# An On-Line Tool for Answering Common Questions About Noise Trends

**Presented to Airport Noise Abatement Committee**
**December 13, 2010**

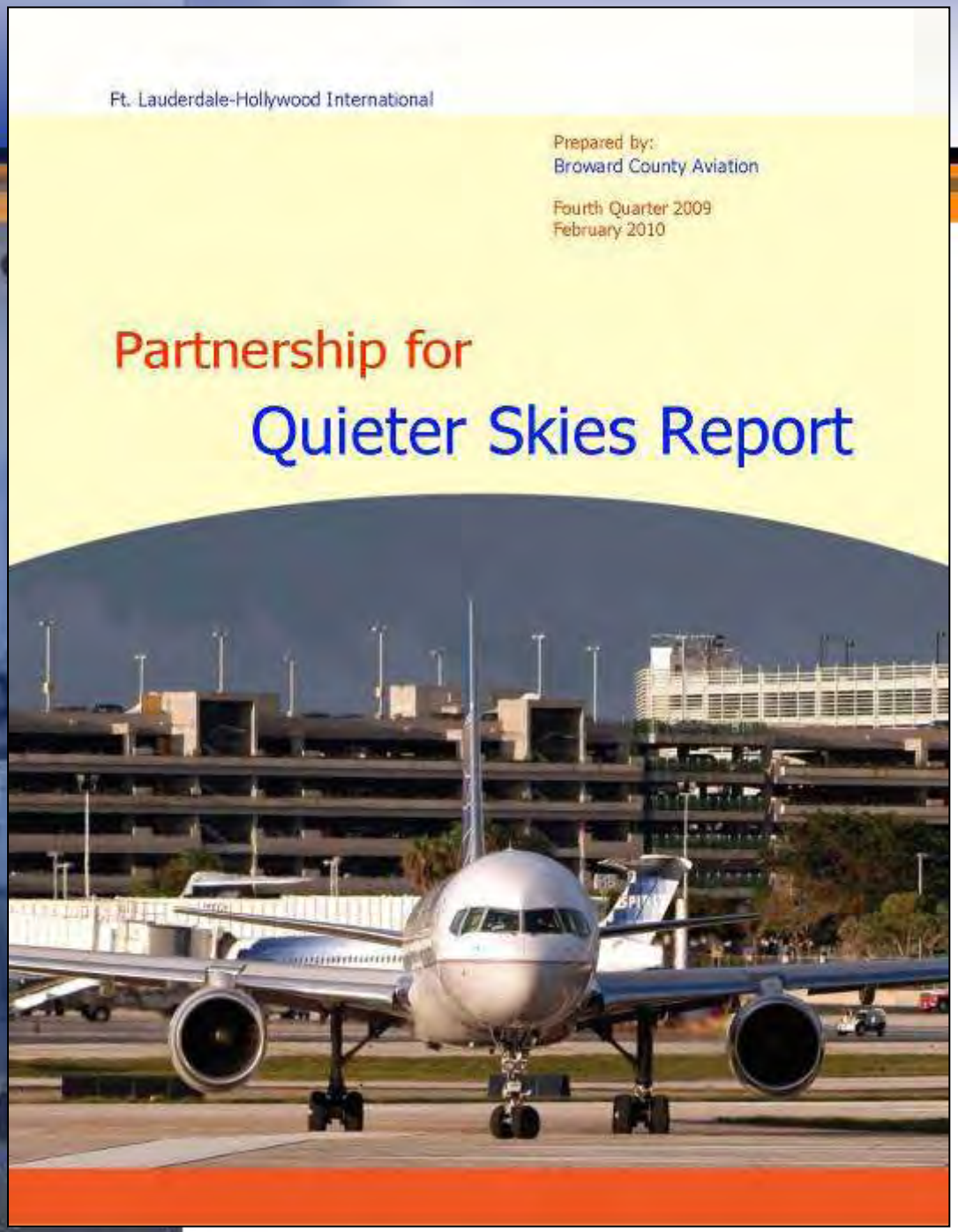
**Ted Baldwin**
**Harris Miller Miller & Hanson Inc.**

# Questions we often hear…



**ANAC members and attendees often ask about noise and operational trends. For example:**

- **What percent of departures are to the west?**
  - What percent of those are on the diagonal?
- **How many Runway 31 departures were there in January through March this year?**
  - How does that compare to 2009 and 2008?
- **I notice departures on the north parallel turn south.**
  - Is that normal? Has it changed?
- **Is there a way I can tell if one airline has increased its operations compared to the others?**
  - Or am I noticing it more because it's using noisier planes?

