

3. FORECASTS

This chapter discusses methodologies used to project aviation demand for system airports. Forecasts developed in the Georgia Statewide Aviation System Plan (GSASP) provide a framework to guide analysis for future system development. It should be recognized that there are always short- and long-term fluctuations in demand projections due to a variety of factors that cannot always be anticipated.

Projections of aviation activity for the state were prepared for the near-term (2020), mid-term (2025), and long-term (2035) time frames. These projections assume that system airports will be able to develop the various facilities necessary to accommodate future based aircraft, enplanements, and annual operations.

Projections of aviation demand developed for the system airports are documented in the following sections:

- Industry Trends and Issues That May Impact Future Aviation Growth
- Historic and Current Aviation Activity in Georgia
- Socioeconomic Trends That May Impact Future Aviation Growth
- Projections of Aviation Demand
 - Commercial Service Enplanements and Operations
 - Based Aircraft
 - General Aviation Aircraft Operations

3.1 Industry Trends and Issues That May Impact Future Aviation Growth

3.1.1 Commercial Service Industry Trends

While Georgia’s future commercial air travel demand will be primarily driven by local demand, it will also be influenced by industry trends and carrier decisions. The following trends have and will continue to have the potential to impact scheduled commercial air service in the state.

Airline rightsizing and capacity discipline. In response to the recession of 2007-2009, airline management focused on profitability by cutting unprofitable and redundant flying and minimizing the number of empty seats. Overall, commercial service operations and domestic seat capacity at all US airports declined in that time frame. In addition, many of the mainline/network carriers no longer operate the smaller commercial aircraft needed to cost-effectively serve communities with more limited demand. Mainline/network carriers have transitioned routes they once served to regional partners who, for now, continue to operate aircraft with smaller seating capacities.

US airlines have been profitable over the last several years, and service and passengers have increased. However, their conservative strategy in airline capacity planning remains.

In the near term, there will likely be a “limited growth” environment for the airlines in terms of seat capacity. While some carriers may try to grow market share by keeping some of their older equipment in service, high fuel costs will reinforce stated airline intentions to retire older equipment. Most airlines will remain capacity disciplined. Longer term, the environment should improve somewhat as airlines continue to add aircraft in the 70- to 100-seat range. Many new aircraft will be delivered over the next several years; these new planes will modernize the existing commercial airline fleet.

Airline consolidation and restructuring. Airline consolidation in the last decade, including the mergers of American and US Airways, Delta and Northwest, and United and Continental, has left the United States with

just four mainline/network carriers (including Alaska). Consolidation, as well as a focus on yield improvement, led to capacity rationalization (fewer departing seats). It is anticipated that the remaining consolidated carriers will continue to operate based on cost-cutting strategies driven by profit margins.

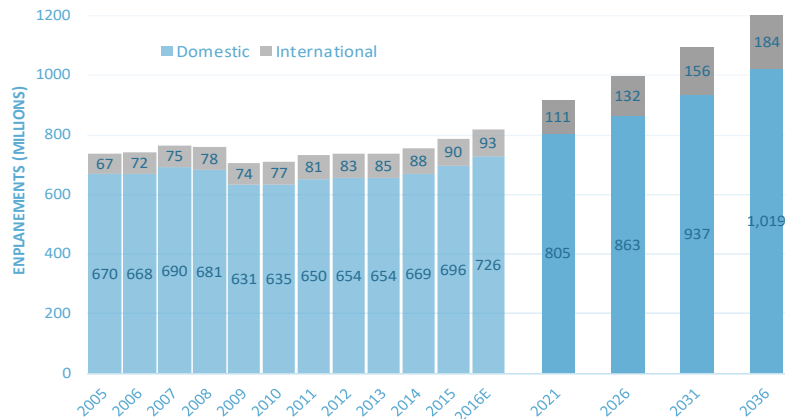
Limited aircraft. The trend in strong growth of the 37- to 50-seat regional jet (RJ) in the 1990s and early 2000s—to replace turboprop aircraft in small markets and supplement narrow-body jet aircraft in larger markets—ended following the spike in jet fuel costs during 2007-2008. It was no longer as economical to fly RJs to provide service to short-haul markets. Operational costs, coupled with the economic recession and curtailed demand, led to the rapid retirement of small RJs throughout all airline networks. However, it is anticipated that the small RJs will continue to have a presence in airline route networks, albeit to a much lesser extent. The migration of network carriers to aircraft with higher seating capacities, in search of lower operating costs, has left many smaller communities with fewer choices in terms of carriers and equipment.

Pilot supply. A nationwide commercial pilot shortage is anticipated to occur in the next several years, potentially impacting commercial airports across the United States. Pilot retirements and fewer pilots coming from the military have reduced the pool of commercial pilots. Further, impediments to becoming a new commercial pilot (including the 1,500-hour rule for flight training to obtain a commercial pilot’s license), the financial burden/cost of flight training, and low entry-level salaries for new commercial pilots have depleted the pilot pipeline. Regional carriers (and the airports they serve) will feel the impact first from the pilot shortage, as regional carrier typically hire new pilots who then move up to network carriers. Because of the shortage of pilots for the commercial carriers and other factors, there are a number of industry experts who believe there will be further consolidation in the airline industry. This further consolidation could put some airports that are served only by a single carrier at risk.

Airfares and growth of ancillary revenues. The price for air travel is a significant factor that influences demand. In general, airfares are influenced by airline operating costs and by competitive influences. Nationally, fares saw a downward trend over the last decade, due largely to changes in fuel prices and the “decoupling” of the ticket price with ancillary services such as baggage fees, seat fees, reservation changes, and food and drink purchases. US carriers have posted net profits for five consecutive years, due in part to ancillary revenues.

US enplanements saw an uptick in 2015 and 2016 due in part to the sharp decline in oil over the last two years that put downward pressure on average air fares. **Figure 3-1** presents the FAA’s 20-year projection of passengers on US carriers. The FAA *Aerospace Forecast, Fiscal Years 2017-2037* anticipates that US airline enplanements will grow 1.9 percent per year on average through the forecast period.

FIGURE 3-1: HISTORIC AND PROJECTED ENPLANEMENTS ON US CARRIERS



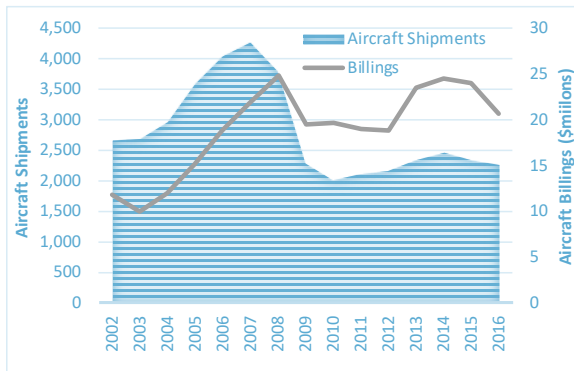
Source: FAA Aerospace Forecasts, Fiscal Years 2017-2037

3.1.2 General Aviation Industry Trends

At the national level, fluctuating trends regarding general aviation usage and economic upturns/downturns have impacted general aviation demand. Slow economic recovery and economic uncertainties have and will continue to impact general aviation demand over the next several years. Some of the national trends that will impact aviation demand at Georgia airports are shown and discussed in this section.

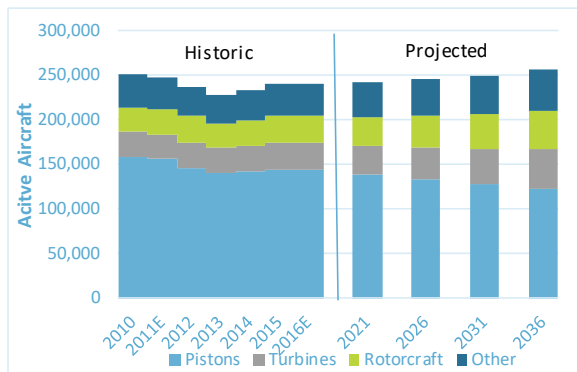
Figure 3-2 presents recent and projected trends in general aviation aircraft orders, active aircraft fleet, and operations.

FIGURE 3-2: GENERAL AVIATION TRENDS



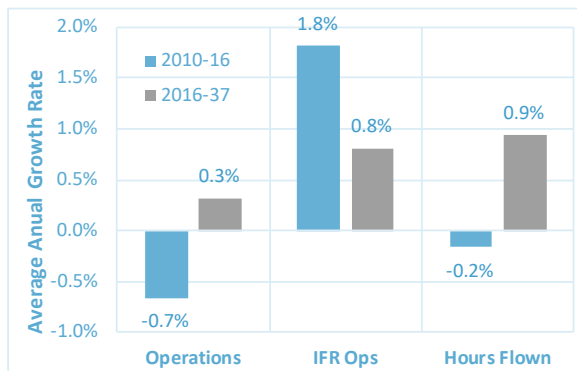
Slow Recovery of General Aviation Aircraft Shipments and Billings*

- Number of units produced fell beginning in 2007 due to economic downturn and escalating fuel prices.
- 2010-2014, production and billings started to show modest improvement, but has again slowed in the last two years.
- Cost trend line is driven by higher percentage of turboprop and jet aircraft purchased to support business travel since 2007.



Stable National Growth in Active Fleet Over the Next 20 Years**

- 2010-2016 Average Annual Growth (AAG): 1.0% decline in total aircraft, driven by 1.7% in single-engine and multi-engine pistons.
- Projected growth in jets and turboprops offsets low-end declines.
- 2016-2037 AAGs:
 - Total aircraft: 0.1%
 - Single engine: -0.9%
 - Multi-engine: -0.5%
 - Jet: 2.3%
 - Rotorcraft: 1.6%
 - Experimental: 1.0%



Slightly Higher Growth Projected for General Aviation Activity**

- General aviation operations to grow 0.3% per year despite recent declines.
- General aviation instrument flight rules (IFR) operations to increase 0.8% per year.
- Hours flown by general aviation aircraft projected to increase 0.9% per year.
- Growth in turbine, rotorcraft, and experimental operations and hours expected to offset a decline in fixed wing piston hours and activity.

Sources: * 2016 General Aviation Statistical Databook and Industry Outlook; ** FAA Aerospace Forecasts, Fiscal Year 2017-2037

Table 3-1 summarizes the trends shown in **Figure 3-2**, showing that while there are opportunities for general aviation growth in the Georgia system, there are also threats to general aviation growth. National trends have impacted Georgia in the past and will continue to impact future growth. National trends have been taken into consideration during the development of demand projections presented later in this chapter.

TABLE 3-1: NATIONAL TRENDS INFLUENCING GENERAL AVIATION GROWTH

Opportunities	Threats
<p>Increased Delivery of Several Aircraft Types 2017-2037 (FAA): Industry trends show that the delivery of some types of GA aircraft is increasing.</p> <ul style="list-style-type: none"> – Turbo Jet: 3.0% Compound Annual Growth Rate (CAGR) – Rotorcraft: 2.6% CAGR – Turboprop: 1.6% CAGR 	<p>Decline in Single-Engine Piston Fleet (FAA): The single engine piston fleet makes up the largest percentage of GA fleet. FAA projects contraction of this portion of the fleet at a rate of -0.9% over the next 20 years.</p> <ul style="list-style-type: none"> – 2005: 148,101 – 2016: 126,820 – 2037 Projected: 105,350 <p>CAGR: 2005-2016: -1.4%; 2016-2037: -0.9%</p>
<p>Growth in Light Sport and Experimental Aircraft (FAA): Because of lower entry and operating costs, industry growth is also projected for light sport and experimental aircraft.</p> <ul style="list-style-type: none"> – Light Sport: 4.1% CAGR – Experimental Aircraft: 1.5% CAGR 	<p>Decline in Active Private Pilots (FAA) The number of active private pilots in the US is decreasing due to new medical requirements for certification and the cost to fly.</p> <ul style="list-style-type: none"> – 2000: 605,700 – 2016: 584,400 <p>CAGR 2005-2016: -0.3%, 2016-2037: 0.1%</p>
<p>Increase in Business Flying: Business use of general aviation aircraft as a tool to increase efficiency and productivity also continues to grow.</p> <ul style="list-style-type: none"> – Efficiency tool – More consistent activity – Purchase more fuel – Higher revenue generators for airports 	<p>Decline in Annual GA Operations at Towered Airports (FAA): GA operations at all towered airports in the US decreased -2.6% per year between 2005 and 2016.</p> <ul style="list-style-type: none"> – 2005: 34.1 million – 2016: 25.5 million – 2037 Projected: 27.3 million <p>– CAGR 2005-2016: -2.6%; 2016-2037: 0.3%</p>
<p>Reduction in Cities with Scheduled Airline Service and Increased Reliance on GA Travel: As airlines continue to consolidate and to reduce or eliminate scheduled service to smaller markets, there is an opportunity for flights on general aviation aircraft to backfill this void.</p>	<p>Phase Out of 100 LL Fuel to Non-Leaded Fuel: Plans to replace 100LL fuel with a non-leaded aviation fuel will result in further reduction in the piston GA fleet.</p>
<p>Some Recovery in GA Shipments and Billings (GAMA): Aircraft shipments and billings have seen small increases over the last six years.</p> <ul style="list-style-type: none"> – Shipments: 2010: 2,024 2016: 2,262 – Billings: 2010: \$19.7M 2016: \$20.7M 	<p>Increase in Cost of New GA Aircraft (aircraft manufacturers): The cost to purchase a new single-engine piston plane has increased significantly.</p> <ul style="list-style-type: none"> – Piper Seneca: \$650,000 (2006) \$1 million (2014) – Cessna 172 Skyhawk: \$300,000 (2005) \$400,000 (2017)

Sources: FAA Aerospace Forecast Fiscal Years 2017-2037, GAMA's 2016 General Aviation Statistical Databook and Industry Outlook

3.2 Historic and Current Aviation Activity in Georgia

Historic activity data for Georgia airports provides a baseline from which future activity can sometimes be projected. While historical trends are not always reflective of future periods, historical data does provide insight into how aviation-related trends may be tied to future growth. This section discusses how aviation activity has changed in Georgia since the 2002 GSASP. Commercial service and general aviation activity over the last decade was greatly impacted by the 2007-2009 US economic downturn, resulting in slower aviation growth in subsequent years.

3.2.1 Commercial Air Service Trends in Georgia

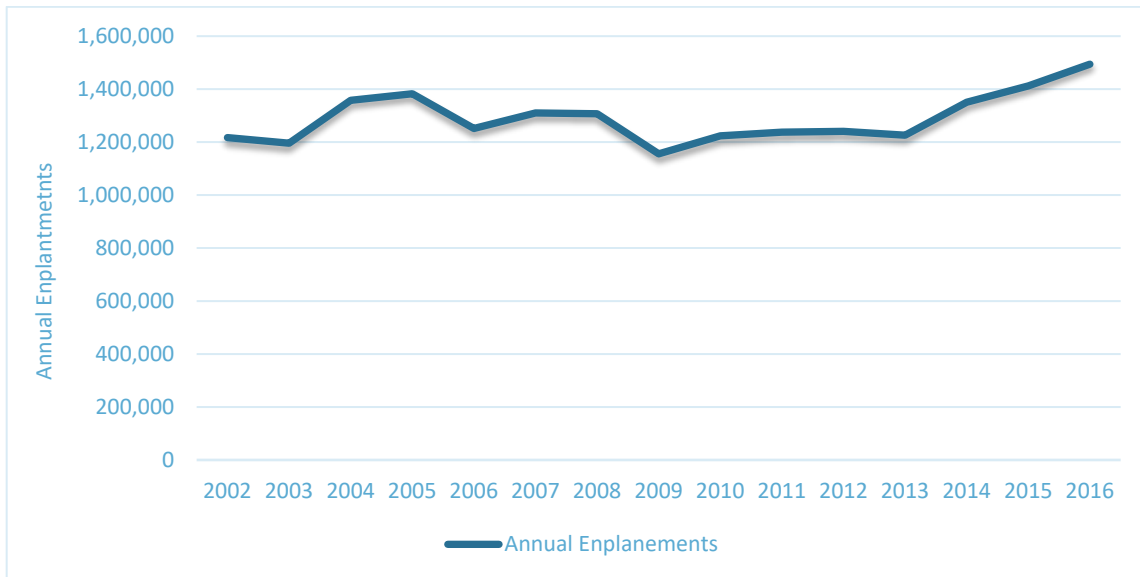
Aviation demand projections for Atlanta-Hartsfield International Airport (Atlanta or ATL) were not developed in this study. Georgia has seven other commercial airports with scheduled airline service, including:

- Southwest Georgia Regional Airport (Albany or ABY)
- Augusta Regional Airport (Augusta or AGS)
- Brunswick-Golden Isles Airport (Brunswick or BQK)
- Columbus Airport (Columbus or CSG)
- Middle Georgia Regional Airport (Macon or MCN)
- Savannah/Hilton Head International Airport (Savannah or SAV)
- Valdosta Regional Airport (Valdosta or VLD)

Collectively, these airports served approximately 1.5 million enplanements in 2016. Most of these enplanements (71 percent) occurred at Savannah/Hilton Head International Airport. One Georgia airport, Middle Georgia Regional Airport in Macon, is part of the US DOT’s Essential Air Service (EAS) program. Athens-Ben Epps Airport had scheduled airline service when the previous GSASP was completed in 2002, but lost service in 2014. The Athens community is actively working to regain commercial air service.

