which includes 63 subsidized vanpools, 69 carpools, public transit incentives, bicycle facilities, commuter advocacy, marketing activities and special events to recruit and retain program participants. LAWA continues to investigate methods to increase the participation in the Rideshare programs; therefore, LAWA is committed to increase its Rideshare participation to 30% by 2010. To assist in meeting this target, LAWA will investigate the feasibility of reducing the number of LAWA staff to start a vanpool.

Furthermore, LAWA distributes LAX FlyAway, Metro, and EZ Regional monthly transit passes on-site and at no cost to LAWA staff who commute to work by bus or rail. LAWA employees are also encouraged to work a "9/8o" work schedule, which further reduces commuter miles and congestion. To further reduce the number of LAWA staff commuting to its airports, LAWA will investigate the feasibility of developing more flexible work schedules, including telecommuting options.



Finally, a small but dedicated number of LAWA staff and tenants bike to work. To increase and encourage the number of staff and tenants who commute by bicycle, LAWA will expand its bicycle facilities for easier storage of bicycles.

Today, these programs save more than 1,400 vehicle trips per day; 6,500,000 commuter miles per year; and 500,000 gallons of gasoline annually, as well as thousands of dollars in insurance and vehicle depreciation costs and countless hours spent on Southern California's over-burdened freeways. In 2006, LAWA received a national award from the Association for Commuter Transportation for "Outstanding Service in the Public Sector" and a Gold Medal in the U.S. Environmental Protection Agency's "Best Workplaces for Commuters Race to Excellence." LAX is the only airport in the country to have received either of these awards.

In addition to commuting, LAWA staff travel to the many different LAWA locations for meetings and meals during the work day. The majority of these trips are single occupancy trips. LAWA is committed to reducing the number of trips required by staff as part of their regular work duties. To this end, LAWA is committed to developing a **video-conferencing** and/or Net Meeting system to minimize travel to different airport offices. Also, because of the high concentration of employees who work at LAX, LAWA is committed to opening a cafeteria for LAWA employees near LAX so that LAWA staff does not need to travel by car to the Sepulveda and Century corridors for meals.

**TARGET 6B**  
Add six new FlyAway  
locations/stations by  
2015.

LAWA has also concentrated on reducing the number of single occupancy trips to and from LAWA airports made by passengers. At LAX, three **FlyAway shuttles** from Van Nuys, Union Station, and Westwood bring passengers to LAX. Since its inception in 1975, the Van Nuys FlyAway has served over 18 million riders. In March 2006, LAWA instituted the Union Station FlyAway to LAX. In its first year, approximately 250,000 riders used the Union Station FlyAway; a threefold increase over its projected annual total ridership. At PMD, LAWA, in partnership with LA Department of Public Works, Antelope Valley Transit Authority, and United Airlines, instituted a "Palmdale Flyer" fashioned after the LAX FlyAway shuttles that will provide shuttle service from Via Princessa Metrolink Station in Santa Clarita, and the Van Nuys FlyAway Bus Terminal to PMD.

The overwhelming success of the FlyAway program is well documented and LAWA is committed to adding six new LAX FlyAway stations by 2015. LAWA continually strives to increase ridership on the FlyAway shuttles; therefore, LAWA will improve peak use scheduling of the FlyAway shuttles for more convenient use of the shuttles.

LAWA has developed programs for improving traffic flow and decreasing the number of single occupancy vehicle trips within LAX's Central Terminal Area (CTA).

