

CHAPTER 1
INVENTORY

The inventory of existing conditions represents the foundational step in developing the *Glendale Regional Airport Master Plan*. This inventory provides a comprehensive overview of the airport's physical and operational characteristics, including its facilities, user base, and activity levels, as well as detailed information regarding airspace, air traffic activity, and the role of the airport. In addition, it includes a thorough assessment of environmental conditions on-site and in surrounding areas, offering critical input to inform subsequent phases of the planning process.

Information provided in this chapter serves as the baseline for the remainder of the master plan, which is compiled using a wide variety of resources, including the following:

- Applicable planning documents and financial reports
- On-site visits
- Interviews with airport staff, tenants, and users
- Aerial and ground photography
- Federal, state, and local publications
- Project record drawings

AIRPORT SETTING

REGIONAL LOCATION

The City of Glendale is located within Maricopa County and is part of the greater Phoenix metropolitan statistical area (MSA), which had an estimated population of 5,257,099 residents in 2025.[1] Glendale, which has an approximate population of 258,143,[2] is located approximately 10 miles northwest of downtown Phoenix, Arizona. The city is comprised of approximately 60 square miles and is divided into six districts. **Figure 1-1** displays the municipal boundary of the City of Glendale.

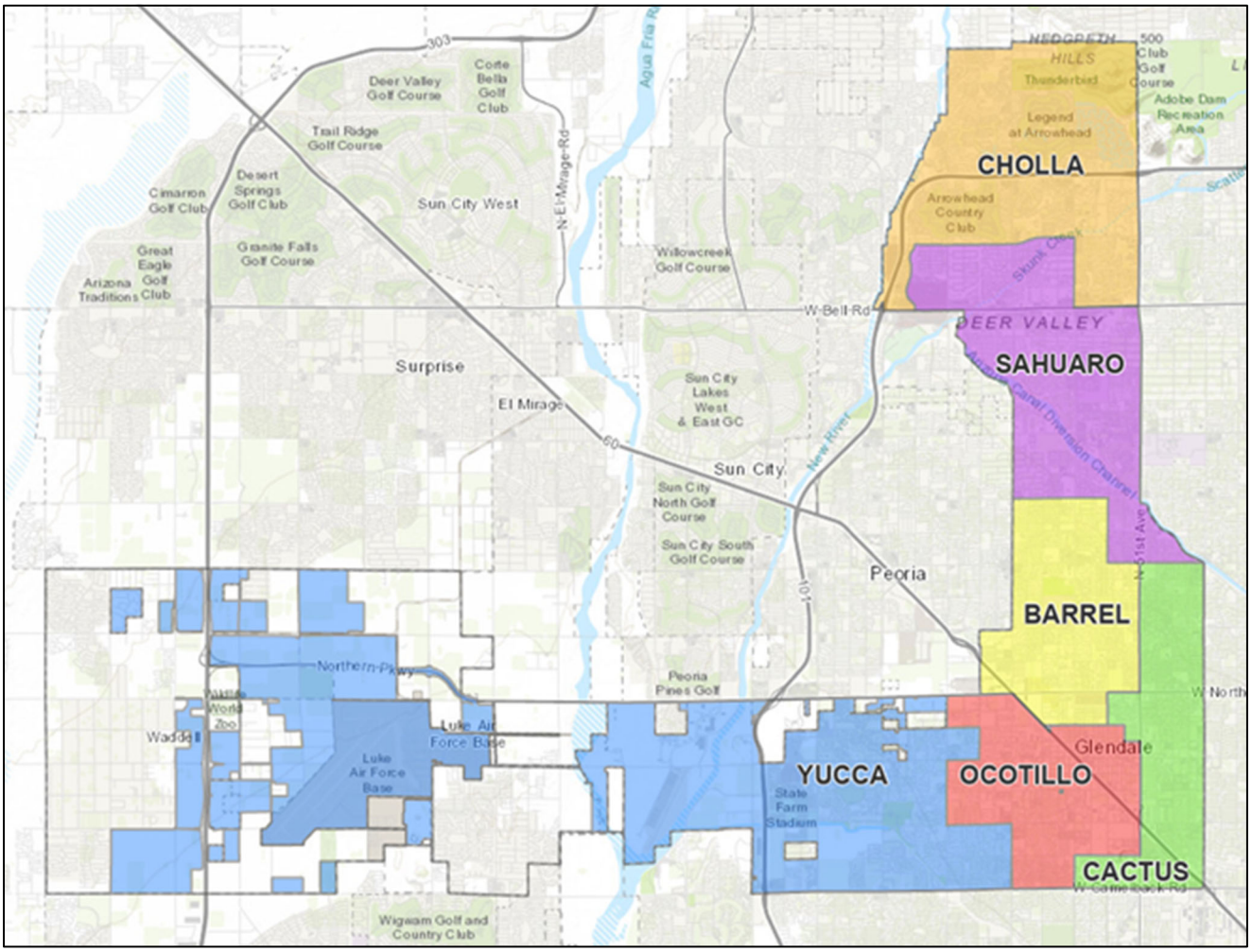


Figure 1-1: City of Glendale Municipal Boundary

Over the past decade, Glendale has experienced significant growth across multiple industries. The city offers a wide range of attractions and amenities for both residents and visitors, including Sahuaro Ranch Park, Camelback Ranch, the Westgate Entertainment District, and State Farm Stadium.

[1] Woods & Poole, 2025
[2] U.S. Census Bureau, QuickFacts, Glendale, Arizona, July 2024

REGIONAL TRANSPORTATION NETWORK

Glendale Regional Airport (GEU) is located in the west central portion of the municipal boundary, approximately six miles west of the city's central business district. Several major roads and highways are within close proximity to the airport, including Arizona State Route 101 (SR 101) and Glendale Avenue. Primary access from SR 101 to GEU is provided by N Glen Harbor Boulevard, which directly connects with Glendale Avenue at the entrance to the airport. **Exhibit 1A** depicts the airport and its regional setting.