As shown in **Figure 3-3**, enplanements at Georgia’s commercial service airports (excluding ATL) grew at an average annual rate of 1.4 percent between 2002 and 2016. After a decade of declining or flat passenger and service levels between 2005 and 2013, passengers started growing in 2014 and peaked 2016 at 1.53 million.

FIGURE 3-3: HISTORIC ENPLANEMENTS (2002-2016), GEORGIA COMMERCIAL AIRPORTS, EXCLUDING ATL



Sources: Airport management records, FAA, Official Airline Guide

The airlines have not added much capacity (monthly departing seats) since cuts in seat capacity that began in 2006. Carriers have been more profitable since the end of the 2007-2009 economic recession because they reduced seat capacity to better match passenger demand. Fewer empty seats resulted in greater airline profitability.

Between January 2002 and January 2007, the number of average daily departures and departing seats declined 34 percent and 23 percent, respectively¹. As shown in **Table 3-2**, average seats per flight have grown from 65.6 in 2002 to 76.5. While the number of non-stop destinations served from Georgia commercial airports has increased, the number of carriers dropped from seven to five. This decline was due to the major airline mergers over the last 10 years.

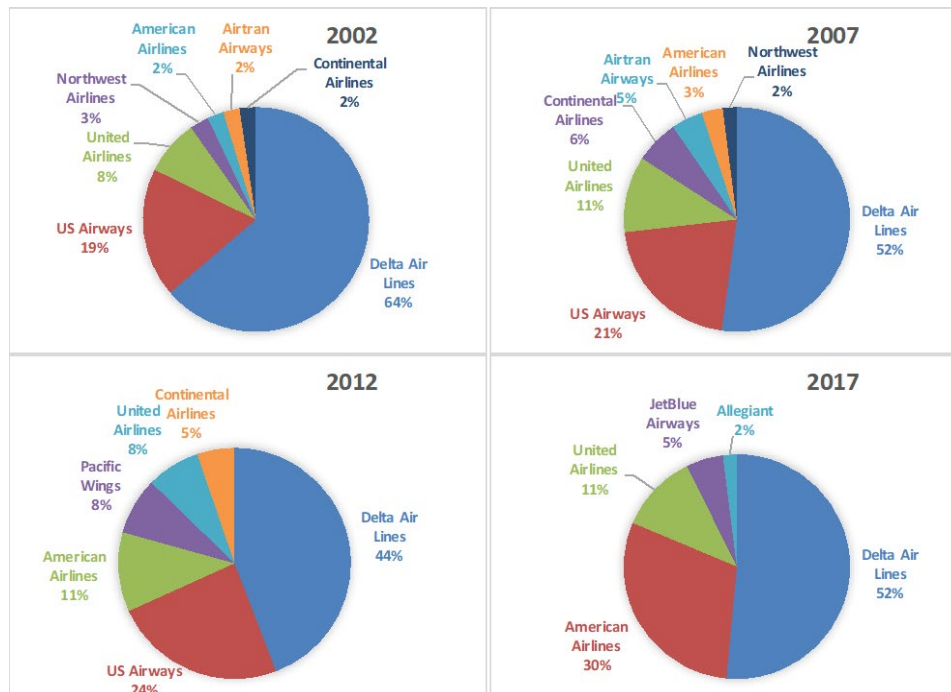
TABLE 3-2: GEORGIA AIR SERVICE SUMMARY (MONTH OF JANUARY 2002-2017), EXCLUDING ATL

	2002	2007	2012	2017
Average Daily Flight Departures	88.1	68.2	70.2	58.5
Average Daily Departing Seats	5,783.0	4,770.8	4,348.5	4,476.5
Average Seats/Flight	65.6	70.0	61.9	76.5
Number of Carriers	7	7	6	5
Number of Destinations	11	12	12	14

Source: FAA, *Official Airline Guide*

Figure 3-4 presents the carrier share of monthly departing flights from all Georgia commercial airports (excluding ATL) for 2002, 2007, 2012, and 2017. As shown, the carrier mix in the state shifted with the mergers of Delta and Northwest (2010), United and Continental (2012), and US Airways and American (2015). Atlanta-based Delta has had the largest share of flights over the last 15 years, albeit at fluctuating levels. JetBlue and Allegiant entered the market in the last five years.

FIGURE 3-4: CARRIER SHARES OF GEORGIA DEPARTING FLIGHTS (MONTH OF JANUARY), EXCLUDING ATL



Source: FAA, *Official Airline Guide*

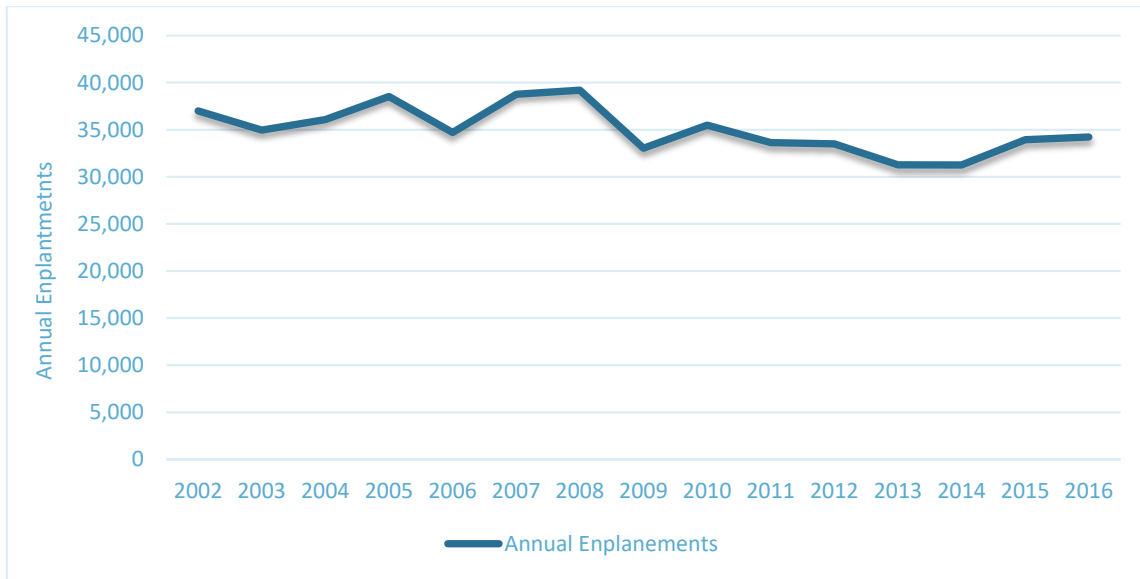
¹ The month of January data was used as it was the most recent data available as of the preparation of this chapter. Although some additional seasonal service does occur at Savannah/Hilton Head International Airport in the summer months, it does not change the overall trends depicted in this analysis.

The following summaries are of the historic activity and passengers at each Georgia commercial airport.

Southwest Georgia Regional Airport (Albany or ABY)

As shown in **Figure 3-5**, between 2002 and 2016 (most recent data available at the time this report was prepared), enplaned passengers at ABY have declined slightly, down 0.6 percent per year on average. After peaking at 39,200 in 2008, enplanements began to dip in 2009, coinciding with a drop-in service from four average daily departures to three. Enplanements were up 8.6 percent in 2015 from 2014 levels and remained flat in 2016.

FIGURE 3-5: ABY HISTORIC ENPLANEMENTS (2002-2016)



Source: FAA, Official Airline Guide

Historic service at Southwest Georgia Regional Airport is presented in **Table 3-3**. Delta’s regional partners Atlantic Southeast (ASA) and ExpressJet have served Southwest Georgia Regional Airport over the last 15 years with nonstop service to Atlanta using 50-seat regional jets. In 2009, Delta dropped one daily flight. Service has remained relatively unchanged since 2009.

TABLE 3-3: ABY AIR SERVICE SUMMARY (MONTH OF JANUARY 2002-2017)

	2002	2007	2012	2017
Average Daily Flight Departures	4.1	3.6	2.8	2.7
Average Daily Departing Seats	204.0	180.0	141.7	136.7
Average Seats/Flight	49.4	50.0	50.0	50.0
Nonstop Destination:	Carrier			
– Atlanta-Hartsfield International	Delta Connection	Delta Connection	Delta Connection	Delta Connection

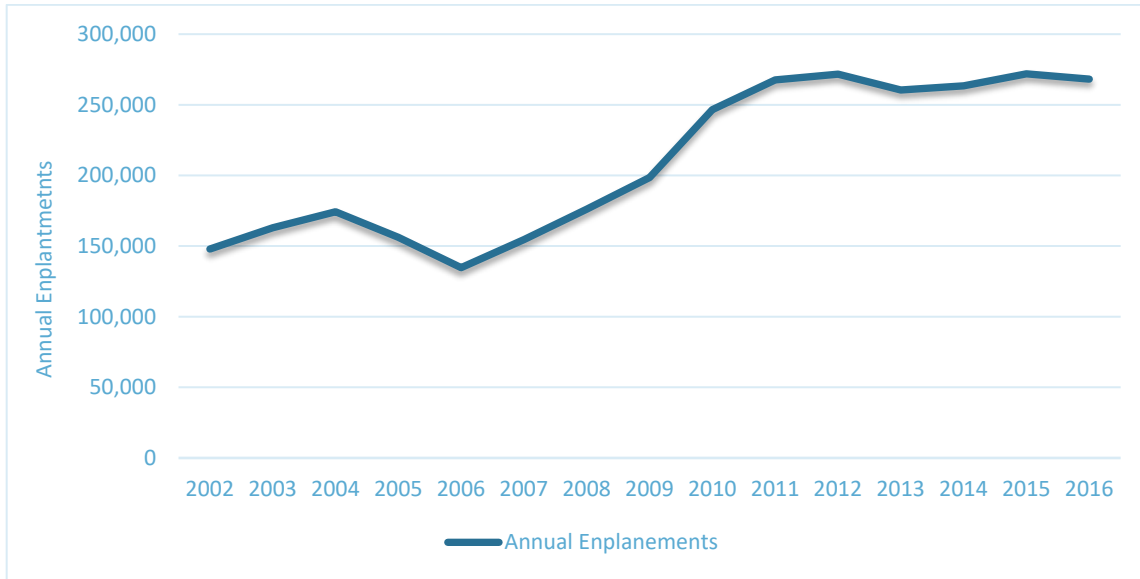
Source: FAA, Official Airline Guide

Legend: Delta Connection (Atlantic Southeast 2002, 2007, 2012, and ExpressJet 2017)

Augusta Regional Airport (Augusta or AGS)

AGS experienced enplanement growth between 2002 and 2016, up 4.3 percent per year on average. Although enplanements have been relatively flat since 2012, they peaked in 2015, reaching 271,915 (Figure 3-6).

FIGURE 3-6: AGS HISTORIC ENPLANEMENTS (2002-2016)



Source: FAA, Official Airline Guide

The service offered at Augusta has changed over the last 15 years (Table 3-4). In January 2002, 15 daily flights were offered to Delta’s hub in Atlanta and US Airways’ hub in Charlotte. By 2006, Delta had dropped from 10 daily departures down to six. American Eagle entered the market in 2011, offering nonstop service to Dallas/Fort Worth International Airport (DFW), but pulled out just one year later. The American and US Airways merger was completed in 2015 and American Eagle took over the service between Augusta and Charlotte. In 2016, Delta added mainline jet service to supplement regional jet service to Atlanta. Table 3-3 presents the increase in aircraft size used to serve Augusta. In 2002, the average number of seats per flights was 48.6. By 2017, the average seats per flight was 64.2.

TABLE 3-4: AGS AIR SERVICE SUMMARY (MONTH OF JANUARY 2002-2017)

	2002	2007	2012	2017
Average Daily Flight Departures	15.1	11.3	16.9	12.5
Average Daily Departing Seats	733.6	561.9	913.8	804.1
Average Seats/Flight	48.6	49.6	54.0	64.2
Nonstop Destinations:	Carriers			
– Atlanta-Hartsfield International	Delta Connection	Delta Connection	Delta Connection	Delta Connection, Delta
– Charlotte Douglas International	US Airways Express	US Airways Express	US Airways Express	American Eagle
– Dallas/Fort Worth International			American Eagle	

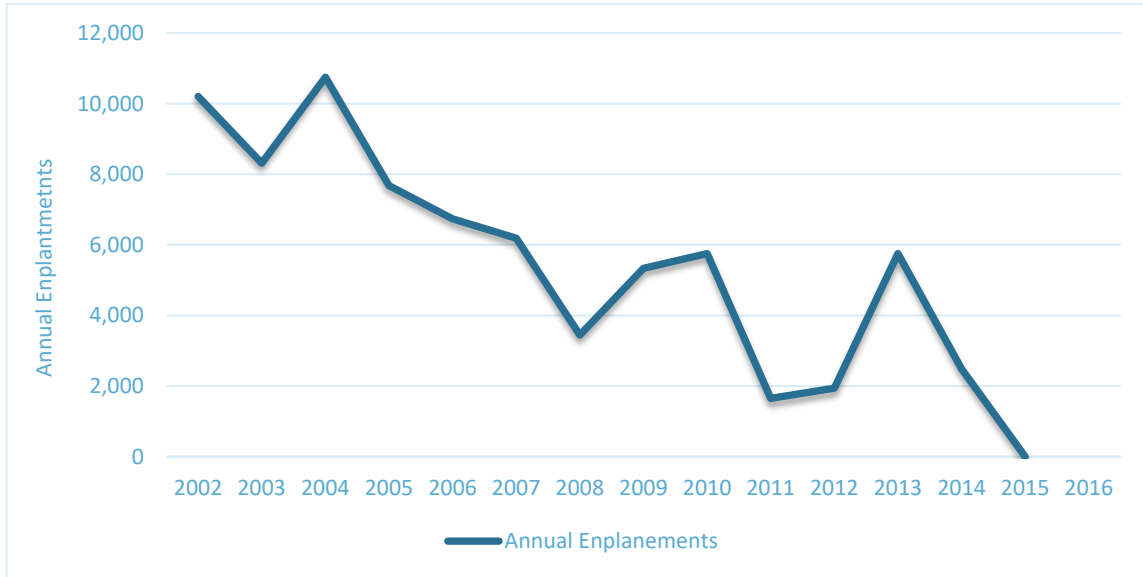
Source: FAA, Official Airline Guide

Legend: Delta Connection = Atlantic Southeast, ExpressJet; American Eagle: 2012 American Eagle, 2017 Piedmont, Air Wisconsin, PSA

Athens-Ben Epps Airport (Athens or AHN)

Athens-Ben Epps Airport experienced declining enplanements over the last decade, as shown in **Figure 3-7**. AHN had been part of the US DOT’s EAS program since airline deregulation. However, after struggling to get passengers to use local service, the US DOT determined in 2014 that Athens was no longer eligible for the subsidy because fewer than 10 passengers boarded planes per day on average. Enplanements peaked in 2004 with 10,750 annually. The last scheduled service flight to Athens was on September 30, 2014.

