



# BOCA RATON AIRPORT

## FAR Part 150 Noise Exposure Map Update



Public Hearing | November 19, 2009

# Agenda

- Purpose of Study
- Brief Explanation of the Noise Exposure Map Update
- Why do an Update?
- What has changed since previous Maps?
- Inventory/Forecast
- Draft Existing and Future Noise Exposure Maps
- Draft Land Use Analysis
- Questions/Comments



# Introduction

- **Ricondo & Associates**  
Miami, Florida

- **Barnard Dunkelberg & Company**  
Tulsa, Oklahoma and Denver, Colorado

- **Mestre Greve Associates**  
Laguna Niguel, California



# Purpose of Study

- Voluntary noise exposure map preparation to continue to receive FAA funds for sound attenuation.
- FAA requested an update of the 2001 NEMs due to changing conditions at Boca Raton Airport.
- Study to Identify:
  - Existing noise exposure (2008).
  - Potential future noise exposure (2018).
  - Number of people that would be exposed to significant aircraft noise levels (65 DNL or greater).
  - Determine eligibility boundaries for potential future noise insulation.
- Study has a 10-year planning horizon – 2008 and 2018
- The Noise Exposure Maps (NEMs) are submitted to the Federal Aviation Administration.



# Study Process, November 2009



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

ACCOMPLISHED

TO BE ACCOMPLISHED

# Why Update Maps?

- **Changing conditions**
- **FAA Cannot Grant Public Funds for Projects That Do Not Meet National Criteria**
  - **Must be in 65 DNL Contour to be eligible for federal funds**
- **Age of Existing NEM Contours Requires Updating**
  - **Future Contour Year (2006) Has Passed**
- **Before Granting Additional Funds for Sound Attenuation, NEM Contours Must be Verified and Certified by the FAA**

