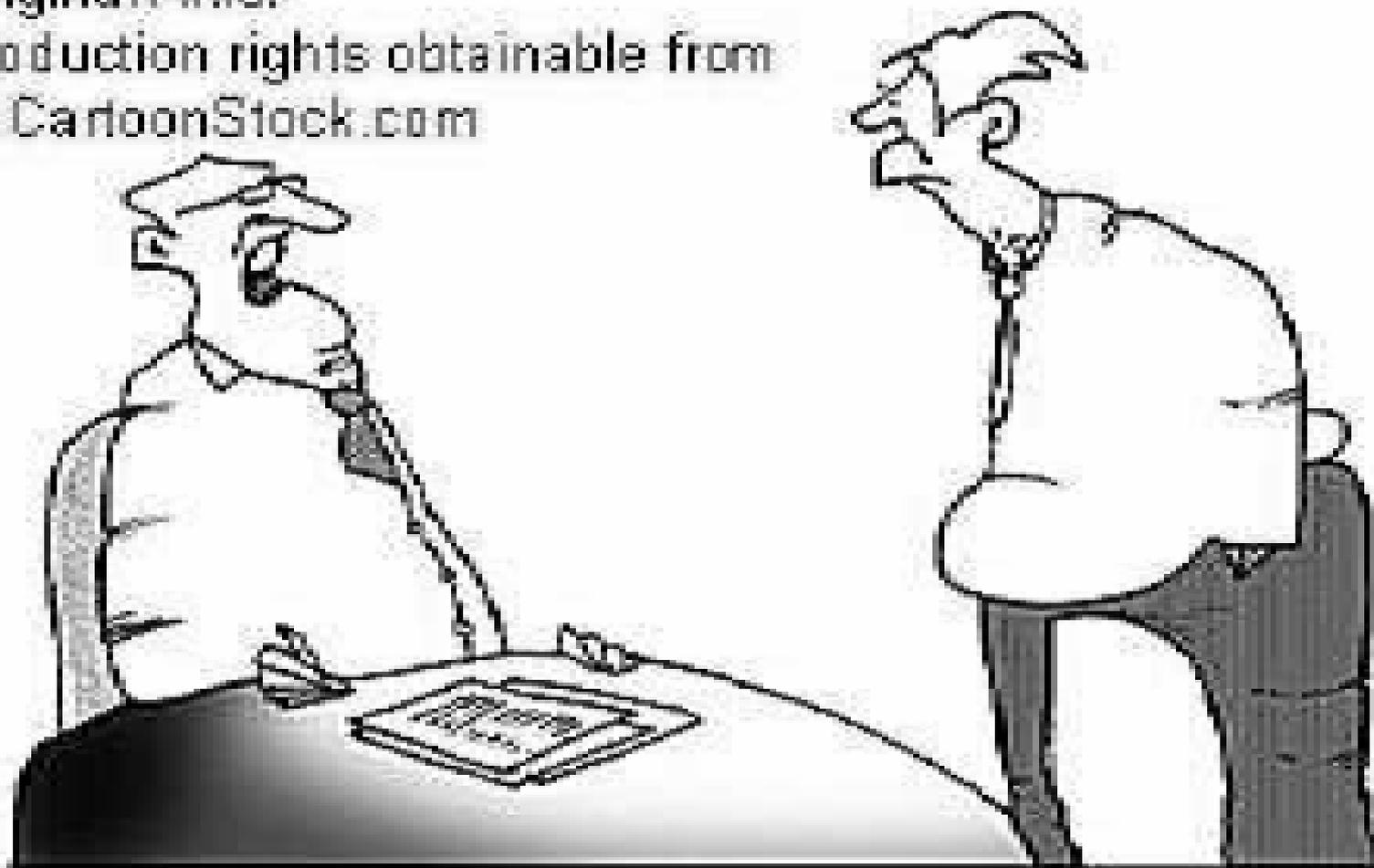


How the Conversation is Changing....  
Denver International Airport, Denver,  
Colorado



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I WANT TO OFFSET MY CARBON FOOTPRINT  
JENKINS...CANCEL YOUR HOLIDAY FLIGHTS

# The Traditional “Environmental” Conversation

- Compliance
- Fuel and Chemical Storage
- Stormwater Protection/Permitting
- Waste Management
- Air Quality/Permits
- NEPA
- Recycling
- General Conformity
- Command and control
- Do what you have to do and no more!