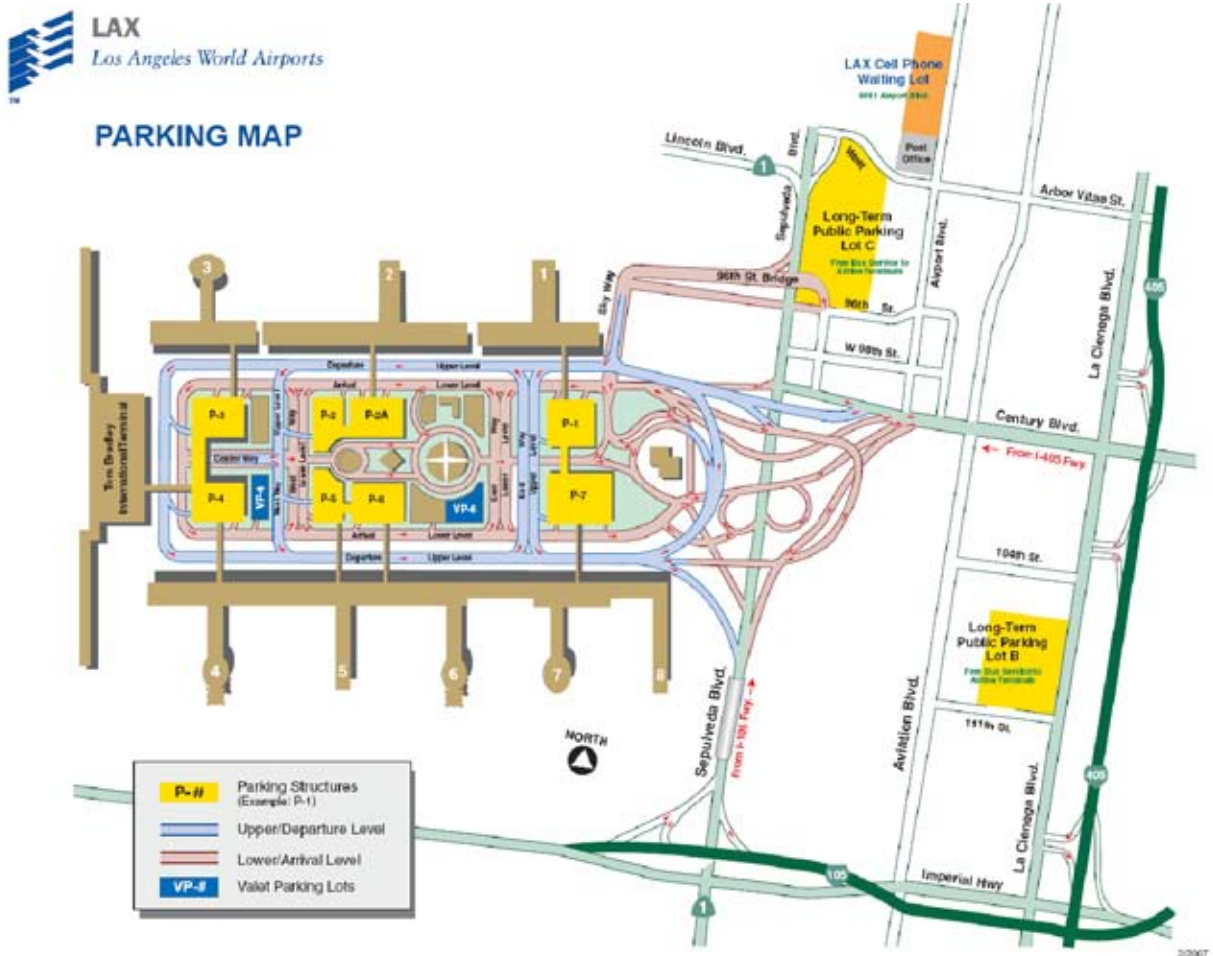


**LAX Cell Phone Waiting Lot:** LAX has a 24-hour LAX Cell Phone Waiting Lot where motorists can wait for free until passengers call to say they are ready to be picked up terminal curbside. This program reduces traffic congestion in the CTA caused by motorists circling while waiting to meet arriving passengers.

**TARGET 6C**  
**Build the LAX**  
**Consolidated Rental**  
**Car Facility by 2015.**

**Rental Cars:** In January 2003, the Board of Airport Commissioners approved on-airport concessions for ten rental car companies at LAX. These ten concessionaires are the only firms permitted to provide curbside pickup and drop-off at passenger terminals. The program calls for on-airport rental car operators to reduce the number of monthly courtesy vehicles trips by at least 20% from a 2004 baseline year.

**Consolidated Rental Car Facility (ConRac):** Since 1999, LA/ONT has operated a ConRac that houses six rental car companies with tram service from the terminals to alleviate traffic congestion on the terminal roadways. With the success of LA/ONT's ConRac, LAWA is committed having a Consolidated Rental Car Facility in operation at LAX by 2015. The ConRac will be planned, designed, and constructed using the Sustainable Airport Planning, Design and Construction Guidelines.



**TARGET 6D**  
 Require LAX off-airport shuttles to reduce their trips by 35% from a 2004 baseline, by 2008.

**Hotel Courtesy Shuttle Trip Reduction Program:** Currently, many major airport-area hotels provide courtesy transportation from LAX terminals to hotels along the Century Boulevard corridor. In December 2006, the Board of Airport Commissioners approved a consolidated hotel courtesy shuttle operation to reduce traffic congestion in the CTA at LAX. The two phase program requires hotels to set trip reduction targets and establishes financial penalties for excess trips. As incentives, the program waives trip fees charged to hotel shuttles that consolidate their operations with other hotels and increases trip fees from \$0.32 to \$1.60 per circuit for hotels that operate the smaller and more frequent shuttles.

- Phase I of the program started on July 1, 2007 and required hotels to reduce shuttle trips by at least 15% from a 2004 base year, with penalties of \$10 per trip for non-compliance.
- Phase II began on February 1, 2008 and required hotels to reduce shuttle trips an additional 20%, for a total trip reduction of 35%, with penalties of \$5 per trip for non-compliance.

**Consolidated Hotel Shuttle:** In addition to working directly with the hotels, the Board of Airport Commissioners, on March 20, 2006, approved a Memorandum of Understanding (MOU) with Destination Shuttle Services, LLC, to operate a consolidated hotel shuttle service. This program incorporates the shuttles of nine Gateway LAX hotels along the Century Boulevard corridor and provides one bus route for every three hotels depending on demand and location.