REGIONAL ECONOMY

The regional economy of Glendale, Arizona, is diverse and driven by several major sectors, according to U.S. Census Bureau data. These sectors include (but are not limited to) the following:

- **Educational services and health care and social assistance**
  - The leading industry for employment in the City of Glendale
  - Approximately 26,124 jobs (or 19.7 percent of total jobs) in the city as of 2024[3]
- **Retail trade**
  - Approximately 17,864 jobs (or 13.4 percent of total jobs) in the city as of 2024[3]
- **Professional, scientific, and management, and administrative and waste management services**
  - Approximately 16,827 (or 12.7 percent of total jobs) in the city as of 2024[3]
- **Construction**
  - Approximately 15,282 jobs (or 11.5 percent of total jobs) in the city as of 2024[3]

REGIONAL CLIMATE

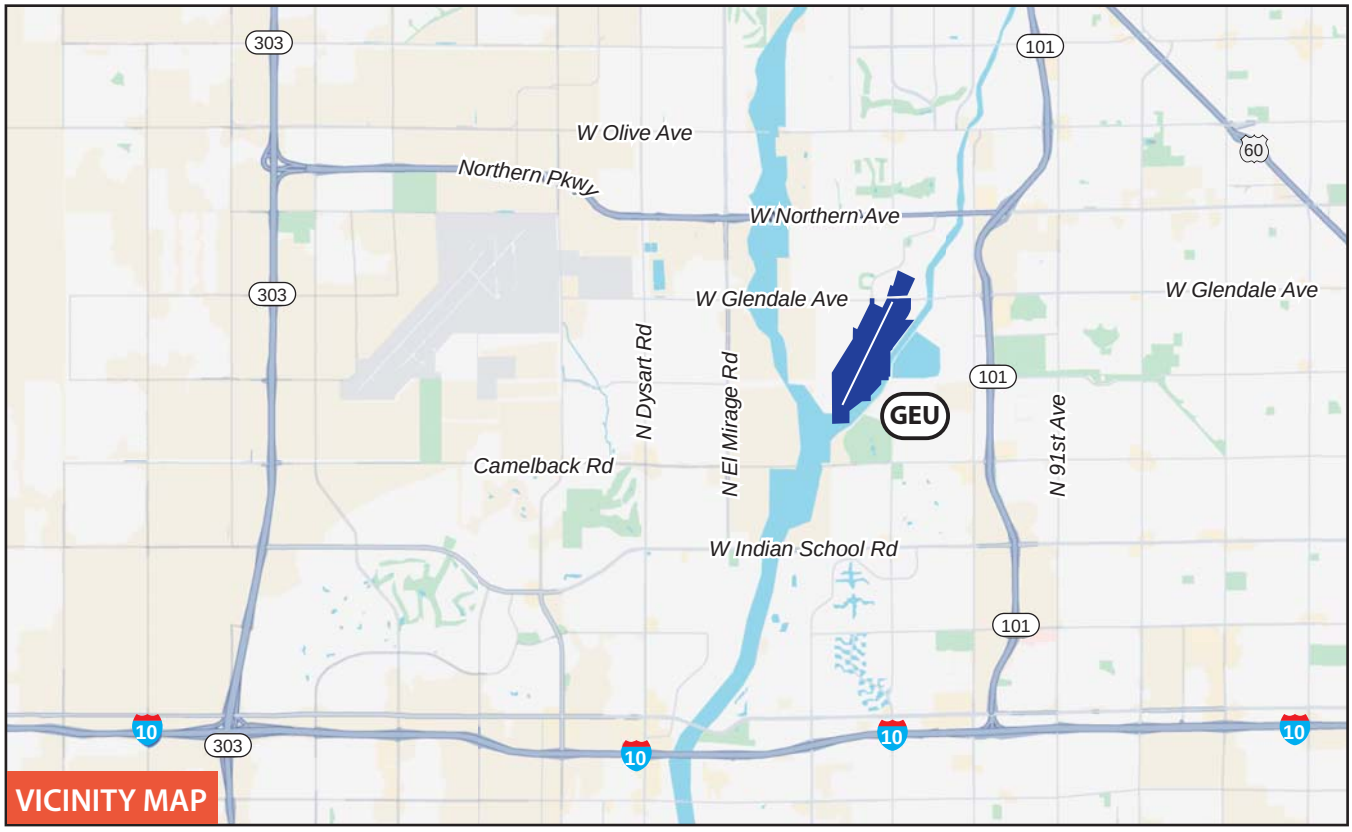
Local weather conditions can significantly impact an airport's operations. Knowledge of the local climate allows an airport to be better prepared for regional conditions and enhances a pilot's flying capabilities. For example, the airport's runway should be oriented to match predominant wind patterns for the area.

The City of Glendale experiences a climate characteristic of the southwest desert, defined by warm, dry conditions throughout much of the year. Average daily minimum temperatures range from approximately 42.0 degrees Fahrenheit in December to 81.2 degrees in July, while average daily maximum temperatures range from about 64.5 degrees in December to 106.5 degrees in July. The region receives an average of approximately 8.2 inches of annual precipitation. **Exhibit 1B** summarizes 30 years of climate data sourced from the nearest weather station to GEU, which is located approximately four miles from the airport.

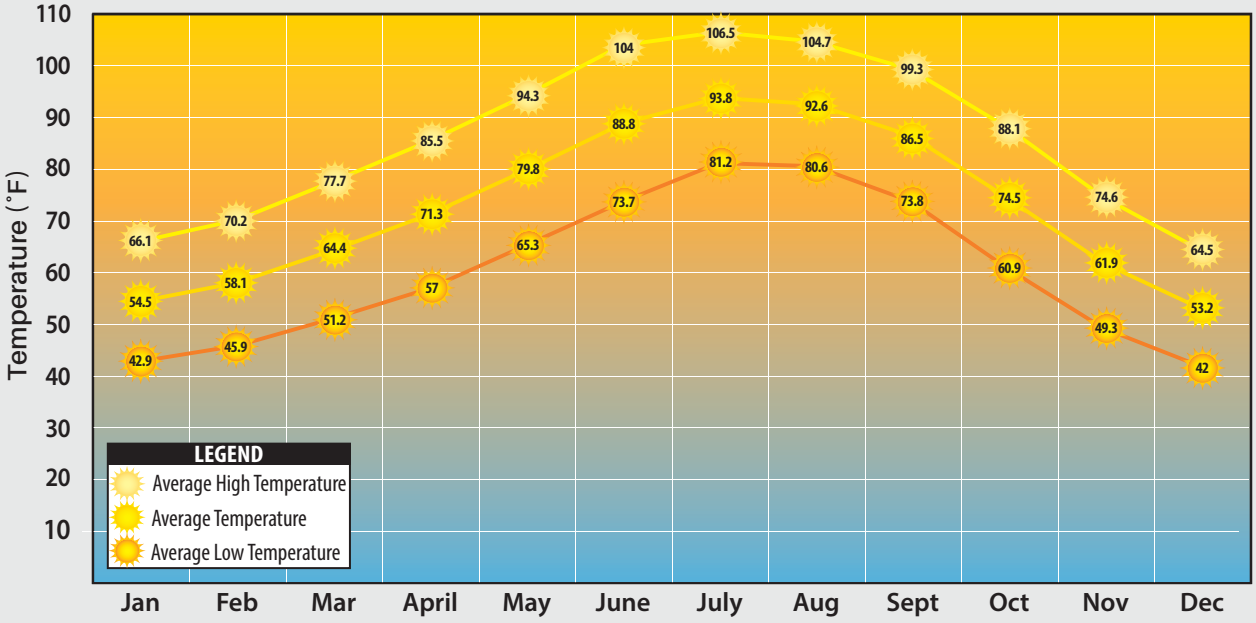
[3] U.S. Census Bureau, American Community Survey, ACS 1-Year Estimates Data Profiles, Table DP03, Selected Economic Characteristics