FIGURE 3-7: AHN HISTORIC ENPLANEMENTS (2002-2016)



Source: FAA, Official Airline Guide

AHN’s historic scheduled airline service is summarized in **Table 3-5**. Until May 2008, Athens was served by twice-daily flights to Charlotte on Air Midwest operating as US Airways Express. GeorgiaSkies took over the airport’s EAS contract and began providing service to Atlanta on nine-seat Cessna 208 Grand Caravan aircraft. This airline was plagued by mechanical problems and cancellations, and enplanements fell. SeaPort Airlines took over AHN’s scheduled service between 2012 and 2014 with flights to Nashville; however, enplanements remained low. As previously mentioned, US DOT issued a determination in 2014 that AHN was no longer eligible for the EAS subsidy due to low enplanements and high subsidy levels.

TABLE 3-5: AHN AIR SERVICE SUMMARY (MONTH OF JANUARY 2002-2017)

	2002	2007	2012	2017
Average Daily Flight Departures	2.7	1.9	1.8	0.0
Average Daily Departing Seats	50.7	36.7	15.9	0.0
Average Seats/Flight	19.0	19.0	9.0	0.0
Nonstop Destinations:	Carriers			
– Atlanta-Hartsfield International			GeorgiaSkies	
– Charlotte Douglas International	US Airways Express	US Airways Express		

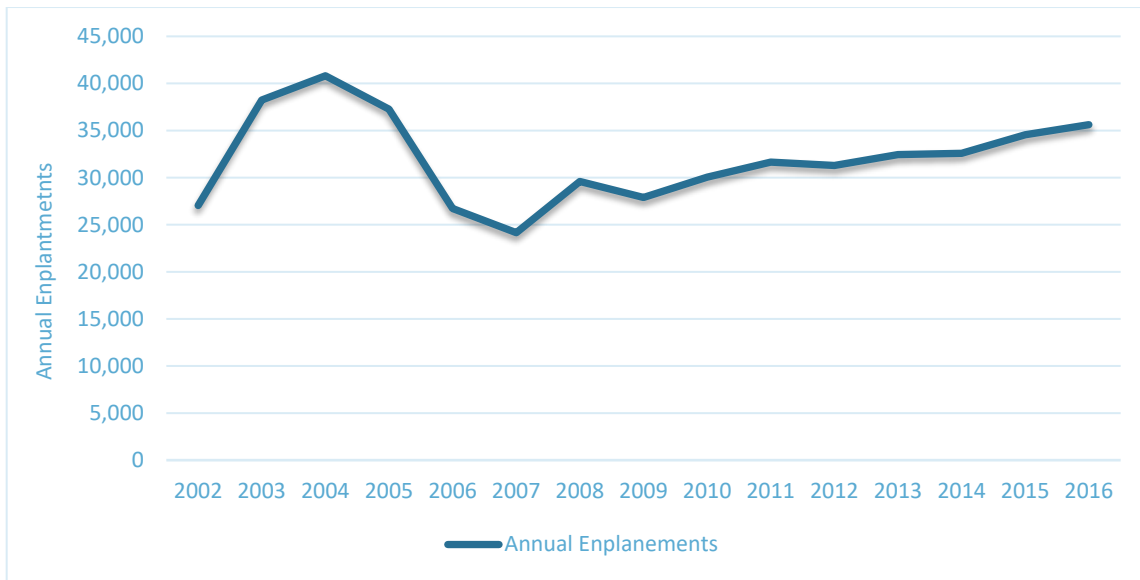
Source: FAA, Official Airline Guide

Legend: US Airways Express = CC Air, Air Midwest; GeorgiaSkies = Pacific Wings

Brunswick-Golden Isles Airport (Brunswick or BQK)

As shown in **Figure 3-8**, enplanements at Brunswick-Golden Isles Airport peaked in 2004 at 40,814. After declining enplanements between 2004 and 2007, the airport has experienced a gradual increase. Between 2007 and 2016 passengers grew at an average annual rate of 4.4 percent, significantly above the national average.

FIGURE 3-8: BQK HISTORIC ENPLANEMENTS (2002-2016)



Source: FAA, Official Airline Guide

Delta’s regional partners provided nonstop service between Brunswick and Atlanta between 2002 and 2017 (**Table 3-6**). Delta transitioned from the 30-seat Brasilia to the 50-seat regional jets in 2002. In 2006, Delta dropped a daily flight, decreasing from four daily departures to three, on average. Scheduled airline service at Brunswick has remained relatively unchanged since 2007.

TABLE 3-6: BQK SERVICE SUMMARY (MONTH OF JANUARY 2002-2017)

	2002	2007	2012	2017
Average Daily Flight Departures	3.9	2.7	2.6	2.8
Average Daily Departing Seats	118.0	135.0	128.3	138.3
Average Seats/Flight	30.0	50.0	50.0	50.0
Nonstop Destination:	Carrier			
– Atlanta-Hartsfield International	Delta Connection	Delta Connection	Delta Connection	Delta Connection

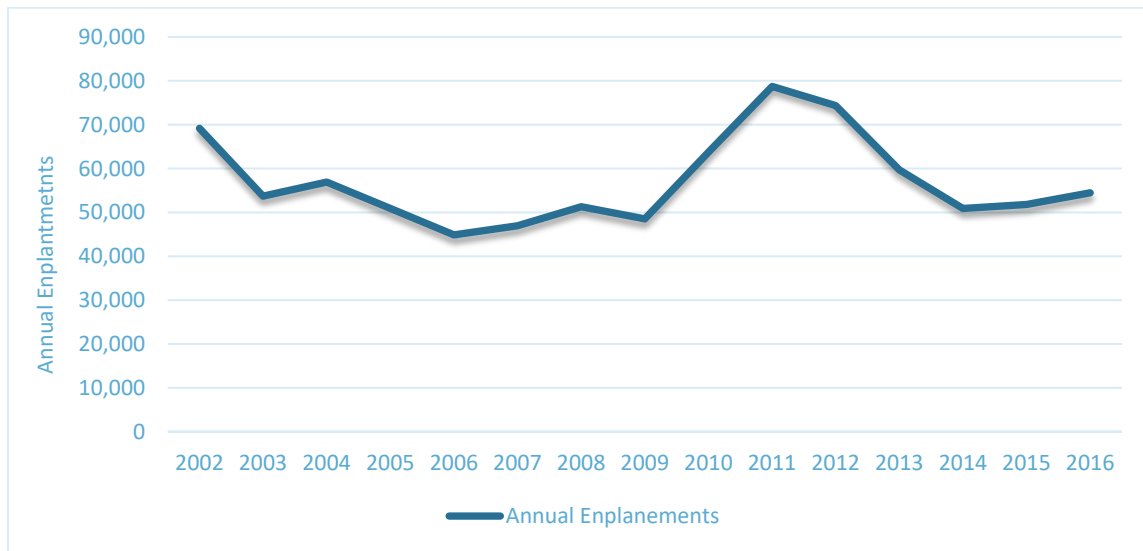
Source: FAA, Official Airline Guide

Legend: Delta Connection = Atlantic Southeast 2002, 2007, 2012 and ExpressJet 2017

Columbus Airport (Columbus or CSG)

Enplanements at Columbus fluctuated between 2002 and 2016. In 2002, 69,200 passengers enplaned flights at CSG. Following drops in service, enplanements followed suit, falling to 48,500 by 2009. American Airlines added service in 2010 which led to a jump in enplanements, but American exited the market by 2013 due to declining demand. With one carrier in the market in 2014, annual enplanements remained around the 50,000 passenger mark, as shown in **Figure 3-9**.

FIGURE 3-9: CSG HISTORIC ENPLANEMENTS (2002-2016)



Source: FAA, *Official Airline Guide*

A summary of the scheduled airline service at Columbus over the last 15 years is presented in **Table 3-7**. In January 2017, CSG had 75 percent fewer departing flights and seats than it had in 2002. In 2002, Delta offered seven daily departures to Atlanta, and US Airways Express offered three flights per day to Charlotte. US Airways exited the market in 2003, and Delta dropped the number of daily departures to four by 2006. American Eagle entered the market in 2010, providing two additional flights to DFW. However, the service could not be sustained, and Delta was once again the only carrier in the market by 2014. Delta dropped one more flight in 2014 and offered just 2.6 average daily scheduled departures from Columbus in January 2017.

TABLE 3-7: CSG AIR SERVICE SUMMARY (MONTH OF JANUARY 2002-2017)

	2002	2007	2012	2017
Average Daily Flight Departures	10.1	3.8	5.6	2.6
Average Daily Departing Seats	508.3	250.8	261.4	131.7
Average Seats/Flight	50.3	66.0	46.7	50.0
Nonstop Destinations:	Carriers			
– Atlanta-Hartsfield International	Delta Connection	Delta Connection	Delta Connection	Delta Connection
– Charlotte Douglas International	US Airways Express			
– Dallas/Fort Worth International			American Eagle	

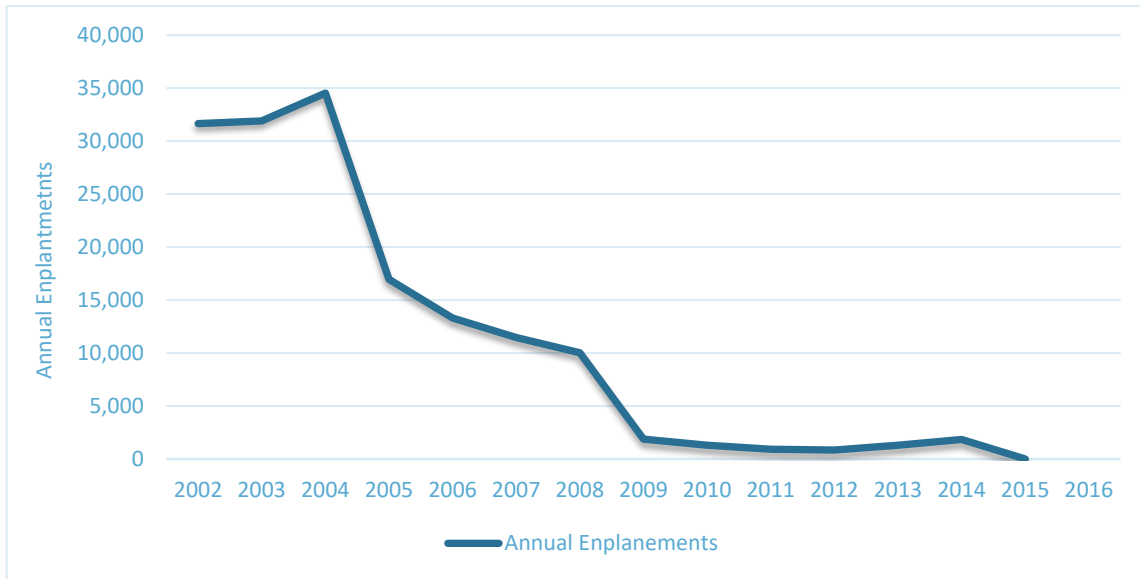
Source: FAA, *Official Airline Guide*

Legend: Delta Connection = Atlantic Southeast 2002, 2007, 2012 and ExpressJet 2017, US Airways Express = Piedmont

Middle Georgia Regional Airport (Macon or MCN)

As shown in **Figure 3-10**, Middle Georgia Regional Airport experienced a large decline in enplanements. Enplanements at this airport peaked in 2004 at 34,500. Delta regional partner Atlantic Southeast Airlines (ASA) served the market until the end of 2008. ASA dropped daily departures between 2002 and 2008 from seven to three before it terminated service toward the end of 2008. By this time, annual enplanements had dropped to just over 10,000. Enplanements on GeorgiaSkies (2008-2013) and Silver Airways (2013-2014) continued to spiral downward and were under 1,500 each year. Silver Airways pulled out of the market at the end of 2014, leaving Macon without air service.

FIGURE 3-10: MCN HISTORIC ENPLANEMENTS (2002-2016)



Source: FAA, *Official Airline Guide*

As shown in **Table 3-8**, service at MCN has changed drastically over the last 15 years. Service by ASA dropped from seven daily flights and 265 daily departing seats in January 2002 to three daily flights and 134 departing seats when ASA left the market 2008. GeorgiaSkies began subsidized EAS in 2008, offering service on the nine-seat Cessna 208 Grand Caravan. The service was plagued by issues with gate usage in Atlanta and cancellations. Silver Airways, using a 34-seat Saab, replaced GeorgiaSkies with service to Atlanta in 2013, but the carrier’s reliability and schedule limited its success, and the carrier pulled out of the Macon market after just nine months of service. After several years without scheduled commercial airline service, Contour Airways began flights between Macon and Baltimore-Washington International Airport (BWI) on August 18, 2017. Contour receives a \$4.7 million annual subsidy to support 12 weekly flights between the two markets on 37-seat ERJ-135 jet aircraft. Standard airfares on the route range from \$69-\$199 each way.

TABLE 3-8: MCN AIR SERVICE SUMMARY (MONTH OF JANUARY 2002, 2007, 2012 AND AUGUST 2017)

	2002	2007	2012	2017 ¹
Average Daily Flight Departures	7.0	3.1	3.8	1.7
Average Daily Departing Seats	264.6	173.3	34.5	63.4
Average Seats/Flight	37.6	55.9	9.0	37.0
Nonstop Destination:	Carriers			
– Atlanta-Hartsfield International	Delta Connection	Delta Connection	GeorgiaSkies	Contour Airlines

Source: FAA, *Official Airline Guide*

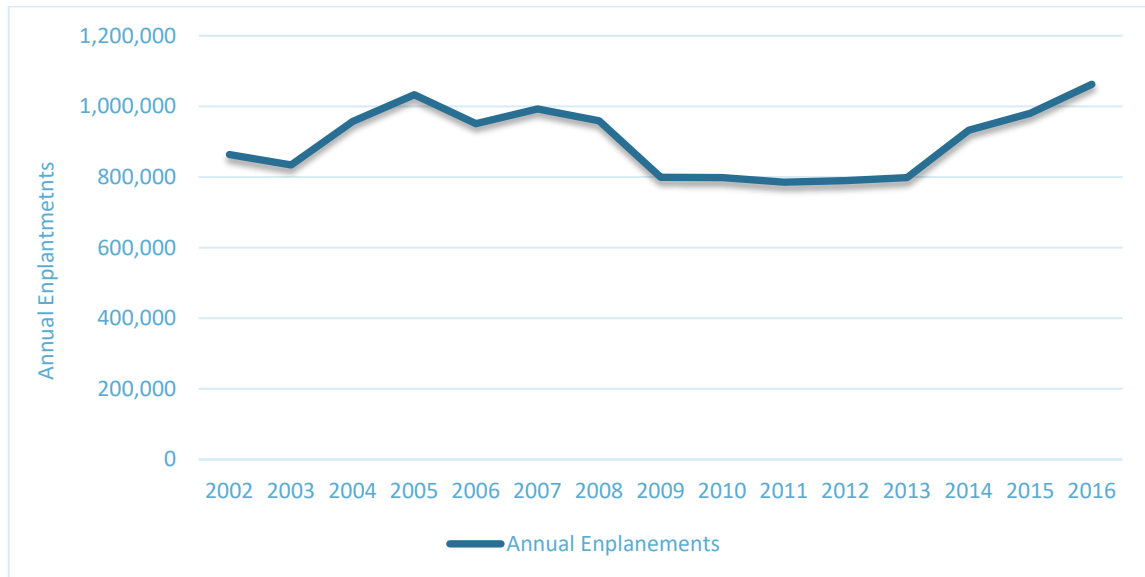
Note: ¹ Contour Airlines began new service from MCN to Baltimore-Washington International in August 2017.

Legend: Delta Connection = Atlantic Southeast; GeorgiaSkies = Pacific Wings

Savannah/Hilton Head International Airport (Savannah or SAV)

Enplanements at Savannah/Hilton Head International Airport have fluctuated since 2002, as graphed in **Figure 3-11**. On average, enplanements grew at 1.5 percent per year between 2002 and 2016. Due to airline mergers over the last decade, including the AirTran/Southwest merger and the economic downturn, annual enplanements dropped from 1 million in 2005 to 800,000 through 2013. JetBlue entered the Savannah market in 2014 and enplanements grew again, reaching 980,000 in 2015 and topping 1 million again in 2016.

FIGURE 3-11: SAV HISTORIC ENPLANEMENTS (2002-2016)



Source: FAA, *Official Airline Guide*

Table 3-9 presents a historic service summary for SAV. In January 2002, the airport had 39 average daily departures on seven carriers to 10 destinations. AirTran exited the market in October 2008, leaving the airport with no low-cost carrier. The mergers of Northwest and Delta, Continental and United, and US Airways and American left fewer carriers at the airport. SAV also experienced many changes in service levels to various destinations including Detroit, Cincinnati, Philadelphia, and Washington, DC. Low-fare carrier JetBlue entered the Savannah market in 2014 providing service to Boston and New York-JFK. In 2016, Allegiant entered the market as well. Although just five carriers served Savannah in January 2017, the airport had an average of 35 daily departures.