**Off-Airport Parking Lot Shuttles:** Due to the success of the hotel shuttle program, LAWA will be working with off-airport parking lots to develop programs to reduce the number of trips around the LAX Central Terminal Area.

Additional measures currently in place to monitor, control, and improve traffic flow within the CTA are described below.

**Traffic Mitigation Plan:** LAWA has developed a Traffic Mitigation Plan that involves the design and installation of cost-effective traffic control devices on airport roadways and facilities for the purpose of reducing traffic congestion and vehicles emissions around its airports.

**Traffic Operations Center (TOC):** LAX operates a TOC that consists of Closed Circuit Television Cameras that view real-time traffic flows within the CTA. The cameras allow staff to identify unusual incidents which are causing traffic delays and determine whether adjustments are needed to the traffic signals.

**Westchester Intelligent Transportation System Improvements:** LAWA is



working with the Los Angeles Department of Transportation (DOT) to install the Adaptive Traffic Control System (ATCS) at 135 intersections in and around LAX, including 32 traffic signals within LAX. The system will improve overall travel time and reduce delays on arterial streets and within LAX. The ATCS allows Los Angeles DOT staff to automatically adjust to changes in traffic demands at an intersection. The ATCS system can be operated by Los Angeles DOT staff in downtown Los Angeles or at the LAX TOC.

**Radio Station AM 530:** LAX traffic information is broadcasted from the TOC on Radio Station AM 530. The radio station provides real-time information on traffic and availability of on-airport parking.

**Changeable Message Signs (CMS):** LAX utilizes portable and fixed electronic message boards to provide real-time information so motorists can make knowledgeable driving decisions. Eight portable CMS signs are available at LAX during peak travel times or for special occurrences. Three permanent CMS for major streets approaching LAX are planned as part of a joint LAWA/Los Angeles DOT project.

**TARGET 6E**  
Develop a LAX  
Centralized Delivery  
Facility by 2010.

**News Releases:** Expected traffic delays, road closures, and alternative routes are also communicated via news releases/media advisory on the LAWA website to mitigate existing traffic congestion and avoid traffic congestion due to road construction. LAWA's traffic management program includes radio and electronic signs to notify travelers and commuters of traffic problems at its airports.

To further enhance this program, LAWA will increase the quantity of traffic information that can be found on its website: [www.lawa.org](http://www.lawa.org).

Another significant source of vehicle traffic to the CTA at LAX is the delivery of products to tenants and airlines. Delivery trucks tie up passenger loading areas and increase congestion in the CTA. To reduce these impacts, LAWA will reutilize an existing building for use as a Centralized Delivery Facility (CDF). The trucks will unload their materials at the CDF and the deliveries will be consolidated into fewer deliveries into the CTA. LAWA is committed to having the CDF in operation by 2010.



***The following tables list the trip reduction current practices and initiatives for FY 2008-2009***

**Table 6-1 Trip Reduction Current Practices**

- LAWA instituted a nine-80 work schedule for employees.
- LAX established a FlyAway program for Van Nuys, Westwood, and Union Station.
- 24% of LAWA employees participate in the Rideshare Program.
- LAWA works cooperatively with LADOT and other transportation agencies to improve off airport streets and intersections to reduce congestion.
- LA/ONT has a Consolidated Rental Car Facility.
- LAX established a Hotel Shuttle Consolidation Program.
- LAX has a Traffic Operations Center to facilitate traffic flow in the CTA.
- LAX Car Rental Shuttles have reduced their trips by 20%.

**Table 6-2 Fiscal Year 2008-2009 Trip Reduction Initiatives**

- LAWA will investigate the feasibility of reducing the number of LAWA staff to start a vanpool.
- LAWA will investigate the feasibility of working more flexible work schedules, including telecommuting options.
- LAWA will expand its bicycle facilities for easier storage of bicycles.
- LAWA will begin to develop a video conferencing/Net Meeting system to minimize travel of LAWA staff to different airport offices.
- LAWA will open a cafeteria near LAX for LAWA staff.
- LAWA will continue to develop FlyAway shuttles to LAX.
- LAWA will investigate improving peak use scheduling of the FlyAway shuttles for more convenient use of the shuttles.
- LAWA will continue to plan the Consolidated Rental Car Facility at LAX.
- LAWA will work with off-airport parking lots to develop programs to reduce the number of trips around LAX's Central Terminal Area.
- LAWA will increase the quantity of traffic information on [www.lawa.org](http://www.lawa.org).
- LAWA will develop a Centralized Delivery Facility at LAX.



