CHAPTER 2

FORECASTS

An essential component of airport planning involves defining anticipated aviation demand across multiple time periods, including the near term (five years), intermediate term (10 years), and long term (20 years). Forecasting aviation demand for Glendale Regional Airport (GEU) primarily focuses on key indicators such as based aircraft, aircraft operations, and peak activity periods. In addition, this chapter assesses the potential demand for commercial airline passenger services at GEU. The analysis evaluates projected demand levels, should the City of Glendale elect to pursue the development of commercial aviation activity at the airport. This chapter presents new aviation demand forecasts for GEU.

The Federal Aviation Administration (FAA) is responsible for the review and approval of airport forecasts developed for planning and design, project justification, *National Environmental Policy Act* (NEPA) environmental reviews, benefit-cost analyses (BCAs), and Part 150 noise compatibility planning (NCP). When reviewing a sponsor's forecast, the FAA must ensure the forecast is based on reasonable planning assumptions, uses current data, and is developed using appropriate forecasting methods. Guidance for the development of FAA-approved aviation demand forecasts is provided in the following publications:

- FAA Order 5090.5, *Formulation of the National Plan of Integrated Airport Systems (NPIAS) and Airports Capital Improvement Plan (ACIP)*
- FAA Memorandum: *Forecast Review and Approval Instructions* (dated August 12, 2024)

- FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*
- FAA AC 150/5000-17, *Critical Aircraft and Regular Use Determination*

According to FAA Order 5090.5, forecasts should be:

- Realistic;
- Objective in their reasoning;
- Based on the latest available data;
- Reflective of current conditions at the airport (as a baseline);
- Supported by information in the study; and
- Able to provide adequate justification for airport planning and development.

The forecasting process for an airport master plan involves a series of basic steps that vary in complexity, depending on the issues to be addressed and the level of effort required. The steps include a review of previous forecasts, determination of data needs, identification of data sources, collection of data, selection of forecasting methods, preparation of the forecasts, and documentation and evaluation of the results. FAA AC 150/5070-6B, *Airport Master Plans*, outlines seven standard steps involved in the forecast process:

1. **Identify Aviation Activity Measures**: Determine the levels and types of aviation activities likely to impact facility needs. For general aviation, these typically include based aircraft and operations.

2. **Review Previous Airport Forecasts**: Sources may include the FAA *Terminal Area Forecast* (TAF), state or regional system plans, and previous master plans.

3. **Gather Data**: Determine what data are required to prepare the forecasts, identify data sources, and collect historical and forecasted data.

4. **Select Forecast Methods**: Several appropriate methodologies and techniques are available, including regression analysis, trend analysis, market share or ratio analysis, exponential smoothing, econometric modeling, comparison with other airports, survey techniques, cohort analysis, choice and distribution models, range projections, and professional judgment.

5. **Apply Forecast Methods and Evaluate Results**: Prepare the actual forecasts and evaluate them for reasonableness.

6. **Summarize and Document Results**: Provide supporting text and tables, as necessary.

7. **Compare Forecast Results with the FAA TAF**: Based aircraft and total operations forecasts are considered consistent with the TAF if they meet one of the following criteria:

    - The forecasts differ by less than 10 percent in the five-year forecast period and less than 15 percent in the 10-year forecast period;

    - The forecasts do not affect the timing or scale of an airport project; or

    - The forecasts do not affect the role of the airport, as defined in the current version of FAA Order 5090.5.

If the master plan forecast is not consistent with the TAF, differences must be resolved if the forecast is to be used in FAA decision-making. This may involve revisions to the forecasts submitted, adjustment to the TAF, or both. It should be noted that the FAA's forecast approval is limited to the 10-year outlook period unless a longer period is specifically needed for environmental analyses or a benefit-cost analysis.

The forecasts must also include an analysis of the current critical aircraft, which is the aircraft or family of characteristically similar aircraft that accounts for at least 500 annual operations at the airport, and the future critical aircraft. FAA AC 150/5000-17, *Critical Aircraft and Regular Use Determination*, is referenced when conducting the critical aircraft analysis.

Aviation activity can be affected by many influences on the local, regional, and national levels, making it virtually impossible to predict year-to-year fluctuations of activity over 20 years with certainty; therefore, it is important to remember that forecasts are intended to serve only as guidelines, and planning must remain flexible enough to respond to a range of unforeseen developments.

The following forecast analysis for the airport was produced following these basic guidelines. Existing forecasts are examined and compared against current and historical activity. The historical aviation activity is then examined, along with other factors and trends that can affect demand. The intent is to provide an updated set of aviation demand projections for the airport that will enable airport management to make planning adjustments, as necessary, to maintain a viable, efficient, and cost-effective facility.

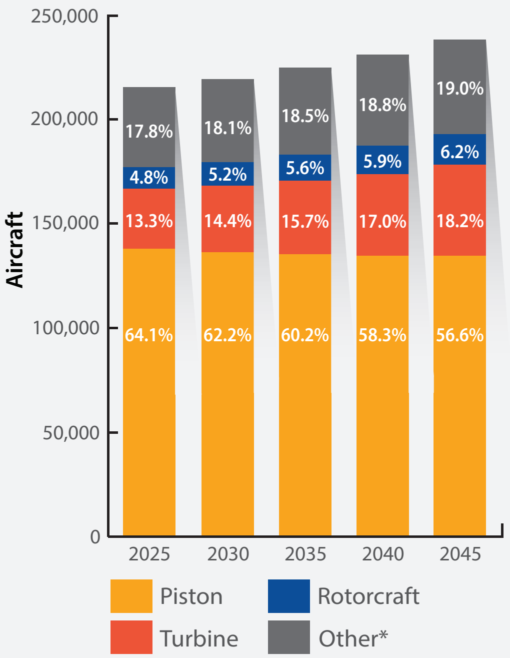
These aviation demand forecasts were prepared in March 2026. The base year is the full calendar year of 2025, with projections developed for a 20-year period through 2045.

NATIONAL AVIATION TRENDS

The FAA publishes an annual national aviation forecast that encompasses projections for large air carriers, air taxi operations, general aviation activity, and FAA workload measures. These forecasts are developed to support the FAA's budgeting and planning processes while serving as a valuable resource for state and local governments, the aviation industry, and the general public. At the time this chapter was prepared, the most recent edition available was the *FAA Aerospace Forecasts Fiscal Years (FY) 2025–2045*. The FAA relies primarily on the economic performance of the United States (U.S.) as a key indicator of future aviation industry growth, while comparable economic methodologies are applied to assess projected growth in international aviation markets. The following discussion is summarized from the *FAA Aerospace Forecasts*. A summary is also shown on **Exhibit 2A**.

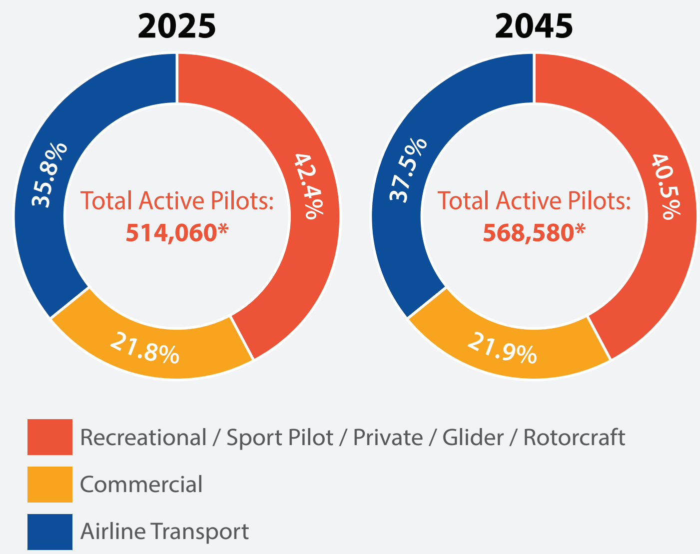
The U.S. commercial air carrier industry experienced a decade of relative stability that extended from the end of the Great Recession in 2009 through the emergence of COVID-19 in 2020. During that period, U.S. airlines revamped their business models to minimize losses by lowering operating costs, eliminating unprofitable routes, and grounding older, less fuel-efficient aircraft. To increase operating revenues, carriers initiated new services customers were willing to purchase and started charging separately for services that were historically bundled in the price of a ticket. The results of these efforts were significant: 2019 marked the eleventh consecutive year of profitability for the U.S. airline industry.

U.S. Active General Aviation Aircraft



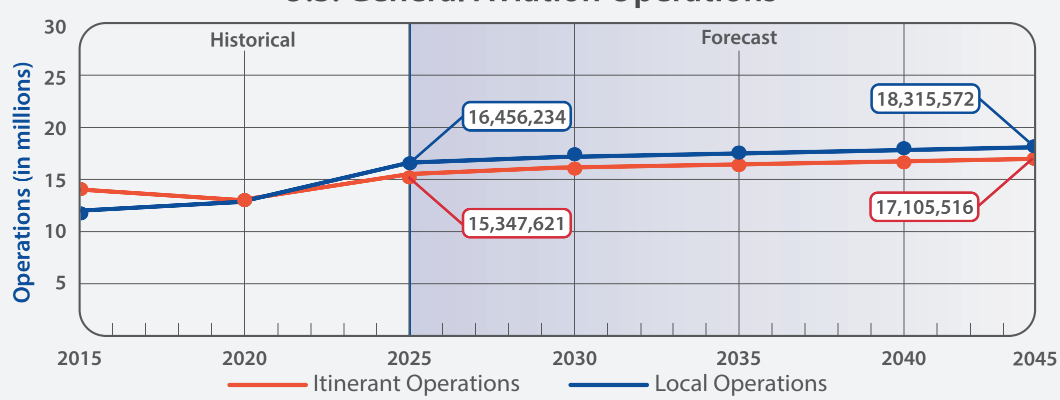
*The other category includes gliders and balloons

Active Pilots By Certificate

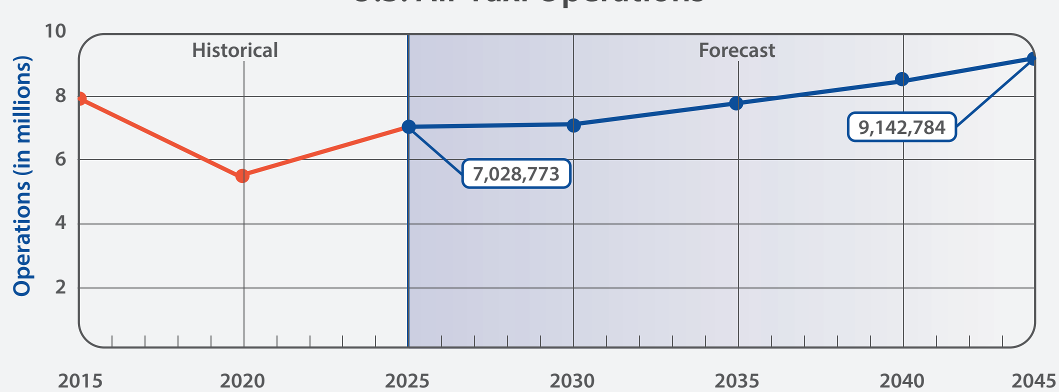


*Excludes Student Pilot Certificates

U.S. General Aviation Operations



U.S. Air Taxi Operations



Source: FAA Aerospace Forecasts FY2025-2045

The global COVID-19 pandemic in 2020 systematically ended those years of relative stability. Airline activity and profitability plummeted almost overnight. In response, airlines were forced to cut capacity and costs, which allowed most to weather the storm. Some regional carriers ceased operations as a result of the pandemic, but no mainline carriers did. Some segments of aviation were less impacted; cargo activity surged, boosted by consumer purchases, and general aviation maintained relatively the same activity levels as pre-pandemic. In 2022, leisure travel demand surged for domestic and Latin American destinations, and by 2023, a wider array of accessible destinations opened with a strong demand for flights across the Atlantic. In 2024, the environment continued to shift; passengers changed focus from spending on goods to experiences, ultimately preferring premium and international travel. This resulted in a surge of travel across the Atlantic Ocean but suppressed domestic travel, requiring carriers to shift business strategies to accommodate the observed trends. By the end of 2024, the top eight U.S. passenger carriers posted net profits of $6.4 billion, but also losses of $2.0 billion at two of the carriers.

The business changes airlines have implemented over the last few years will continue to shape the industry long into the foreseeable future. Airlines will be smaller due to having retired aircraft and encouraged voluntary employee separations, which has led airlines to transition their respective fleets to newer and more fuel-efficient aircraft to meet current and future demand for travel. Within the industry, there is confidence that U.S. airlines can generate solid returns on capital and sustained profits; however, aviation demand will be driven by economic activity over the long term as the growing U.S. and world economies provide the basis for aviation growth.

Recovery of the general aviation (GA) sector from the impact of the COVID-19 crisis was faster than recovery for the airlines. Private aviation became attractive during the COVID-19 pandemic. While some decline in general aviation activity was observed in 2024, much of the growth experienced in 2020 and 2021 has remained. The FAA is currently observing the highest number of people pursuing aviation and becoming student pilots in the past three decades, alongside the greatest increase in private pilot certifications since 1995.

The active GA fleet is forecasted to increase by 10.6 percent between 2025 and 2045. The turbine aircraft fleet, including rotorcraft, did not show a decline between 2019 and 2023, but experienced rapid growth of 3.6 percent in 2022 and 2.3 percent growth in 2023. This fleet is projected to have an average growth rate of 2.1 percent per year during the forecast period. The total piston fleet (single- and multi-engine piston aircraft, light sport aircraft, and piston rotorcraft) declined by 1.6 percent between 2019 and 2023 and is estimated to have shrunk by an additional 0.4 percent in 2024. The piston aircraft fleet is projected to decline modestly (0.1 percent annually) over the forecast period. Growth in the GA fleet is expected to occur in turbine aircraft. Despite average annual growth of the active GA fleet between 2023 and 2045 (0.5 percent), the number of GA hours flown is projected to increase by 19 percent during this period (an average of 0.8 percent per year), as growth in turbine, rotorcraft, and experimental hours more than offsets declines in fixed-wing piston hours. Over the 20-year forecast period, operations are forecasted to grow 1.1 percent a year, with commercial activity growing at approximately four times the rate of non-commercial (general aviation and military) activity.

BUSINESS JET OPERATIONAL TRENDS

General aviation airports are often hubs of diverse activity, although they frequently serve predominantly piston-powered aircraft. These aircraft, including single-engine airplanes and light twin-engine aircraft, comprise most of the based aircraft and operations at GEU. Routine activities for these aircraft vary from local flights and flight training to recreational flying and short-haul travel. Piston-powered aircraft are generally more numerous and engaged in more frequent, shorter operations, which contributes to a busy, vibrant atmosphere at general aviation airports.

In contrast, business jets are less numerous and conduct fewer operations overall but are physically demanding in a different way. Business jets require more space for operations due to their larger size and need for longer runways. Arrivals and departures by business jets can place greater demands on airport infrastructure, such as requiring more intensive ground handling, fueling, and maintenance services. The operational impact of business jets includes increased coordination and infrastructure support; their presence is prominently felt, even if they operate less frequently compared to their piston-powered counterparts. At reliever airports, such as GEU, business jets typically drive the critical aircraft discussion. For this reason, additional focus is placed on national business jet trends to help understand growth patterns and how they might impact future operations at GEU.

Since the early 2000s, business jet operational trends have significantly evolved, driven by advancements in technology, changing economic conditions, and shifts in travel preferences. Advances in aircraft technology have led to the development of business jets with greater range and performance capabilities. Newer models can cover longer distances nonstop, reducing the need for intermediate stops. Ultra-long-range business jets, such as the Gulfstream G700/G800, Bombardier Global 7500, and Boeing Business Jet (BBJ) have ranges over 7,000 nautical miles (nm) and are experiencing growing demand from corporations and high-net-worth individuals who seek more flexibility and range. A strong focus has been placed on improving fuel efficiency and reducing operating costs. Modern business jets are designed with more efficient engines and aerodynamic enhancements that lower fuel consumption and operational expenses. Some of the most fuel-efficient business jet models include the Embraer Phenom 300, Pilatus PC-24, Cessna Citation XLS, and Learjet 75.

The FAA's *Traffic Flow Management System Counts* (TFMSC) database provides data on aircraft operations across the country. As shown in **Table 2A**, the top 15 business jets with the most operations in 2025 are led by two of the most efficient business jets, the Embraer Phenom 300 and the Cessna Citation Excel/XLS.

TABLE 2A: 2025 Top 15 Busiest Business Jets by Operations

Aircraft Type	2020 Operations	2021 Operations	2022 Operations	2023 Operations	2024 Operations	2025 Operations	2020–2025 CAGR
E55P – Embraer Phenom 300	213,923	335,646	354,249	364,496	399,592	470,195	14.03%
C56X – Cessna Excel/XLS	242,977	357,612	380,367	348,207	341,568	348,958	6.22%
H25B – BAe HS 125/700-800/Hawker 800	158,778	240,801	229,572	199,976	188,903	191,214	3.15%
BE40 – Raytheon/Beech Beechjet 400/T-1	209,219	244,373	234,904	200,363	157,608	136,283	-6.89%
C560 – Cessna Citation V/Ultra/Encore	170,545	228,409	219,329	197,471	183,614	178,137	0.73%
C25B – Cessna Citation CJ3	125,983	179,269	193,852	205,427	221,978	227,382	10.34%
CL60 – Bombardier Challenger 600/601/604	131,174	193,995	202,902	191,212	192,776	197,120	7.02%
GLF4 – Gulfstream IV/G400	133,027	202,549	196,146	175,091	167,300	173,724	4.55%
CL30 – Bombardier Challenger 300	127,629	172,303	169,523	162,654	162,026	171,924	5.09%
C525 – Cessna Citation Jet/CJ1	124,413	166,026	166,923	152,957	142,491	134,688	1.33%
C680 – Cessna Citation Sovereign	101,731	151,397	158,480	137,461	125,118	119,047	2.65%
F2TH – Dassault Falcon 2000	90,177	131,785	149,210	142,465	132,020	132,962	6.69%
GLF5 – Gulfstream V/G500	89,818	127,765	150,344	136,684	135,606	134,635	6.98%
C750 – Cessna Citation X	94,729	129,732	131,305	118,117	114,528	117,400	3.64%
LJ45 – Bombardier Learjet 45	90,256	124,336	131,070	122,107	118,127	112,232	3.70%

Source: FAA TFMSC Database

CAGR = compound annual growth rate

Table 2B shows the business jets with the fastest operational growth rates over the past five years. Many of these aircraft are among the most efficient business jets currently operating in the industry, including several models of the Cessna Citation family, the Honda Jet HA-420, and the Embraer Phenom 300.

