

Fort Lauderdale-Hollywood International Airport



# Monthly Operations & RNAV Use Report



BROWARD COUNTY AVIATION DEPARTMENT MONTHLY RNAV REPORT September 2021

This RNAV Report provides a monthly overview of aircraft arriving and departing from Fort Lauderdale-Hollywood International Airport (FLL). The purpose of this report is to determine the number of aircraft that utilize Area Navigation (RNAV) procedures using the FLL Airport Noise and Operations Monitoring System (ANOMS).

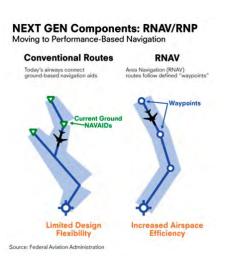
### OVERVIEW OF NEXTGEN 🚳



The Next Generation Air Transportation System (NextGen) is the FAA-led modernization of the United States National Airspace System (NAS). Goals include using new technologies and procedures to increase the safety, efficiency, and predictability of the NAS, as well as reducing the overall environmental impact of aviation. The FAA implemented the South-Central Florida Metroplex Project on August 12, 2021. This project is aimed at improving the safety and efficiency of airspace in South-Central Florida by optimizing arrival and departure procedures at 21 regional airports.

### RNAV //

RNAV is a method of navigation that consists of routes formed from a series of waypoints (geographical points on the ground) that may have required altitude or performance characteristics. Aircraft said to be navigating on RNAV procedures must fly over or near these waypoints (within a given tolerance), attaining the given altitude or performance settings set by the FAA and air traffic control (ATC). The potential advantages of RNAV routes include time and fuel savings, reduced dependency on radar vectoring, reduced ATC transmissions, and more efficient use of airspace.



### Operations and Runway Use



This section provides a tabular and graphical summary of monthly operations and runway use at FLL. Monthly operations are broken down by airframe type, arrivals,

and departures, time of day (night defined as 10:30 pm to 6:00 am) and runway use is separated graphically by east and west flow.

#### RNAV PROCEDURES FOR FLL



This report provides a tabular and graphical summary of overall RNAV procedures for FLL. For aircraft arriving to or departing from FLL, there are 14 published RNAV procedures in total. These procedures each consist of waypoints and have multiple routes. This report will allow residents near the airport to understand, at a glance, the usage of RNAV procedures that most affect them.

Standard Instrument Departures (SIDs)

AARPS, BNGOS, FEELX, GLADZ, MHITO, REGAE, SNAPR, TWZTR/HURCN, VACAY

Standard Arrival Routes (STARs)

BHHIA, CUUDA, OLAHS, TEEKY

#### FLIGHT TRACK DENSITY PLOTS 3



Flight track density plots show the relative use of the airspace surrounding FLL. Color ranges are assigned based on the relative density of traffic (from low to high) for several categories:

- Jet Arrivals
- **Jet Departures**
- Jet Departures Close Up
- Non-Jet Operations

#### RESOURCES



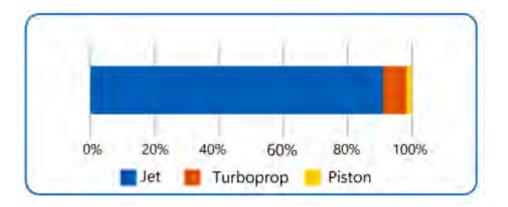
- https://www.faa.gov/air\_traffic/community\_engagement/florida/
- http://metroplexenvironmental.com/fl metroplex/fl introduction.html
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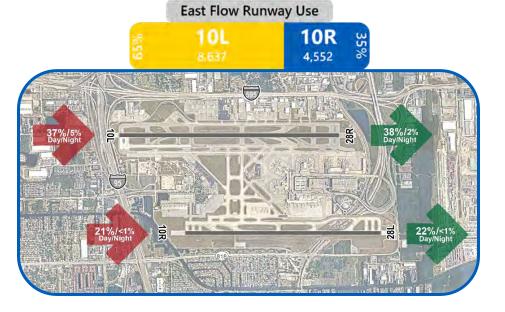


