Fort Lauderdale-Hollywood International Airport

Monthly Operations & RNAV Use Report

May 2022

BROWARD COUNTY FLORIDA

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).
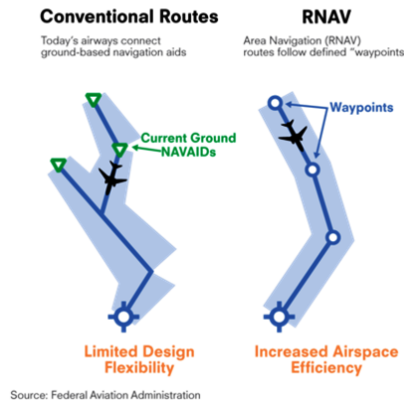
OVERVIEW OF NEXTGEN

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.

NEXT GEN Components: RNAV/RNP
Moving to Performance-Based Navigation

Conventional Routes
Today's airways connect ground-based navigation aids

RNAV
Area Navigation (RNAV) routes follow defined "waypoints"

Current Ground NAVAIDs
Waypoints

Limited Design Flexibility
Increased Airspace Efficiency

Source: Federal Aviation Administration

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) pre-May 19/post-May 19

- AARPS, BNGOS, FEELX, GLADZ, MHITO, REGAE, SNAPR, TWZTR/HURCN, VACAY
- AGERS, BNICE, FEALX, GLADZ, FRSBE, HROCK, LIFRR, MAYNR, REGAE, SNAPR

Standard Arrival Routes (STARs)

- BHHIA, CUUDA, OLAHS, TEEKY

FLIGHT TRACK DENSITY PLOTS

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
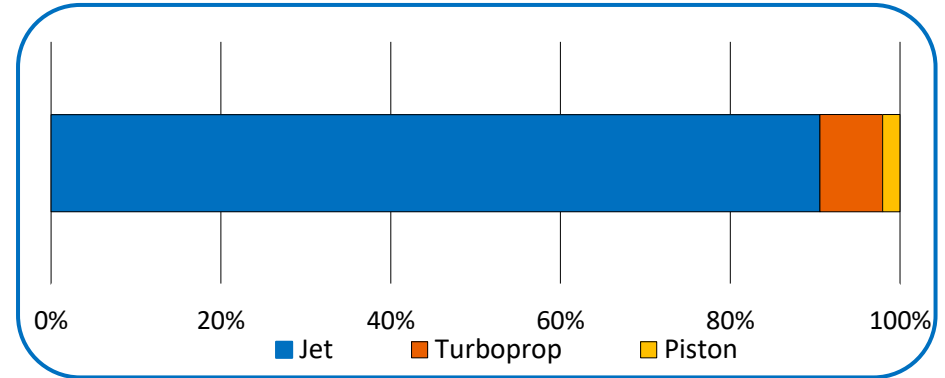- Jet Departures – Close Up
- Non-Jet Operations

RESOURCES

- https://www.faa.gov/air_traffic/community_engagement/florida/
- http://metroplexenvironmental.com/fl_metroplex/fl_introduction.html
- http://www.metroplexenvironmental.com/fl_metroplex/fl_docs.html
- https://www.faa.gov/nextgen/this_is_nextgen/

Monthly Operations and Runway Use

May 2022

Type	Arrivals	Departures	Total
Jet	11,354	11,396	22,750
Turboprop	980	969	1949
Piston	228	223	452
Total	**12,562**	**12,589**	**25,151**

Legend: Jet | Turboprop | Piston

East Flow Runway Use

| 64% | 10L 14,181 | 10R 7,889 | 36% |

- 50%/12% Day/Night
- 46%/6% Day/Night
- 27%/<1% Day/Night
- 35%/<1% Day/Night

West Flow Runway Use

| 35% | 28L 1,079 | 28R 2,023 | 65% |

- 8%/<1% Day/Night
- 6%/1% Day/Night
- 4%/<1% Day/Night
- 8%/<1% Day/Night
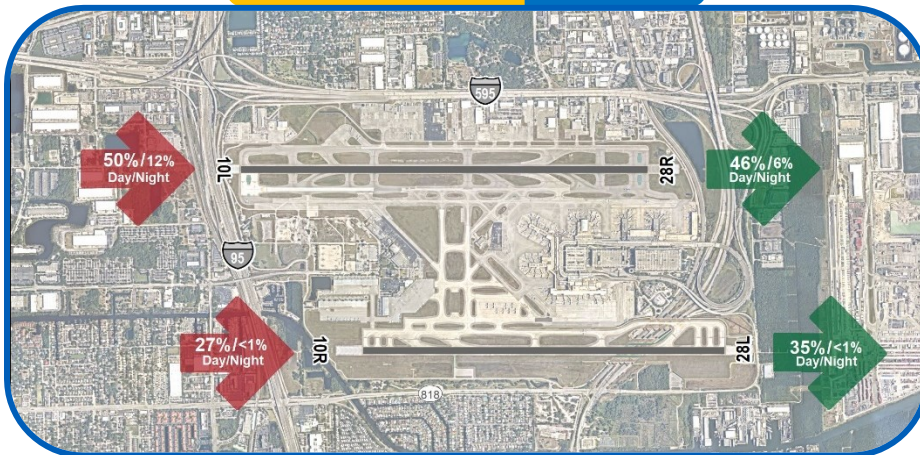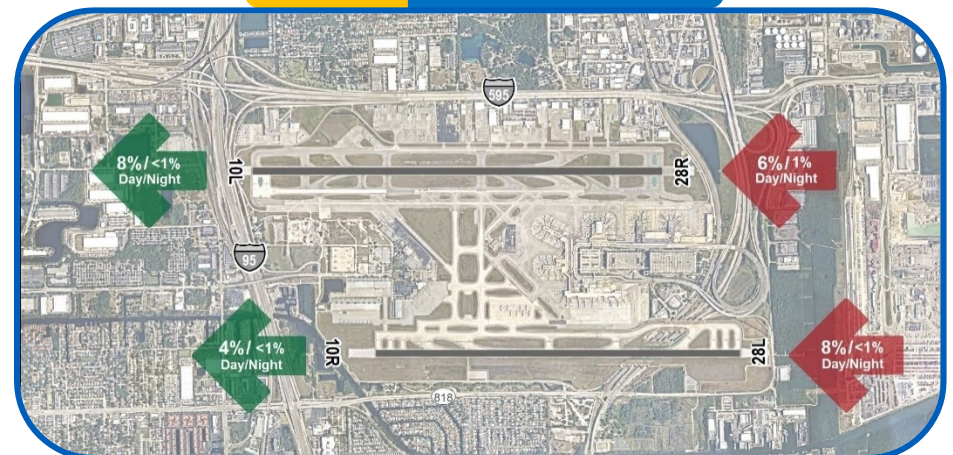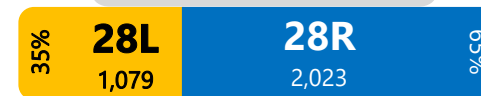
Arrival and Departure Daily RNAV Percentages