TABLE 2B: Top 15 Fastest Operational Growth Business Jets

Aircraft Type	2020 Operations	2021 Operations	2022 Operations	2023 Operations	2024 Operations	2025 Operations	2020–2025 CAGR
GLF6 – Gulfstream	37,724	55,534	73,457	79,805	84,261	89,795	15.55%
E55P – Embraer Phenom 300	213,923	335,646	354,249	364,496	399,592	470,195	14.03%
G280 – Gulfstream G280	42,360	66,010	79,495	79,726	83,720	92,200	13.84%
GL5T – Bombardier BD-700 Global 5000	23,772	38,703	40,258	41,975	42,424	47,868	12.37%
C25C – Cessna Citation CJ4	50,926	78,040	87,161	86,107	92,778	96,626	11.27%
C25B – Cessna Citation CJ3	125,983	179,269	193,852	205,427	221,978	227,382	10.34%
HDJT – HONDA HA-420 HondaJet	27,295	48,402	67,416	61,348	54,212	45,958	9.07%
GLEX – Bombardier BD-700 Global Express	60,258	87,379	102,430	101,014	98,391	96,789	8.22%
CL60 – Bombardier Challenger 600/601/604	131,174	193,995	202,902	191,212	192,776	197,120	7.02%
GLF5 – Gulfstream V/G500	89,818	127,765	150,344	136,684	135,606	134,635	6.98%
F2TH – Dassault Falcon 2000	90,177	131,785	149,210	142,465	132,020	132,962	6.69%
FA7X – Dassault Falcon F7X	22,238	29,954	37,141	36,708	35,219	32,349	6.45%
C56X – Cessna Excel/XLS	242,977	357,612	380,367	348,207	341,568	348,958	6.22%
F900 – Dassault Falcon 900	62,849	92,544	101,998	95,416	89,416	88,298	5.83%
CL30 – Bombardier (Canadair) Challenger 300	127,629	172,303	169,523	162,654	162,026	171,924	5.09%

Source: FAA TFMSC Database

CAGR = compound annual growth rate

Table 2C provides a five-year breakdown of business jet operations by aircraft reference code (ARC). These data show that the B-II and C-II categories accounted for over 63 percent of total business jet operations in 2025. The highest growth categories are C-III and D-III. The C-III category has grown at a compound annual growth rate (CAGR) of 11.54 percent and is represented by aircraft such as the Gulfstream V. The D-III category has a CAGR of 6.98 percent and is represented by aircraft such as the Bombardier Global 5000.

TABLE 2C:National Business Jet Operations by Aircraft Reference Code (ARC)

ARC / Example Aircraft	2020 Operations	2021 Operations	2022 Operations	2023 Operations	2024 Operations	2025 Operations	2020–2025 CAGR
B-I / Beech Jet 400	593,453	750,189	755,156	666,707	594,794	552,931	-1.17%
C-I / Learjet 45	292,293	397,439	385,763	335,363	311,994	300,353	0.45%
B-II / Phenom 300	1,095,425	1,589,201	1,641,579	1,551,553	1,554,500	1,617,133	6.71%
C-II / Challenger 300	852,448	1,240,626	1,268,828	1,168,079	1,124,010	1,144,216	5.03%
D-II / Gulfstream G400	133,027	202,549	196,146	175,091	167,300	173,724	4.55%
B-III / Falcon F7X	22,238	29,954	37,141	36,708	35,219	32,349	6.45%
C-III / Gulfstream V	121,754	181,616	216,145	222,794	225,076	234,452	11.54%
D-III / Bombardier Global 5000	89,818	127,765	150,344	136,684	135,606	134,635	6.98%

Source: FAA TFMSC Database

CAGR = compound annual growth rate

UNMANNED AIRCRAFT SYSTEMS (UAS)/DRONES

UAS, commonly referred to as drones, have been experiencing healthy growth in the U.S. and around the world over the past few years. According to the *FAA Aerospace Forecasts*:

> *"A drone consists of a remotely piloted aircraft and its associated elements – including the control station and the associated communication links – that are required for the safe and efficient operation in the national airspace system (NAS). The introduction of drones in the NAS has opened up numerous possibilities, especially from a commercial perspective. This has also brought challenges including drones' safe and secure integration into the NAS. Despite these challenges, the drone sector holds enormous promise; potential uses range from individuals flying solely for recreational purposes to large companies delivering commercial packages and delivering medical supplies. Public service uses, such as conducting search and rescue support missions following natural disasters, are proving promising as well."*

On December 21, 2015, the FAA launched an online registration system for recreational/model small drones, which required all drones that weigh more than 0.55 pounds (or 250 grams) and less than 55 pounds (or 25 kilograms) to be registered. The registration system captures the number of registered pilots but does not capture individual drone aircraft; nevertheless, the registration information provides a basic understanding of the growth in drone activity, from which the FAA has made a growth forecast for the next five years.

Trends in Recreational/Model Aircraft

Through an examination of the drone aircraft registrations and renewals, the FAA estimated that there were over 1.61 million small drones registered in the national fleet by the end of 2024. The FAA developed three forecasts (low range, base range, and high range), which are presented in **Table 2D**. By 2029, the FAA forecasts nearly two million small drones in its high-range forecast.

TABLE 2D: Total Recreational/Model Fleet

Forecast	Fiscal Year	Low Range*	Base Range**	High Range**
Historical	2024	455,100	1,867,000	1,867,000
Forecast	2025	460,000	1,889,400	1,904,300
Forecast	2026	484,800	1,911,000	1,928,700
Forecast	2027	497,800	1,922,800	1,945,200
Forecast	2028	505,500	1,925,800	1,958,800
Forecast	2029	507,200	1,929,700	1,972,500
–	CAGR:	2.19%	0.66%	1.11%

Source: FAA Aerospace Forecasts FY 2025–2045

CAGR = compound annual growth rate

*Effective/active fleet counts combined with multiplicity of aircraft ownership
**New registration counts combined with multiplicity of aircraft ownership

Trends in Commercial/Non-Model UAS Aircraft

Online registration for commercial/non-model small drones went into effect on April 1, 2016. These are commercial drones that weigh less than 55 pounds. Unlike recreational/model ownership, each aircraft must be individually registered. Registrations of commercial/non-model UAS aircraft have been increasing every year, according to the FAA. **Table 2E** shows the FAA forecast for this category of UAS. It is estimated that there were up to 960,000 commercial/non-model UAS in 2024, which is expected to increase to 1,209,000 by 2029 in the high-range forecast.

TABLE 2E: Total Commercial/Non-Model Fleet

Forecast	Fiscal Year	Low Range*	Base Range**	High Range**
Historical	2024	388,000	966,000	966,000
Forecast	2025	395,000	1,030,000	1,035,000
Forecast	2026	402,000	1,089,000	1,099,000
Forecast	2027	408,000	1,135,000	1,151,000
Forecast	2028	411,000	1,165,000	1,187,000
Forecast	2029	413,000	1,180,000	1,209,000
–	**CAGR:**	**1.26%**	**4.08%**	**4.59%**

Source: FAA Aerospace Forecasts FY 2025–2045

CAGR = compound annual growth rate

*Effective/active fleet counts combined with multiplicity of aircraft ownership
**New registration counts combined with multiplicity of aircraft ownership

Trends in Large UAS

Drones that weigh 55 pounds (large UAS) or more cannot be operated as recreational remote-piloted aircraft. They are registered with the FAA using the existing aircraft registration system. Large UAS require a Title 49 United States Code (USC) § 44807 exemption or a public aircraft operator (PAO) certification. These drones are also required to have tail numbers. At present, most large drones are flown by government entities, but commercial operators have steadily increased; most new large drone operators are active in agricultural spraying operations. The FAA estimates there were 4,313 large drones operating in the NAS in 2024 and forecasts that 44,740 commercial large drones will be operating by 2029.

Advanced Air Mobility (AAM)

The AAM segment encompasses piloted electric vertical takeoff and landing (eVTOL) vehicles with progressively remote-piloted or automated control options. AAM is defined as "a safe and efficient system for air passenger and cargo transportation, inclusive of small package delivery and other urban drone services, which support a mix of onboard/ground-piloted and increasingly autonomous operations." Urban air mobility (UAM), a subset of the larger AAM category, is envisioned as a transportation system that is likely to use piloted and progressively automated aircraft to move passengers and cargo at lower altitudes within urban and suburban environments.

AAM technology presents considerable opportunities for economic growth over the coming decades. Despite many regulatory and technological issues, and because AAM services have not yet begun in the U.S., the FAA provides a general projection of annual trips, daily trips, and fleet size, as outlined in **Table 2F**.

TABLE 2F: NAS-Wide AAM Demand Forecast

Characteristics	Year 1 (EIS)	Year 2	Year 3	Year 4	Year 5	Year 6	CAGR
Annual Trips	42,405	323,038	616,115	1,029,883	1,826,525	2,820,956	101.29%
Daily Trips	116	885	1,688	2,822	5,004	7,729	101.35%
Fleet Size	4	32	62	104	184	283	103.37%

Source: FAA Aerospace Forecasts FY 2025–2045

CAGR = compound annual growth rate
EIS = entry into service

The FAA forecasts indicate that upon reaching the point of entry into service (EIS), demand for AAM operations is likely to grow exponentially within the first several years, despite the ongoing safety and infrastructure challenges that may slow full integration in the short term; nevertheless, flight testing continues as numerous commercial companies conduct test flights. An example is the advancements Joby Aviation has made with its eVTOL aircraft, which is anticipated to receive FAA certification in 2026. Currently, this aircraft can fly over 150 miles on one battery charge and can carry four passengers.

As previously mentioned, one of the potential challenges that remains for eVTOL entering the marketplace is infrastructure. A system of vertiports for AAM services appears to be the preferred method of operation. Joby Aviation and Archer Aviation have partnered with parking garage operator REEF Technology with the goal of using parking garage rooftops as vertiports. Other options may include the establishment of vertiports at existing airports. Because AAM aircraft operate in a manner similar to helicopters, initial AAM operations are anticipated to follow existing helicopters' operations and traffic patterns. If demand grows significantly, formal vertiports may be necessary to more efficiently separate air traffic and increase the safety of operations.

RISKS TO THE FORECAST

While the FAA is confident its forecasts for aviation demand and activity can be reached, they are dependent on several factors, including the strength of the global economy, security (including the threat of international terrorism), and oil prices. Higher oil prices could lead to shifts in consumer spending away from aviation, dampening a recovery in air transport demand. The COVID-19 pandemic introduced a new risk, and although the industry has rebounded, the threat of future global health and emergencies and potential economic fallout remains.

AIRPORT SERVICE AREA

The initial step in determining the aviation demand for an airport is to define its generalized service area for various segments of aviation. The service area is primarily defined by evaluating the locations of competing airports and their capabilities, services, and relative attraction and convenience. In determining the aviation demand for an airport, it is necessary to identify the role of the airport, as well as the specific areas of aviation demand the airport is intended to serve. GEU is classified as a reliever airport in the NPIAS and Arizona *State Aviation System Plan* (SASP), meaning its main purposes are to relieve congestion at local commercial service airports, such as Phoenix Sky Harbor International Airport (PHX), and provide more general aviation access to the overall community.

The service area for an airport is a geographic region from which the airport can be expected to attract the largest share of its activity. The definition of the service area can be used to identify other factors, such as socioeconomic and demographic trends, that influence aviation demand at an airport. Aviation demand will also be impacted by the proximity and strength of aviation services offered at competing airports, as well as the local and regional surface transportation network.

As in any business enterprise, the more attractive a facility is in terms of services and capabilities, the more competitive it will be in the market. If an airport's attractiveness increases in relation to nearby airports, so will the size of its service area. If its facilities and services are adequate and/or competitive, some level of aviation activity might be attracted to an airport from more distant locales.

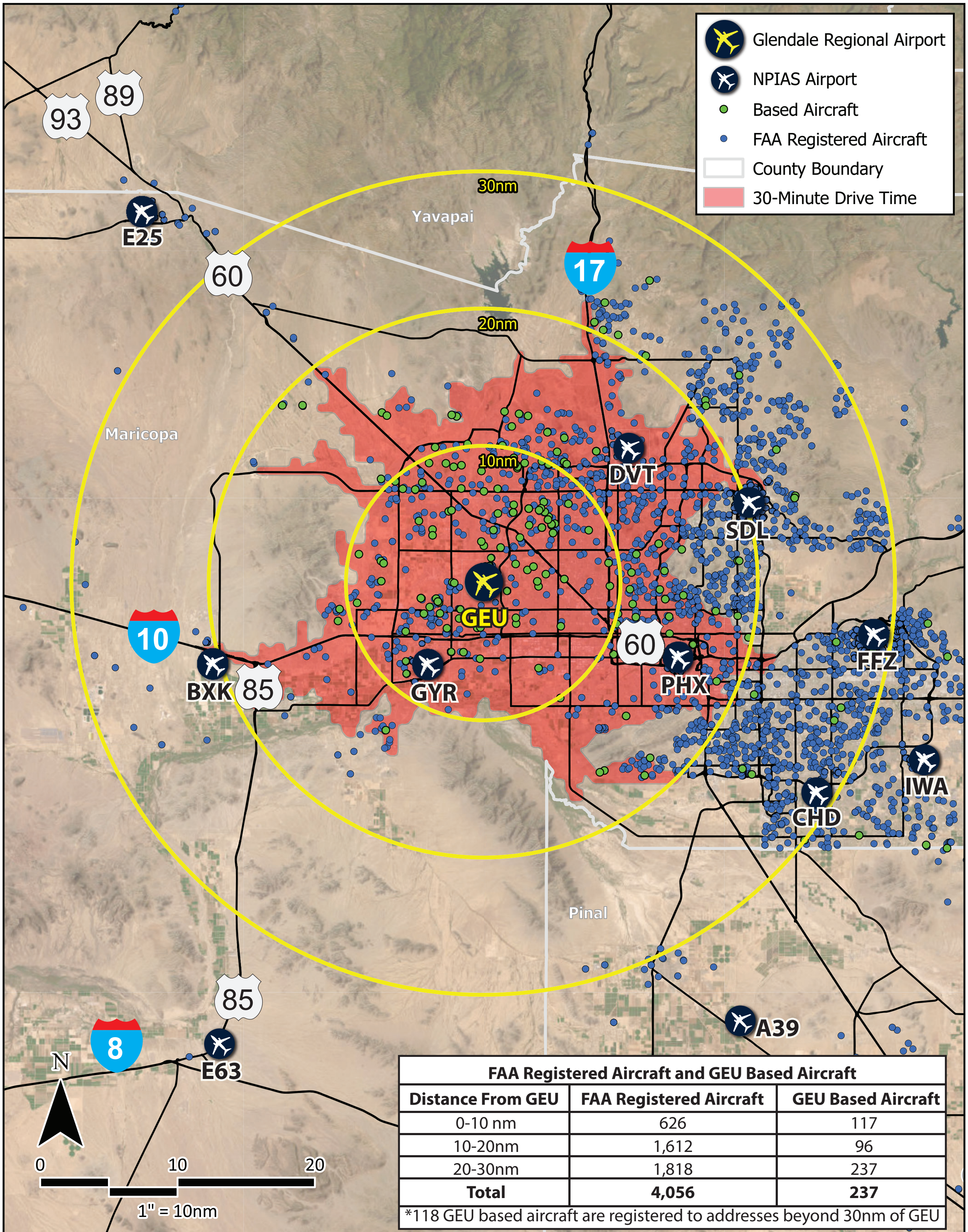
As a rule, a general aviation airport's service area can extend for approximately 30 nm. As outlined in Chapter One, there are eight public-use airports with at least one paved runway within a 30-nm radius of GEU. Of the eight public-use airports within the 30-nm vicinity of GEU, five are classified as reliever airports in the NPIAS, one is classified as a primary commercial service airport (PHX), one is classified as a GA Local airport, and the remaining airport is not contained in the NPIAS. Additionally, four of these airports offer a runway length of over 7,000 feet.

When evaluating the airport's service area, two primary demand segments must be considered: based aircraft and itinerant operations. An airport's ability to attract based aircraft is an important factor when defining the service area; proximity is a consideration for most aircraft owners. Aircraft owners typically choose to base at airports close to their homes or businesses. **Exhibit 2B** depicts a radius of 10, 20, and 30 nm from GEU that encompasses a substantial portion of northeastern Maricopa County and includes smaller portions of Yavapai and Pinal Counties. A 30-minute drive time isochrone is also shown on the exhibit in red shading.

Registered aircraft in the region and aircraft based at GEU are depicted on the exhibit. Large clusters of registered aircraft are located east of GEU in the Phoenix metropolitan area (MSA) and in surrounding cities, such as Scottsdale, Chandler, and Mesa. In total, there are 4,056 registered aircraft within a 30-nm radius of GEU. The airport has 416 aircraft in its based aircraft inventory, 355 of which have been validated by the FAA as of March 2026. Of the validated based aircraft at GEU, approximately 33 percent are registered to addresses located within 10 nm, 27 percent within 20 nm, and seven percent within 30 nm of the airport. Approximately 33 percent of based aircraft at GEU (118 aircraft) are registered to addresses outside the 30-nm radius.

The second demand segment to consider is itinerant operations. These are operations that are performed by aircraft that arrive from outside the airport area and land at GEU or depart from GEU for another airport. In most cases, pilots will use airports nearer their intended destinations; however, this is dependent on each airport's ability to accommodate aircraft operators in terms of the facility and services available. As a result, airports with better facilities and services are more likely to attract a larger portion of the region's itinerant operations.

When compared to other public-use airports in the region, GEU offers the typical array of general aviation services and amenities, including fueling services, aircraft maintenance and repairs, ground handling, passenger and crew services (Glendale Aero Services), flight planning and support, aircraft storage and



FAA Registered Aircraft and GEU Based Aircraft

Distance From GEU	FAA Registered Aircraft	GEU Based Aircraft
0-10 nm	626	117
10-20nm	1,612	96
20-30nm	1,818	237
Total	**4,056**	**237**

*118 GEU based aircraft are registered to addresses beyond 30nm of GEU

Sources: ESRI Basemap Imagery (2024), FAA Registered Aircraft 2024 (Most recent data Available), GEU Based Aircraft List, Coffman Associates Analysis tiedowns, aircraft cleaning, and administrative support. All of the reliever airports within the 30-nm radius of GEU (Phoenix–Goodyear Airport [GYR], Phoenix Deer Valley Airport [DVT], Scottsdale Airport [SDL], Falcon Field Airport [FFZ], and Chandler Municipal Airport [CHD]) have control towers and several have longer runways than GEU. Additionally, all of these airports offer 1-mile instrument approach minimums. From a geographical standpoint, GEU is in an ideal location to serve tenants and visitors in the northern portion of Maricopa County and the Phoenix MSA.

For the purposes of this planning study, GEU's primary service area is defined as Maricopa County. The majority of registered aircraft in the region are located in Maricopa County and the 30-nm range surrounding the airport encompasses a significant portion of the county. While this geographic area and the 30-minute drive time are largely centered on the northeastern portion of Maricopa County, aircraft owners have fewer options outside this area. GEU is well-equipped to accommodate these users and others within the county in terms of location and available facilities (i.e., runway length, services, and amenities). Given the growth in the Phoenix MSA, it is considered to be a secondary service area for GEU and will be considered in the development of aviation demand forecasts.

SERVICE AREA SOCIOECONOMICS

The socioeconomic characteristics of an airport's service area can provide valuable information from which to derive an understanding of the dynamics of growth near an airport. This information is crucial in determining aviation demand level requirements, as most aviation demand is directly related to the socioeconomic conditions of the surrounding region. Statistical analysis of population, employment, income, and gross regional product (GRP) trends outlines the economic strength of a region and can help determine the ability of the area to sustain a strong economy in the future. Socioeconomic data utilized in the development of new based aircraft and operations forecasts for GEU include historical and projected population, employment, per capita personal income, and GRP data from Woods & Poole Economics, Inc.

10 years of historical data, projections through 2045 for the service area, and comparisons to the Phoenix MSA, State of Arizona, and United States are summarized on **Exhibit 2C**.

The socioeconomic data presented indicates that Maricopa County has experienced significant growth in all categories over the last 10 years, and that growth trend is anticipated to continue over the 20-year planning period. When compared to the Phoenix MSA, Maricopa County's growth rates in all categories are similar; however, when compared to the state and the United States as a whole, the MSA and county rates prove to be higher. Based on this statistical evidence, it is not unreasonable to assume Maricopa County and the Phoenix MSA will also experience larger growth in terms of aviation demand compared to what is anticipated at the state and national levels.