**Objective 7****INCORPORATE SUSTAINABLE PLANNING, DESIGN, AND CONSTRUCTION PRACTICES INTO ALL AIRPORT PROJECTS.**

LAWA is continually evaluating and updating its facilities to meet the changing air travel and cargo needs of the region and to provide safe airport operations. Over the next five to ten years, a wide range of projects will be planned, designed, and executed at LAWA's four airports, including civil landside and airside activities, renovation of existing buildings, construction of new facilities, and general construction and maintenance activities. These projects provide LAWA with tremendous opportunities to incorporate sustainable planning, design and construction practices into its future facilities and operations.



In January 2007, the Board of Airport Commissioners committed LAWA to incorporate the highest possible LEED standards in all future construction projects at LAWA's four airports. In addition, LAWA's development and implementation of the Sustainable Airport Planning, Design and Construction Guidelines (Guidelines) strengthens its commitment to become the "global leader in airport sustainability."

The Guidelines provide a comprehensive set of airport specific performance standards that consider the unique opportunities and obstacles that arise during typical airport projects when incorporating sustainability. The Guidelines include performance standards for planning, design and construction activities that integrate sustainability strategies into the project work.

The Guidelines apply to projects that involve general construction and maintenance, buildings and facilities, roads, runways, taxiways, infrastructure, and other civil projects, both airside and landside. To assist in facilitating the integration of sustainability, the Guidelines include a rating system to measure and document the level of a project's success in achieving the requirements of the performance standards. This "LAWA-Sustainable Rating System" will be used to track progress and document achievements in implementing the sustainable planning, design and construction practices. Every project will receive a ranking by LAWA depending on the level of sustainability reached in design and/or construction. The Guidelines will be updated on a regular basis to integrate "lessons learned" from all design and construction projects.

The Guidelines will facilitate the integration of sustainable concepts and practices into all capital, non-capital, tenant, and federal projects that are undertaken at each of its four airports. The Guidelines also provide a model for incorporating sustainable practices which can be used by other organizations in the City of Los Angeles as well as other airports nationwide.





**TARGET 7A**  
Implement the Airport Sustainable Planning, Design and Construction Guidelines for all projects begun on or after Feb. 2008.

In order to meet its objective for incorporating sustainable practices, LAWA has directed that the Guidelines be used for all projects initiated after February 2008.

In addition to the Guidelines, LAWA will perform a systematic review of its construction standards to incorporate green standards by 2009. To facilitate the incorporation of green standards into its practices, LAWA will implement the following initiatives in the next fiscal year:

- Prepare a Green Standard Specifications for use in conjunction with the Guidelines which will apply to all projects;
- Incorporate the Green Standard, "New Green Book", into tenant developments; and
- Require LEED-accredited professionals on planning, design, and construction projects, where applicable.

To ensure LAWA employees, its tenants and consultants understand their responsibility to follow the Guidelines, LAWA will continue its program to educate all parties on the requirements of the standards. Specific activities that will be performed in the 2008-2009 fiscal year include:

- Training LAWA employees on the correct use of the Airport Sustainable Planning, Design and Construction Guidelines; and
- Providing a workshop for all interested tenants and consultants on the requirement of the Guidelines.

**TARGET 7B**  
Incorporate green standards into all aspects of LAWA's planning, design, construction process by 2009.

***The following tables list the sustainable design practices and initiatives for FY 2008-2009***

**Table 7-1 Sustainable Design Current Practices**

- LAWA developed Sustainable Guidelines for all planning, design, and construction projects.

**Table 7-2 Sustainable Design Initiatives**

- LAWA will prepare a Green Standard Specifications for use in conjunction with the Guidelines which will apply to all projects.
- LAWA will incorporate the Green Standard, "New Green Book", into tenant developments.
- LAWA will require LEED-accredited professionals on planning, design, and construction projects, where applicable
- LAWA will train LAWA employees on the correct use of the Airport Sustainable Planning, Design and Construction Guidelines.
- LAWA will provide a workshop for all interested tenants and consultants on the requirement of the Guidelines.



**Objective 8**
**PROMOTE SUSTAINABILITY AWARENESS TO AIRPORT EMPLOYEES AND THE GREATER COMMUNITY.**

Aligned with the triple bottom line approach to sustainability, LAWA believes that a sustainable organization looks beyond environmental stewardship and addresses economic growth and social responsibility through interaction with the surrounding community. Through its Sustainability Vision and Principles, along with its long-standing policies that focus on creating beneficial economic impacts, improving labor and community relations, and providing leadership within the aviation community, LAWA is committed to making its facilities great places to work and travel through. In conjunction with the implementation of the SPIMS process, LAWA will take an active role in communicating progress to the greater LAWA community. Therefore, LAWA is committed to increasing the awareness of its employees and the greater community of the importance and benefits of sustainable operations.

Throughout its history, LAWA employees have taken steps to foster close relationships with local educational and charitable organizations. These programs include visiting schools and LAWA facilities and donating time and materials to these organizations. Examples of LAWA's outreach to the greater community are listed below.

