

GEORGIA AIRPORTS MEAN BUSINESS



GEORGIA

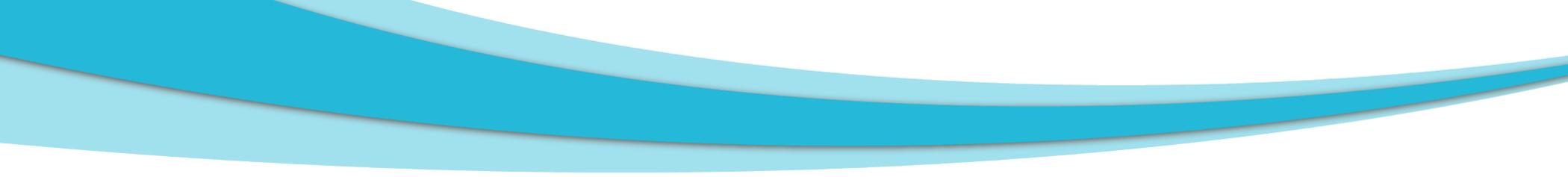
STATEWIDE AVIATION SYSTEM PLAN



EXECUTIVE SUMMARY

GEORGIA AIRPORTS MEAN BUSINESS

OCTOBER 2018





G E O R G I A

— STATEWIDE AVIATION SYSTEM PLAN —

ACKNOWLEDGMENTS

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THE GSASP UPDATE SUPPORTED THREE UNIQUE INVENTORY EFFORTS

Runway Protection Zone (RPZ) Analysis

- » Georgia airports have a total of 280 RPZs
- » RPZs are safety areas located at the end of each runway
- » Only 30% of all RPZs are fully under airport control
- » \$283.5 million would be needed to bring all RPZs under airport control

Compatible Land Use Analysis

- » There are 196 Georgia local government entities in proximity to the study airports
- » 20% of the local government entities have specific zoning to provide airports with protection from incompatible land use and tall structures
- » Additional efforts are needed to protect airports from encroachment

Through-the-Fence (TTF) Analysis

- » TTF operations are discouraged by the Federal Aviation Administration (FAA)
- » Less than 2% of all airports have TTF activities
- » Airport sponsors should discourage TTF operators
- » TTF operators must be charged an equitable rate for using any public airport

INTRODUCTION

Georgia is served by a comprehensive system of 103 airports, and the System Plan provides a blueprint to develop commercial and general aviation airports to meet the Georgia Department of Transportation (GDOT) mission of delivering a transportation system focused on innovation, safety, sustainability, and mobility. This update also demonstrates how federal, state, and local airport investment has improved the performance of the state airport system. A performance-based approach to the Georgia Statewide Airport System Plan (GSASP) update enables GDOT to understand:

- » How the statewide airport system is currently performing
- » How the airport system has improved since 2002
- » How the system should be improved to meet statewide transportation objectives

The 2018 GSASP included the following components:

- » Update to the Statewide Aviation System Plan
- » Analysis of runway protection zones
- » Inventory to identify counties and municipalities that are protecting airport resources through land use compatibility controls
- » Inventory of airports with through-the-fence operators

The strategic approach to the GSASP ensures Georgia has a system of airports to meet the needs of commercial aviation, business and corporate users, and personal and recreational flyers. More information on the GSASP can be obtained from GDOT Aviation Programs at aviationprograms@dot.ga.gov





OVERVIEW

The Georgia Statewide Aviation System Plan (GSASP) started with a data collection effort that was completed as part of the **Inventory**. The inventory included on-site visits to all study airports. Airport activity, facilities, and services information obtained during the visits was used to support study analysis. The **Forecast** identified changes in demand since 2002. The forecasting effort considered anticipated trends as identified by the FAA and other aviation industry groups. The **System Evaluation** used a series of system performance measures to identify adequacies and deficiencies that characterize the state airport system.

The **Airport Roles** task determined if there are areas that do not have adequate accessibility to a system airport, or if there are areas that should have improved accessibility to an airport. The **Facility/Service Objectives** analysis identified specific improvements needed at each airport.

The **Costs** analysis developed a report card for each airport, and cost estimates for system plan recommendations were developed. The **Recommended Plan** is a blend of projects from the system plan, costs to ensure adequate control over all RPZs, and Georgia's Statewide Airfield Pavement Management Study. Recommendations from the system plan cover a 20-year time frame, but costs to improve the system are focused on the next five years.



STUDY COMMUNICATION AND OUTPUT

Public Outreach/Communication

Communication with stakeholders was essential to the success of the GSASP; this effort included:

- » Direct contact with each airport on study process and outputs
- » On-site visits to each airport
- » A focus group meeting at the onset of the System Plan to identify potential weaknesses/trends to include in the study analysis
- » Stakeholder meetings that provided input on draft study findings and recommendations
- » Project briefings to aviation stakeholders such as the Georgia Airports Association and State Transportation Board
- » A project website that included information on how to stay involved as well as where project documents were published: <http://www.dot.ga.gov/IS/AirportAid/AviationSystemPlan>

Study Purpose/Output

The purpose of the GSASP is to provide Aviation Programs with a key decision-making document and guidance for:

- » Determining current performance and any deficiencies in the airport system
- » Identifying airports and related facilities that are needed to meet study objectives
- » Recommending facilities and services that are needed for each airport to support its identified role in the state system

Study analysis is documented in the following:

- » A technical report that documented all study analyses, findings, and recommendations
- » An Executive Summary that provides a high-level summary of the technical analysis
- » Individual Airport Reports that provide airport-specific recommendations, the airport report card, estimated development costs, information from the land use compatibility analysis, and RPZ information

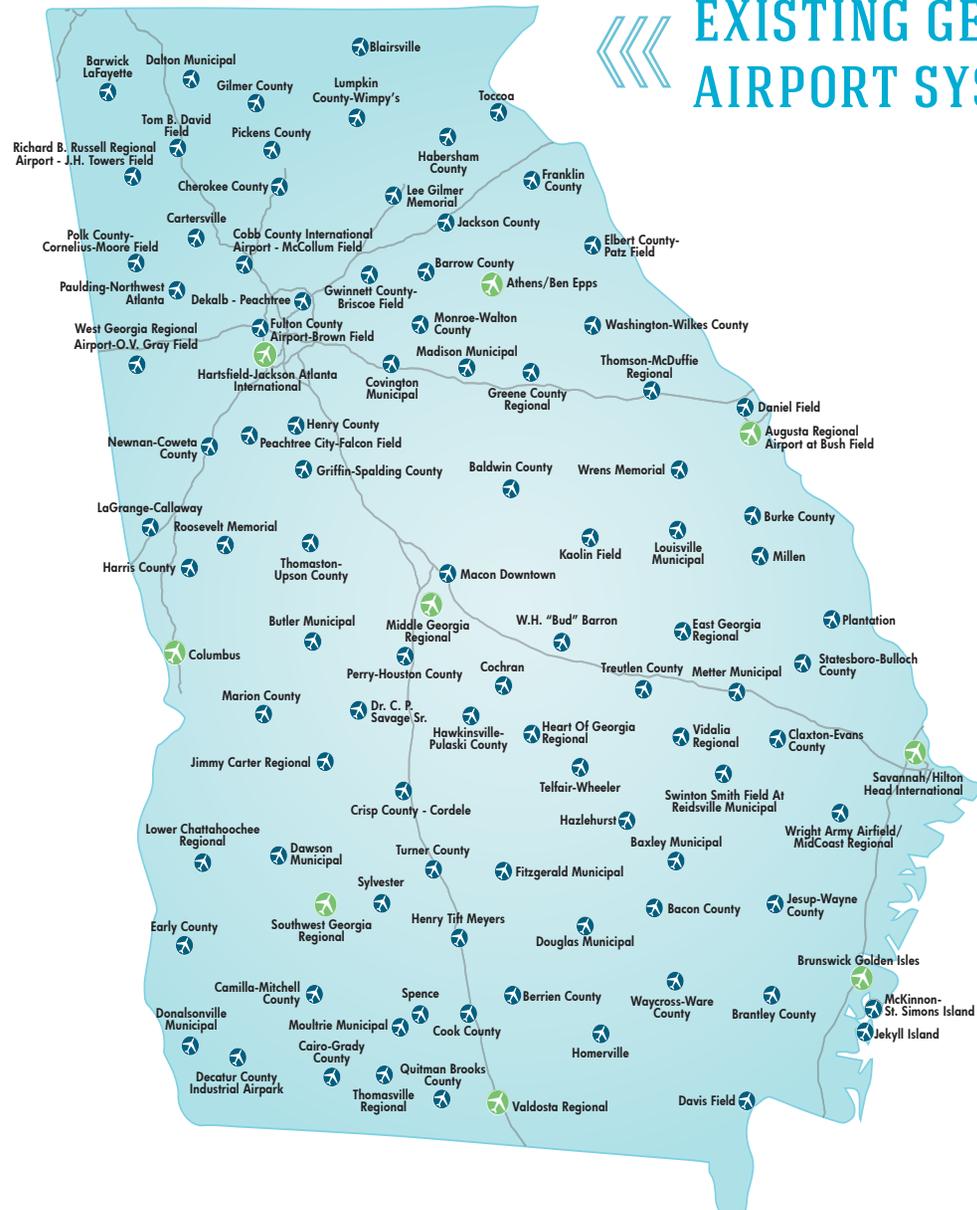


INFORMATION ON GEORGIA AIRPORTS

- » Commercial airports enplane over 1.5 million passengers annually
- » Commercial airports serve over 48,000 annual takeoffs and landings by commercial airlines
- » All airports in Georgia accommodate more than 4,900 based aircraft
- » All airports in Georgia serve annual takeoffs and landings by general aviation aircraft that total almost 1.5 million
- » Georgia is served by nine commercial airports, including Hartsfield-Jackson Atlanta International Airport, the busiest commercial airport in the world
- » Georgia has 94 general aviation airports that vary in size and complexity
- » 94% of Georgia Airports are in the FAA National Plan of Integrated Airport Systems (NPIAS)

