



14 CFR PART 150 NOISE AND LAND USE COMPATIBILITY STUDY

Technical Committee Meeting #2
August 23, 2017

Agenda

- Introductions
- Review of the Role of the TC Meeting Facilitator
- Review of TC Meeting No.1
- Data Collection Process and Status
- AEDT Model Inputs
- Aircraft Activity Forecast
- Runway Use
- Flight Track Analysis (Examples)
- Questions from TC Members
- Future TC Meetings
- Adjourn



Welcome and Introductions

TC Objectives and Role of the Facilitator

Purpose and Objectives of the TC

- Broward County Aviation Department (BCAD) has formed a Technical Committee (TC) for the Part 150 Study for Fort Lauderdale-Hollywood International Airport (FLL)
- BCAD has invited a cross section of key stakeholders to serve on the TC
- The TC is composed of primary and alternate members who are authorized to represent their organization and/or constituents for the duration of the FLL Part 150 Study, which is estimated at three years
- TC meetings will be conducted in a professional and respectful manner
- TC meetings will be open to the public, subject to space availability

TC Members

- BCAD
- ANAC
- Southwest Airlines
- Delta Airlines
- JetBlue
- Spirit Airlines
- FedEx*
- UPS
- NBAA
- Greater Fort Lauderdale Chamber of Commerce
- Greater Hollywood Chamber of Commerce
- Greater Dania Beach Chamber of Commerce
- Greater Fort Lauderdale Alliance Economic Development Agency
- Broward Workshop
- City of Dania Beach
- City of Fort Lauderdale
- City of Hollywood
- Town of Davie
- City of Plantation
- City of Cooper City
- Town of Southwest Ranches
- City of Weston
- Broward County Planning and Development Management Division*
- Broward County School Board
- FAA - Orlando Airports District Office
- Miami Air Traffic Management/TRACON
- FLL Airport Traffic Control Tower
- South Florida Flight Standards Division (FSDO)

*Participation in the Technical Committee not yet confirmed.

Purpose and Objectives of the TC

- TC members represent the interests of their organization and/or constituents
- The TC's role is to support the FLL Part 150 Study
 - Review study assumptions
 - Provide technical feedback within the context of the Part 150 Study (noise exposure maps and noise compatibility program)
 - TC members are encouraged to express their opinions and expected to respect the range of opinions expressed by their fellow TC members
- TC members are also expected to advise their organization and/or constituents of the TC's discussions
- BCAD will respect and consider the TC's technical input, but retains responsibility for, and decision making authority on, the FLL Part 150 Study

Role of the TC Meeting Facilitator

- To ensure that the TC meetings are effective they will be facilitated by a professional meeting facilitator
- The meeting facilitator is responsible for ensuring that the TC meetings adhere to the published meeting agenda
- The meeting facilitator may extend or shorten the length of a discussion related to an agenda item at his or her sole discretion
- The meeting facilitator, or BCAD, may cancel or suspend a TC meeting due to disrespectful or disruptive behavior

Reminder - Please sign and return the TC Participation Agreement if you haven't done so already

Summary of TC #1

Summary of TC #1

- Technical Committee (TC)
 - Purpose and Objectives of the Technical Committee
 - Role of the TC Meeting Facilitator
 - TC Charter and Participation Agreement
- Airport Overview
- Part 150 Study Overview
- Introduction to Aircraft Noise, Modeling, and Compatibility
- Initial Data Collection
- Project Schedule



Summary of TC #1

14 CFR Part 150

- 14 Code of Federal Regulations (CFR) Part 150 establishes the parameters of the Airport Noise and Land Use Compatibility Planning process
- 14 CFR Part 150 also establishes the methods and metrics to be used in aircraft noise analyses for other types of federal and state aircraft noise analyses
- Voluntary program established to allow airports to explore opportunities for improving compatibility surrounding communities
- Sets forth the methodology and procedures to be followed when preparing aircraft noise exposure maps and developing airport land use compatibility programs

Summary of TC #1

14 CFR Part 150

- Assesses the impacts of aircraft noise on the area surrounding an airport
- Deems noise levels below 65 dB Day-Night Average Sound Level (DNL) to be compatible with all land uses
- Identifies measures to reduce aircraft noise (noise abatement) and limit its impacts (noise mitigation)
- Outlines a program for implementation of noise abatement and mitigation measures
- Allows FAA-approved measures to be eligible for FAA funding

Data Collection Process and Status

Data Collection – Minimum NEM Area



Initial Data Collection – Land Use Compatibility

- City of Fort Lauderdale Zoning Ordinances
- City of Fort Lauderdale Zoning Map
- City of Fort Lauderdale General Land Use Maps
- City of Fort Lauderdale Mapped Historic Sites
- Fort Lauderdale Comprehensive Plan Elements
 - Future Land Use Element
 - Parks and Recreation Element
 - Schools Element
 - Transportation Element
 - Comp Plan Evaluation Report
- City of Davie Zoning and Noise Ordinances
- City of Dania Beach Zoning Ordinance

Initial Data Collection – Land Use Compatibility

- City of Dania Beach Zoning Ordinance
- Dania Beach Land Use Map
- Dania Beach Zoning Map
- Dania Beach Future Land Use Plan Element
- City of Hollywood Noise Ordinance
- Cooper City Zoning and Noise Ordinance
- Cooper City Public Schools Comprehensive Plan Element
- Cooper City Future Land Use Element
- Cooper City Future Land Use Element
- Weston Zoning Ordinance
- Plantation Zoning and Noise Ordinance



Initial Data Collection – Land Use Compatibility

Future Coordination Meetings:

- City of Dania Beach
- City of Fort Lauderdale
- City of Hollywood
- Town of Davie
- City of Plantation
- City of Cooper City
- Town of Southwest Ranches
- City of Weston



AEDT Model Inputs

AEDT Model Inputs

Aviation Environmental Design Tool (AEDT)

- Among other things, the AEDT calculates the cumulative 24-hour noise exposure for the annual average day at an airport
- Primary area of focus is the 65 dB DNL contour
- Annual-average day DNL contours will not always match short-term measured values due variables such as:
 - Runway use
 - Fleet mix
 - Wind and weather conditions
 - Pilot/controller techniques