FORECASTING APPROACH

The development of aviation forecasts proceeds through analytical and judgmental processes. A series of mathematical relationships is tested to establish statistical logic and rationale for projected growth; however, the judgment of the forecast analyst, based on professional experience, knowledge of the aviation industry, and assessment of the local situation, is important in the final determination of the preferred forecast. The most reliable approach to estimating aviation demand is through the utilization of more than one analytical technique. Frequently considered methodologies include trendline/time series projections, correlation/regression analysis, and market share analysis. The forecast analyst may elect to not use certain techniques, depending on the reasonableness of the forecasts produced using other techniques.

- **Trendline/time series projections** are probably the simplest and most familiar of the forecasting techniques. A basic trendline projection is produced by fitting growth curves to historical data and extending them out into the future. A basic assumption of this technique is that outside factors will continue to affect aviation demand in much the same manner as in the past. As broad as this assumption may be, the trendline projection serves as a reliable benchmark for comparing other projections.

- **Correlation analysis** provides a direct relationship measure between two separate sets of historical data. If there is a reasonable correlation between the data sets, further evaluation using regression analysis may be employed.

- **Regression analysis** measures statistical relationships between dependent and independent variables, yielding a correlation coefficient. The correlation coefficient (Pearson's r) measures association between the changes in the dependent variable and the independent variable(s). An r^2 value (coefficient determination) greater than 0.95 indicates good predictive reliability. A value less than 0.95 may be used, but with the understanding that the predictive reliability is lower.

- **Market share analysis** involves a historical review of the airport activity as a percentage, or share, of a larger regional, state, or national aviation market. A historical market share trend is determined, providing an expected market share for the future. These shares are then multiplied by the forecasts of the larger geographical area to produce a market share projection. This method has the same limitations as trendline projections but can provide a useful check on the validity of other forecasting techniques.

A forecast will age and become less reliable the farther it is from the base year, particularly due to changing local and national conditions; nevertheless, the FAA requires that a 20-year forecast be developed for long-range airport planning. Facility and financial planning usually require at least a 10-year view because it often takes more than five years to complete a major facility development program; however, it is important to use forecasts that do not overestimate revenue-gathering capabilities or underestimate demand for facilities needed to meet public (user) needs.

A wide range of factors is known to influence the aviation industry and can have significant impacts on the extent and nature of aviation activity in both the local and national markets. Historically, the nature and trend of the national economy has had a direct impact on the level of aviation activity; nevertheless, trends emerge over time and provide the basis for airport planning.

	Population				Employment				Income*				GRP*			
	Maricopa	PHX MSA	Arizona	U.S.	Maricopa	PHX MSA	Arizona	U.S	Maricopa	PHX MSA	Arizona	U.S.	Maricopa	PHX MSA	Arizona	U.S.
2016	4,178,601	4,567,839	6,806,723	324,372,550	2,517,630	2,612,755	3,644,792	193,425,865	$45,046	$43,914	$41,809	$49,826	$227,677,982	$235,669,093	$319,265,688	$19,027,076,629
2017	4,235,618	4,633,577	6,885,131	326,615,022	2,597,415	2,693,850	3,740,745	196,394,051	$46,357	$45,210	$43,174	$51,005	$237,581,202	$246,068,032	$333,098,997	$19,507,617,990
2018	4,296,931	4,704,178	6,975,645	328,535,257	2,690,527	2,791,017	3,854,741	200,292,212	$47,750	$46,567	$44,316	$52,241	$248,483,580	$257,453,317	$346,576,555	$20,123,895,864
2019	4,368,554	4,784,921	7,076,680	330,232,117	2,756,810	2,859,233	3,929,946	201,635,228	$49,800	$48,590	$46,042	$53,682	$262,472,141	$271,623,722	$362,651,221	$20,688,073,506
2020	4,445,415	4,875,628	7,187,135	331,577,720	2,755,090	2,861,046	3,920,031	195,286,641	$53,512	$52,251	$49,730	$56,492	$269,620,047	$279,227,669	$371,705,819	$20,282,967,473
2021	4,500,147	4,949,233	7,274,078	332,099,760	2,884,525	2,996,012	4,086,801	202,752,136	$56,529	$55,130	$52,273	$59,144	$292,161,984	$302,481,868	$400,817,259	$21,609,346,417
2022	4,564,457	5,029,933	7,377,566	334,017,321	3,038,704	3,155,580	4,287,594	212,442,020	$55,149	$53,778	$50,704	$56,925	$306,737,155	$317,566,952	$416,887,492	$22,271,055,253
2023	4,615,625	5,102,020	7,473,027	336,806,231	3,121,016	3,240,581	4,386,618	216,940,864	$56,164	$54,735	$51,617	$57,612	$318,590,530	$330,422,565	$433,864,129	$22,879,134,559
2024	4,673,096	5,186,958	7,582,384	340,110,988	3,177,721	3,299,649	4,456,578	219,549,986	$57,645	$55,833	$52,407	$58,379	$327,322,296	$339,472,450	$444,721,890	$23,329,983,465
2025	4,731,563	5,257,099	7,671,117	342,265,910	3,235,249	3,359,561	4,527,272	222,120,529	$58,684	$56,808	$53,310	$59,371	$336,213,450	$348,694,246	$455,729,943	$23,783,449,879
FORECASTS																
2030	5,023,665	5,612,189	8,119,291	352,789,184	3,532,057	3,668,550	4,890,407	234,867,522	$63,876	$61,664	$57,796	$64,220	$383,748,991	$397,996,064	$514,422,623	$26,135,512,362
2035	5,310,939	5,970,864	8,570,472	362,710,397	3,836,782	3,986,207	5,263,910	247,621,100	$69,222	$66,628	$62,382	$69,097	$436,277,277	$452,516,415	$579,218,690	$28,650,423,117
2045	5,860,500	6,692,931	9,475,153	380,613,305	4,452,699	4,631,225	6,026,583	273,289,516	$80,824	$77,256	$72,202	$79,475	$556,658,361	$577,764,239	$728,003,526	$34,227,832,015
CAGR																
2016-2025 CAGR	1.25%	1.42%	1.20%	0.54%	2.54%	2.55%	2.19%	1.39%	2.68%	2.61%	2.46%	1.77%	3.98%	4.00%	3.62%	2.26%
2025-2045 CAGR	1.08%	1.21%	1.06%	0.53%	1.61%	1.62%	1.44%	1.04%	1.61%	1.55%	1.53%	1.47%	2.55%	2.56%	2.37%	1.84%

*In 2017 Dollars

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Future facility requirements, such as general aviation hangars and terminals, apron areas, and runways, are derived from projections of various aviation demand indicators. Using a broad spectrum of local, regional, and national socioeconomic and aviation information and analyzing the most current aviation trends, forecasts are presented for the following aviation demand indicators:

- Based aircraft
- Based aircraft fleet mix
- General aviation operations
- Air taxi and military operations
- Operational peaks
- Demand potential for commercial service

The following forecast analyses examine each of these aviation demand categories expected at GEU over the next 20 years. Each segment is examined individually and collectively to provide an understanding of the overall aviation activity at the airport through 2045.

PREVIOUS FORECASTS

Consideration is given to any forecasts of aviation demand for the airport that have recently been completed. For GEU, recently prepared forecasts reviewed are those in the current FAA TAF, which was published in February 2026, and the most recent *Airport Layout Plan* (ALP) *Update and Narrative Report*, which was completed in 2018.

On an annual basis, the FAA publishes the TAF for each airport included in the NPIAS. The TAF is a generalized forecast of airport activity that is used by the FAA primarily for internal planning purposes. It is available to airports and consultants to use as a baseline projection and is an important point of comparison when developing local forecasts.

The 2018 ALP update is now eight years old and was prepared prior to the COVID-19 pandemic. Since that time, total operations and based aircraft have experienced growth, but at different rates than what was previously projected. **Table 2H** presents the 2026 TAF and 2018 ALP update projections compared to actual data for GEU.

It is important to note that the TAF based aircraft count is lower than the current FAA-validated count from the based aircraft registry. The TAF reflects 348 based aircraft in 2025, while the registry reflects 355 FAA-validated based aircraft. The total operations count used in the TAF is higher than the count reported by the GEU airport traffic control tower (ATCT); the tower reported 129,322 operations for 2025. Once the forecasts presented in this chapter are approved by the FAA, the FAA could update the TAF to reflect the selected forecasts.

TABLE 2H: Previous Forecasts

Year	Based Aircraft: FAA TAF	Based Aircraft: GEU ALP 2018[1]	Based Aircraft: Actual	Total Operations: FAA TAF	Total Operations: GEU ALP 2018*	Total Operations: Actual
2015	268	280	N/A	76,837	77,835	77,835
2016	286	283	N/A	72,051	78,390	70,523
2017	226	285	N/A	73,788	78,948	75,005
2018	137	288	N/A	83,939	79,511	87,657
2019	137	291	N/A	87,724	80,077	86,138
2020	94	295	N/A	85,457	80,940	86,332
2021	94	297	N/A	82,522	81,222	79,343
2022	94	300	N/A	89,685	81,801	98,367
2023	95	302	N/A	113,005	82,384	116,555
2024	94	305	N/A	122,385	82,971	125,490
2025	348	310	355	133,416	83,770	129,322
2026	351	311	–	139,098	84,157	–
2027	354	314	–	139,986	84,757	–
2028	357	317	–	140,876	85,361	–
2029	360	321	–	141,767	85,969	–
2030	363	324	–	142,663	86,582	–
2031	366	327	–	143,561	87,198	–
2032	369	330	–	144,464	87,820	–
2033	372	333	–	145,370	88,445	–
2034	375	336	–	146,280	89,076	–
2035	378	340	–	147,196	89,710	–
2036	381	343	–	148,117	90,350	–
2037	384	346	–	149,042	90,993	–
2038	387	350	–	149,972	91,642	–
2039	390	353	–	150,908	92,295	–
2040	393	356	–	151,849	92,952	–
2041	396	360	–	152,796	93,614	–
2042	399	363	–	153,748	94,281	–
2043	402	367	–	154,707	94,953	–
2044	405	370	–	155,671	95,630	–
2045	408	374	–	156,641	96,311	–

Sources: FAA Terminal Area Forecast, February 2026; GEU ALP Update and Narrative Report, May 2018; FAA Based Aircraft Inventory Program (data not available prior to 2025); FAA OPSNET

*The 2018 ALP update utilized a base year of 2015 with projections for 2020, 2025, 2035. All other years included in the table have been interpolated or extrapolated.

GENERAL AVIATION FORECASTS

General aviation encompasses all portions of civil aviation except commercial service and military operations. To determine the types and sizes of facilities that should be planned to accommodate general aviation activity at GEU, certain elements of this activity must be forecasted. These indicators of general aviation demand include based aircraft, aircraft fleet mix, and annual operations.

The number of based aircraft is the most basic indicator of general aviation demand. By first developing a forecast of based aircraft for the airport, other demand indicators can be projected. The process of developing forecasts of based aircraft begins with an analysis of aircraft ownership in the primary general aviation service area through a review of historical aircraft registrations. An initial forecast of registered aircraft is developed and will be used as one data point to arrive at a based aircraft forecast for GEU.

BASED AIRCRAFT FORECAST

Forecasts of based aircraft may directly influence needed facilities and applicable design standards. The needed facilities may include hangars, aprons, taxilanes, etc. The applicable design standards may include separation distances and object clearing surfaces. The sizes and types of based aircraft are also an important consideration; the addition of numerous small aircraft may have no effect on design standards, while the addition of a few larger business jets can have a substantial impact on applicable design standards.

Because of the numerous variables known to influence aviation demand, several separate forecasts of based aircraft are developed. Each forecast is examined for reasonableness and any outliers are discarded or given less weight. Collectively, the remaining forecasts will create a planning envelope. A single planning forecast is then selected for use in developing facility needs for the airport. The selected forecast of based aircraft can be one of the forecasts developed, based on the experience and judgement of the forecaster, or it can be a blend of the forecasts.

Based Aircraft Inventory

Documentation of the historical number of based aircraft at the airport has been somewhat intermittent. The FAA did not require airports to report based aircraft numbers until recently, with the establishment of the FAA's National Based Aircraft Inventory Program (www.basedaircraft.com), in which it is possible to cross-reference based aircraft claimed by one airport with based aircraft at other airports. The FAA now utilizes this based aircraft inventory as a baseline for determining how many and what types of aircraft are based at any individual airport. This database evolves daily as aircraft are added or removed. It is the responsibility of the sponsor (owner) of each airport to input based aircraft information into the FAA database.

Airport staff have undertaken a comprehensive physical count and submitted the count to the FAA for validation. At the time these forecasts were prepared (March 2026), GEU had 355 validated based aircraft, which included 306 single-engine aircraft, 38 multi-engine aircraft, four business jets, and seven helicopters. It should be noted that the FAA based aircraft inventory reports 416 aircraft; however, due to factors such as aircraft being reported by other airports (duplicates), the FAA has only validated 355 aircraft, so the count of 355 based aircraft has been utilized for the based aircraft forecasts.

Registered Aircraft Forecast

Aircraft ownership trends for the primary service area (Maricopa County) typically dictate based aircraft trends for an airport. As such, a forecast of registered aircraft for the primary service area was developed for use as an input for the subsequent based aircraft forecast.

Table 2J presents the history of registered aircraft in the service area from 2016 through 2025. These figures are derived from the FAA aircraft registration database, which categorizes registered aircraft by county based on the zip code of the registered aircraft. Although this information generally provides a correlation to based aircraft, it is not uncommon for some aircraft to be registered in one county but based at an airport outside the county, or vice versa.

TABLE 2J: Registered Aircraft Fleet Mix in Maricopa County, Arizona

Year	Single-Engine Piston	Multi-Engine Piston	Turboprop	Jet	Helicopter	Other*	Electric	UAV	Total
2016	3,019	316	145	251	245	331	3	65	4,375
2017	3,006	302	139	261	250	312	4	82	4,356
2018	2,824	254	153	273	231	270	4	86	4,095
2019	2,831	253	139	304	216	265	2	70	4,080
2020	2,856	249	135	308	202	252	2	95	4,099
2021	2,874	258	145	330	220	253	2	99	4,181
2022	2,860	250	151	326	233	257	2	100	4,179
2023	3,010	255	145	301	273	260	2	97	4,343
2024	3,087	271	170	318	287	267	3	100	4,503
2025	3,111	259	165	265	299	252	6	107	4,464
10-Year CAGR:	**0.3%**	**-2.0%**	**1.3%**	**0.5%**	**2.0%**	**-2.7%**	**7.2%**	**5.1%**	**0.2%**

Sources: FAA Aircraft Registry Database; FAA Census of U.S. Civil Aircraft

CAGR = compound annual growth rate
UAV = unmanned aerial vehicle

*Other includes gliders, ultralights, experimental aircraft

Over the 10-year period, aircraft registrations in the service area have shown minimal growth, increasing at a CAGR of 0.2 percent. While single-engine piston aircraft account for 70 percent of registered aircraft in 2025, the strongest growth has been in the more sophisticated aircraft categories (turboprops, helicopters, and electric aircraft). UAVs (drones) were not included as a separate category until 2015, and 65 of these aircraft were registered in 2016. Over the next eight years, these registrations rose rapidly, resulting in 107 registrations by 2025 at a CAGR of 5.1 percent.

Although there are no recently prepared forecasts for the service area regarding registered aircraft, one was prepared for this study using market share, population ratio, and historical growth rate/trendline projection methods. Several regression forecasts were also considered; these examined the correlation of registered aircraft with the service area population, employment, income, and GRP. **Table 2K** details the results of this analysis, which considered the correlation between registered aircraft (dependent variable) and several independent variables, as described above. None of the resulting regressions produced an r^2 value greater than 0.95, indicating poor correlation; therefore, the regressions have been excluded from consideration.

TABLE 2K: Regression Analysis

Independent Variable	r^2
Population	0.494
Employment	0.371
Income	0.306
Gross Regional Product	0.304
U.S. Active Aircraft	0.620

Source: Coffman Associates Analysis

Trendline/Historical Growth Rate Projection

Utilizing the last 10 years of registered aircraft data, a trendline projection was completed based on the statewide growth rate for GA aircraft, which resulted in 4,780 registered aircraft by 2045 (0.34 percent CAGR). A five-year trendline projection was also prepared to consider a more recent timeframe. The five-year trendline projection results in 6,292 registered aircraft by 2045 (1.73 percent CAGR).

A historical growth rate projection was also prepared. Over the last 10 years, the number of registered aircraft in the service area (Maricopa County) has grown at a CAGR of 0.40 percent. By applying this CAGR to the current number of registered aircraft, a forecast emerges that results in 4,838 registered aircraft by 2045.

Market Share of U.S. Active Aircraft

Consideration was also given to the ratio of service area registered aircraft compared to the total number of based aircraft, both historically and forecasted by the *FAA Aerospace Forecasts* to be in the United States. The county's 4,464 registered aircraft count in 2025 represents approximately 2.071 percent of all based aircraft in the U.S. **Table 2L** shows the historical market share of the service area compared to U.S. totals, as well as two forecasts that consider a constant market share and an increasing market share over the 20-year planning period.

TABLE 2L: Registered Aircraft Projections – Market Share of U.S. Based Aircraft

Forecast	Year	Registered Aircraft	U.S. Active Aircraft	% of Total of U.S. Active Aircraft
Historical	2006	4,772	221,942	2.150%
Historical	2007	4,943	231,606	2.134%
Historical	2008	5,504	228,664	2.407%
Historical	2009	5,413	223,876	2.418%
Historical	2010	5,333	223,370	2.388%
Historical	2011	5,218	220,453	2.367%
Historical	2012	4,965	209,034	2.375%
Historical	2013	4,381	199,927	2.191%
Historical	2014	4,146	204,408	2.028%
Historical	2015	4,179	210,031	1.990%
Historical	2016	4,375	211,794	2.066%
Historical	2017	4,356	211,757	2.057%
Historical	2018	4,095	211,749	1.934%
Historical	2019	4,080	210,981	1.934%
Historical	2020	4,099	204,140	2.008%
Historical	2021	4,181	209,194	1.999%
Historical	2022	4,179	209,540	1.994%
Historical	2023	4,343	214,222	2.027%
Historical	2024	4,503	214,940	2.095%
Historical	2025	4,464	215,600	2.071%
Constant Market Share	2030	4,544	219,405	2.071%
Constant Market Share	2035	4,656	224,805	2.071%
Constant Market Share	2045	4,936	238,350	2.071%
Increasing Market Share	2030	4,774	219,405	2.176%
Increasing Market Share	2035	5,073	224,805	2.257%
Increasing Market Share	2045	5,763	238,350	2.418%

Sources: FAA Aerospace Forecasts FY 2025–2029; Coffman Associates Analysis

If the county maintains the current market share, it will result in 4,936 aircraft by 2045 (0.50 percent CAGR). Because the historical trend has shown market share growth for the county, an increasing market share projection was prepared that considered a return to the historical high market share of 2.418 percent, which was achieved in 2009. This results in a total service area registration count of 5,763 by 2045 (1.29 percent CAGR).

Ratio of Registered Aircraft to Population

The number of registered aircraft in an area often fluctuates based on population trends. In 2025, the service area had 0.94 registered aircraft per 1,000 residents. Over the past 20 years, this ratio has shown a small declining trend, likely due to the large increase in population of the service area compared to aircraft registrations in the service area over the same period. Two projections have been prepared: one based on maintaining the current ratio constant over the forecast period, and an increasing ratio based on the average ratio (1.11 registered aircraft per 1,000 residents) over the past 20 years. **Table 2M** shows the ratio of registered aircraft per 1,000 residents compared to the population of the service area from 2006 to 2025, along with the two forecasts mentioned above.