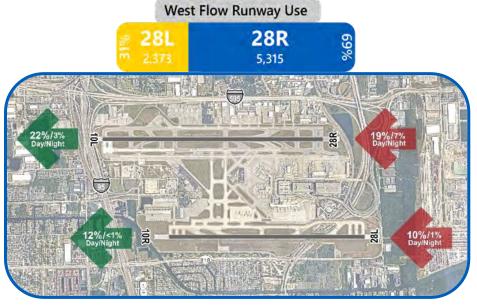
### Monthly Operations and Runway Use

September 2021

Туре	Arrivals	Departures	Total
Jet	9,558	9,652	19,210
Turboprop	641	644	1,285
Piston	185	180	365
Total	10,384	10,476	20,860

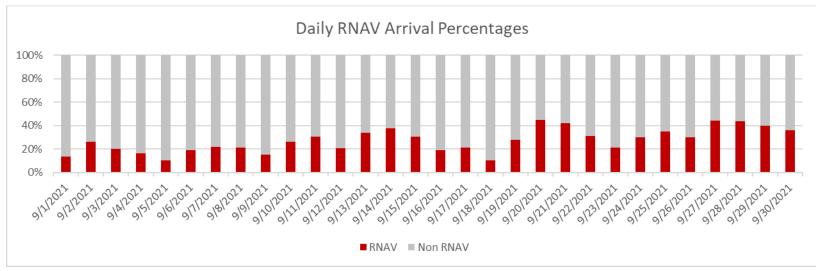


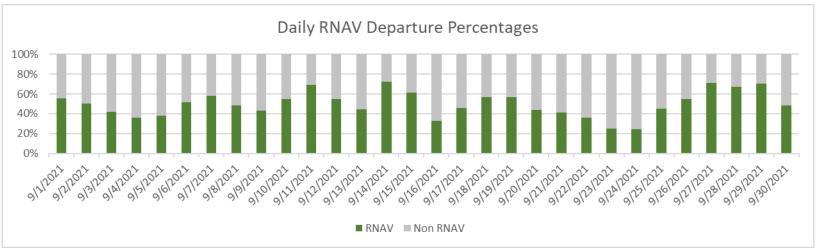






### Arrival and Departure Daily RNAV Percentages





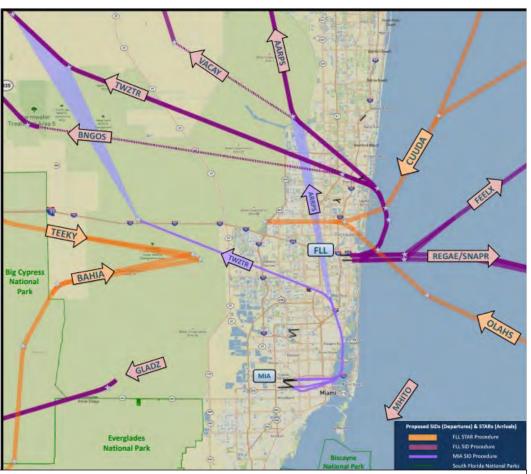


### FLL RNAV East Flow Operations



Monthly RNAV Use Summary

#### FAA South-Central Florida Public Workshop 2020 Community Engagement Board



Note: The Arrivals and Departures tables on the right represent the total number of flights during the month flying the full procedure for each procedure listed. Percentages represent any jet flying on an RNAV within Broward County. Flights that are vectored early are not included in this list.

### STARS | Arrivals

Procedure Name	# of Operations	,
BAHIA	85	
CUUDA	382	
OLAHS	93	2 40/
TEEKY	970	34%
•		

### SIDS | Departures

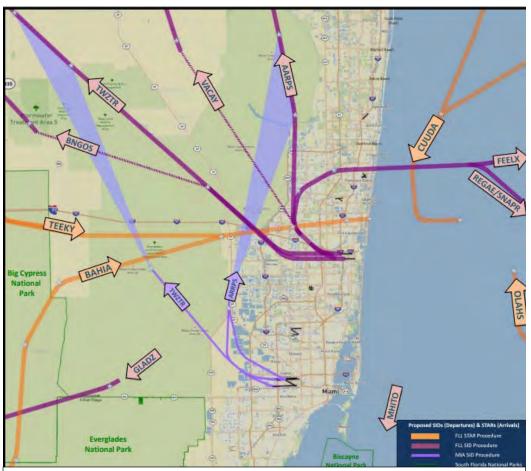
Procedure Name	# of Operations
AARPS	376
BNGOS	71
FEELX	888
GLADZ	22
MHITO	24
REGAE	146
SNAPR	269
TWZTR/HURCN	53%