# The Conversation Today

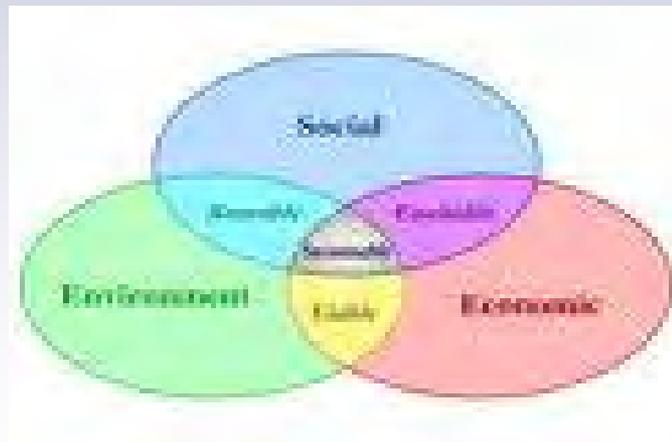
- Reducing fuel use
- Carbon Footprint
- Sustainability
- Recycling
- Global Warming
- Greenhouse Gas Emission Inventories
- Life Cycle Analysis of total project cost
- Alternative Fuels
- Resource conservation
- "Green" procurement
- Cross – media impacts
- USGBC LEED criteria



©Imbodi of the river.

# What is Sustainability Anyway?

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



# Why the Change?

- Business examples
- Opportunities for social benefits
- Consumer awareness and expectation
- The media
- Aviation contributions to date not effectively publicized
- New focus on transportation (specifically aviation)
- Local governments are taking action

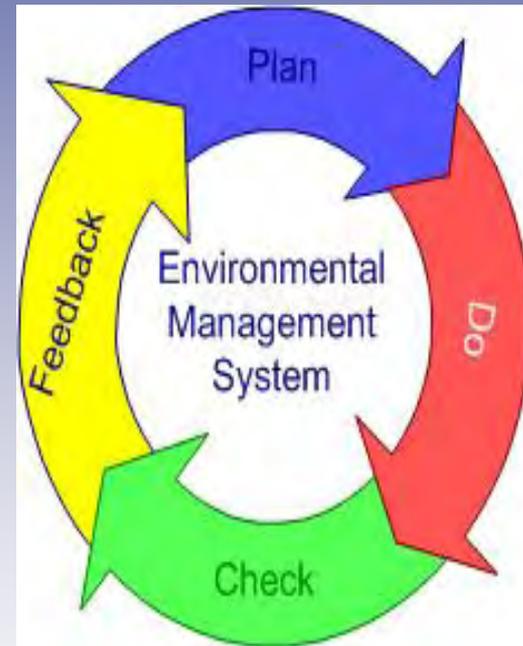


# So What Does this all Mean to Airports?

- Need to incorporate sustainability into all aspects of our business
- Airports and their business partners must work together
- Education and awareness at all levels is key
- Top management must support sustainability initiatives
- Opportunity is all around us

# DIA's Environmental Program

- EMS certified to ISO 14001 in 2004; recertified to new 2004 standard in 2007
- Believed to be the first airport in the U.S. to develop a facility wide EMS certified to ISO 14001
- Includes sustainability/continual improvement targets
- Accepted into CDPHE Environmental Leadership Program in 2004
- First airport in the U.S. to be accepted into EPA's Environmental Performance Track Program (2006)



# Sustainability Goals – Where do they come from?

- Continual Improvement Goals in DIA's EMS; EPA PT; CDPHE ELP
- Greenprint Denver
- Denver Climate Action Plan
- Mayor's Executive Order 123 (the sustainability XO)
- Colorado Climate Action Plan



# Greenprint Denver and Climate Action Plan Goals

- Reduce energy use by 1% per passenger
- Reduce gasoline use by 5%
- Reduce hazardous waste generation by 5%
- Reduce solid waste by 5% per passenger
- Increase alternatively fueled light duty vehicles to 70% (*currently at 57%*)
- Aircraft deicing fluid recycling
- Reduce Greenhouse Gas Emissions by 10% per capita by 2012 relative to 1990
- LEED Silver standard for all new City construction



# DIA's Goals

## Mass Transit

- 152 DIA employees enrolled in RTD's Valu-Pass program
- New carpool program (2008)



## Reduce Paper Consumption (20% below 2005 baseline)

- Paper-free Fridays campaign
- Outreach program on alternatives to paper use
- Double-sided programming for printers and copiers



## Training and Awareness

- For employees, tenants, and contractors (450 as of 10/07)
- Added sustainability concepts



## Greenhouse Gas Emissions Reduction

- Carbon Offsets for Travel (RFP issued – Jan. 2008)
- Reduced access fee for hybrid taxis