TABLE 2M: Registered Aircraft Projections – Ratio of Registered Aircraft per 1,000 Residents to Population

Forecast	Year	Registered Aircraft	Service Area Population	Ratio of Aircraft per 1,000 Residents
Historical	2006	4,772	3,642,884	1.31
Historical	2007	4,943	3,711,954	1.33
Historical	2008	5,504	3,771,061	1.46
Historical	2009	5,413	3,803,779	1.42
Historical	2010	5,333	3,822,107	1.40
Historical	2011	5,218	3,861,107	1.35
Historical	2012	4,965	3,921,817	1.27
Historical	2013	4,381	3,979,682	1.10
Historical	2014	4,146	4,043,039	1.03
Historical	2015	4,179	4,108,853	1.02
Historical	2016	4,375	4,178,601	1.05
Historical	2017	4,356	4,235,618	1.03
Historical	2018	4,095	4,296,931	0.95
Historical	2019	4,080	4,368,554	0.93
Historical	2020	4,099	4,445,415	0.92
Historical	2021	4,181	4,500,147	0.93
Historical	2022	4,179	4,564,457	0.92
Historical	2023	4,343	4,615,625	0.94
Historical	2024	4,503	4,673,096	0.96
Historical	2025	4,464	4,731,563	0.94
Constant Ratio per 1,000 Service Area Residents	2030	4,722	5,023,665	0.94
Constant Ratio per 1,000 Service Area Residents	2035	4,992	5,310,939	0.94
Constant Ratio per 1,000 Service Area Residents	2045	5,509	5,860,500	0.94
Increasing Ratio per 1,000 Service Area Residents	2030	5,025	5,023,665	1.00
Increasing Ratio per 1,000 Service Area Residents	2035	5,506	5,310,939	1.04
Increasing Ratio per 1,000 Service Area Residents	2045	6,505	5,860,500	1.11

Sources: Woods & Poole, CEDDS Data, 2025; Coffman Associates Analysis

Maintaining the constant ratio (0.94) through 2045 results in 5,509 registered aircraft at a CAGR of 1.06 percent. The increasing ratio projection results in 6,505 registered aircraft by 2045 at a CAGR of 1.90 percent.

Registered Aircraft Forecast Summary

Table 2N summarizes the seven registered aircraft forecasts for Maricopa County. Over the last 20 years, registrations in the service area have declined, representing a -0.33 percent CAGR; however, within the last five years, registrations have steadily been rising at a growth rate of 1.32 percent. Through the growth trends experienced within the previous five years, as well as statewide and national trends, it is not unreasonable to assume moderate growth in aircraft registrations in the service area will continue through the planning period; therefore, the increasing market share projection with a CAGR of 1.29 percent is viewed as the most realistic scenario. The selected registered aircraft forecast results in 4,774 registered aircraft in 2030, 5,073 registered aircraft in 2035, and 5,763 registered aircraft in 2045.

TABLE 2N: Registered Aircraft Forecast Summary

Projection	2025	2030	2035	2045	CAGR 2025–2045
5-Year Trendline	4,464	4,957	5,402	6,292	1.73%
10-Year Growth Rate	4,464	4,555	4,647	4,838	0.40%
10-Year Trendline	4,464	4,466	4,571	4,780	0.34%
Constant % of U.S. Active	4,464	4,544	4,656	4,936	0.50%
Increasing % of U.S. Active – SELECTED FORECAST	**4,464**	**4,774**	**5,073**	**5,763**	**1.29%**
Constant Aircraft/1000 Population	4,464	4,722	4,992	5,509	1.06%
Increasing Aircraft/1000 Population	4,464	5,025	5,506	6,505	1.90%

Source: Coffman Associates Analysis

CAGR = compound annual growth rate

Based Aircraft Market Share of Registered Aircraft Forecast

According to the FAA's National Based Aircraft Inventory Program, GEU had a validated based aircraft count of 355 in 2025. Utilizing the forecast of registered aircraft in Maricopa County, several market share forecasts of based aircraft at GEU have been developed. In 2025, the 355 validated based aircraft at GEU represented 7.95 percent of the aircraft registered in the county. By maintaining this market share constant through the planning years, a forecast emerges that results in 458 based aircraft by 2045 (1.28 percent CAGR). In addition to the constant market share projection, two increasing market share projections (mid-range and high-range) were developed. The mid-range market share projection considered a moderate market share increase to 8.19 percent by 2045, resulting in 472 based aircraft at a 1.43 percent CAGR. The high-range market share projection considered a more aggressive market share increase to 8.42 percent by 2045, resulting in 485 based aircraft at a 1.57 percent CAGR. **Table 2P** presents the market share projections.

TABLE 2P: Based Aircraft Market Share of Registered Aircraft Forecast

Forecast	Year	GEU Based Aircraft	Maricopa County Registered Aircraft	GEU Market Share %
Historical	2025	355	4,464	7.95%
Constant Market Share	2030	380	4,774	7.95%
Constant Market Share	2035	403	5,073	7.95%
Constant Market Share	2045	458	5,763	7.95%
Increasing Market Share (Mid-Range)	2030	382	4,774	8.01%
Increasing Market Share (Mid-Range)	2035	409	5,073	8.07%
Increasing Market Share (Mid-Range)	2045	472	5,763	8.19%
Increasing Market Share (High-Range)	2030	385	4,774	8.07%
Increasing Market Share (High-Range)	2035	415	5,073	8.19%
Increasing Market Share (High-Range)	2045	485	5,763	8.42%

Sources: FAA National Based Aircraft Inventory Program; Coffman Associates Analysis

Growth Rate Projections

According to the FAA TAF for GEU published in February 2026, the based aircraft count is expected to increase slightly over the forecast period, with a 0.8 percent CAGR. Maintaining this CAGR over the forecast period results in 416 based aircraft by 2045. Because based aircraft within the state are projected to grow over the planning period, a growth rate projection utilizing the statewide TAF CAGR for 2025–2045 (1.54 percent) has also been considered. When the statewide growth rate is applied to GEU based aircraft, a forecast emerges that yields 482 based aircraft by 2045. **Table 2Q** displays the growth rate projections for GEU based aircraft.

TABLE 2Q: Based Aircraft Growth Rate Forecasts

Forecast	Year	GEU Based Aircraft	Maricopa County Registered Aircraft
Historical	2025	355	4,464
GEU TAF Growth Rate	2030	369	4,853
GEU TAF Growth Rate	2035	384	5,127
GEU TAF Growth Rate	2045	416	5,763
Arizona TAF Growth Rate	2030	383	4,853
Arizona TAF Growth Rate	2035	414	5,127
Arizona TAF Growth Rate	2045	482	5,763

Sources: FAA National Based Aircraft Inventory Program; FAA TAF; Coffman Associates Analysis

Ratio Projections

Similar to the previously shown market share projections, several ratio projections were also developed that compare the counts of GEU based aircraft per 1,000 service area (Maricopa County) residents. In 2025, GEU held a ratio of 0.075 aircraft per 1,000 service area residents. Maintaining this constant ratio through the planning years results in 440 based aircraft by 2045 at a CAGR of 1.08 percent. In addition to the constant ratio projection, two increasing ratio projections (mid-range and high-range) were developed. The mid-range ratio projection considered an increased service area ratio of 0.093 aircraft per 1,000 residents, resulting in 545 based aircraft at a 2.17 percent CAGR. The high-range ratio projection considered an increase to 0.110 based aircraft per 1,000 service area residents, resulting in 645 based aircraft at a 3.03 percent CAGR. **Table 2R** presents the ratio projections.

TABLE 2R: Based Aircraft Ratio per 1,000 Service Area Residents Forecasts

Forecast	Year	GEU Based Aircraft	Service Area Population (Maricopa County)	GEU Based Aircraft per 1,000 Service Area Residents
Historical	2025	355	4,731,563	0.075
Constant Ratio per 1,000 Service Area Residents	2030	377	5,023,665	0.075
Constant Ratio per 1,000 Service Area Residents	2035	398	5,310,939	0.075
Constant Ratio per 1,000 Service Area Residents	2045	440	5,860,500	0.075
Increasing Ratio per 1,000 Service Area Residents (Mid-Range)	2030	399	5,023,665	0.080
Increasing Ratio per 1,000 Service Area Residents (Mid-Range)	2035	446	5,310,939	0.084
Increasing Ratio per 1,000 Service Area Residents (Mid-Range)	2045	545	5,860,500	0.093
Increasing Ratio per 1,000 Service Area Residents (High-Range)	2030	421	5,023,665	0.084
Increasing Ratio per 1,000 Service Area Residents (High-Range)	2035	491	5,310,939	0.093
Increasing Ratio per 1,000 Service Area Residents (High-Range)	2045	645	5,860,500	0.110

Sources: FAA National Based Aircraft Inventory Program; Woods & Poole, 2025; Coffman Associates Analysis

Regression Analysis

Several forecasts were prepared utilizing historical based aircraft data from the TAF and the regression model. Correlations were examined utilizing independent variables, including population, employment, income, GRP, and U.S. active aircraft. The regression that produced the highest correlation was the regression with population, which had an r^2 value of 0.275. As previously described, correlation values over 0.95 indicate good predictive reliability; therefore, the regression forecasts developed for based aircraft will not be utilized further.

Selected Based Aircraft Forecast

Selecting a based aircraft forecast is ultimately based on the judgement of the forecast analyst. A selected forecast should be reasonable and based on a sound methodology. The methodology presented in this analysis examined the history of aircraft ownership in the airport's service area (Maricopa County). Utilizing the selected registered aircraft projections, eight based aircraft forecasts were developed using the different methodologies that were previously described. A market share analysis was conducted based on maintaining a constant market share and a mid- and high-range increasing market share over the forecast period; two projections were developed considering the FAA TAF for GEU and the TAF for the State of Arizona; and three projections were developed considering the ratio of based aircraft per 1,000 service area residents at constant, mid-range, and high-range scenarios. These eight projections are summarized in **Table 2S**. The 2026 TAF for GEU is also included as a point of comparison.

TABLE 2S: Based Aircraft Forecast Summary

Projection	2025	2030	2035	2045	CAGR 2025–2045
GEU 2026 TAF	348	363	378	408	0.80%
GEU 2026 TAF Growth Rate	355	369	384	416	0.80%
AZ 2026 TAF Growth Rate	355	383	414	482	1.54%
Constant Market Share	355	380	403	458	1.28%
Increasing Market Share (Mid-Range)	355	382	409	472	1.43%
Increasing Market Share (High-Range) – SELECTED FORECAST	**355**	**385**	**415**	**485**	**1.57%**
Constant Ratio per 1,000 Service Area Residents	355	377	398	440	1.08%
Increasing Ratio per 1,000 Service Area Residents (Mid-Range)	355	399	446	545	2.17%
Increasing Ratio per 1,000 Service Area Residents (High-Range)	355	421	491	645	3.03%

Sources: FAA TAF; FAA National Based Aircraft Inventory Program; Woods & Poole, 2025; Coffman Associates Analysis
CAGR = compound annual growth rate

Future aircraft basing at the airport will depend on several factors, including the state of economy, fuel costs, available facilities, competing airports, and hangar development potential. Forecasts consider projections for a strong growing local economy, as well as reasonable development of airport facilities necessary to accommodate aviation demand. GEU will not experience significant based aircraft growth unless new hangar facilities are constructed. Competing airports will play a role in deciding demand; however, GEU should fare well in this competition because many of the airports with which GEU is competing are becoming increasingly constrained in terms of aircraft storage space, along with other variables, such as the implementation of landing fees at several of these airports.

Consideration must also be given to the current and future aviation conditions at the airport. GEU is in a desirable location west of the central Phoenix MSA. Over the last decade, the City of Glendale and its surrounding areas have experienced exponential growth in terms of population and economic development. It is reasonable to assume these factors could have a direct impact on GEU in terms of based aircraft. In addition, the *Glendale Regional Airport Eastside Development Plan*, which was completed in 2023, analyzed the undeveloped land east of Runway 1-19. The study concluded that there are approximately 120 acres of undeveloped land that could be utilized for various aeronautical and non-aeronautical purposes, including a significant increase in aircraft storage space.

With these indicators in mind, it is a reasonable assumption that GEU will continue to have strong demand for aviation activity in the future; therefore, the high-range increasing market share projection has been selected as the preferred forecast, with 385 based aircraft projected by 2030, 415 by 2035, and 485 by 2045 (1.57 percent CAGR). The selected forecast is reasonably optimistic and assumes GEU can increase its market share of registered aircraft in the county with expanded facilities. The selected forecast also assumes continued population and economic growth of the local area will drive demand for more based aircraft.

Exhibit 2D presents the eight based aircraft forecasts that comprise the planning envelope.

BASED AIRCRAFT FLEET MIX

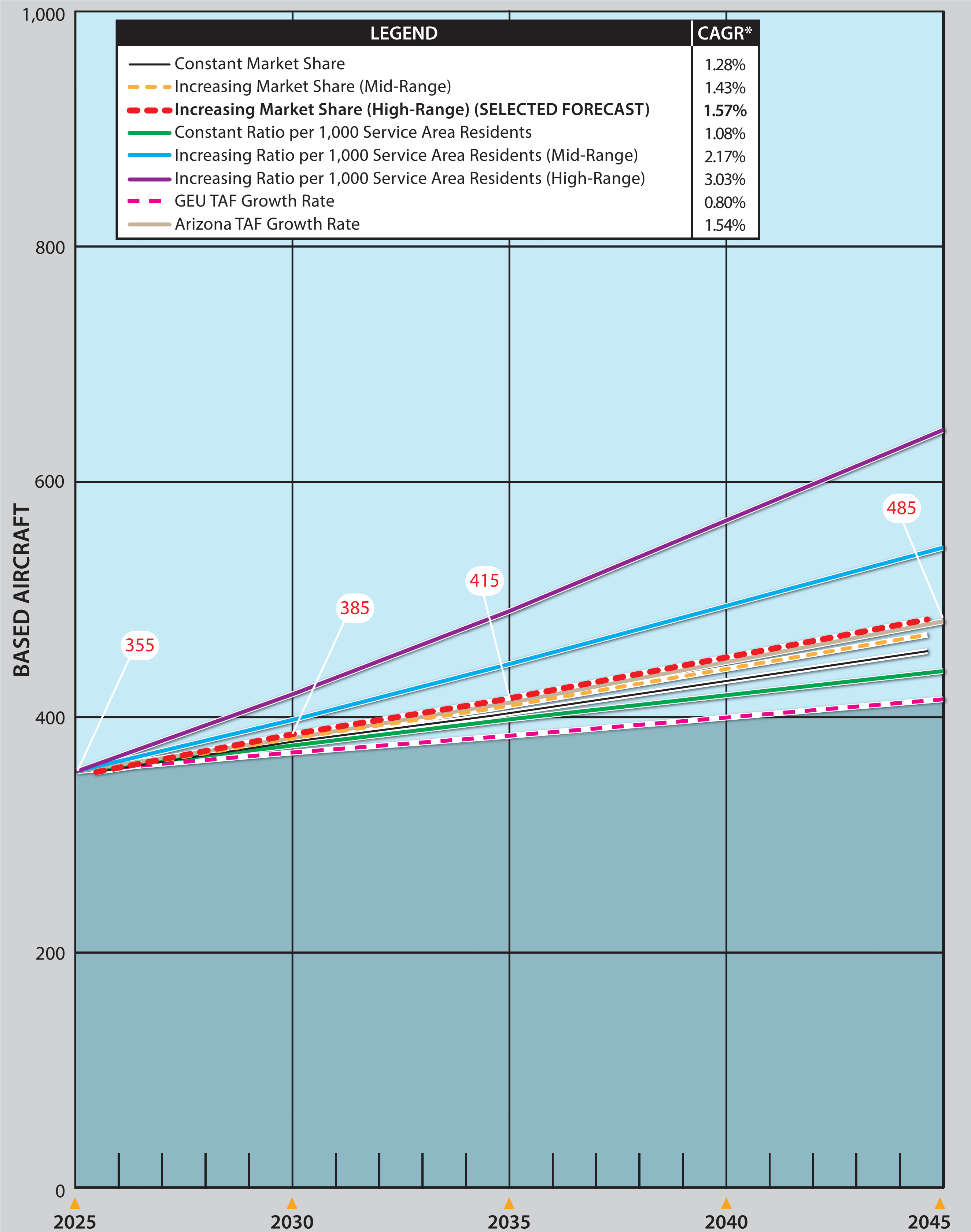
It is important to understand the current and projected based aircraft fleet mix at an airport to ensure the proper planning of facilities. For example, the various separation requirements and obstacle clearing surfaces for a particular area will be based on whether the area is planned to be utilized by small piston aircraft or large business jets.

The current based aircraft fleet mix consists of 300 single-engine piston (SEP) aircraft, 38 multi-engine piston (MEP) aircraft, seven turboprop (TP) aircraft, four jets, seven helicopters, and three other (including experimental and light sport) aircraft. As a general aviation reliever airport with significant levels of flight training and corporate aviation activities, GEU should continue to have a diverse fleet mix. The forecasted growth trends in the GEU based aircraft fleet mix take FAA projections of the national general aviation fleet mix into consideration. Growth is expected in all categories, with the most sophisticated aircraft (turboprops, jets, and helicopters) leading in overall percentage growth. **Table 2T** presents the forecasted fleet mix for based aircraft at GEU.

TABLE 2T: Based Aircraft Fleet Mix

Aircraft Type	2025	2025 Percent	2030	2030 Percent	2035	2035 Percent	2045	2045 Percent
Single-Engine Piston	300	84.5%	317	82.3%	331	79.8%	355	73.2%
Multi-Engine Piston	34	9.6%	34	8.8%	35	8.4%	40	8.2%
Turboprop	7	2.0%	13	3.4%	19	4.6%	40	8.2%
Jet	4	1.1%	5	1.3%	9	2.2%	20	4.1%
Helicopter	7	2.0%	12	3.1%	15	3.6%	22	4.5%
Other	3	0.8%	4	1.0%	6	1.4%	8	1.6%
Total:	**355**	**100.0%**	**385**	**100.0%**	**415**	**100.0%**	**485**	**100.0%**

Sources: FAA National Based Aircraft Inventory Program; Coffman Associates Analysis



*Compound Annual Growth Rate

Sources: FAA TAF; basedaircraft.com; Coffman Associates analysis

OPERATIONS FORECAST

Operations at GEU are classified as general aviation, air taxi, or military. General aviation operations include a wide range of activity, from recreational use and flight training to business and corporate uses. Air taxi operations are those conducted by aircraft operating under Federal Aviation Regulations (FAR) Part 135, otherwise known as for-hire or on-demand activity. Air taxi operations typically include commuter, air cargo, air ambulance, and many fractional ownership operations. Military operations include operations conducted by the branches of the U.S. military. Air carrier is an additional category of operations conducted by large aircraft with 60 or more passenger seats. These flights are infrequent at GEU; therefore, air carrier operations are not included as part of the operations forecast.

It should be noted that the FAA's forecast of air taxi operations trends lower in the short term and returns to growth after 2028 due to ongoing changes to the scheduled airline aircraft fleet mix. Airlines are transitioning away from 50-seat regional jets that are counted under the air taxi category to larger jets with seating capacities of 60 seats or more that are counted under the air carrier category. This airline fleet mix transition should have no impact on unscheduled GEU air taxi operations.

Aircraft operations are further classified as local and itinerant. A local operation is a takeoff or landing performed by an aircraft operating within sight of an airport or executing simulated approaches or touch-and-go operations at an airport. Local operations are generally characterized by training activity. Itinerant operations are those performed by aircraft with specific origins or destinations away from an airport. Typically, itinerant operations increase with business and commercial use because business aircraft are primarily used to transport passengers from one location to another.

