

Airport Profile

Palm Beach International Airport

Palm Beach International Airport (PBI) is located in Palm Beach County, Florida about three miles west of Palm Beach, Florida. PBI began operations in 1936 under its former name of Morrison Field. The airfield was turned over to the U.S. Army Air Force during World War II to train pilots and stage for the European Theatre.

Palm Beach is known for its beautiful beaches, which draw tourists from all over the country every year. The city is home to numerous parks and historic districts, making it an entertaining destination for tourists and Florida locals alike. PBI's location surrounded by highway access to the rest of Florida makes it a convenient destination for all Florida travelers.

PBI is experiencing an increasing trend in both annual enplanements and annual domestic passengers that was continued in 2015. PBI continued to serve 18 domestic destinations in 2015, as it has since 2011.

2015

BY THE NUMBERS

3,142,580
Enplanements

3,055,997
Passengers

\$195.71
Average Fare

18
U.S. Cities Served

1
Intrastate
Destination



Data Explanation

For this report, three key data sources were used: *Passenger Origin-Destination Survey* from the U.S. Department of Transportation, the Official Airline Guide (OAG) and Airline Reporting Corporation (ARC). In this profile, data are combined and compared in order to identify general trends about the airport, as well as offer certain analysis on the findings. A description of these data sources is presented below. Throughout the text, the data sources will be further explained, but this section provides a general overview of the data used in the development of this Airport Air Service Profile.

Air Passenger Origin and Destination (O&D) Survey

DB1B Coupon: The Airline Origin and Destination Survey (DB1B) is a 10 percent sample of airline tickets from reporting carriers collected by the Office of Airline Information of the Bureau of Transportation Statistics. Data from this source provides coupon-specific information for each domestic itinerary of the Origin and Destination Survey.

T-100 Domestic Market: This data source contains domestic market data reported by both U.S. and foreign air carriers, including carrier, origin, destination, and service class for enplaned passengers, freight and mail when both origin and destination airports are located within the boundaries of the United States and its territories.

Official Airline Guide (OAG)

OAG data were summarized as weekly averages for the reported year. All OAG data are for direct flights and represents statistically significant samples of data.

Airline Reporting Corporation (ARC)

The data provided by this source represent a statistically significant and representative sample of airline tickets purchased with a consumer form of payment through an ARC-accredited agency, including major online travel agencies (OTAs), such as Expedia, Orbitz, and Travelocity.

The data represent a 10 percent sample, an industry standard sample size, of passengers from participating agencies. Passenger volumes represented by the data can vary significantly by individual markets, depending on several factors including, but not limited to, the following: 1) the overall composition of air travelers (leisure vs. business); 2) the presence of carriers whose distribution is more heavily weighted toward the direct vs. agency channel (e.g. low cost carriers); and 3) the presence of carriers with limited participation in the ARC settlement system (e.g. Southwest Airlines).

The data used represent passengers and zip codes from where in Florida tickets were purchased. The data include purchases from Florida zip codes only. Because the data in this document represent consumer purchases of airline tickets, there is a natural bias toward leisure and unmanaged business travel behavior and may not account for all business travel. There also may be limitations due to misrepresentation of the passenger information in instances where a person from one zip code purchased a ticket for another person in a different zip code.

Airline Reporting Corporation (ARC) did not assist in the preparation of this analysis, all analyses disclosed herein were performed by Kimley-Horn and Associates, INC., the consultant to the Florida Department of Transportation, Central Aviation Office.

Palm Beach International Airport Air Service Summary

Introduction

Palm Beach International Airport (PBI) began commercial service in 1936. In addition to the commercial service offerings, PBI has served as an Army and Air Force training base throughout the years. The airport is currently served by three runways measuring 3,214 feet, 6,931 feet, and 10,000 feet. Together, these runways served 3,142,580 total enplanements in 2015. Although PBI is located in close proximity to two much larger commercial airports, it remains an important hub airport that serves destinations throughout the United States (U.S.)