**THESE ACTIVITY STATISTICS DO NOT INCLUDE HARTSFIELD-JACKSON ATLANTA INTERNATIONAL AIRPORT*

EXISTING GEORGIA AIRPORT SYSTEM



ROLES/LEVELS FOR GEORGIA AIRPORTS

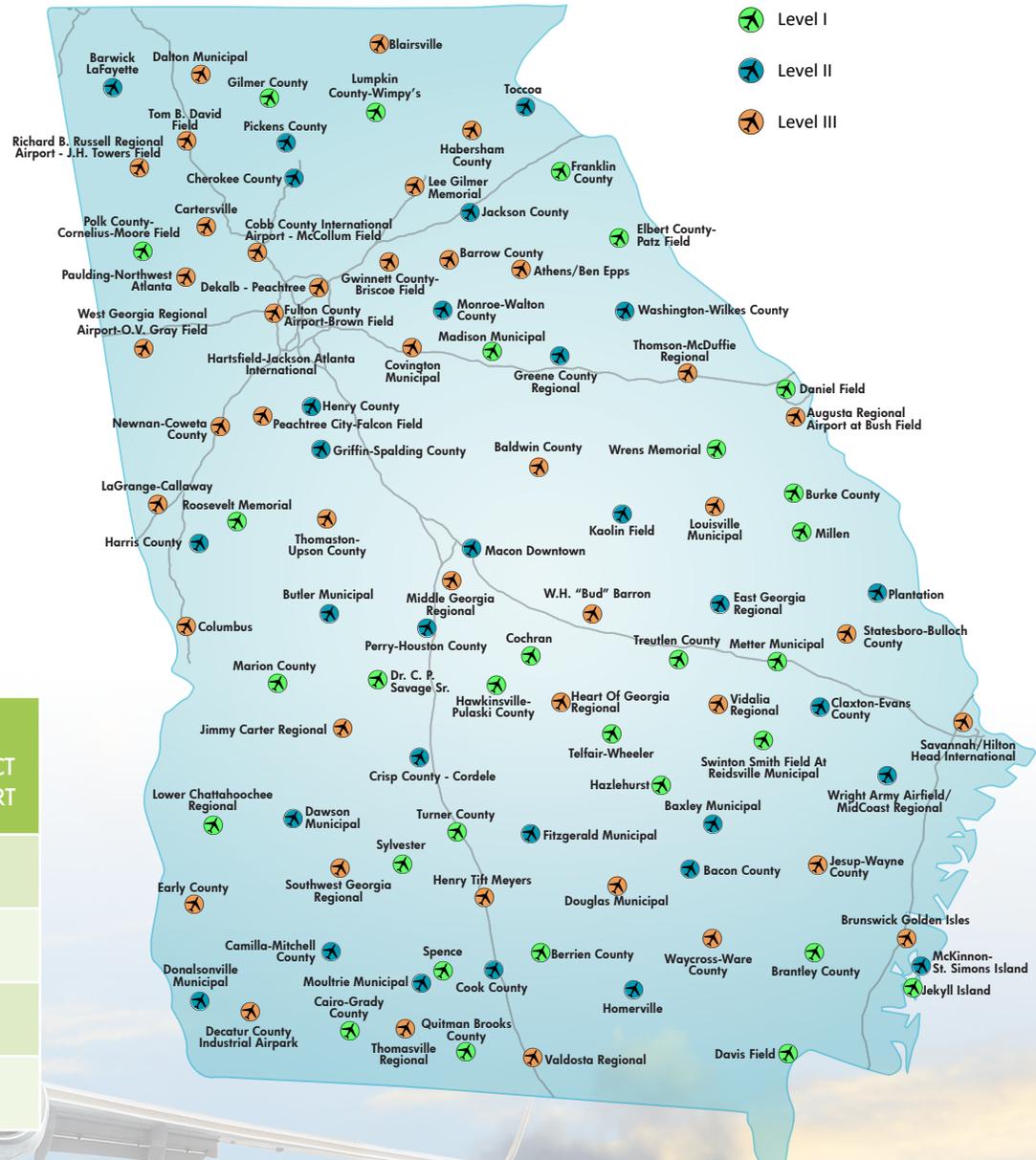
All airports in Georgia are assigned to a role or level in the state airport system; assigned airport levels when the GSASP started in late 2016 are shown on the map. Airport levels are determined by analyzing a number of factors, including coverage, accessibility, socioeconomic, and demographics. These factors were assigned a numeric value, and all airports were scored. This process helped identify and group airports with similar scores into one of three roles/levels, as shown on this page.

Comparing each airport's current facilities and services to those associated with its assigned level helps to generate the airport's report card. Airport report cards are presented in the Individual Airport Reports.

Graphs on the following pages show changes in system performance by airport level, as measured by the ability of airports in each level to meet all established facility and service objectives. They also show where more work is needed to enable airports to fulfill their specific objectives. Projects to move the system to meet its stated goals form the basis of the system plan's recommendations.

AIRPORT LEVEL	LEVEL I MINIMUM GENERAL AVIATION AIRPORT	LEVEL II LOCAL IMPACT BUSINESS AIRPORT	LEVEL III REGIONAL IMPACT BUSINESS AIRPORT
RUNWAY LENGTH	4,000 feet	5,000 feet	5,500 feet
RUNWAY WIDTH	75 feet	100 feet	100 feet
APPROACH TYPE	Non-Precision	Non-Precision	ILS or LPV
WEATHER REPORTING	Not An Objective	AWOS/ASOS	AWOS/ASOS