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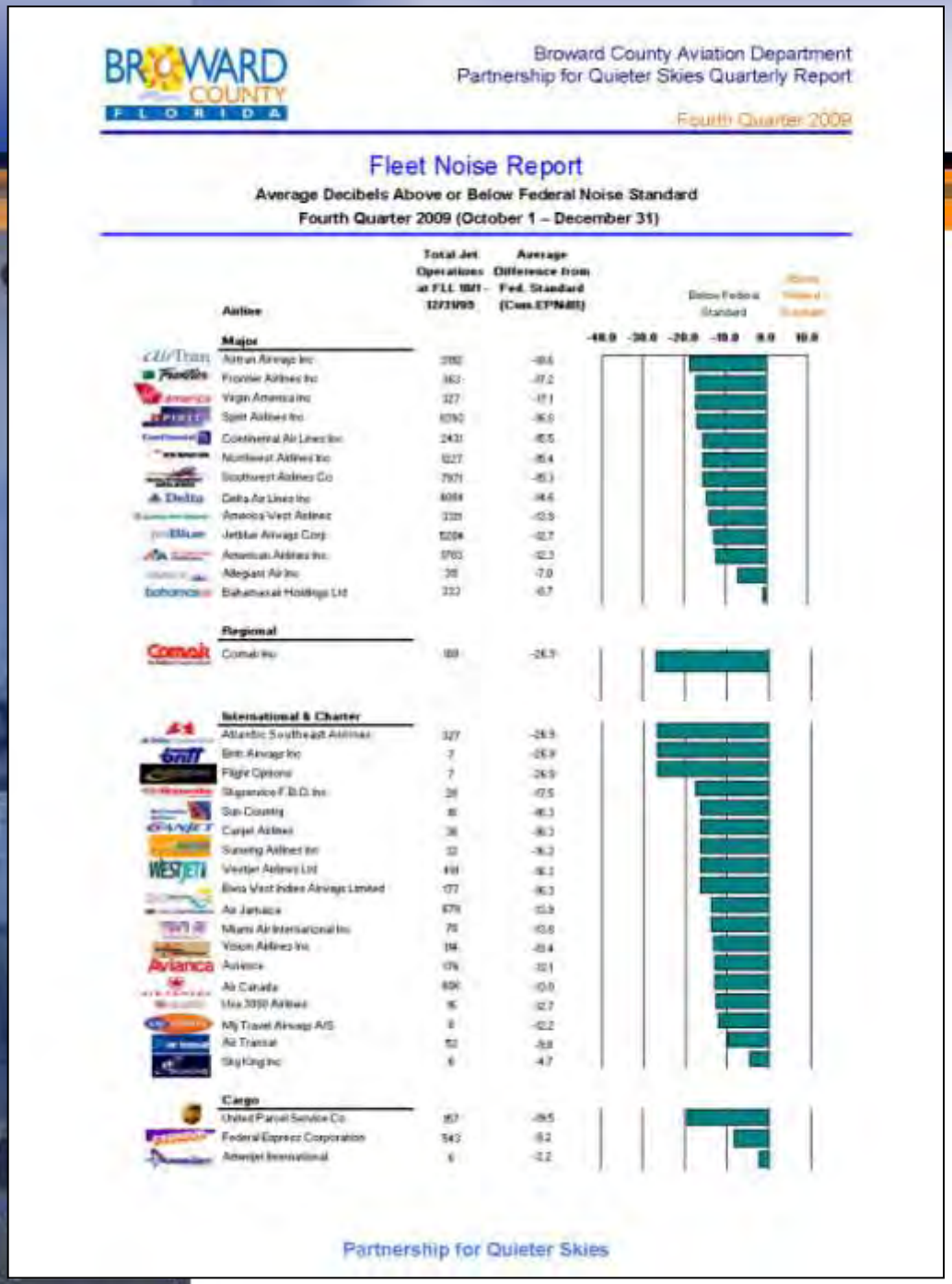
**The "PQS" reports have the answers!**

**Have you checked them out recently?**

# A PQS refresher…



- **"Partnership for Quieter Skies" is made up of:**
  - Broward County Commission, BCAD, ANAC, and citizens
  - FAA, air carriers, and other operators
- **Reports are on the Broward County website**
  - www.broward.org/airport/community
  - "Quiet Skies Report"
- **Developed in 2005-6 with ANAC input**
  - Under continuous production since 2007
  - Quarterly reports are on line from 2007 on
- **Four major reporting areas**
  - Fleet Noise Report
  - Runway Use
  - High Noise Events
  - Airspace Density

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# Fleet Noise Report

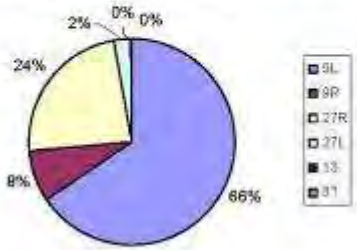
- **Airlines grouped by type**
- **Provides information on numbers of operations and relative fleet "noisiness" based on:**
  - Quarterly operations captured by ANOMS8
  - Actual aircraft flown at FLL
  - FAA AC36-1H
- **Can answer questions like:**
  - Is there a way I can tell if one airline has increased its operations compared to the others?
  - Or am I noticing it more because it's using noisier planes?

## Runway Use Summary Report

**Departures Runway Use for All Aircraft Types**

**Fourth Quarter 2009 (October 1 – December 31)**

| Runway | Departures |
|---|---|
| 9L - North runway, east flow | 20671 |
| 9R - South runway, east flow | 2540 |
| 27R -North runway, west flow | 7590 |
| 27L - South runway, west flow | 791 |
| 13 - Diagonal runway, south flow | 23 |
| 31 - Diagonal runway, north flow | 44 |



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# Departure Runway Use Summary

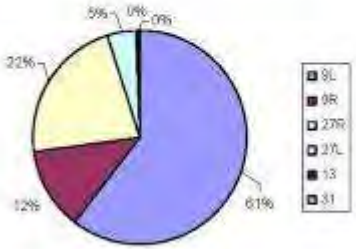
- Departures on all runways for all aircraft
- Graphic and pie chart presentation of percentage use permit consideration of trends in *relative* use
- Table presenting actual numbers permits quarter-by-quarter comparisons of *actual* operations