TABLE 3-9: SAV AIR SERVICE SUMMARY (MONTH OF JANUARY 2002-2017)

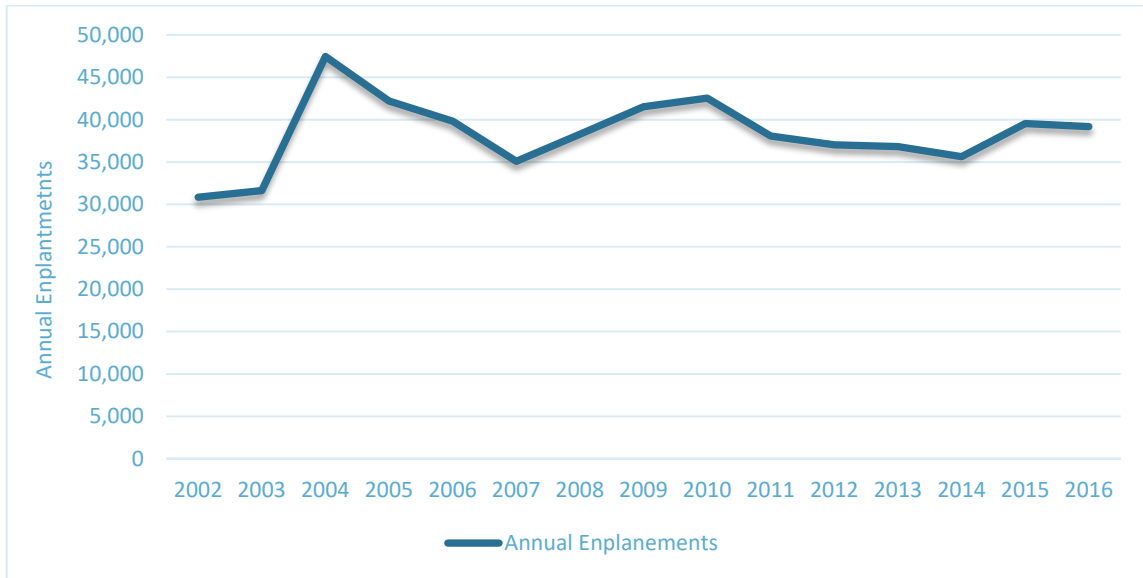
	2002	2007	2012	2017
Average Daily Flight Departures	39.3	38.9	33.8	34.8
Average Daily Departing Seats	3,728.8	3,277.0	2,709.6	3,113.9
Average Seats/Flight	94.8	84.3	80.1	89.4
Number of Carriers	7	7	6	5
Number of Destinations	10	12	12	14
Nonstop Destinations:	Carriers			
– Atlanta-Hartsfield International	AirTran, Delta	AirTran, Delta	Delta	Delta, Delta Connection
– LaGuardia	Delta Connection	Delta Connection	Delta Connection	Delta Connection
– Cincinnati/Northern Kentucky International	Delta Connection	Delta Connection		Allegiant
– Detroit Metropolitan Wayne County	Northwest Airlink	Northwest Airlink	Delta Connection	
– Dallas/Fort Worth International	American Eagle, Delta Connection	American Eagle	American Eagle	American Eagle
– O'Hare International	United Express	United Express	United Express	United Express
– Washington Dulles International	United Express	United Express	United Express	United Express
– Newark International	Continental Express	Continental Express	Continental Express	Allegiant, United Express
– George Bush Intercontinental		Continental Express	Continental Express	United Express
– Charlotte Douglas International	US Airways	US Airway Express	US Airway Express	American Eagle
– Philadelphia International	US Airway Express	US Airway Express	US Airway Express	American Eagle
– Washington National		US Airway Express	US Airway Express	American Eagle
– Miami International			American Eagle	
– Boston Logan International				JetBlue
– John F. Kennedy International				Delta Connection, JetBlue
– Baltimore-Washington International				Allegiant

Source: FAA, *Official Airline Guide*

Valdosta Regional Airport (Valdosta or VLD)

As shown in **Figure 3-12**, enplanements at VLD peaked in 2004 at 47,500. In 2004, Delta partner Atlantic Southeast (ASA) added two daily flights. By 2007, enplanements fell to 35,100, coinciding with a drop in scheduled service. Between 2008 and 2016, enplanements remained between 35,000 and 42,000 each year. Overall, between 2002 and 2016, annual enplanements grew at an average annual rate of 1.7 percent.

FIGURE 3-12: VLD HISTORIC ENPLANEMENTS (2002-2016)



Source: FAA, Official Airline Guide

As shown in **Table 3-10**, Delta’s regional partners, ASA (2002-2012) and ExpressJet (2012-2017), provided nonstop service between Valdosta and Atlanta. Service levels declined from six daily departures on 30-seat aircraft in 2002 to three daily departures on 50-seat regional jet aircraft by 2007. Service levels remained relatively unchanged between January 2007 and January 2017.

TABLE 3-10: VLD AIR SERVICE SUMMARY (MONTH OF JANUARY 2002-2017)

	2002	2007	2012	2017
Average Daily Flight Departures	5.8	2.9	2.9	2.9
Average Daily Departing Seats	175.0	156.1	143.3	143.3
Average Seats/Flight	30.0	54.5	50.0	50.0
Nonstop Destination:	Carriers			
– Atlanta-Hartsfield International	Delta Connection	Delta Connection	Delta Connection	Delta Connection

Source: FAA, Official Airline Guide

Legend: Delta Connection = Atlantic Southeast 2002, 2007, 2012 and ExpressJet 2017

3.2.2 General Aviation Trends in Georgia

This section discusses how general aviation activity has changed in Georgia since the 2002 SASP was completed. Over the past 15 years, general aviation has been impacted by events such as 9/11, the 2007-2009 US economic downturn, high aviation fuel costs, and declining numbers of those seeking pilot training.

Based aircraft are aircraft that are permanently stored at an airport. In 2016, 4,852 aircraft were reported based at Georgia’s 103 system airports. This is down 6.7 percent from 2001 or -0.5 percent per year on average. This decline mirrors the decline in active general aviation aircraft experienced in the United States over the last decade.

Since the 2002 GSASP, the FAA changed the way airports report based aircraft. Prior to the new program, based aircraft were frequently double counted, i.e. assigned to more than one airport. Subsequently, it is possible

that some of the reported decline of Georgia’s based aircraft since the 2002 GSASP is a result of the FAA’s new based aircraft counting program.

For this analysis, an operation is defined as either a takeoff or a landing. Current aircraft operational data for this system plan were derived from the airport manager’s verification of the FAA’s 5010 reports or from data reported by an airport air traffic control tower (ATCT). For non-towered airports, annual operations reported on the Form 5010 are estimates only, they are not verified through actual counts.

Local operations are defined by the FAA as those performed by aircraft that 1) operate in a local traffic pattern or within sight of an airport, 2) depart or arrive to practice landings and takeoffs within a 20-mile radius, or 3) execute an instrument approach. All other operations are considered itinerant. Air taxi operations are itinerant operations that are typically conducted by air charter operators or Part 135 operators. Operators certified under Part 135 of the Federal Aviation Regulations (FAR) conduct business aircraft operations for compensation and must comply with requirements on operations, maintenance, and training.

Annual general aviation operations at Georgia system airports for 2016 were estimated to be 1.51 million. This total includes estimates at non-towered airports and actual air traffic control tower counts. Ten airports in Georgia (excluding ATL) have an aircraft control tower.² Since 2001, total operations have declined 33.6 percent overall (-2.7 percent per year on average). At the time of the 2002 GSASP, a total of 2.3 million annual general aviation operations were reported. Since the 2002 GSASP, general aviation operations for the 10 airports with ATCTs have declined 42.7 percent, representing an average annual rate of decline of -3.6 percent.

While general aviation activity has decreased since the 2002 GSASP was prepared, it is possible that some of noted decrease could be from better demand estimates by airport managers at non-towered airports. Airports have done a better job monitoring and tracking activity over the last decade. GDOT also adjusted several airports’ operational counts if they appeared to be overstated when compared to statewide and national trends or FAA guidelines.

Table 3-11 presents the change in based aircraft and general aviation operations at each Georgia system airport.

TABLE 3-11: BASED AIRCRAFT AND GENERAL AVIATION OPERATIONS ESTIMATES IN GEORGIA

Associated City	FAA ID	Airport	Based Aircraft				General Aviation Operations		
			2001	2016	Change	CAGR	2001	2016	CAGR
Commercial Airports									
Albany	ABY	Southwest Georgia Regional Airport	52	30	-22	-3.6%	45,253	16,134	-6.6%
Augusta	AGS	Augusta Regional Airport At Bush Field	17	13	-4	-1.8%	43,687	15,124	-6.8%
Athens	AHN	Athens-Ben Epps Airport	118	92	-26	-1.6%	64,623	33,485	-4.3%
Brunswick	BQK	Brunswick-Golden Isles Airport	60	38	-22	-3.0%	20,300	28,000	2.2%
Columbus	CSG	Columbus Airport	137	130	-7	-0.3%	48,322	14,485	-7.7%
Macon	MCN	Middle Georgia Regional Airport	91	97	6	0.4%	27,771	13,677	-4.6%
Savannah	SAV	Savannah/Hilton Head International Airport	106	134	28	1.6%	96,816	55,612	-3.6%

² Towered airports in Georgia include Southwest Georgia Regional, Augusta Regional, Athens-Ben Epps, Columbus, Middle Georgia Regional, Savannah/Hilton Head International, Cobb County International, DeKalb-Peachtree, Fulton County, and Gwinnett County.

TABLE 3-11: BASED AIRCRAFT AND GENERAL AVIATION OPERATIONS ESTIMATES IN GEORGIA

Associated City	FAA ID	Airport	Based Aircraft				General Aviation Operations		
			2001	2016	Change	CAGR	2001	2016	CAGR
Valdosta	VLD	Valdosta Regional Airport	43	51	8	1.1%	39,615	11,343	-8.0%
General Aviation Airports									
Adel	15J	Cook County Airport	30	25	-5	-1.2%	6,820	4,500	-2.7%
Alma	AMG	Bacon County Airport	10	10	0	0.0%	6,600	720	-13.7%
Americus	ACJ	Jimmy Carter Regional Airport	23	29	6	1.6%	13,600	9,100	-2.6%
Ashburn	75J	Turner County Airport	4	3	-1	-1.9%	4,500	1,200	-8.4%
Atlanta	FFC	Atlanta Regional Airport-Falcon Field (Peachtree City)	108	178	70	3.4%	50,517	70,000	2.2%
Atlanta	RYY	Cobb County International Airport-McCollum Field	314	303	-11	-0.2%	115,650	62,805	-4.0%
Atlanta	CVC	Covington Municipal Airport	40	39	-1	-0.2%	41,904	12,000	-8.0%
Atlanta	PDK	DeKalb-Peachtree Airport	608	346	-262	-3.7%	233,233	157,623	-2.6%
Atlanta	FTY	Fulton County Airport-Brown Field	310	82	-228	-8.5%	105,502	55,853	-4.2%
Atlanta	CCO	Newnan-Coweta County Airport	84	95	11	0.8%	31,149	64,681	5.0%
Atlanta	PUJ	Paulding-Northwest Atlanta Airport	0	20	20	-	-	4,000	-
Augusta	DNL	Daniel Field Airport	75	56	-19	-1.9%	42,600	30,000	-2.3%
Bainbridge	BGE	Decatur County Industrial Air Park	43	41	-2	-0.3%	11,000	15,000	2.1%
Baxley	BHC	Baxley Municipal Airport	23	14	-9	-3.3%	10,500	5,000	-4.8%
Blairsville	DZJ	Blairsville Airport	22	46	24	5.0%	6,000	33,455	12.1%
Blakely	BIJ	Early County Airport	11	14	3	1.6%	8,000	325	-19.2%
Brunswick	SSI	McKinnon-St. Simons Island Airport	86	78	-8	-0.6%	43,500	48,000	0.7%
Buena Vista	82A	Marion County Airport	1	0	-1	-	600	500	-1.2%
Butler	6A1	Butler Municipal Airport	16	11	-5	-2.5%	7,500	3,022	-5.9%
Cairo	70J	Cairo-Grady County Airport	20	16	-4	-1.5%	8,000	6,054	-1.8%
Calhoun	CZL	Tom B. David Field Airport	64	107	43	3.5%	19,600	20,000	0.1%
Camilla	CXU	Camilla-Mitchell County Airport	22	26	4	1.1%	12,000	7,386	-3.2%
Canon	18A	Franklin County Airport	21	22	1	0.3%	5,500	4,000	-2.1%
Canton	CNI	Cherokee County Airport	104	109	5	0.3%	23,600	30,000	1.6%
Carrollton	CTJ	West Georgia Regional Airport-O.V. Gray Field	94	103	9	0.6%	47,325	29,500	-3.1%
Cartersville	VPC	Cartersville Airport	155	137	-18	-0.8%	69,500	25,550	-6.5%
Cedartown	4A4	Polk County Airport-Cornelius Moore Field	27	21	-6	-1.7%	11,500	7,696	-2.6%
Claxton	CWV	Claxton-Evans County Airport	9	11	2	1.3%	3,800	2,000	-4.2%
Cochran	48A	Cochran Airport	13	17	4	1.8%	9,500	2,000	-9.9%
Cordele	CKF	Crisp County-Cordele Airport	23	17	-6	-2.0%	26,100	4,381	-11.2%

TABLE 3-11: BASED AIRCRAFT AND GENERAL AVIATION OPERATIONS ESTIMATES IN GEORGIA

Associated City	FAA ID	Airport	Based Aircraft				General Aviation Operations		
			2001	2016	Change	CAGR	2001	2016	CAGR
Cornelia	AJR	Habersham County Airport	52	74	22	2.4%	20,400	20,000	-0.1%
Cuthbert	25J	Lower Chattahoochee Regional Airport	2	3	1	2.7%	2,000	500	-8.8%
Dahlonega	9A0	Lumpkin County-Wimpy's Airport	18	20	2	0.7%	4,600	5,000	0.6%
Dalton	DNN	Dalton Municipal Airport	55	45	-10	-1.3%	23,500	1,825	-15.7%
Dawson	16J	Dawson Municipal Airport	59	40	-19	-2.6%	23,500	10,811	-5.0%
Donalsonville	17J	Donalsonville Municipal Airport	9	21	12	5.8%	8,500	5,412	-3.0%
Douglas	DQH	Douglas Municipal Airport	17	31	14	4.1%	20,500	12,000	-3.5%
Dublin	DBN	W.H. "Bud" Barron Airport	28	24	-4	-1.0%	25,650	8,000	-7.5%
Eastman	EZM	Heart Of Georgia Regional Airport	38	26	-12	-2.5%	10,530	17,155	3.3%
Elberton	EBA	Elbert County Airport-Patz Field	20	22	2	0.6%	7,450	6,000	-1.4%
Ellijay	49A	Gilmer County Airport	1	20	19	22.1%	2,500	2,162	-1.0%
Fitzgerald	FZG	Fitzgerald Municipal Airport	25	32	7	1.7%	12,225	1,350	-13.7%
Folkston	3J6	Davis Field Airport	5	5	0	0.0%	4,200	2,059	-4.6%
Gainesville	GVL	Lee Gilmer Memorial Airport	106	134	28	1.6%	36,550	38,690	0.4%
Greensboro	3J7	Greene County Regional Airport	20	15	-5	-1.9%	7,000	1,100	-11.6%
Griffin	6A2	Griffin-Spalding County Airport	105	99	-6	-0.4%	17,400	12,000	-2.4%
Hampton	HMP	Henry County Airport	143	85	-58	-3.4%	29,800	7,000	-9.2%
Hawkinsville	51A	Hawkinsville-Pulaski County Airport	8	2	-6	-8.8%	5,500	745	-12.5%
Hazlehurst	AZE	Hazlehurst Airport	17	28	11	3.4%	6,650	1,400	-9.9%
Hinesville	LHW	Wright Army Airfield (Fort Stewart)/MidCoast Regional Airport	7	24	17	8.6%	4,500	3,190	-2.3%
Homerville	HOE	Homerville Airport	2	1	-1	-4.5%	900	832	-0.5%
Jasper	JZP	Pickens County Airport	44	65	21	2.6%	6,000	19,817	8.3%
Jefferson	JCA	Jackson County Airport	65	58	-7	-0.8%	10,500	16,600	3.1%
Jekyll Island	09J	Jekyll Island Airport	0	5	5	-	2,000	5,000	6.3%
Jesup	JES	Jesup-Wayne County Airport	3	15	12	11.3%	5,000	6,000	1.2%
LaFayette	9A5	Barwick Lafayette Airport	46	53	7	0.9%	6,500	6,500	0.0%
LaGrange	LGC	Lagrange-Callaway Airport	66	57	-9	-1.0%	16,261	12,000	-2.0%
Lawrenceville	LZU	Gwinnett County Airport-Briscoe Field	280	213	-67	-1.8%	108,543	84,476	-1.7%
Louisville	2J3	Louisville Municipal Airport	20	16	-4	-1.5%	11,004	6,000	-4.0%
Macon	MAC	Macon Downtown Airport	19	31	12	3.3%	19,500	8,807	-5.2%
Madison	52A	Madison Municipal Airport	9	18	9	4.7%	3,250	4,700	2.5%
Mc Rae	MQW	Telfair-Wheeler Airport	7	11	4	3.1%	5,000	3,000	-3.3%

