

Two Perspectives on CDA

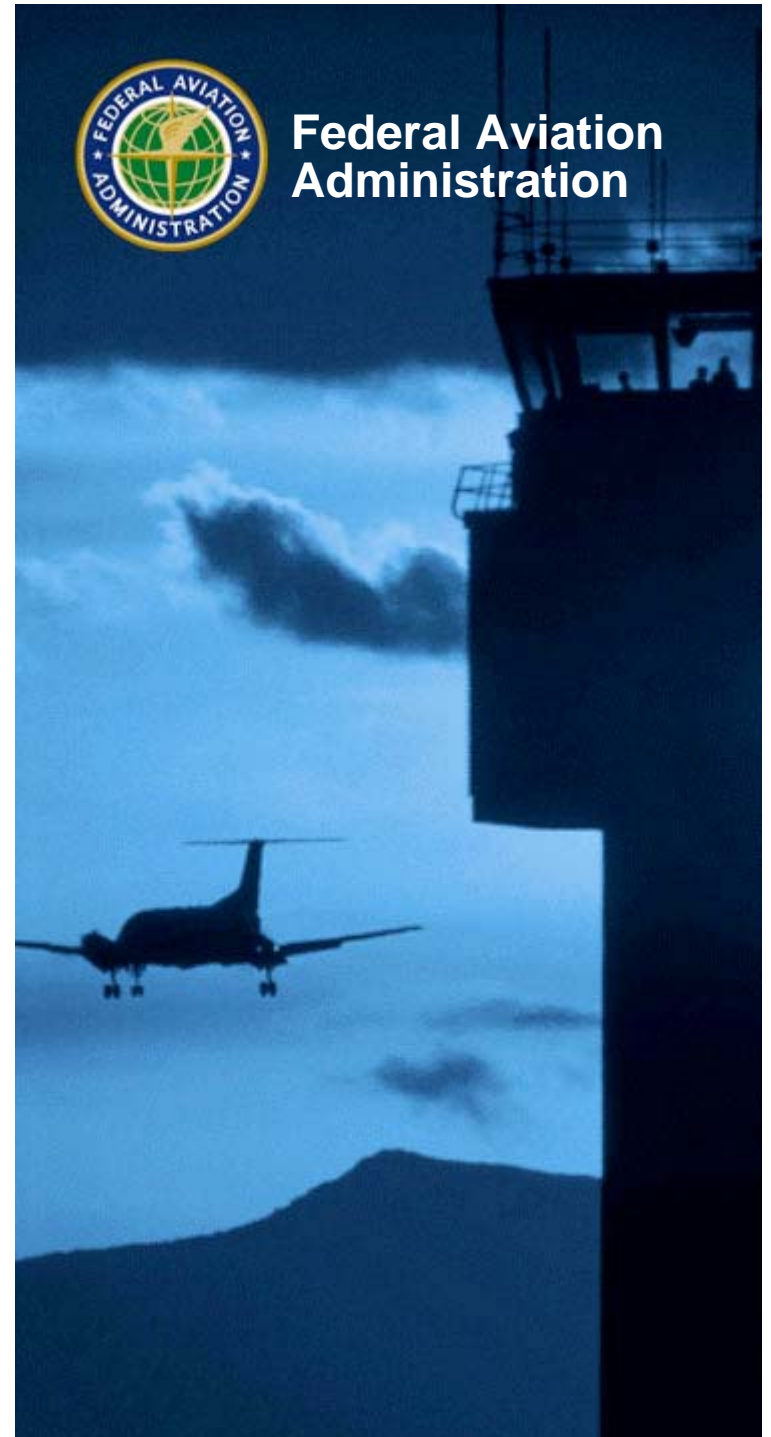
A REGULATOR'S PERSPECTIVE

Presented to: Air Carrier Flt Procedure Developers

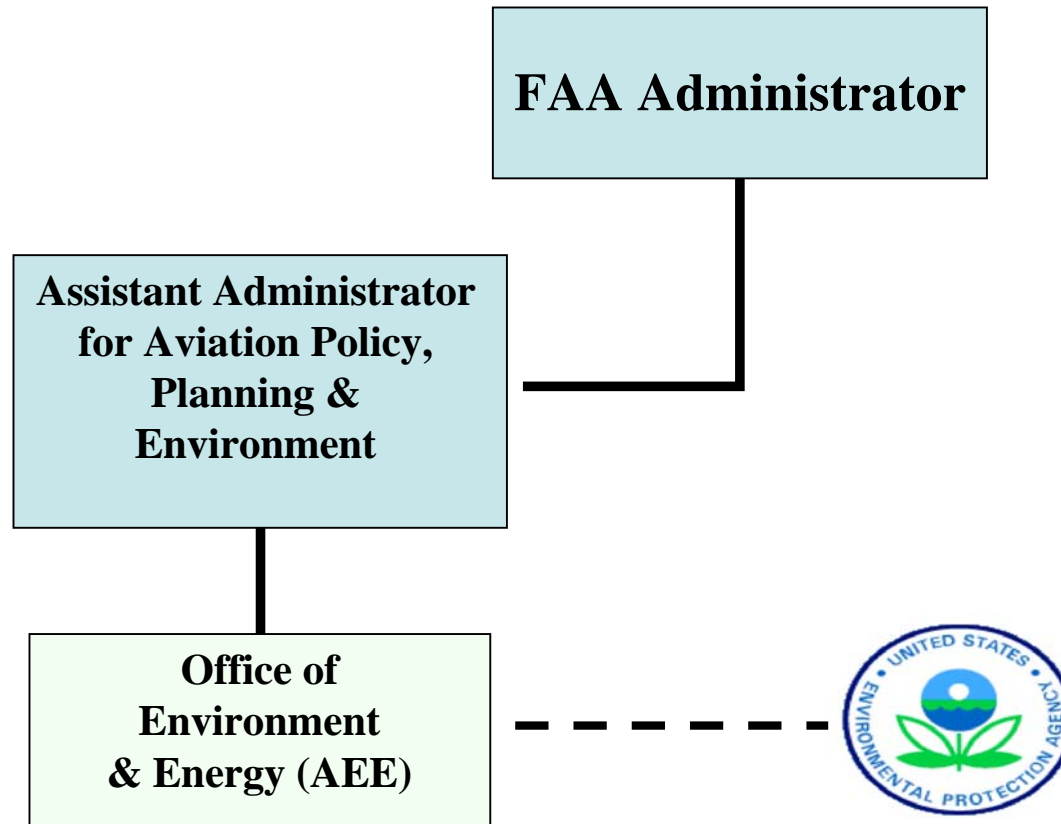
By: **Carl Burleson,**
FAA Director-Office of Environment & Energy

Date: January 19-20, 2006

Georgia Institute of Technology Campus
Atlanta, GA



Organizational Context



Navigating the Future



Capacity Goal: Work with local governments and airspace users to provide capacity in the United States airspace system that meets projected demand in an environmentally sound manner