Several methods have been employed to develop a reasonable planning envelope of future potential aircraft operations. The following sections present several new operations forecasts. Counts from the GEU ATCT were utilized in this analysis. **Table 2U** shows the historical operations data for GEU since 2006.

TABLE 2U: Historical Operations Data

Calendar Year	Itinerant: Air Carrier	Itinerant: Air Taxi	Itinerant: General Aviation	Itinerant: Military	Itinerant: Subtotal	Local: General Aviation	Local: Military	Local: Subtotal	Total Operations
2006	0	1,285	46,560	98	47,943	102,811	18	102,829	150,772
2007	0	1,017	42,736	46	43,799	102,384	25	102,409	146,208
2008	0	1,873	47,266	26	49,165	87,016	31	87,047	136,212
2009	0	1,993	39,579	64	41,636	62,410	16	62,426	104,062
2010	0	1,672	28,406	57	30,135	52,058	5	52,063	82,198
2011	0	1,071	26,366	49	27,486	59,632	6	59,638	87,124
2012	0	1,019	27,837	19	28,875	47,230	22	47,252	76,127
2013	1	934	26,100	52	27,087	40,649	76	40,725	67,812
2014	0	882	22,345	69	23,296	41,688	69	41,757	65,053
2015	2	520	25,480	46	26,048	51,773	14	51,787	77,835
2016	0	530	24,087	55	24,672	45,788	63	45,851	70,523
2017	1	394	25,052	38	25,485	49,426	94	49,520	75,005
2018	0	234	26,801	12	27,047	60,441	169	60,610	87,657
2019	0	169	28,768	90	29,027	57,111	0	57,111	86,138
2020	0	280	29,629	4	29,913	56,419	0	56,419	86,332
2021	0	324	31,600	7	31,931	47,390	22	47,412	79,343
2022	1	340	37,274	2	37,617	60,747	3	60,750	98,367
2023	0	718	38,602	24	39,344	76,353	858	77,211	116,555
2024	0	1,292	42,427	3	43,722	81,762	6	81,768	125,490
2025	2	631	57,175	1	57,809	71,513	0	71,513	129,322
20-Year CAGR:	**N/A**	**-3.5%**	**1.0%**	**-20.5%**	**0.9%**	**-1.8%**	**-100.0%**	**-1.8%**	**-0.8%**
10-Year CAGR:	**N/A**	**1.8%**	**9.0%**	**-33.0%**	**8.9%**	**4.6%**	**-100.0%**	**4.5%**	**6.3%**

Source: FAA Operations and Performance Data (OPSNET)

Market Share Projections

Market share analysis compares known historical and forecasted data points to arrive at a trend for the unknown variable (GEU operations). The forecasts consider the market share of GA (itinerant and local) and air taxi operations at the airport compared to the FAA's forecast for operations nationwide, as presented in the *FAA Aerospace Forecasts*. **Table 2V** displays the results of the market share analysis.

TABLE 2V: Operations Market Share Projections

Forecast	Year	GA Itinerant: GEU	GA Itinerant: U.S.*	GA Itinerant: GEU Market %	GA Local: GEU	GA Local: U.S.*	GA Local: GEU Market %	Air Taxi: GEU	Air Taxi: U.S.*	Air Taxi: GEU Market %
Historical	2006	46,560	–	N/A	102,811	–	N/A	1,285	–	N/A
Historical	2007	42,736	–	N/A	102,384	–	N/A	1,017	–	N/A
Historical	2008	47,266	–	N/A	87,016	–	N/A	1,873	–	N/A
Historical	2009	39,579	–	N/A	62,410	–	N/A	1,993	–	N/A
Historical	2010	28,406	14,863,856	0.191%	52,058	11,716,274	0.444%	1,672	9,410,381	0.018%
Historical	2011	26,366	14,527,903	0.181%	59,632	11,437,028	0.521%	1,071	9,278,542	0.012%
Historical	2012	27,837	14,521,656	0.192%	47,230	11,608,306	0.407%	1,019	8,994,371	0.011%
Historical	2013	26,100	14,117,370	0.185%	40,649	11,688,355	0.348%	934	8,803,402	0.011%
Historical	2014	22,345	13,978,993	0.160%	41,688	11,675,040	0.357%	882	8,439,711	0.010%
Historical	2015	25,480	13,887,203	0.183%	51,773	11,691,338	0.443%	520	7,895,478	0.007%
Historical	2016	24,087	13,905,204	0.173%	45,788	11,632,612	0.394%	530	7,580,119	0.007%
Historical	2017	25,052	13,839,151	0.181%	49,426	11,732,324	0.421%	394	7,179,651	0.005%
Historical	2018	26,801	14,130,495	0.190%	60,441	12,354,014	0.489%	234	7,125,556	0.003%
Historical	2019	28,768	14,458,889	0.199%	57,111	13,372,787	0.427%	169	7,274,058	0.002%
Historical	2020	29,629	12,790,762	0.232%	56,419	12,596,530	0.448%	280	5,513,506	0.005%
Historical	2021	31,600	13,891,464	0.227%	47,390	13,651,750	0.347%	324	5,893,070	0.005%
Historical	2022	37,274	14,634,811	0.255%	60,747	14,029,412	0.433%	340	6,522,238	0.005%
Historical	2023	38,602	14,581,782	0.265%	76,353	15,270,058	0.500%	718	6,455,870	0.011%
Historical	2024	42,427	14,917,167	0.284%	81,762	15,971,308	0.512%	1,292	6,732,627	0.019%
Historical	2025	57,175	15,347,621	0.373%	71,513	16,456,234	0.435%	631	7,028,773	0.009%
Historical	**20-Year CAGR**	**1.03%**	**–**	**–**	**-1.80%**	**–**	**–**	**-3.49%**	**–**	**–**
Historical	**15-Year CAGR**	**5.30%**	**0.37%**	**–**	**1.22%**	**2.46%**	**–**	**-3.47%**	**-1.83%**	**–**
Historical	**10-Year CAGR**	**9.03%**	**0.99%**	**–**	**4.56%**	**3.53%**	**–**	**1.76%**	**-0.75%**	**–**
Constant Market Share	2030	60,300	16,180,379	0.373%	75,100	17,288,895	0.435%	640	7,108,069	0.0090%
Constant Market Share	2035	61,400	16,480,109	0.373%	76,600	17,620,607	0.435%	700	7,752,708	0.0090%
Constant Market Share	2045	63,700	17,105,516	0.373%	79,600	18,315,572	0.435%	820	9,142,784	0.0090%
Constant Market Share	**CAGR**	**0.54%**	**0.28%**	**–**	**0.54%**	**0.29%**	**–**	**1.32%**	**1.27%**	**–**
Increasing Market Share	2030	74,000	16,180,379	0.457%	77,700	17,288,895	0.449%	650	7,108,069	0.0091%
Increasing Market Share	2035	89,300	16,480,109	0.542%	81,800	17,620,607	0.464%	720	7,752,708	0.0092%
Increasing Market Share	2045	121,600	17,105,516	0.711%	90,500	18,315,572	0.494%	870	9,142,784	0.0095%
Increasing Market Share	**CAGR**	**3.85%**	**0.28%**	**–**	**1.18%**	**0.29%**	**–**	**1.62%**	**1.27%**	**–**

Sources: U.S. GA Operations – FAA Aerospace Forecasts; Historical GEU Operations – GEU ATCT Counts; GEU Projections – Coffman Associates Analysis

CAGR = compound annual growth rate

*U.S. GA operational data do not account for years prior to 2010

For 2025, GEU accounts for 0.373 percent of U.S. itinerant GA operations, 0.435 percent of local GA operations, and 0.009 percent of air taxi operations. By carrying these percentages forward through the planning horizon, a constant market share forecast emerges. The constant market share is considered a low-range projection, as historical data indicate GEU's market share has shown growth for each operational category within the previous 20 years.

In addition to the constant market share projections, an increasing market share projection was developed for each operational category. In terms of itinerant operations, a market share increase to 0.711 percent by 2045 was considered, resulting in a total of 121,600 operations by 2045. For local operations, a 0.494 percent market share was evaluated, resulting in 90,500 operations by 2045. Finally, an increase in market share to 0.0095 by air taxi operations was considered, resulting in 870 operations in this category by 2045.

Growth Rate Projections

Growth rate projections were developed utilizing historical growth rates, the GEU TAF growth rates, and the statewide TAF growth rates for each operational category. For itinerant operations, the growth rates of 1.30 percent (GEU TAF) and 0.47 percent (AZ TAF) were applied, resulting in 74,100 operations and 62,800 operations, respectively, by 2045. For local operations, the growth rates of 0.40 percent (GEU TAF) and 0.44 percent (AZ TAF) were applied, resulting in 79,600 operations and 78,000 operations, respectively, by 2045. For air taxi operations, the growth rates of 1.74 percent (GEU TAF) and 1.09 percent (AZ TAF) were applied, resulting in 890 operations and 780 operations, respectively, by 2045.

Historical growth rates in each operational category were also considered and applied to the base year count to develop projections for the plan years. For itinerant and local operations, the 15-year CAGR (5.30 percent [itinerant] and 1.22 percent [local]) was considered, while the 10-year CAGR (1.76 percent) was applied to air taxi operations to produce forecasts for each operational segment. When these growth rates were applied to their respective operational categories, the result was a projection of 179,600 itinerant operations, 101,500 local operations, and 910 air taxi operations by 2045.

General Aviation and Air Taxi Operations Forecast Summary

Table 2W summarizes the projections prepared for itinerant and local GA operations and air taxi operations at GEU. The FAA's TAF projections for GEU are included for comparison purposes.

Market trends indicate that GA and air taxi operations will continue to grow in the State of Arizona. One of the key elements of this growth is the continual expansion of flight schools and their operations, especially at GEU, with more students and aircraft continually coming to the airport. Furthermore, airport management is committed to developing new facilities and services to improve GEU's position as a prime choice for airport services in the region for all GA users, including the growing corporate/business aircraft market. As previously mentioned, socioeconomic indicators suggest GEU's service area will continue to thrive over the planning period, bringing new business opportunities and potential users and tenants.

TABLE 2W: Operations Forecast Summary

Category	Projection	2025	2030	2035	2045	CAGR 2025–2045
Itinerant General Aviation	Constant Market Share	57,175	60,300	61,400	63,700	0.54%
Itinerant General Aviation	**Increasing Market Share – SELECTED FORECAST**	**57,175**	**74,000**	**89,300**	**121,600**	**3.85%**
Itinerant General Aviation	Historical Growth Rate	57,175	87,700	117,200	179,600	5.89%
Itinerant General Aviation	GEU TAF Growth Rate	57,175	61,000	65,100	74,100	1.30%
Itinerant General Aviation	Statewide TAF Growth Rate	57,175	58,500	59,900	62,800	0.47%
Itinerant General Aviation	GEU 2026 TAF	55,076	62,671	65,444	71,363	1.30%
Local General Aviation	Constant Market Share	71,513	75,100	76,600	79,600	0.54%
Local General Aviation	**Increasing Market Share – SELECTED FORECAST**	**71,513**	**77,700**	**81,800**	**90,500**	**1.18%**
Local General Aviation	Historical Growth Rate	71,513	80,300	87,100	101,500	1.77%
Local General Aviation	GEU TAF Growth Rate	71,513	73,500	75,400	79,600	0.54%
Local General Aviation	Statewide TAF Growth Rate	71,513	73,100	74,700	78,000	0.44%
Local General Aviation	GEU 2026 TAF	77,032	78,585	80,171	83,436	0.40%
Air Taxi	Constant Market Share	631	640	700	820	1.32%
Air Taxi	Increasing Market Share	631	650	720	870	1.62%
Air Taxi	**Historical Growth Rate – SELECTED FORECAST**	**631**	**660**	**740**	**910**	**1.85%**
Air Taxi	GEU TAF Growth Rate	631	690	750	890	1.73%
Air Taxi	Statewide TAF Growth Rate	631	670	700	780	1.07%
Air Taxi	GEU 2026 TAF	1,303	1,402	1,578	1,839	1.74%

Source: Coffman Associates Analysis

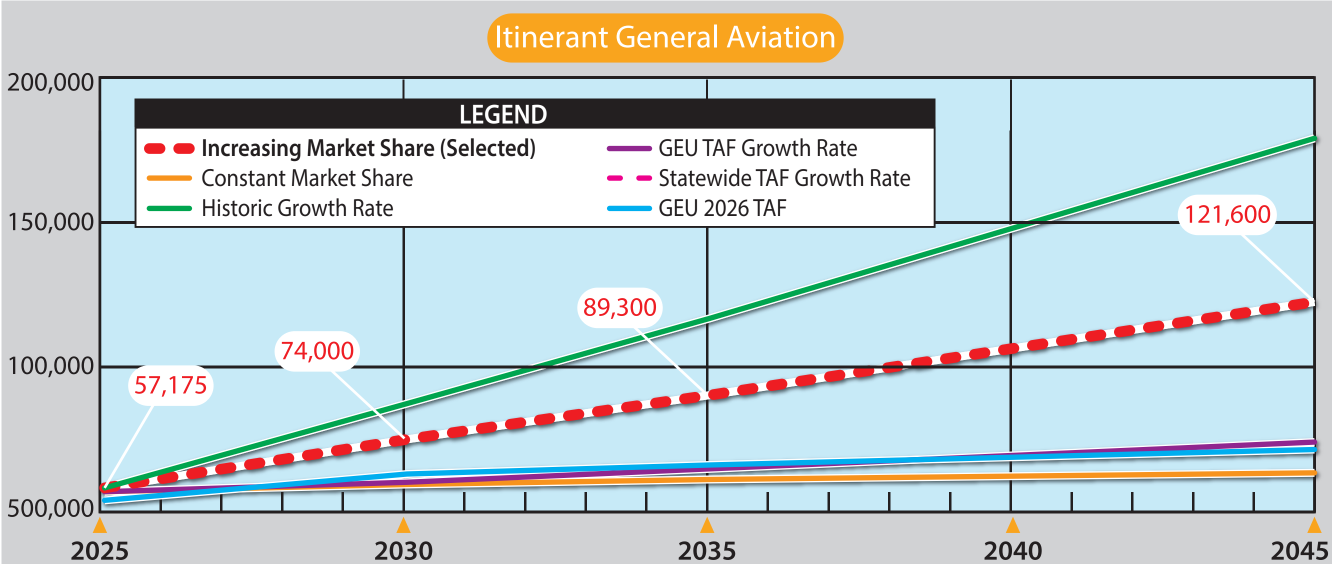
CAGR = compound annual growth rate

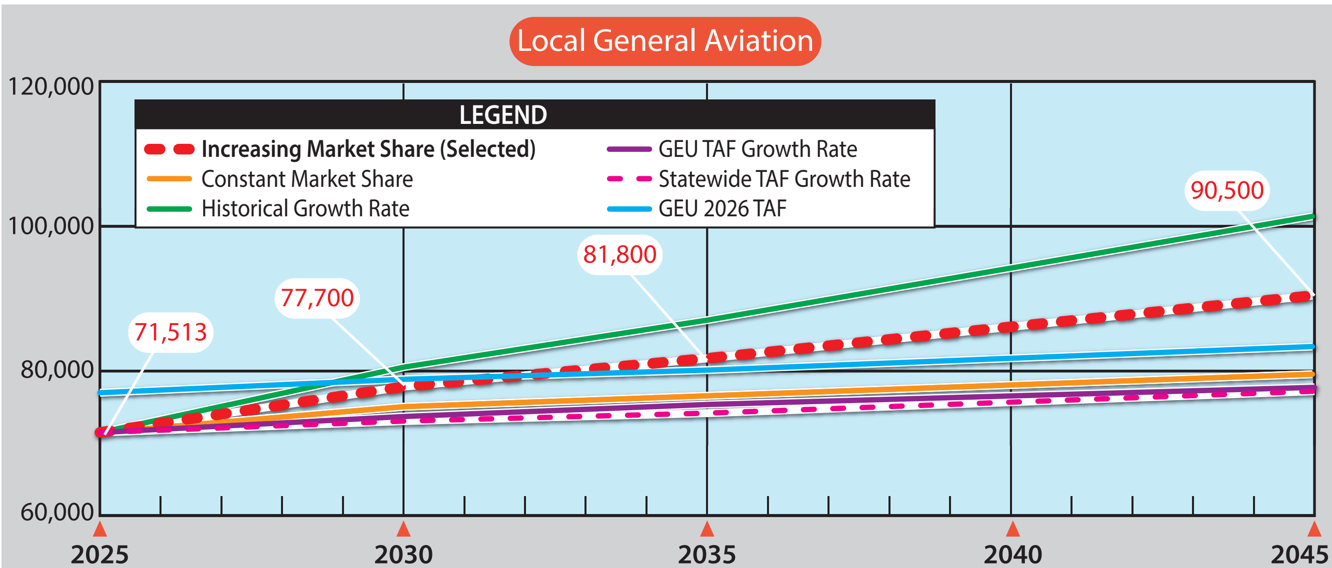
Economic developments, such as the VAI Resort and adjoining Mattel Adventure Park, will increase the attraction of the City of Glendale; subsequently, the attraction of GEU will increase because the airport is within the immediate vicinity of these developments. The City of Glendale is also home to State Farm Stadium and Camelback Ranch, which are significant economic drivers in the community.

Due to these factors, GEU has experienced an operational spike over the past few years. While growth is expected over the 20-year planning period, it will likely stabilize somewhat compared to what has occurred over the most recent five-year period. For these reasons, the increasing market share projections of itinerant and local GA operations have been selected as the most reasonable, resulting in 121,600 itinerant operations and 90,500 local operations by 2025. These forecasts coincide with the level of growth observed in recent years and account for the expected moderation of operational levels through the planning period.

Historically, air taxi operations at GEU have experienced a declining trend, with a -3.49 percent CAGR over the previous 20 years, reaching a low of 169 operations in 2019. Since then, air taxi operations have experienced moderate growth in recent years, reaching a peak of 1,292 in 2024 before dropping to 631 in 2025. For these reasons, the historical growth rate projection has been selected. This forecast shows air taxi operations continuing at a moderate growth rate through 2045 with a 1.85 percent CAGR.

The general aviation and air taxi operations forecasts are presented on **Exhibit 2E**.