Daily RNAV Arrival Percentages

Daily RNAV Departure Percentages
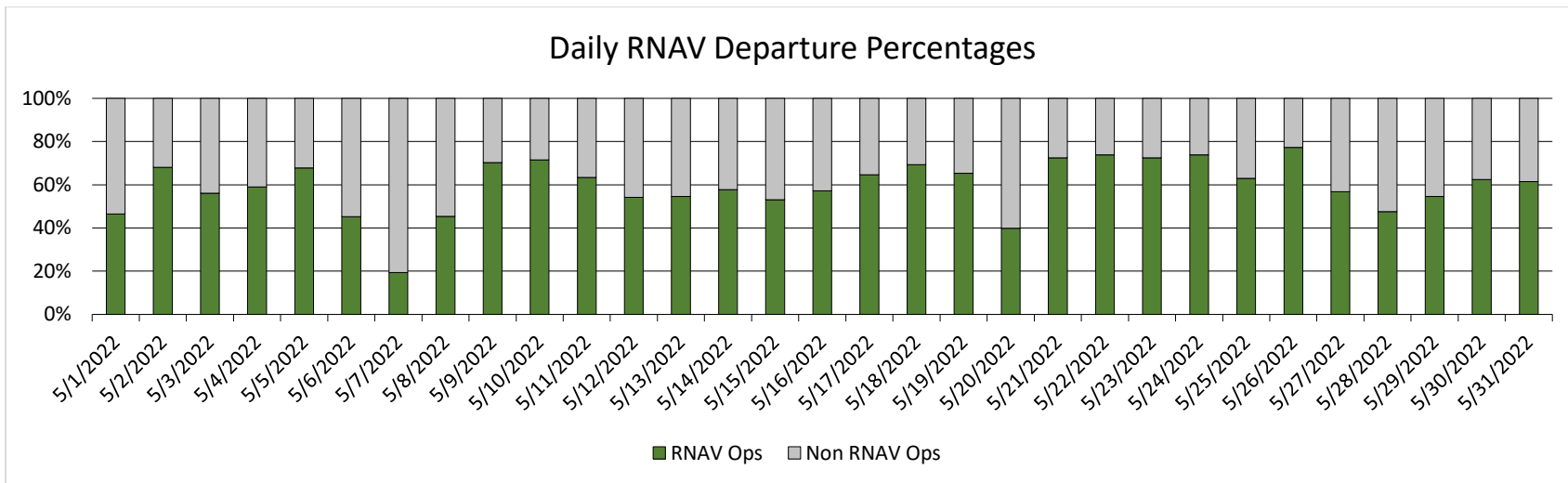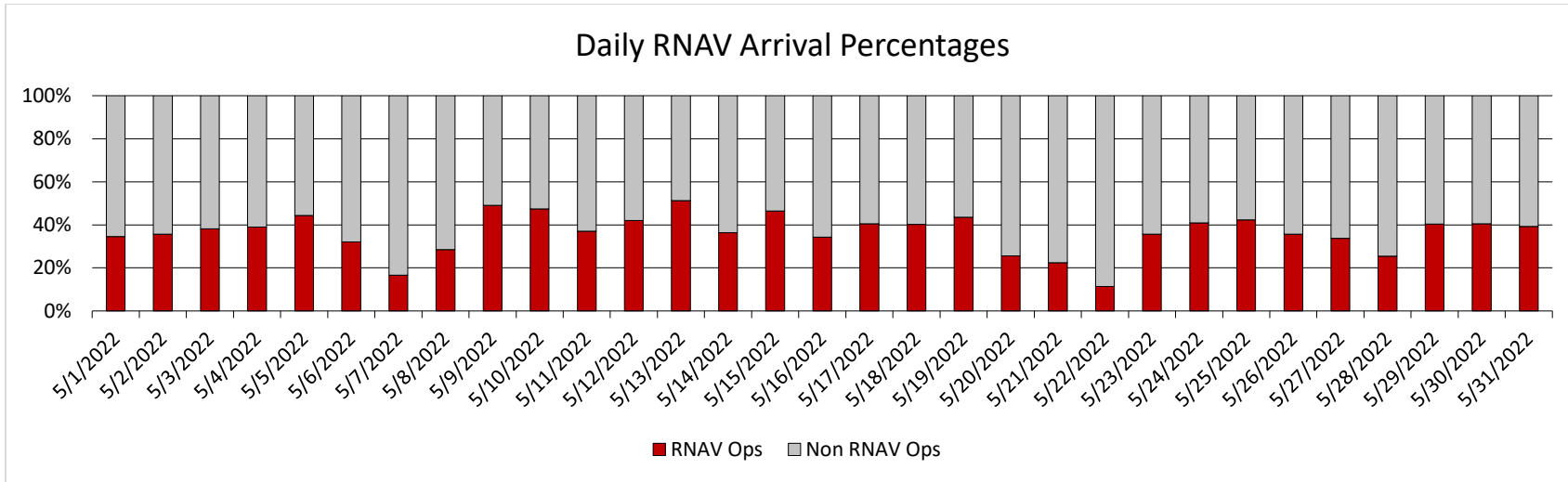
FLL RNAV East Flow Operations