## Runway Use Summary Report

**Arrivals Runway Use for All Aircraft Types**

**Fourth Quarter 2009 (October 1 – December 31)**

| Runway | Arrivals |
|---|---|
| 9L - North Runway, east flow | 19672 |
| 9R - South runway, east flow | 3961 |
| 27R -North runway, west flow | 7142 |
| 27L - South runway, west flow | 1508 |
| 13 - Diagonal runway, south flow | 56 |
| 31 - Diagonal runway, north flow | 87 |



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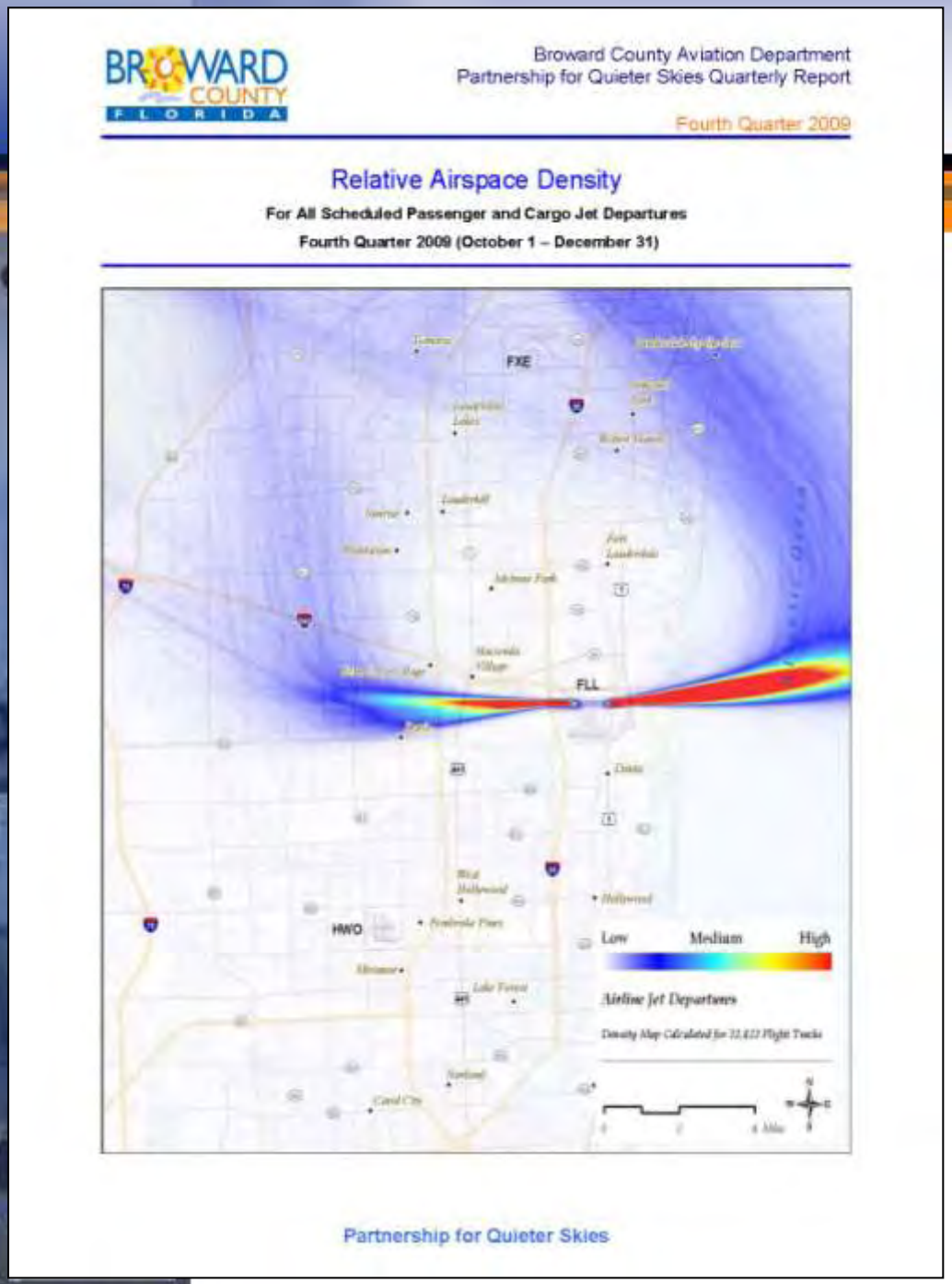
# Arrival Runway Use Summary

- Arrivals on all runways for all aircraft
- Graphic and pie chart presentation of percentage use permit consideration of trends in *relative* use
- Table presenting actual numbers permits quarter-by-quarter comparisons of *actual* operations

