



NOISE 101

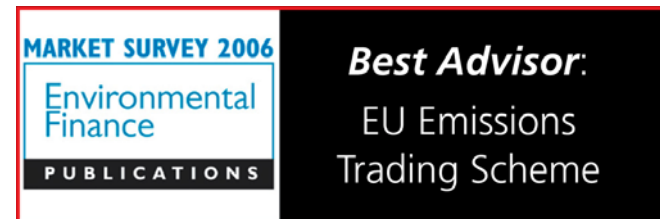
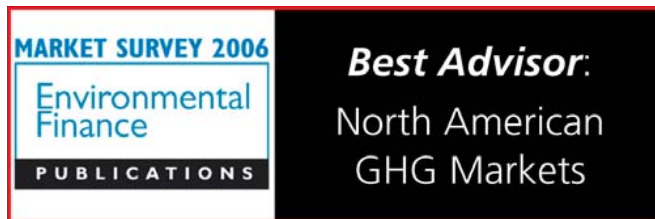
The Economics of Noise

Prepared for:

**Flying Green – A Thoroughbred Approach
to Winning the Race for the Environment**

SH&E Has Studied the Economics of Aircraft Noise for 15 Years

- ◆ **Our Experience Includes Benefit Cost Analyses for Seven Part 161 Noise Studies**
 - SJC, SFO, PSM, APF, LAX and VNY with HMMH
 - BUR with Landrum & Brown
- ◆ **We also Conducted a Curfew Extension Study Using a Part 161 Framework for Geneva International Airport**
- ◆ **SH&E is now Part of ICF International, the Leader in the Economic Analysis of Carbon Trading and Climate Change**



Aircraft Noise is the Unwanted By-product of Highly Valuable Economic Activity

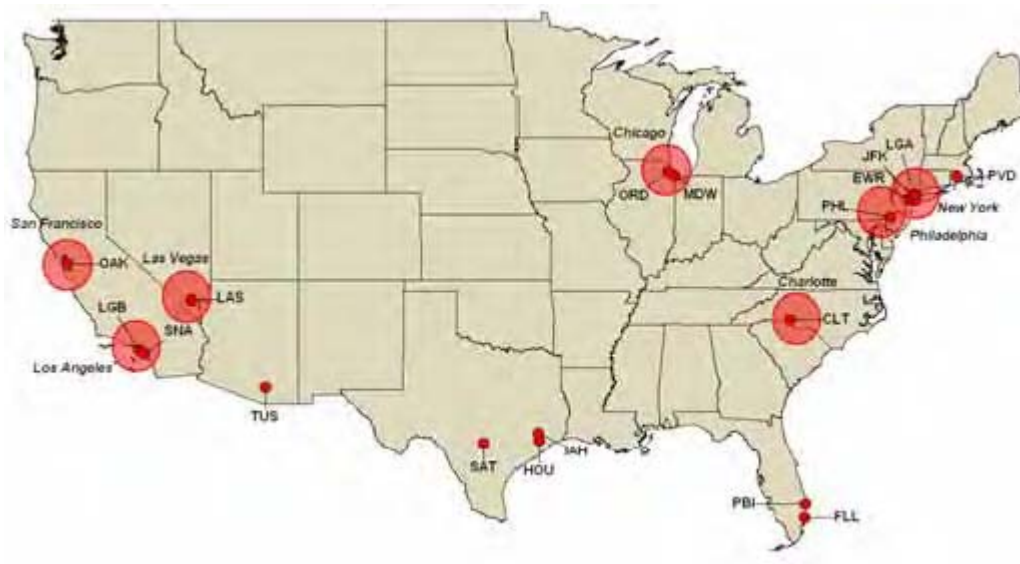
“The direct impact of commercial air transportation and related industries in 2004 was estimated at \$247 billion in gross output, \$72 billion in earnings and over a million jobs...”

The indirect impact of expenditures by commercial air travelers creates an additional \$191 billion of gross output, \$67 billion of earnings and 3.3 million jobs.”

***– COMMERCIAL AVIATION AND THE AMERICAN ECONOMY,
Campbell-Hill Aviation Group, March 2006***

US Airports Require Additional Capacity to Support Future Growth

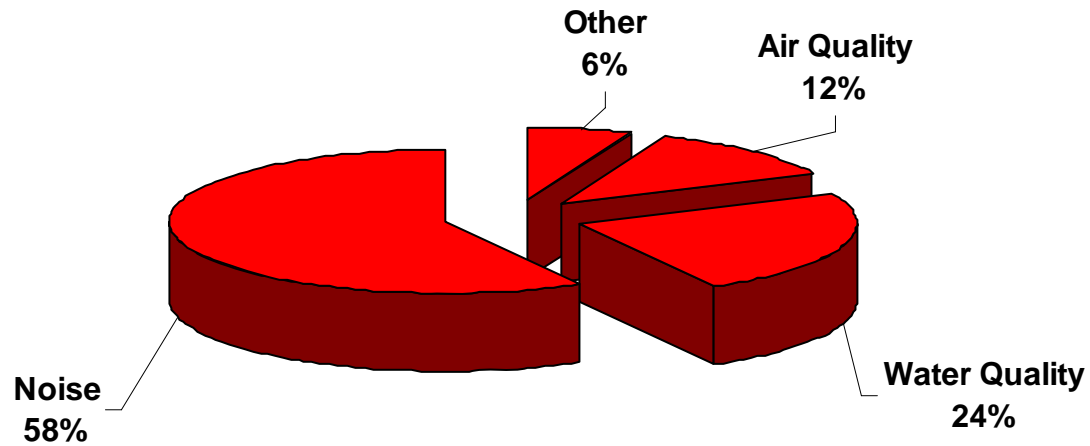
Airports and Metropolitan Areas Needing Additional Capacity in 2015 If Planned Improvements Do Not Occur