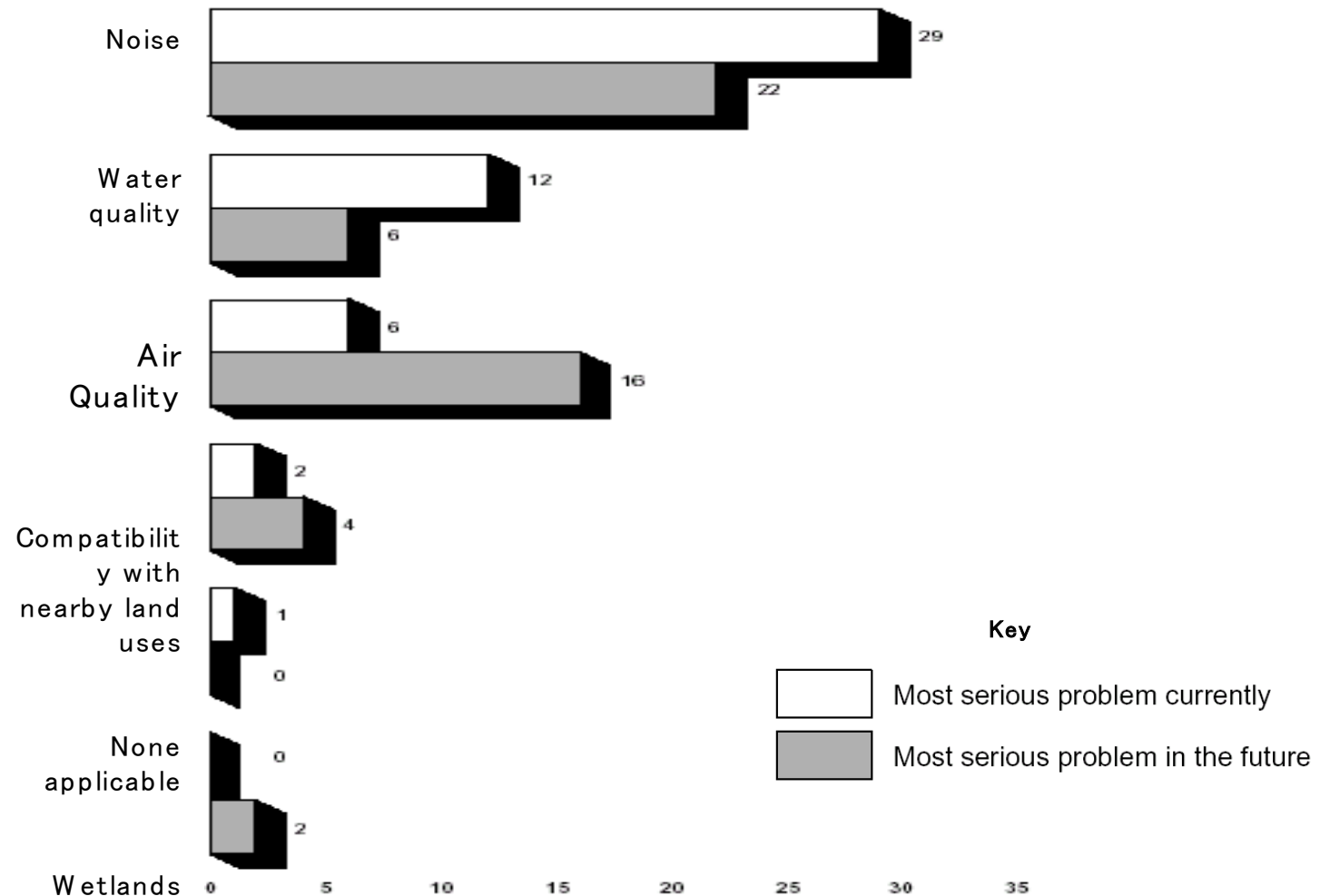
Integrated National Plan



Develop Environmental Protection that Allows Sustained Aviation Growth

Download .pdf version of the plan at www.jpdo.aero

Environmental Constraints to Expand Airport Capacity

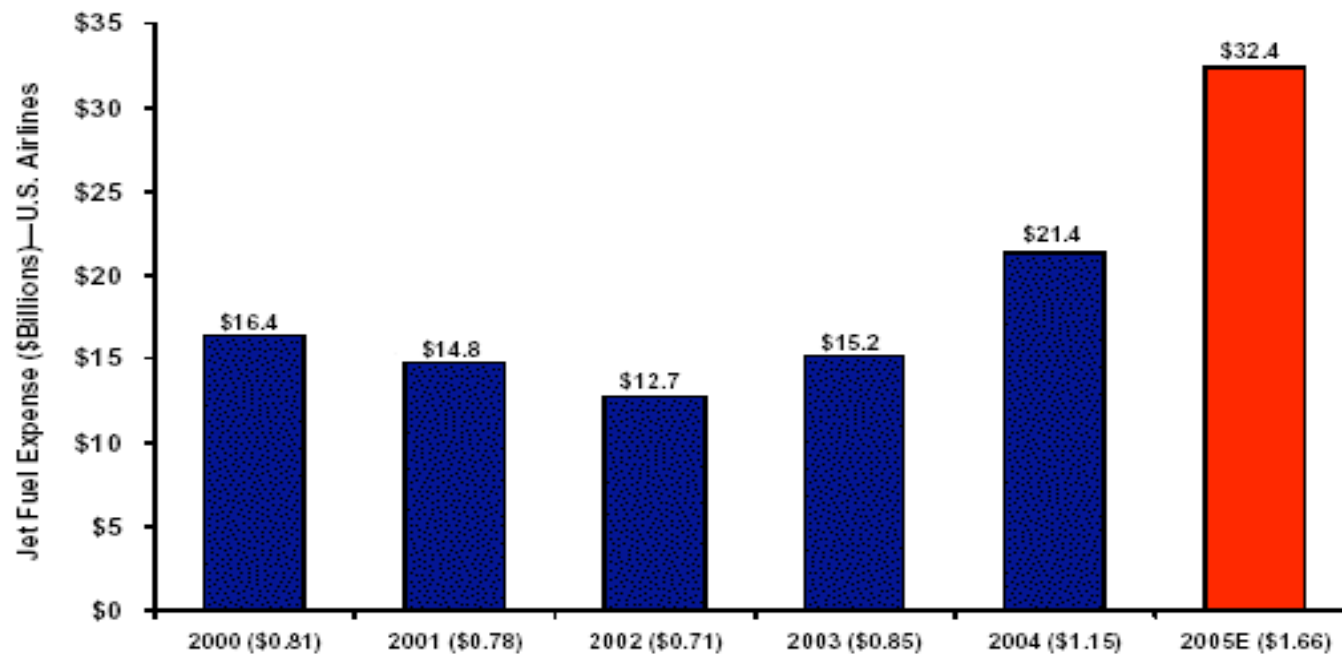