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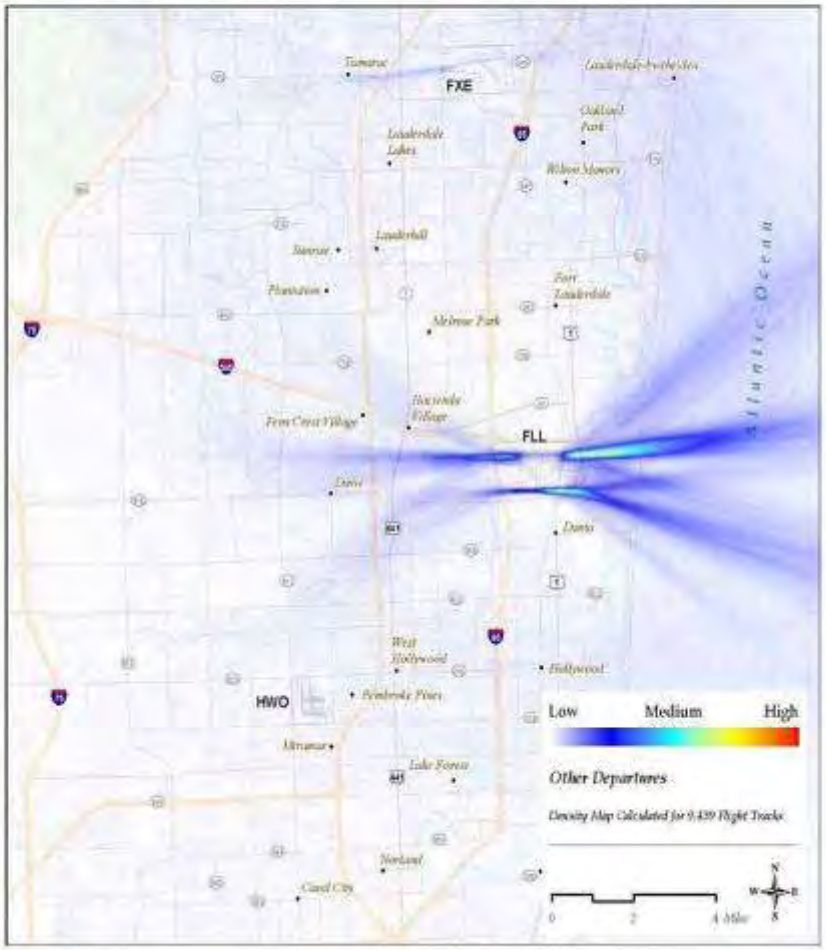
# Airspace Density for Scheduled Jet Departures

- Departures by scheduled passenger and cargo jets

## Relative Airspace Density

**For All Propeller and Non-Scheduled Jet Departures**

**Fourth Quarter 2009 (October 1 – December 31)**



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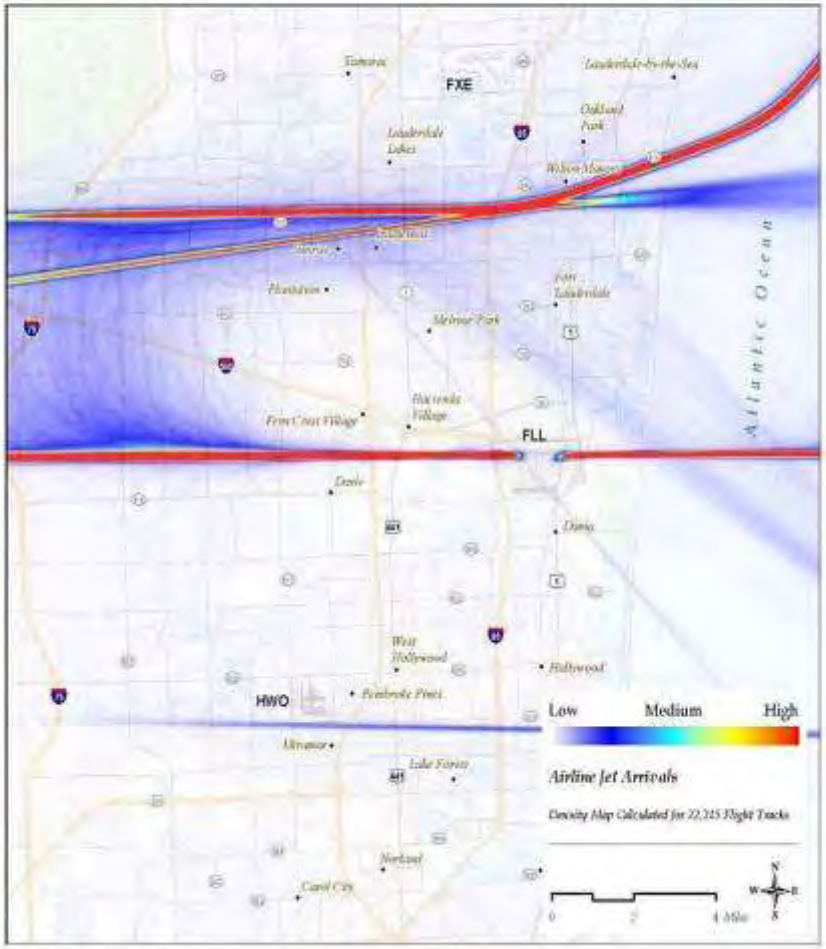
# Airspace Density for Other Departures