- **Aviation Academy:** The Aviation Career Education (ACE) Academy is a free, week-long motivational program to provide students with a basic understanding of career opportunities within the aviation industry, as well as a general knowledge about LAX. This program is open to all Los Angeles area seventh and eight-grade students and high school students in communities surrounding LAX. Annually, 75 local students participate in the program.
- **Food Bank Donations:** In 2007, LAWA employees donated over 60,000 pounds of packaged and prepared foods to the Los Angeles Regional Food Bank.
- **Gateways Internship Program:** This program was launched by LAWA as a collaborative initiative of the Inglewood Unified School District, South Bay Private Industry Council and LAWA. This program provides paid internships to local youth currently attending high school or college. The goal of the program is to expose local high school and college students to career opportunities in the aviation industry.
- **AIRCademics Passport to Art Program:** This unique program is comprised of a 30-week curriculum offered at the Westchester YMCA, near LAX. This school-to-career enrichment program focuses on teaching science, math, reasoning, and aviation through the completion of art projects. Participants also learn about the history of flights while attending lectures and field trips.



- **Wings to Fly Mentoring Program:** This mentoring program connects LAWA employees with at-risk youth in local high schools. Over a seven-month period, students come to LAX twice a month for professionally facilitated workshops, guest speakers and one-on-one time with their mentors, and learn about airport opportunities and interact with positive adult role models in a fun atmosphere.
- **Job Shadow Day:** LAX hosts Job Shadow Days where local high school students have the opportunity to “test drive” a career in the airport industry. LAX pairs airport employees with students on a first-come, first-served basis to share technical skills and knowledge. The Job Shadow Days is coordinated by LAWA’s Community Relations and the Inglewood/Airport Area Chamber of Commerce.

**TARGET 8A**  
Provide training to 100% of LAWA tenants and consultants to make them aware of sustainability programs by Dec. 2008.

As part of its efforts to provide a positive working environment, LAWA currently implements a number of programs to protect the health and safety of its employees, tenants, and passengers. These include:

- **Security:** LAWA employs an extensive police force. The Airport Police Division is grounded in the precept that it is a service organization with a clear and distinct mission. The Vision of the LAWA Airports Police Division is to become a world leader in aviation law enforcement and security services.
- **External Defibrillators:** LAWA currently supplies defibrillators on all floors and in all terminals.
- **Emergency Drills:** Floor wardens are assigned to plan and evaluate emergency drills for all LAWA employees.
- **Haz Cards:** All LAWA staff receives a “Haz Card” which identifies necessary emergency response information.
- **Medical Personnel Availability:** LAWA has a nurse on duty for first aid and medical treatment during normal business hours.

**TARGET 8B**  
Offer formal training to 100% of LAWA tenants and consultants to make them aware of sustainability programs by Dec. 2008.

LAWA will continue with its active outreach program to the greater Los Angeles community but it will also take more active role of communicating its efforts to the entire LAWA community. To begin this awareness program, LAWA will provide sustainability awareness training to 100% of its staff by December 2008. As part of this program, LAWA will recognize the staff that has taken a leadership role in the promoting sustainability.

To further promote LAWA’s commitment to sustainability, LAWA will offer sustainability training to its tenants and consultants. This training will also be offered to all of LAWA’s tenants and consultants working at LAWA facilities.

For the 68 million passengers who travel through LAWA’s airports, LAWA will take a two pronged approach to communicating sustainability. First, LAWA will



**TARGET 8C**  
**Develop internal and external sustainability communication strategy and plan by Dec. 2008.**

strive to improve the public arts program in its terminals, offices, and buildings. LAX has several public arts exhibition locations in Terminals 1, 2 and 3 and the Tom Bradley International Terminal and LA/ONT has 24 exhibition locations in its terminals. These spaces allow local artists to exhibit their artwork while creating a more aesthetically pleasing space for airport workers and passengers. Right now at LA/ONT, an exhibition showcases a collection of robots that are made from recycled household products. LAWA's public art program also includes showcasing local children's artwork in LAX's Terminal 2. LAWA will expand the public arts program into new spaces and with new programs throughout the 2008-2009 fiscal year.

Second, LAWA will communicate to its passengers its sustainability program through public notices in the terminals and its improved terminal recycling program. These notices will allow passengers to see the progress LAWA is making in creating a more sustainable community.

Finally, LAWA will develop an internal and external sustainability communication strategy and plan by December 2008. This plan will be made available on the LAWA website. The website will provide general information on LAWA's sustainability programs and provide tracking information on its programs to meet its sustainability objectives.

***The following tables list the sustainability awareness current practices and initiatives for FY 2008-2009***

**Table 8-1 Sustainability Awareness Current Practices**

- LAWA has developed educational opportunities for local universities and high schools.
- LAWA provides programs to protect the health and safety of its tenants, staff and passengers.
- LAWA has a public arts program.

**Table 8-2 Sustainability Awareness Initiatives**

- LAWA will provide sustainability education and training to LAWA employees, its tenants, and consultants.
- LAWA will expand its public arts program into new spaces and with new programs.
- LAWA will improve communication to its passengers on its sustainability program. LAWA will develop an internal and external sustainability communication strategy and plan.