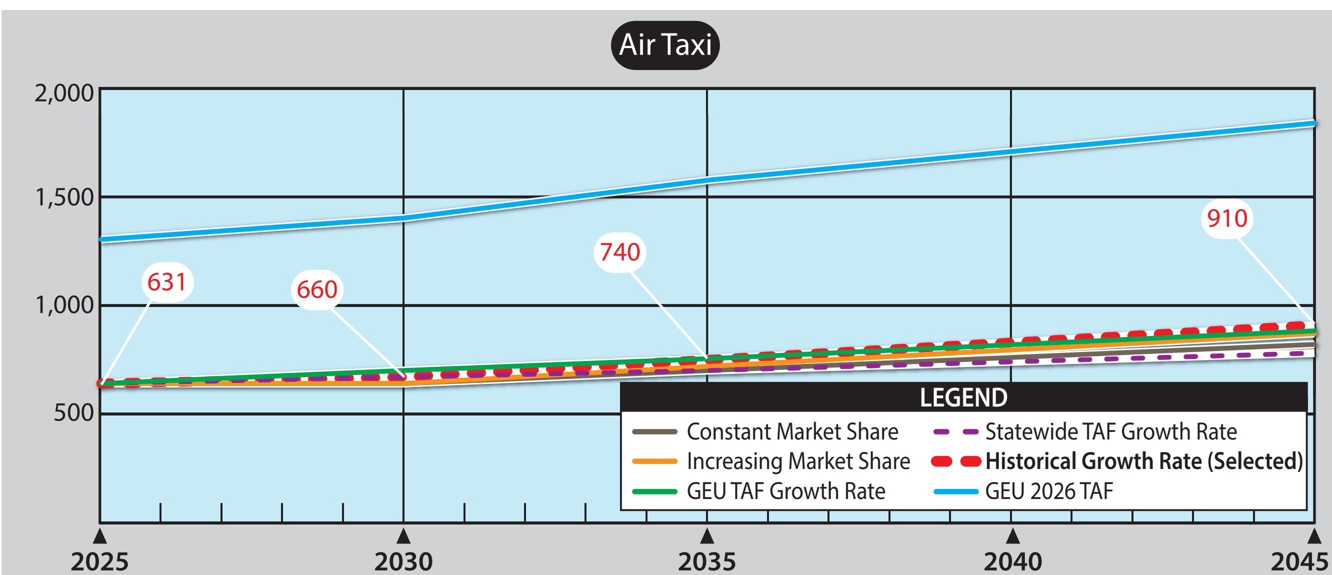


Exhibit 2E
OPERATIONS FORECASTS

Military Operations Forecast

Military aircraft can (and do) utilize civilian airports across the country. GEU occasionally experiences activity by military aircraft, potentially due to the close proximity of Luke Air Force Base (AFB) to the airport. Forecasts of military activity are inherently difficult to predict because of the national security nature of military operations and the fact that such missions can change without notice; thus, it is typical for the FAA to use a flatline forecast for military operations. For GEU, the FAA TAF projects one itinerant operation and two local operations to remain static over the forecast period. These TAF estimates are also utilized for the master plan forecast.

Total Operations Forecast Summary

Table 2Y presents the summary of the selected operations forecasts. The summary table details the culmination of each selected operations forecast. Over the planning horizon, total operations are projected to grow from 129,320 in 2025 to 213,013 by 2045 at a CAGR of 2.53 percent.

TABLE 2Y: Total Operations Forecast Summary

Year	Itinerant: Air Taxi	Itinerant: General Aviation	Itinerant: Military	Itinerant: Total	Local: General Aviation	Local: Military	Local: Total	Total Operations
2025	631	57,175	1	57,807	71,513	0	71,513	129,320
2030	660	74,000	1	74,663	77,700	2	77,702	152,363
2035	740	89,300	1	90,043	81,800	2	81,802	171,843
2045	910	121,600	1	122,513	90,500	2	90,502	213,013
CAGR:	1.85%	3.85%	0.00%	3.83%	1.18%	–	1.18%	2.53%

Source: Coffman Associates Analysis

CAGR = compound annual growth rate

PEAKING CHARACTERISTICS

Peaking characteristics play an important role in determining airport capacity and facility requirements. The FAA's *Traffic Flow Management System Counts* (TFMSC) data collected by the tower were examined to identify peaking periods. The peaking periods used to develop facility requirements are described as follows.

Peak Month

The peak month is an absolute peak within a given year. In 2025, the peak month for operations was March, during which there were 14,417 operations, which represented 11.4 percent of annual operations.

Design Day

The design day is calculated by dividing the peak month by the number of days of the month. Because March was the peak month, the design day is calculated as the peak month divided by 31.

Busy Day

The busy day is calculated by averaging the busiest day each week during the peak month. In this case, the busiest day each week of March 2025 (peak month of base year) represented approximately 19.6 percent of the week's total operations.

Design Hour

The design hour was calculated by identifying the average hourly operations during design days during the peak month. Calculations exclude overnight hours (between 10:00 p.m. and 6:00 a.m.), which would skew down the design hour. The design hour during design days of March 2025 represented 5.9 percent of design day operations.

Peak period projections based on the baseline calculations are included in **Table 2Z**.

TABLE 2Z: Peak Period Forecasts

Forecast	2025	2030	2035	2045
Annual Operations	129,320	152,363	171,843	213,013
Peak Month	14,417	17,329	19,545	24,228
Design Day	465	559	630	782
Busy Day	639	768	866	1,073
Design Hour	27	33	37	46

Source: Coffman Associates Analysis

FORECAST SUMMARY

This chapter has outlined the various activity levels that might reasonably be anticipated over the planning period. **Exhibit 2F** presents a summary of the aviation forecasts prepared in this chapter. The base year for these forecasts is 2025 with a 20-year planning horizon to 2045. The primary aviation demand indicators are based aircraft and operations. The count of based aircraft is forecasted to increase from 355 in 2025 to 485 by 2045 (1.58 percent CAGR). Total operations at GEU are forecasted to increase from 129,320 in 2025 to 213,013 by 2045 (2.53 percent CAGR)

Projections of aviation demand will be influenced by unforeseen factors and events in the future; therefore, it is not unreasonable to assume future demand will follow the exact projection line, but forecasts of aviation demand tend to fall within the planning envelope over time. The forecasts developed for this master planning effort are considered reasonable for planning purposes. The need for additional facilities will be based on these forecasts; however, if demand does not materialize as projected, implementation of facility construction can be slower. Likewise, if demand exceeds these forecasts, the airport may accelerate construction of new facilities.

FORECAST COMPARISON TO THE FAA TAF

Historically, forecasts have been submitted to the FAA to be evaluated and compared to the TAF. The FAA prefers that forecasts differ by less than 10 percent in the five-year period and less than 15 percent in the 10-year period. Where the forecasts differ, supporting documentation is necessary to justify the difference.

	Base Year	Forecast			CAGR
	2025	2030	2035	2045	
AIRPORT OPERATIONS					
Itinerant					
Air Taxi	631	660	740	910	1.85%
General Aviation	57,175	74,000	89,300	121,600	3.85%
Military	1	1	1	1	0.00%
Total Itinerant	**57,807**	**74,661**	**90,041**	**122,511**	**3.83%**
Local					
General Aviation	71,513	77,700	81,800	90,500	1.18%
Military	0	2	2	2	-
Total Local	**71,513**	**77,702**	**81,802**	**90,502**	**1.18%**
Total Operations	**129,320**	**152,363**	**171,843**	**213,013**	**2.53%**
OPERATIONAL PEAKING CHARACTERISTICS					
Peak Month	14,417	17,329	19,545	24,228	2.63%
Design Day	465	559	630	782	2.63%
Busy Day	639	768	866	1,073	2.63%
Design Hour	27	33	37	46	2.70%
BASED AIRCRAFT					
Single-Engine Piston	300	317	331	355	0.85%
Multi-Engine Piston	34	34	35	40	0.82%
Turboprop	7	13	19	40	9.11%
Jet	4	5	9	20	8.38%
Helicopter	7	12	15	22	5.89%
Other	3	4	6	8	5.03%
TOTAL	**355**	**385**	**415**	**485**	**1.57%**

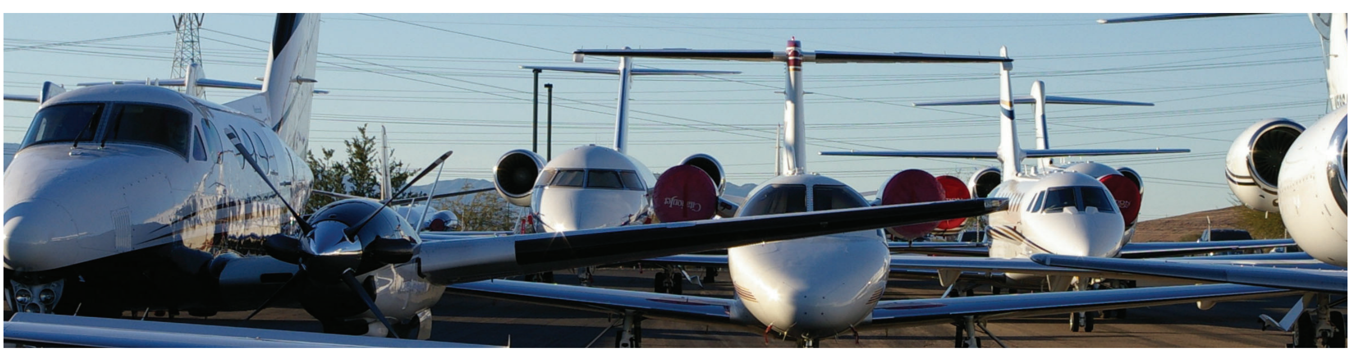


Exhibit 2F
FORECAST SUMMARY

Table 2AA presents a summary of the selected forecasts and a comparison to the FAA TAF for GEU. The master plan operations forecast is slightly outside the TAF tolerance in the 10-year period, primarily due to the amount of growth in historical operations over the last 10 to 15 years compared to the previous 20 years. In terms of based aircraft, the five-year and 10-year periods are within TAF tolerance.

TABLE 2AA: Comparison of Master Plan Forecasts to FAA TAF

Category	Forecast	2025	2030	2035	2045	CAGR
Total Operations	Master Plan Forecast	129,320	152,363	171,843	213,013	2.53%
Total Operations	TAF	133,416	142,663	147,196	156,641	0.81%
Total Operations	**% Difference from TAF:**	**3.12%**	**6.58%**	**15.45%**	**30.50%**	**–**
Based Aircraft	Master Plan Forecast	355	385	415	485	1.57%
Based Aircraft	TAF	348	363	378	408	0.80%
Based Aircraft	**% Difference from TAF:**	**1.99%**	**5.88%**	**9.33%**	**17.25%**	**–**

AIRCRAFT/AIRPORT/RUNWAY CLASSIFICATION

The FAA has established several aircraft classification systems that group aircraft types based on their performance (approach speed during landing operations) and design characteristics (wingspan and landing gear configuration). These classification systems are used to determine the appropriate airport design standards for specific airport elements, such as runways, taxiways, taxilanes, and aprons.

AIRCRAFT CLASSIFICATION

The selection of appropriate FAA design standards for the development and location of airport facilities is based primarily on the characteristics of the aircraft that are currently using or expected to use an airport. The critical design aircraft is used to define the design parameters for an airport. The design aircraft may be a single aircraft type or a group of aircraft with similar characteristics. The design aircraft is classified by three parameters: aircraft approach category (AAC), airplane design group (ADG), and taxiway design group (TDG). FAA AC 150/5300-13B, *Airport Design*, Change 1, describes the following airplane classification systems, the parameters of which are presented on **Exhibit 2G**.

Aircraft Approach Category (AAC)

The AAC is a grouping of aircraft based on a reference landing speed (V_{REF}), if specified, or if V_{REF} is not specified, 1.3 times the stall speed (V_{SO}) at the maximum certified landing weight. V_{REF}, V_{SO}, and the maximum certified landing weight are values established for the aircraft by the certification authority of the country of registry (the FAA in the United States).

The AAC refers to the approach speed of an aircraft in landing configuration and is depicted by a letter (A through E). The higher the approach speed (operational characteristic), the more restrictive the applicable design standards will be. The AAC generally applies to runways and runway-related facilities, such as runway width, runway safety area (RSA), runway object free area (ROFA), runway protection zone (RPZ) and separation standards.

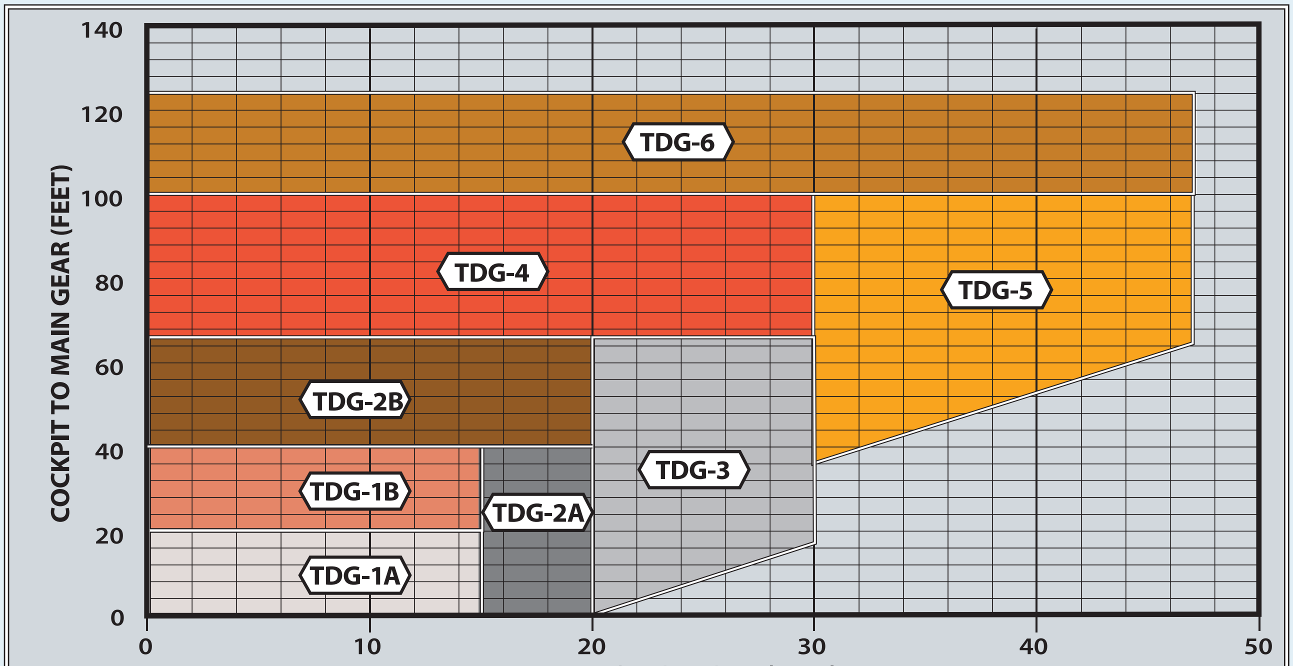
AIRCRAFT APPROACH CATEGORY (AAC)	
Category	**Approach Speed**
A	Less than 91 knots
B	91 knots or more but less than 121 knots
C	121 knots or more but less than 141 knots
D	141 knots or more but less than 166 knots
E	166 knots or more

AIRPLANE DESIGN GROUP (ADG)		
Group #	**Tail Height (feet)**	**Wingspan (feet)**
I	<20	<49
II	20-<30	49-<79
III	30-<45	79-<118
IV	45-<60	118-<171
V	60-<66	171-<214
VI	66-<80	214-<262

VISIBILITY MINIMUMS	
RVR* (feet)	**Flight Visibility Category (statute miles)**
VIS	3-mile or greater visibility minimums
5,000	Not lower than 1-mile
4,000	Lower than 1-mile but not lower than ¾-mile
2,400	Lower than ¾-mile but not lower than ½-mile
1,600	Lower than ½-mile but not lower than ¼-mile
1,200	Lower than ¼-mile

***RVR**: Runway Visual Range

TAXIWAY DESIGN GROUP (TDG)



Source: FAA AC 150/5300-13B, Airport Design

A-I

Aircraft	TDG
Beech Bonanza	1A
Cessna 150, 172	**1A**
Piper Comanche, Seneca	1A

B-I

Aircraft	TDG
Eclipse 500	1A
Beech Baron 55/58	1A
Beech King Air 100	**1A**
Cessna 421	2A
Cessna Citation M2 (525)	1A
Cessna Citation 1(500)	1A
Embraer Phenom 100	1A

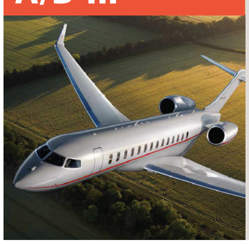
A/B-II *12,500 lbs. or less*

Aircraft	TDG
Beech Super King Air 200	2A
Beech King Air 90	1A
Cessna 441 Conquest	**1A**
Cessna Citation CJ2	2A
Pilatus PC-12	2

B-II *over 12,500 lbs.*

Aircraft	TDG
Beech Super King Air 350	2A
Cessna Citation CJ3 (525B)	2A
Cessna Citation CJ4 (525C)	**1B**
Cessna Citation Latitude	1B
Embraer Phenom 300	1B
Falcon 20	1B
Pilatus PC-24	2A

A/B-III



Aircraft	TDG
Bombardier Dash 8	3
Bombardier Global 7500	**2B**
Falcon 7X, 8X	2A

C/D-I

Aircraft	TDG
Lear 35, 40, **45**, 55, 60XR	**1B**
F-16	1A

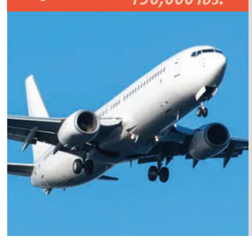
C/D-II

Aircraft	TDG
Challenger 600/604	1B
Cessna Citation III, VI,VII, X	1B
Embraer Legacy 135/140	2B
Gulfstream IV (D-II)	**2A**
Gulfstream G280	1B
Lear 70, 75	1B
Falcon 50, 900, 2000	2A
Hawker 800XP, 4000	1B

C/D-III *less than 150,000 lbs.*

Aircraft	TDG
Gulfstream V	2B
Gulfstream 550, 600, 650	**2B**
Global 5000, 6000	2B

C/D-III *over 150,000 lbs.*



Aircraft	TDG
Airbus A319, A320, A321	3
Boeing 737-800, 900	3
MD-83, 88	4

C/D-IV

Aircraft	TDG
Airbus A300	5
Boeing 757-200	4
Boeing 767-300, 400	**5**
MD-11	6

C/D-V

Aircraft	TDG
Airbus A330-200, 300	5
Airbus A340-500, 600	6
Boeing 747-100 - 400	5
Boeing 777-300	6
Boeing 787-8, 9	**5**

E-I

Aircraft	TDG
F-15	**1B**

Note: Aircraft pictured is identified in bold type.

Airplane Design Group (ADG)

The ADG is depicted by a Roman numeral (I through VI) and is a classification of aircraft that relates to aircraft wingspan or tail height (physical characteristics). When the aircraft wingspan and tail height fall in different groups, the higher (more restrictive) group is used. The ADG influences design standards for taxiway safety area (TSA), taxiway object free area (TOFA), taxilane object free area, apron wingtip clearance, and various separation distances.

Taxiway Design Group (TDG)

The TDG is a classification of airplanes based on certain undercarriage dimensions of the aircraft. Both outer-to-outer main gear width (MGW) and cockpit-to-main gear (CMG) distances are used in the classification of an aircraft. The TDG is depicted by an alphanumeric system (1A, 1B, 2, 3, 4, 5, 6, and 7). The taxiway design elements determined by the application of the TDG include the taxiway width, taxiway edge safety margin, taxiway shoulder width, taxiway fillet design and dimensions, and (in some cases) the separation distance between parallel taxiways/taxilanes. Other taxiway elements, such as the taxiway safety area (TSA), taxiway object free area (TOFA), taxiway/taxilane separation to parallel taxiway/taxilanes or fixed or movable objects, and taxiway/taxilane wingtip clearances, are determined solely based on the wingspan (ADG) of the design aircraft utilizing those surfaces. It is appropriate for taxiways to be planned and built to different TDG standards based on expected use.

The reverse side of **Exhibit 2G** summarizes the classifications of the most common aircraft in operation today. Generally, recreational and business piston and turboprop aircraft will fall in AAC A and B and ADG I and II. Business jets typically fall in AAC B and C, while larger commercial aircraft fall in AAC and D.

AIRPORT AND RUNWAY CLASSIFICATIONS

Along with the previously defined aircraft classifications, airport and runway classifications are used to determine the appropriate FAA design standards to which the airfield facilities should be designed and built.

Runway Design Code (RDC)

The RDC is a code that signifies the design standards to which the runway should be built. The RDC is based on planned development and has no operational component.