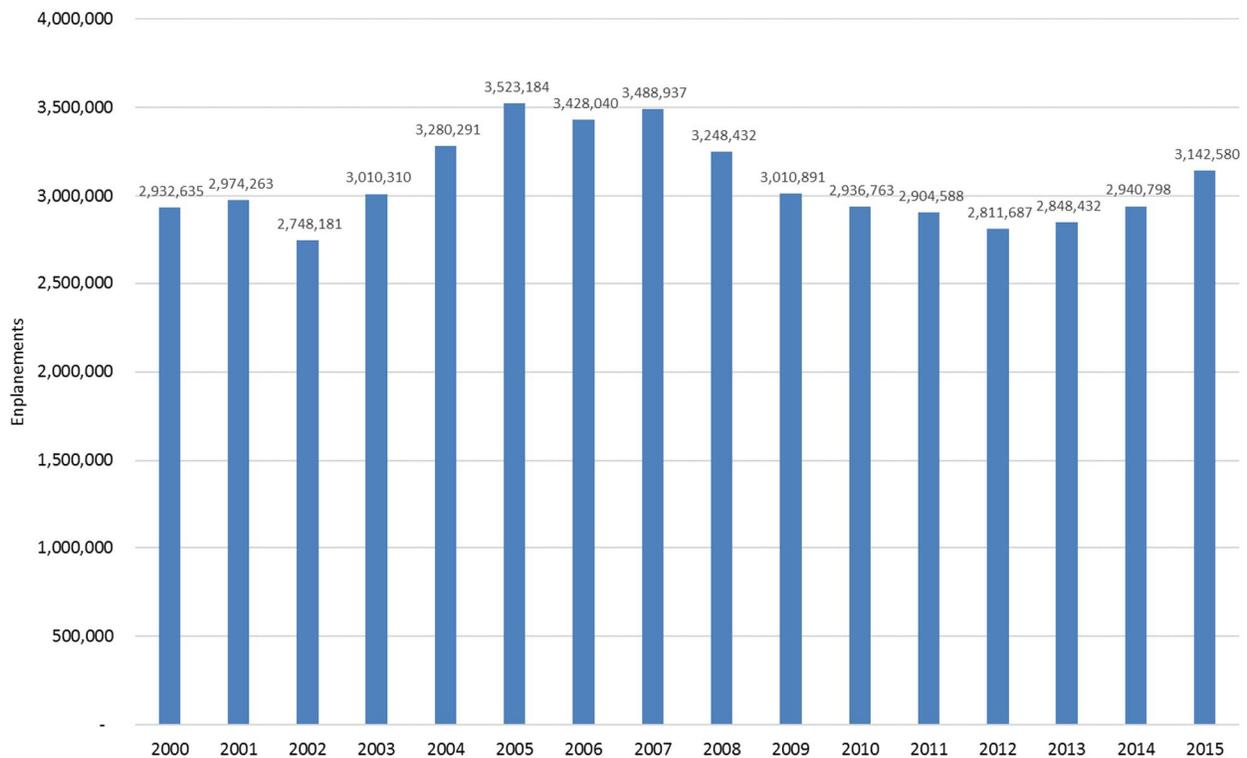
PBI is located in the Southeast Continuing Florida Aviation System Planning Process (CFASPP) region as well as FDOT District four. Also, included in this region and district is Fort Lauderdale-Hollywood International Airport (FLL). This airport profile will illustrate statistical data about PBI including: annual enplanements, local population analysis, as well as many other metrics using baseline conditions reported from 2014 and 2015 data. The following statistical information will provide a description of the most recent overall performance of PBI and how that compares to previous years' performance.

More information about PBI can be found at: <http://www.pbia.org/>

Annual Enplanements

Figure 1 represents total annual enplanements at PBI between 2000 and 2015. This data shows a gradual decline in annual enplanements between 2007 and 2011 and a subsequent increase in annual enplanements between 2012 and 2015. PBI had 3,142,580 enplanements in 2015 compared to 2,811,687 in 2013. This 11.77 percent growth in annual enplanements suggests increasing demand for operations at PBI.

Figure 1. Annual Enplanements¹



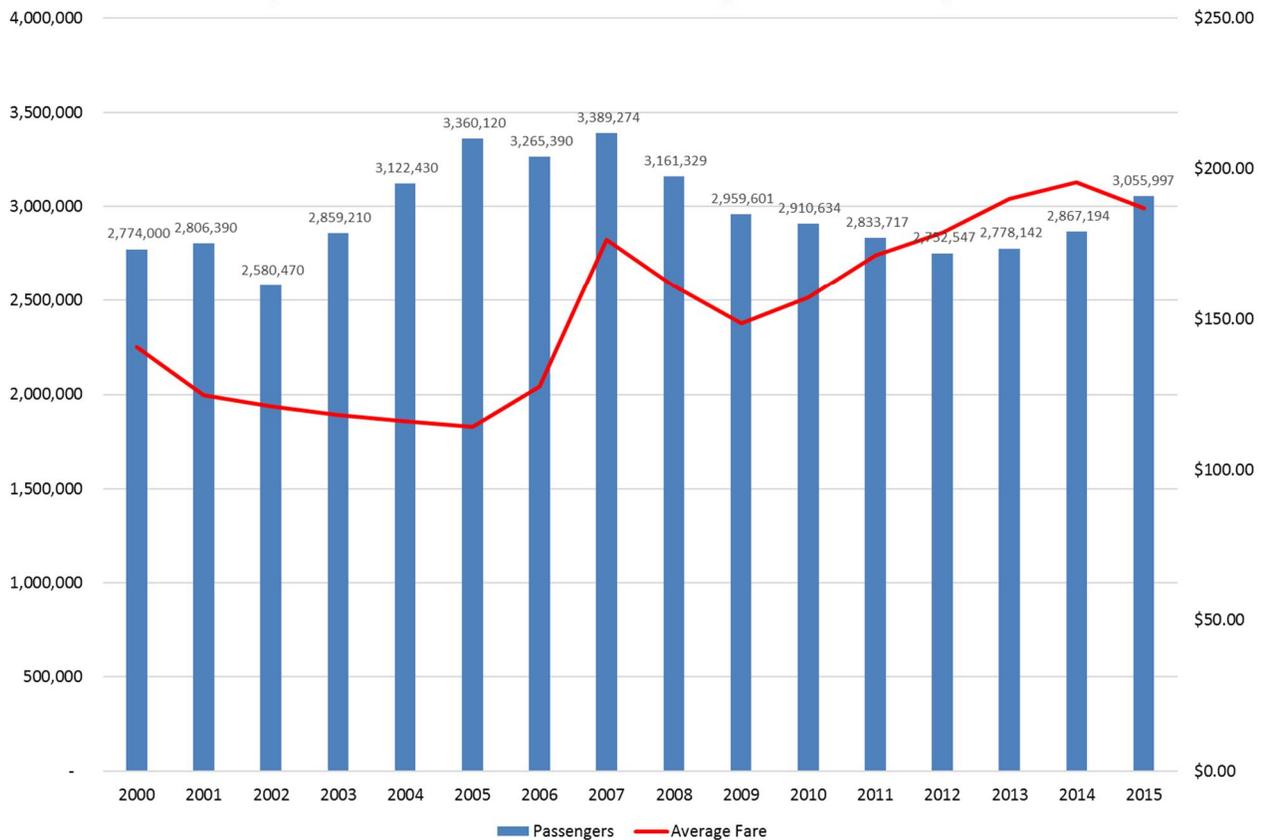
¹ Annual airport passenger traffic reports, provided by FDOT