**Objective 9*****INTEGRATE SUSTAINABLE PRACTICES INTO INTERNAL POLICIES, BUSINESS PROCESSES, AND WRITTEN AGREEMENTS.***

During the planning stage of the Sustainability Performance Improvement Management System (SPIMS) process, LAWA performed a sustainability assessment of its policies and written agreements. As evidenced by the numerous existing and planned programs detailed in this plan, LAWA is committed to sustainability improvement. For the last 30 years, LAWA has performed countless activities that have benefited the environment, the local economy and society. As LAWA implements the SPIMS process, LAWA acknowledges that it needs to integrate sustainability in a systematic manner. Sustainability, through the implementation of the SPIMS will become part of LAWA's business process.

In addition to the current programs that LAWA outlined under the other objectives, LAWA has programs that assist LAWA in integrating sustainable practices into policies, business processes, and written agreements. These programs include the following:

**Job Outreach Center:** LAWA's Business and Job Opportunities Division provides employment and educational outreach services to local community-based organizations, and community residents. The Division provides information regarding employment opportunities to job seekers who are interested in employment with airport tenants, surrounding airport companies and other private companies. LAWA staff assists potential employers by providing the employer with resumes of job seekers whose skills match the needs of the employer.

**Business and Job Resources Center (BJRC):** In October 2006, LAWA opened the Business and Job Resources Center (BJRC) which coordinates all job training programs. The BJRC works with local Work Source Centers and airport employers to enhance community access to airport jobs.

LAWA has partnered with local agencies to develop a job training program for local LAX residents so that local residents become qualified for LAX-based jobs. Using 12 training providers, LAWA has referred 236 candidates for job training with 177 potential LAX employees completing the training.

**Inglewood Job Center:** In January 2008, LAWA opened a Job Center at Inglewood City Hall to facilitate the hiring of local community residents who live close to LAX.

**First Source Hiring:** LAWA received approval from the Federal Aviation Administration in November 2006 to begin implementation of its First Source Hiring Program (FSHP)—its program that ensures that local residents are referred for priority interview consideration. LAWA began a pilot program with 50 of the 300 companies that employ people at LAX. Moreover, LAWA began part-



nering with 56 local work source centers, local employment agencies, and community and faith-based organizations to assist in referring prescreened, qualified people to LAWA employers. Since November 2006, 1,275 candidates were referred for approximately 400 airport positions with 42 LAWA tenants with 233 confirmed hires.

LAWA will begin Phase II of the FSHP in July 2008 when it has in place a computer-based system that will allow for more efficient notification of local groups and better tracking of hiring successes. LAWA will have the system in full implementation in July 2009.

**Minority Business Enterprise (MBE)/Women Business Enterprise (WBE) and Small Business Utilization and Retention Program:** The Business and Job Opportunities Division (BJOD) and Procurement Division work closely with business advocacy groups to enhance these programs. The BJOD has opened an office on Century Boulevard to assist businesses on preparing proposals and other activities.

**Sweatshop Ordinance:** LAWA adopted the spirit of the City's anti-sweatshop ordinance, which requires that a living wage be paid to workers on contracts and creates a flexible mechanism to share information with other groups.

**Community Benefits Agreement:** In December 2004, the Board of Airport Commissioners approved a Community Benefits Agreement (CBA) with the LAX Coalition for Economic, Environmental and Educational Justice (LAX Coalition) that provides environmental mitigation programs and jobs-related benefits to communities that would be impacted by the implementation of the LAX Master Plan. LAWA worked to ensure that communities impacted by the Master Plan also received benefits as a result of its implementation. CBA projects include:

***Noise Mitigation***

- Increased funding for Airport Noise Mitigation Program
- End-of-Block Soundproofing
- Suspension of Avigation Easement
- FAR Part 161 Study for Limitations on Nighttime Departures

***Economic Development Benefits***

- Job Training Program
- First Source Hiring Program
- Small Business Attraction and Retention Program
- Application of City Living Wage and Worker Retention Ordinances



***Community Environmental/Health Studies***

- LAX Air Quality and Source Apportionment Study
- Health Study of Upper Respiratory System and Hearing Loss Impacts
- Environmental Justice Community-Based Research Studies

***Air Quality/Emission Reductions and Control***

- Electrification of Passenger Gates
- Electrification of Cargo Operations Areas
- Electrification of Hangars
- Emission Reductions from Ground Service Equipment
- Emission Reductions from On-Road Trucks, Buses and Shuttles
- Conversion of On-site Trucks, Shuttles and Buses to Alternative Fuel
- Development and Enforcement on Construction Vehicle Idling Limits
- Development of an Alternative Fuel Vehicle Program
- Hydrogen Fuel Cell Infrastructure at LAX