TABLE 3-11: BASED AIRCRAFT AND GENERAL AVIATION OPERATIONS ESTIMATES IN GEORGIA

Associated City	FAA ID	Airport	Based Aircraft				General Aviation Operations		
			2001	2016	Change	CAGR	2001	2016	CAGR
Metter	MHP	Metter Municipal Airport	21	19	-2	-0.7%	4,350	2,000	-5.0%
Milledgeville	MLJ	Baldwin County Airport	21	24	3	0.9%	10,000	4,285	-5.5%
Millen	2J5	Millen Airport	3	5	2	3.5%	2,500	1,040	-5.7%
Monroe	D73	Monroe-Walton County Airport	33	37	4	0.8%	12,000	10,000	-1.2%
Montezuma	53A	Dr. C.P. Savage, Sr. Airport	7	9	2	1.7%	5,500	500	-14.8%
Moultrie	MGR	Moultrie Municipal Airport	28	31	3	0.7%	14,100	10,839	-1.7%
Moultrie	MUL	Spence Airport	10	3	-7	-7.7%	10,000	1,100	-13.7%
Nahunta	4J1	Brantley County Airport	2	0	-2	-	1,000	350	-6.8%
Nashville	4J2	Berrien County Airport	17	9	-8	-4.2%	6,000	3,500	-3.5%
Perry	PXE	Perry-Houston County Airport	51	90	39	3.9%	18,000	19,500	0.5%
Pine Mountain	PIM	Harris County Airport	3	22	19	14.2%	7,500	7,097	-0.4%
Quitman	4J5	Quitman Brooks County Airport	24	21	-3	-0.9%	11,000	2,500	-9.4%
Reidsville	RVJ	Swinton Smith Field At Reidsville Municipal Airport	3	11	8	9.0%	4,500	3,969	-0.8%
Rome	RMG	Richard B. Russell Regional Airport-J.H. Towers Field	105	78	-27	-2.0%	29,000	36,538	1.6%
St Marys	4J6	St Marys Airport	22	15	-7	-2.5%	12,250	4,261	-6.8%
Sandersville	OKZ	Kaolin Field Airport	7	17	10	6.1%	10,150	5,183	-4.4%
Soperton	4J8	Treutlen County Airport	3	0	-3	-	600	600	0.0%
Statesboro	TBR	Statesboro-Bulloch County Airport	30	63	33	5.1%	20,000	18,500	-0.5%
Swainsboro	SBO	East Georgia Regional Airport	6	13	7	5.3%	4,750	4,500	-0.4%
Sylvania	JYL	Plantation Airpark	25	44	19	3.8%	10,500	12,000	0.9%
Sylvester	SYV	Sylvester Airport	3	2	-1	-2.7%	3,000	795	-8.5%
Thomaston	OPN	Thomaston-Upson County Airport	44	90	46	4.9%	22,800	16,060	-2.3%
Thomasville	TVI	Thomasville Regional Airport	58	60	2	0.2%	32,000	10,085	-7.4%
Thomson	HQU	Thomson-McDuffie Regional Airport	54	24	-30	-5.3%	31,050	10,105	-7.2%
Tifton	TMA	Henry Tift Myers Airport	47	33	-14	-2.3%	17,000	8,000	-4.9%
Toccoa	TOC	Toccoa Airport-RG LeTourneau Field	57	52	-5	-0.6%	30,000	7,300	-9.0%
Vidalia	VDI	Vidalia Regional Airport	20	32	12	3.2%	16,500	17,500	0.4%
Warm Springs	5A9	Roosevelt Memorial Airport	7	13	6	4.2%	5,000	3,000	-3.3%
Washington	IYY	Washington-Wilkes County Airport	14	16	2	0.9%	5,200	6,000	1.0%
Waycross	AYS	Waycross-Ware County Airport	42	35	-7	-1.2%	17,000	5,860	-6.9%
Waynesboro	BXG	Burke County Airport	3	12	9	9.7%	3,000	3,000	0.0%
Winder	WDR	Barrow County Airport	141	109	-32	-1.7%	61,000	36,000	-3.5%
Wrens	65J	Wrens Memorial Airport	8	9	1	0.8%	3,600	1,976	-3.9%

TABLE 3-11: BASED AIRCRAFT AND GENERAL AVIATION OPERATIONS ESTIMATES IN GEORGIA

Associated City	FAA ID	Airport	Based Aircraft				General Aviation Operations		
			2001	2016	Change	CAGR	2001	2016	CAGR
All Georgia Airports			5,199	4,852	-347	-0.5%	2,270,250	1,508,286	-2.7%

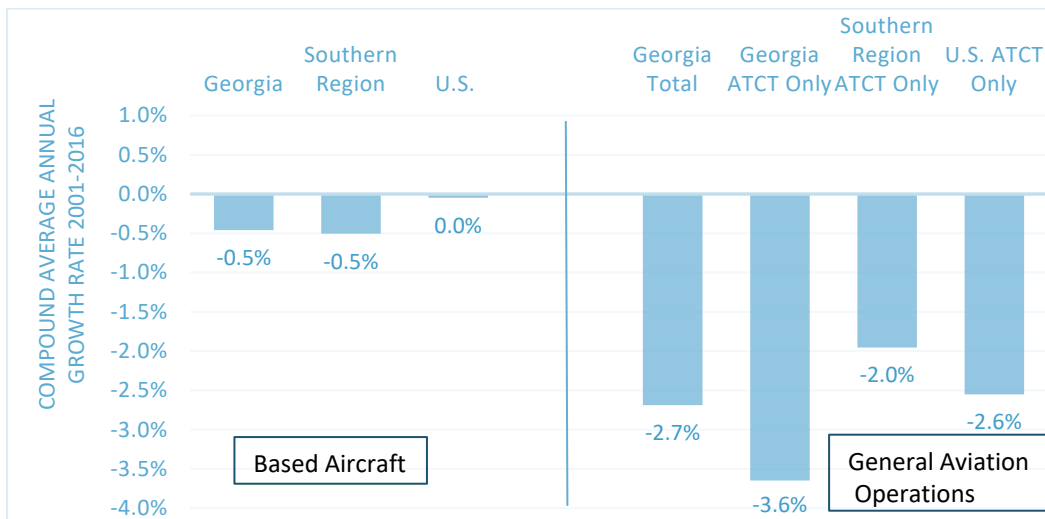
Sources: Airport Management Records, 2002 GSASP

Note: CAGR = compound annual growth rate

The downward trend for based general aviation aircraft and annual general aviation operations is not unique to Georgia airports. The trends reflect the decline in general aviation activity across the nation due to a weak economy and high fuel prices over the last decade. To better understand the state’s trends in based aircraft and general aviation operations, comparative information for the United States and FAA’s Southern Region was reviewed. As shown in **Figure 3-13**, between 2001 and 2016, based aircraft in Georgia declined 0.5 percent per year on average. This compares to a decline of 0.5 percent in the region and no growth or decline in based aircraft nationally. In terms of general aviation operations, reviewing general aviation operations at towered airports is the most accurate means for determining change. Georgia’s average annual decline in general aviation operations at towered airports (-3.6 percent) was greater than the rate experienced by all towered airports the region (-2.0 percent) and by all towered airports the United States. (-2.6 percent). When all Georgia airport operations are combined (towered and non-towered airports) general aviation operations fell at an average annual rate of -2.7 percent.

The overall trend in general aviation operations for the state, region, and nation are similar. This helps substantiate that future aviation trends at system airports may also be similar to national trends projected by FAA.

FIGURE 3-13: COMPARISON OF GEORGIA, SOUTHERN REGION, AND US GENERAL AVIATION ACTIVITY TRENDS (2001-2016)



Sources: Georgia Airport Management, FAA Terminal Area Forecast, FAA Air Traffic Activity Data System (ATADS) database, FAA Aerospace Forecasts Fiscal Years 2017-2037.

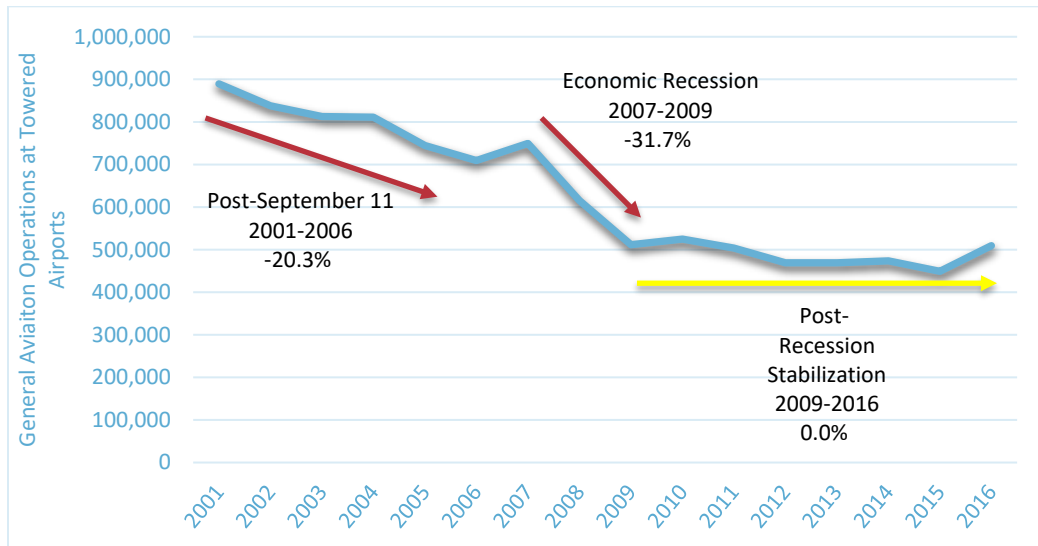
Notes: ATCT = Airports with Air Traffic Control Towers that record general aviation operations. Southern Region includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, and the US Virgin Islands.

Two key national events attributed to the significant decline in general aviation operations in Georgia over the last 15 years: the events of September 11, 2001 and the economic recession 2007-2009. As shown in **Figure**

3-14, general aviation operations at towered airports³ in Georgia fell 20 percent in the years following September 11 (2001-2006) and then fell another 32 percent during the economic recession. These specific events coupled with increases in fuel prices, the rising cost of general aviation aircraft, declining numbers of pilots, and changes in how companies do business with increased utilization of technology help explain the decline in Georgia’s general aviation activity.

While general aviation operations have not rebounded since September 11 and the recession, they stabilized beginning in 2009, as shown in **Figure 3-14**. Further, between 2015 and 2016 general aviation operations at towered airports increased more than 10 percent. These recent trends indicate that general aviation operations in Georgia may continue to experience growth into the future, albeit conservative growth.

FIGURE 3-14: CHANGE IN GENERAL AVIATION OPERATIONS AT TOWERED AIRPORTS IN GEORGIA



Source: FAA ATADS database

3.3 Socioeconomic Trends That May Impact Future Aviation Growth

Factors that may influence future aviation activity, that are independent of historic airport activity, include area socioeconomic and demographic trends. Socioeconomic characteristics are often examined to derive an understanding of the dynamics of projected aviation growth. As socioeconomic activity increases, commercial service and general aviation activity also generally increases.

Georgia and many of its 159 counties have growing economies. There are 18 Fortune 500 companies headquartered in the state including Home Depot, Coca-Cola, UPS, and Delta Airlines. Georgia is ranked #1 in the top states for attracting business and having a favorable business climate for the last three years.⁴ The principal industries in the state include manufacturing, automotive, aerospace, defense, energy, life sciences, agribusiness, logistics and transportation, financial services, information technology, film, and tourism. The state offers numerous incentives and workforce training for business attraction and retention. In recent years, there has been a growing trend for business use of general aviation aircraft. This fact was considered as projections of future aviation demand were developed.

³ A year over year comparison of general aviation operations in Georgia was only available for the larger airports with air traffic control towers that report operations by type to the FAA. In 2016, general aviation operations at towered airports accounted for about one-third (33%) of the total general aviation operations in the state estimated as part of the GSASP.

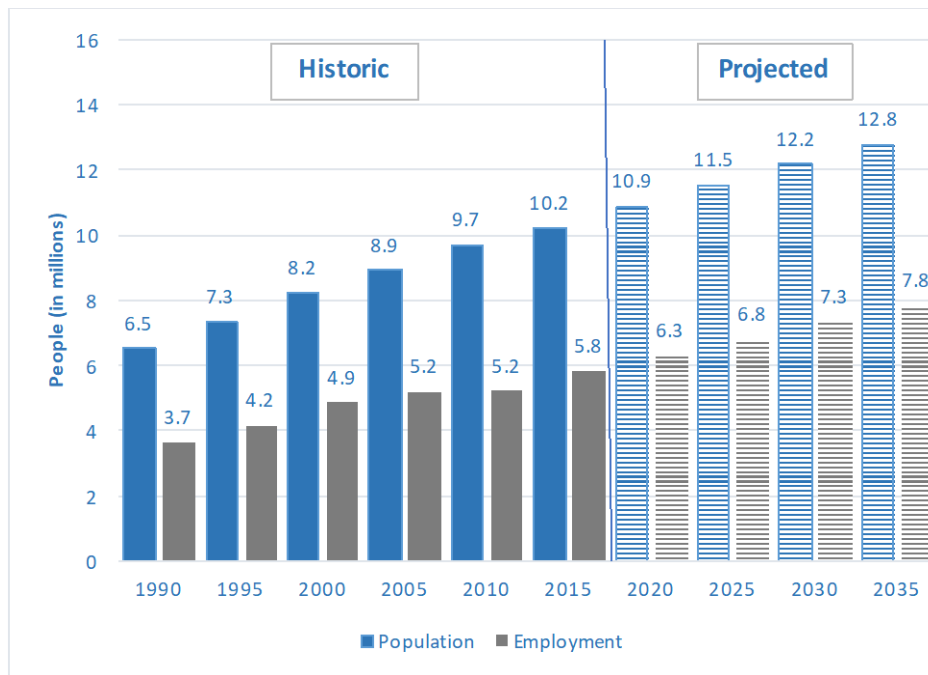
⁴ *Area Development Magazine* Q3 2016, *Site Selection Magazine* November 2016

A summary of Georgia’s historic and projected trends in socioeconomic and demographic factors are discussed below. These trends were considered as projections of aviation demand for each system airport were developed.