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Passengers and Fares

PBI saw an increase in annual passengers between 2011 and 2015. In 2015 PBI had 3,055,997 annual domestic passengers, this is roughly a 200,000 passenger increase from the passenger count in 2014. In support of the large increase in passenger count between 2014 and 2015, the average fare at PBI decreased in 2015 to \$187.07. This is roughly an eight percent decrease from 2014, although still well above the low point of \$114.41 in 2005. **Figure 2** displays the annual passengers and annual average fare at PBI.

Figure 2. Annual Domestic Passengers and Average Fares²



² U.S. Department of Transportation (U.S. DOT) Bureau of Transportation Statistics (BTS) O&D Survey & T-100 Domestic Market All Carriers

Destination Airports

PBI served 18 non-stop destinations throughout the U.S. in 2015. One of the 18 destinations was Tampa International Airport (TPA), a neighboring airport within the state of Florida. Of flights departing from PBI, the destination receiving the most weekly flights was Hartsfield-Jackson Atlanta International Airport (ATL). ATL is known as being one of the busiest airports in the world as well as being the primary hub for Delta Air Lines. Regardless of the high number of flights bound for ATL (90 per week), PBI still served destinations all over the United States. **Figure 3** displays PBI's nonstop domestic destinations.

Domestic Routes

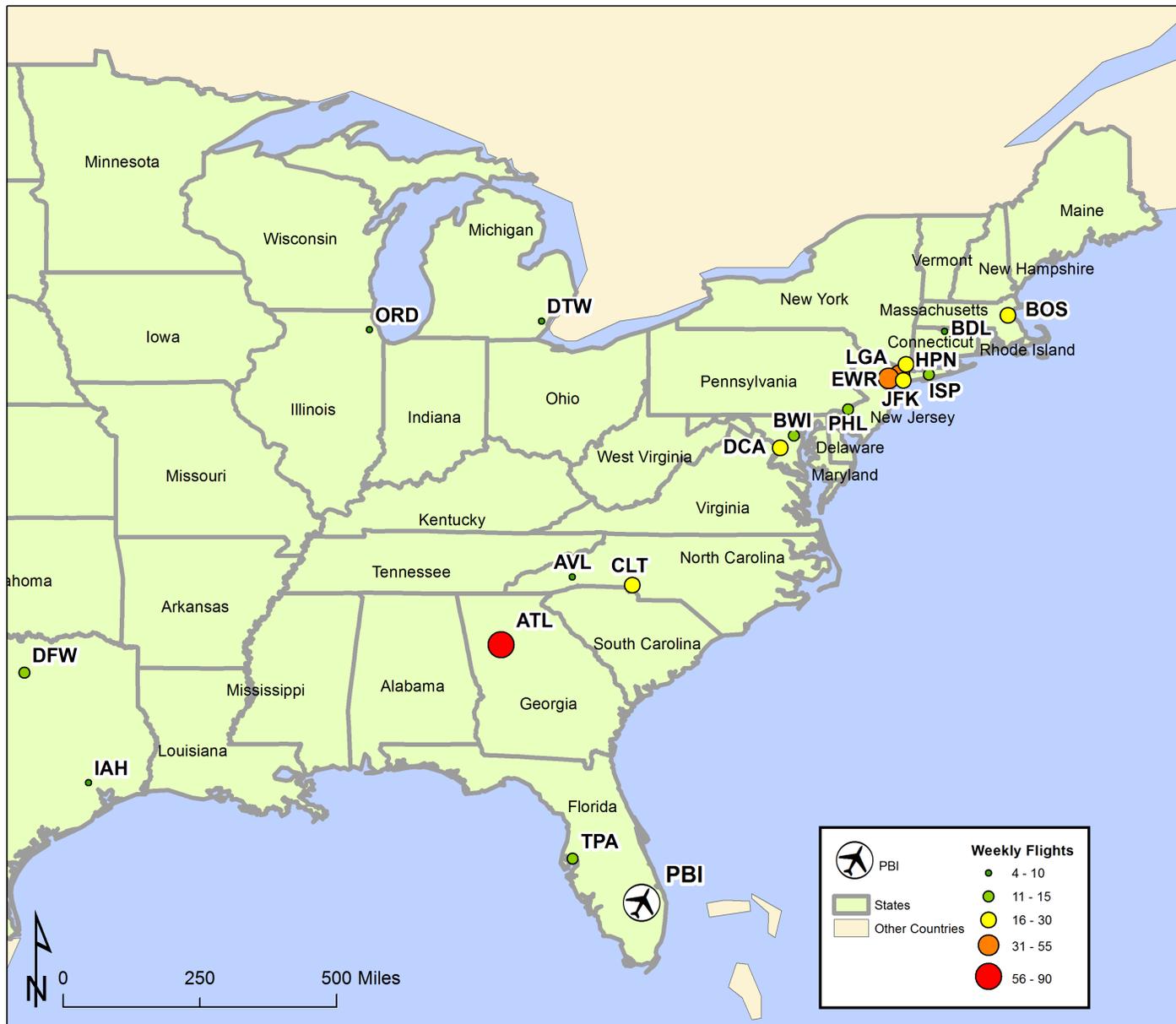
Figure 4 displays PBI's top domestic routes. For purposes of this study, a route is the complete path taken by passengers from the starting airport (in this case PBI) to their final destination. The routes from PBI shown below had the most frequent passengers traveling on them in 2015. All of the routes were direct flights. The final destinations include:

1. LaGuardia Airport (LGA)
2. Newark Liberty International Airport (EWR)
3. Ronald Reagan Washington National Airport (DCA)
4. John F. Kennedy International Airport (JFK)
5. Boston Logan International Airport (BOS)
6. Hartsfield-Jackson Atlanta International Airport (ATL)
7. Philadelphia International Airport (PHL)
8. Chicago O'Hare International Airport (ORD)
9. Dallas/Fort Worth International Airport (DFW)

This analysis represents the intention of travel of the majority of passengers flying out of PBI. It should be noted that the majority of these airports are in the Northeast region of the U.S. Therefore, the appropriate conclusion is that the majority of passengers who travel from PBI are ultimately bound for the Northeast region of the U.S. Data for the routing analysis were obtained from Airline Reporting Corporation (ARC).

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Figure 3. PBI's Nonstop Domestic Destinations³



³ The Official Airline Guide (OAG)

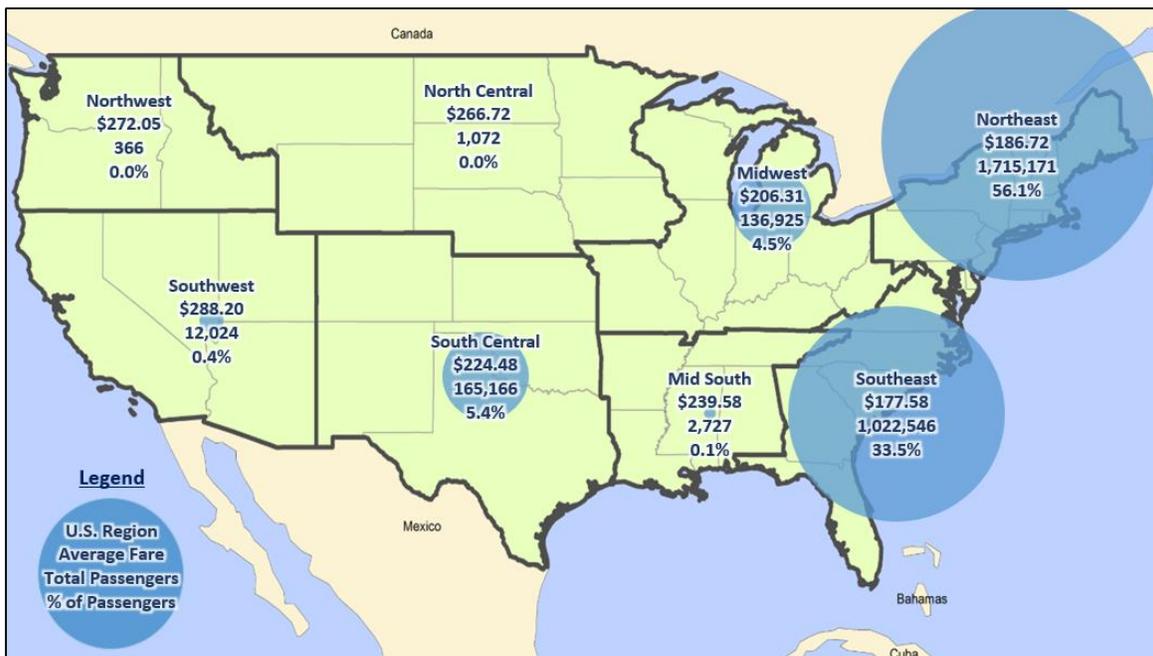
Figure 4. Top Domestic Routes⁴



Domestic Regional Analysis

Figure 5 displays the average fare, number of passengers, and percentage of total passengers departing PBI and bound for each of the eight regions of the United States. The data shows that 56.1 percent of passengers departing PBI were bound for destinations in the Northeast region. The Northeast region contains numerous large hub airports such as JFK, EWR, and LGA that received a large portion of PBI's flights in 2015. It should be noted that **Figure 5** incorporates Florida airports into the southeast region, therefore adding PBI's intrastate service to the southeast percentage. The Southeast region received the second most passengers from PBI in 2015 at 33.5 percent. This region contains Hartsfield-Jackson Atlanta International Airport (ATL) as well as Charlotte Douglas International Airport (CLT), two large hub airports that collectively received a large amount of service from PBI in 2015.