AEDT Model Inputs

Model Inputs

- The Amount of Noise Exposure is determined by:
 - Aircraft types
 - Stage length
 - Number of average annual day operations
 - Nighttime weighting (1 nighttime operation = 10 daytime operations)
- The Noise Exposure Distribution is determined by:
 - Runway configuration and use
 - Flight track locations
 - Flight track use

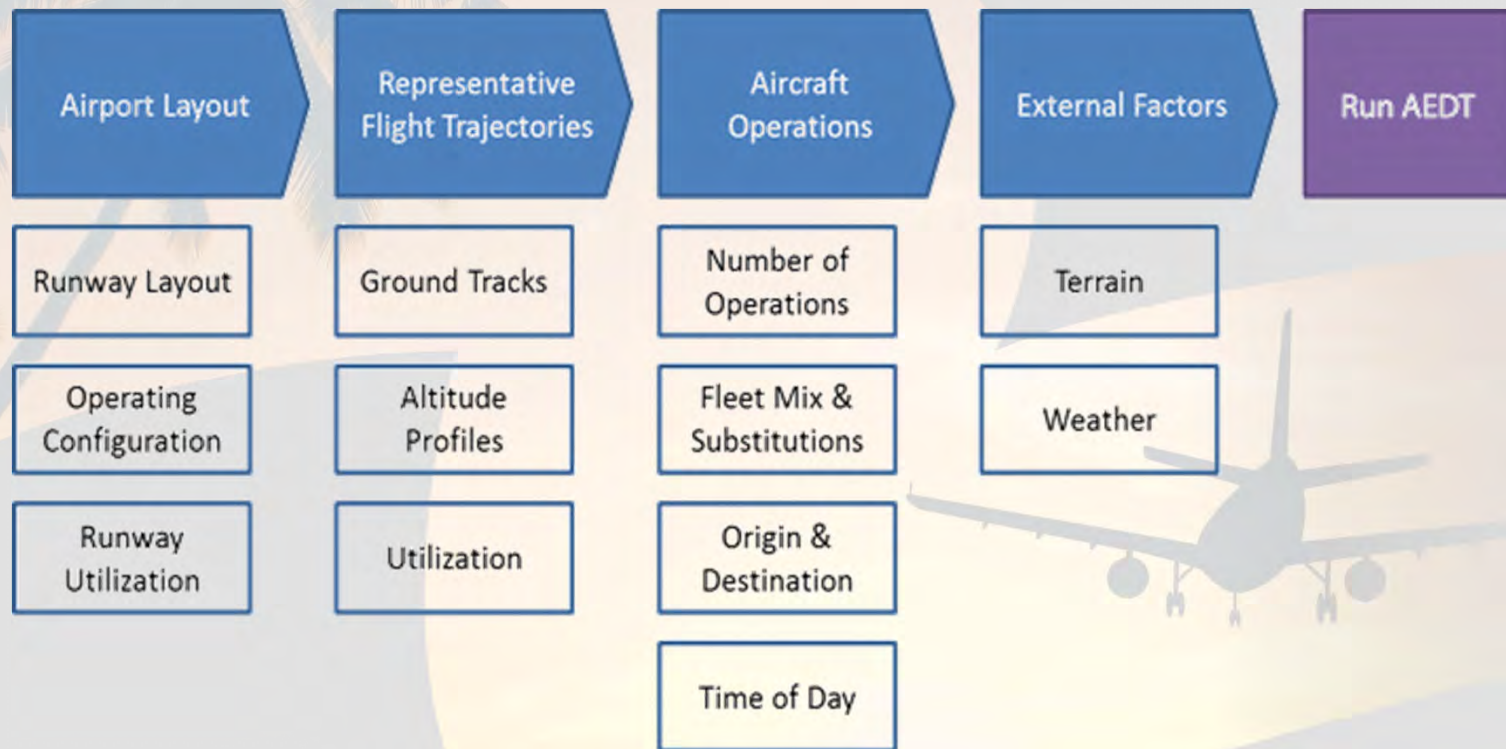


Aviation Environmental
Design Tool (AEDT)
Version 2C SP2



AEDT Model Inputs

AEDT Inputs



Aircraft Activity Forecast

Aircraft Activity Forecast

FAA Forecast Approval:

- FAA approved use of Master Plan Update (MPU) Accelerated Baseline Forecast for the FLL 14 CFR Part 150 Study

Fiscal Year	FAA TAF	MPU Accelerated Baseline Forecasts
2017	304,590	329,300
2018	311,559	335,000
2023	343,194	364,765

Sources: FAA, Terminal Area Forecasts, 2017,
Ricondo & Associates, Inc., 2016



U.S. Department
of Transportation
Federal Aviation
Administration

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Orlando, FL 32822
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April 10, 2017

Mr. William Castillo
Airport Planning Manager
Broward County Aviation Department
2200 SW 45th Street, Suite 101
Dania Beach, Florida 33312

Dear Mr. Castillo:

RE: Fort Lauderdale-Hollywood International Airport, Fort Lauderdale, FL
Approval of Forecast for use in the 14 CFR Part 150 Study

This letter responds to your request for approval to use the Accelerated Baseline Forecasts for the purposes of the 14 Code of Federal Regulations (CFR) Part 150 Study for the Fort Lauderdale-Hollywood International Airport (FLL).

On January 13, 2017, the Federal Aviation Administration (FAA) approved the Baseline Forecast for FLL and accepted the Accelerated Baseline Forecast prepared in the Master Plan Update for sensitivity purposes and for the purpose of establishing facility requirements.

The FAA notes that the Accelerated Baseline Forecast varies less than 10 percent in the 5 year period and 15 percent in the 10 year period from the FAA's 2016 Terminal Area Forecast (TAF) published in January, 2017.

The FAA has determined that the Accelerated Baseline Forecast is consistent with the FAA's most recent TAF for FLL, and therefore, we approve the use of the Accelerated Baseline Forecast for the ongoing FLL Part 150 Study.