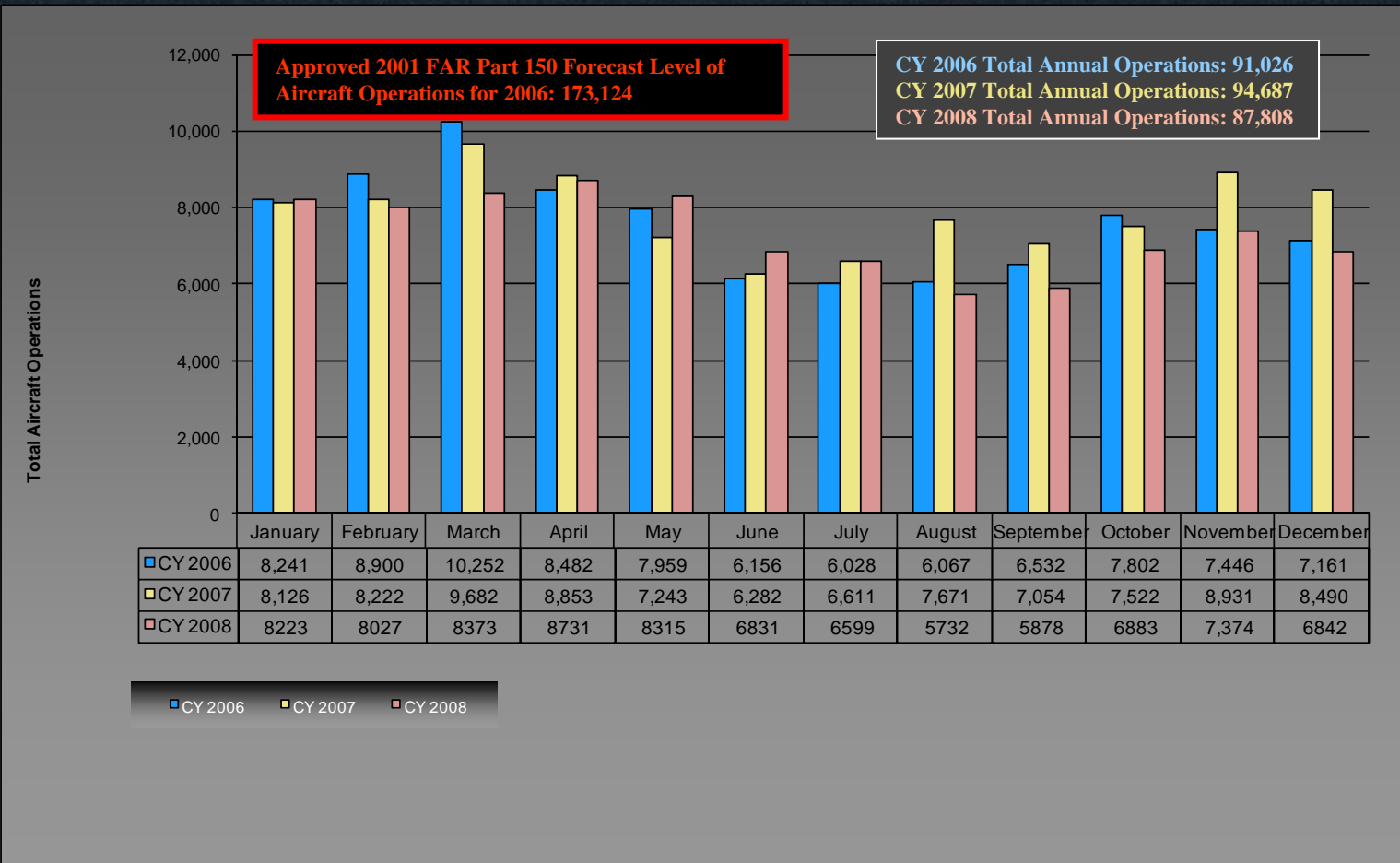


# What Has Changed?

- **New Version of Integrated Noise Model (INM)**
  - Version produces more accurate prediction of aircraft noise contours
- **Actual Permanent Noise Monitoring System and Radar Tracking Data**
- **Greater Accuracy Determining Aircraft Types, Flight Tracks, Runway Utilization and Time of Day**
  - No longer as many “Guesstimates” concerning input data for INM
  - Example: Time of Day – 2001 Study predicted 23% nighttime ops versus 5% nighttime ops based on 2008 ops data
- **Gradual Conversion of Fleet Mix**
  - Louder/Older aircraft transitioning out of fleet
- **Voluntary Noise Abatement Plan is Working**



# 2006 to 2008 Aircraft Operations Comparison to Current FAR Part 150 Forecast Level



# Forecasts of Aviation Activity

- Approximately 87,808 operations in 2008
- Approximately 131,600 forecast for 2018
- Aircraft fleet mix also important