Population. Between 1990 and 2015, statewide population grew at an average annual rate of 1.8 percent per year. In 2015, Georgia’s estimated population was 10.2 million, up from 6.5 million in 1990 (**Figure 3-15**). Over the last 10 years, statewide population grew at a slightly lower annual rate of 1.4 percent. Over the 20-year forecast period, population is estimated to increase at 1.1 percent per year on average.⁵

Employment. Between 1990 and 2015 employment in Georgia increased at an average annual rate of 1.9 percent per year. In 2015, it was estimated that state employment was 5.8 million, up from 3.7 million in 1990 (**Figure 3-15**). Over the last 10 years, statewide employment grew at a lower rate of 1.1 percent per year on average. Employment in Georgia is projected to grow at 1.4 percent per year on average between 2015 and 2035.⁶

FIGURE 3-15: HISTORIC AND PROJECTED GEORGIA POPULATION AND EMPLOYMENT



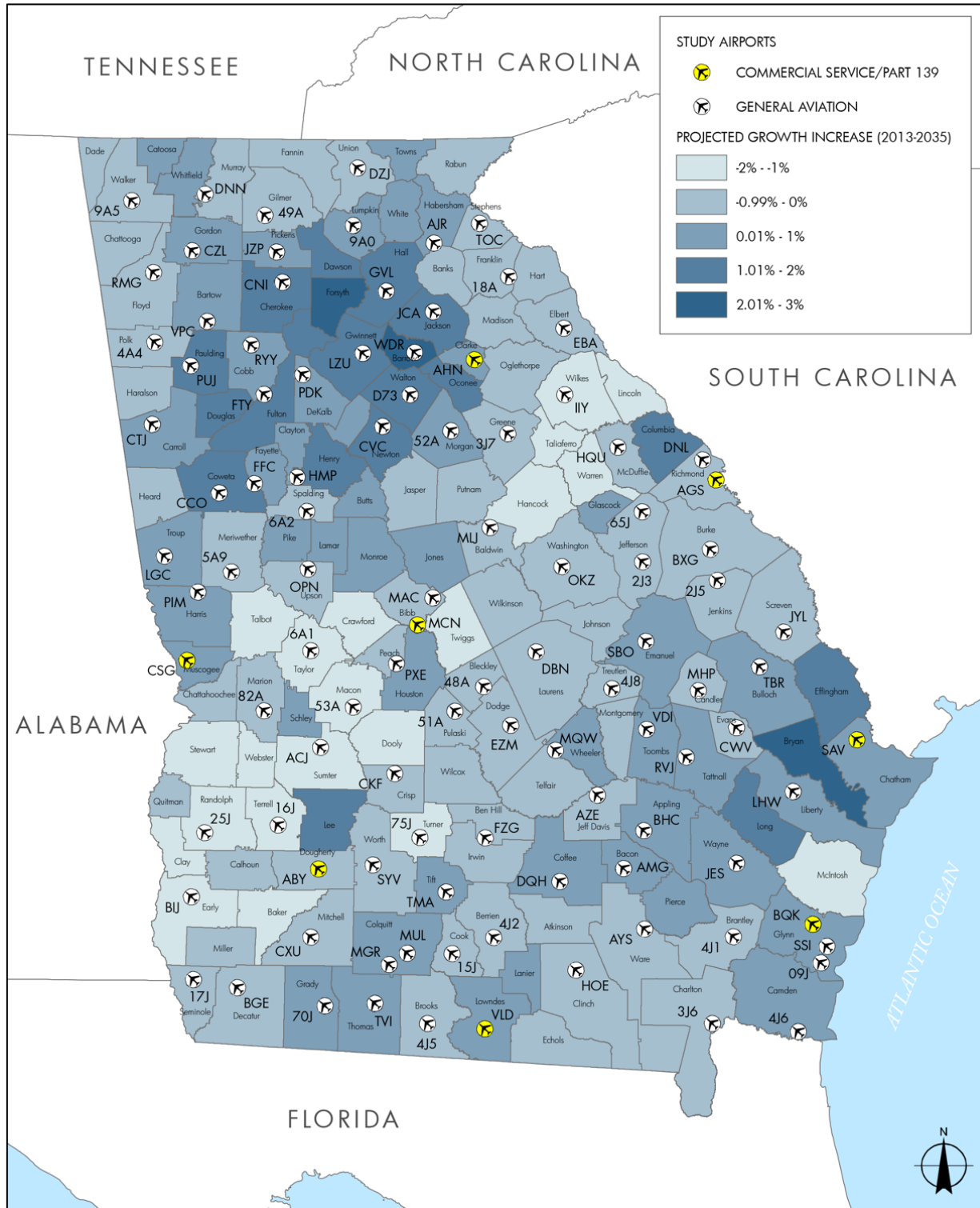
Sources: US Census Bureau, US Department of Commerce, Georgia Governor’s Office of Planning and Budget, 2015 Series, Woods & Poole, Inc.

Figure 3-16 presents projected rates of population increase by Georgia county. Much of the highest growth is projected to occur near the urban areas; Forsyth and Barrow counties near Atlanta and Bryan County near Savannah are expected to experience the highest rates of population growth between 2013 and 2035. Employment growth rates by county show a similar trend and are presented in **Figure 3-17**. Henry, Paulding, Cherokee, and Forsyth counties near Atlanta are anticipated to see the highest rates of employment growth over the next two decades.

⁵ US Census Bureau and Georgia Governor’s Office of Planning and Budget, 2015 Series

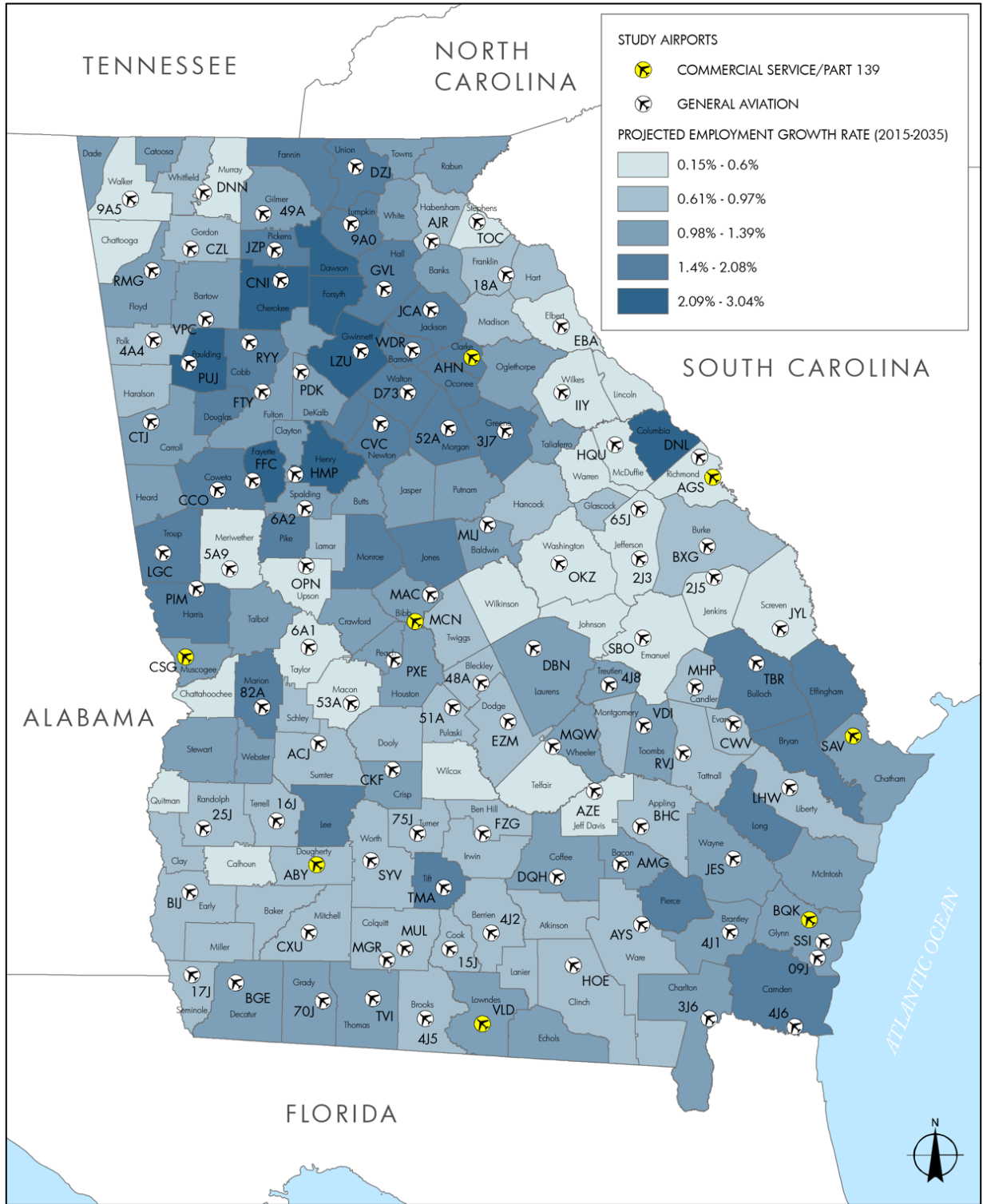
⁶ US Department of Commerce and Woods & Poole Economics, Inc.

FIGURE 3-16: PROJECTED POPULATION GROWTH RATE BY COUNTY (2013-2035)



Data Source: Georgia Governor's Office of Planning and Budget, 2015 Series

FIGURE 3-17: PROJECTED EMPLOYMENT GROWTH RATE BY COUNTY (2015-2035)



Data Source: Woods & Poole, 2017

3.4 Projections of Aviation Demand

For the GSASP, projections of aviation demand were developed for enplanements, commercial aircraft operations, based aircraft, and general aviation aircraft operations. The following assumptions were used to establish demand projections for system airports:

- Aviation activity at system airports will generally reflect the national aviation industry; FAA projects low rates of growth for most aspects of aviation.
- Local economies may grow and population and employment increase; changes in aviation demand will most likely not be directly related to, but may be supported by such increases.
- Economic disturbances may cause year-to-year demand variations.
- Fuel prices will continue to fluctuate, and the future availability of 100LL fuel (needed to fly piston aircraft) may further impact the general aviation projections.
- Commercial service forecasts assume mainline or legacy network carriers will continue to operate their hubs in a manner consistent with current operations.
- The Essential Air Service program will continue to be federally funded.
- Projections are unconstrained with respect to facilities.

3.4.1 Commercial Service Projections

This section presents projections of passenger enplanements and commercial airline aircraft operations at Georgia's commercial airports. If available and current (five years old or less), enplanement growth rates developed as part of individual airport master plans were adopted for the GSASP projections. Three airports have recent master plans: Augusta Regional, Brunswick-Golden Isles, and Savannah/Hilton Head International. Forecasts developed as part of the master planning process are typically far more in-depth than the forecasting process used in a state aviation system plan. The master plan projections were verified for their reasonableness, based on historic activity and national trends.

Scheduled airline service at Middle Georgia Regional Airport resumed August 2017 provided by Contour Airlines, the carrier selected by the US DOT to provide subsidized air service as part of the EAS program. Based on equipment (37-seat ERJ-135) and flight frequency (12 weekly flights) outlined in the EAS order DOT-OST-2007-28671, it is estimated that 1,240 commercial service operations will occur at Macon in 2018. These operations are assumed to remain constant over the forecast period. If a load factor of 65 percent is assumed, this level of activity and load factor results in an estimated 15,000 annual enplanements in 2018. Future projections of enplanements for Macon were developed from 2019 forward.

According to Athens-Ben Epps airport management, carriers have recently expressed interest in serving Athens, and the airport is putting together a revenue guarantee program to secure new air service. However, as of February 2018, no new service has been confirmed. Therefore, commercial service enplanements and operations forecasts have not been developed for Athens as part of the GSASP.



Enplanements

As presented in **Table 3-12**, similar to the decline in enplanements experienced nationally, enplanements at Georgia airports fell during the 2007-2009 economic recession. However, enplanements grew 3.8 percent per year on average at all Georgia airports (excluding ATL) between 2010 and 2016. This average annual rate of growth is higher than the average growth rate that occurred at all US airports during the same period (2.4 percent annually). Recent growth in enplanements at Georgia airports was fueled by Savannah/Hilton Head International. Enplanements at Augusta Regional and Brunswick-Golden Isles have grown over the last six years at rates closer to the national average. Southwest Georgia, Columbus, and Valdosta Regional have experienced declines in enplanements since 2010.

TABLE 3-12: GEORGIA HISTORIC COMMERCIAL SERVICE ENPLANEMENTS AND OPERATIONS (EXCLUDING ATL)

Airport	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	CAGR 2006-2016	CAGR 2010-2016
Enplanements													
Southwest Georgia Regional	34,712	38,758	39,200	33,044	35,494	33,627	33,494	31,276	31,260	33,949	34,223	-0.1%	-0.6%
Athens-Ben Epps	6,738	6,187	3,449	5,335	5,751	1,655	1,941	5,751	2,488	0	0	NA	NA
Augusta Regional at Bush Field	134,716	154,558	176,097	198,489	246,587	267,631	271,740	260,523	263,478	271,915	279,105	7.6%	2.1%
Brunswick-Golden Isles	26,725	24,153	29,594	27,901	30,059	31,655	31,284	32,450	32,579	34,561	35,629	2.9%	2.9%
Columbus	44,872	46,972	51,288	48,526	63,726	78,718	74,336	59,675	50,883	51,790	54,467	2.0%	-2.6%
Middle Georgia Regional	13,303	11,465	10,029	1,866	1,296	917	843	1,296	1,837	0	0	NA	NA
Savannah/Hilton Head	950,904	992,625	959,037	799,066	798,194	785,251	789,663	798,376	932,416	980,531	1,089,222	1.4%	5.3%
Valdosta Regional	39,829	35,094	38,269	41,516	42,537	38,066	37,030	36,814	35,636	39,544	39,178	-0.2%	-1.4%
Total Georgia Enplanements	1,251,799	1,309,812	1,306,963	1,155,743	1,223,644	1,237,520	1,240,331	1,226,161	1,350,577	1,412,290	1,531,824	2.0%	3.8%
Commercial Service Operations													
Southwest Georgia Regional	2,640	2,580	2,174	1,980	2,034	1,978	2,000	2,056	1,970	1,930	2,024	-2.6%	-0.1%
Athens-Ben Epps	1,296	1,276	1,564	3,028	2,224	1,234	1,004	1,182	722	0	0	NA	NA
Augusta Regional at Bush Field	8,654	8,674	9,482	10,680	12,140	12,546	11,560	11,522	10,272	10,232	9,998	1.5%	-3.2%
Brunswick-Golden Isles	2,056	1,928	1,826	1,884	1,970	1,912	1,912	2,018	1,986	1,934	2,046	0.0%	0.6%
Columbus	2,634	2,836	2,978	3,128	3,484	4,390	4,256	3,322	2,676	2,410	2,524	-0.4%	-5.2%
Middle Georgia Regional	2,368	2,232	2,546	3,138	2,516	1,678	1,210	1,352	1,156	0	0	NA	NA
Savannah/Hilton Head	29,400	32,092	32,394	29,340	29,656	28,240	26,466	26,386	28,488	28,362	29,522	0.0%	-0.1%
Valdosta Regional	2,288	2,058	1,854	2,072	2,054	2,050	2,074	2,052	2,004	2,042	2,058	-1.1%	0.0%
Total Georgia Commercial Service Operations	51,336	53,676	54,818	55,250	56,078	54,028	50,482	49,890	49,274	46,910	48,172	-0.6%	-2.5%

Sources: Enplanements 2006-2015: FAA Passenger Boarding and All-Cargo Data; Enplanements 2016: Airport records, Commercial Service Operations: Bureau of Transportation Statistics T-100 Segment Data

Notes: CAGR = compound annual growth rate, NA = not available



Table 3-13 presents the enplanement projections for Georgia’s commercial service airports, excluding ATL. For Augusta Regional, Brunswick-Golden Isles, and Savannah/Hilton Head International, master plan growth rates were applied to 2016 actual enplanements. For the other airports, a methodology was used that applied a variation of the FAA’s enplanement growth rate projection from the *Aerospace Forecasts Fiscal Years 2017-2037* to each airport’s 2016 enplanements. The growth rate selected for each airport was based on each airport’s recent growth (2010-2016) in enplanements and projected socioeconomic growth in the airport’s market area.

Based on this approach, Georgia can expect an average annual rate of growth of 3.0 percent for all enplanements (excluding ATL) for the forecast period. Enplanements are expected to reach 2.7 million by 2035. This rate of growth is higher than the 1.9 percent national rate of growth for all US enplanements projected by the FAA in its *Aerospace Forecasts Fiscal Years 2017-2037*. Savannah is expected to see the highest rate of growth in enplanements, with an average annual growth rate of 3.3 percent, reaching 2.0 million enplanements by 2035. Since the majority of the statewide enplanements are at Savannah, the airport’s higher than average annual rate of growth pulls the statewide average annual rate of growth up above the national average projected by the FAA.