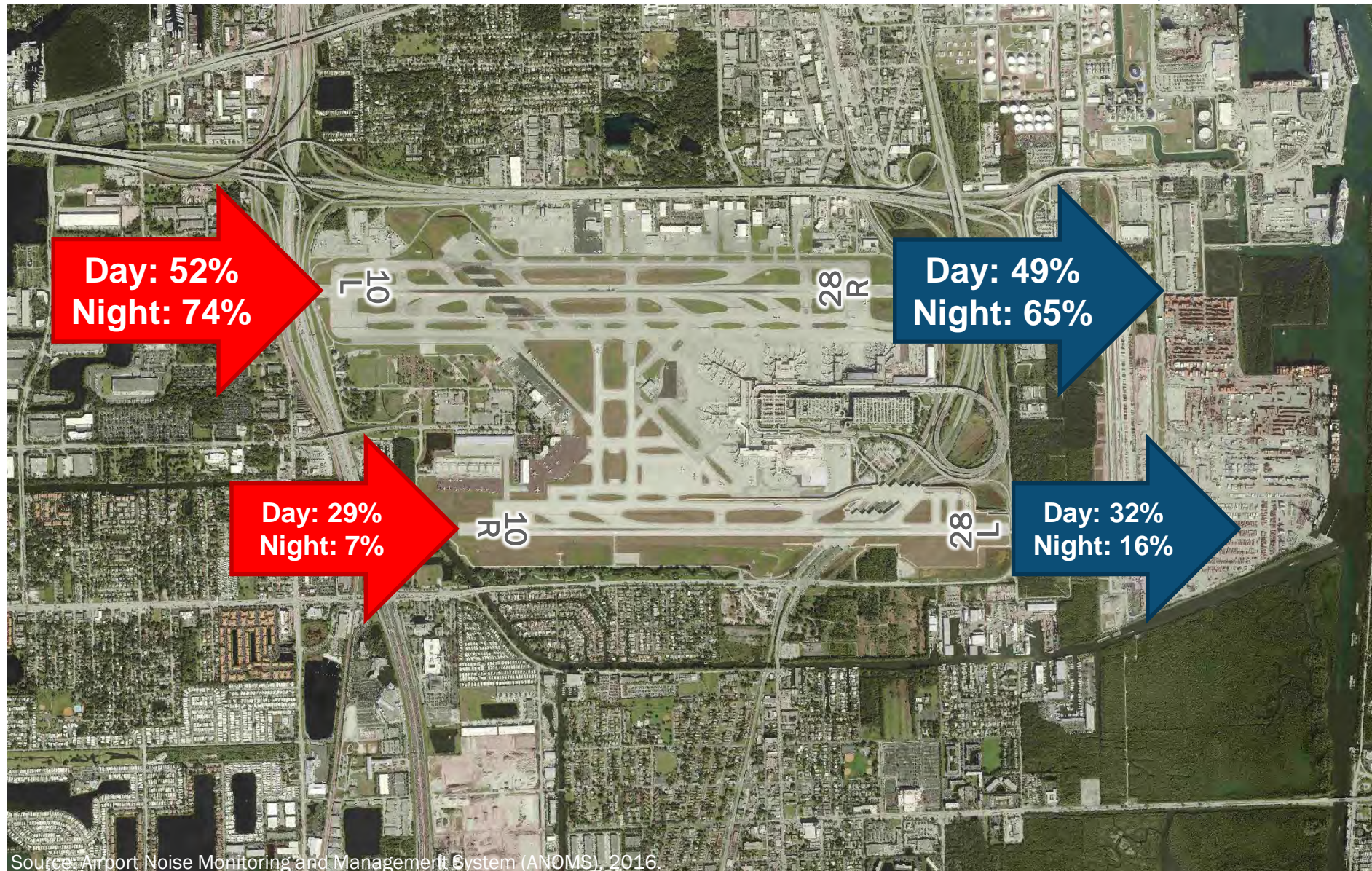
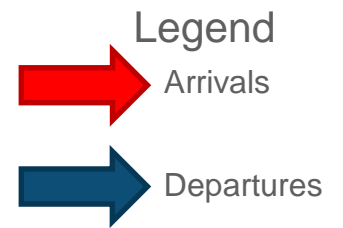
If you have any questions, please feel free to contact me at (407) 812-6331, ext. 130.