~ from the 2007 Denver Climate Action Plan

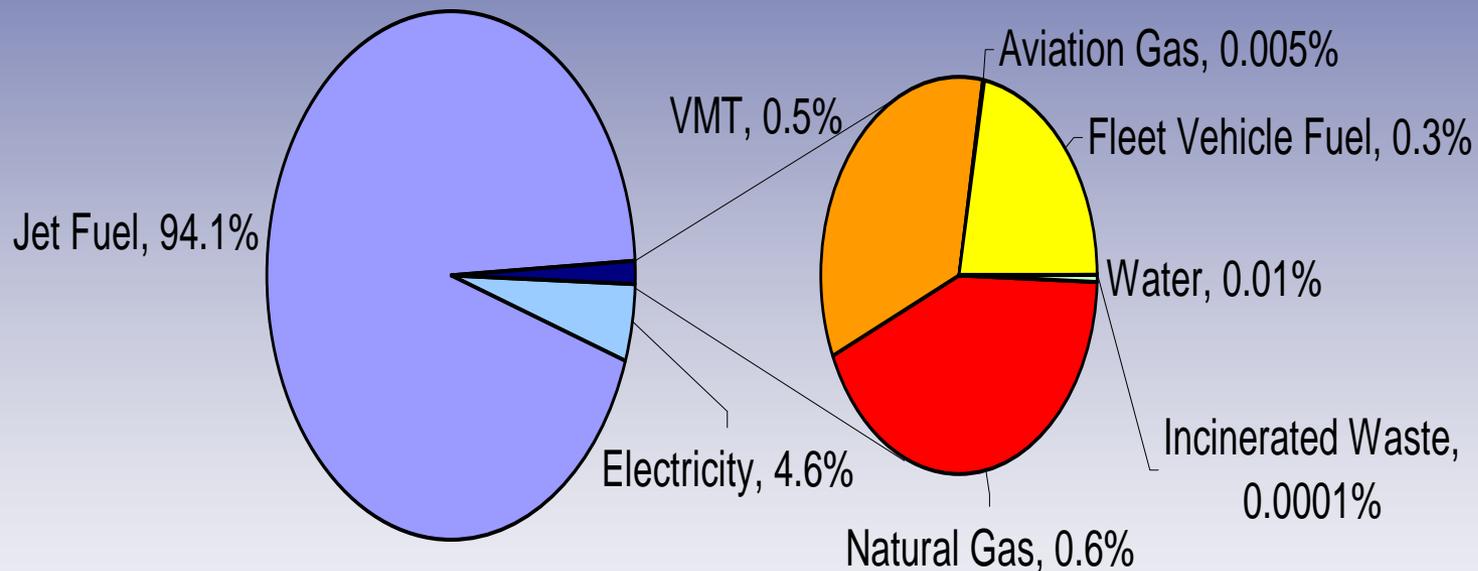


## Support Denver Water's Tap Smart Program

- Waterless urinals in the AOB
- New RJ facility fixtures (1.6 gpf toilets; 1.0 gpf urinals)
- Terminal bathroom retrofits, include variable flush urinals
- Modified technical specifications for future projects



# GHG Emissions by Energy Use for DIA (2005)



*DIA TOTAL GHG Emissions (2005) = 4.8 million mtCO<sub>2</sub>e*

*DIA buildings plus the Denver allocation of DIA's aircraft fuel (22%) = 1.2 million mtCO<sub>2</sub>e*

*All buildings at DIA = 211,000mtCO<sub>2</sub>e*

# Energy Conservation Projects



# Wind Energy

- Evaluating site for testing
- Awaiting approval from neighboring municipality
- Plan to monitor speed and frequency for one year.



# Photovoltaic Project at DIA



Cost \$13mm  
71.5 acres  
10,000 solar panels  
Generate 3.5 million kilowatt hours annually

# Additional Energy Conservation Projects

- Master Energy Study
- Walkways and escalators
- Evaluating waste to energy
- Lighting study
- Turn off your light and computer campaign
- Reduced Access fees for hybrid taxis



# Waste Minimization Projects



# Waste Minimization Projects

- Recycling pilot with SETAC and PDX
- 160 new containers in common areas
- Waste Composition Study
- Feasibility study for composting
- Evaluating additional commodities for recycling
- Single stream vs. segregation
- Development of new contract specifications – waste hauling and recycling
- Recycling in parking lots and garages

# Other Programs

- Eco-efficient purchasing
- No idling zones
- Environmental excellence awards
- EFP Program
- Sustainable Design Criteria Manual
- Biodiesel
- CNG stations
- Fuel hydrant system
- Dedicated deicing pads
- Annual reporting
- Carpool program
- Environmental planning



# Challenges (and Opportunities) for DIA

- Ozone non-attainment (November 2007)
- Growth
- Deicing Effluent Limitation Guidelines
- New permits – MS4 and Industrial stormwater
- How to deal with greenhouse gas emissions?
- Waste reduction goals
- Carbon offset program – will it work?
- EMS permitting
- GRI aviation sector supplement development
- Master Plan (& adapting plan for changing priorities)

# What Does the Future Hold?

- Greenhouse gas emissions reporting – will it be mandatory?
- Cap and trade program for carbon
- Sustainability reporting
- Pay as you throw programs
- Taxes for high MPG vehicles
- More regulation of on and off road vehicle engines
- Tougher fuel standards
- EMS permitting
- More efficient aircraft engines
- Renewable fuels
- New technology for deicing



# For More Information

- [www.flydenver.com/diabiz/community](http://www.flydenver.com/diabiz/community)
- [www.greenprint.org](http://www.greenprint.org)
- [janell.barrilleaux@diadenver.net](mailto:janell.barrilleaux@diadenver.net)



THERE'S A  
MOTHER NATURE  
TO SEE YOU, SIR.

Thank You