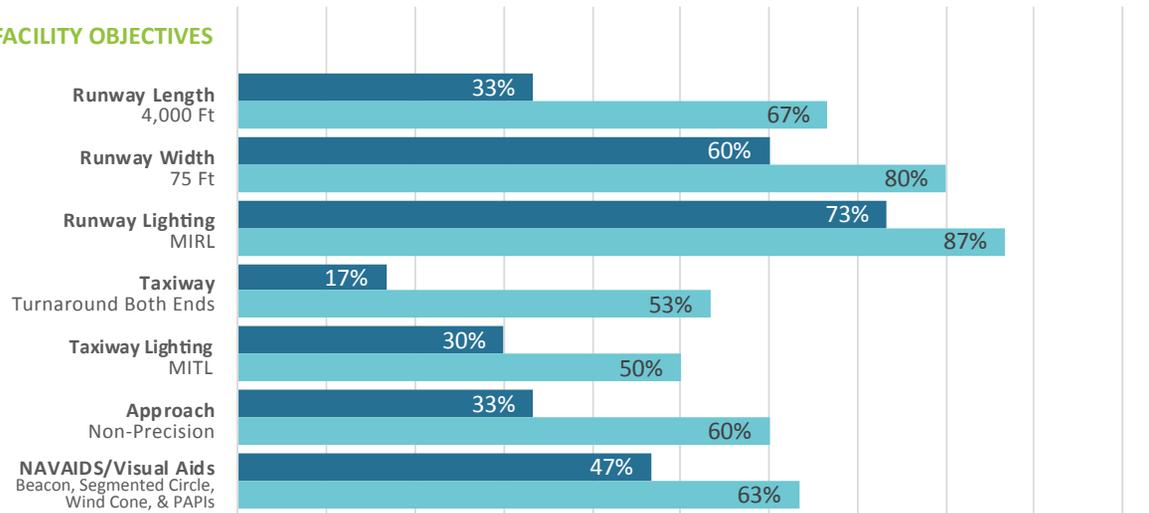
EXISTING AIRPORT LEVELS



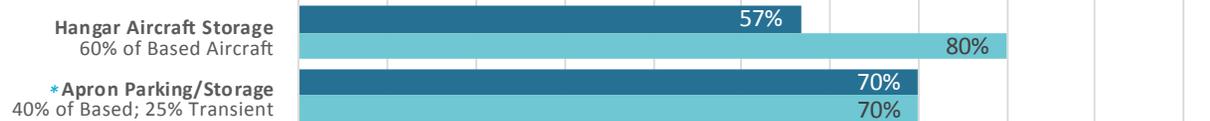
COMPARISON OF 2002 & CURRENT FACILITY OBJECTIVE PERFORMANCE

» LEVEL I - MINIMUM STANDARD GENERAL AVIATION AIRPORTS

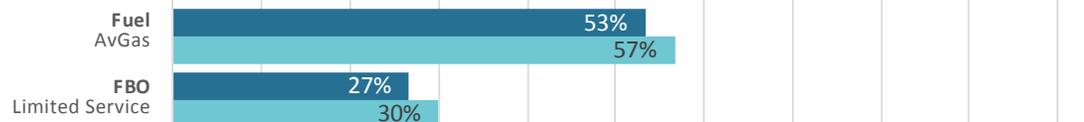
AIRSIDE FACILITY OBJECTIVES



OTHER FACILITY OBJECTIVES



SERVICE OBJECTIVES



0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

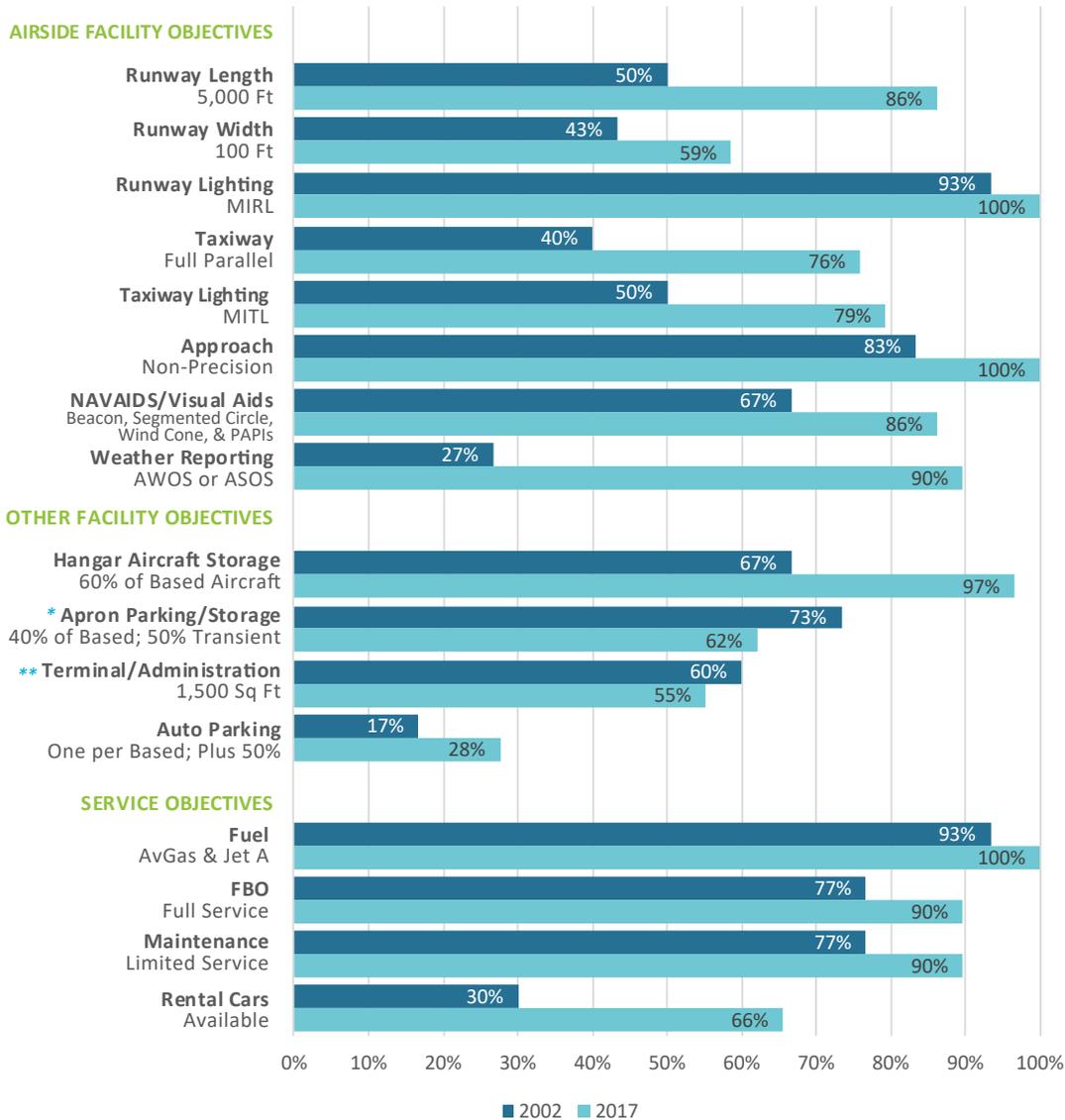
■ 2002 ■ 2017



* Apron spaces were estimated differently in 2002; the 2002 analysis included unpaved apron and the 2017 analysis considered only paved apron.

COMPARISON OF 2002 & CURRENT FACILITY OBJECTIVE PERFORMANCE

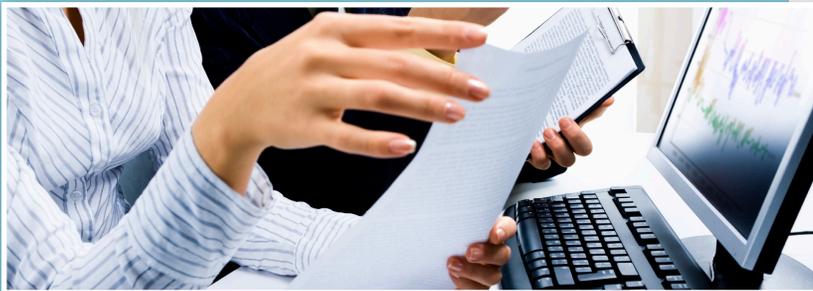
» LEVEL II - BUSINESS AIRPORTS OF LOCAL IMPACT



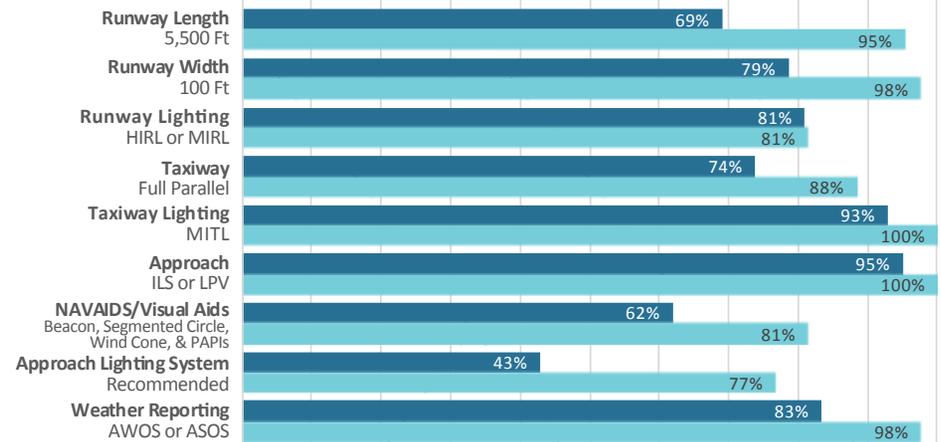
8 * Apron spaces were estimated differently in 2002; the 2002 analysis included unpaved apron and the 2017 analysis considered only paved apron.
 **Compliance with the terminal/administration building was over reported in 2002.

COMPARISON OF 2002 & CURRENT FACILITY OBJECTIVE PERFORMANCE

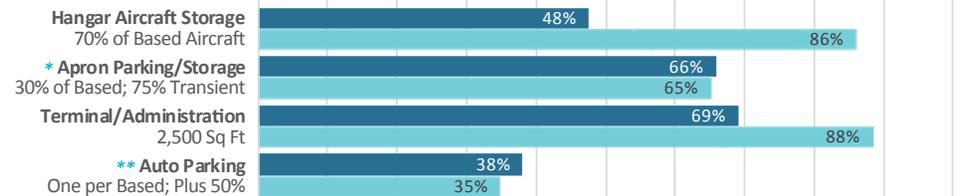
» LEVEL III - BUSINESS AIRPORTS OF REGIONAL IMPACT



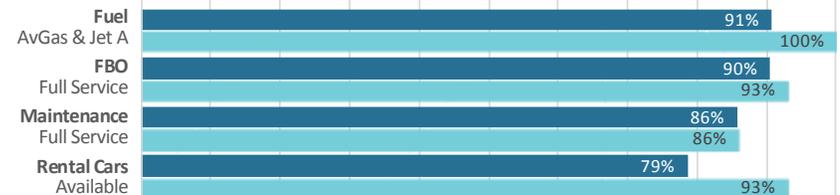
AIRSIDE FACILITY OBJECTIVES



OTHER FACILITY OBJECTIVES



SERVICE OBJECTIVES



0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

■ 2002 ■ 2017

* Apron spaces were estimated differently in 2002; the 2002 analysis included unpaved apron and the 2017 analysis considered only paved apron. **The 2002 analysis considered both commercial and general aviation auto parking spaces; the 2017 analysis considered only spaces for general aviation users.

SYSTEM PERFORMANCE

To evaluate Georgia’s airport system, a series of performance measures were established. The measures are generally tied to accessibility to certain system features. The system evaluation task was conducted using drive-time analyses supported by a geographic information system (GIS). In accordance with FAA guidelines, the evaluation process considered accessibility to Georgia airports, as well as accessibility to airports in neighboring states.