Source: GAO/RCED-00-153
[Aug-2000] survey of the nation's
50 busiest commercial service
airports.

Fuel Costs Escalating

Industry Fuel Expense Estimated to Have Risen \$11B in '05

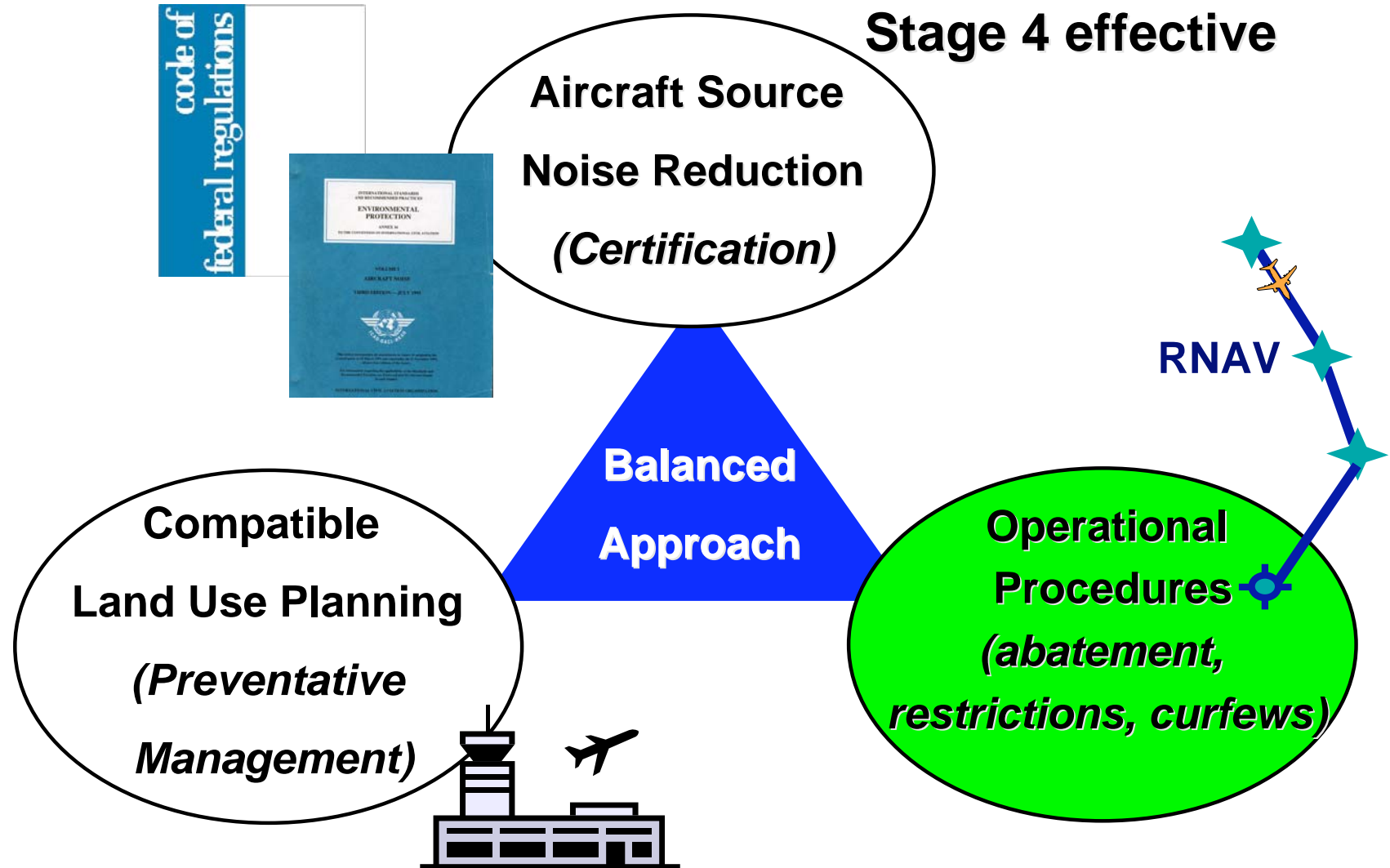
Higher Crude, Crack Spread, Consumption All Fueling Increase vs. '04



