



BOCA RATON AIRPORT

FAR Part 150 Noise Exposure Map Update



Public Meeting | November 2008



Agenda

- **Background**
- **Introduction**
- **Brief Explanation of the Noise Exposure Map Update**
 - *What is a Noise Exposure Map (NEM) Update Study*
 - *Summary of Services*
- **What has changed since previous Maps?**
- **Why do an Update?**
- **Inventory/Forecast**
- **Questions/Comments**

Background

- Boca Raton Airport, Federal Aviation Regulation (FAR) Part 150 Noise Compatibility Program – approved by the FAA on June 28, 2002
- Approved Program includes seven (7) operational elements and eleven (11) land use elements.
- Two key land-use elements comprise:
 - The installation of a Noise and Operations Monitoring System (completed in 2007)
 - Sound Insulation (ongoing)



Background

- **Sound Insulation:**

- Boca Raton Airport's Residential Sound Insulation Program commenced in early 2006
- C&S Engineers, Inc. was selected as the Program Manager under a competitive bid process
- Program has been designed and is being implemented under a multi-phase/multi-year approach
- Program is contingent upon federal and state funding. 95% of costs to date have been funded by federal grants. Another 2.5% have been funded by state grants.



Background

- **Sound Insulation (continued):**

- Pilot phase (comprising 10 residences) began in 2007 and was completed earlier this year.
- Another 34 residences are included in Phase 1 of the program, which is currently ongoing.
- The FAA has required an update to the Noise Exposure Maps (NEM's) approved as part of the Noise Compatibility Program in 2002 before any further federal funds are committed to the Sound Insulation Program. Thus, any subsequent phases of the Sound Insulation program are contingent on the completion of the NEM Update and receipt of federal funds for phases beyond Phase 1.





Introduction

- **Ricondo & Associates**/Miami, Florida
- **Barnard Dunkelberg & Company**/Tulsa, Oklahoma and Denver, Colorado
- **Mestre Greve Associates**/Laguna Niguel, California
- **Quest Corporation of America**/Miami, Florida





Who is Involved?

- **Airport Administration and Staff**
- **FAA**
- **Aircraft Operators**
- **Airport Tenants**
- **State of Florida**
- **Surrounding Neighborhoods**
- **Surrounding Jurisdictions**
- **Airport Users**
- **Other Interested Parties**
- **Consultant Team**



Purpose of Study

- **Voluntary noise exposure map preparation to continue to receive FAA funds for sound attenuation.**
- **Identify existing noise exposure, identify potential future noise exposure, and identify the number of people that would be exposed to significant aircraft noise levels in order to reduce the number of people affected by noise.**