- Propeller and turboprop aircraft, and unscheduled operations

## Relative Airspace Density

**For All Scheduled Passenger and Cargo Jet Arrivals**

**Fourth Quarter 2009 (October 1 – December 31)**



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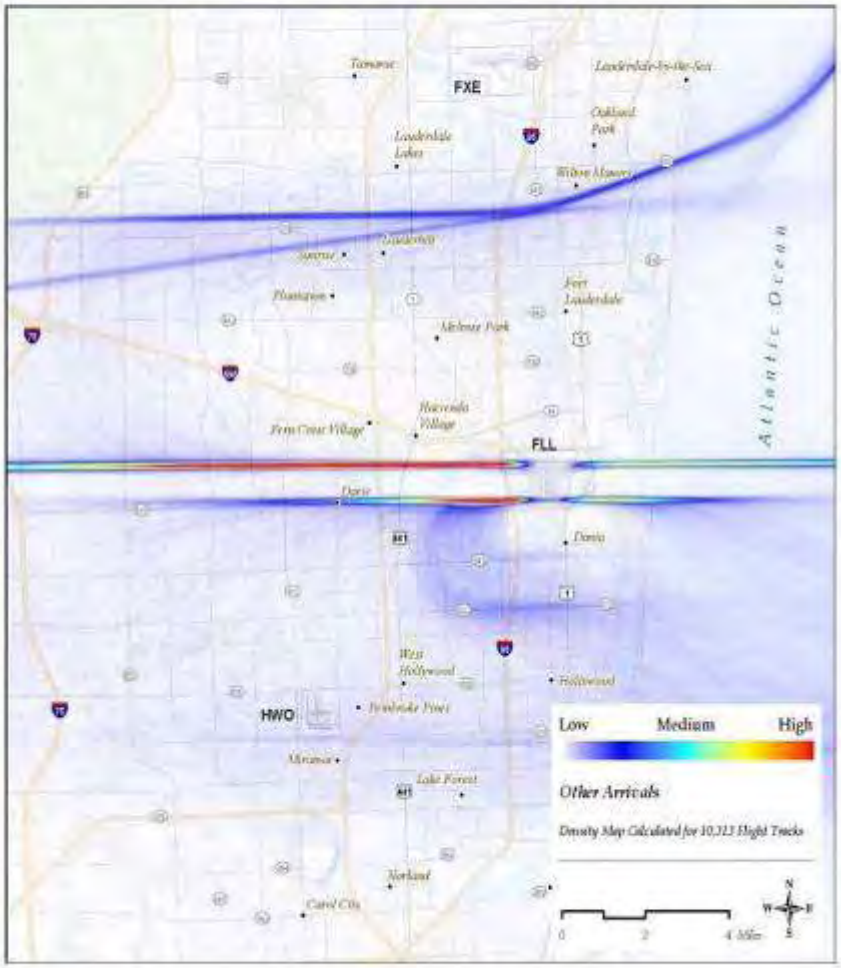




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# Airspace Density for Other Arrivals

- Propeller and turboprop aircraft, and unscheduled operations

Quarterly flight track density plots permit evaluation of seasonal variation.

For example, comparing scheduled jet departures for each quarter in 2009 shows seasonal variation in alignment with extended runway centerlines is “normal”…

# First Quarter 2009
# Scheduled Jet Departures

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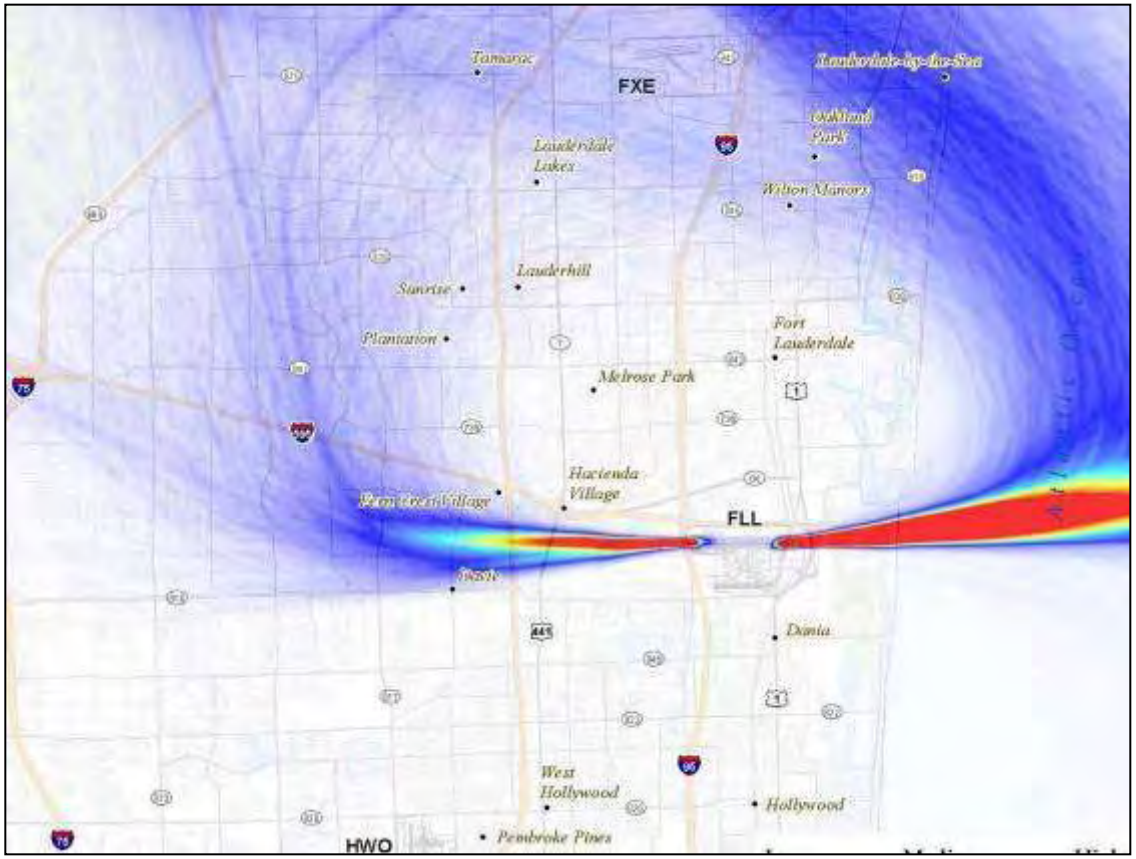