Sincerely,

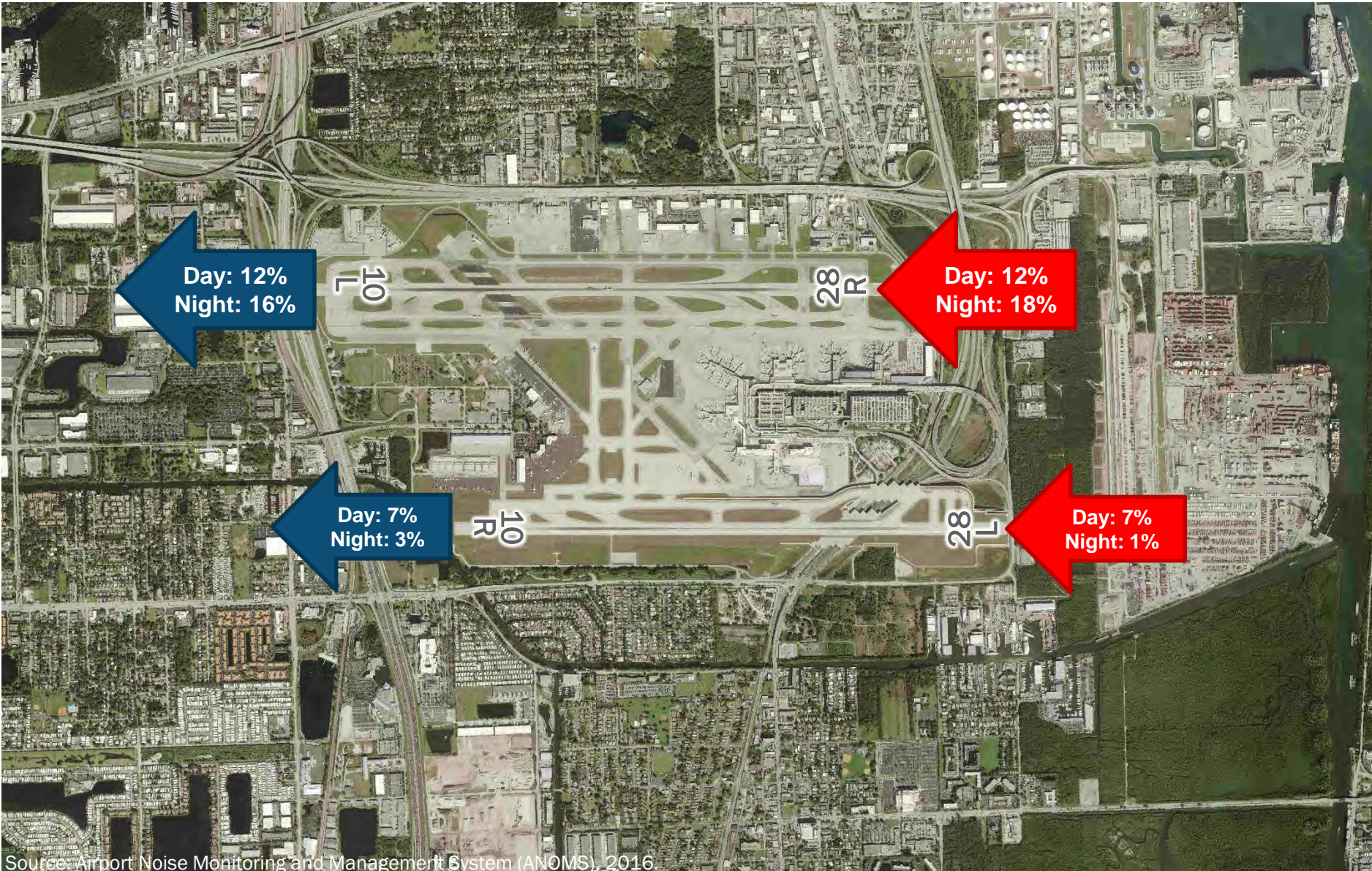
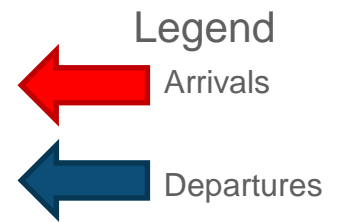
Allan M. Nagy
FAA Orlando ADO Environmental Program Specialist

Runway Use

Runway Use – East Flow



Runway Use – West Flow



Runway Use

Daytime and Nighttime Operations

Operation Type	Day	Night	Grand Total
Arrivals	84%	16%	100%
Departures	90%	10%	100%
Grand Total	87%	13%	100%

Source: Airport Noise Monitoring and Management System (ANOMS), 2016.

Runway Usage

Operation Type	Runway	Day	Night	Grand Total
Arrivals	North Runway			
	10L	52%	74%	55%
	28R	12%	18%	13%
	Total	64%	92%	68%
	South Runway			
	10R	29%	7%	26%
	28L	7%	1%	6%
	Total	36%	8%	32%
Departures	North Runway			
	10L	49%	65%	51%
	28R	12%	16%	13%
	Total	61%	81%	64%
	South Runway			
	10R	32%	16%	30%
	28L	7%	3%	6%
	Total	39%	19%	36%

Flight Track Analysis

ANOMS System

Airport Noise and Operations Monitoring System (ANOMS)

- Operational data collected for calendar year 2016
- Flight and aircraft radar data originate from the Passive Surveillance Secondary Radar (PASSUR) system that collects both the flight track and flight identification
- Data collected by PASSUR is downloaded and processed by Bruel & Kjaer and incorporated into BCAD's ANOMS