### FLL RNAV West Flow Operations <

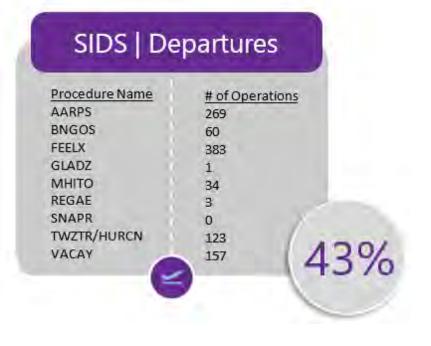
Monthly RNAV Use Summary

#### FAA South-Central Florida Public Workshop 2020 Community Engagement Board



Note: The Arrivals and Departures tables on the right represent the total number of flights during the month flying the full procedure for each procedure listed. Percentages represent any jet flying on an RNAV within Broward County. Flights that are vectored early are not included in this list.







### Monthly East and West Flow RNAV Percentages

September 2021





# Monthly RNAV Use by Operator September 2021

and the same of th	Number of Operations		Percent RNAV Operations	
Air Carrier	Total RNA		50%	1009
Air Canada	114	41		
Air Transat	27	8		
Alaska Airlines	60	30		
Allegiant Air	284	115		
American Airlines	1129	495	•	
Avianca	24	12	-	-
Azul Linhas Aereas Brasileiras	57	14		
Bahamas Air Holdings Ltd.	113	43		
Copa Airlines	71	25	<b>ᆣ</b> 。	
Delta Airlines	1520	668	•	
JetBlue Airways	3903	1614		
Republic Airlines	55	15	•	
Southwest Airlines	2326	995		
Spirit Airlines	5261	2234		
Sun Country Airlines	28	9		
United Airlines	1068	491		
WestJet	13	5		