***Environmental Mitigations/Commitments for Construction***

- Construction-related Diesel Emission Reduction Requirements
- Rock Crushing Operations/Materials Stockpiles Away from Residential Areas
- Development of the Sustainable Airport Planning, Design and Construction Guidelines
- Diversion of Construction Traffic from Residential Streets

**Ethics:** Ethics is one of LAWA's core values and an important part of sustainability. LAWA's core values of honesty, integrity, respect/collegiality/collaboration, responsibility, transparency and citizenship are important to meeting the social responsibility aspects of sustainability. LAWA, along with the City of Los Angeles, requires its employees to commit to a standard of conduct that maintains and enhances the public's trust in government. LAWA uses the following strategies to achieve this requirement:

- Office of Ethics and Business Conduct reports to LAWA Executive Director and to Board of Airport Commissioners' Audit and Ethics Committee and serves as a third-party, independent resource for the agency. The Office of Ethics and Business Conduct is charged with building an ethical culture at LAWA that will nurture and support an environment that upholds the highest standards of ethical conduct.
- Through the Office of Ethics and Business Conduct, LAWA offers ethics awareness and compliance training to all staff. LAWA managers use a top-down cascade training module to raise awareness of the importance



of ethics in the workplace and to assist employees in working through ethical dilemmas. Training modules both introduce employees to the services offered by the Office of Ethics and Business Conduct as well as educating employees on their responsibilities under the Code of Ethics.



These individual programs allow LAWA to increase its sustainability performance. Moreover, LAWA is committed to integrating sustainability into its policies, business practices, and written agreements. The development of the objectives and targets to improve sustainability performance is the first step. Specific projects, such as the development of the Airport Sustainable Planning, Design, and Construction Guidelines also show LAWA's commitment to integration.

LAWA's integration of sustainability into its business processes is evidenced by its commitment in developing and implementing an Environmental Management System (EMS). The development and implementation of the EMS, like SPIMS, will present an organizational structure, processes and tools necessary to enable LAWA managers and environmental staff to integrate environmental compliance commitments into day-to-day activities. Moreover, the EMS will continually monitor, measure and improve LAWA's environmental performance, while providing more environmental awareness to LAWA staff and tenants. The EMS will help to instill that environmental performance improvement is everyone's responsibility and to empower LAWA employees.

In the EMS's first phase, LAWA has begun development and implementation at LA/ONT's Construction and Maintenance (C&M) Division. The initial development and implementation efforts in the C&M Division will serve as the EMS pilot project that will provide a foundation on which LAWA can build and roll out a comprehensive EMS to the other airports. Once the EMS pilot project is complete, the scope will be expanded to encompass all of LAWA.

As a purchaser of products and services to manage the airport, LAWA has extensive requirements for suppliers of these services and products. As part of its purchasing system, LAWA has a Procurement Wizard—a computer-based system to ensure that all contracts, requests for proposals, and other agreements meet LAWA's requirements—that guides staff through the development of a procurement document. LAWA will incorporate sustainability standards and language into the Procurement Wizard to assist in meeting the goal that all written agreements will include sustainability requirements by December 2008.

Finally, LAWA needs to make its internal business processes more sustainable. To this end, LAWA will begin a program to reduce the amount of paper generated during the planning and development of projects and in everyday operations.





LAWA will implement a LAWA-wide single document control system—Documentum—that will allow storage of important documents in a single electronic location. This system will allow easier access to electronic documents so that each LAWA staff member will not need their own hard copy. LAWA also plans to investigate the feasibility of converting its paper-based timekeeping system into a computer-based paperless system.

***The following tables list the sustainable practices—practices and initiatives for FY 2008-2009***

**Table 9-1 Sustainable Practices Current Practices**

- LAWA has begun to place sustainability language into the procurement process.
- The Board of Airport Commissioners adopted LAWA's Sustainability Vision and Principles.
- LAWA implemented an Environmental Management System (EMS) pilot program for LA/ONT's Construction and Maintenance Section.
- LAWA opened a job center in Inglewood to assist in local hiring of employees at LAX.
- LAWA has a significant ethics training program for all staff.
- LAWA has implemented a First Source Hiring pilot program for 50 LAX employers.

**Table 9-2 Sustainability Practices Initiatives**

- LAWA will expand its First Source Hiring Program to all its tenants.
- LAWA will expand its Environmental Management System to LAX Construction and Maintenance Department.
- LAWA will incorporate Sustainability Procurement requirements and documents into the Procurement Wizard.
- LAWA will implement a LAWA-wide single document system that will allow more efficient storage and retrieval.
- LAWA will investigate the feasibility of converting its paper-based timekeeping system into a computer-based paperless system.





Los Angeles World Airports  
Global Leader in  
Airport Sustainability

## Los Angeles World Airports *Sustainability Vision and Principles*

**Our Sustainability Vision** As the international gateway in our region, Los Angeles World Airports is committed to setting the global airport standard for customer satisfaction and security, regional economic leadership and organizational performance. Building on our core values, we will engage our employees, tenants, customers, and communities in an effort to continually improve our environmental, economic and social performance.