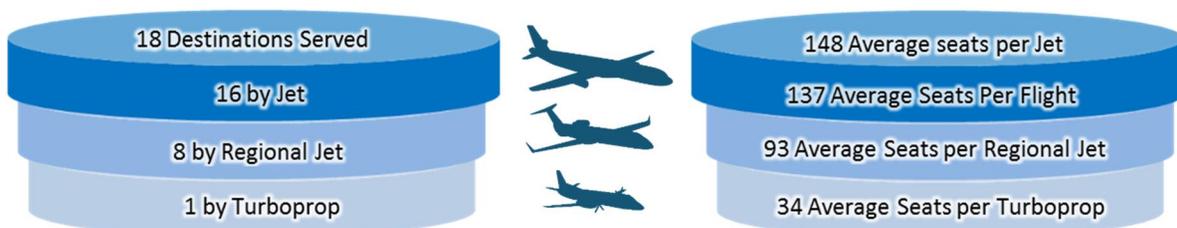
Figure 5. Domestic Passengers and Fares⁵



Aircraft Type

Of the 18 destinations served by PBI, 16 were served by large jet aircraft, 8 by regional jet aircraft, and one by a turboprop aircraft. The use of large jet aircraft has a direct impact on the average seats per flight at an airport. Generally larger jet aircraft substantially increase the average seats per flights. **Figure 6** displays the aircraft types that served the 26 destinations from PBI as well as the average seats per flight on each aircraft type.

Figure 6. Aircraft Types and Average Seats per Flight⁶



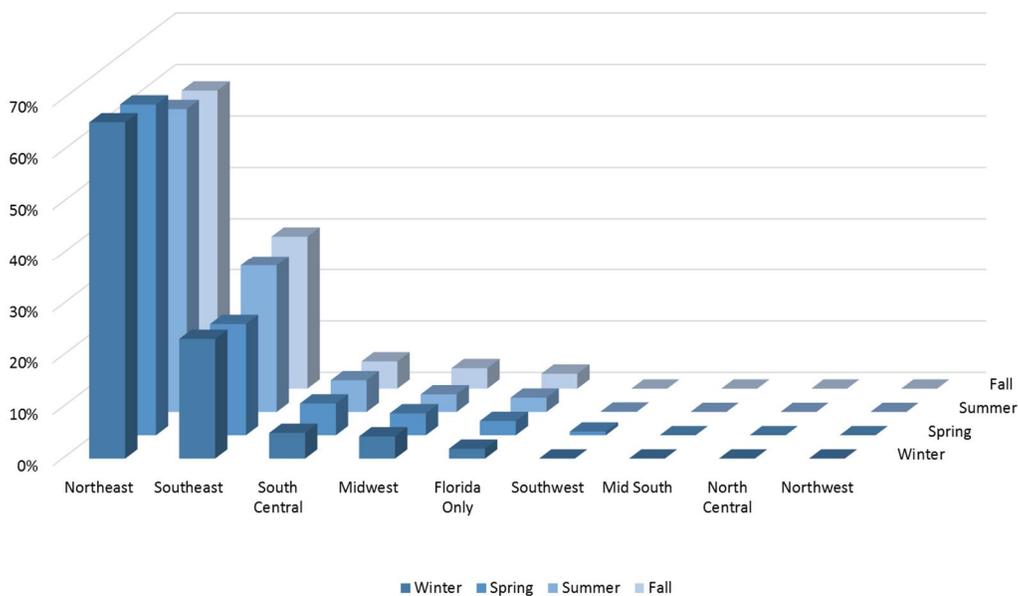
⁵ The Official Airline Guide (OAG)

⁶ The Official Airline Guide (OAG)

Seasonal Flight Comparison

The data shown in **Figure 7** further supports the identification of primary travel to the Northeast region and Southeast region. It should be noted that this figure separates Florida intrastate destinations from the Southeast region. This separation provides a clearer depiction of the out-of-state region's activity in comparison to other regions. The data shows that activity to the Southeast region increases in the summer and fall seasons, while activity to the Northeast region increases in the winter and spring season. This trend of increased activity to the Northeast region in the winter is relatively consistent with all of Florida's commercial service airports.

Figure 7. Season by Region Analysis⁷



Average Load Factors

Average load factors represent the number of passenger miles traveled as a proportion of available seat miles. Higher average load factors represent more total passenger boardings. The average load factor at PBI was 84.29, slightly higher than the U.S. average, 82.68, for 2015. A summary of 2014 and 2015 average load factors is shown in **Table 1**.

Table 1. Average Load Factor Analysis⁸

Year	Domestic	International	Total
Palm Beach International			
2014	85.24	76.92	85.07
2015	84.38	79.67	84.29
All U.S. Airports			
2014	84.49	81.03	82.69
2015	84.98	80.61	82.68

⁷ The Official Airline Guide (OAG)

⁸ The Bureau of Transportation Statistics (BTS) T-100 Table Data

On-Flight Market Freight Statistics

Freight statistics represent the total number of pounds of freight, property other than mail and passenger baggage, transported by air **from** a given airport. In 2015, PBI shipped over 19 million pounds of freight, a roughly two-million-pound decrease from 2014. A summary of 2014 and 2015 on-flight market freight statistics is shown in **Table 2**.