TABLE 3-13: GEORGIA ENPLANEMENT PROJECTIONS

Airport	FAA ID	Base Year 2016	Projections			CAGR 2016-2035
			2020	2025	2035	
Southwest Georgia Regional Airport	ABY	34,223	35,898	37,417	41,102	1.0%
Augusta Regional Airport At Bush Field ¹	AGS	279,105	303,299	336,511	414,244	2.1%
Brunswick-Golden Isles Airport ¹	BQK	35,629	38,869	43,337	53,873	2.2%
Columbus Airport	CSG	54,467	57,133	59,550	65,416	1.0%
Middle Georgia Regional Airport ²	MCN	0	15,346	15,996	17,571	1.0%
Savannah/Hilton Head International Airport ¹	SAV	1,089,222	1,239,838	1,458,366	2,017,761	3.3%
Valdosta Regional Airport	VLD	39,178	42,080	44,773	51,531	1.5%
Total Georgia Enplanements		1,531,824	1,732,464	1,995,949	2,661,498	3.0%

Source: Marr Arnold Planning

Notes: CAGR = compound annual growth rate

¹ Projected growth rate from individual airport master plan

² Middle Georgia Regional did not have air service in 2016. Contour Airlines began 12 weekly flights at the airport in August 2017. It is projected that enplanements will grow at an average of annual rate of 1.0% between 2018 and 2035.

Commercial Service Operations

Historic commercial service operations (departures and arrivals) at Georgia airports are presented in **Table 3-12**. Carriers have limited their operational growth at Georgia airports since the 2007-2009 economic recession to improve load factors and regain profitability. **Table 3-14** shows the commercial service operational forecasts for Georgia’s commercial airports. These projections include only operations (takeoffs and landings) by scheduled commercial airlines. General aviation (including air taxi) activity at commercial service airports is projected in another section.

Similar to enplanement projections, master plan growth rates were sourced for operational projections for Augusta Regional, Brunswick-Golden Isles, and Savannah/Hilton Head International. Commercial service operational projections for Southwest Georgia Regional, Columbus, and Valdosta Regional were developed based on the individual airport operational growth that occurred after the 2007-2009 economic recession and

the FAA’s projected national rate of growth for commercial service operations. Commercial service operations at Middle Georgia Regional are expected to remain unchanged (based on the EAS agreement) over the 20-year forecast period.

Total commercial service operations for all commercial airports, except for ATL, are projected to increase at an average annual growth of 1.5 percent. Statewide commercial operations are projected to increase from 48,172 in 2016 to 63,486 in 2035. This growth is just slightly higher than the FAA’s projected annual average growth rate for all US commercial service operations of 1.3 percent annually.

TABLE 3-14: GEORGIA COMMERCIAL SERVICE OPERATIONS PROJECTIONS

Airport	FAA ID	Base Year 2016	Projections			CAGR 2016-2035
			2020	2025	2035	
Southwest Georgia Regional Airport	ABY	2,024	2,073	2,141	2,311	0.7%
Augusta Regional Airport At Bush Field ¹	AGS	9,998	10,349	10,804	11,776	0.9%
Brunswick-Golden Isles Airport ¹	BQK	2,046	2,089	2,144	2,259	0.5%
Columbus Airport	CSG	2,524	2,585	2,670	2,882	0.7%
Middle Georgia Regional Airport ²	MCN	0	1,240	1,240	1,240	0.0%
Savannah/Hilton Head International Airport ¹	SAV	29,522	31,581	34,358	40,667	1.7%
Valdosta Regional Airport	VLD	2,058	2,108	2,177	2,350	0.7%
Total Georgia Commercial Service		48,172	52,025	55,535	63,486	1.5%

Source: Marr Arnold Planning

Notes: CAGR = compound annual growth rate

¹ Projected growth rate from individual airport master plan.

² Middle Georgia Regional did not have air service in 2016. Contour Airlines began 12 weekly flights at the airport in the August 2017. It is projected that commercial service operations will remain constant between 2018 and 2035.

3.4.2 General Aviation Projections

Several scenarios for projecting based aircraft and general aviation operations are discussed in this section. A preferred methodology was then chosen for each demand component. **Table 3-17** details the preferred projections for based aircraft and general aviation operations.

Based Aircraft

Estimating the number of aircraft anticipated to be based at system airports over the next 20 years impacts the planning for future facility and infrastructure needs. Initially, based aircraft were projected using four methodologies. The results of the forecasting scenarios were compared, and one methodology was chosen as the preferred based aircraft projection.

A summary of the four scenarios used to develop based aircraft projections is discussed below and shown in **Table 3-15** and **Figure 3-18**. **Table 3-15** summarizes statewide results for the four projection methodologies examined for the system plan update.

Scenario 1: Historic Based Aircraft Growth and FAA Active General Aviation Fleet Growth

This bottom-up methodology considered historic growth from 2001-2016 for based aircraft at each airport. A range of projected growth rates was then applied, based on the FAA’s projected growth rate for active general

aviation aircraft. Growth rates were derived from the *FAA Aerospace Forecasts, Fiscal Years 2017-2037*. This methodology considered the fleet mix of aircraft at all airports and projected a slightly higher rate of growth for those airports that have aircraft types that are expected to see higher rates of future growth. If an airport experienced declines in based aircraft over the last 15 years and had no based jets, based aircraft were projected to remain constant throughout the 20-year forecast period. This scenario produces a statewide 0.5 percent compound annual growth rate (CAGR) in statewide based aircraft through 2035.

Scenario 2: County Population Growth Rate

This scenario assumes that the growth in based aircraft at each system airport will be equal to the rate of projected population growth for the county in which the airport is located. The population projections used to support this scenario were developed by the Georgia Governor’s Office of Planning and Budget. The statewide annual growth rate for based aircraft in this scenario is 0.9 percent.

Scenario 3: Industry Trends/County Employment Growth

In this scenario, a range of projected growth rates was applied using the projected rate of employment growth for the county where the airport is located. A percentage of the FAA’s projected growth rates for active general aviation aircraft from the *FAA Aerospace Forecasts, Fiscal Years 2017-2037* was applied to each airport’s 2016 based aircraft to develop a 20-year projection. This scenario projects statewide based aircraft to growth at average annual rate of 0.6 percent.

Scenario 4: Market Share: FAA’s Terminal Area Forecast (TAF) Growth Rate

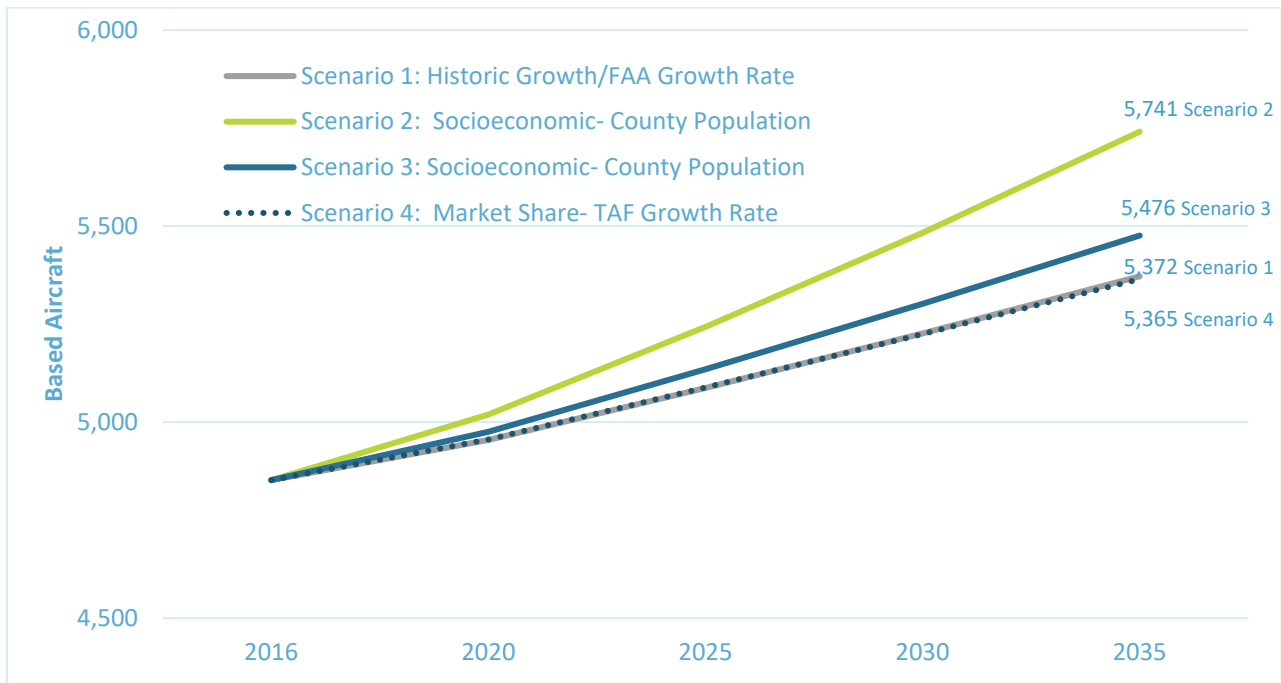
The FAA annually publishes its Terminal Area Forecasts in which it projects operations and based aircraft for each airport included in the NPIAS. The TAF projects based aircraft at Georgia’s NPIAS airports to grow at an average annual rate of 0.5 percent between 2015 (the most recent year for TAF data) and 2035. This top-down scenario assumes that the system airports will maintain their share of the total statewide based aircraft through the forecast period.

TABLE 3-15: COMPARISON OF BASED AIRCRAFT PROJECTION SCENARIOS

Scenarios	2016	2020	2025	2035	CAGR 2016-35
1. Historic Growth/FAA Growth Rate	4,852	4,954	5,087	5,372	0.54%
2. Socioeconomic - County Population	4,852	5,019	5,243	5,741	0.89%
3. Industry Trends/County Employment Growth	4,852	4,975	5,135	5,476	0.64%
4. Market Share - TAF Growth Rate	4,852	4,956	5,088	5,365	0.53%

Source: Marr Arnold Planning
 CAGR = compound annual growth rate

FIGURE 3-18: COMPARISON OF BASED AIRCRAFT PROJECTION SCENARIOS



Source: Marr Arnold Planning

Preferred Based Aircraft Projection

After comparing the results of the four forecast scenarios, the statewide growth rate produced by **Scenario 1: Historic Airport Growth/FAA Growth Rate** (0.54 percent) was selected as the preferred projection growth for based aircraft. This rate of growth was then applied to each system airport’s 2016 based aircraft to determine its individual projection of based aircraft. Scenario 1 was selected as the preferred based aircraft projection because it takes historic trends into consideration, and it considers the modest growth projected by the FAA throughout the 20-year forecast period for business aircraft. The results of Scenario 1 for each airport are depicted in **Table 3-17**.

3.4.3 General Aviation Aircraft Operations

Different factors impact the number of operations at an airport. These factors include, but are not limited to:

- Total based aircraft
- Area demographics/including business density
- Activity and facilities at neighboring airports
- National trends
- Airport location

These factors were examined and three methodologies were used to develop projections of annual general aviation operations for each system airport. A summary of the scenarios used to develop the aircraft operational projections are shown in the **Table 3-16** and **Figure 3-19**.

Scenario 1: Operations Per Based Aircraft (OPBA)

OPBA is calculated by dividing the number of total operations by the number of aircraft based at each airport. It is important to note that the OPBA ratio represents operations performed by both based and visiting aircraft. In Scenario 1, total operations at each system airport are projected by applying the airport’s 2016 OPBA ratio to the preferred projection of based aircraft. Utilizing this methodology, it is projected that total general aviation operations at system airports will grow at a CAGR of 0.5 percent over the 20-year forecast period. These projections include general aviation operations at commercial and general aviation airports.

Scenario 2: County Employment Growth

Scenario 2 assumes that the growth of general aviation operations at each system airport will be equal to the rate of projected employment growth for the county in which the airport is located. Employment projections were developed by Woods and Poole. The annual growth rate for annual general aviation operations in this scenario is 1.1 percent.

Scenario 3: Growth of FAA Hours Flown

Scenario 3 applies the FAA’s projected rate of growth for general aviation aircraft hours flown (derived from *FAA Aerospace Forecasts, Fiscal Years 2017-2037*) to the 2016 total operations for all airports. Each airport’s share of 2016 operations is then maintained through the forecast period and applied to the statewide total to estimate operations for 2020, 2025, and 2035 by airport. The CAGR for total general aviation operations in this Scenario is 0.9 percent.

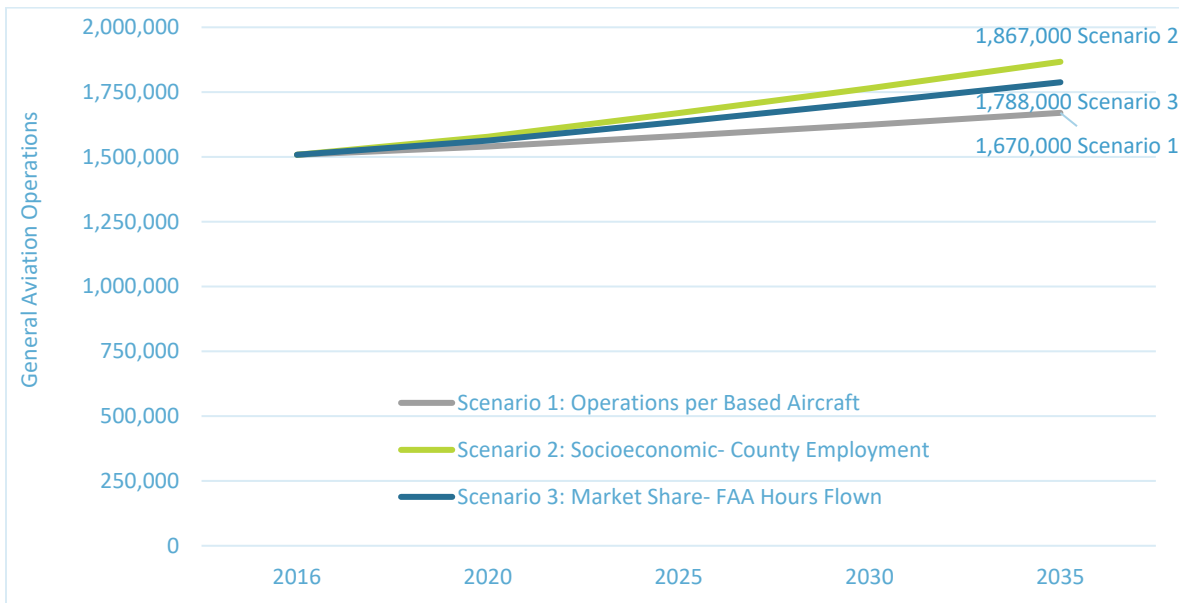
TABLE 3-16: COMPARISON OF GENERAL AVIATION ANNUAL OPERATIONS PROJECTION SCENARIOS

Scenarios	2016	2020	2025	2035	CAGR 2016-35
1. Operations per Based Aircraft	1,508,286	1,540,000	1,581,000	1,670,000	0.54%
2. Socioeconomic - County Employment	1,508,286	1,578,000	1,669,000	1,867,000	1.13%
3. Market Share - FAA Hours Flown	1,508,286	1,563,000	1,635,000	1,788,000	0.90%

Source: Marr Arnold Planning

Note: CAGR = compound annual growth rate

FIGURE 3-19: OPERATIONS PROJECTION SCENARIOS



Source: Marr Arnold Planning

Preferred Annual General Aviation Operations Projection

The results of the three projections for general aviation operational demand, shown in **Table 3-16** and **Figure 3-19** can be viewed as a range for future general aviation statewide takeoffs and landings. In the lowest scenario (Scenario 1), total annual general aviation operations could increase from their 2016 level of 1.51 million to 1.67 million at the end of the 20-year planning period. If mid-growth scenario is achieved (Scenario 3), annual operations for system airports could reach 1.79 million. The highest-growth scenario (Scenario 2), presents a projection of general aviation operational demand that could reach 1.87 million operations at the end of the forecast period.

General aviation activity at Georgia airports experienced large declines since the previous system plan was completed in 2002. Many factors contributed to the decline, primarily September 11 and the economic recession of 2007-2009. However, operations over the last several years have stabilized and towered airports experienced a 10 percent increase in general aviation operations during 2015-2016. This trend helps support the preferred projection of general aviation operations at system airports developed as part of **Scenario 1: Operations Per Based Aircraft**.