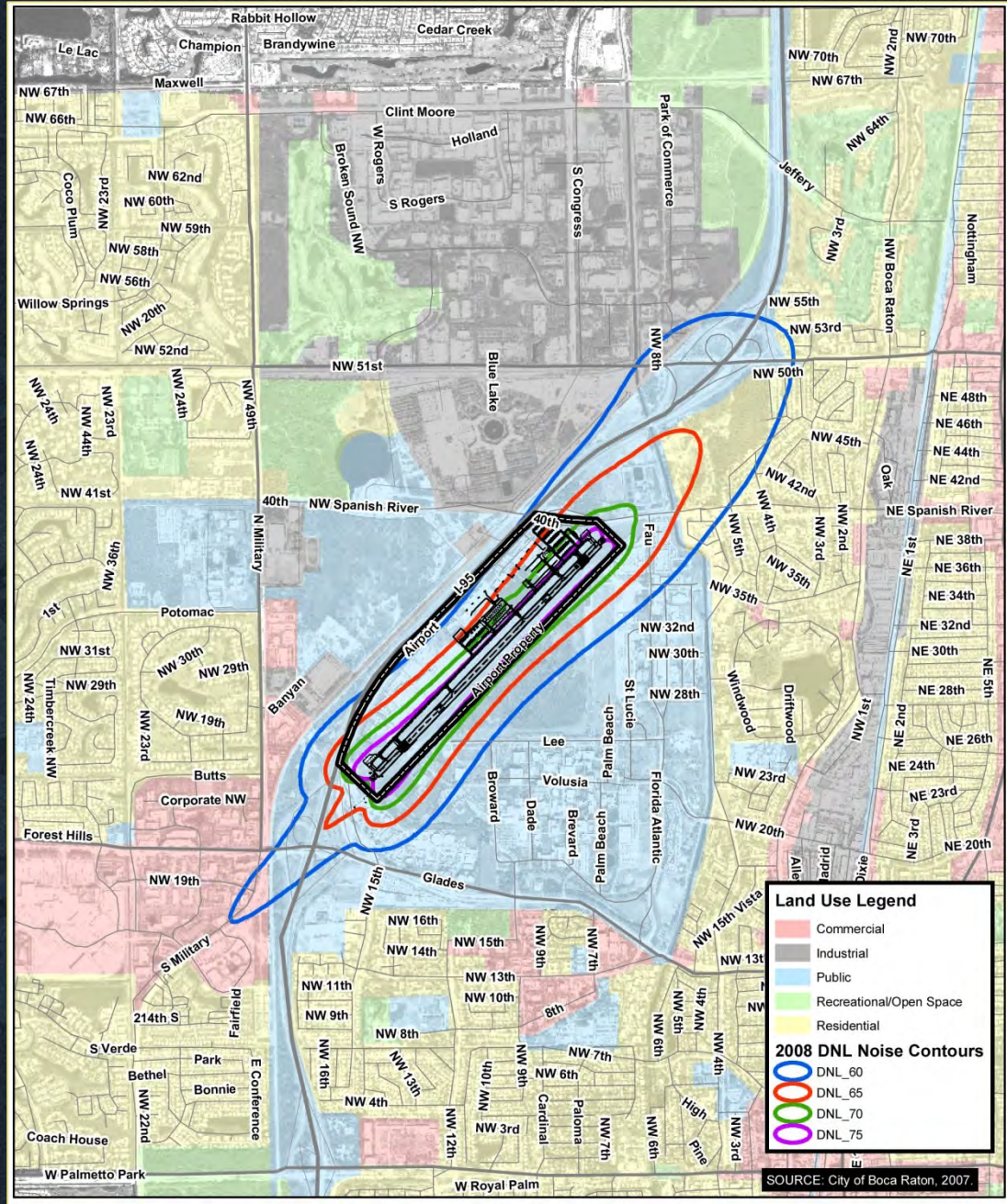


# Forecasts of Aviation Activity

Year	2008	2012	2018
Piston/Turboprop	54,306	45,696	58,690
Turbojet	32,622	55,089	71,879
Rotor	880	948	1,044
<b>Total</b>	<b>87,808</b>	<b>110,722</b>	<b>131,613</b>