System performance reported below considers both Georgia and nearby airports in surrounding states. The accessibility rating shows the percent of Georgia’s population that is within the specified drive time of an airport that exhibits each performance measure criteria.

System and airport-specific recommendations identified in the GSASP update, if implemented, will help to elevate the accessibility ratings reported here.

SYSTEM PERFORMANCE MEASURE	* CURRENT ACCESSIBILITY RATING
60-MINUTE PROXIMITY TO AN AIRPORT WITH SCHEDULED COMMERCIAL AIRLINE SERVICE	85.1%
30-MINUTE PROXIMITY TO ANY AIRPORT	93.7%
30-MINUTE PROXIMITY TO AN AIRPORT WITH ANY PUBLISHED APPROACH	93.1%
45-MINUTE PROXIMITY TO AN AIRPORT WITH AN APPROACH THAT PROVIDES VERTICAL GUIDANCE	98.9%
30-MINUTE PROXIMITY TO AN AIRPORT WITH ON-SITE WEATHER REPORTING EQUIPMENT	91.3%
30-MINUTE PROXIMITY TO AN AIRPORT WITH ONE RUNWAY AT LEAST 4,000 FEET LONG	93.0%
30-MINUTE PROXIMITY TO AN AIRPORT WITH ONE RUNWAY AT LEAST 5,000 FEET LONG	92.0%
45-MINUTE PROXIMITY TO AN AIRPORT WITH ONE RUNWAY AT LEAST 5,500 FEET LONG	97.7%
PRIMARY RUNWAYS MEETING A PAVEMENT CONDITION INDEX (PCI) OBJECTIVE OF 70	98.0%

* THESE ACCESSIBILITY RATINGS REFLECT ACCESS TO ALL RESIDENTS IN GEORGIA.



ACCESS TO AIRPORTS WITH SCHEDULED COMMERCIAL AIRLINE SERVICE

Having access to an airport with scheduled commercial airline service is important for Georgia's economy. Georgia is home to the world's busiest commercial airport, Hartsfield-Jackson Atlanta International (ATL). In August 2018, seven out of eight other commercial airports in Georgia had airline service. The Athens-Ben Epps Airport remained without service as of August 2018.

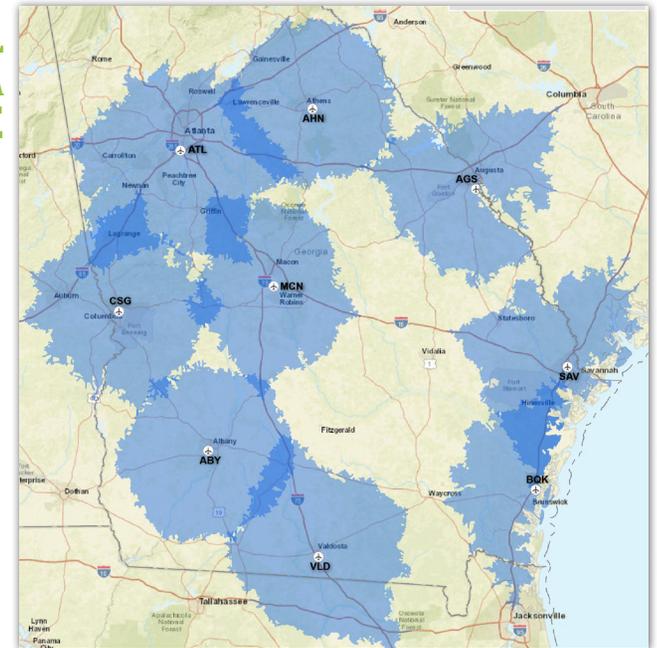
At the time the data collection for the system plan was completed, the commercial airports (excluding Hartsfield-Jackson Atlanta International) were served by five different commercial air carriers. On a daily basis for, all airports, these carriers had about 60 daily non-stop departures to 14 different destinations.

The system performance analysis shows that when a 60-minute service area for only Georgia's commercial airports is considered, 81% of Georgia's residents are within 60 minutes or less of a commercial service airport.

Trends in the commercial airline industry may put smaller commercial service airports at risk. Additional analysis showed if single-carrier commercial airports lost service, the accessibility rating would decrease from 81% to 58%. The maps on this page help to demonstrate the priority that communities must place on efforts to retain existing airline service.