Nevada
Utah
Arizona
New Mexico
Mexico
Gulf of California
Saint George
Mesquite
Page
Boulder City
Gallup
Kingman
Flagstaff
Winslow
Lake Havasu City
Prescott Valley
GEU
Blythe
Phoenix
Gilbert
Yuma
Tucson
Green Valley
Sierra Vista
STATE MAP

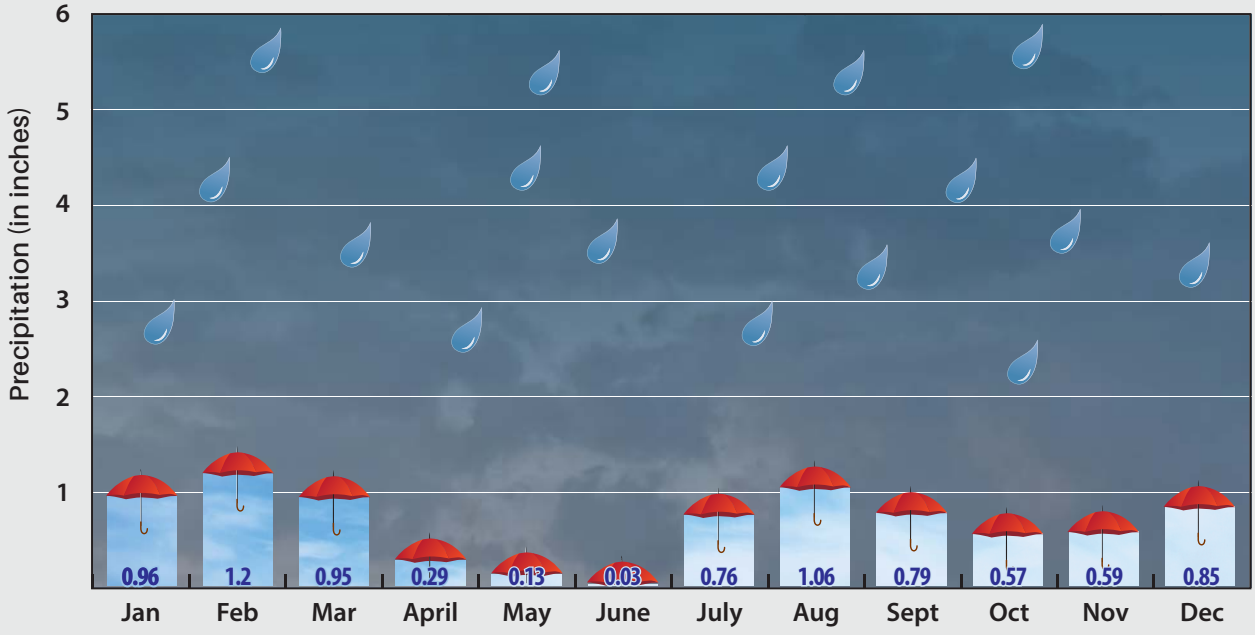

Prescott Valley
Coconino
Prescott
Camp Verde
Kirkland
Yavapai
Payson
Congress
Wickenburg
Aguila
Tonto Basin
Maricopa
GEU
Sun City West
Glendale
Phoenix
Tempe
Gilbert
Goodyear
Florence
Theba
Casa Grande
Pinal
Eloy
Midway
North Komelik
Pima
Marana
Santa Rosa
COUNTY MAP


303
101
60
W Olive Ave
Northern Pkwy
W Northern Ave
W Glendale Ave
W Glendale Ave
N Dysart Rd
N El Mirage Rd
N 91st Ave
GEU
Camelback Rd
W Indian School Rd
10
VICINITY MAP

AVERAGE MONTHLY TEMPERATURES



AVERAGE MONTHLY PRECIPITATION



Source: National Oceanic and Atmospheric Administration, Climatography of the U.S., No. 81, data from 1991-2020, as sourced from Litchfield Park, AZ US USC00024977

AIRPORT HISTORY AND BACKGROUND

Glendale Regional Airport originated in 1971 when the City of Glendale established its first municipal airport on a 27-acre site, later expanding to 40 acres; however, growth constraints and community opposition led to a search for a new location, culminating in a federally and state-supported site selection study in 1980 that identified the current site with backing from the Maricopa Association of Governments (MAG). Construction began in 1983 and the new airport opened on June 30, 1986.

Subsequent developments included terminal and fixed based operator (FBO) facilities, infrastructure upgrades, land acquisitions, and airfield enhancements to accommodate larger aircraft, such as turboprops and business jets. Continued improvements through the 1990s and 2000s were guided by master plans completed in 1998 and 2009, as well as an Airport Layout Plan (ALP) Update and Narrative in 2018. These improvements added taxiways, hangars, maintenance facilities, and pavement upgrades, ensuring the airport remains a key hub for general aviation and corporate aviation and contributes significantly to Glendale's economic growth.

Timeline of Events

- 1971: original municipal airport established on 27 acres (later expanded to 40 acres)
- 1980: site selection and master planning study initiated for a new airport
- 1983: construction of current airport begins
- 1986: new airport official opens; terminal completed
- 1987: FBO facilities developed
- 1992: airport traffic control tower (ATCT) replaced with relocated tower from Scottsdale Airport (SDL)
- 1994–1995: aircraft apron expanded; terminal spaces converted to offices
- 1997: acquisition of 59 additional acres for future development
- Late 1990s: taxiways, hangars, and maintenance facility constructed
- 1998: master plan leads to major airfield improvements (runway expansion, automated weather observation system (AWOS), fencing)
- 2009: airport master plan update completed
- 2018: ALP Update and Narrative completed
- 2019–present: taxiway improvements, hangar development, and pavement rehabilitation projects completed

AIRPORT ADMINISTRATION

GEU is owned and operated by the City of Glendale and is a division within the city's Transportation Department. The mission of the airport is as follows:

> "*Glendale Regional Airport connects Glendale to the region, state, and world by providing exemplary aviation services*."

