



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

# Airports Going Green Sustainability & Recycling

at  
Los Angeles World Airports

*Intissar Durham*  
*Chief Airports Engineer*  
*August 6, 2009*





# Sustainability Drivers

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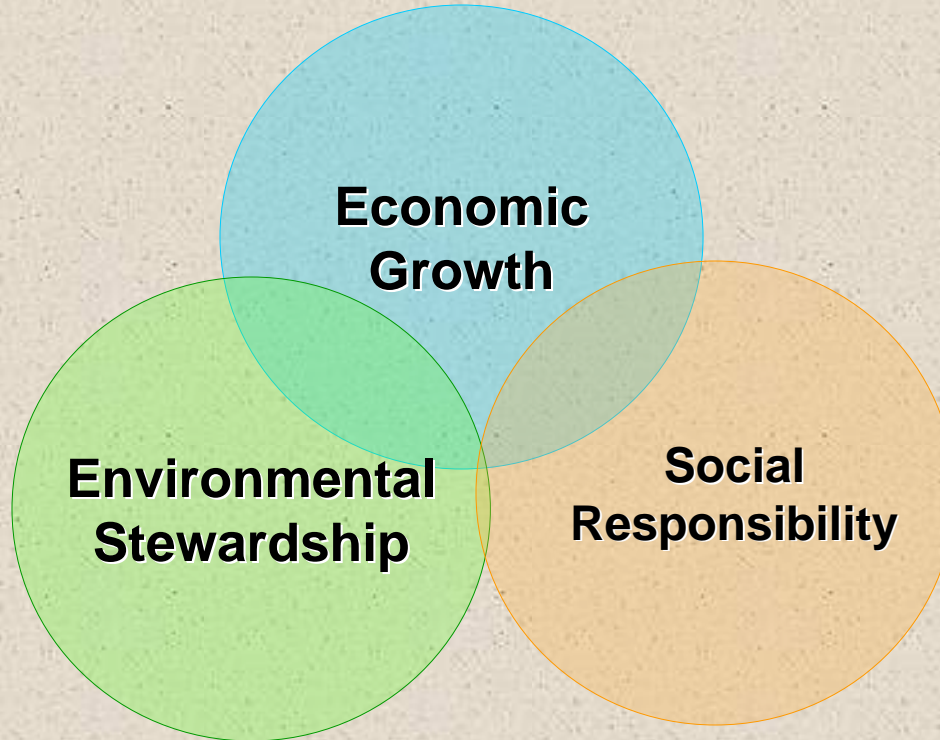
- **LA City Council introduced “Greening LAX” motion on October 10, 2006**
- **Board of Airport Commissioners (BOAC) adopted LEED Building Standards on January 22, 2007**
- **BOAC adopted LAWA’s Sustainability Vision and Principles Policy on August 6, 2007**
- **Sustainable Airport Planning, Design and Construction Guidelines completed in January 2008, revised in 2009 and are being implemented on all types of work:**
  - **General C&M**
  - **Civil**
  - **Buildings**
  - **Tenants**



# Sustainability for LAWA

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## *Moving Beyond Environmental Compliance*





# LAWA's Sustainability Policy



## 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 LAWAs 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.



# Recycling & Source Reduction Efforts (Highlights)

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- **LAWA's recycling efforts resulted in a waste diversion rate of 66.5% in 2008**
  - Exceed 2007 numbers by 1.5%
  - Continue on path towards Mayor's goal of 70% recycling by 2015
- **Worked with several airlines to help implement in-flight recycling**
- **LAWA provides recycling services to tenants at no charge and assists tenants with setting up their own recycling programs**



# Construction Waste Management & Recycling

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- **Recycle & reuse of construction materials**
  - Eliminate amount of waste produced on jobsite
  - Avoid use of landfills and incinerators for construction debris
  - 50% recycling rate required on all projects
  - Goal is to achieve a 75% diversion rate
- **Use of materials with recycled content**
- **Construction Water Reuse Requirements**
  - Dust control
  - Soil compaction





# Construction Waste Management & Recycling (cont.)

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- **During Design Process: Consideration of deconstruction, reuse & recycling of facilities**
  - Evaluate potential future uses for the structure and building components
  - Specify materials and systems with high future value
  - Reuse, re-program, or relocate existing facilities
- **Salvage Material and Resources**
  - Salvage 10% of construction and demo waste by weight



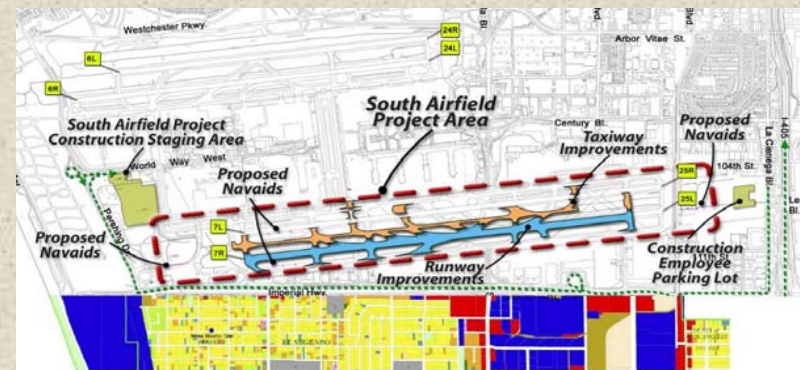
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# Case Study

## South Airfield Improvement Project (SAIP)

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- Moved runway at Los Angeles International Airport (LAX) approximately 55 feet south of existing Runway centerline
- Construction of a new parallel taxiway between the south airfield runways
- Project Completed in 2008





## Construction Mitigations

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- **Air Quality**
  - Retrofitting diesel engines
  - Restrictions on vehicle/equipment idling
- **Noise**
  - Mandatory installation of noise control devices
  - Noise sensitive construction scheduling
- **Traffic**
  - Onsite recovery and recycling to reduce truck trips
  - Designated truck routes and delivery schedules to avoid congestion
- **Biotic Communities**
  - Environmental buffer areas to ensure sensitive areas were not infringed upon
  - Multiple species inventoried and protected





# SAIP

## On-Site Material Recycling

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- **Concrete crushing/recycling plants on site to facilitate reuse of existing pavement material**
- **200,000 cubic yards of material crushed, recycled and used in construction of new runway**
  - **Alternative would be to haul existing pavement material to landfill 40 miles away**

## On-Site Material Recycling (cont.)

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- **Prevented a massive amount of solid waste from entering scarce landfills**
- **Avoided toxic diesel emissions from over 16,000 80-mile roundtrips to disposal sites**
- **Significant amount of re-entrained road dust was avoided**
- **All material stockpiles, crushing, and concrete mixing operations were located away from residents and sensitive habitats**



# LAWA Sustainability Guidelines

**Sustainable Airport, Planning, Design,  
and Construction Guidelines:**

**<http://www.lawa.org/welcomeLAWA.aspx>**