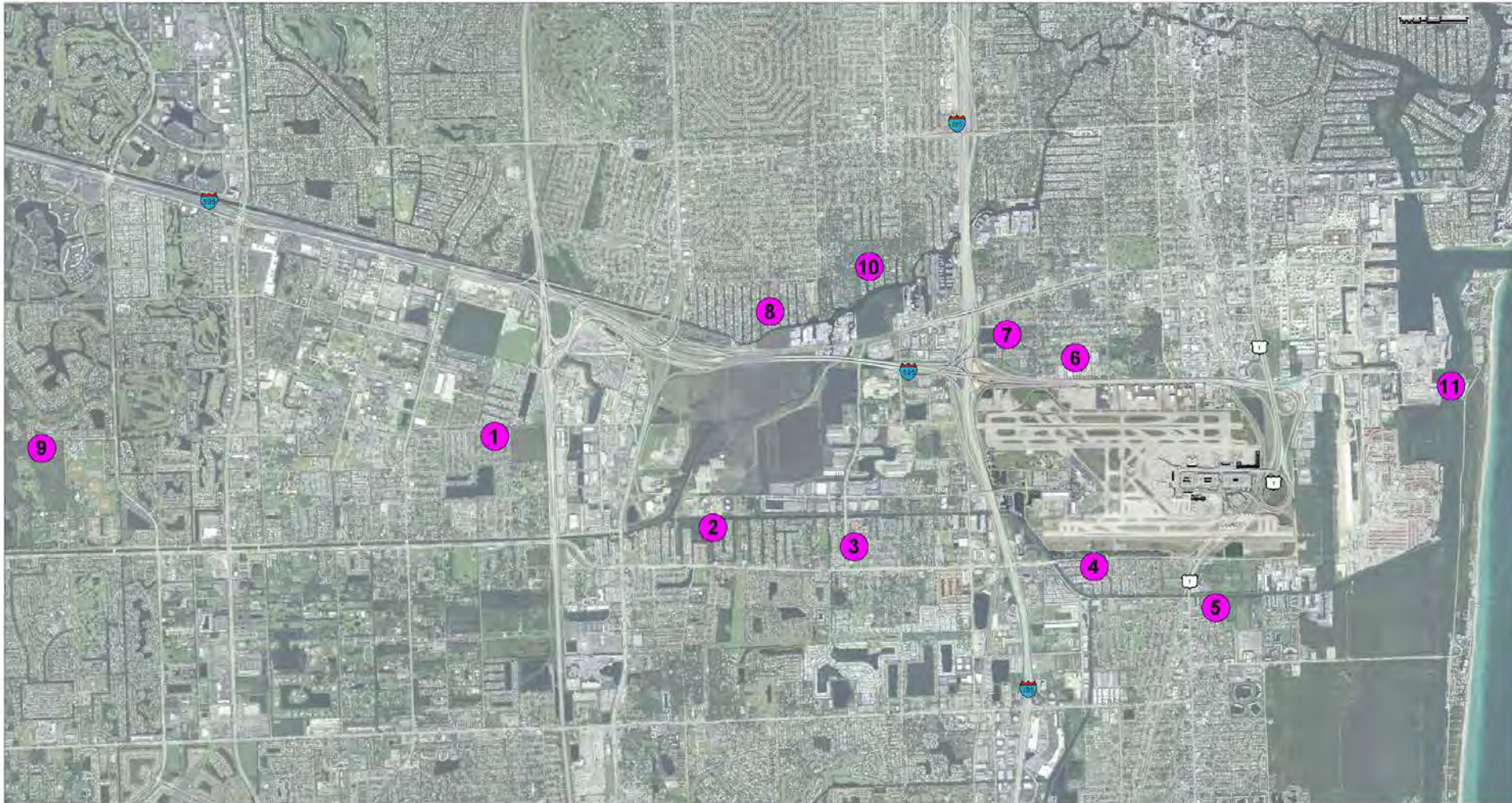


Noise Monitoring Sites/Limitations



FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT

EXISTING NOISE MONITOR LOCATION



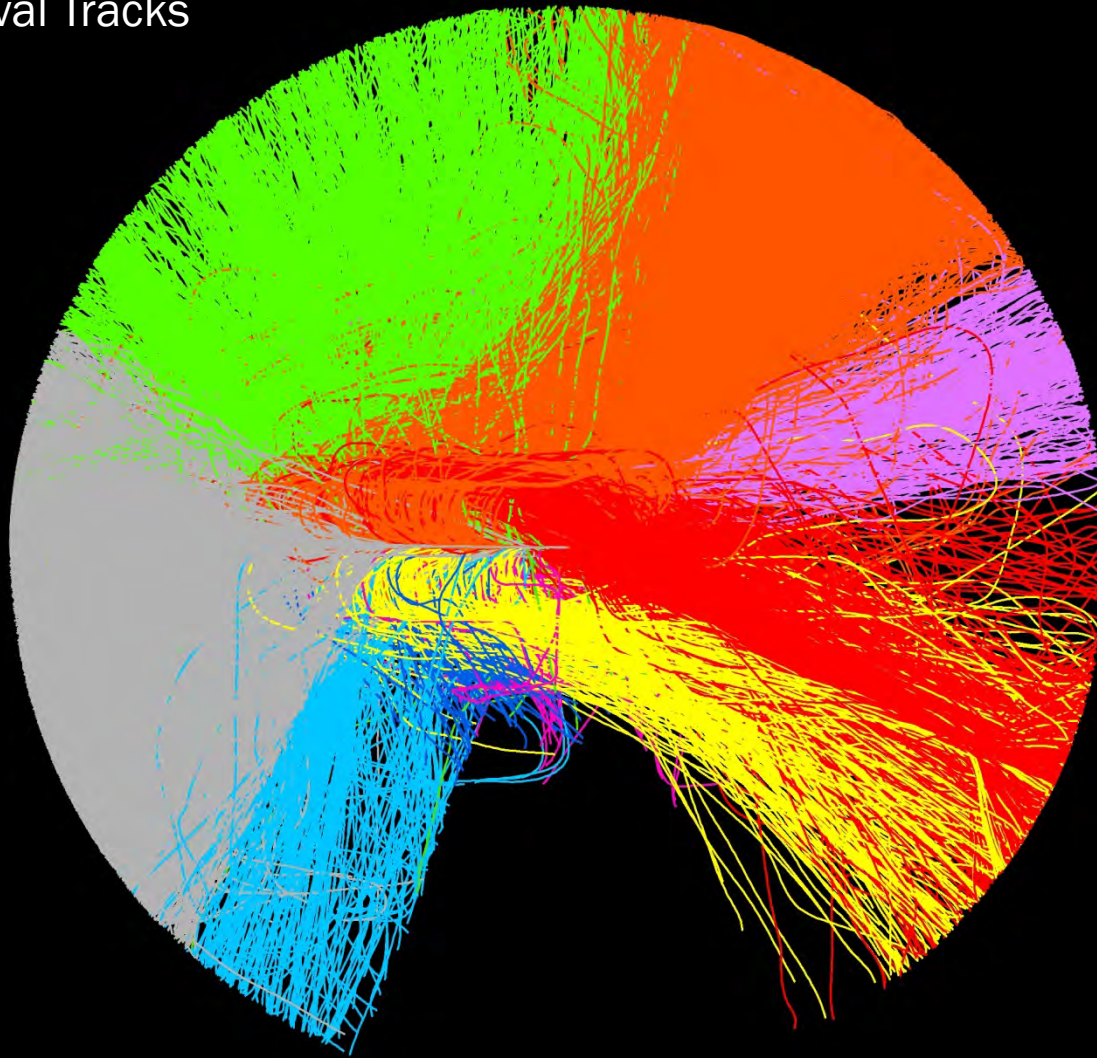
Noise Monitoring Sites/Limitations

Noise Monitoring Sites

1. 3640 Southwest 55th Avenue, Davie
2. 4548 Southwest 37th Avenue, Dania Beach
3. 4609 Southwest 28th Avenue, Dania Beach
4. 805-B Northwest 13th Avenue, Dania Beach
5. 325 Northeast 3rd Avenue, Dania Beach
6. 1021 Southwest 32nd Court, Fort Lauderdale
7. 1750 Southwest 32nd Street, Fort Lauderdale
8. 3411 Southwest 27th Street, Fort Lauderdale
9. 3900 Southwest 100th Avenue, Davie
10. 2343 Southwest 27th Avenue, Fort Lauderdale
11. 6503 N Ocean Dr., Hollywood FL 33019
(Von D. Mizell and Eula Johnson State Park, formerly John U Lloyd State Park)