The airport is managed on a daily basis by a full-time Airport Administrator, who reports to the Director of Transportation. The administrative team is supported by four additional full-time staff members and a management assistant. In addition, the seven-member Aviation Advisory Commission evaluates airport-related issues and provides recommendations to the Glendale City Council on matters concerning airport operations and development. The commission convenes monthly to review and discuss airport business.

CAPITAL IMPROVEMENT HISTORY

The federal government makes significant levels of funding available for eligible capital improvements at airports across the country. The primary funding mechanism is through the Airport Improvement Program (AIP). The AIP is funded through the Aviation Trust Fund, which was established in 1970 to provide funding for aeronautical capital investment programs (aviation development, facilities, equipment, and research and development). The Aviation Trust Fund also finances a portion of Federal Aviation Administration (FAA) operations.

The AIP is funded by user fees, such as taxes on airline tickets, aviation fuel taxes, and taxes on the sales of various aircraft parts and equipment. The AIP provides entitlement funds based on annual passenger enplanements (boardings) and has a pool of discretionary funding that is distributed based on the priority rankings of proposed projects.

Airports have recently been eligible for additional funding through several programs passed by the U.S. Congress to reduce the negative impact of the COVID-19 pandemic. The *CARES Act*, which provided immediate funding to airports, increased the federal share of AIP projects to 100 percent (up from 90 percent) in 2020; this was a one-time program. The U.S. Congress also passed the *Coronavirus Response and Relief Supplemental Appropriation Act* (CRRSAA) (Public Law 116-260), which provided additional funding for airports, and the *Infrastructure Investment and Jobs Act* (IIJA) (Public Law 117-58; also referred to as the *Bipartisan Infrastructure Law* [BIL]), which invests an additional $25 billion into airport infrastructure.

The State of Arizona has long recognized the value and importance of the airports in the state and has established several funding mechanisms to support capital improvements for airports in the state. The Arizona Department of Transportation (ADOT) Aeronautics Group is responsible for prioritizing and distributing funds for airport projects through the State Aviation Fund.

Exhibit 1C summarizes capital improvement funding the airport has received from federal and state sources. GEU has received more than $19.1 million from the federal government and $9.8 million from the state over the last 10 years.

FAA Grants

Year	Grant Number	Description	Amount
2016	3-04-0064-025-2016	Rehabilitate North Apron (Phase One)	$865,070
2017	3-04-0064-026-2017	Rehabilitate 101,000 square yards of the North Apron	$3,125,313
2018	3-04-0064-027-2018	Land Acquisition for Runway Protection Zone (RPZ) (Conair)	$1,561,842
2019	3-04-0064-028-2019	Acquire Land for Approaches (Conair Phase II)	$8,994,102
2022	3-04-0064-034-2022	Rehabilitate Realign/Reconstruct Taxiways A4 & A6 (Construct)	$1,529,582
2023	3-04-0064-035-2023	South Apron Reconstruction & Taxilane R1 & R2 Reconfiguration	$2,070,000
2025	3-04-0064-038-2025	Update Master Plan	$733,256
2025	3-04-0064-039-2025	Reconstruct Airfield Signage/Markings, Reconstruct Runway Visual Guidance System and Rehabilitate Lighting (Runway 1-19), Rehabilitate Taxiway A Lighting	$242,250
		Grand Total	**$19,121,415**

State Grants

Year	Grant Number	Description	Amount
2016	E6S3K01L	Conair Land Acquisition, Phase 1 of 6	$1,350,000
2017	E7S1R01L	Conair Land Acquisition, Phase 2 of 6	$2,120,000
2017	E7F3G01C	Rehabilitate North Apron (Phase One)	$42,465
2018	E8M1001C	Rehabilitate 101,000 square yards of the North Apron	$153,417
2019	E9M1T01L	Land Acquisition for RPZ (Conair)	$76,668
2020	E0M2E01L	Acquire Land for Approaches (Conair Phase II)	$280,000
2020	E0S1I01L	Land Acquisition for Protection (Safety Areas)	$1,620,000
2021	E1S1F01L	Land Acquisition for Protection (Conair Land Phase II)	$292,500
2022	E2S5H01C	Land Protection Acquisition (Conair Phase III)	$138,859
2022	E2S5N01C	Rehabilitate/Reconstruct South Apron Phase 1	$1,863,000
2023	E3M3L01C	Rehabilitate Realign/Reconstruct Taxiways A4 & A6 (Construct)	$75,085
2024	E4P1C01C	Rehabilitate Runway 1-19 (Section 10)	$1,691,961
2024	E4M2Z01C	South Apron Reconstruction & Taxilane R1 & R2 Reconfiguration	$101,636
2026	E6M4G01P	Update Master Plan	$19,296
2026	E6M4H01D	Reconstruct Airfield Signage/Markings, Reconstruct Runway Visual Guidance System and Rehabilitate Lighting (Runway 1-19), Rehabilitate Taxiway A Lighting	$6,375
		Grand Total	**$9,831,262**



AIRPORT ECONOMIC IMPACT

Airports serve as significant economic drivers for their regions. GEU plays an important role by providing essential aviation services, as well as substantial support to local businesses. In 2021, the ADOT Aeronautics Group commissioned a statewide airport economic impact study, which found that GEU accounted for more than $54 million in annual economic impact, as illustrated in **Figure 1-2**.