Monthly RNAV Use Summary

Legend:
- FLL STAR Procedure
- FLL SID Procedure
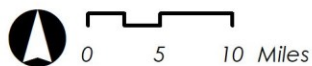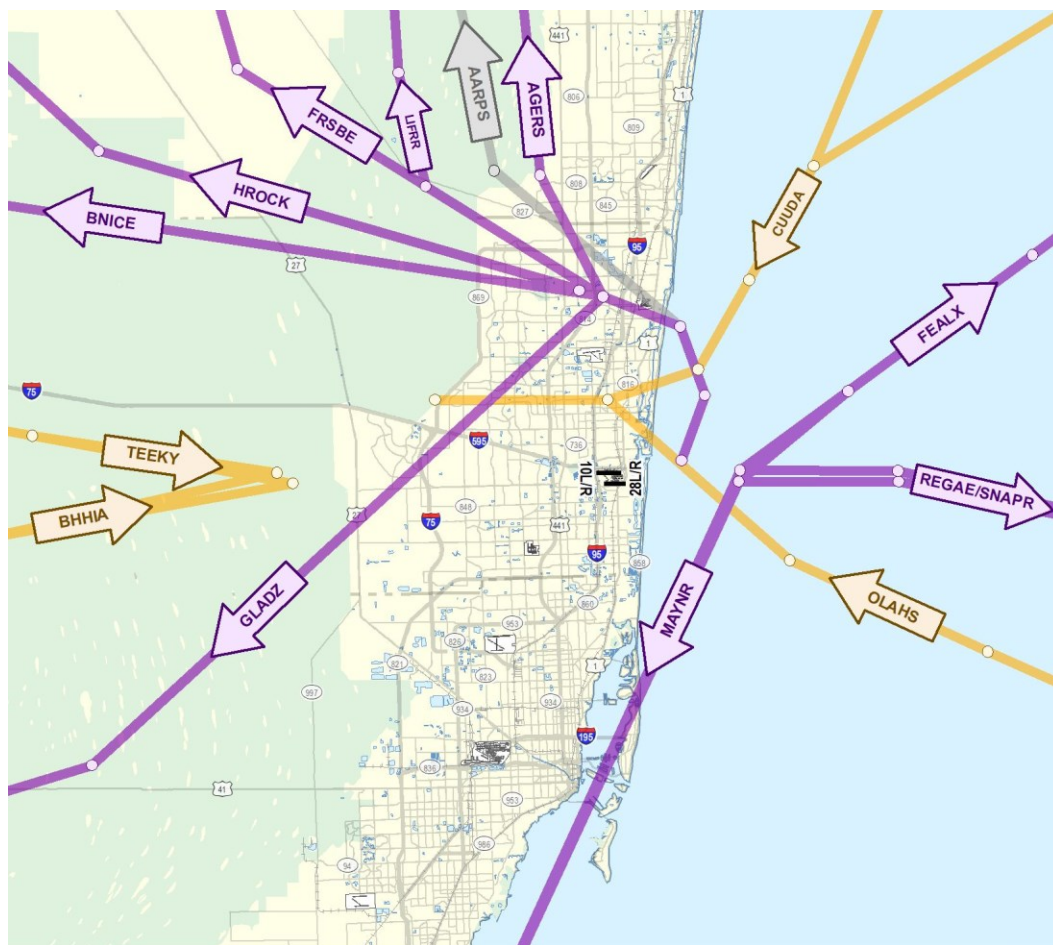- FLL Procedure Removed Mid-May

0   5   10 Miles

STARS | Arrivals

Procedure Name	# of Operations
BHHIA	236
CUUDA	627
OLAHS	124
TEEKY	759

39%

SIDS | Departures

Procedure Name	# of Operations
AARPS	451
AGERS	22
BNGOS	128
BNICE	110
FEALX	1757
FRSBE	219
GLADZ	36
HROCK	198
LIFRR	146
MHITO	46
REGAE	35
SNAPR	767
TWTZR/HURCN	160
VACAY	112

63%

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.