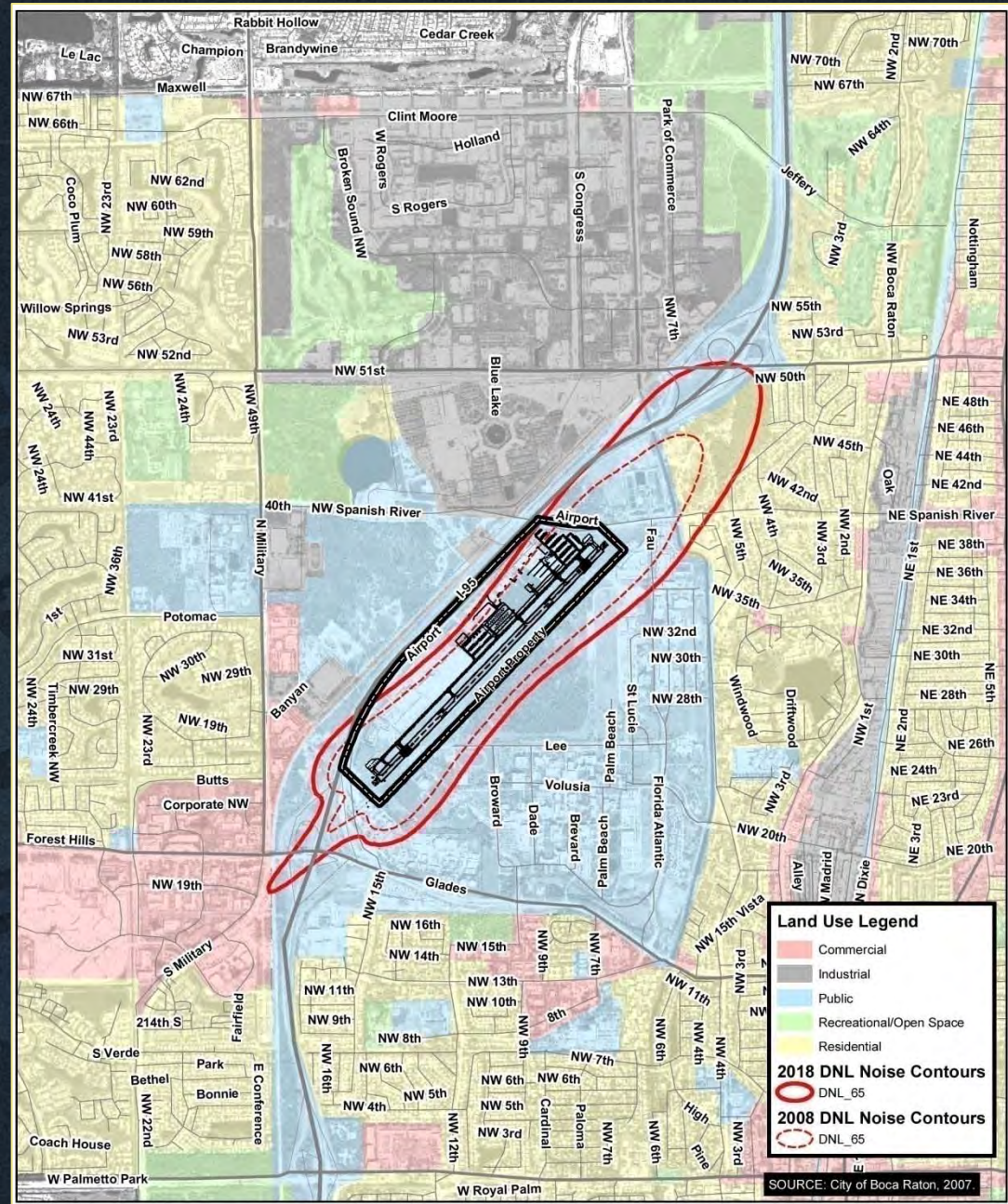
# Boca Raton 2008 Noise Contours







# Boca Raton 2008 & 2018 65 DNL Noise Contours



# Land Use/Population in the 2018 Noise Contours



Land Use	65 DNL	70 DNL	75 DNL
People	130	0	0
Residential Units	53	0	0
Insulated Units (Including Phase 2)	53	---	---
Insulated – Single Family Units	8	---	---
Insulated – Single Family Units (Phase 1)	2	---	---
Insulated – Single Family Units (Phase 2)	6	---	---
Insulated – Multi-Family Units	45	---	---
Un-insulated/Un-attenuated Units	0	---	---
Schools	1	0	0
<b>Total Acres</b>	<b>606 Acres</b>	<b>275 Acres</b>	<b>139 Acres</b>

Sources: *Aerial Photography, Land Use Base Map, 2000 Census Data, BDC Analysis.*

The total figures for each contour are cumulative. The contours contain the area within all smaller contours.

Total population and housing units are generally rounded to the nearest five. 5 units per building were estimated for the Vistazo Townhome complex.






Vistazo Townhomes were constructed after the previous Part 150 Study Contours were submitted; therefore, they were insulated during construction and not as part of the airport sound insulation program.