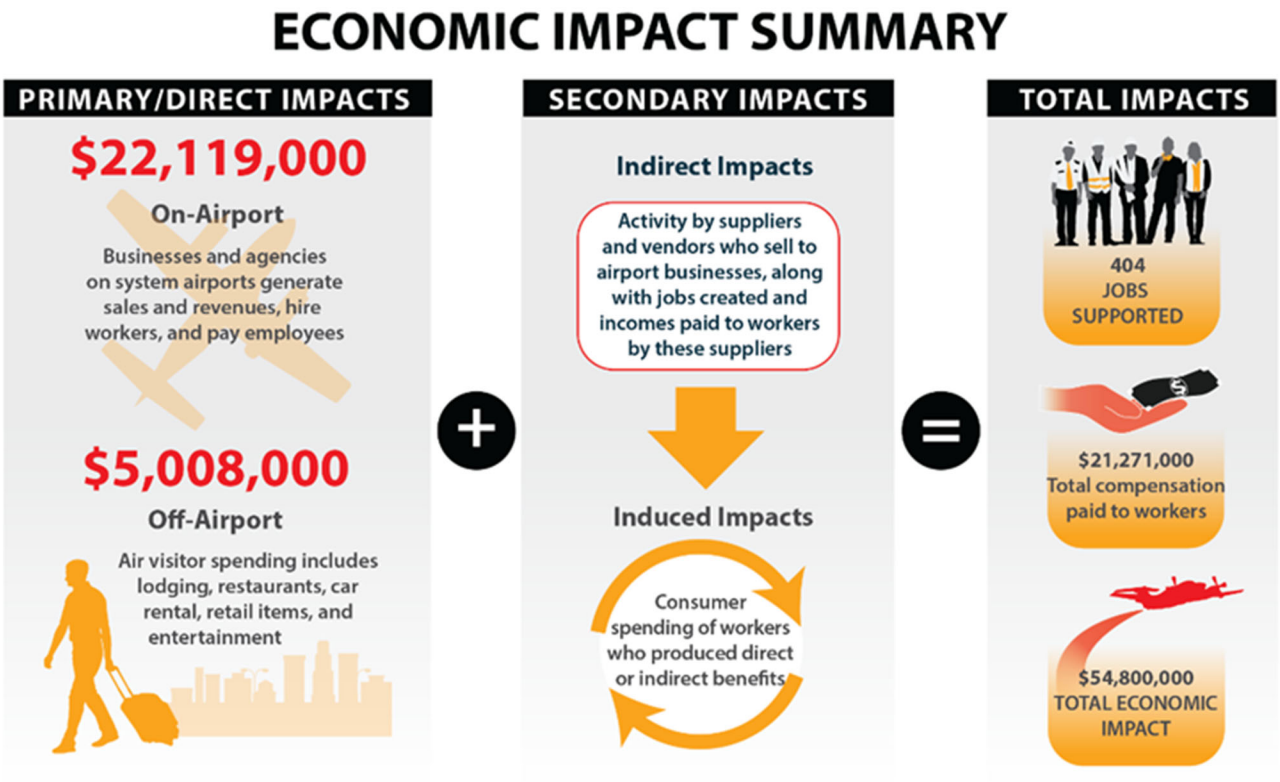


Figure 1-2: GEU Airport Economic Impact, 2021

AIRPORT SYSTEM PLANNING ROLE

Airport planning occurs at the national, state, and local levels. Each level has a different emphasis and purpose. At the national level, GEU is included in the *National Plan of Integrated Airport Systems* (NPIAS). At the state level, the airport is included in the *Arizona State Aviation System Plan* (SASP). Locally, the primary planning document is the airport master plan. The previous airport master plan for GEU was completed in 2009 and had a base forecast year of 2007.

FEDERAL AIRPORT PLANNING

The NPIAS is published biennially, in accordance with Title 49 United States (U.S.) Code § 47103, as part of an ongoing effort to sustain a robust national airport system. The NPIAS is maintained by the FAA and identifies the types and levels of airport development eligible under the AIP and IIJA over a five-year planning period. The IIJA provides formula-based and competitive grant funding for airport terminal projects, on-airport rail access projects, and airport-owned control towers, which have historically

received limited or no funding through the AIP. It should be noted that the IIJA was enacted as a temporary funding mechanism to enhance transportation infrastructure for fiscal years (FY) 2022 through 2026. Accordingly, this source of federal funding is scheduled to expire at the conclusion of FY 2026.

There are more than 20,000 airports and landing facilities across the United States. Of these facilities, 3,287 are designated by the NPIAS as public-use facilities that play a significant role in the national airport system and are therefore eligible for federal development funding. NPIAS airports are categorized as primary and nonprimary facilities, which respectively include 390 and 2,897 airports. Primary airports are defined as those that accommodate 10,000 or more annual passenger enplanements, whereas nonprimary airports are general aviation airports.

GEU is classified in the 2025–2029 NPIAS as a regional general aviation (GA) reliever airport and is one of 586 regional GA airports nationwide. Airports within this category play a vital role in the National Airspace System (NAS) by supporting relatively large population centers and contributing to the economic activity of their surrounding regions. This classification is typically characterized by relatively high levels of operational activity, including the presence of jet and multi-engine aircraft. GEU's designation as a reliever airport is particularly significant, as reliever facilities are intended to accommodate GA traffic that might otherwise utilize congested commercial service airports, such as Phoenix Sky Harbor International Airport (PHX). **Table 1A** provides an overview and description of the various airport categories included in the NPIAS.

TABLE 1A: Activity and Development at NPIAS Airports

Airport Category	Number of Airports	Percent of 2023 Enplanements	Percent of Based Aircraft	Percent of NPIAS Cost
Large Hub	31	71%	1	36%
Medium Hub	33	17%	2	14%
Small Hub	74	8%	4	10%
Nonhub	252	3%	9	12%
Primary Subtotal:	**390**	**99%**	**16**	**72%**
National	122	–	14	5%
Regional	586	–	25	9%
Local	1,220	–	18	9%
Basic	778	–	3	5%
Unclassified	191	–	1	0%
Nonprimary Subtotal:	**2,897**	**0.07%**	**61**	**28%**
Total NPIAS Airports:	**3,287**	**100%**	**77**	**100%**

Source: NPIAS, 2025–2029

STATE AIRPORT PLANNING

GEU is included in the 2018 SASP; an update to the SASP is currently underway and expected to be completed by the end of 2026. The primary purpose of a state airport system plan is to study the performance and interaction of an entire aviation system. According to the SASP and ADOT, the vision of the plan is as follows:

> "*To provide the framework that will allow Arizona's aviation system to meet the needs of citizens, visitors, and businesses by supporting economic competitiveness, connectivity, and accessibility with a commitment to safety, sound resource management, and partnerships*."

Glendale Regional Airport is classified as a reliever airport in the SASP. Reliever airports are intended to reduce congestion at high-traffic commercial service airports, such as PHX. In this role, they support the NAS by accommodating GA activities and providing access to regional, national, and (in some cases) international markets. Reliever airports typically experience substantial activity from business jets and turboprop aircraft.