# Second Quarter 2009
# Scheduled Jet Departures

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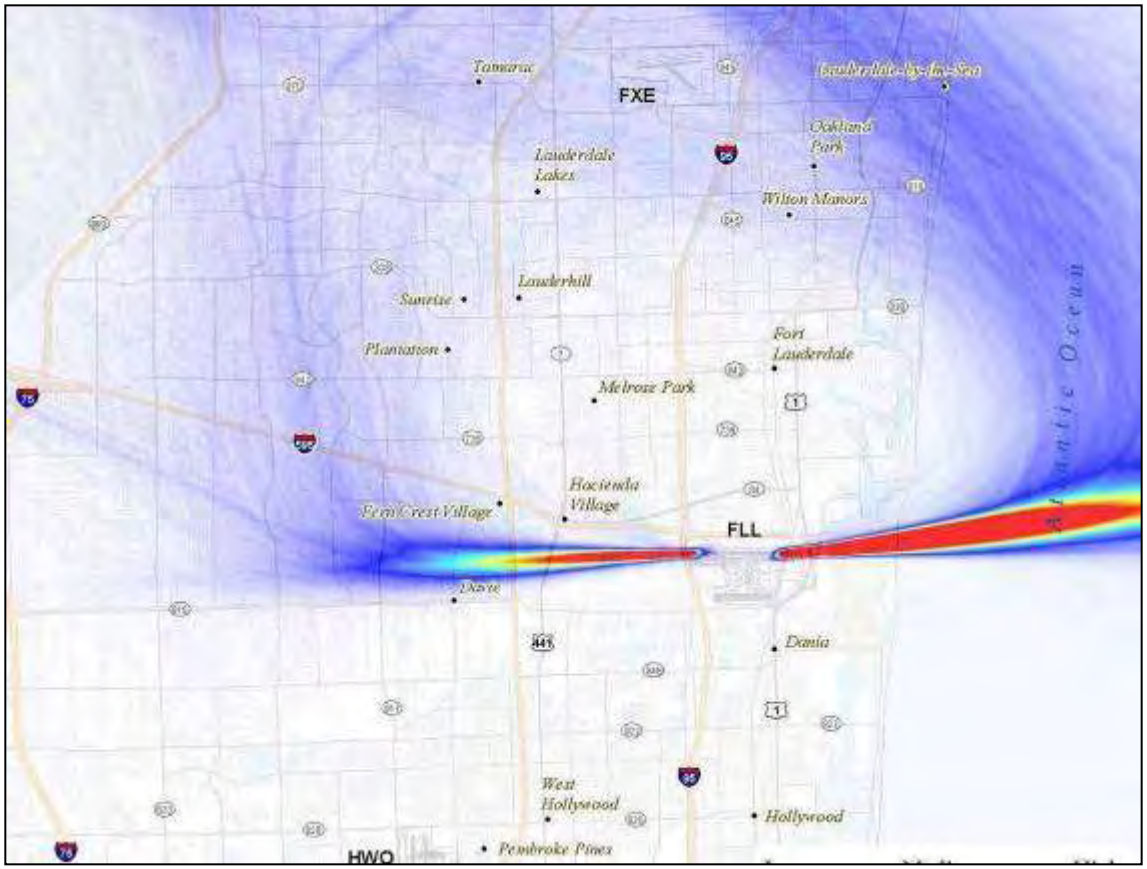

# Third Quarter 2009
# Scheduled Jet Departures

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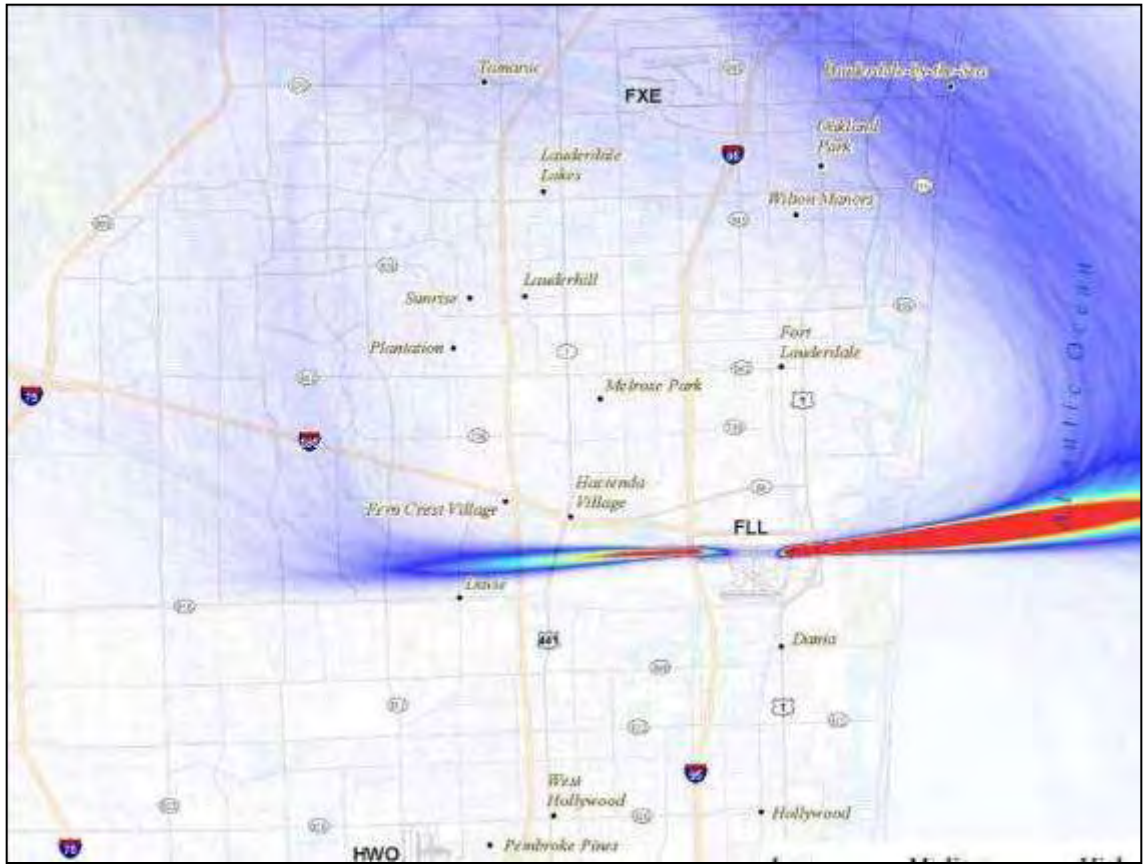