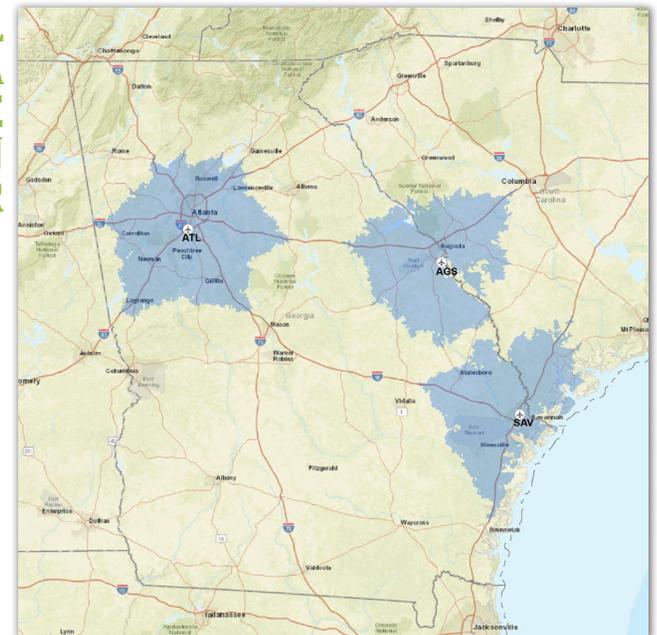
GEORGIA COMMERCIAL AIRPORTS AT A 60-MINUTE DRIVE TIME

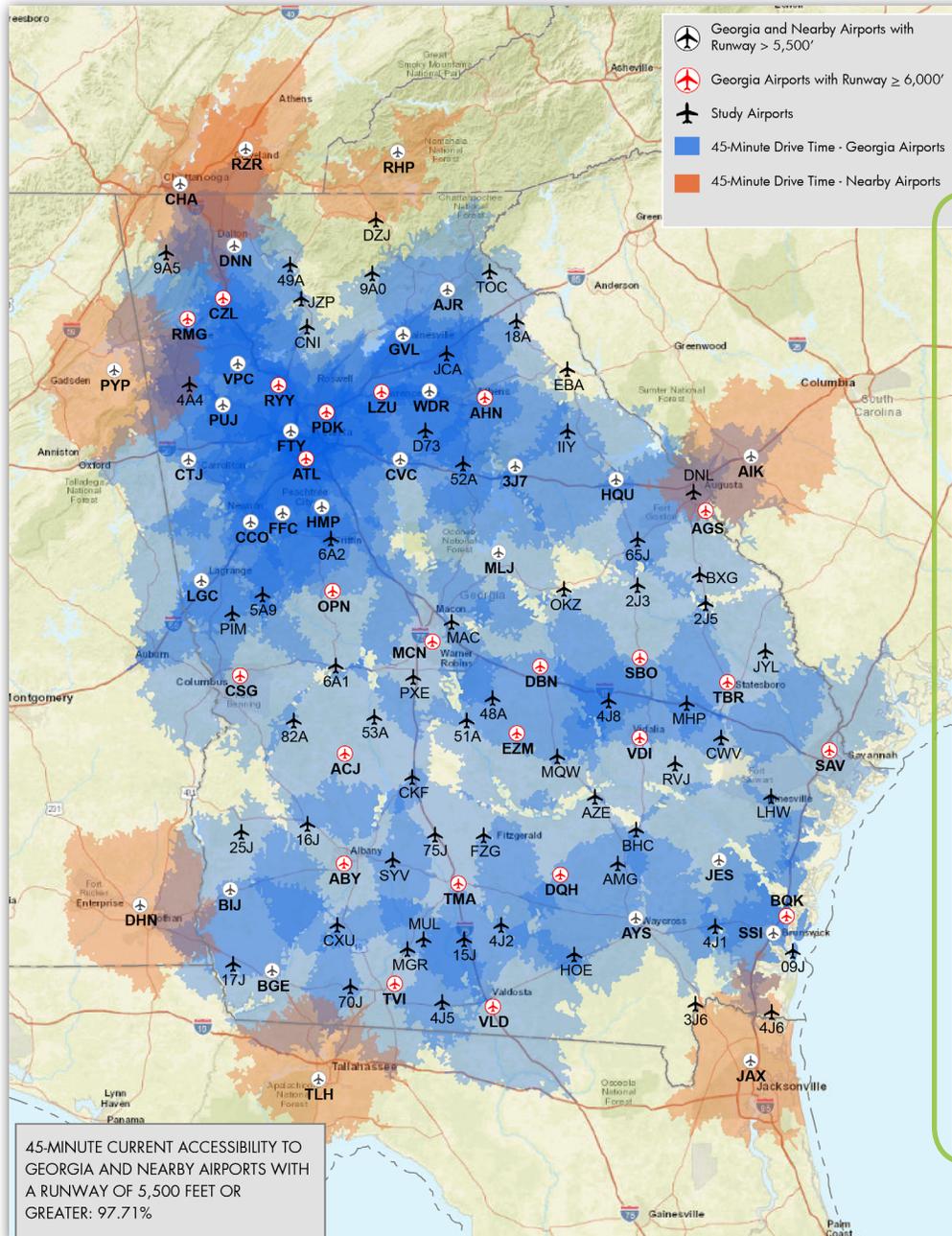
81%
Accessibility Rating



GEORGIA COMMERCIAL AIRPORTS AT A 60-MINUTE DRIVE TIME WITH MORE THAN ONE CARRIER

58%
Accessibility Rating





ACCESS TO AIRPORTS WITH RUNWAYS 5,500 FEET LONG OR LONGER

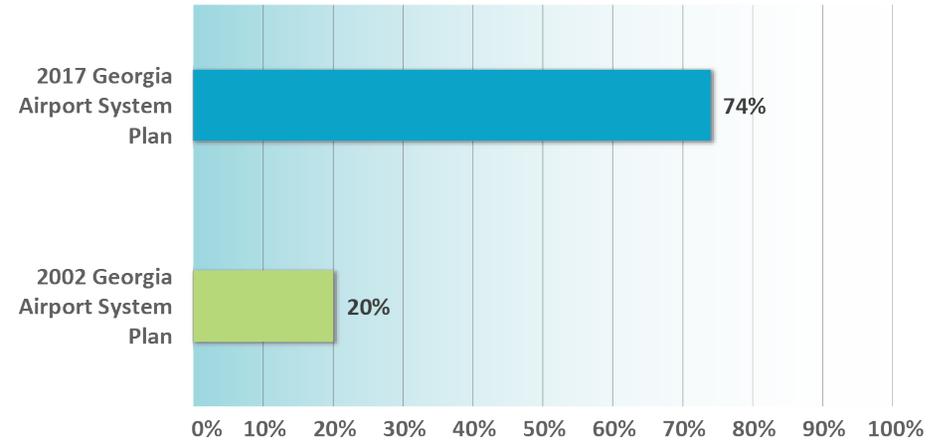
According to the FAA, business aviation is the fastest growing segment of general aviation, and other industry sources indicate notable growth is expected for shipments of larger general aviation corporate jets. Information from the National Business Aviation Association (NBAA) indicates that their members consider a runway length of 5,500 feet as “adequate” for meeting the needs of most large general aviation business jets. The accompanying map shows the current 45-minute drive time accessibility to all Georgia and nearby airports in surrounding states that have a runway that is at least 5,500 feet long.

The accessibility rating for this measure is 98%, which points to the success of system planning and data-driven investments. For some states, this rating does not reach 90%. It is an objective for airports assigned to Level III in the Georgia airport system to have a minimum runway length of 5,500 feet. If airports recommended for inclusion in Level III can meet their minimum runway length objective of 5,500 feet, this accessibility rating could increase in the future.

CHANGES IN SYSTEM PERFORMANCE

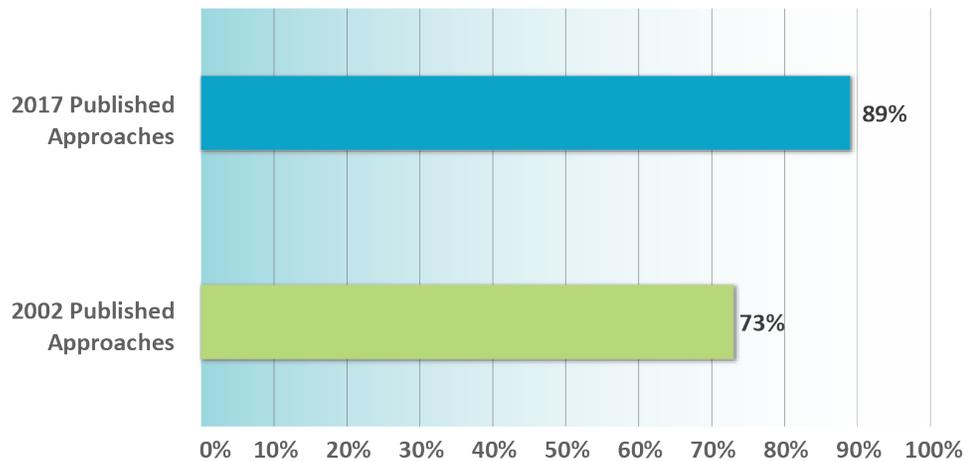
The system performance analysis shows high accessibility ratings for many key components of the airport system. As part of this project, reporting was provided showing system improvement between 2002 and 2017. This information enables GDOT to see how investment has elevated system performance. Information in the following graphs shows how the bar has been raised for the performance of the Georgia airport system. Information shown on these graphs considers all system airports.