Source: FAA, Capacity Needs in the National Airspace System, May 2007

Noise is Still the Greatest Barrier to Airport Expansion

Environmental Issues That Currently Most Concern Airports



Source: GAO's survey of the nation's 50 busiest commercial service airports, August 2000

Since 1982 Airports and the FAA Have Spent \$7.9 Billion to Reduce the Impacts of Aircraft Noise

AIP and PFC Investments for Noise-Related Purposes	
Dollars in millions	
AIP funds, fiscal years 1982-2007	Funding
Mitigation measures for residences	\$1,903
Land acquisition	\$2,170
Noise monitoring system	\$170
Mitigation measures for public buildings	\$703
Noise compatibility plan	\$87
Total AIP funds	\$5,033
PFC funds, fiscal years 1992-2007	
Multiphase	\$1,283
Land acquisition	\$481
Soundproofing	\$1,018
Monitoring	\$31
Planning	\$15
Total PFC funds	\$2,828
Grand total	\$7,861

Source: FAA, reported in GAO Aviation and the Environment, October 2007

But in 2006 Alone Delays Increased US Airline Direct Operating Costs by \$7.7 Billion

2006 Direct Aircraft Operating Costs due to Delays		
Dollars in millions, CY 2006		
Fuel	\$	3,296
Crew - Pilots/Flight Attendants	\$	1,659
Maintenance	\$	1,277
Aircraft Ownership	\$	1,069
Other	\$	361
Total DOCs	\$	7,663

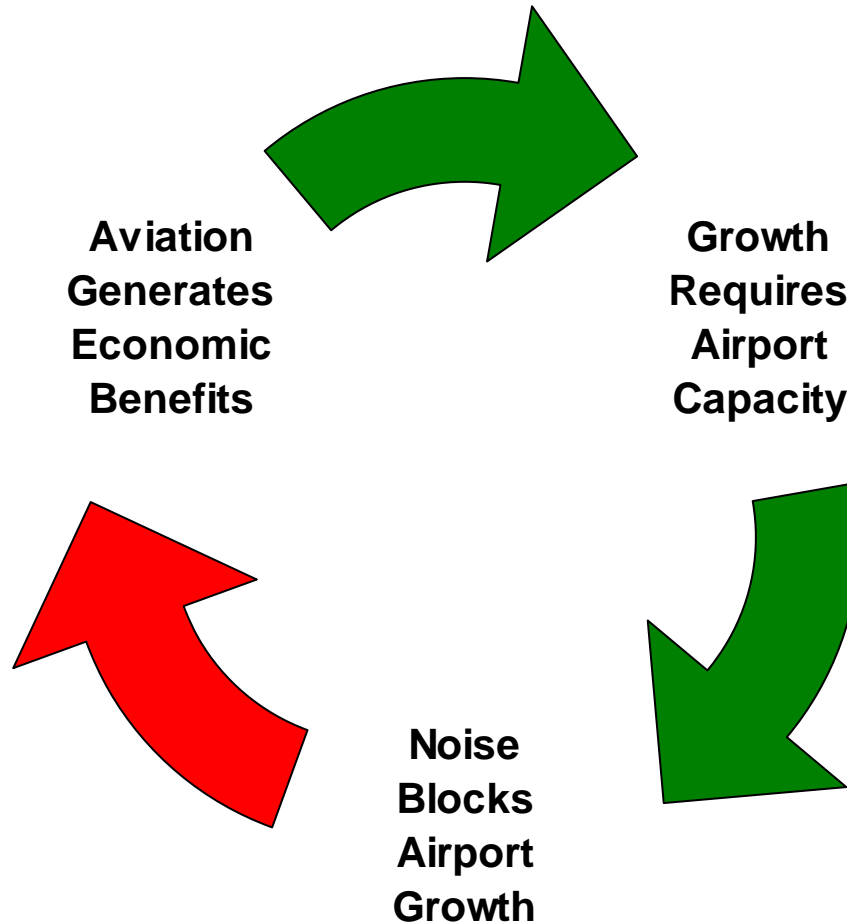
This does not include delay-related costs imposed upon airline passenger and shippers

At This Rate, Delays Will Add \$46 Billion to Airline Operating Costs for the 2007-2015 Period



Source: www.jaunted.com

Current Policies Regarding Airport Noise are Contributing to the Stalemate in Airport Expansion



Pressure is Mounting to Override Local Opposition to Airport Expansion

"The pyramids took less time to build than some runways in the United States. . . . We don't want to silence local objections, but we must provide a forum that has a finite ending date. Federal, state and local environmental reviews must be conducted concurrently, not consecutively."