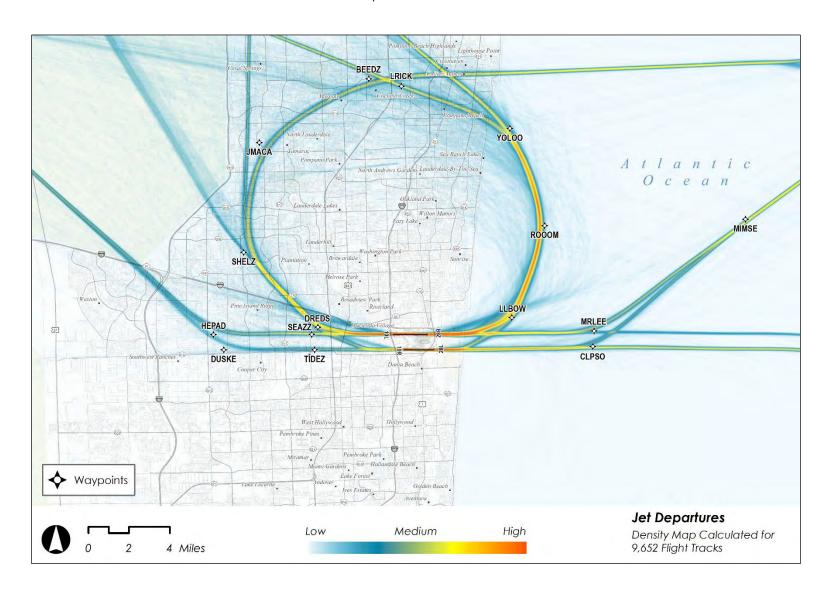






# Relative Airspace Density 🍼

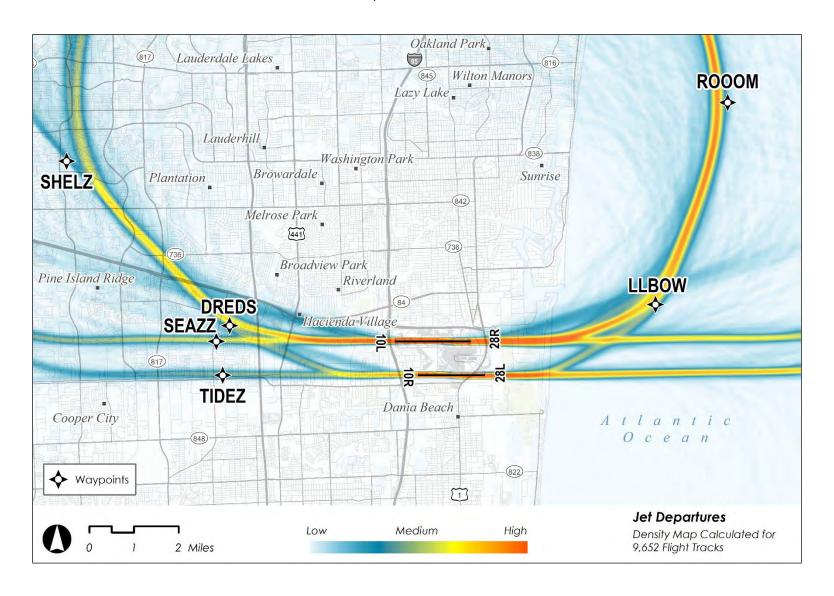
For All Jet Departures September 2021





### Relative Airspace Density

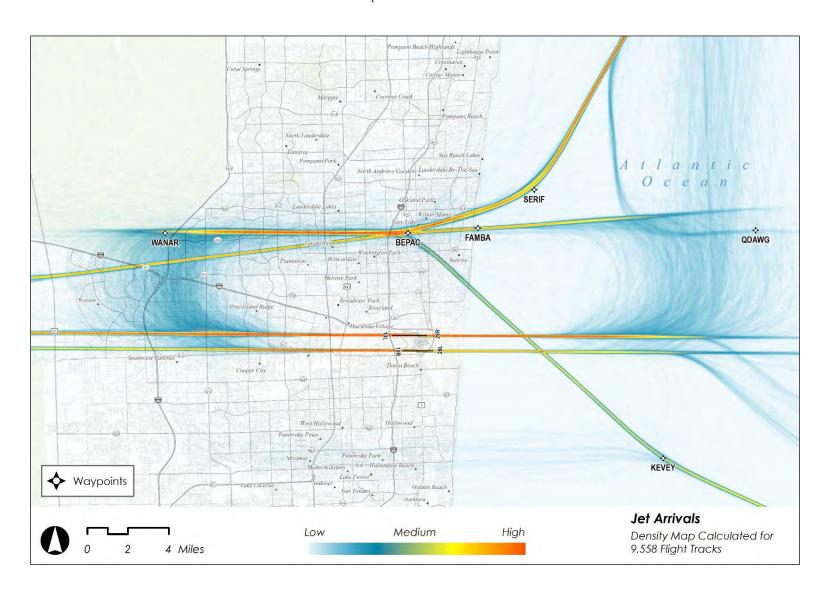
For All Jet Departures September 2021





## Relative Airspace Density 5

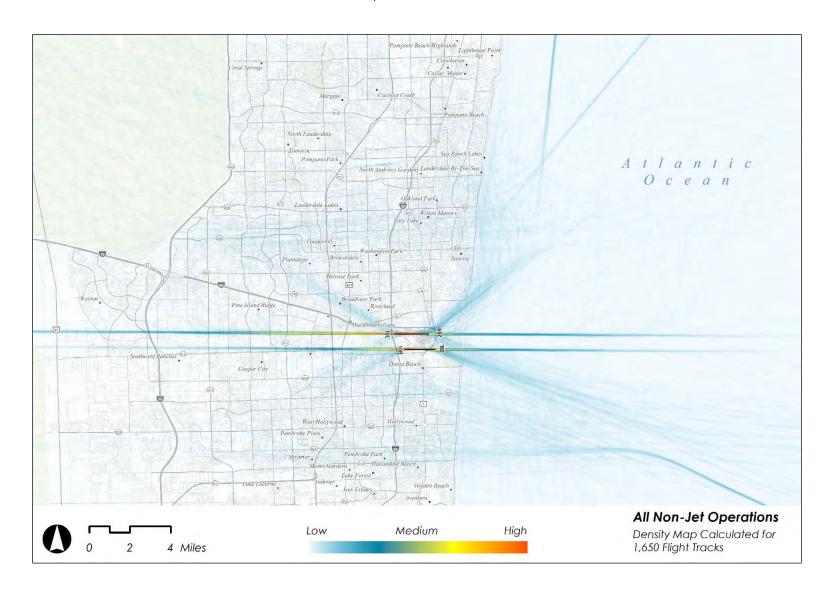
For All Jet Arrivals September 2021





### Relative Airspace Density

For All Non-Jet Arrival and Departures
September 2021

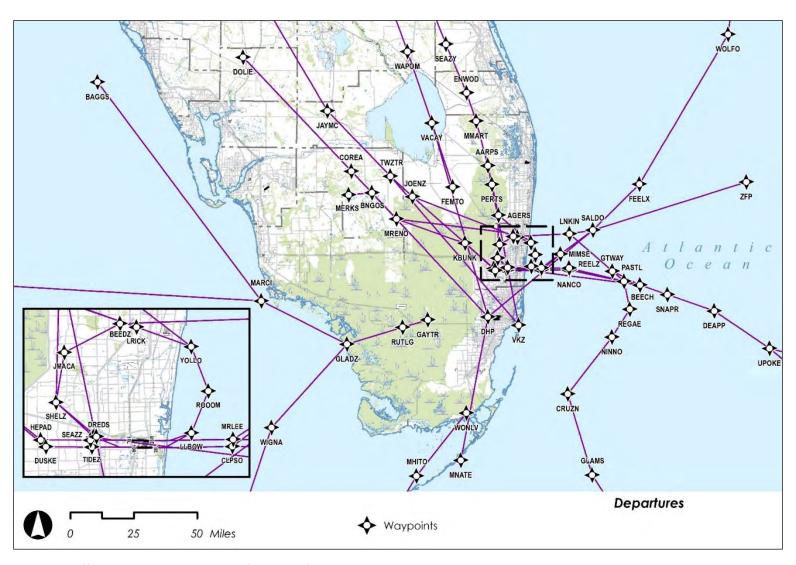


# South-Central Florida Metroplex FLL Arrivals (STARS)



Source: http://www.metroplexenvironmental.com/fl\_metroplex/fl\_docs.html

# South-Central Florida Metroplex FLL Departures (SID)



Source: http://www.metroplexenvironmental.com/fl\_metroplex/fl\_docs.html