PERCENTAGE OF AIRPORTS WITH A VERTICAL GUIDANCE APPROACH

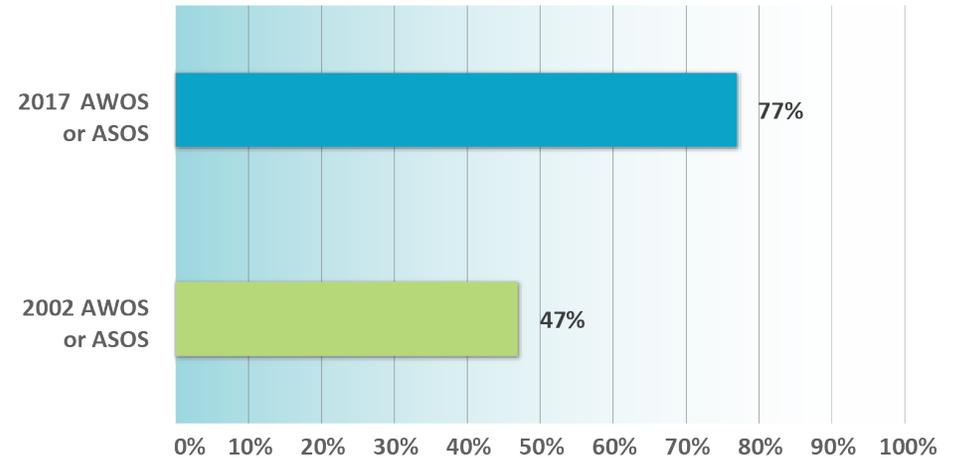


» Vertical Guidance Approach = ILS or LPV Approach

PERCENTAGE OF AIRPORTS WITH A PUBLISHED APPROACH

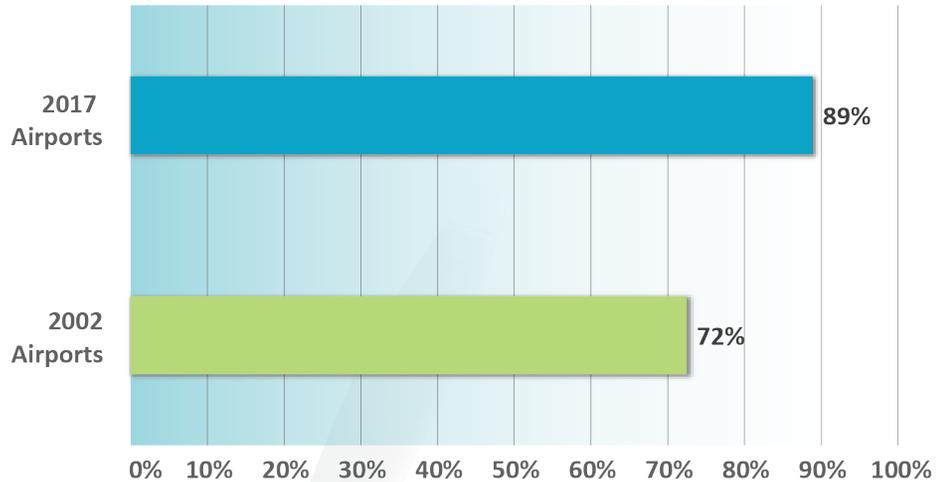


PERCENTAGE OF AIRPORTS WITH WEATHER REPORTING EQUIPMENT

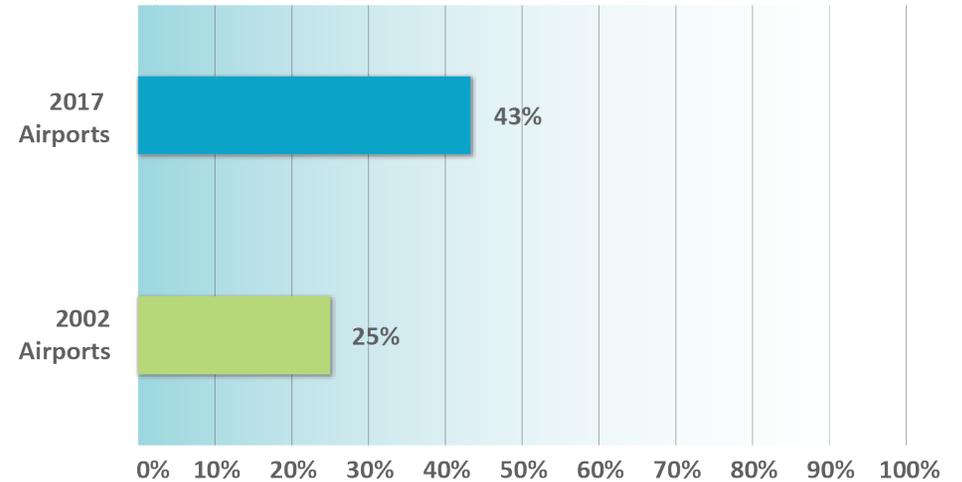


COMPARISON OF 2002 VERSUS 2017 SYSTEM PERFORMANCE

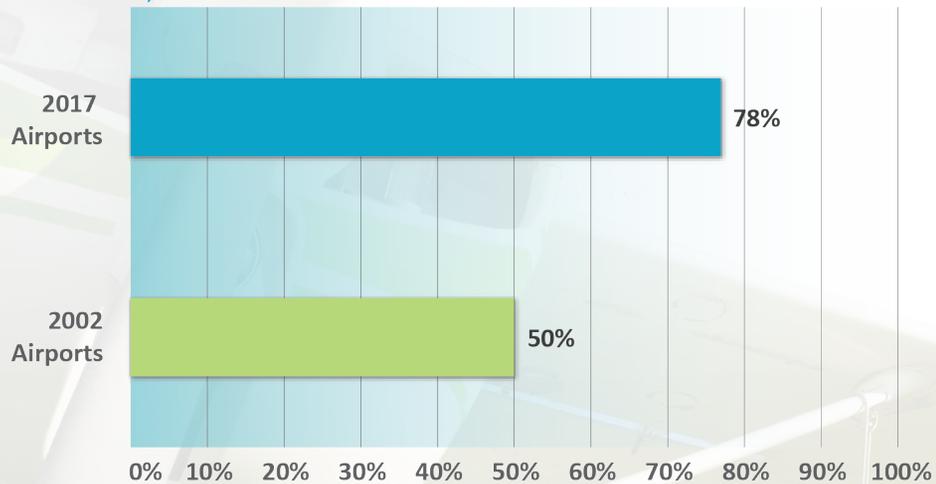
PERCENTAGE OF AIRPORTS WITH A RUNWAY LENGTH OF 4,000 FEET OR GREATER



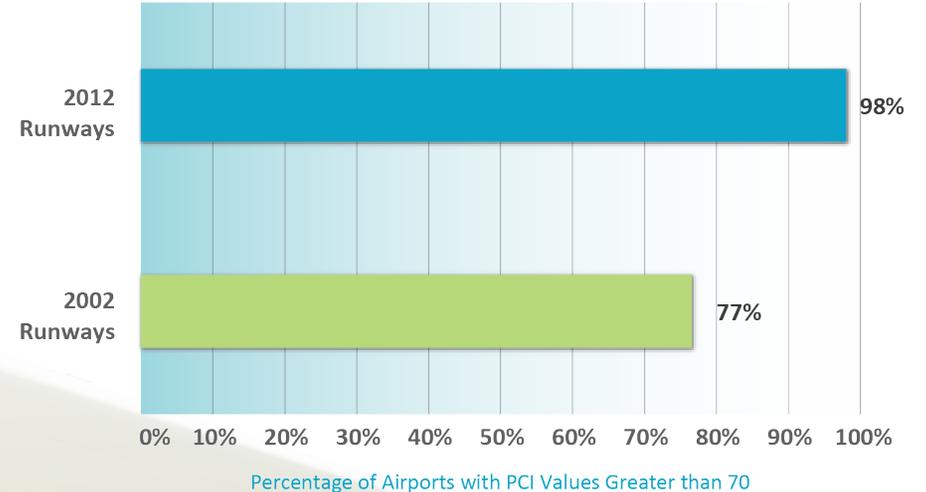
PERCENTAGE OF AIRPORTS WITH A RUNWAY LENGTH OF 5,500 FEET OR GREATER



PERCENTAGE OF AIRPORTS WITH A RUNWAY LENGTH OF 5,000 FEET OR GREATER



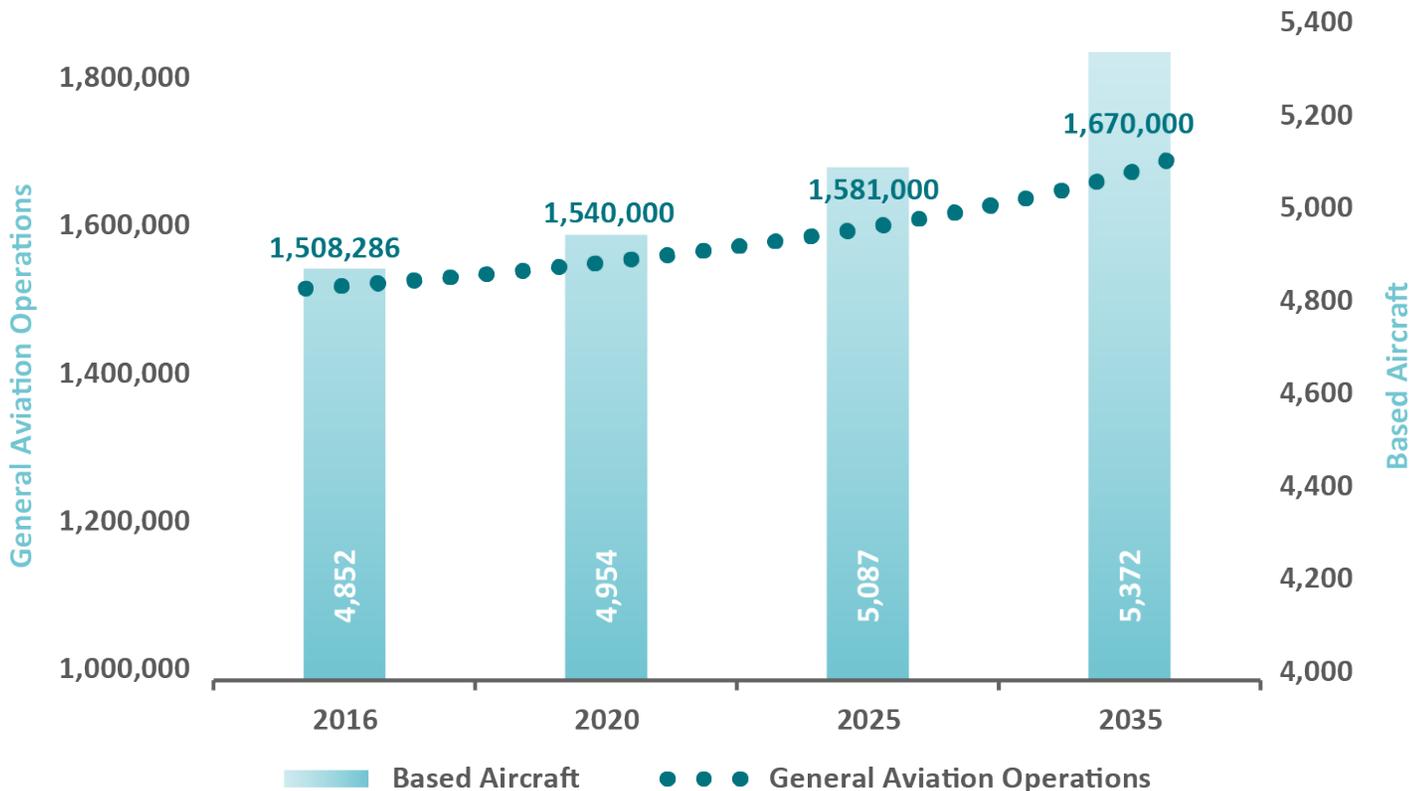
2002 VERSUS 2012 PRIMARY RUNWAY PAVEMENT CONDITION INDEX (PCI) COMPARISON



GENERAL AVIATION OUTLOOK

According to the FAA, business aviation is currently the fastest growing segment of the general aviation industry. A healthier U.S. economy is supporting growth in corporate aviation. Businesses based in Georgia, as well as businesses in other states that use general aviation to visit Georgia companies, are contributing to increased general aviation activity at some Georgia airports.

Several methodologies were considered to develop preferred general aviation projections. Statewide projections of based aircraft and annual general aviation operations are shown below. Airport-specific projections of general aviation demand are provided in each airport’s Individual Airport Report, and the Technical Report provides details on forecast methodologies. Over the forecast period, statewide based aircraft are forecast to grow at an average annual rate of .54%, while statewide general aviation aircraft operations are forecast to increase at an average annual rate of .54%.