Sources: Air Transport Association, Energy Information Administration, Department of Transportation

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Balanced Approach Elements



Partnership for AiR Transportation Noise and Emissions Reduction (PARTNER) FAA Center of Excellence



- AVIATION ENVIRONMENTAL R&D:

Established September 2003, PARTNER fosters breakthrough technical, operational, and workforce capabilities enabling quieter and cleaner aircraft. It seeks to enhance the understanding of aerospace environmental issues and is co-sponsored by:

- Federal Aviation Administration (FAA),
- National Aeronautics and Space Administration (NASA), and
- Transport Canada

- BREAKTHROUGH:

Funded Project 4 - Continuous Descent Approach (CDA) at Louisville Int'l Airport (SDF) that successfully demonstrated drastic environmental benefits achievable using CDA. Participants: MIT, Boeing, Delta, RAA, UPS

COE CDA Participants



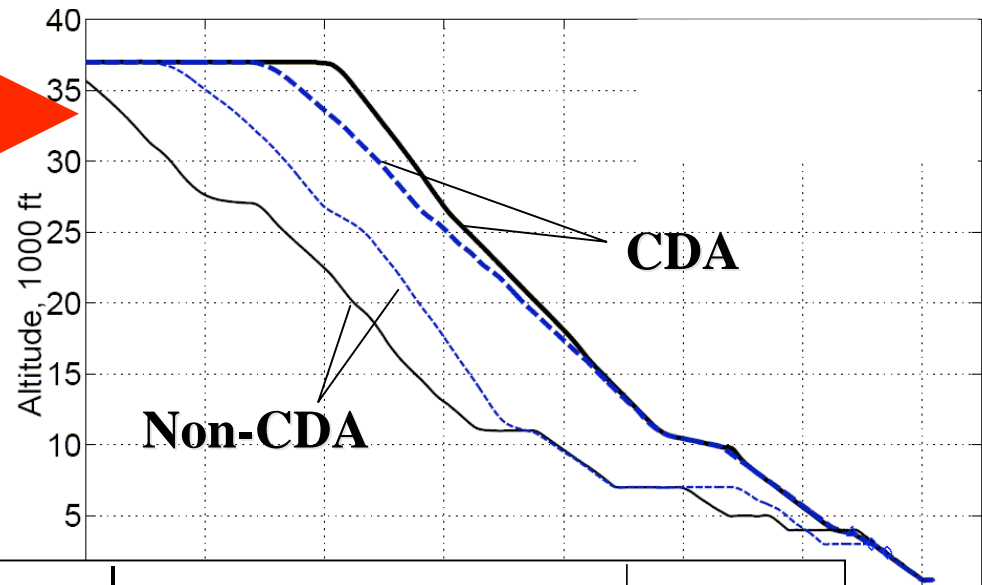
Noise Abatement Procedures Working Group:

- **Massachusetts Institute of Technology**
- **Boeing Company**
- **Federal Aviation Administration**
- **National Aeronautics & Space Administration**
- **Louisville Regional Airport (SDF) Authority**
- **United Parcel Service (UPS)**