# South-Central Florida Metroplex Waypoints by Procedure

#### STARS | Arrivals

**BAHIA:** 10L: [FLICH+]-PYREX-HULKY-BAHIA-ADUBE-HOLID

BAHIA: 10R: PYREX-HULKY-BAHIA-ADUBE-BUNKR

**BAHIA:** 28L/R: PYREX-HULKY-BAHIA-ADUBE-FIPKO-BEPAC-FAMBA

CUUDA: 10L/R: [MACKL+|PLAID+]-CUUDA-LOKKR-SERIF-BEPAC-WANAR

CUUDA: 28L/R: [MACKL+|PLAID+]-CUUDA-LOKKR-BEKNE-QDAWG

OLAHS: 10L/R: [MAYKO+|DOPLY+|CIREX+]-OLAHS-WAVUN-KEVEY-BEPAC-WANAR

OLAHS: 28L/R: [MAYKO+|DOPLY+|CIREX+]-OLAHS-WAVUN-CRNVL

TEEKY: 10L: [DANNA+|INKES+]-YANCI-TEEKY-BANTY-HEEZE-HOLID TEEKY: 10R: [DANNA+|INKES+]-YANCI-TEEKY-BANTY-HEEZE-BUNKR

TEEKY: 28L/R: [DANNA+|INKES+]-YANCI-TEEKY-BANTY-HEEZE-GOYLE-BEPAC-FAMBA

#### SIDS | Departures

AARPS: 10L/R: LLBOW-ROOOM-YOLOO-AGERS-PERTS-AARPS-MMART-ENWOD-SEAZY

AARPS: 28L/R: DREDS-SHELZ-AGERS-PERTS-AARPS-MMART-ENWOD-SEAZY

BNGOS: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-MRENO-BNGOS-COREA-DOLIE