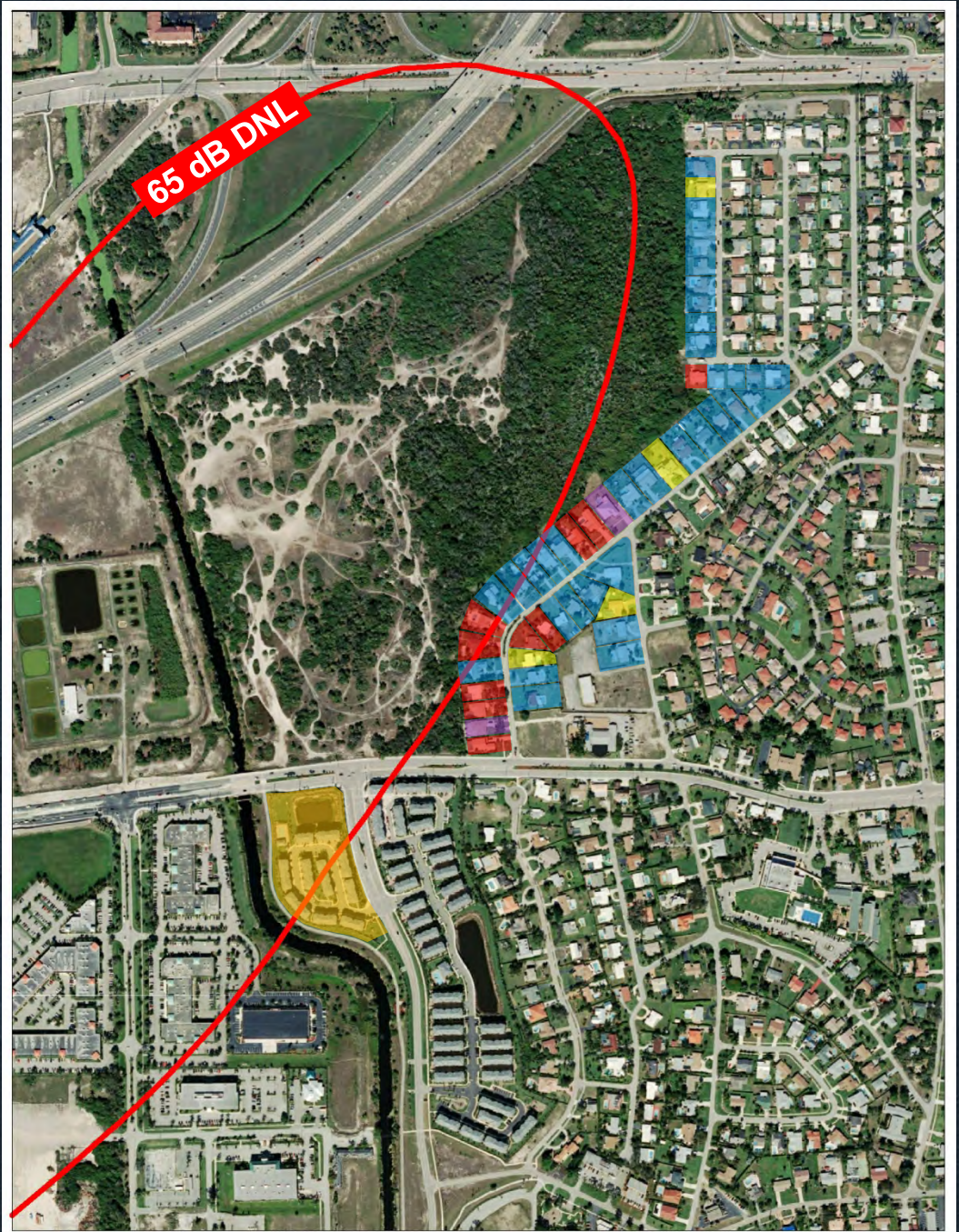
--- Insulated homes are only shown for the 65 DNL contour since only homes within the 65 DNL contour are eligible for Federal funding.