Table 2. PBI Freight⁹

Year	Freight (in pounds)
2014	22,481,947
2015	19,901,664

On-Flight Market Mail Statistics

Mail statistics represent the total number of pounds of U.S. and foreign mail shipped **from** a given airport. PBI had a decrease in pounds of mail shipped between 2014 and 2015 with roughly one million pounds less being shipped in 2015. A summary of 2014 and 2015 on-flight market mail statistics is shown in **Table 3**.

Table 3. PBI Mail¹⁰

Year	Mail (in pounds)
2014	2,957,135
2015	1,997,903

⁹ The Bureau of Transportation Statistics (BTS) T-100 Segment Data

¹⁰ The Bureau of Transportation Statistics (BTS) T-100 Table Data

Market Leakage Study

Introduction

Florida has the highest number of large hub airports (4) of any state in the U.S. Florida also has many commercial service airports (20), which compete over the same potential passengers. There are many factors that play into the decision-making of passengers, ranging from cost to airport proximity to how direct a flight is. Because of these factors, many smaller commercial airports in Florida experience market leakage, or a loss of passengers who choose to drive further distances to airports for various reasons, such as less expensive flights or more convenient flight options. For large airports located in large metropolitan areas leakage may be a less significant factor because they still carry large numbers of passengers. Conversely for smaller airports the loss of passengers to larger airports may potentially be more significant. This analysis looks at tickets purchased in Florida zip codes to see which Florida airports may lose business due to market leakage. The market leakage study analyzes zip codes from where a ticket was purchased and subsequently which airport was departed from for that purchase. To better understand the market leakage findings, key demographic data are presented as part of the market leakage study.

Metropolitan Statistical Area (MSA)

According to the U.S. Census, an MSA is “a geographic entity based on the concept of a core area with a large population nucleus, plus adjacent communities having a higher degree of economic and social integration with that core.” Per this definition, looking at populations, employment, and other important factors at the level of an MSA, should prove beneficial in better understanding the area. PBI is one of three commercial service airports in the Miami-Ft. Lauderdale-Pompano Beach MSA.

Drive Time and Population Analysis

Figure 8 displays the area around PBI that can access the airport with a 90-minute or less drive

Figure 8. 90 Minute Drive Time Area¹²

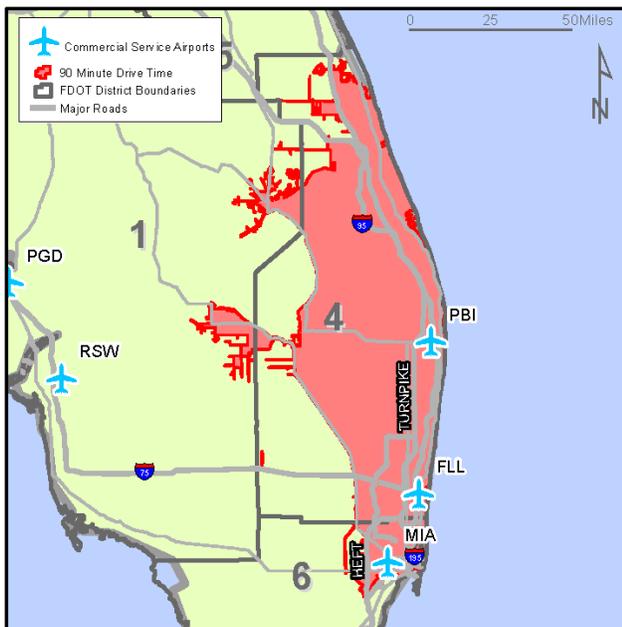


Table 4. Population Within 90 Minutes¹¹

Population Trends	
2010 Total Population	5,402,786
2016 Total Population	5,722,588
2021 Total Population	6,067,692
2040 Total Population	7,579,866
2016-2021 Annual Rate of Change	1.18%
2016-2040 Percent Change	32%

time. Further, **Table 4** displays the population of that area in 2010 and 2016 as well as the projected population in the area for 2021 and 2040. The projected annual rate of change, or growth rate, between 2016 and 2021 of the population in that area is 1.18 percent. With this growth rate, this area is expected to have a 32 percent growth in population by the year 2040. Therefore, by the year 2040, it is anticipated that 7,579,866 people will have a 90 minute or less drive time from their homes to PBI.