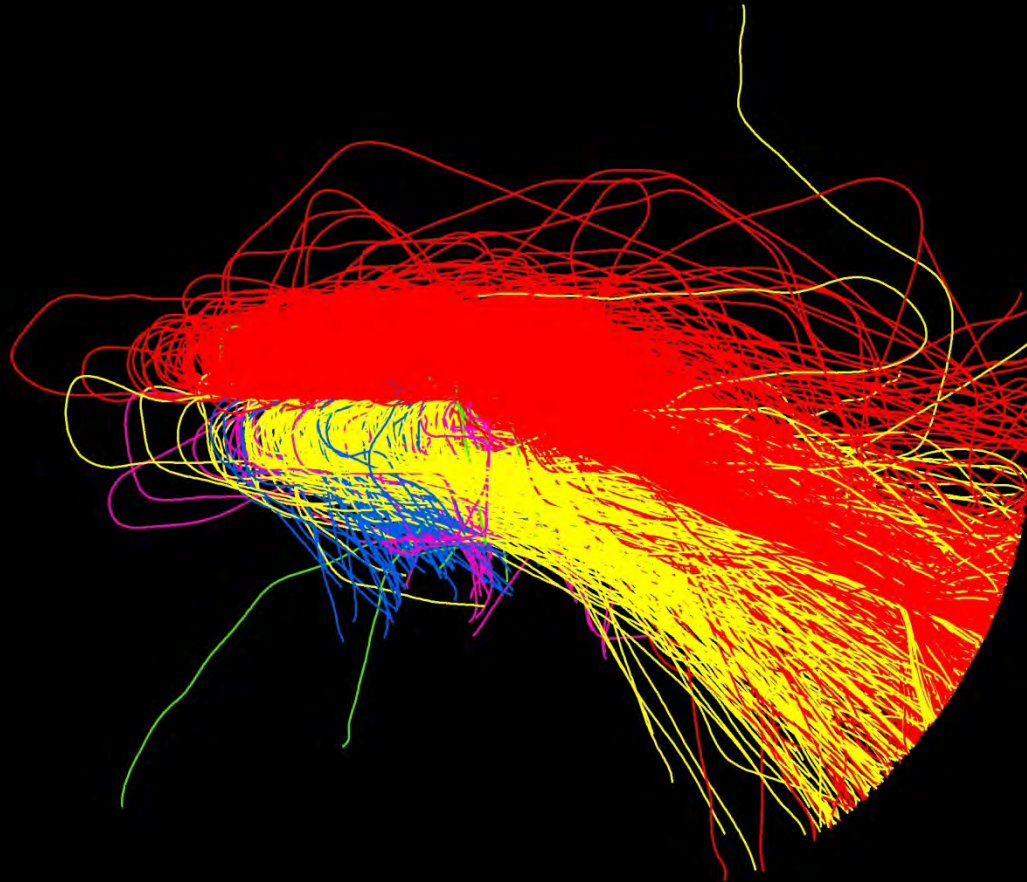
Flight Track Analysis

Runway 10L Arrival Tracks



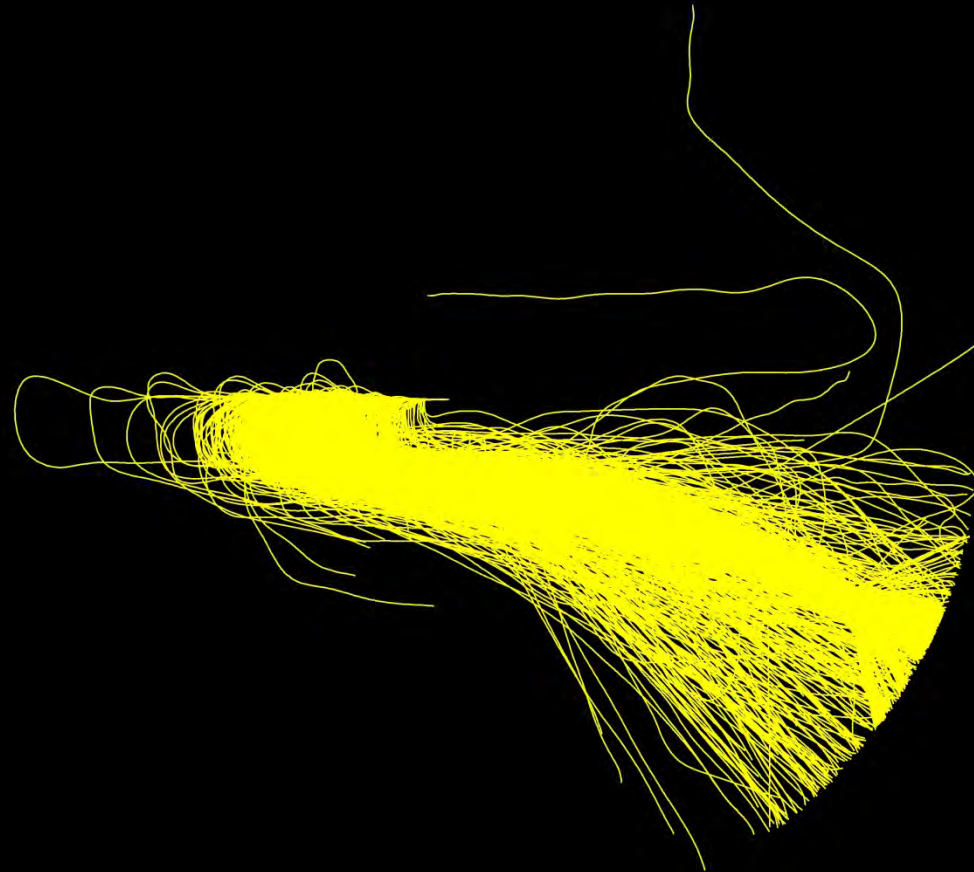
Flight Track Analysis

Runway 10L Arrival Tracks