FLL RNAV West Flow Operations ✈
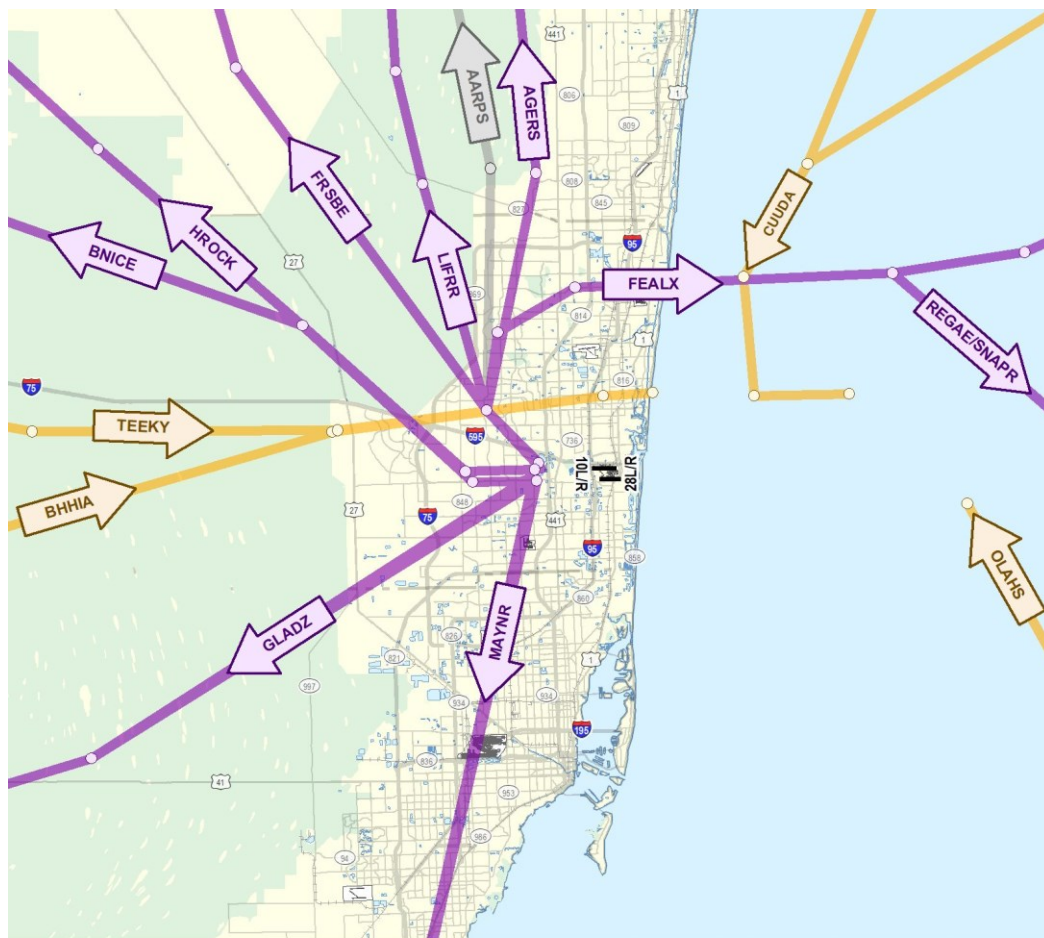
Monthly RNAV Use Summary

Legend:
- FLL STAR Procedure
- FLL SID Procedure
- FLL Procedure Removed Mid-May

0   5   10 Miles
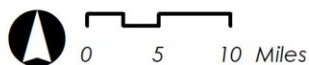
Note: The Arrivals and Departures tables on the right represent the total number of flights during the month flying the full procedure for each procedure listed. Percentages represent any jet flying on an RNAV within Broward County. Flights that are vectored early are not included in this list.

STARS | Arrivals

Procedure Name	# of Operations
BHHIA	22
CUUDA	33
OLAHS	7
TEEKY	174

22%

SIDS | Departures

Procedure Name	# of Operations
AARPS	107
AGERS	0
BNGOS	36
BNICE	3
FEALX	174
FRSBE	7
GLADZ	1
HROCK	5
LIFRR	0
MHITO	67
REGAE	0
SNAPR	0
TWZTR/HURCN	56
VACAY	56

37%

Monthly East and West Flow RNAV Percentages

May 2022
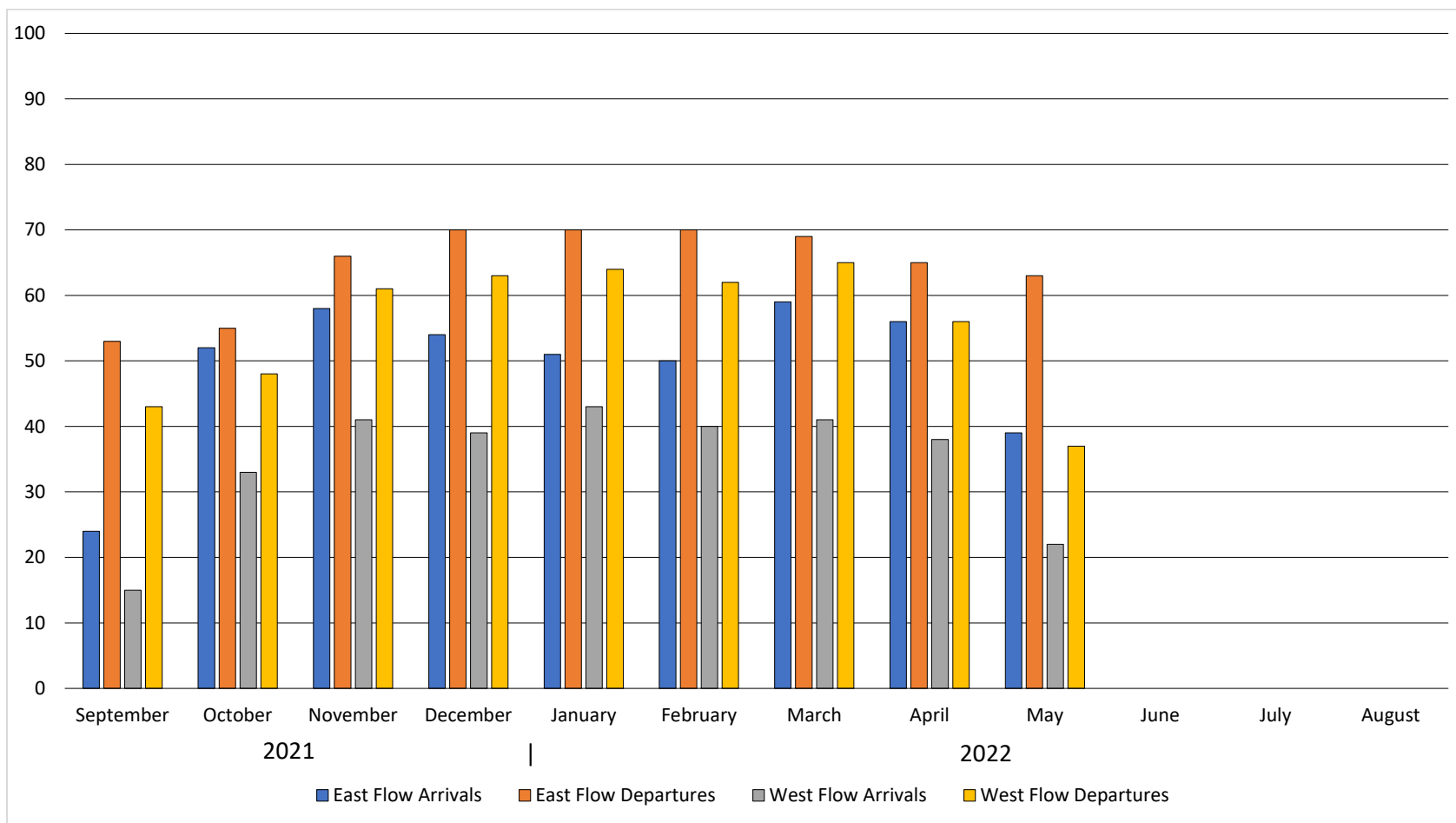
Monthly RNAV Use by Operator
May 2022