– Senator Kay Bailey Hutchison, quoted by Associated Equipment Distributors (AED) in BUILDING AMERICA'S AIRPORT INFRASTRUCTURE, 2007

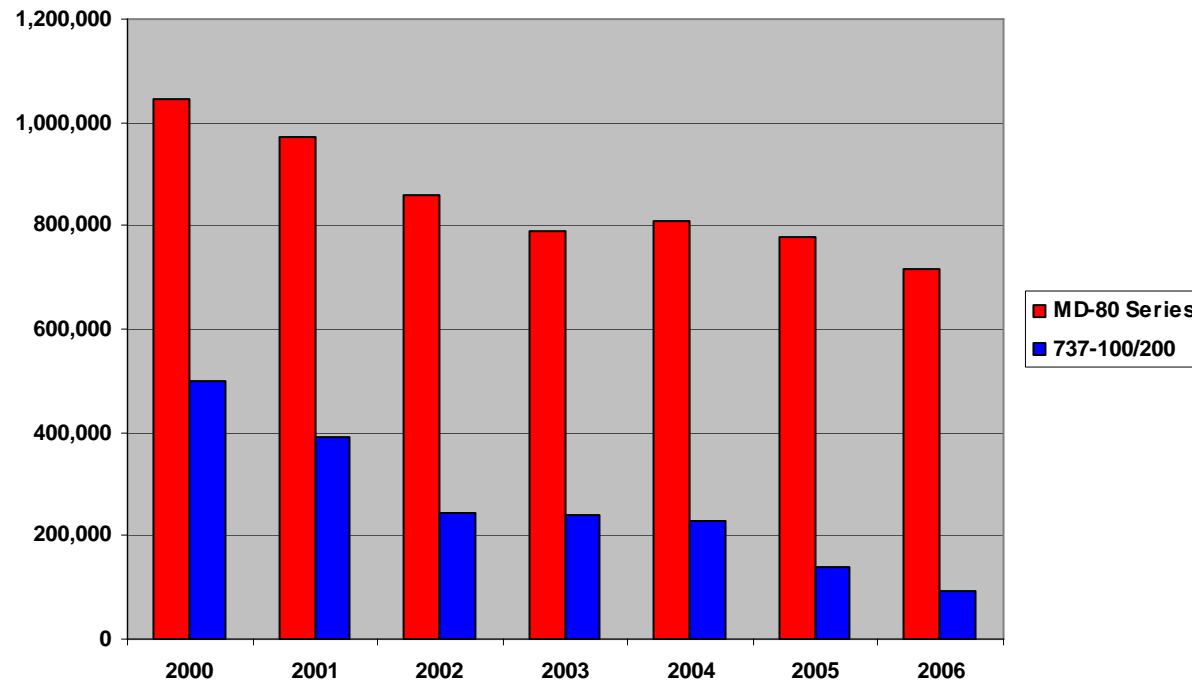
But Increased Concern over Emissions and Global Warming Gives Opponents New Reasons to Block Airport Growth



Source: www.cnn.com

Airports Will Gain Some Noise Benefits as Operations with Louder Aircraft Continue to Decrease

Annual Departures by US Carriers



Source: USDOT T100 Database

But Additional Noise Benefits from Technology May Be Limited

- ◆ **New design widebodies (A380, B787) are substantially quieter than the aircraft they replace**
- ◆ **New design narrowbody aircraft will not be in service before 2017**
- ◆ **CDA provides limited benefit to people living closest to airports**

Reducing Emissions May Take Precedence over Reducing Noise, Increasing Local Opposition to Airport Expansion

The design goals for new engines that call for higher fuel efficiency with super-low emissions and noise “run opposite of each other,” he says, adding: “Everybody can’t have everything.”

– Dale Stolzer, Southwest Airlines senior director of engineering and maintenance programs, quoted in Reed ATI, February 5, 2008

“There is a trade-off between noise and carbon dioxide emissions. We think reducing CO2 should be the priority.”

– Andy Harrison, chief executive of easyJet, quoted in the Times, June 15, 2007

Our Conclusions

- ◆ **Noise is a major contributor to delays**
- ◆ **To be effective, noise policy needs to address opposition to airport expansion**
- ◆ **We should not rely on new technologies to solve noise problems**
- ◆ **Airports will probably have to take the lead in developing innovative approaches to reducing noise impacts**
 - DFW program to purchase noise easements for 25% of fair market value
 - FRA agreement to balance impacts of new runway and terminal by restricting night operations

Our Conclusions

- ◆ **DFW program to purchase aviation easements for 25% of fair market value**
- ◆ **FRA program to offset impacts of new runway and terminal development by restricting night operations**