from Southeast

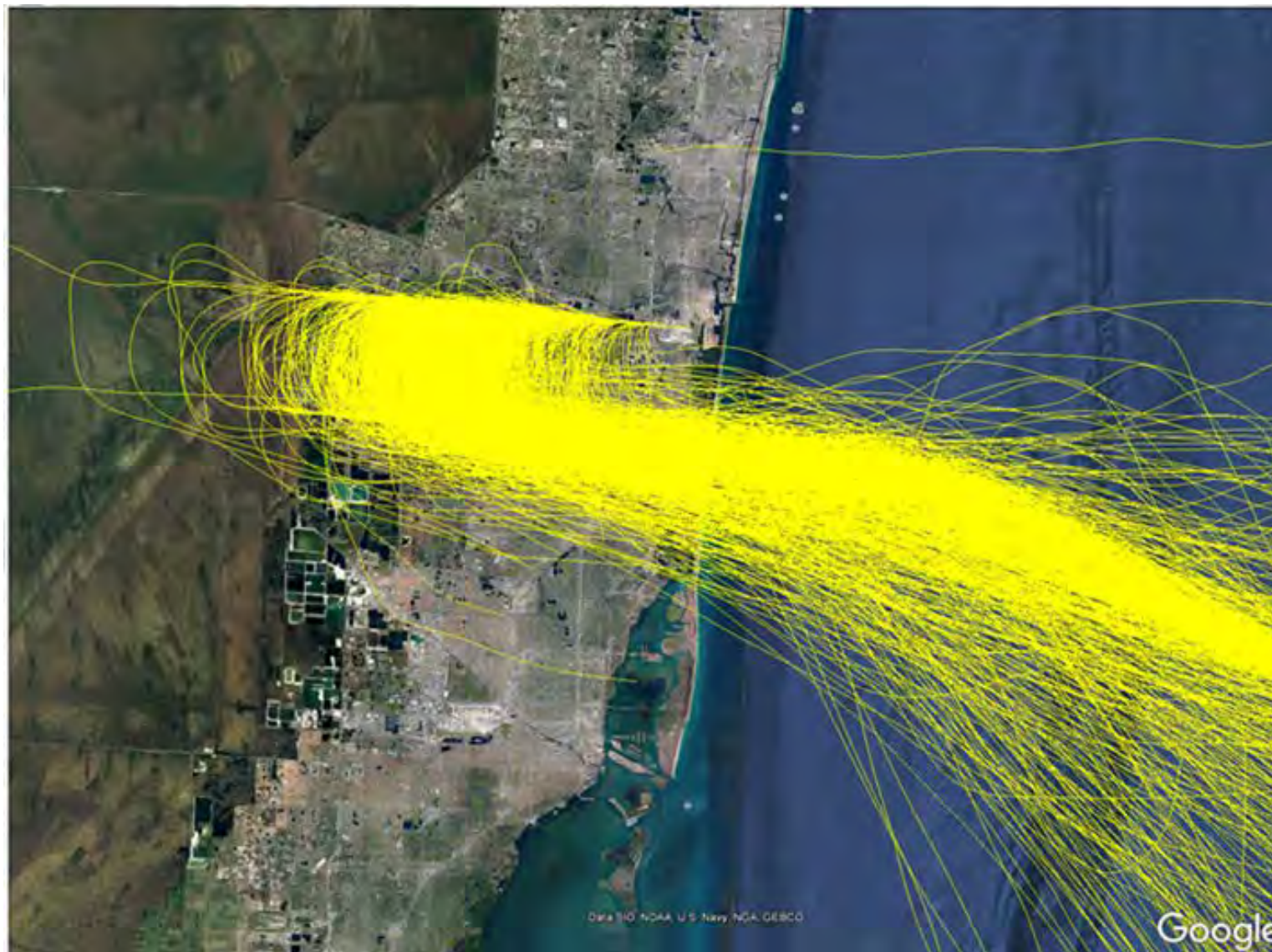


Flight Track Analysis

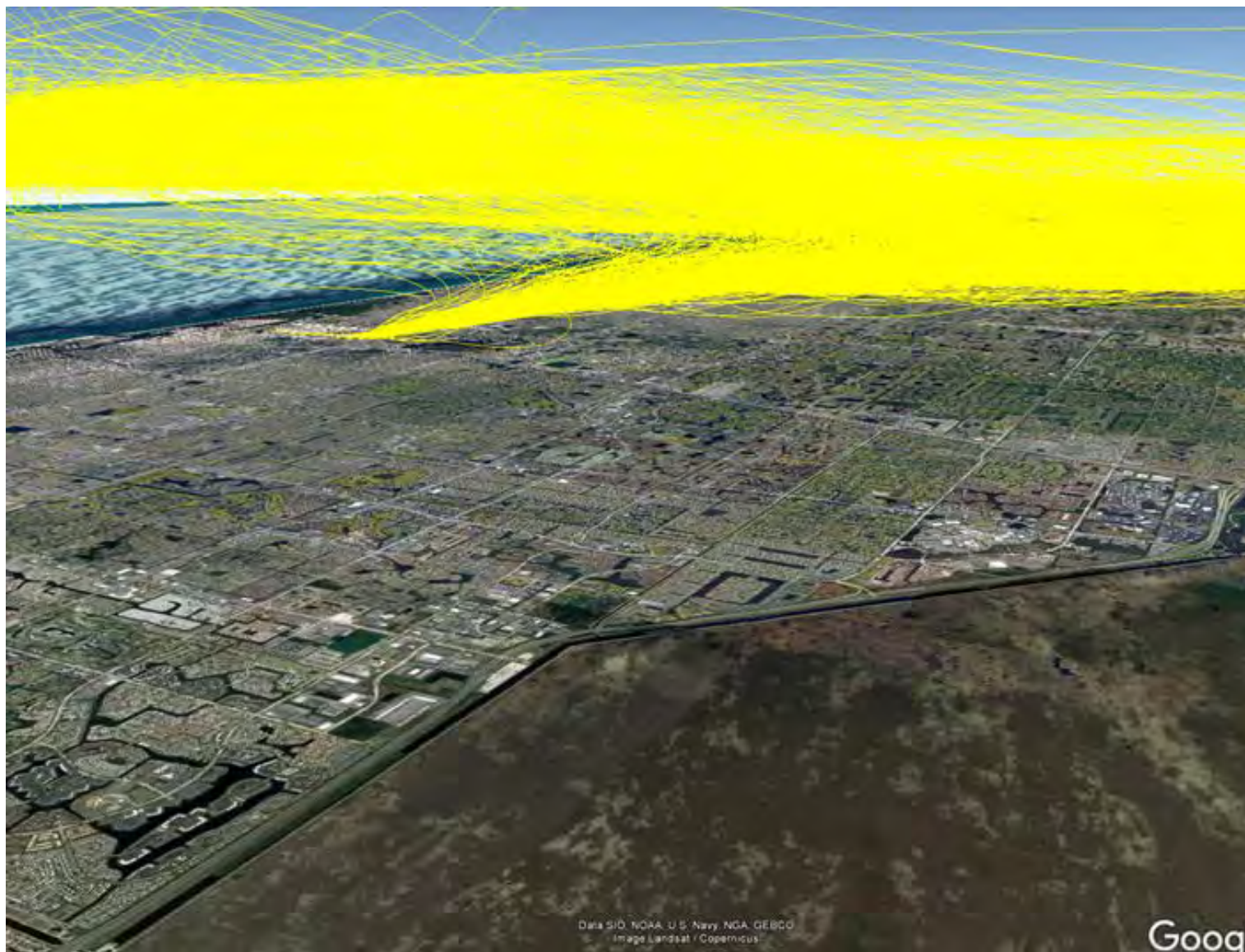
Runway 10L Arrival Tracks from
Southeast – South Downwind