BNGOS: 28L: TIDEZ-DUSKE-KBUNK-MRENO-BNGOS-COREA-DOLIE BNGOS: 28R: SEAZZ-HEPAD-KBUNK-MRENO-BNGOS-COREA-DOLIE

FEELX: 10L: MRLEE-MIMSE-MIDNT-FEELX-WOLFO
FEELX: 10R: CLPSO-MIMSE-MIDNT-FEELX-WOLFO

FEELX: 28L/R: DREDS-SHELZ-JMACA-BEEDZ-LNKIN-MIDNT-FEELX-WOLFO

GLADZ: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-GAYTR-RUTLG-GLADZ-[WIGMA+|MARCI+]

GLADZ: 28L: TIDEZ-GAYTR-RUTLG-GLADZ-[WIGMA+|MARCI+]
GLADZ: 28R: SEAZZ-GAYTR-RUTLG-GLADZ-[WIGMA+|MARCI+]

MHITO: 10L: MRLEE-WONLV-MHITO MHITO: 10R: CLPSO-WONLV-MHITO MHITO: 28L: TIDEZ-WONLV-MHITO MHITO: 28R: SEAZZ-WONLV-MHITO

REGAE: 10L: MRLEE-REELZ-PASTL-REGAE-NINNO-CRUZN-GLAMS

**REGAE:** 10R: CLPSO-CUDEL-PASTL-REGAE-NINNO-CRUZN-GLAMS

REGAE: 28L/R: DREDS-SHELZ-JMACA-BEEDZ-LNKIN-GTWAY-PASTL-REGAE-NINNO-CRUZN-GLAMS

**SNAPR:** 10L: MRLEE-REELZ-BEECH-SNAPR-DEAPP-UPOKE **SNAPR:** 10R: CLPSO-CUDEL-BEECH-SNAPR-DEAPP-UPOKE

SNAPR: 28L/R: DREDS-SHELZ-JMACA-BEEDZ-LNKIN-GTWAY-BEECH-SNAPR-DEAPP-UPOKE

TWZTR/HURCN: 10L/R: LLBOW-ROOOM-YOLOO-JONEZ-HURCN-JAYMC
TWZTR/HURCN: 28L: TIDEZ-DUSKE-KBUNK-JONEZ-HURCN-JAYMC
TWZTR/HURCN: 28R: SEAZZ-HEPAD-KBUNK-JONEZ-HURCN-JAYMC

VACAY: 10L/R: LLBOW-ROOOM-YOLOO-AGERS-FEMTO-VACAY-WAPOM

VACAY: 28L/R: DREDS-SHELZ-FEMTO-VACAY-WAPOM

#### To view the active published FAA full procedure plates, please follow the link here:

https://www.faa.gov/air\_traffic/flight\_info/aeronav/procedures/application/?event=procedure.results&tab=charts&nasrId=FLL#searchResultsTop

#### **Noise Information**

#### Ways to File an Aircraft Noise Comment

To file a formal aircraft noise comment, choose one of the following options:

Online: Complete the Noise Comment Form then select the Submit button.

By Phone: Call the Noise Comment Hotline at 954-359-2366

Download the new Noise Comment Web App and use this platform to file a complaint.

#### Using the New Noise Comment Web App to file a noise complaint.

From a mobile phone, click this link Noise Comment Web App and download to an iPhone or Android phone.

The link is **only** accessible from a mobile phone. It is **not** available in the iOS or Google Play App stores. It is **only** available from the webpage.

#### Noise Comment Web App Instructions:

Save the app to your home screen using the link above.

From an iPhone: Tap the box with the vertical arrow and select add to the home screen.

From an Android phone: Tap the 3 Menu dots and select add to the homepage.

Go to your home screen and open the new noise comment web app.

Enter your comment information following Steps 1-5 and click Submit.

Note: After using the noise comment web app the first time, user information is saved and does not need to be re-entered. You can submit additional comments by tapping "Submit Comment."

If you have questions or comments about the app, please contact the Aviation Department at 954-359-6181

Prepared by Harris Miller Miller & Hanson Inc. on behalf of Broward County Aviation Department.