



SUSTAINABILITY

ENERGY | ENVIRONMENT | ECONOMICS



Tampa  
International  
Airport



# the green initiatives



tampa international airport's plan for protecting resources, promoting energy efficiency and making a difference



# Sustainability

Sustainable development –

“meets the needs of the present without compromising the ability of future generations to meet their own needs.”

*World Commission on Environment and Development (WCED)*



# Environmental Management Policy

- Environmental Management Practices
  - Ensure business partners, tenants, suppliers, contractors and the community are aware of the Airport's environmental management system
- Sustainable Development
  - Preserves natural resources
  - Incorporates energy saving features
  - Considers the initial and on-going costs
- Sustainable Operations
  - Conserves energy and natural resources
  - Prevents pollution and reduces waste



# Sustainability Manual

- Airport “LEED” program currently under development
  - Planning and Development initiative
  - Participation by multiple departments
  - Targeted completion 2010
- Sustainable design and development enhances sustainable operations

## *LEED:*

*The Leadership in Energy and Environmental Design -- Environmental rating and certification system from the U.S. Green Building Council*



## Sustainable Operations

- Natural Resource Preservation
- Alternative Fuels for vehicles
- Alternative Energy Sources
- Alternative Lighting Solutions
- Recycling & Reuse of Materials
- Pollution Reduction



## Non-Attainment Status

- A “non-attainment” area
  - pollution levels exceed air quality standards
- EPA proposing new ozone standards for Florida
  - targeting reduction of nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC).
- Parts of Florida and Tampa/Hillsborough County are likely to become non-attainment areas under the new standards.



## Vehicle Initiatives

### Clean Air Partnership

- Commuter Options
  - Car Pooling
  - Flexible schedule
- Green Fleet Program
  - Alternative fuel vehicles



A Voluntary Effort for Reducing  
Air Pollution and Highway  
Congestion in the Tampa Bay



## Alternative Fuel Vehicles

- Electric vehicles for Police and Maintenance personnel





## Alternative Fuel Vehicles

- First Hybrid added to the fleet in 2008



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## Alternative Fuel Vehicles

- Airline-owned electric ground support equipment





# Lighting Solutions

- High-efficiency fixtures on all new projects
- Lighting retrofits
  - High efficiency fixtures reduce energy costs
  - Longer life lamps reduce waste
  - Introducing new technology
- LED airfield lighting and sign fixtures





## Energy Management

- Building Control System
  - Temperature setbacks
  - Load shed programs
  - Lighting controls
- Non-Peak Conservation Efforts
  - Bag system management





# Water Conservation

## Restroom Design

- Low flow fixtures and sensors on all new projects
- 74% of all existing toilets are low flow (1.6 gpf vs 3.5 gpf)
- 74% of all existing urinals are low flow (1.0 gpf vs 1.6 gpf)
- Fixtures are upgraded through attrition and refurbishment projects
- 100% projected by end of 2012.