The Arizona SASP establishes development objectives for airports based on their designated classifications. **Table 1B** outlines the specific development objectives applicable to reliever airports like GEU.

TABLE 1B: SASP Service Objectives for Reliever Airports

Objective Type	Objective Criteria	Minimum Objective
Airside Facility Objective	Airport Reference Code (ARC)	C-III
	Runway Length	Accommodate 75% of large aircraft at 90% useful load
	Runway Width	100 feet
	Runway Surface	Paved
	Taxiway Type	Full parallel and connectors
	Taxiway Width	Width per ARC
	Instrument Approach Procedures	Non-precision
	Visual Aids	Beacon, lighted windsock, segmented circle, REILs, PAPIs
	Runway and Taxiway Lighting	MIRL/MITL
	Approach Lighting Systems	Desired
Landside Facility Objective	Airport Fencing	Full perimeter fencing and controlled access
	Aprons and Tiedowns	Accommodate 25% of based fleet and 75% of transient fleet
	Hangars	Accommodate 75% of based fleet and 25% of overnight
	Terminal Facilities	Terminal with pilot lounge
	Auto Parking	Enough to accommodate activity
	Automated Weather Reporting	Yes
	Fixed Base Operator (FBO)	Yes
	Air Taxi/Charter	Yes
	Aircraft Rental	Yes
	Aircraft Maintenance	Yes
	Avionics Sales and Service	Yes
	Aircraft Fuel	Yes
	Deicing	N/A
	Oxygen	Yes
	Snow Removal	N/A
	Ground Transportation	Yes
	On-Site Car Rental	N/A
	Internet Access	Yes
	Phone Access	Yes
	Restrooms	Yes
	U.S. Customs	Yes

Source: Arizona SASP Update, 2018

MIRL = medium intensity runway lighting
MITL = medium intensity taxiway lighting
PAPIs = precision approach path indicators
REILs = runway end identifier lights

LOCAL AIRPORT PLANNING

The airport master plan and airport layout plan (ALP) are the primary local planning documents. Guidelines for the development of an airport master plan and ALP are provided in FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*. The AC identifies the following functions of a master planning study:

- The airport master plan is the sponsor's conceptual design for the long-term development of the airport. Master plans are prepared to support the modernization or expansion of existing airports and the creation of new airports.
- The goal of a master plan is to provide the framework needed to guide future airport development that will cost-effectively satisfy aviation demand while addressing relevant environmental and socioeconomic issues.
- Each master plan should meet the following objectives:
    - Justify the plan through technical, economic, and environmental investigation of concepts and alternatives.
    - Provide an effective graphic presentation of the future development of the airport and anticipated land use in the vicinity of the airport.
    - Establish a realistic schedule for the implementation of the development proposed in the plan, particularly the short-term capital improvement program.
    - Propose an achievable plan to support the implementation schedule.
    - Provide sufficient project definitions and details for subsequent environmental evaluations that may be required before the project is approved.
    - Present a plan that adequately addresses the issues at the airport and satisfies local, state, and federal regulations.
    - Document policies and future aeronautical demand to support municipal or local deliberations regarding spending, debt, land use controls, and other policies necessary to preserve the integrity of the airport and its surroundings.
    - Set the stage and establish the framework for a continuing planning process. Such a process should monitor key conditions and permit changes in plan recommendations, as required.

The products of a master planning process vary with the complexity of the study and may include a variety of supporting studies and appendices; however, all products fall within one of two basic types: airport master plans or ALP updates.

Master Plan Reviews by the FAA

The recommendations contained in an airport master plan represent the views, policies, and development plans of the airport sponsor and do not necessarily represent the views of the FAA. Acceptance of the master plan by the FAA does not constitute a commitment on the part of the United States to participate in any development depicted in the plan and does not indicate that the proposed development is environmentally acceptable in accordance with appropriate public law. The FAA reviews all elements of the master plan to ensure sound planning techniques have been applied; however, the FAA only approves the following elements of airport master plans:

- *Forecasts of Aviation Demand*: The master plan forecast should be reviewed to ensure the underlying assumptions and forecast methodologies are appropriate. Paragraph 704.h of FAA AC 150/5070-6B, *Airport Master Plans*, should be used to determine consistency of the master plan forecast with the FAA *Terminal Area Forecast* (TAF). Inconsistencies between the master plan forecast and the TAF must be resolved and the forecast must be approved before subsequent planning work proceeds.

- *Critical Aircraft*: The current critical aircraft is an aircraft (or group of aircraft with similar characteristics) that operates at least 500 times annually at the airport. The future critical aircraft is the aircraft (or group of aircraft with similar characteristics) that is projected to account for at least 500 annual operations at the airport in the future. The future critical aircraft may be the same as the current critical aircraft or may be different. The future critical aircraft must be reasonable and based on historical trends or reasonably assumed changes in aircraft usage.