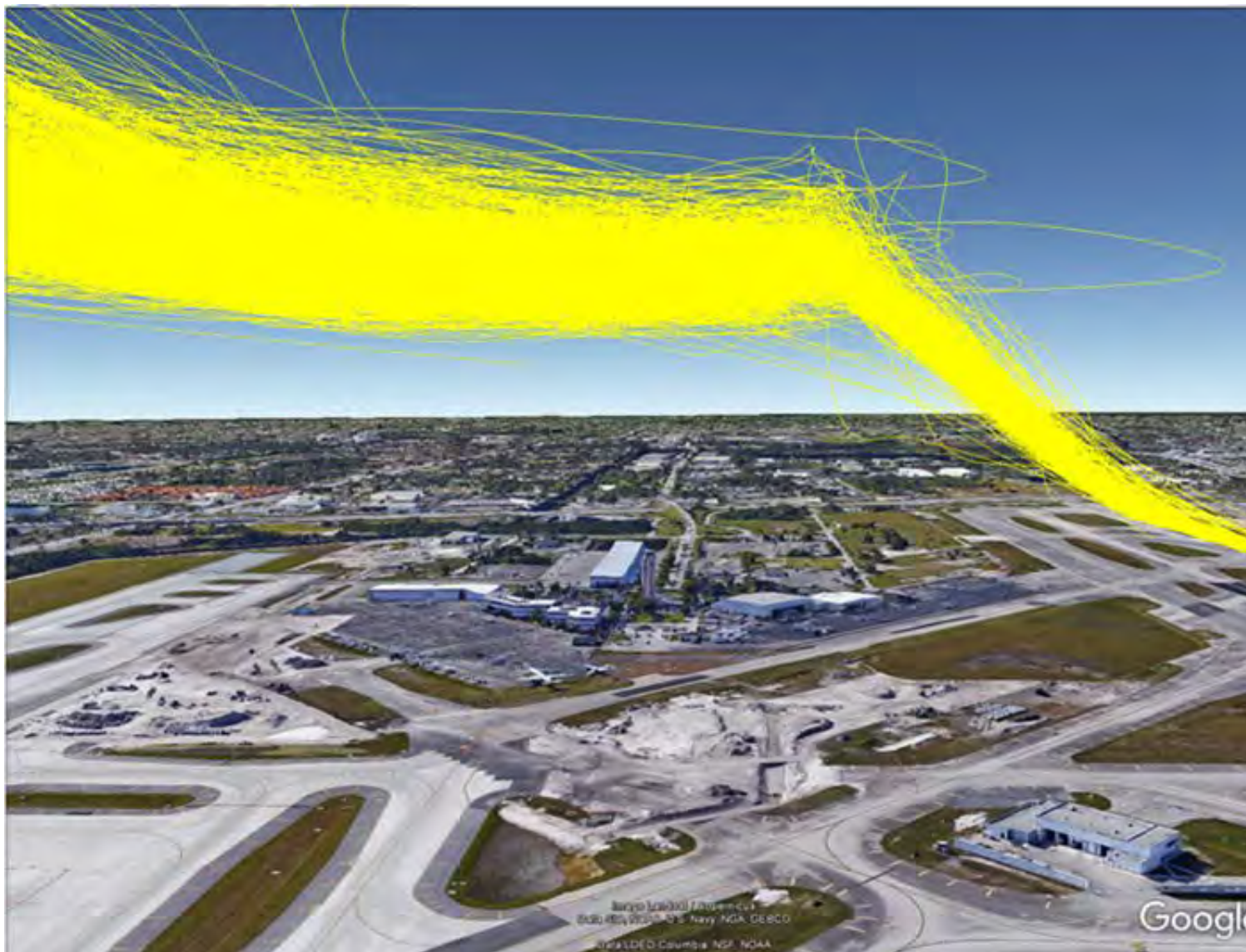
Flight Track Analysis



Flight Track Analysis



Flight Track Analysis



Questions from TC Members

Future TC Meetings

Future Meetings

Technical Committee

- TC Meeting #3 (Tentative)
- TC Meeting #4 (Tentative)

November 2017

January/February 2018

Public Workshops

- Overview of Part 150 Process

October/November 2017

TC and Public Workshop materials will be available on the project website immediately following each meeting

www.flpart150.com

Adjourn