## Water Conservation

- Recycled car wash water for RAC and Fleet
- Airside C condensate recovery



cooling tower

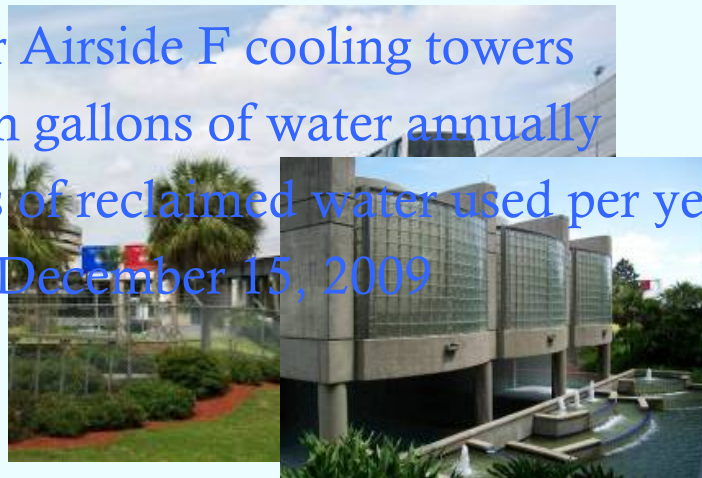




## Water Conservation

### Reclaimed Water Initiative

- Project 5360 09 - Distribution piping and pumps
- City of Tampa installing transmission pipe
- Irrigation for 75 acres plus North Terminal
- Irrigation for Spruce St. landscaping
- Pilot test for Airside F cooling towers
  - Saves 15m gallons of water annually
- 82m gallons of reclaimed water used per year
- Completed December 15, 2009



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## Conservation Results 2007 – 2010

- Potable Water:
  - Reduced use from 238,071 CCF to 159,815 CCF.
  - Reduced cost from \$986,667 to \$804,559.
- Electricity:
  - Reduced use from 92 GWH to 75.4 GWH
  - Reduced cost from \$8m to \$7m in Terminal Complex



# Recycling Initiatives



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# Recycling Initiatives

- Office paper  
7.5 tons in 2008
- Automotive waste  
Oils, lubricants, batteries, antifreeze
- Scrap metal  
39 tons annually
- Landscaping waste and pallets





# Recycling Initiatives

- Fluorescent lamps  
44,000 in 2008
- Electronics, computers, toner cartridges
- Employee break rooms added
- Concrete  
Old slabs crushed and reused in new projects





# Recycling Initiatives

## Airport Tenants

- Cooking Oil (HMS Host)
- In flight recycling (Delta and AirTran)
- Trash recycling (Marriott)





## Airport Terminal Recycling

- Pilot program began March 09
- All public areas implemented May 09
- 132 public recycling containers
- 26 break rooms
- From May 2009 - May 2010 over 850 tons were diverted from the landfill



## What Can Be Recycled?

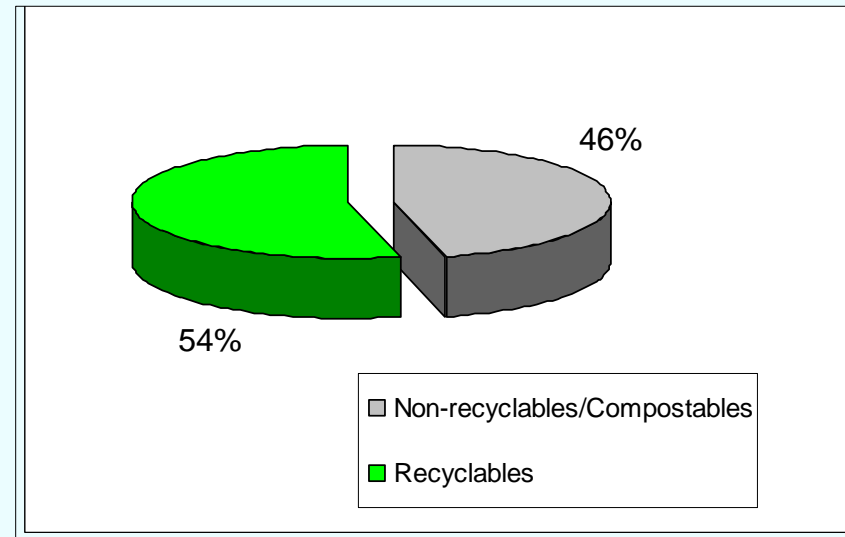
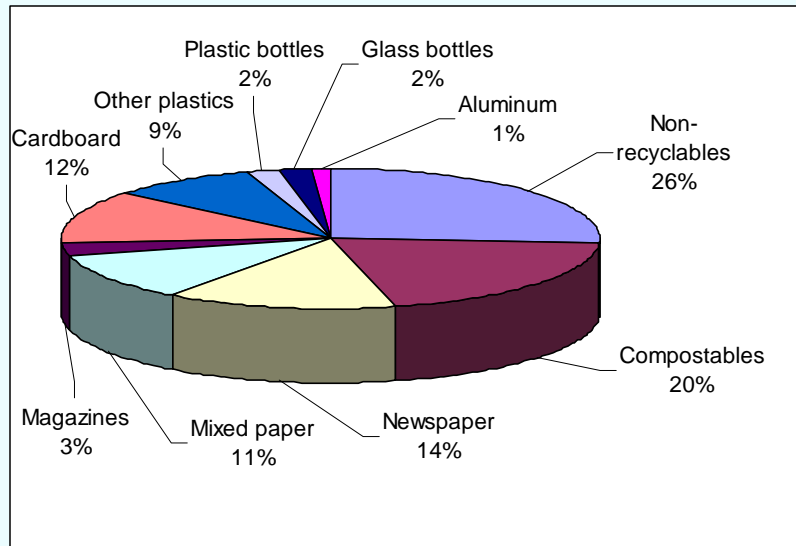
- Plastics
- Glass/Bottles
- Aluminum/Steel Cans
- Newspapers/Magazines
- Paperboard (Food boxes, Etc.)