**Our Sustainability Principles** We will foster stewardship and continual performance improvement at all levels within LAWA's organization by complying with applicable legal requirements, integrating sustainable practices into our operations and administrative processes, communicating our endeavors, and following these principles:

**Becoming an innovative** and national model in implementing environmental solutions.

**Taking responsibility** for improving our overall operational sustainability.

**Increasing our business value** through improved sustainable performance.

**Engaging our stakeholders** to better understand and address their concerns.

**Incorporating sustainable** design and construction practices in the development of our airport system.

**Monitoring and measuring** our progress through our sustainability performance improvement management system.



## APPENDIX B SPIMS IMPLEMENTATION TEAM PROCESS

LAWA understands that achieving its goal of being the Global Leader in Airport Sustainability is a far-reaching and wide-ranging endeavor which will require a cross discipline group of employees to meet this challenge. As a first step in achieving improved sustainability performance, LAWA' Implementation Teams reviewed current practices that meet the goals of the sustainability drivers. The current sustainability practices and initiatives were categorized into six goal areas that will serve as the foundation for moving forward with the SPIMS process. Using these goal areas, LAWA was able to involve employees in initiatives that best fit their areas of expertise and to focus their activities on specific programs. The six goal areas are:

1. **Water Efficiency**—LAWA provides large quantities of water to its passengers, tenants, and employees as well as for proper operation of airport facilities. LAWA currently provides reclaimed water from Hyperion Wastewater Treatment Plant, which is utilized for irrigation and water conservation. The Implementation Team assigned to this goal area reviewed practices that pertain to **potable water conservation, water efficient landscaping, and water re-use.**
2. **Materials and Resources**—LAWA purchases million of pounds of products that are used by employees, tenants, and passengers. These products, which circulate through the four facilities, can originate from controlled procurement, as well as from purchases made employees, tenants, and passengers. Procurement may focus on products consisting of recycled and/or recyclable materials. Following use, the product waste may be either recycled or disposed of in landfills or through incineration. The Implementation Team assigned to this goal area reviewed practices that pertain to **materials procurement and waste minimization and recycling.**
3. **Energy and Atmosphere**—LAWA is a global transportation hub and LAX is the fifth busiest airport in the world. LAWA's facilities require large amounts of energy to service the millions of passengers, vehicles and airplanes that flow through its airports annually. The Implementation Team assigned to this goal area reviewed practices that pertain to **energy use, energy efficiency, and air quality.**
4. **Transportation Resources**—As a receiving and staging point for millions of travelers and a place of work for over 50,000 employees, LAWA's airports are in a unique position to seek efficiencies in its transportation system on-site and off-site. Improvements in traffic flow, mass transport, and shuttle service can have a significant effect on the City of Los Angeles as a whole. The Implementation Team assigned to this goal area reviewed practices that pertain to **traffic congestion and non-single occupancy vehicle alternatives.**



5. **Sustainable Design**—LAWA is continually growing and updating its facilities to provide the capacity to meet the country's expanding need for air travel in the most effective, efficient, environmentally friendly, and secure way possible. Tremendous potential exists to complete the design and construction of these projects in a sustainable manner. The Implementation Team assigned to this goal area reviewed practices that pertain to **sustainable planning, design, and construction guidelines, and green specifications.**
6. **Administrative Processes**—As an employer and one of the largest welcoming centers for people visiting the Southern California region, LAWA plays an active and progressive role in its community. LAWA strives to be a leader in labor and community relations and within the aviation community. With these responsibilities LAWA can make many policies that show its commitment to environmental stewardship, economic growth and social responsibility. The Implementation Team assigned to this goal area reviewed practices that pertain to **policies, guidelines, and plans as well as community, health and safety, and indirect economic impacts.**

LAWA's Implementation Teams reviewed the current sustainability practices of each of the established categories. The teams met on a regular basis to discuss programs and initiatives for each of the departments. The teams collected information on tracking progress and documented programs that will help meet LAWA's sustainability goals.

To guide LAWA and to perform a comprehensive sustainability assessment, LAWA developed a list of sustainability indicators from four organizations that have developed guidelines for general and aviation groups to become more sustainable. The four organizations are:

- Global Report Initiative (GRI) developed a widely used sustainability reporting framework that includes a comprehensive set of indicators that measure economic, environmental, and social performance.
- Pacific Sustainability Index (PSI) is a system that measures the comprehensiveness of environmental and social reports developed by corporations and other groups.
- Airport Council International (ACI) is an association of air transport industry representatives that developed an initiative to address environmental impact of the aviation industry.
- Transportation Resources Board (TRB) is one of six major divisions of the National Research Council that connects transportation-based engineers, scientists, and practitioners. The TRB has developed programs and studies that integrate sustainability into transportation projects.

The Implementation Teams used the indicators developed by these organizations to guide their reviews of current practices.