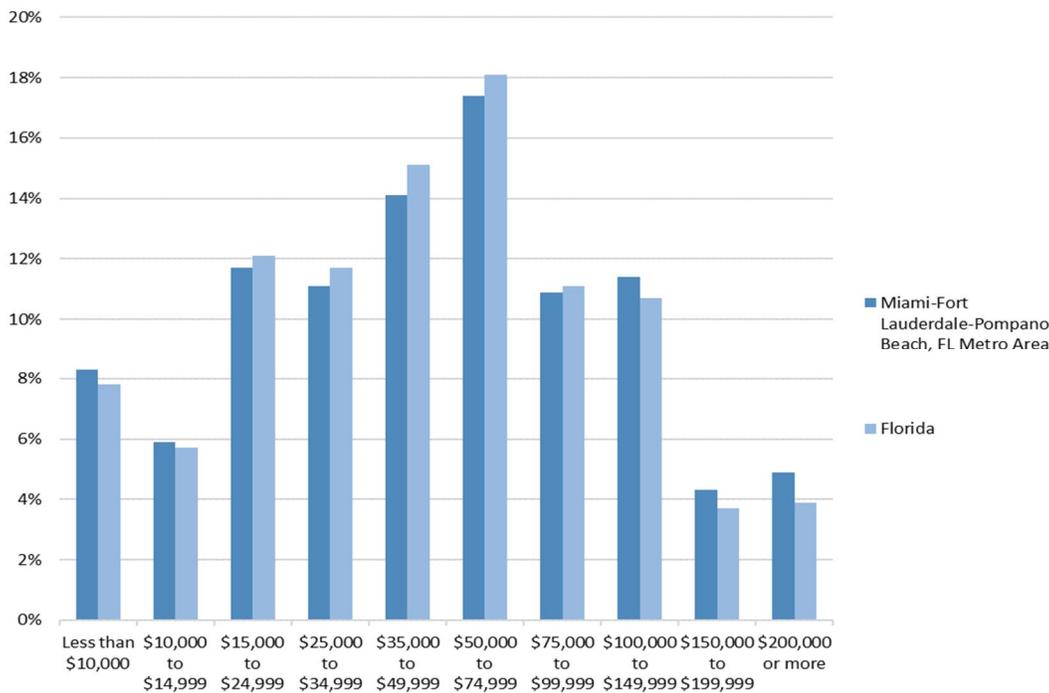
¹¹ U.S. Census Bureau, Census 2010 Summary – ESRI Housing Profile

¹² U.S. Census Bureau, Census 2010 Summary – ESRI Housing Profile

Income Levels

The income distribution in the Miami-Fort Lauderdale-Pompano Beach MSA follows normal trends when compared to other MSA's in the state. However, this MSA has higher percentages of people with an annual income of over \$100,000 than the Florida average. The income in an area may impact the demand for air travel in an area. In an area that has a relatively high number of upper income households, more people may be willing to pay more in order to travel a shorter distance to the airport. In lower income areas, people may be likely to drive a greater distance for air travel in order to capture reduced fares. Many other factors affect airports other than income, and in an area with a dense population that has multiple large hub commercial airports within a relatively close proximity, there may be a multitude of reasons that a household may choose to use a given airport. A summary of income data for the MSA are in **Figure 9**. Income data for the MSA and State was derived from the US Census American Fact Finder.

Figure 9. MSA and Florida Income Comparison¹³

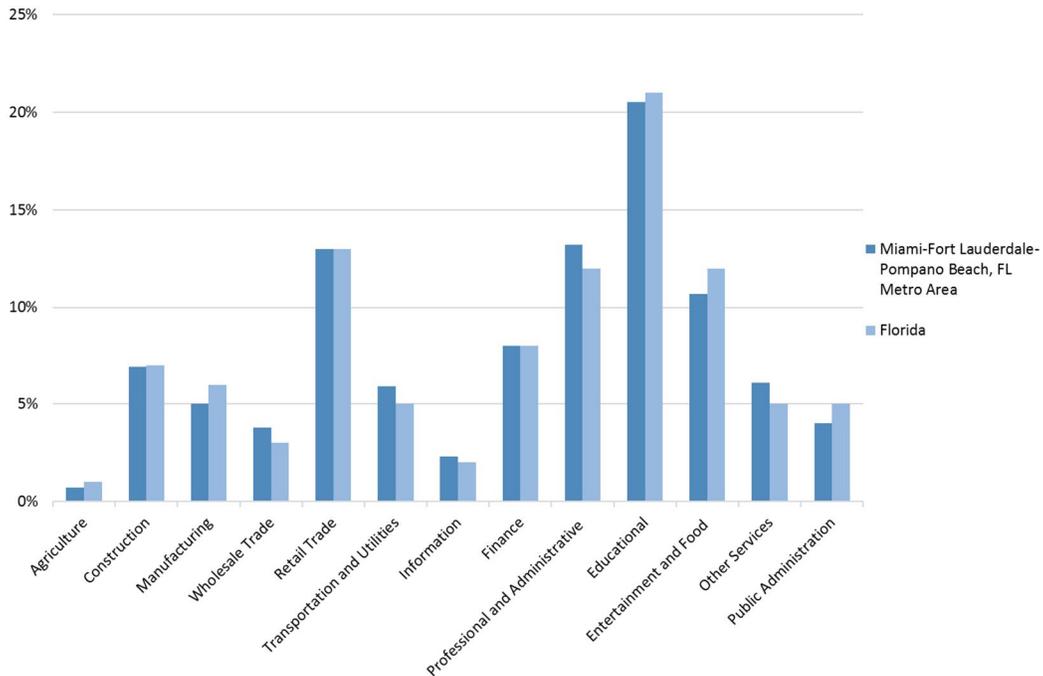


Employment

The primary types of employment located in an area may influence air travel. For areas that have a large number of companies that participate in professional and financial services, demand for local air travel will likely increase because they are less concerned about the cost of flights and more concerned about ease of access to the airport. In most cases, differences will exist between the county and the state averages, but these discrepancies are generally not large enough to impact commercial air service demand. The Miami-Fort Lauderdale-Pompano Beach MSA has a relatively parallel relationship with Florida's employment by industry percentages. A summary of employment by industry can be seen in **Figure 10**. As shown, this MSA has a high employment percentage in the professional and administrative industry compared to the rest of the state. This higher percentage could result in increased demand for local air travel and increase PBI's annual passenger count.