**\*\*City of Tampa accepts co-mingled recyclables**



# Airport Waste Stream



“In-flight recycling only occurs if there is a system on the ground that allows it to happen.”

*National Resource Defense Council*



# Recycling Collection Points



Landside  
cardboard compactor  
collection point



Airside terminal  
collection point





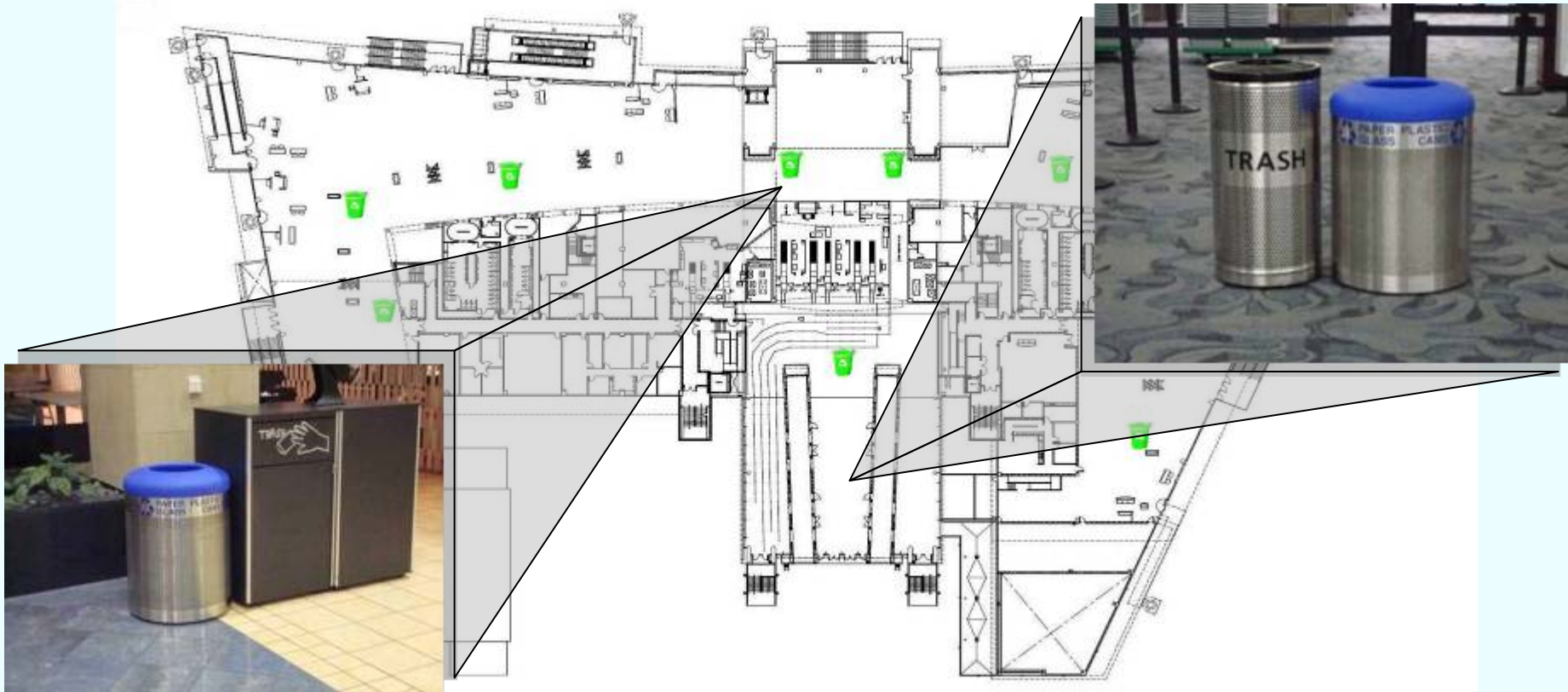
## Terminal Public Recycling



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## Airside Public Recycling - Airside E



AIRSIDE 'E' - BOARDING LEVEL



## Possibilities for the Future

- Solar power



Denver International's  
2 mega-watt solar array



## Possibilities for the Future

- Compressed Natural Gas