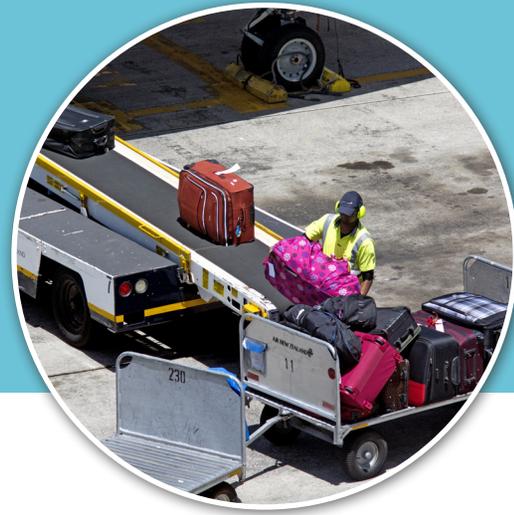


Current Based Aircraft
4,852

Projected Based Aircraft
5,372

Current Operations
1.5 million

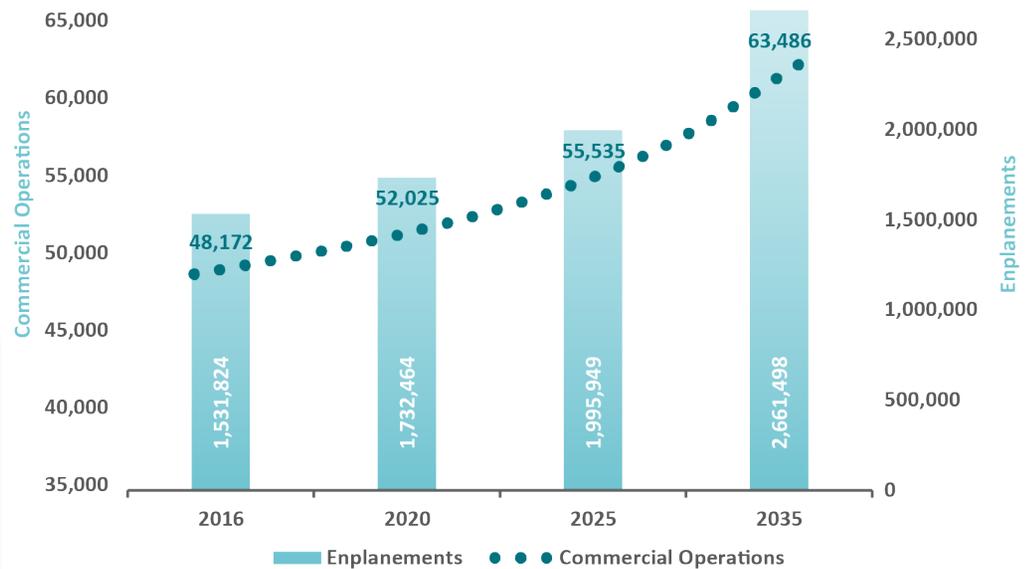
Projected Operations
1.7 million



COMMERCIAL AIRLINE ACTIVITY

Commercial airline operations at Georgia airports are expected to grow, but at a lower average annual rate than commercial passenger enplanements. Twenty-year demand projections were developed in the GSASP for commercial passenger enplanements and commercial aircraft operations; these projections exclude Hartsfield-Jackson Atlanta International Airport. Commercial enplanements are expected to grow at an average annual rate of 2.9%, while commercial aircraft operations are forecast to increase at an average annual rate of 1.7%. The projections follow.

	CURRENT	20-YEAR DEMAND PROJECTION
COMMERCIAL PASSENGER ENPLANEMENTS	1,531,824	2,661,498
COMMERCIAL AIRCRAFT OPERATIONS	48,172	63,486

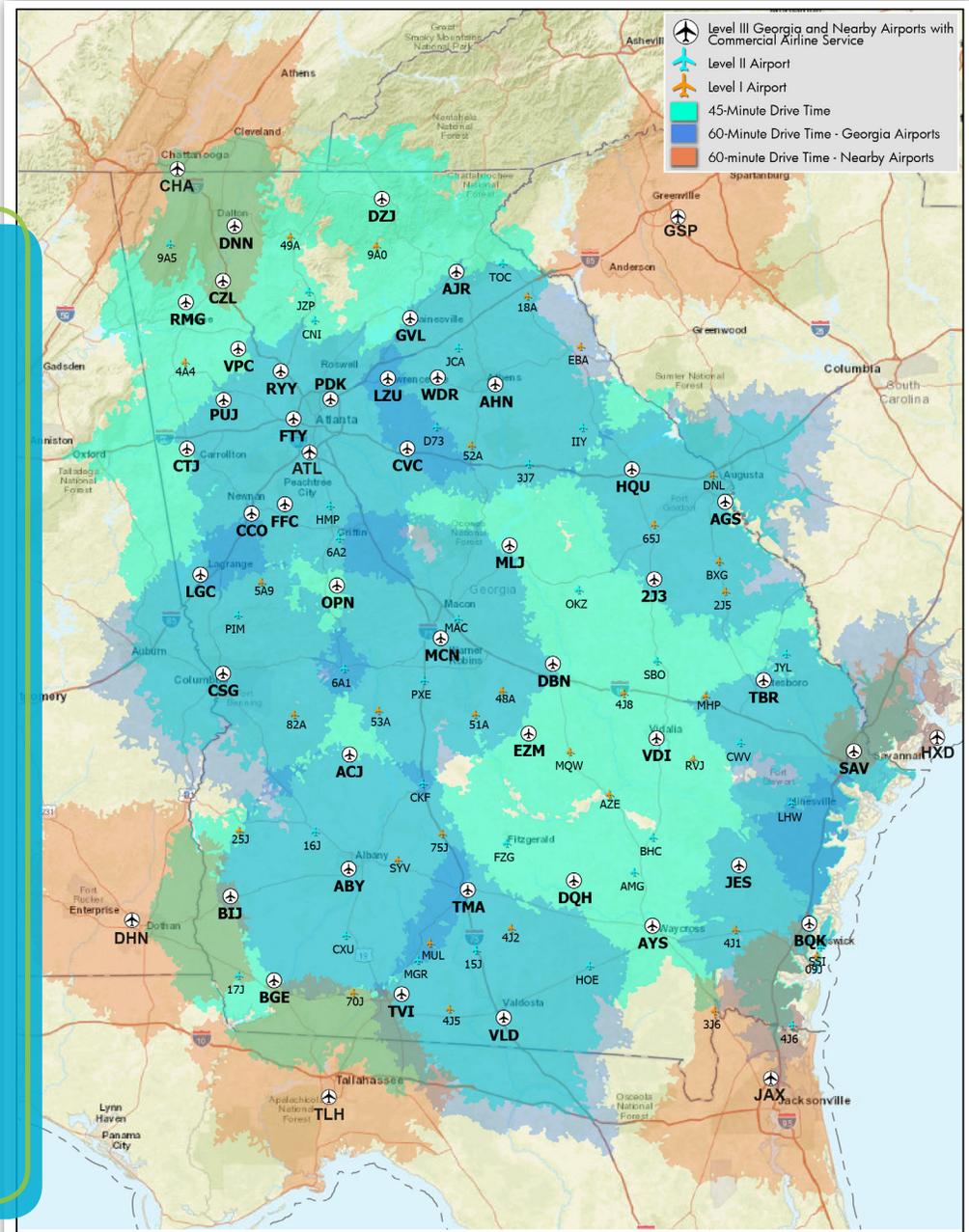


45-MINUTE SERVICE AREAS FOR LEVEL III AND 60-MINUTE SERVICE AREAS FOR COMMERCIAL AIRPORTS

FUTURE SYSTEM CHANGES ACCESS TO LEVEL III AIRPORTS

The GSASP objective is to have all Georgians within a 45-minute drive time of a Level III Airport, or a 60-minute drive time of a commercial airport. The runway length objective for Level III airports is a minimum of 5,500 feet. A review was undertaken to identify the portions of the state that are currently not served by a Level III Airport.

The GDOT review indicated that the system could benefit from additional Level III airports. Additional airports recommended for Level III include the existing Wright Army Airfield facility and a new general aviation airport north of Atlanta in the Dawson/Forsyth county area.

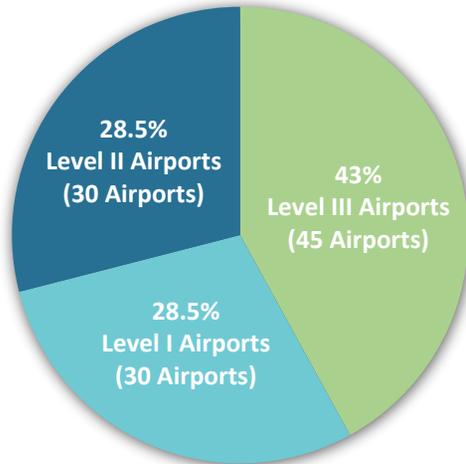


RECOMMENDED AIRPORT SYSTEM

The Georgia airport system is performing at a high level. The GSASP recommended role/level changes to increase Level III Airport accessibility. The map shows recommended levels for all study airports. Airports recommended for a change to their current level in the state airport system are shown in the table below.