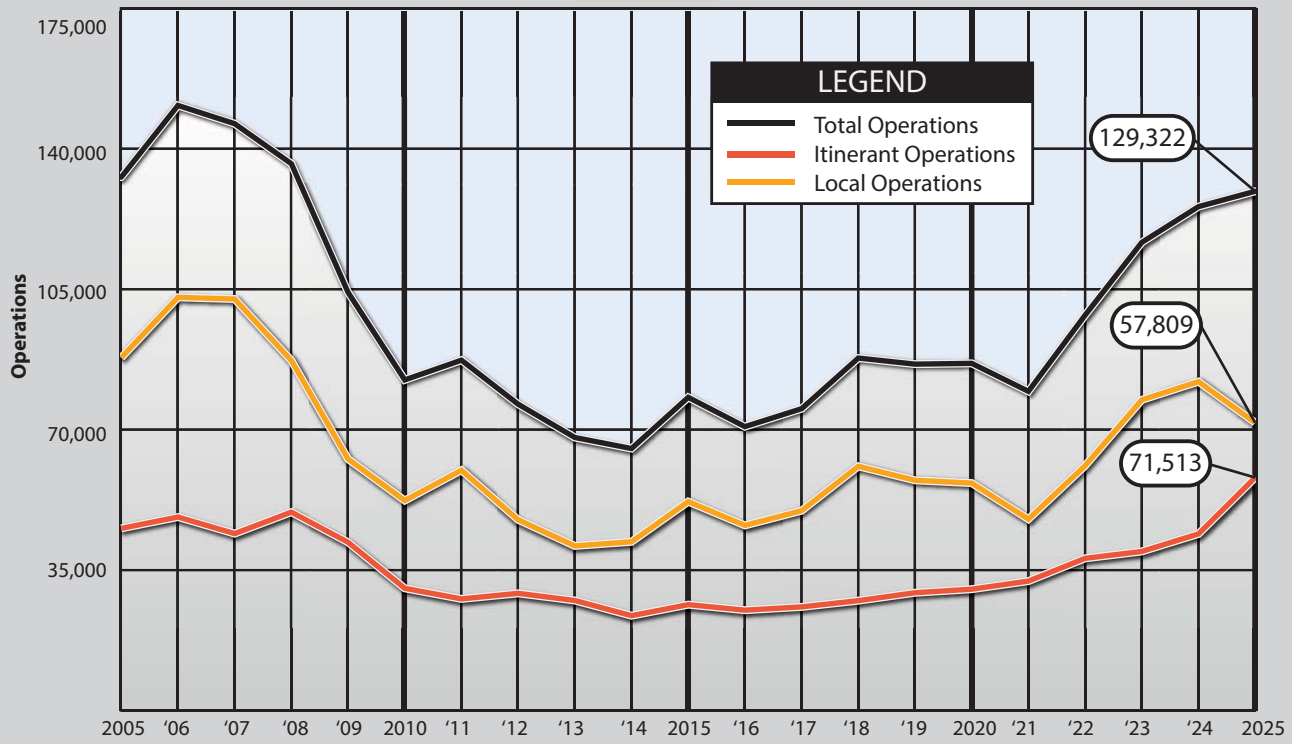
- *Airport Layout Plan*: All airport development at federally obligated airports must be done in accordance with an FAA-approved ALP. Furthermore, proposed development must be shown on an approved ALP to be eligible for AIP funding. FAA approval of the ALP indicates that the existing facilities and proposed development depicted on the ALP conform to the FAA airport design standards in effect at the time of the approval, or that an approved modification to a standard has been issued. Such approval also indicates that the FAA finds the proposed development to be safe and efficient.

In many regards, an airport master plan can be considered a feasibility study of what may be possible or desired as part of the long-term vision for an airport. Multiple alternative development scenarios that may be feasible are included in a master plan; however, implementation of any of these scenarios requires FAA approval. While a single long-term vision is included in a master plan, it can be revised in the future by updating the ALP or the master plan.

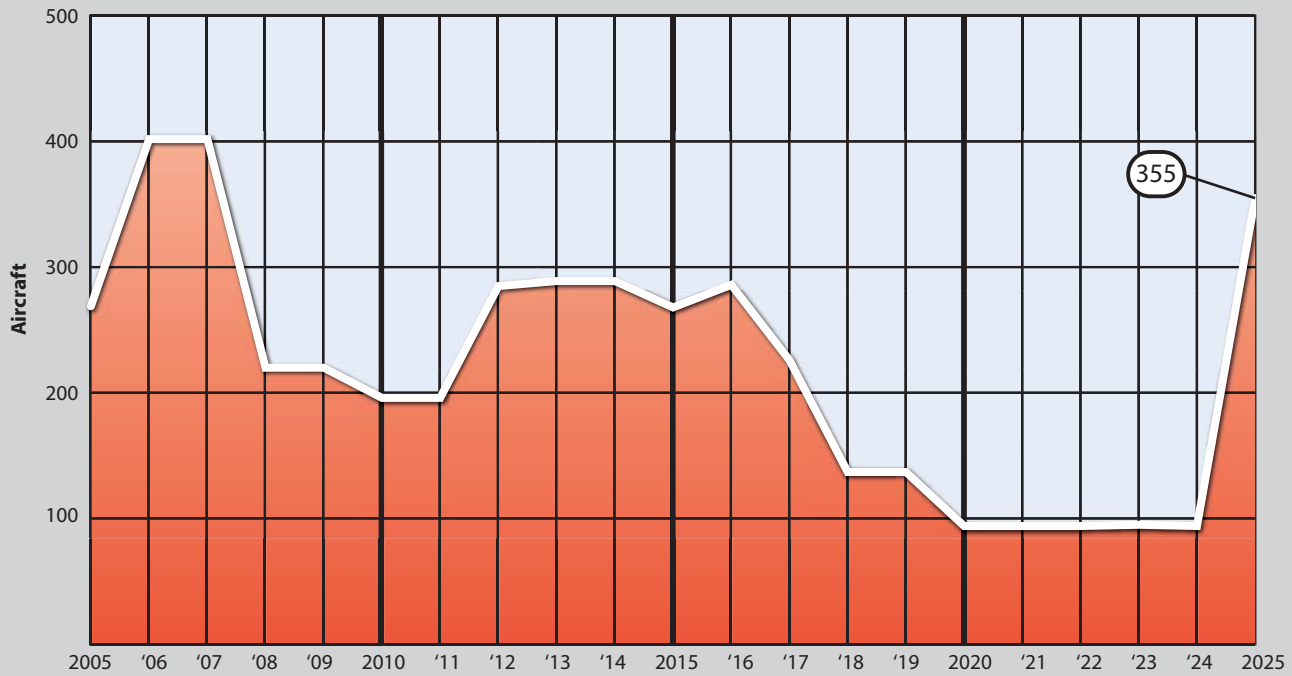
HISTORICAL AERONAUTICAL ACTIVITY

The total number of based aircraft and annual operations (takeoffs and landings), both in aggregate and by aircraft type, represent key indicators of aeronautical activity. These metrics will inform subsequent analyses to forecast future activity levels and assess long-term facility requirements for GEU. A brief description of each activity segment is provided in this section and **Exhibit 1D** presents a summary of activity statistics over the past 10 years.

OPERATIONS



BASED AIRCRAFT



Sources: Operations - FAA OPSNET; FAA Based Aircraft Inventory, FAA TAF

ANNUAL OPERATIONS

Aircraft operational statistics at GEU are recorded by the airport traffic control tower (ATCT). The ATCT is owned by the city and operated by an FAA contractor Monday through Friday from 6:00 a.m. to 8:30 p.m. and Saturday and Sunday from 7:00 a.m. to 7:00 p.m. Among other duties, the ATCT counts aircraft operations, which are defined as either takeoffs or landings. Aircraft operations are classified as either local or itinerant. Local operations are those that stay within an airport's traffic pattern, such as flight training or touch-and-go operations, while itinerant operations are those with origins or destinations at other airports. Aircraft operations are further separated into four general categories:

- **Air carrier operations** are performed by commercial airline aircraft with more than 60 seats. Another commercial airline indicator is the amount of air cargo shipped, which is typically recorded in annual enplaned pounds or tons.
- **Air taxi operations** are associated with commuter aircraft with 60 or fewer passenger seats, but this category also includes for-hire general aviation aircraft.
- **Military operations** are conducted by airplanes and helicopters with military identification.
- **General aviation operations** include all other aviation activity, from small ultralight aircraft to large business jets.