Salt Lake City Airport

**Coming to TPA in 2012!**



## Possibilities for the Future

- Expanded Use of Reclaimed Water



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## Possibilities for the Future

- Expanded Trash Recycling
  - Tenant areas and break rooms
  - In-flight recycling
- On-site Trash Recycling Facility

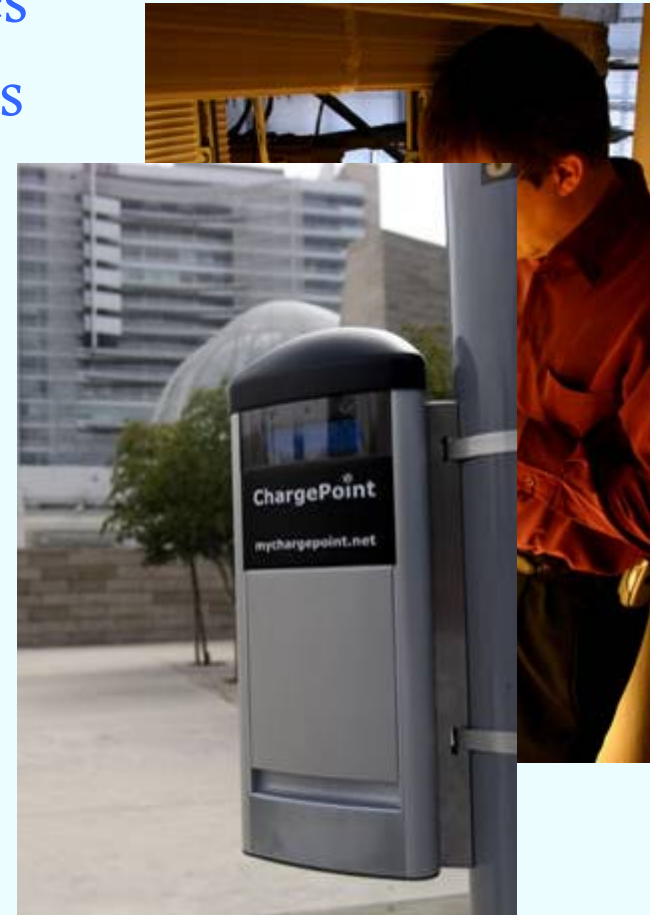


Ft Lauderdale Airport's on-site recycling facility



## Possibilities for the Future

- Emerging Lighting Technologies
- Public Vehicle Charging Stations



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Thank you!



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