The AAC, ADG, and runway visual range (RVR) are combined to form the RDC of a runway. The RDC provides the information needed to determine certain applicable design standards. The first component, depicted by a letter, is the AAC and relates to aircraft approach speeds (operational characteristic). The second component, depicted by a Roman numeral, is the ADG and relates to either the aircraft wingspan or tail height (physical characteristic), whichever is more restrictive. The third component relates to the available instrument approach visibility minimums, expressed by RVR values in feet of 1,200 (⅛-mile); 1,600 (¼-mile); 2,400 (½-mile); 4,000 (¾-mile); and 5,000 (1-mile). The RVR values approximate standard visibility minimums for instrument approaches to the runways. For a runway designed for visual approaches only, “VIS” is used in place of a numerical value for the RVR.

Approach Reference Code (APRC)

The APRC is a code that signifies the current operational capabilities of a runway and associated parallel taxiway regarding landing operations. The APRC has the same three components as the RDC: AAC, ADG and RVR. The APRC describes the current operational capabilities of a runway under meteorological conditions in which no special operating procedures are necessary, unlike the RDC, which is based on planned development with no operational component. The APRC for a runway is established based on the minimum runway-to-taxiway centerline separation.

Departure Reference Code (DPRC)

The DPRC is a code that signifies the current operational capabilities of a runway and associated parallel taxiway regarding takeoff operations. The DPRC represents aircraft that can take off from a runway while any aircraft are present on adjacent taxiways, under meteorological conditions with no special operating conditions. The DPRC is like the APRC but is composed of only the AAC and ADG. A runway may have more than one DPRC, depending on the parallel taxiway separation distance.

Airport Reference Code (ARC)

The ARC is an airport designation that signifies the airport's highest runway design code (RDC) minus the third component of the RDC (visibility). The ARC is used for planning and design only and does not limit the aircraft that may be able to operate safely at an airport. The current airport layout plan for GEU identifies the ARC for Runway 1-19 as B-II; the Citation Excel/XLS is the representative aircraft for the critical design aircraft.

CRITICAL AIRCRAFT

The selection of appropriate FAA design standards for the development and location of airport facilities is primarily based on the characteristics of the aircraft that are currently using or expected to use the airport. The critical design aircraft is used to define the design parameters for an airport. The design aircraft may be a single aircraft type or a group of aircraft with similar characteristics defined by the three parameters: AAC, ADG, and TDG.

The first consideration is the safe operation of aircraft likely to use an airport. Any operation of an aircraft that exceeds the design criteria of an airport may result in a decreased safety margin; however, it is not a usual practice to base the airport design on an aircraft that infrequently uses the airport.

The design aircraft is defined as the most demanding aircraft type, or grouping of aircraft with similar characteristics, that makes regular use of the airport, which is defined as 500 annual operations (excluding touch-and-go operations). Planning for future aircraft use is important because the design standards are used to plan separation distances between facilities. These future standards must be considered now to ensure short-term development does not preclude the reasonable long-range potential needs of the airport.

According to FAA AC 150/5300-13B, *Airport Design*, "airport designs based only on existing aircraft can severely limit the ability to expand the airport to meet future requirements for larger, more demanding aircraft. Airport designs that are based on large aircraft never likely to be served by the airport are not economical." Selection of the current and future critical design aircraft must be realistic in nature and supported by current data and realistic projections.

AIRPORT DESIGN AIRCRAFT

There are three elements for classifying the airport design aircraft: AAC, ADG, and TDG. The AAC and ADG are examined first, followed by the TDG.

The FAA's TFMSC database includes documentation of commercial (air carrier and air taxi), general aviation, and military aircraft traffic. Due to factors such as incomplete flight plans, limited radar coverage, and VFR operations, TFMSC data do not account for all aircraft activity at an airport by a given aircraft type; however, the TFMSC provides an accurate reflection of IFR activity. Historical TFMSC data for GEU are depicted on **Exhibit 2H**.

Operators of high-performance aircraft, such as turboprops and jets, tend to file flight plans at a high rate. According to TFMSC data for GEU, operations conducted by aircraft with an AAC/ADG of B-II have consistently exceeded 500 annual operations over the past several years; as such, **the historical operational activity indicates GEU's existing ARC is B-II**. The aircraft that operate most frequently at GEU are the Beechcraft 200 Super King Air, Cessna Citation V and Citation Latitude, and Embraer Phenom 300. The Beechcraft 200 Super King Air conducts the most operations within this group; however, a Cessna Citation V is currently based at GEU, so it has been identified as the current critical aircraft.

To determine GEU's future ARC, annual operations by AAC and ADG were forecasted through 2045 using a growth rate forecast based on historical TFMSC data within each AAC and ADG category. Historical and forecasted operations by AAC and ADG are depicted in **Table 2BB**. In terms of AAC, operations levels in categories A, B, and C are anticipated to increase and surpass the threshold of 500 annual operations. For ADG, all categories are expected to increase; however, ADG II is the only category expected to exceed the threshold of 500 annual operations, so **GEU's future critical aircraft is within the C-II category and is represented by the Bombardier Challenger 300**. It should be noted that this future critical aircraft is assumed to be representative of general aviation activity only, and if commercial service were to be initiated at GEU (to be discussed), a different representative family of aircraft may be identified.

TABLE 2BB: Historical and Forecasted Operations by Airport Reference Code

Classification	2021	2022	2023	2024	2025	2030	2035	2045	2025–2045 CAGR
AAC A	256	346	314	342	322	405	509	806	4.69%
AAC B	628	828	842	852	784	979	1,222	1,904	4.54%
AAC C	344	344	582	356	376	411	449	537	1.79%
AAC D	92	70	106	72	56	53	51	46	-1.00%
ADG I	346	588	466	460	362	379	396	434	0.91%
ADG II	920	944	1,284	1,062	1,114	1,349	1,633	2,395	3.90%
ADG III	54	56	94	100	62	71	82	108	2.80%

Sources: FAA TFMSC; Coffman Associates Analysis

TAXIWAY DESIGN GROUP (TDG)

The TFMSC also provides a breakdown of aircraft operations by TDG. According to GEU operations data (presented in **Table 2CC**), the highest TDG that exceeds the threshold of 500 annual operations in 2025 is TDG 2A, which is represented by the Cessna Citation V. Business jets fall primarily within the 1B, 2A, and 2B categories. These TDG categories should continue to experience growth; however, based on the TFMSC data, TDG 2A is considered the existing and ultimate critical design TDG for taxiway planning purposes.

TABLE 2CC: GEU Operations by Taxiway Design Group*

Year	1A	1B	2A	2B
2016	368	470	341	39
2017	260	431	364	25
2018	179	364	284	34
2019	203	439	333	50
2020	190	370	251	51
2021	305	471	445	55
2022	493	512	470	47
2023	267	774	664	92
2024	376	554	555	99
2025	317	572	538	67

Source: FAA TFMSC

*TDG 3 and 4 are not shown due to minimal activity at GEU.

RUNWAY DESIGN CODE (RDC)

The RDC relates to specific FAA design standards that should be met in relation to a runway. The RDC takes the AAC, ADG, and RVR into consideration. In most cases, the critical design aircraft will also be the RDC for the primary runway.

The current runway design at GEU for Runway 1-19 should meet the design standards for the overall airport design aircraft, which has been identified as the Cessna Citation V, a B-II aircraft. The runway has non-precision localizer performance with vertical guidance (LPV) approaches to both runway ends with as low as 1-mile visibility minimums. The RVR value assigned to a runway with 1-mile minimums is 5000; therefore, **the applicable existing RDC for Runway 1-19 is B-II-5000**. The ultimate critical aircraft was identified within ARC C-II, which is represented by the Bombardier Challenger 300; therefore, **the ultimate RDC for Runway 1-19 is C-II-5000**.

CRITICAL AIRCRAFT SUMMARY

Table 2DD summarizes the current and future runway classifications.

TABLE 2DD: Airport and Runway Classifications

Classification (General Aviation)	Runway 1-19 (Existing)	Runway 1-19 (Ultimate)
Airport Reference Code (ARC)	B-II	C-II
Critical Aircraft (Typ.)	Cessna Citation V	Bombardier Challenger 300
Runway Design Code (RDC)	B-II-5000	C-II-5000
Taxiway Design Group (TDG)	2A	2A

Source: FAA AC 150/5300-13B, Airport Design, Change 1

ARC	Aircraft	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
A-I	B36T - Allison 36 Turbine Bonanza	0	0	0	0	0	0	2	0	0	0
	EVOT - Lancair Evolution Turbine	0	2	2	2	2	0	2	0	0	0
	KODI - Quest Kodiak	0	4	0	0	0	0	2	0	0	0
	LNP4 - Lancair Propjet four-seat	0	0	0	0	0	0	0	2	0	0
	P46T - Piper Malibu Meridian	18	8	6	18	14	48	84	42	12	14
	SF50 - Cirrus Vision SF50	0	0	2	6	16	24	94	78	134	148
	TBM7 - Socata TBM-7	4	6	4	10	4	24	30	0	8	6
	TBM8 - Socata TBM-850	6	12	10	6	0	4	6	4	8	6
	TBM9 - Socata TBM	0	0	8	4	6	8	0	10	10	10
	Total	**28**	**32**	**32**	**46**	**42**	**108**	**220**	**136**	**172**	**184**
A-II	C208 - Cessna 208 Caravan	0	0	0	2	0	0	2	0	2	6
	DHC6 - DeHavilland Twin Otter	2	0	0	0	0	0	0	0	0	0
	PC12 - Pilatus PC-12	64	64	68	96	64	148	124	178	168	132
	Total	**66**	**64**	**68**	**98**	**64**	**148**	**126**	**178**	**170**	**138**
B-I	AC90 - Gulfstream Commander	6	20	6	4	6	2	8	2	6	0
	BE10 - Beech King Air 100 A/B	2	4	2	0	4	6	10	12	12	6
	BE40 - Raytheon/Beech Beechjet 400/T-1	28	20	6	16	6	14	34	28	34	8
	C25M - Cessna Citation M2	0	0	0	6	6	6	10	10	4	2
	C425 - Cessna 425 Corsair	2	0	0	0	0	2	4	0	6	8
	C500 - Cessna 500/Citation I	2	0	0	0	2	0	2	0	0	2
	C501 - Cessna I/SP	2	8	2	0	2	6	8	8	0	2
	C510 - Cessna Citation Mustang	20	10	6	8	4	2	10	10	22	0
	C525 - Cessna CitationJet/CJ1	70	46	20	24	22	36	56	34	34	44
	E50P - Embraer Phenom 100	14	22	32	6	2	4	10	2	4	4
	EA50 - Eclipse 500	14	20	24	38	56	54	16	6	4	4
	FA10 - Dassault Falcon/Mystère 10	0	0	2	4	4	0	2	0	2	0
	HDJT - HONDA HA-420 HondaJet	0	0	2	2	0	2	20	84	56	8
	LJ31 - Bombardier Learjet 31/A/B	10	6	6	8	4	4	10	0	6	2
	MU2 - Mitsubishi Marquise/Solitaire	4	10	6	10	22	14	14	14	8	4
	MU30 - Mitsubishi MU300/ Diamond I	2	0	0	0	0	0	0	0	0	0
	PAY1 - Piper Cheyenne 1	2	2	0	0	4	0	0	0	0	0
	PAY2 - Piper Cheyenne 2	2	2	0	2	4	0	2	4	4	6
	PAY3 - Piper PA-42-720 Cheyenne 3	0	2	0	0	0	0	0	0	0	0
	PAY4 - Piper Cheyenne 400	0	0	0	0	0	2	2	0	0	0
	PRM1 - Raytheon Premier 1/390 Premier 1	46	18	6	10	16	34	66	14	42	24
	TEX2 - Raytheon Texan 2	0	2	0	0	0	0	0	0	0	0
	Total	**226**	**192**	**120**	**138**	**164**	**188**	**284**	**228**	**244**	**124**
B-II	ASTR - IAI Astra 1125	8	4	4	2	0	0	8	10	2	4
	B350 - Beech Super King Air 350	34	30	12	18	22	26	36	58	24	26
	BE20 - Beech 200 Super King Air	24	42	18	38	28	42	36	68	62	128
	BE30 - Raytheon 300 Super King Air	16	0	6	8	4	14	22	2	14	12
	BE9L - Beech King Air 90	130	78	42	50	22	36	32	8	24	34
	BE9T - Beech F90 King Air	10	2	14	12	10	2	0	2	0	0
	C25A - Cessna Citation CJ2	6	10	2	4	8	16	22	16	16	12
	C25B - Cessna Citation CJ3	18	38	14	44	26	44	42	56	44	38
	C25C - Cessna Citation CJ4	16	22	8	2	2	6	10	20	38	28
	C441 - Cessna Conquest	12	10	4	0	0	4	10	4	16	4
	C550 - Cessna Citation II/Bravo	20	24	26	10	6	34	22	14	4	2
	C551 - Cessna Citation II/SP	0	0	0	0	0	0	2	0	2	2
	C55B - Cessna Citation Bravo	0	0	0	0	0	2	10	0	4	2
	C560 - Cessna Citation V/Ultra/Encore	40	48	38	32	44	28	30	30	84	96
	C56X - Cessna Excel/XLS	72	80	60	52	34	50	78	50	46	44
	C680 - Cessna Citation Sovereign	40	34	16	20	16	18	22	56	22	30
	C68A - Cessna Citation Latitude	0	6	18	42	36	48	68	54	70	70
	E545 - Embraer EMB-545 Legacy 450	2	0	12	16	8	10	10	18	10	14
	E550 - Embraer Legacy 500	0	4	2	8	8	16	12	34	14	34
	E55P - Embraer Phenom 300	26	12	30	30	46	40	54	100	92	70

ARC	Aircraft	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
B-II cont.	FA20 - Dassault Falcon/Mystère 20	2	0	0	4	0	0	0	0	0	0
	PC24 - Pilatus PC-24	0	0	0	0	0	2	6	4	8	4
	SH33 - Shorts 330	0	0	0	0	0	0	0	0	10	0
	SW3 - Fairchild Swearingen SA-226T/TB Merlin 3	0	2	4	0	0	0	0	0	0	0
	Total	**476**	**446**	**330**	**392**	**320**	**438**	**532**	**604**	**606**	**654**
B-III	DH8C - Dash 8/DHC8-300	0	0	0	0	0	0	2	0	0	0
	FA7X - Dassault Falcon F7X	0	0	8	10	2	0	6	4	0	2
	FA8X - Dassault Falcon 8X	0	0	2	0	2	0	2	2	2	2
	GL7T - Bombardier Global 7500	0	0	0	0	0	2	2	4	0	2
	Total	**0**	**0**	**10**	**10**	**4**	**2**	**12**	**10**	**2**	**6**
C-I	LJ24 - Bombardier Learjet 24	2	0	2	0	0	0	0	0	0	0
	LJ35 - Bombardier Learjet 35/36	16	18	24	16	14	8	20	14	4	14
	LJ40 - Learjet 40; Gates Learjet	8	2	4	6	2	8	4	4	0	0
	LJ45 - Bombardier Learjet 45	24	12	34	30	30	20	26	56	26	10
	LJ55 - Bombardier Learjet 55	4	2	0	4	2	0	6	0	0	0
	LJ60 - Bombardier Learjet 60	36	22	24	16	16	12	26	28	12	18
	P180 - Piaggio P-180 Avanti	0	2	0	2	6	0	2	0	2	12
	WW24 - IAI 1124 Westwind	4	4	0	0	0	0	0	0	0	0
	Total	**94**	**62**	**88**	**74**	**70**	**48**	**84**	**102**	**44**	**54**
C-II	C650 - Cessna III/VI/VII	18	20	8	14	4	10	16	6	4	10
	C700 - Cessna Citation Longitude	0	0	0	0	0	4	6	14	22	26
	C750 - Cessna Citation X	38	36	10	22	26	26	14	72	36	32
	CL30 - Bombardier (Canadair) Challenger 300	32	26	24	40	30	26	20	44	34	20
	CL35 - Bombardier Challenger 300	12	20	12	14	26	68	42	42	48	60
	CL60 - Bombardier Challenger 600/601/604	36	38	44	46	26	16	26	44	20	36
	E135 - Embraer ERJ 135/140/Legacy	0	2	0	2	0	0	0	2	0	4
	E35L - Embraer 135 LR	2	2	2	0	0	2	2	4	2	6
	F2TH - Dassault Falcon 2000	18	20	12	20	8	12	22	44	6	18
	F900 - Dassault Falcon 900	12	14	22	10	8	16	24	34	8	10
	FA50 - Dassault Falcon/Mystère 50	24	24	16	16	4	12	14	18	14	4
	G150 - Gulfstream G150	4	2	2	6	6	4	0	10	2	6
	G280 - Gulfstream G280	2	12	6	14	12	24	10	16	2	12
	GALX - IAI 1126 Galaxy/Gulfstream G200	10	12	2	16	2	8	2	16	22	18
	GLF3 - Gulfstream III/G300	8	2	0	0	0	0	0	0	4	0
	H25B - BAe HS 125/700-800/Hawker 800	62	28	26	22	18	32	36	58	24	18
	H25C - BAe/Raytheon HS 125-1000/Hawker 1000	2	8	0	0	0	0	2	6	2	0
	HA4T - Hawker 4000	2	0	2	2	2	2	0	2	2	0
	LJ70 - Learjet 70	0	2	2	2	0	0	0	2	0	0
	LJ75 - Learjet 75	0	10	2	0	6	8	4	4	2	0
	Total	**282**	**278**	**192**	**246**	**178**	**270**	**240**	**438**	**254**	**280**
C-III	GA5C - G-7 Gulfstream G500	0	0	0	0	0	0	2	6	16	8
	GA6C - G-7 Gulfstream G600	0	0	0	2	0	0	0	6	0	2
	GL5T - Bombardier BD-700 Global 5000	10	0	6	0	4	2	0	6	4	6
	GLEX - Bombardier BD-700 Global Express	10	8	8	12	10	22	12	14	18	16
	GLF6 - Gulfstream	4	4	0	4	6	2	6	10	20	10
	SB20 - Saab 2000	0	2	0	0	0	0	0	0	0	0
	Total	**24**	**14**	**14**	**18**	**20**	**26**	**20**	**42**	**58**	**42**
C-IV	Boeing 757-200	0	0	0	0	2	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**
D-I	F16 - Lockheed F-16 Fighting Falcon	0	0	0	0	0	2	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**
D-II	CRJ2 - Bombardier CRJ-200	2	0	0	0	2	10	0	8	6	6
	GLF4 - Gulfstream IV/G400	46	30	20	24	12	54	46	56	26	36
	Total	**48**	**30**	**20**	**24**	**14**	**64**	**46**	**64**	**32**	**42**
D-III	GLF5 - Gulfstream V/G500	14	10	18	30	32	26	24	42	40	14
	Total	**14**	**10**	**18**	**30**	**32**	**26**	**24**	**42**	**40**	**14**

Source: GEU TFMSC 2016-2025 (Data Normalized Annually)

AIRPORT REFERENCE CODE (ARC) SUMMARY

ARC	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
A-I	28	32	32	46	42	108	220	136	172	184
A-II	66	64	68	98	64	148	126	178	170	138
B-I	226	192	120	138	164	188	284	228	244	124
B-II	476	446	330	392	320	438	532	604	606	654
B-III	0	0	10	10	4	2	12	10	2	6
C-I	94	62	88	74	70	48	84	102	44	54
C-II	282	278	192	246	178	270	240	438	254	280
C-III	24	14	14	18	20	26	20	42	58	42
C-IV	0	0	0	0	2	0	0	0	0	0
D-I	0	0	0	0	0	2	0	0	0	0
D-II	48	30	20	24	14	64	46	64	32	42
D-III	14	10	18	30	32	26	24	42	40	14
Total	1,258	1,128	892	1,076	910	1,320	1,588	1,844	1,622	1,538

Approach Category

AC	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
A	94	96	100	144	106	256	346	314	342	322
B	702	638	460	540	488	628	828	842	852	784
C	400	354	294	338	270	344	344	582	356	376
D	62	40	38	54	46	92	70	106	72	56
Total	1,258	1,128	892	1,076	910	1,320	1,588	1,844	1,622	1,538

Design Group

DG	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
I	348	286	240	258	276	346	588	466	460	362
II	872	818	610	760	576	920	944	1,284	1,062	1,114
III	38	24	42	58	56	54	56	94	100	62
IV	0	0	0	0	2	0	0	0	0	0
Total	1,258	1,128	892	1,076	910	1,320	1,588	1,844	1,622	1,538

Source: GEU TFMSC 2016-2025 (Data Normalized Annually)

Exhibit 2H continued
HISTORICAL JET AND TURBOPROP OPERATIONS

POTENTIAL COMMERCIAL PASSENGER SERVICE ENPLANEMENTS

Although scheduled commercial service is not currently offered at GEU, an analysis of potential passenger enplanements and commercial operations is being examined as part of this master plan to determine possible opportunities and facility needs, should the airport pursue this segment of air travel in the future.