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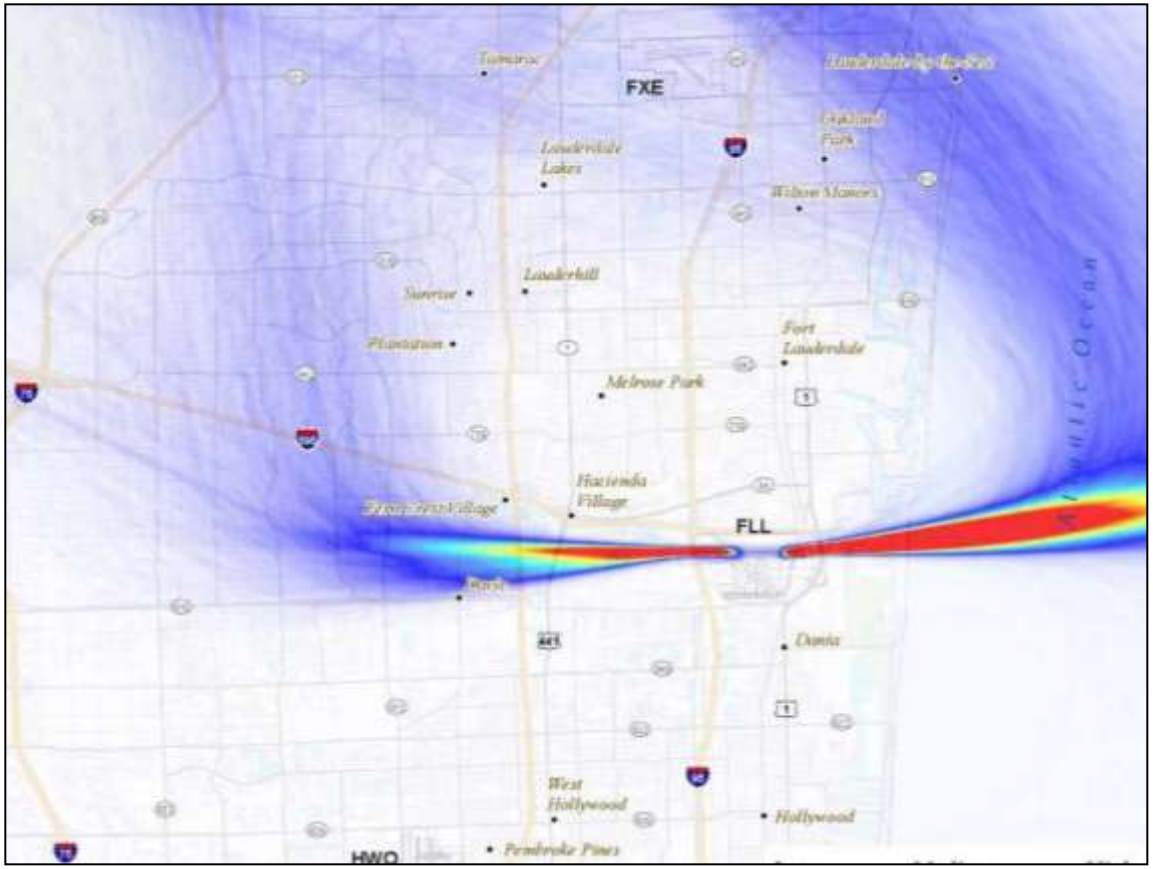