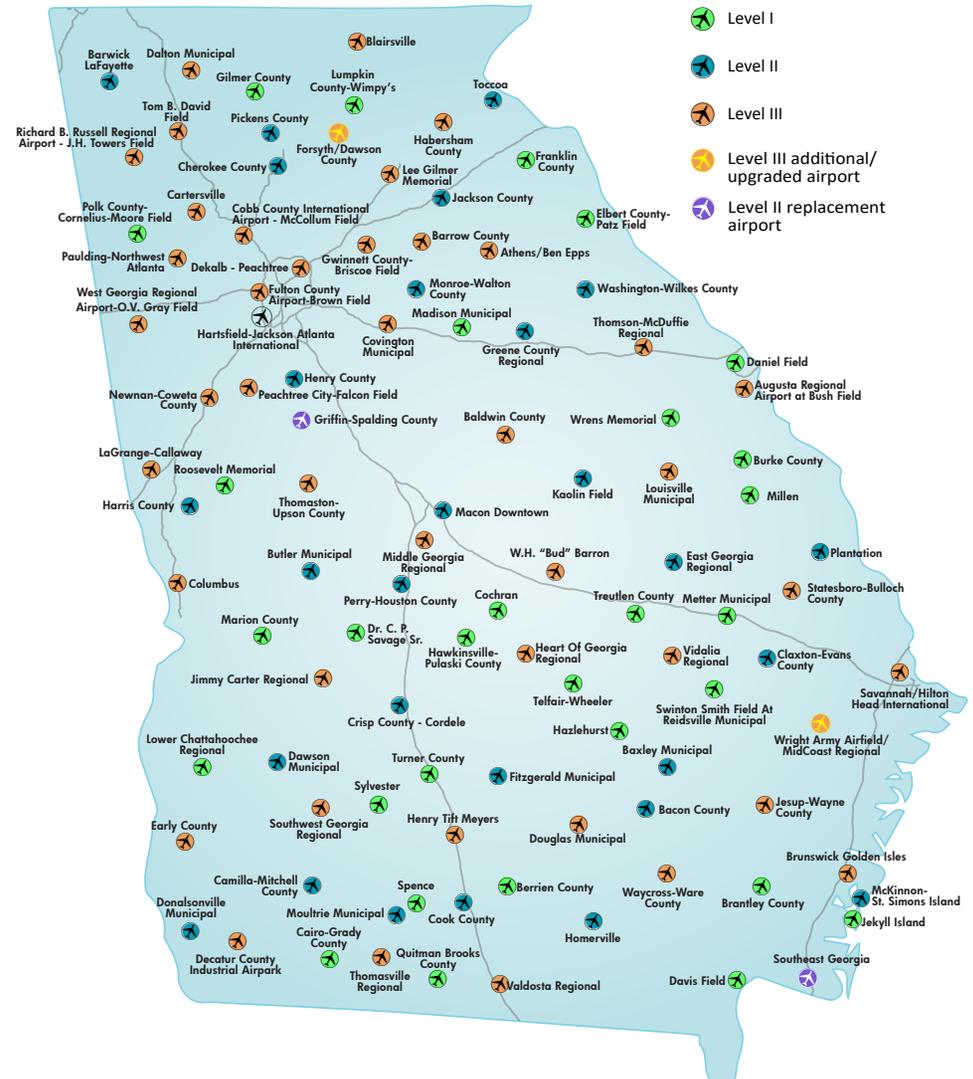
RECOMMENDED LEVEL III AIRPORTS				
CITY	AIRPORT NAME	AIRPORT ID	CURRENT LEVEL	RECOMMENDED LEVEL
DAWSONVILLE	Forsyth/Dawson County Airport	30GA	None/ Additional Airport	III
HINESVILLE	Wright Army Airfield (Fort Stewart)/MidCoast Regional Airport	LHW	II	III

SYSTEM DISTRIBUTION BY RECOMMENDED LEVEL



RECOMMENDATIONS FOR REPLACEMENT AIRPORTS

As part of the system plan update, the need for two replacement airports was identified. One replacement airport is for the existing Griffin-Spalding County Airport; this project is underway. The other replacement is for the St. Marys Airport in southeast Georgia; this airport closed in September 2017. Sites that are technically capable of supporting a replacement in southeast Georgia were identified as part of the system plan. Both of the replacement airports have a Level II role designation.

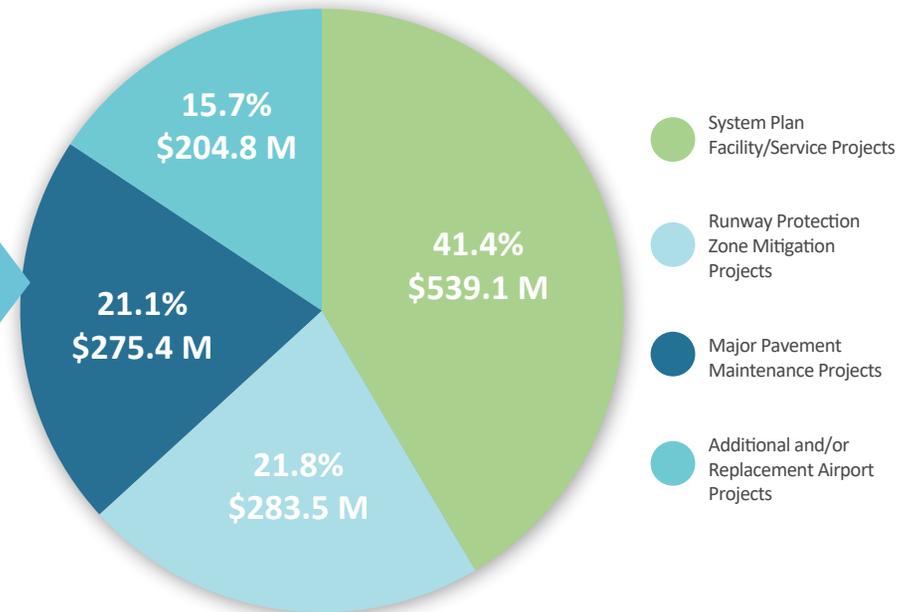


DEVELOPMENT COSTS

The GSASP identified projects needed at each airport to meet the airport’s specific facility and service objectives. GDOT also has a Statewide Airfield Pavement Management Study that identifies maintenance and rehabilitation projects for existing runways, taxiways, and aprons. Significant investment is needed each year just to maintain the existing infrastructure at Georgia airports. The system plan also identified the financial requirements for additional or replacement system airports. Finally, as part of the System Plan Update, cost estimates to bring all RPZs under airport control were developed.

When all inputs noted here are considered, a total investment of at least \$1.3 billion over the next five years would be needed to meet the goals and objectives of the system plan.

TOTAL ESTIMATED DEVELOPMENT COSTS



SOURCE OF ESTIMATED DEVELOPMENT COSTS	LEVEL III COMMERCIAL SERVICE	LEVEL III	LEVEL II	LEVEL I	COMBINED DEVELOPMENT COSTS (BY PLAN)	PERCENTAGE OF TOTAL
SYSTEM PLAN FACILITY/SERVICE PROJECTS	\$26,234,000	\$247,261,155	\$140,680,114	\$124,907,034	\$539,082,303	41.4%
RUNWAY PROTECTION ZONE MITIGATION PROJECTS	\$59,021,372	\$138,526,508	\$56,687,958	\$29,268,814	\$283,504,652	21.8%
MAJOR PAVEMENT MAINTENANCE PROJECTS	\$86,237,520	\$138,761,315	\$30,094,879	\$20,293,476	\$275,387,190	21.1%
ADDITIONAL OR REPLACEMENT AIRPORT PROJECTS	\$0	\$44,260,000	\$160,541,193	\$0	\$204,801,193	15.7%
COMBINED DEVELOPMENT COSTS (BY LEVEL)	\$171,492,892	\$568,808,978	\$388,004,144	\$174,469,324	\$1,302,775,338	100.0%
PERCENTAGE OF TOTAL	13.2%	43.7%	29.8%	13.4%	100.0%	

SYSTEM NEEDS VERSUS SYSTEM BENEFITS

For the Georgia airport system to remain viable, significant investment will be required. The GSASP shows that the average annual investment need for the airports is at least \$261 million. This funding need is not all-inclusive, as there will undoubtedly be additional funding requirements.

On average, annual funds available to apply to the needs of the Georgia airport system, from both GDOT and the FAA, have averaged \$63.7 million. Based on the historic average annual level of funding, there will be a significant funding gap.

Airports in Georgia have an annual economic benefit of \$4.4 billion. Georgia airports are providing an annual economic benefit that far exceeds the anticipated annual financial need to maintain and develop the state airport system.



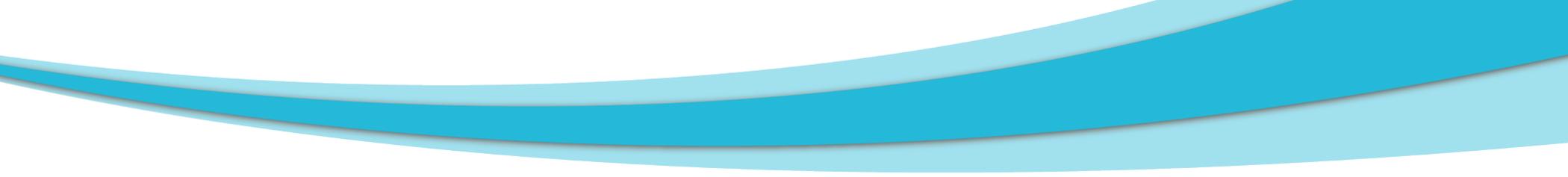
SUMMARY OF FINDINGS

Estimated five-year system planning funding needs **\$1.3 billion**

Estimated average annual system planning funding needs **\$261 million**

Estimated state/federal funds available to address annual need **\$63.7 million**

Estimated annual economic impact of study airports **\$4.4 billion**



PREPARED BY
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STATEWIDE AVIATION SYSTEM PLAN

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