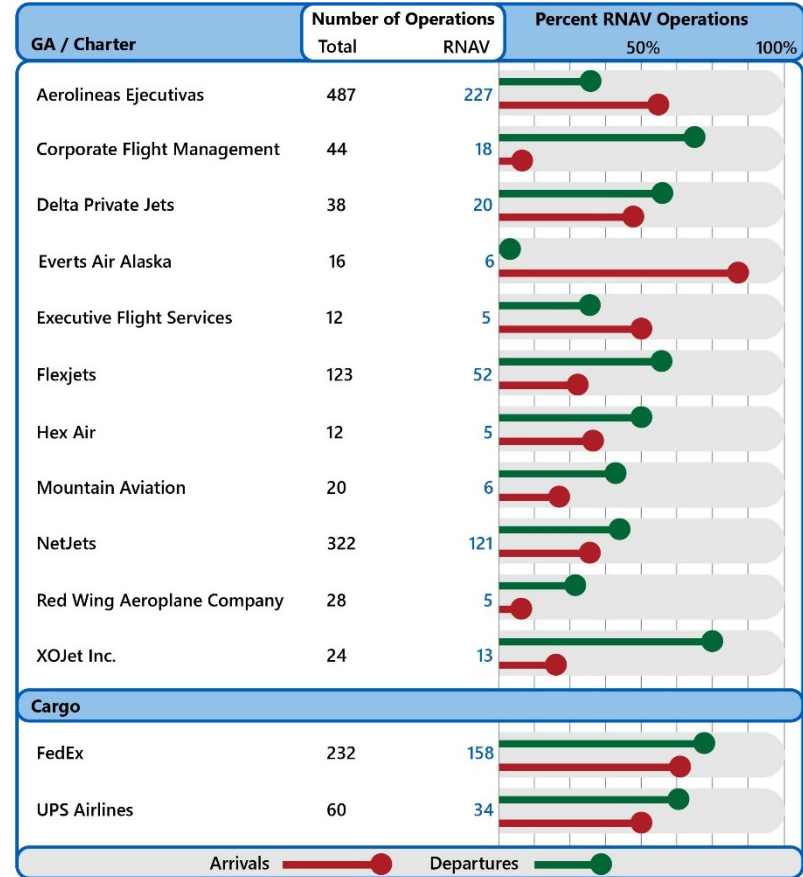| Air Carrier	Number of Operations		Percent RNAV Operations
	Total	RNAV	50% 100%
Aerosiyusa	17	2	
Air Canada	11	5	
Air Canada Rouge	314	144	
Air Transat	68	34	
Alaska Airlines	89	60	
Allegiant Air	528	254	
American Airlines	888	445	
Avelo Airlines	48	16	
Avianca	49	27	
Azul Linhas Aereas Brasileiras	58	28	
Bahamas Air Holdings Ltd.	127	47	
Copa Airlines	56	20	
Delta Airlines	1961	1086	
Flair Airlines	52	23	
JetBlue Airways	4535	2117	
Southwest Airlines	3053	1614	
Spirit Airlines	5127	2485	
Sun Country Airlines	47	24	
United Airlines	1442	739	
WestJet	42	12	

GA / Charter	Number of Operations		Percent RNAV Operations
	Total	RNAV	50% 100%
Aerolineas Ejecutivas	487	227	
Corporate Flight Management	44	18	
Delta Private Jets	38	20	
Everts Air Alaska	16	6	
Executive Flight Services	12	5	
Flexjets	123	52	
Hex Air	12	5	
Mountain Aviation	20	6	
NetJets	322	121	
Red Wing Aeroplane Company	28	5	
XOJet Inc.	24	13	
Cargo			
FedEx	232	158	
UPS Airlines	60	34	