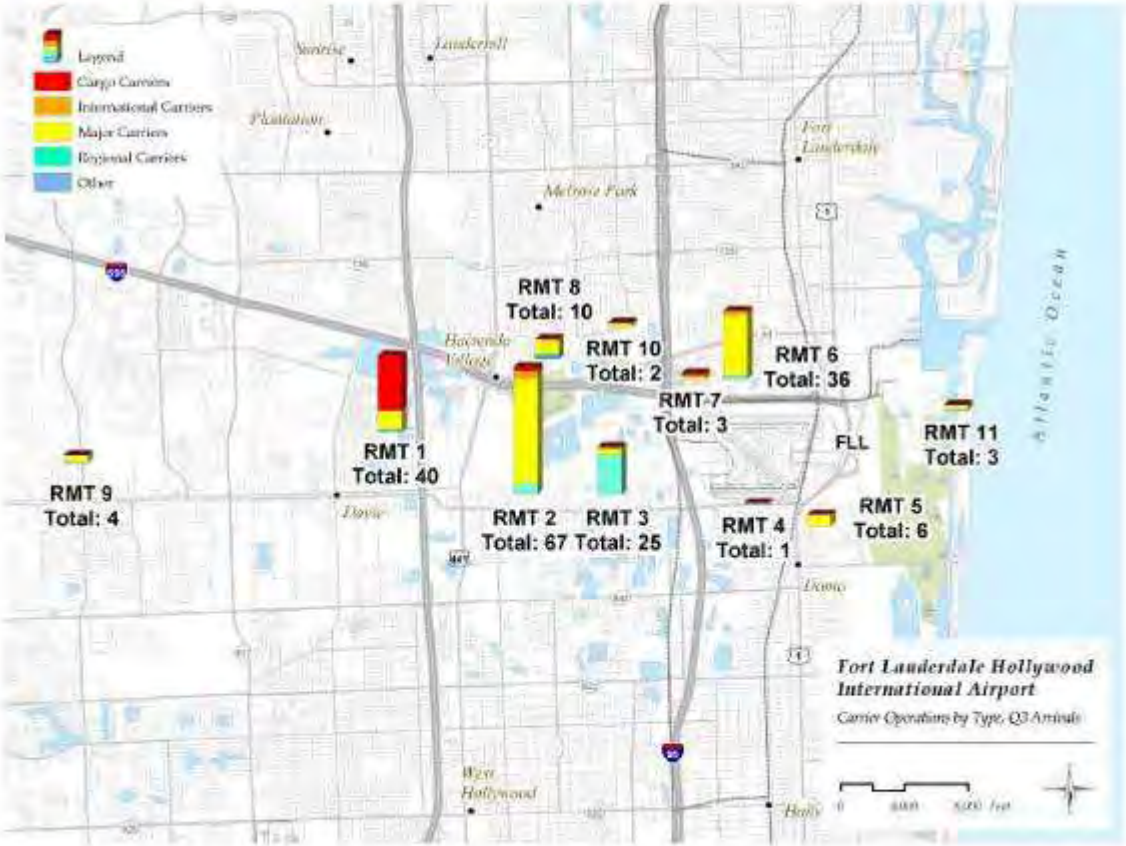
Broward County Aviation Department
Partnership for Quieter Skies Quarterly Report

Fourth Quarter 2009

## High Noise Events- Arrivals

**For Monitor Locations 1-11**

**Fourth Quarter 2009 (October 1 – December 31)**

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# High Noise Events for Arrivals

- **Noise events > 85 dB SEL**
  - Shows events at all monitoring locations
- **Grouped by operator type**

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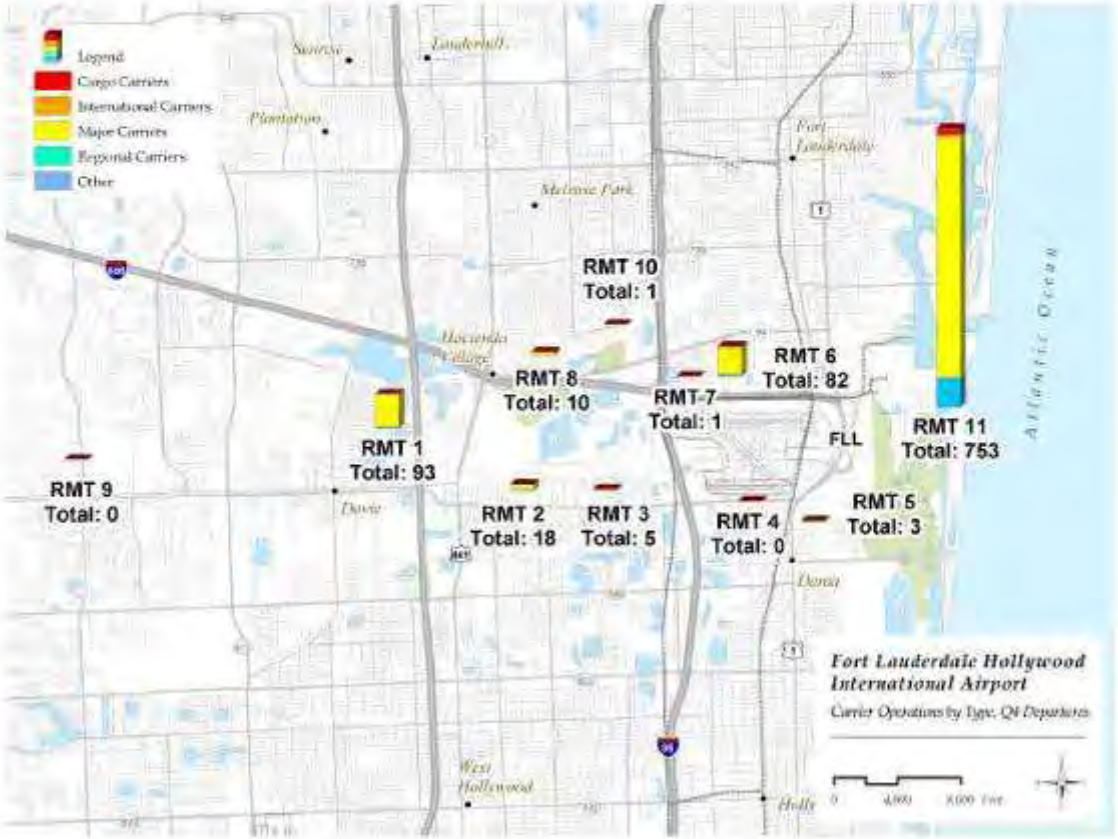


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- **Noise events > 85 dB SEL**
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# Questions and Discussion

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- Take a look at the website
- Are there additions or changes that would help?