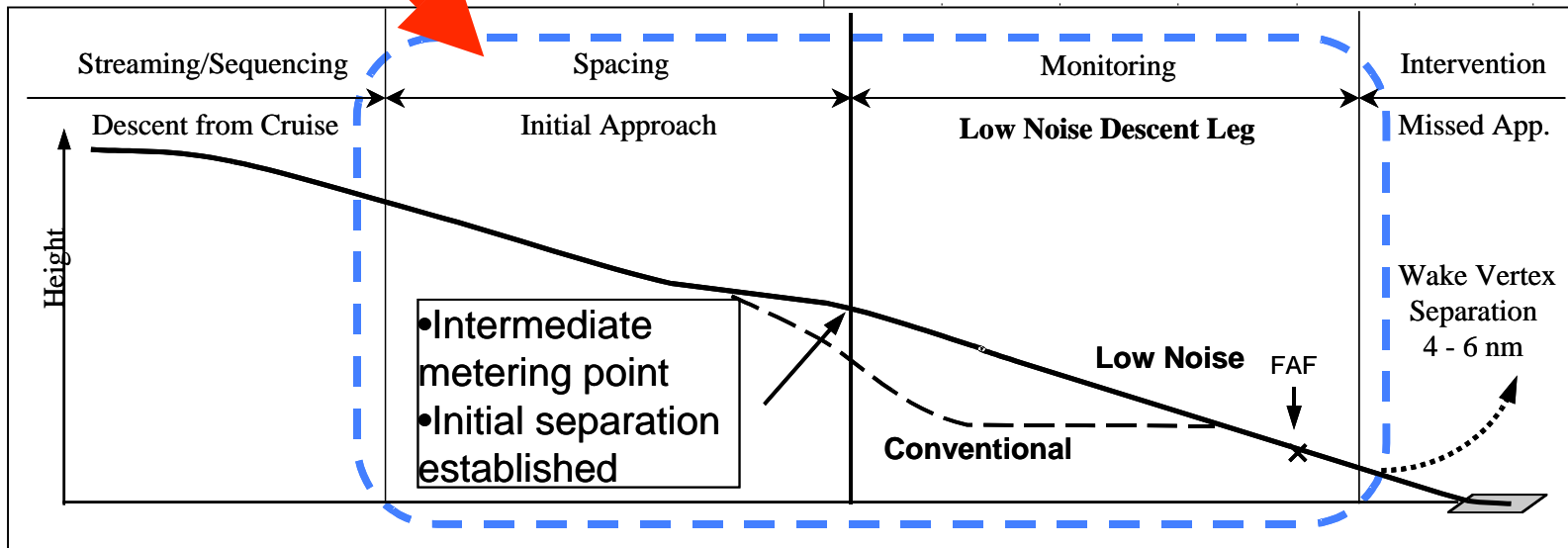
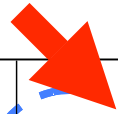


Continuous Descent Arrival (CDA) Procedure

Demonstrated CDA



Conceptual CDA



2004 CDA Flight Test Summary

- Environmental and performance (economic) benefits:
 - Up to 6 dB noise reduction (at 7.5 to 15 NM).
 - Airport vicinity noise exposure reduced.
 - Fuel burn (from cruise) reduced.
 - Aircraft emissions reduced.
 - Flight time (from cruise) reduced.



Time is Right!

- **Demonstrated CDA a viable operational technique with environmental benefits for Nighttime (low density) operations.**
- **CDA Intellectual know-how established under PARTNER COE Project 4 team.**
- **Required technology available (i.e., FMS, radar data, ADS-B, etc...)**
- **National and corporate need to reduce fuel usage for transportation.**

In 2005, CDA R&D introduced in FAA Flight Plan.



TODAY - 2006 FAA Flight Plan

Top CAPACITY Objective

Objective 4 –

Address environmental issues associated with capacity enhancements.

INITIATIVE:

- *Work with several airports to implement Continuous Descent Approach (CDA) for night operations, and initiate research into CDA applicability to airports with greater traffic levels, general mixed fleet, and mixed operations.*

PERFORMANCE TARGETS:

- *Reduce the number of people exposed to significant noise by 1 percent per year through FY 2010, ...*
- *Improve aviation fuel efficiency per revenue plane-mile by 1 percent per year through FY 2010, ...*

Navigating the Future- Closing Observations



→ Environment- a Key Constraint on Future Growth

→ CDA- an Opportunity to Reduce the Environmental Footprint and Business Costs

→ Success requires a shared commitment and partnership.