¹³ U.S. Census American Fact Finder

Figure 10. Employment by Industry¹⁴

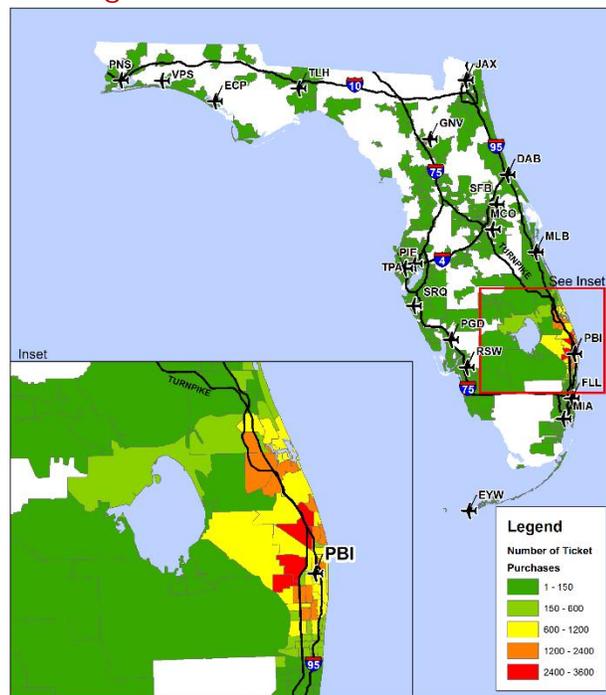


Leakage

Figure 11 displays the zip codes in Florida where tickets for flights departing from PBI were purchased. This graphic shows the purchases of tickets primarily in the area surrounding PBI. However, tickets have been purchased for PBI flights from all over the state of Florida. Some areas with noticeable aggregations of ticket purchases include Orlando, Tampa, and Daytona. The majority of tickets purchased for PBI flights were purchased from in-state locations. However, 41 percent of ticket purchases were from out of state locations. The other states where ticket purchases were made included but aren't limited to:

- New York – 8%
- New Jersey – 4%
- Pennsylvania – 3%
- Massachusetts – 3%

Figure 11. In-state Ticket Purchases¹⁵

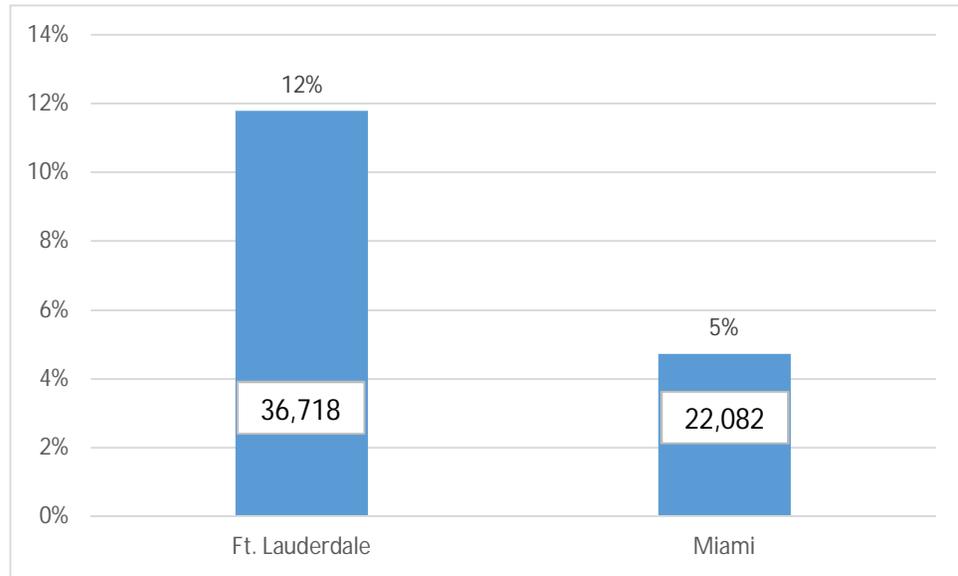


¹⁴ U.S. Census American Fact Finder

¹⁵ Airline Reporting Corporation (ARC)

The airport serves many passengers from the Palm Beach market, but does not appear to attract many passengers from the Ft. Lauderdale-Hollywood International or Miami International markets. From the 2015 market leakage analysis, 12 percent of passengers

Figure 12. In-state Ticket Purchases¹⁶
 (Represented as a Percentage of the Departing Airports Total Enplanement Volumes in 2015)



departing from Ft. Lauderdale-Hollywood International Airport and five percent of passengers departing from Miami International were from Palm Beach County. This analysis shows that Palm Beach is leaking a significant number of passengers from the Palm Beach market to other nearby airports. **Figure 12** illustrates the two main airports (FLL and MIA) that receive leaked passengers from the Palm Beach International Airport market area. The values that are presented represent the number and percent of passengers who purchased their ticket from a Palm Beach County zip code but flew out of an alternative airport. Data presented are from a 10 percent sample from all months of 2015.

¹⁶ Airline Reporting Corporation (ARC)