Arrivals ●—— Departures ——●

Relative Airspace Density
For All Jet Departures
May 2022

Waypoints

Waypoints Added or Relocated in May 2022

Low · Medium · High

Jet Departures
Density Map Calculated for
11,396 Flight Tracks

0   2   4 Miles

Relative Airspace Density
For All Jet Departures
May 2022

Waypoints
Waypoints Added or Relocated in May 2022

Low   Medium   High

0   1   2 Miles

Jet Departures
Density Map Calculated for
11,396 Flight Tracks

Relative Airspace Density

For All Jet Arrivals
May 2022

Waypoints

Low   Medium   High

0   2   4 Miles

Jet Arrivals

Density Map Calculated for
11,354 Flight Tracks
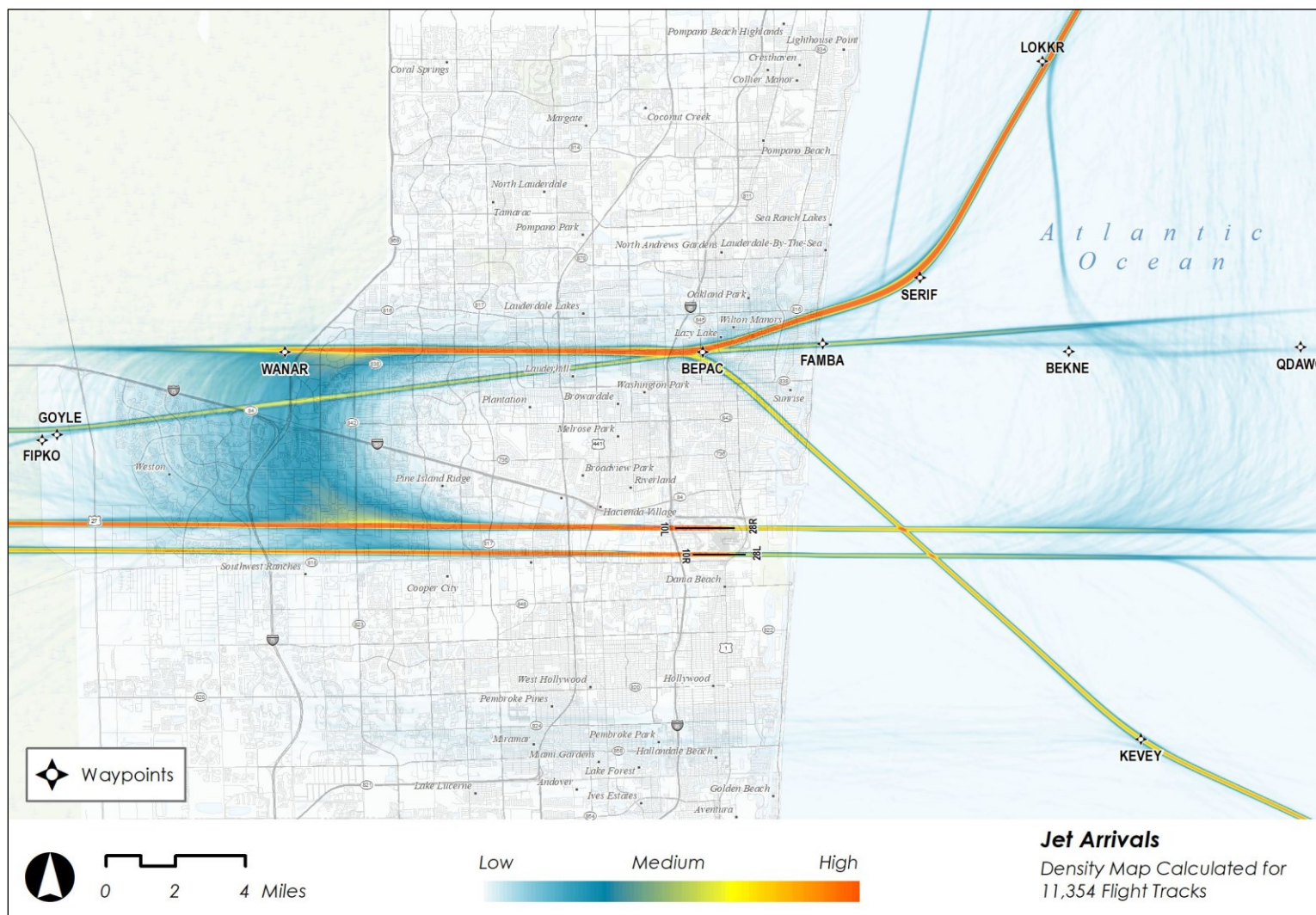
Relative Airspace Density
For All Non-Jet Arrival and Departures
May 2022