As shown in **Table 3-16** and **Figure 3-19**, total annual general aviation operations for system airports are projected to reach 1.67 million in 2035. The average annual rate of growth implied in the preferred forecast is 0.54 percent.

3.5 Summary

This system plan took a conservative approach to projecting future aviation demand for system airports and follows national aviation trends and Georgia specific anticipated growth for socioeconomic indicators. **Table 3-17** presents based aircraft and general aviation operations projections for each system airport. Commercial service enplanements and operations are presented in **Table 3-13** and **Table 3-14**. Projections of demand presented in this chapter will help establish future facility needs for all system airports.

TABLE 3-17: PROJECTIONS OF BASED AIRCRAFT AND GENERAL AVIATION OPERATIONS

Airport	City	FAA ID	Based Aircraft					General Aviation Operations				
			2016	2020	2025	2035	CAGR 2016-35	2016	2020	2025	2035	CAGR 2016-35
Commercial Airports												
Southwest Georgia Regional Airport	Albany	ABY	30	31	31	33	0.54%	16,134	16,500	16,900	17,900	0.54%
Augusta Regional Airport At Bush Field	Augusta	AGS	13	13	14	14	0.54%	15,124	15,400	15,900	16,700	0.54%
Athens-Ben Epps Airport	Athens	AHN	92	94	96	102	0.54%	33,485	34,200	35,100	37,100	0.54%
Brunswick-Golden Isles Airport	Brunswick	BQK	38	39	40	42	0.54%	28,000	28,600	29,400	31,000	0.54%
Columbus Airport	Columbus	CSG	130	133	136	144	0.54%	14,485	14,800	15,200	16,000	0.54%
Middle Georgia Regional Airport	Macon	MCN	97	99	102	107	0.54%	13,677	14,000	14,300	15,100	0.54%
Savannah/Hilton Head International Airport	Savannah	SAV	134	137	140	148	0.54%	55,612	56,800	58,300	61,600	0.54%
Valdosta Regional Airport	Valdosta	VLD	51	52	53	56	0.54%	11,343	11,600	11,900	12,600	0.54%
General Aviation Airports												
Cook County Airport	Adel	15J	25	26	26	28	0.54%	4,500	4,600	4,700	5,000	0.54%
Bacon County Airport	Alma	AMG	10	10	10	11	0.54%	720	700	800	800	0.54%
Jimmy Carter Regional Airport	Americus	ACJ	29	30	30	32	0.54%	9,100	9,300	9,500	10,100	0.54%
Turner County Airport	Ashburn	75J	3	3	3	3	0.54%	1,200	1,200	1,300	1,300	0.54%
Atlanta Regional Airport-Falcon Field (Peachtree City)	Atlanta	FFC	178	182	187	197	0.54%	70,000	71,500	73,400	77,500	0.54%
Cobb County International Airport-McCollum Field	Atlanta	RYY	303	309	318	335	0.54%	62,805	64,100	65,800	69,500	0.54%
Covington Municipal Airport	Atlanta	CVC	39	40	41	43	0.54%	12,000	12,300	12,600	13,300	0.54%
DeKalb-Peachtree Airport	Atlanta	PDK	346	353	363	383	0.54%	157,623	160,900	165,300	174,500	0.54%
Fulton County Airport-Brown Field	Atlanta	FTY	82	84	86	91	0.54%	55,853	57,000	58,600	61,800	0.54%
Newnan-Coweta County Airport	Atlanta	CCO	95	97	100	105	0.54%	64,681	66,000	67,800	71,600	0.54%
Paulding-Northwest Atlanta Airport	Atlanta	PUJ	20	20	21	22	0.54%	4,000	4,100	4,200	4,400	0.54%
Daniel Field Airport	Augusta	DNL	56	57	59	62	0.54%	30,000	30,600	31,500	33,200	0.54%
Decatur County Industrial Air Park	Bainbridge	BGE	41	42	43	45	0.54%	15,000	15,300	15,700	16,600	0.54%
Baxley Municipal Airport	Baxley	BHC	14	14	15	15	0.54%	5,000	5,100	5,200	5,500	0.54%
Blairsville Airport	Blairsville	DZJ	46	47	48	51	0.54%	33,455	34,200	35,100	37,000	0.54%



TABLE 3-17: PROJECTIONS OF BASED AIRCRAFT AND GENERAL AVIATION OPERATIONS

Airport	City	FAA ID	Based Aircraft					General Aviation Operations				
			2016	2020	2025	2035	CAGR 2016-35	2016	2020	2025	2035	CAGR 2016-35
Early County Airport	Blakely	BIJ	14	14	15	15	0.54%	325	300	300	400	0.54%
McKinnon-St. Simons Island Airport	Brunswick	SSI	78	80	82	86	0.54%	48,000	49,000	50,300	53,100	0.54%
Marion County Airport	Buena Vista	82A	0	0	0	0	0.00%	500	500	500	500	0.54%
Butler Municipal Airport	Butler	6A1	11	11	12	12	0.54%	3,022	3,100	3,200	3,300	0.54%
Cairo-Grady County Airport	Cairo	70J	16	16	17	18	0.54%	6,054	6,200	6,300	6,700	0.54%
Tom B. David Field Airport	Calhoun	CZL	107	109	112	118	0.54%	20,000	20,400	21,000	22,100	0.54%
Camilla-Mitchell County Airport	Camilla	CXU	26	27	27	29	0.54%	7,386	7,500	7,700	8,200	0.54%
Franklin County Airport	Canon	18A	22	22	23	24	0.54%	4,000	4,100	4,200	4,400	0.54%
Cherokee County Airport	Canton	CNI	109	111	114	121	0.54%	30,000	30,600	31,500	33,200	0.54%
West Georgia Regional Airport-O.V. Gray Field	Carrollton	CTJ	103	105	108	114	0.54%	29,500	30,100	30,900	32,700	0.54%
Cartersville Airport	Cartersville	VPC	137	140	144	152	0.54%	25,550	26,100	26,800	28,300	0.54%
Polk County Airport-Cornelius Moore Field	Cedartown	4A4	21	21	22	23	0.54%	7,696	7,900	8,100	8,500	0.54%
Claxton-Evans County Airport	Claxton	CWV	11	11	12	12	0.54%	2,000	2,000	2,100	2,200	0.54%
Cochran Airport	Cochran	48A	17	17	18	19	0.54%	2,000	2,000	2,100	2,200	0.54%
Crisp County-Cordele Airport	Cordele	CKF	17	17	18	19	0.54%	4,381	4,500	4,600	4,900	0.54%
Habersham County Airport	Comelia	AJR	74	76	78	82	0.54%	20,000	20,400	21,000	22,100	0.54%
Lower Chattahoochee Regional Airport	Cuthbert	25J	3	3	3	3	0.54%	500	500	500	600	0.54%
Lumpkin County-Wimpy's Airport	Dahlonega	9A0	20	20	21	22	0.54%	5,000	5,100	5,200	5,500	0.54%
Dalton Municipal Airport	Dalton	DNN	45	46	47	50	0.54%	1,825	1,900	1,900	2,000	0.54%
Dawson Municipal Airport	Dawson	16J	40	41	42	44	0.54%	10,811	11,000	11,300	12,000	0.54%
Donalsonville Municipal Airport	Donalsonville	17J	21	21	22	23	0.54%	5,412	5,500	5,700	6,000	0.54%
Douglas Municipal Airport	Douglas	DQH	31	32	33	34	0.54%	12,000	12,300	12,600	13,300	0.54%
W.H. "Bud" Barron Airport	Dublin	DBN	24	25	25	27	0.54%	8,000	8,200	8,400	8,900	0.54%
Heart Of Georgia Regional Airport	Eastman	EZM	26	27	27	29	0.54%	17,155	17,500	18,000	19,000	0.54%
Elbert County Airport-Patz Field	Elberton	EBA	22	22	23	24	0.54%	6,000	6,100	6,300	6,600	0.54%



TABLE 3-17: PROJECTIONS OF BASED AIRCRAFT AND GENERAL AVIATION OPERATIONS

Airport	City	FAA ID	Based Aircraft					General Aviation Operations				
			2016	2020	2025	2035	CAGR 2016-35	2016	2020	2025	2035	CAGR 2016-35
Gilmer County Airport	Ellijay	49A	20	20	21	22	0.54%	2,162	2,200	2,300	2,400	0.54%
Fitzgerald Municipal Airport	Fitzgerald	FZG	32	33	34	35	0.54%	1,350	1,400	1,400	1,500	0.54%
Davis Field Airport	Folkston	3J6	5	5	5	6	0.54%	2,059	2,100	2,200	2,300	0.54%
Lee Gilmer Memorial Airport	Gainesville	GVL	134	137	140	148	0.54%	38,690	39,500	40,600	42,800	0.54%
Greene County Regional Airport	Greensboro	3J7	15	15	16	17	0.54%	1,100	1,100	1,200	1,200	0.54%
Griffin-Spalding County Airport	Griffin	6A2	99	101	104	110	0.54%	12,000	12,300	12,600	13,300	0.54%
Henry County Airport	Hampton	HMP	85	87	89	94	0.54%	7,000	7,100	7,300	7,700	0.54%
Hawkinsville-Pulaski County Airport	Hawkinsville	51A	2	2	2	2	0.54%	745	800	800	800	0.54%
Hazlehurst Airport	Hazlehurst	AZE	28	29	29	31	0.54%	1,400	1,400	1,500	1,500	0.54%
Wright Army Airfield (Fort Stewart)/MidCoast Regional Airport	Hinesville	LHW	24	25	25	27	0.54%	3,190	3,300	3,300	3,500	0.54%
Homerville Airport	Homerville	HOE	1	1	1	1	0.54%	832	800	900	900	0.54%
Pickens County Airport	Jasper	JZP	65	66	68	72	0.54%	19,817	20,200	20,800	21,900	0.54%
Jackson County Airport	Jefferson	JCA	58	59	61	64	0.54%	16,600	16,900	17,400	18,400	0.54%
Jekyll Island Airport	Jekyll Island	09J	5	5	5	6	0.54%	5,000	5,100	5,200	5,500	0.54%
Jesup-Wayne County Airport	Jesup	JES	15	15	16	17	0.54%	6,000	6,100	6,300	6,600	0.54%
Barwick Lafayette Airport	LaFayette	9A5	53	54	56	59	0.54%	6,500	6,600	6,800	7,200	0.54%
Lagrange-Callaway Airport	LaGrange	LGC	57	58	60	63	0.54%	12,000	12,300	12,600	13,300	0.54%
Gwinnett County Airport-Briscoe Field	Lawrenceville	LZU	213	217	223	236	0.54%	84,476	86,300	88,600	93,500	0.54%
Louisville Municipal Airport	Louisville	2J3	16	16	17	18	0.54%	6,000	6,100	6,300	6,600	0.54%
Macon Downtown Airport	Macon	MAC	31	32	33	34	0.54%	8,807	9,000	9,200	9,800	0.54%
Madison Municipal Airport	Madison	52A	18	18	19	20	0.54%	4,700	4,800	4,900	5,200	0.54%
Telfair-Wheeler Airport	Mc Rae	MQW	11	11	12	12	0.54%	3,000	3,100	3,100	3,300	0.54%
Metter Municipal Airport	Metter	MHP	19	19	20	21	0.54%	2,000	2,000	2,100	2,200	0.54%
Baldwin County Airport	Milledgeville	MLJ	24	25	25	27	0.54%	4,285	4,400	4,500	4,700	0.54%
Millen Airport	Millen	2J5	5	5	5	6	0.00%	1,040	1,000	1,000	1,000	0.54%



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Airport	City	FAA ID	Based Aircraft					General Aviation Operations				
			2016	2020	2025	2035	CAGR 2016-35	2016	2020	2025	2035	CAGR 2016-35
Monroe-Walton County Airport	Monroe	D73	37	38	39	41	0.54%	10,000	10,200	10,500	11,100	0.54%
Dr. C.P. Savage, Sr. Airport	Montezuma	53A	9	9	9	10	0.54%	500	500	500	600	0.54%
Moultrie Municipal Airport	Moultrie	MGR	31	32	33	34	0.54%	10,839	11,100	11,400	12,000	0.54%
Spence Airport	Moultrie	MUL	3	3	3	3	0.54%	1,100	1,100	1,200	1,200	0.54%
Brantley County Airport	Nahunta	4J1	0	0	0	0	0.00%	350	400	400	400	0.54%
Berrien County Airport	Nashville	4J2	9	9	9	10	0.54%	3,500	3,600	3,700	3,900	0.54%
Perry-Houston County Airport	Perry	PXE	90	92	94	100	0.54%	19,500	19,900	20,400	21,600	0.54%
Harris County Airport	Pine Mountain	PIM	22	22	23	24	0.54%	7,097	7,200	7,400	7,900	0.54%
Quitman Brooks County Airport	Quitman	4J5	21	21	22	23	0.54%	2,500	2,600	2,600	2,800	0.54%
Swinton Smith Field At Reidsville Municipal Airport	Reidsville	RVJ	11	11	12	12	0.54%	3,969	4,100	4,200	4,400	0.54%
Richard B. Russell Regional Airport - J.H. Towers Field	Rome	RMG	78	80	82	86	0.54%	36,538	37,300	38,300	40,500	0.54%
St Marys Airport	St Marys	4J6	15	15	16	17	0.54%	4,261	4,400	4,500	4,700	0.54%
Kaolin Field Airport	Sandersville	OKZ	17	17	18	19	0.54%	5,183	5,300	5,400	5,700	0.54%
Treutlen County Airport	Soperton	4J8	0	0	0	0	0.00%	600	600	600	600	0.54%
Statesboro-Bulloch County Airport	Statesboro	TBR	63	64	66	70	0.54%	18,500	18,900	19,400	20,500	0.54%
East Georgia Regional Airport	Swainsboro	SBO	13	13	14	14	0.54%	4,500	4,600	4,700	5,000	0.54%
Plantation Airpark	Sylvania	JYL	44	45	46	49	0.54%	12,000	12,300	12,600	13,300	0.54%
Sylvester Airport	Sylvester	SYV	2	2	2	2	0.54%	795	800	800	900	0.54%
Thomaston-Upson County Airport	Thomaston	OPN	90	92	94	100	0.54%	16,060	16,400	16,800	17,800	0.54%
Thomasville Regional Airport	Thomasville	TVI	60	61	63	66	0.54%	10,085	10,300	10,600	11,200	0.54%
Thomson-McDuffie Regional Airport	Thomson	HQU	24	25	25	27	0.54%	10,105	10,300	10,600	11,200	0.54%
Henry Tift Myers Airport	Tifton	TMA	33	34	35	37	0.54%	8,000	8,200	8,400	8,900	0.54%
Toccoa Airport-RG LeTourneau Field	Toccoa	TOC	52	53	55	58	0.54%	7,300	7,500	7,700	8,100	0.54%
Vidalia Regional Airport	Vidalia	VDI	32	33	34	35	0.54%	17,500	17,900	18,300	19,400	0.54%
Roosevelt Memorial Airport	Warm Springs	5A9	13	13	14	14	0.54%	3,000	3,100	3,100	3,300	0.54%



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Airport	City	FAA ID	Based Aircraft					General Aviation Operations				
			2016	2020	2025	2035	CAGR 2016-35	2016	2020	2025	2035	CAGR 2016-35
Washington-Wilkes County Airport	Washington	IYY	16	16	17	18	0.54%	6,000	6,100	6,300	6,600	0.54%
Waycross-Ware County Airport	Waycross	AYS	35	36	37	39	0.54%	5,860	6,000	6,100	6,500	0.54%
Burke County Airport	Waynesboro	BXG	12	12	13	13	0.54%	3,000	3,100	3,100	3,300	0.54%
Barrow County Airport	Winder	WDR	109	111	114	121	0.54%	36,000	36,800	37,700	39,900	0.54%
Wrens Memorial Airport	Wrens	65J	9	9	9	10	0.54%	1,976	2,000	2,100	2,200	0.54%
Georgia Statewide Total			4,852	4,954	5,087	5,372	0.54%	1,508,286	1,540,000	1,581,300	1,669,600	0.54%

Source: Marr Arnold Planning

Notes: CAGR = compound annual growth rate