BACKGROUND

Over the past several years, there have been significant changes in the commercial service industry serving airports. Airline business practices have recently evolved to help airlines become more profitable. Most carriers charge for checked luggage. Most also charge for defined "extras" or "perks," such as greater seat depth, expanded leg room, or window/aisle seats. These charges have generated significant profit centers for the airlines.

In 2007, the U.S. economy was just entering the most significant recession since the Great Depression. Prior to the COVID-19 pandemic, economic conditions had improved with nominal annual growth rates since 2009. During the financial crisis of 2008–2009, airlines substantially slashed their flying capacities in response to the sudden decline in demand for air travel. In the following years, even as the demand environment improved, network airlines did not add significant capacity; this practice was commonly referred to as "capacity discipline." The airlines have held back increasing capacity until more recently, which resulted in increased profitability, but fewer network flights and fewer new market routes have been added.

POTENTIAL COMMERCIAL SERVICE

At present, commercial service opportunities at GEU are extremely limited due to the proximity of scheduled air service at PHX. Access from Glendale to PHX is less than one hour by vehicle, so the likelihood of any traditional mainline legacy carrier (American Airlines, Delta Air Lines, and United Airlines) and/or Southwest Airlines serving GEU is improbable. These airlines are strong anchors at PHX and tend to favor the trappings of a larger hub airport, as they depend on the ability to link their passengers via the hub-and-spoke system. Moreover, these carriers are unlikely to add operations to a nearby regional airport, thereby competing with themselves at PHX. This type of move is considered "splitting" operations; it creates higher local costs, as an airline must staff operations at both locations, which increases operational costs and reduces profitability.

Tertiary commercial service airports (which GEU would be if scheduled passenger service were implemented) tend to be built around origination and destination (O&D) passenger models. Hub and smaller regionalized commercial service airports served by the mainline legacy carriers tend to build their networks around the hub-and-spoke system. As such, GEU potentially has opportunity for non-traditional and/or low-cost passenger airline options that currently have limited or no operations at PHX. Low-cost airlines, like Allegiant Airlines, utilize irregular schedules, unlike the daily departure schedules utilized by the legacy carriers. For example, Allegiant Airlines could serve a market departing Tuesday and returning on Saturday. Other low-cost options, like Frontier Airlines and Breeze Airways (both of which operate out of PHX), may offer daily departures but limited schedule options.

There are many non-traditional or low-cost carrier options, including Allegiant Airlines, Frontier Airlines, Breeze Airways, and Sun Country Airlines. Of these airlines, Sun Country Airlines could prove to have the biggest potential in being a carrier for GEU, as it does not currently operate at PHX; however, it should be noted that Sun Country Airlines currently operates at Phoenix–Mesa Gateway Airport (IWA). Sun Country Airlines was founded in 1982 and has been operating with a fleet of Boeing 737 aircraft, offering destinations to passengers throughout the U.S., Mexico, and the Caribbean.

These low-cost carriers tend to generate demand from specific users, most commonly leisure travelers who desire low airfares. These users are willing to sacrifice certain features, such as schedule frequency and traditional perks associated with airline reward programs, in favor of low fares. Business travelers tend not to use these airlines, as they are less reliable and offer few connections. Generally, local passenger demand for these airlines is limited when compared to demand for a legacy carrier.

As stated, because GEU is currently a general aviation airport within the vicinity of a major commercial service airport, the likelihood of scheduled air service is low; therefore, it is much more likely that passenger enplanement activity would be limited to charter operations conducted under Title 14 Code of Federal Regulations (CFR) Part 135, *Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft*. Paying passengers boarding charter flights are considered enplanements by the FAA. Total enplanements can be an important metric for airports, as airports that exceed 10,000 enplanements are entitled to at least $1.3 million in capital improvement funding from the FAA via the Airport Improvement Program (AIP). A forecast of charter passenger enplanements, along with the scheduled commercial service forecast, is necessary so airports can effectively plan for capital improvements and the funding thereof.

It is also worth noting that the airport will more than likely be required to become Title 14 CFR Part 139-certified, depending on the type of service (scheduled versus unscheduled, number of seats on an aircraft). Obtaining a Part 139 certification involves several facility upgrades/modifications, including the installation of passenger and baggage screening facilities, on-site aircraft rescue and firefighting (ARFF) capabilities, and an approved *Airport Certification Manual* (ACM), among other requirements. In general, an airport must be Part 139-certified if it serves scheduled flights with nine or more passenger seats or unscheduled flights with 31 or more passenger seats. The majority of these flights operate under Part 121, which governs most scheduled air carriers and sets a rigorous standard for compliance; however, some of the newer entrants, such as JSX, are able to circumvent these requirements through the use of 30-seat aircraft operating under Part 135, which applies to on-demand charters and has less stringent rules than Part 121.

Because there are no historical commercial passenger operating data for GEU, operational and enplanement forecasting is a function of the type(s) of aircraft in use, operational frequency, and load factors. The following sections present the potential for passenger enplanements, commercial operations, and potential commercial service operators at GEU. **These forecasts have been prepared to offer long-term potential and will be considered separately from the planning forecasts presented earlier in this chapter. The primary purpose of this analysis is to provide the City of Glendale with important facility planning information, should there be interest in implementing commercial service at Glendale Regional Airport.**

POTENTIAL PASSENGER ENPLANEMENTS

Tertiary Airport Methodology

One methodology to evaluate potential commercial air service at GEU is to analyze other tertiary airports, which are smaller commercial service airports near large metropolitan areas that are already served by one or more large hub airports. The following tertiary airports were considered:

- Orlando Sanford International Airport in Florida (26 miles northeast of Orlando)
- Westchester County Airport in New York (39 miles north of New York City)
- Phoenix–Mesa Gateway Airport in Arizona (36 miles southeast of Phoenix)
- Bellingham International Airport in Washington (94 miles north of Seattle and 52 miles south of Vancouver)
- Stockton Metropolitan Airport in California (80 miles east of San Francisco)
- Portsmouth International Airport at Pease in New Hampshire (58 miles north of Boston)

Table 2EE presents historical enplanement data for each of these airports.

TABLE 2EE: Secondary/Tertiary Commercial Passenger Airport Enplanements

Airport Name	2004	2009	2014	2019	2024*
Orlando Sanford International (FL)	926,820	836,223	1,064,133	1,601,614	1,412,702
Westchester County (NY)	462,981	964,927	756,189	872,023	1,182,384
Phoenix–Mesa Gateway (AZ)	2,891	289,770	669,807	881,855	978,296
Bellingham International (WA)	82,205	326,850	543,346	335,616	266,703
Stockton Metropolitan (CA)	1,863	28,368	82,298	101,156	63,668
Portsmouth International (NH)	22,279	17,079	45,708	116,903	100,298

Source: FAA Airport Enplanement Data

*2024 represents the most recent enplanement data available from the FAA.

Orlando Sanford International Airport has the most successful enplanement model of all the airports examined. This airport is basically utilized as a hub by Allegiant Airlines for all Orlando flights, as well as for international charter airlines. There is no regularly scheduled service by legacy carriers or commuter airlines. Similarly, Phoenix–Mesa Gateway Airport has experienced strong passenger growth since Allegiant Airlines began operating in the early 2000s. Phoenix, Arizona, ranks near the top of the most visited U.S. cities; as such, there is some potential that a carrier similar to Allegiant Airlines could generate passenger demand at GEU.

Westchester County Airport and Bellingham International Airport are tertiary airports; however, both are served by traditional carrier options, as well as non-traditional/low-cost carriers. As such, they offer a glimpse at enplanement levels for such markets. Portsmouth International Airport at Pease is a tertiary airport served by Allegiant Airlines and Breeze Airways.

As presented in the table, tertiary airports can generate a range of enplanements, from tens of thousands to over one million passenger enplanements. The upper end of the envelope is represented primarily by O&D markets.

Travel Propensity Factor Methodology

Due to a lack of passenger service history, it is challenging to develop a reasonable forecast of future passenger enplanements. Traditional trendline and regression analyses do not generate a reasonable forecast because there is no history to examine. The method employed here is to examine the smaller commercial service markets within the State of Arizona through characteristics such as population, proximity to a larger hub airport, and enplanement levels. The relationship between a service area's population and enplanements is the travel propensity factor (TPF), which is calculated by dividing an airport's passenger enplanement count by the population of the service area.

The TPF is predominantly impacted by the proximity of an airport to other airports with higher levels of service, or "hub" airports. Regional airports with higher TPF ratios tend to be located farther from hub airports in relatively isolated areas. Such an airport generally has a service area that extends into adjacent, well-populated regions or has an air service advantage that attracts more passengers who might otherwise choose to drive to a more distant hub airport. Generally, the higher the TPF, the more likely air travelers are to utilize the local airport for commercial service.

Table 2FF presents five Arizona markets with limited commercial service options. Only a few of these airports are within a manageable driving distance to a larger hub airport and are the only commercial service options for their regional communities. The table presents a comparison of the 2020 and 2024 TPFs at each small Arizona market airport. The distance to the closest hub airport is also considered. Generally, the farther a community is from a larger hub airport, the higher the TPF will be.

TABLE 2FF: Small Arizona Markets and Travel Propensity Factor

Arizona Small Markets	2020 Pop.	2020 Enp.	2020 TPF	2024 Pop.	2024 Enp.	2024 TPF	Miles to Nearest Hub
Prescott Regional (PRC) – Prescott, AZ	45,827	13,029	0.284	48,224	25,316	0.525	105 – Phoenix (PHX)
Flagstaff Pulliam (FLG) – Flagstaff, AZ	76,831	61,158	0.796	77,539	79,081	1.020	144 – Phoenix (PHX)
Grand Canyon West (1G4) – Peach Springs, AZ	32,689*	5,366	0.164	35,383*	29,597	0.836	123 – Las Vegas (LAS)
Page Municipal (PGA) – Page, AZ	7,440	8,915	1.198	7,230	22,400	3.098	279 – Phoenix (PHX)
Yuma International (YUM) – Yuma, AZ	95,548	57,930	0.606	103,559	85,227	0.823	177 – San Diego (SAN)

Sources: Enplanements – FAA Passenger Boarding Data; Population – Woods & Poole, CEDDS Data, 2025

Enp. = passenger enplanements
Pop. = population
TPF = travel propensity factor

*Population of Kingman, AZ, utilized

In 2020, the average TPF of the airports serving the five selected cities was 0.610. By 2024, the average TPF had increased to 1.261 and all five cities increased in TPF, which is indicative of the growth seen throughout the regional commercial service segment of the industry following the COVID-19 pandemic. This growth results from various reasons, including (but not limited to) more advanced and fuel-efficient aircraft, increased seating capacities, and decreased ticket pricing due to ancillary revenues.

Potential Flight Scenario Methodology

Another methodology for forecasting potential enplanements and commercial operations is to consider potential flight schedules and aircraft fleets of the on-demand and scheduled charter operators. The potential enplanement and operations estimates are based on a potential flight schedule, as well as a limited set of factors (primarily population and distance to a hub airport). Factors that may positively affect enplanement levels include the reliability of the airline, frequency of the schedule, convenience, and advertising budget, as well as an unlimited number of community factors, such as industry, businesses, places of higher education, and recreational attractions.

The purpose is to identify multiple scenarios of potential enplanement and operational figures that can be refined later, if necessary. One additional factor to consider is the willingness of a passenger to drive a longer distance to a hub airport.

Tables 2GG, **2HH**, **2JJ**, and **2KK** present four different potential commercial passenger enplanement and operations scenarios based on potential operator types: passenger membership model carriers, regional jet operators, and irregularly scheduled carriers, such as Allegiant Airlines, Breeze Airlines, or Avelo Airlines.

Scenario 1: Passenger Membership Model Scenarios

The first set of scenarios was strictly based on passenger membership models, such as Surf Air and similar operators. This scenario used the eight-seat Pilatus PC-12 single-engine turboprop at an estimated 80 percent boarding load factor (BLF). Weekly schedules considered 12, 24, and 48 weekly departures, which correlate to two, four, and eight departures daily, Monday through Friday, and one day (or halved each day) on the weekend. Under these scenarios, GEU could experience an estimated annual enplanement level ranging between 3,700 and 15,000 enplanements and an annual commercial aircraft operations level between 1,248 and 4,992 operations.

TABLE 2GG: Enplanements and Operations Based on Potential Flight Schedules
Scenario 1: Passenger Membership Model Scenarios

Aircraft Type	ARC	Seats	Boarding Load Factor %	Occupied Seats	Departure Frequency	Total Annual Enplanements	Total Operations
Pilatus PC-12	A-II	8	80%	6	12x Weekly	3,700	1,248
Pilatus PC-12	A-II	8	80%	6	24x Weekly	7,500	2,496
Pilatus PC-12	A-II	8	80%	6	48x Weekly	15,000	4,992

Scenario 2: Hop-On Jet Service

A second scenario assumed a "hop-on jet service," such as JSX, begins operations at GEU. JSX utilizes 30-seat Embraer E135 and 145 aircraft. A 90 percent BLF was considered with six, 12, and 24 weekly departures, which resulted in projected enplanements ranging from 8,400 enplanements per year on the low end to 33,700 annual enplanements on the high end. Annual operations ranged from 624 to 2,496 operations.

TABLE 2HH: Enplanements and Operations Based on Potential Flight Schedules
Scenario 2: Hop-On Jet Service

Aircraft Type	ARC	Seats	Boarding Load Factor %	Occupied Seats	Departure Frequency	Total Annual Enplanements	Total Operations
ERJ E135/145	C-II	30	90%	27	6x Weekly	8,400	624
ERJ E135/145	C-II	30	90%	27	12x Weekly	16,800	1,248
ERJ E135/145	C-II	30	90%	27	24x Weekly	33,700	2,496

Scenario 3: Regional Jet Operator Scenarios

The third set of scenarios assumed a regional carrier, such as SkyWest Airlines, which operates under contracts with Delta Air Lines, United Airlines, and American Airlines. The analysis offered three different aircraft models: the CRJ200 (50 passenger seats), the CRJ700 (70 passenger seats), and the Embraer E175 (76 passenger seats). The daily departures considered were lower than the passenger membership scenarios, as the aircraft have higher seating capacities. Based on the analysis, the potential enplanements ranged from a low of 12,500 to a high of 49,900 enplanements. Annual aircraft operations ranged from a low of 624 to a high of 2,496 operations.

TABLE 2JJ: Enplanements and Operations Based on Potential Flight Schedules
Scenario 3: Regional Jet Operator Scenarios

Aircraft Type	ARC	Seats	Boarding Load Factor %	Occupied Seats	Departure Frequency	Total Annual Enplanements	Total Operations
CRJ200	D-II	50	80%	40	6x Weekly	12,500	624
CRJ200	D-II	50	80%	40	12x Weekly	25,000	1,248
CRJ200	D-II	50	80%	40	24x Weekly	49,900	2,496
CRJ700	C-II	70	80%	56	6x Weekly	17,500	624
CRJ700	C-II	70	80%	56	12x Weekly	34,900	1,248
ERJ E175	C-III	76	80%	61	6x Weekly	19,000	624
ERJ E175	C-III	76	80%	61	12x Weekly	38,100	1,248

Scenario 4: Irregularly Scheduled Charter Operator Scenarios

The fourth set of scenarios assumed an irregularly scheduled airline, such as Sun Country Airlines or Allegiant Airlines. This model considered the 186-seat Boeing 737-800 as a typical aircraft for charter operations. As shown in the table, the analysis considered a range of two to eight weekly departures. Based on the factors presented, the enplanement range was between 15,500 to 62,000 enplanements. Annual operations ranged from 208 to 832 operations.

TABLE 2KK: Enplanements and Operations Based on Potential Flight Schedules
Scenario 4: Irregularly Scheduled Charter Operator Scenarios

Aircraft Type	ARC	Seats	Boarding Load Factor %	Occupied Seats	Departure Frequency	Total Annual Enplanements	Total Operations
Boeing 737-800	D-III	186	80%	149	2x Weekly	15,500	208
Boeing 737-800	D-III	186	80%	149	4x Weekly	31,000	416
Boeing 737-800	D-III	186	80%	149	8x Weekly	62,000	832

POTENTIAL ENPLANEMENTS SUMMARY

Due to the lack of capacity constraints at PHX, there is currently no need for a second commercial service airport to serve the Phoenix metropolitan area. While the market will not support a second airport offering commercial service using legacy carriers, there is potential opportunity to establish commercial service at GEU in the form of air charter service using non-traditional carriers.

The analysis in this section presents various enplanement scenarios for GEU, as well as comparisons to enplanements in other similar markets. Due to the lack of recent historical context for commercial service activity, it is difficult to predict which of these scenarios is more likely to occur, and there is no guarantee GEU will be able to develop and maintain consistent commercial service activity. For this reason, the enplanement projections are separate from the overall operations and based aircraft forecasts that will be submitted to the FAA for review and approval. The purpose of preparing enplanement projections is to provide the City of Glendale with the ability to begin preliminary planning for facilities and services to accommodate commercial activities, should the city decide to pursue commercial passenger service at GEU in the future.

SUMMARY

This chapter has outlined various activity levels that might reasonably be anticipated over the planning period, as well as the critical aircraft for the airport. Total based aircraft are forecasted to grow from the current count of 355 to 485 based aircraft by 2045. Operations are forecasted to grow from 129,320 operations in 2025 to 213,013 operations by 2045. This projected growth is driven by the FAA's positive outlook for GA activity nationwide, as well as positive socioeconomic outlooks for the region.

The critical aircraft for the airport was determined by examining the FAA TFMSC database of flight plans. The existing general aviation critical aircraft for Runway 1-19 is described as B-II with the Cessna Citation V as the representative aircraft, transitioning to C-II at some point in the future with the Bombardier Challenger 300 serving as the representative aircraft.

The potential for commercial air service was also examined. While GEU is unlikely to ever provide scheduled passenger service involving legacy carriers, there may be opportunities for non-traditional/low-cost carriers, along with scheduled public charters using non-traditional carriers.

The next step in the planning process is to assess the capabilities of the existing facilities to determine what upgrades may be necessary to meet future demands. The range of forecasts developed here will be carried forward to the next chapter as planning horizon activity levels that will serve as milestones or activity benchmarks in evaluating facility requirements.