# Sound Insulation with Updated 2018 Contours

-  Phase 1 (Pilot Study) Insulated Homes
-  Phase 2 Insulated Homes
-  Homes That Did Not Qualify
-  Homes That Opted Out of the Program
-  Multi-Family Townhomes Insulated as Part of Construction



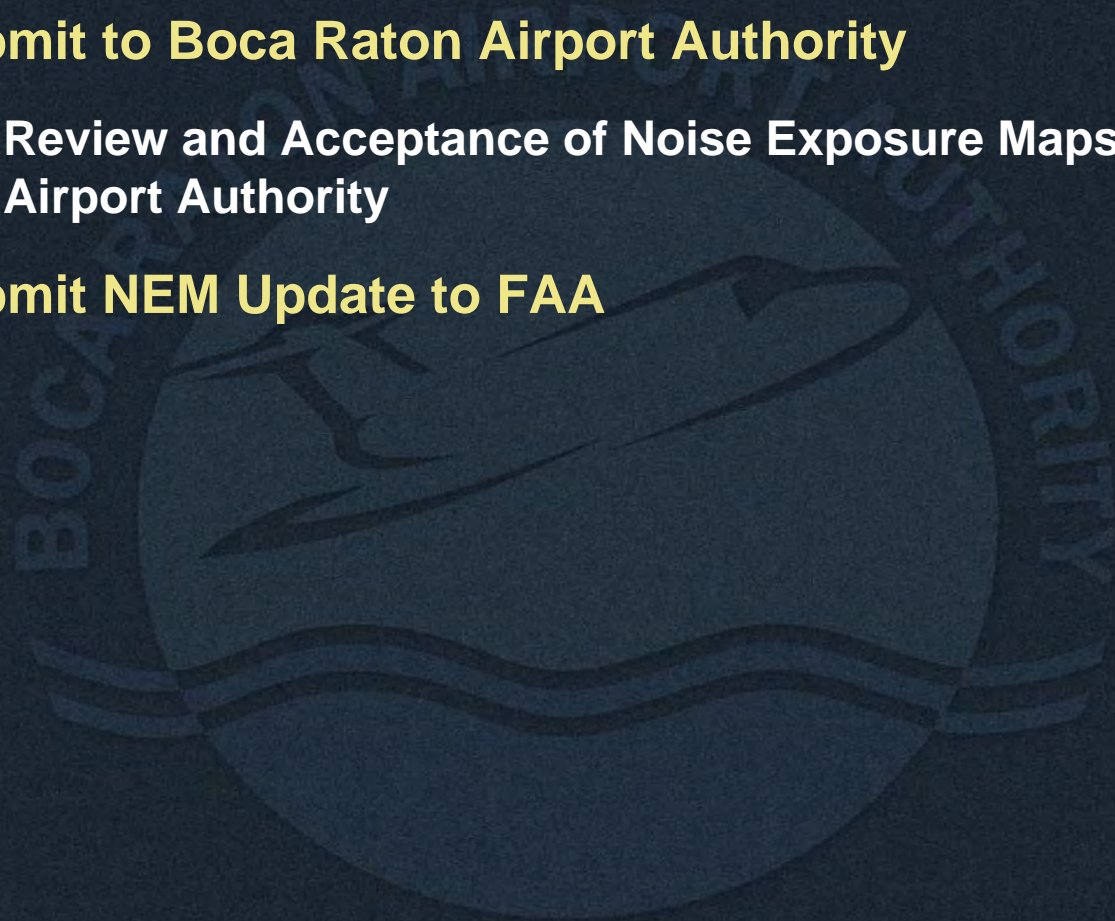
# Public Comment Period

- **Public Comment Period:** Lasts until Nov. 27, 2009
- **Submit Comments:**
  - **Verbally or written tonight at the public hearing**
    - Court Reporter set up in the adjacent room
  - **Verbally or written to:**
    - Kim Singer – Public Affairs Director
      - 3700 Airport Road, Suite 304
      - Boca Raton, Florida 33431
      - PH: (561) 391 2202
      - FAX: (561) 391 2238
      - Email: [ksinger@bocaairport.com](mailto:ksinger@bocaairport.com)



# Next Steps

- **Public Comment Period:** Lasts until Nov. 27, 2009
- **Submit to Boca Raton Airport Authority**
  - Review and Acceptance of Noise Exposure Maps by the Airport Authority
- **Submit NEM Update to FAA**





# Thank You!