All Non-Jet Operations
Density Map Calculated for
2,402 Flight Tracks

Low   Medium   High

0   2   4 Miles
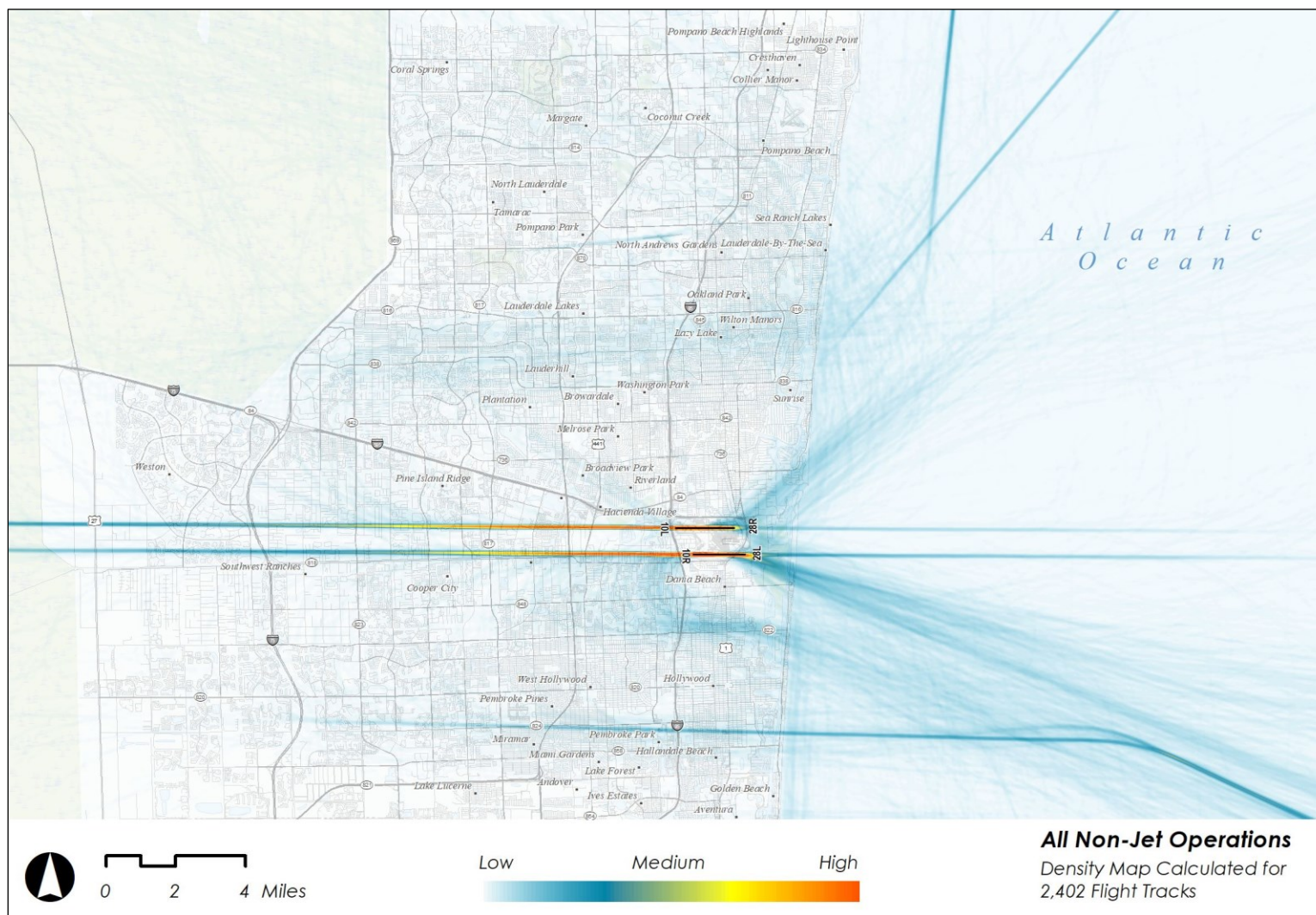
Appendix

South-Central Florida Metroplex
FLL Arrivals (STARS)

Source: http://www.metroplexenvironmental.com/fl_metroplex/fl_docs.html

Appendix

South-Central Florida Metroplex
FLL Departures (SID)

Source: http://www.metroplexenvironmental.com/fl_metroplex/fl_docs.html
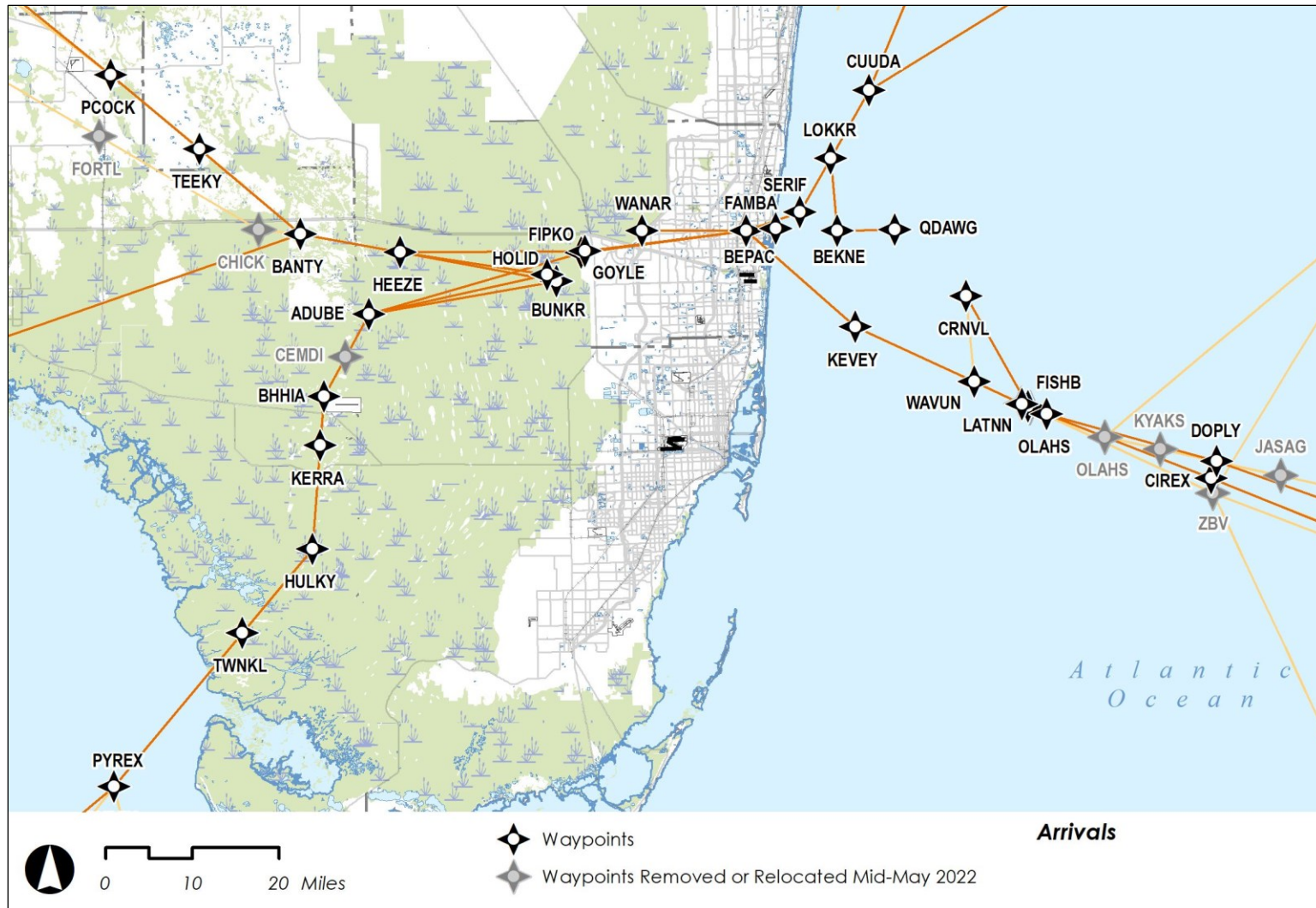
Appendix