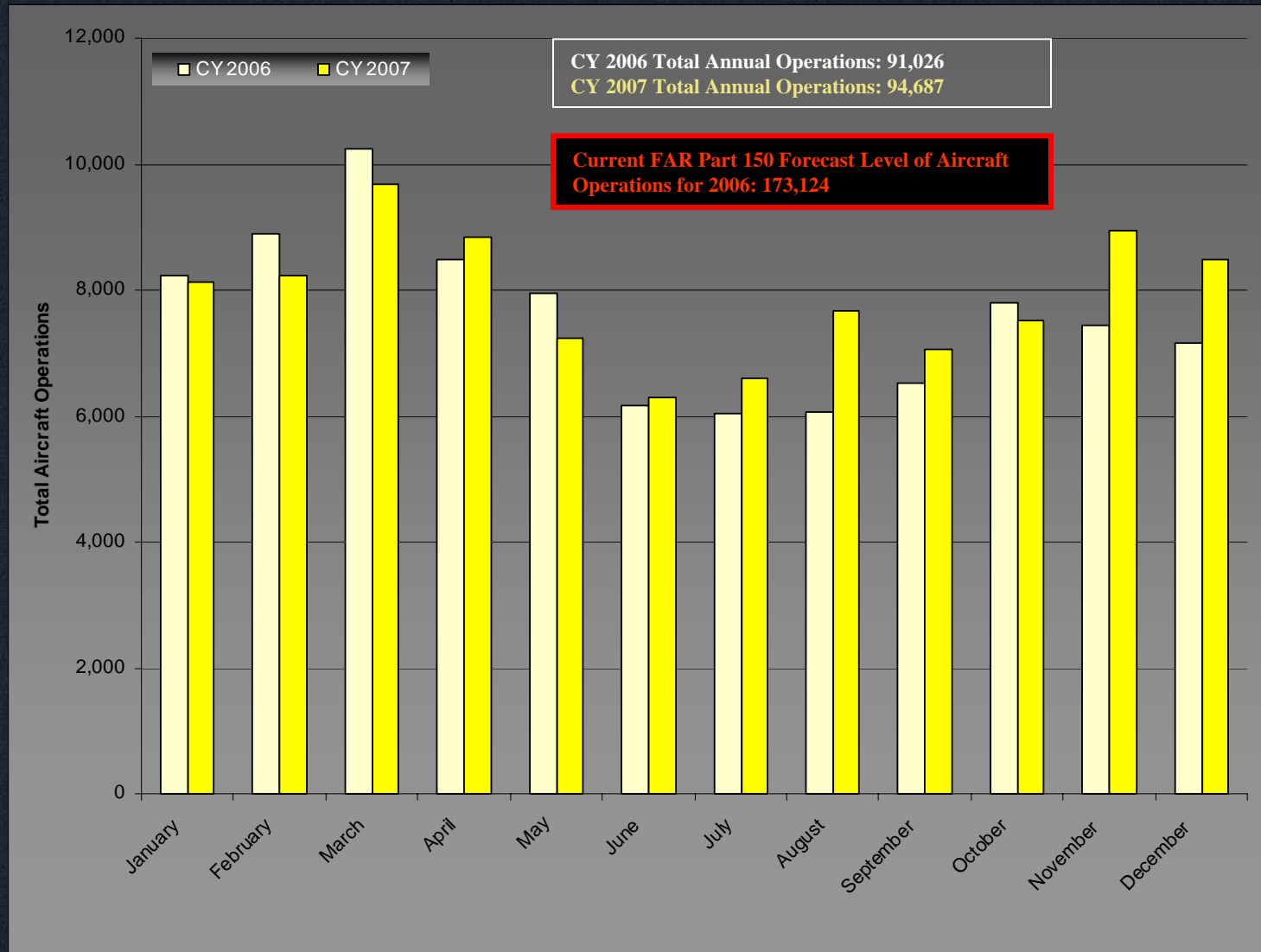


Purpose of Study *(continued)*

- It has a ten-year planning horizon.
- The Study identifies and evaluates two components: both existing and future aircraft noise and land use/people.
- The Noise Exposure Maps (NEMs) are accepted by the Federal Aviation Administration.



2007 and 2006 Aircraft Operations Comparison to Current FAR Part 150 Forecast Level



Airport Sponsor Constraints

- The Federal Government, through the Federal Aviation Administration, has limited the Sponsor's ability to:
 - Control of aircraft in flight
 - Control expenditure of funds
 - Control of noise emissions at "the source"
 - Significantly limits airport Sponsor's implementation of noise restrictions



Airport Sponsor Constraints *(continued)*

- Airport Sponsor must provide access to all airport users and cannot discriminate against any user, but can pass reasonable noise rules/regulations that do not affect access to the airport.
- FAR Part 161 sets limits on noise rules/regulations that do not affect access to the airport.



Noise Exposure Map Elements

- Study Mobilization
- Inventory of Existing Conditions
- Forecasts of Aviation Activity
- Existing Noise Exposure Contour
- Future (ten year) Noise Exposure Contour
- Existing and Predicted Future Population Noise Intrusions
- Preparation of Noise Exposure Maps
- Public Hearing
- FAA Acceptance



Study Process



1

INVENTORY OF EXISTING CONDITIONS

2

DEVELOP AVIATION ACTIVITY FORECASTS

3

GENERATE EXISTING NOISE CONTOURS

4

GENERATE FUTURE NOISE CONTOURS

5

NOISE/POPULATION ANALYSIS

6

DEVELOP NOISE EXPOSURE MAPS

7

DEVELOP PRELIMINARY ELIGIBILITY BOUNDARY

8

PUBLIC HEARING

9

ADOPTION OF NOISE EXPOSURE MAPS AND
SUBMITAL OF PROGRAM TO THE
FEDERAL AVIATION ADMINISTRATION

10

FAA ACCEPTS NOISE EXPOSURE MAPS

What Has Changed?

- **New Version of Integrated Noise Model—more accurate prediction of aircraft noise contours**
- **Actual Permanent Noise Monitoring Data**
- **Greater Accuracy Determining Aircraft Types, Flight Tracks, Runway Utilization and Time of Day—No longer as many “Guesstimates” concerning input data**
- **Gradual Conversion of Fleet Mix—Stage 2 aircraft transitioning out of fleet**
- **Voluntary Noise Abatement Plan is Working**



Why Update Maps

- **Reasons Presented on Previous Slide-changing conditions**
- **FAA Cannot Grant Public Funds for Projects That Do Not Meet National Criteria—65 DNL Contour**
- **Age of Existing Contour Requires Updating, as the Future Contour Has Passed**
- **Before Granting Additional Funds for Sound Attenuation, Contours Must be Verified and Certified**



Time Required For Study

- Approximately 10-18 months to public hearing
- Boca Raton Authority Adoption Process
- Typically 45 Days of FAA Acceptance and Publication of Noise Exposure Maps



Inventory of Facilities

- One runway, Runway 5/23, 6,276 feet long and 150 feet wide
- Displaced thresholds on both ends
- Most landside facilities located on west side of runway, although the ATCT is on the east side
- Generalized existing land use is composed mostly of commercial/office, educational, municipal and residential uses
- Generally, future land use reflects existing land use with some expansion of residential uses



Forecasts of Aviation Activity

- **Approximately 94,600 operations in 2007**
- **Approximately 128,200 forecast for 2017**
- **Aircraft fleet mix also important**



Forecasts of Aviation Activity

Year	2007	2012	2017
Single-Engine Piston	45,222	45,696	48,857
Multi-Engine Piston	4,583	4,336	4,296
Turboprop	4,634	4,653	4,818
Turbojet	39,323	55,089	69,190
Rotor	924	948	1,029
Total	94,687	110,722	128,191



Comments and Additional Information



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Thank You!