South-Central Florida Metroplex
Waypoints by Procedure

STARS | Arrivals

BHHIA TWO: 10L: [PYREX+|TWNKL+]-HULKY-KERRA-BHHIA-ADUBE-HOLID
BHHIA TWO: 10R: [PYREX+|TWNKL+]-HULKY-KERRA-BHHIA-ADUBE-BUNKR
BHHIA TWO: 28L/R: [PYREX+|TWNKL+]-HULKY-KERRA-BHHIA-ADUBE-FIPKO-BEPAC-FAMBA

CUUDA TWO: 10L/R: [MACKL+|PLAID+]-CUUDA-LOKKR-SERIF-BEPAC-WANAR
CUUDA TWO: 28L/R: [MACKL+|PLAID+]-CUUDA-LOKKR-BEKNE-QDAWG

OLAHS TWO: 10L/R: [DOPLY+|CIREX+]-OLAHS-LATNN-WAVUN-KEVEY-BEPAC-WANAR
OLAHS TWO: 28L/R: [DOPLY+|CIREX+]-OLAHS-FISHB-CRNVL

TEEKY TWO: 10L: [PCOCK+|MARCI+]-TEEKY-BANTY-HEEZE-HOLID
TEEKY TWO: 10R: [PCOCK+|MARCI+]-TEEKY-BANTY-HEEZE-BUNKR
TEEKY TWO: 28L/R: [PCOCK+|MARCI+]-TEEKY-BANTY-HEEZE-GOYLE-BEPAC-FAMBA

SIDS | Departures

AGERS ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-AGERS-[HURGI+]-PERTS-AARPS-MMART-ENWOD SEAZY-[DUCEN+]
AGERS ONE: 28L/R: DREDS-SHELZ-AGERS-[HURGI+]-PERTS-AARPS-MMART-ENWOD-SEAZY-[DUCEN+]

BNICE ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-MRENO-BNICE-[COREA+|DOLIE+|MERKS+]
BNICE ONE: 28L: TIDEZ-DUSKE-KBUNK-MRENO-BNICE-[COREA+|DOLIE+|MERKS+]
BNICE ONE: 28R: SEAZZ-HEPAD-KBUNK-MRENO-BNICE-[COREA+|DOLIE+|MERKS+]

FEALX TWO: 10L: MRLEE-MIMSE- FEALX-[PADUS+|PREDA+|WOLFO+]
FEALX TWO: 10R: CLPSO-MIMSE-FEALX-[PADUS+|PREDA+|WOLFO+]
FEALX TWO: 28L/R: DREDS-SHELZ-JMACA-BEEDZ-LNKIN-FEALX-[PADUS+|PREDA+|WOLFO+]

GLADZ TWO: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-GAYTR-RUTLG-GLADZ-[WIGNA+|MARCI+]
GLADZ TWO: 28L: TIDEZ-GAYTR-RUTLG-GLADZ-[WIGNA+|MARCI+]
GLADZ TWO: 28R: SEAZZ-GAYTR-RUTLG-GLADZ-[WIGNA+|MARCI+]

FRSBE ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-ALNZO-FRSBE-[WAPOM+|STYMY+]
FRSBE ONE: 28L/R: DREDS-SHELZ-ALNZO-FRSBE-[WAPOM+|STYMY+]

HROCK ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-JOENZ-HROCK-[KPASA+|SMELZ+]
HROCK ONE: 28L: TIDEZ-DUSKE-KBUNK-JOENZ-HROCK-[KPASA+|SMELZ+]
HROCK ONE: 28R: SEAZZ-HEPAD-KBUNK-JOENZ-HROCK-[KPASA+|SMELZ+]

LIFRR ONE: 10L/R: LLBOW-ROOOM-YOLOO-LRICK-LIFRR-BOBOE-DURRY-CLEFF-[WIXED+|BAIRN+]
LIFRR ONE: 28L/R: DREDS-SHELZ-LIFRR-BOBOE-DURRY-CLEFF-[WIXED+|BAIRN+]

MAYNR ONE: 10L: MRLEE-AUSTI-MAYNR-MCLAW-[FUNDI+|JABOX+]
MAYNR ONE: 10R: CLPSO-AUSTI-MAYNR-MCLAW-[FUNDI+|JABOX+]
MAYNR ONE: 28L: TIDEZ-AUSTI-MAYNR-MCLAW-[FUNDI+|JABOX+]
MAYNR ONE: 28R: SEAZZ-AUSTI-MAYNR-MCLAW-[FUNDI+|JABOX+]

REGAE TWO: 10L: MRLEE-REELZ-PASTL-REGAE-NINNO-CRUZN-GLAMS-LRODD-[URSUS+]
REGAE TWO: 10R: CLPSO-CUDEL-PASTL-REGAE-NINNO-CRUZN-GLAMS-LRODD-[URSUS+]
REGAE TWO: 28L/R: DREDS-SHELZ-JMACA-BEEDZ-LNKIN-GTWAY-PASTL-REGAE-NINNO-CRUZN-GLAMS-LRODD-[URSUS+]

SNAPR TWO: 10L: MRLEE-REELZ-ZOMBI-SNAPR-KRAFT-HEYDR-[RAJAY+|SUMAC+]
SNAPR TWO: 10R: CLPSO-CUDEL-ZOMBI-SNAPR-KRAFT-HEYDR-[RAJAY+|SUMAC+]
SNAPR TWO: 28L/R: DREDS-SHELZ-JMACA-BEEDZ-LNKIN-GTWAY-SNAPR-KRAFT-HEYDR-[RAJAY+|SUMAC+]

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.