In addition to the ATCT, the airport also utilizes VirTower, which is a supplemental tracking system for airport operations. It should be noted that VirTower typically reports 1000 more operations per month when compared to ATCT counts. This is due to various reasons such as VirTower reporting operations during times in which the ATCT is closed.

Table 1C provides a summary of operational statistics reported by the ATCT since 2005, including the breakdown of itinerant and local operations and the categories of operations. Operations at GEU have had a cyclical trend, including increases, decreases, and stagnation, over the last 20 years. By the end of 2023, operational levels returned to historical highs experienced from 2005 to 2009, exceeding 100,000 annual operations.

TABLE 1C: Airport Operations

Year	Itinerant: Air Carrier	Itinerant: Air Taxi	Itinerant: General Aviation	Itinerant: Military	Itinerant: Subtotal	Local: General Aviation	Local: Military	Local: Subtotal	Total Operations
2005	0	1,869	43,175	58	45,102	87,697	66	87,763	132,865
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

(Table continues)

TABLE 1C (continued): Airport Operations

Year	Itinerant: Air Carrier	Itinerant: Air Taxi	Itinerant: General Aviation	Itinerant: Military	Itinerant: Subtotal	Local: General Aviation	Local: Military	Local: Subtotal	Total Operations
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

Source: FAA Operations Network (OPSNET)

BASED AIRCRAFT

Accurately identifying the number of based aircraft is essential to the master planning process; however, this task can be complex due to the transient nature of aircraft storage. The FAA requires airports to report based aircraft to the National Based Aircraft Inventory database, where the information is subsequently cross-referenced with data from other airports to ensure accuracy. A validated based aircraft count includes only aircraft that are based at the airport for at least six months of the year. According to the database, there are currently 355 validated based aircraft at GEU. Of the 355 validated aircraft, the fleet mix consists of 306 single-engine piston aircraft, 38 multi-engine aircraft, four turbine-powered aircraft, and seven helicopters.

Table 1D summarizes historical based aircraft counts at GEU, as sourced from the FAA *National Based Aircraft Inventory* database and the FAA TAF published in February 2026. It should be noted that there was a substantial increase in based aircraft at GEU from 2024 to 2025. This is due to the fact that TAF records often do not accurately capture and typically underreport based aircraft counts; however, the TAF remains the primary source of historical based aircraft information and was utilized for the years prior to 2025.

TABLE 1D: Historical Based Aircraft

Year	Aircraft
2011	196
2012	285
2013	289
2014	289
2015	268
2016	286
2017	226
2018	137
2019	137
2020	94
2021	94
2022	94
2023	95
2024	94
2025	355*

*Sources: *BasedAircraft.com; FAA TAF, 2026*

AIRSIDE FACILITIES

Airside facilities support aircraft movements between the air and ground. Generally, these facilities include runways, taxiways, airport lighting and markings, and navigational aids. **Exhibit 1E** depicts airfield facility information at GEU.

RUNWAY 2-20

GEU operates a single runway, which is designated Runway 2-20. It should be noted that the runway is presently marked as Runway 2-20; however, FAA and other aeronautical publications still report the runway as 1-19, pending approval by the FAA to republish the runway as 2-20. A Notice to Airmen (NOTAM) has been issued to address this interim discrepancy and the official redesignation is anticipated in 2027. Runway 2-20 measures 7,150 feet in length and 100 feet in width and is oriented on a north-south alignment. The asphalt pavement features a grooved surface treatment and is reported by FAA publications to be in good condition. Runway 1 and Runway 19 are both equipped with non-precision markings and are maintained in good condition. The runway has a longitudinal slope from north to south, with the northern end serving as the high point. The elevation differential between the two ends is 29.9 feet, resulting in an overall gradient of 0.42 percent. For obstacle clearance, landing thresholds are displaced at both ends: 701 feet for Runway 1 and 1,001 feet for Runway 19. A summary of the runway data is provided in **Table 1E**.

TABLE 1E: Runway Data

Runway Characteristics	Runway 2	Runway 20
Field Elevation	1071.3' Above Mean Sea Level	
Runway Length	7,150'	
Runway Width	100'	
Blast Pad Dimensions	150 long ' x 115' wide	140’ - 150' long x 117' wide
Pavement Type	Asphalt	
Pavement Condition (FAA-Reported)	Good	
Gradient	0.42%	
Landing Threshold Displacement	701'	1,001'
Runway Load-Bearing Strength	Single Wheel (S): 40,000 lbs.; Dual Wheel (D): 60,000 lbs.	
Runway Markings/Condition	Non-Precision/Good	Non-Precision/Good
Runway Edge Lights	Medium Intensity (MIRL)	
Runway End Identifier Lights	Yes	Yes
Distance Remaining Signs	Yes (Lighted)	Yes (Lighted)
Visual Glidepath Indicator/Slope	PAPI-2L (3.00°)	PAPI-2L (3.00°)
Traffic Pattern	Right	Left
Traffic Pattern Altitude (Above Ground Level)	Piston/Turboprop: 1,030'; Jets: 1,530'; Helicopters: 630'	

Sources: FAA Airport and Data Information Portal (ADIP); GEU Records

RUNWAY MARKINGS

Various runway markings are used to provide information to pilots. Runways intended for use by only small aircraft typically have basic markings, while runways available for larger transport aircraft have more complex markings that provide more information. Runways that support instrument approach procedures with both horizontal and vertical guidance (precision or Category I approaches) have additional markings. Runway markings are described in further detail as follows:

Threshold Bars

The threshold bar is a 10-foot-wide white stripe at the end of each runway that visually designates the runway landing threshold and the end of the runway. Threshold bars are typically associated with precision markings and/or displaced landing thresholds.

Threshold Stripes

Runway threshold stripes are a series of white stripes that are 150 feet long by six feet wide. These markings provide a visual grid that alerts pilots to the location of the landing threshold. The total number of threshold stripes indicates the width of the runway to pilots. There are eight threshold stripes on each end of the runway, which is the standard for showing that the runway is 100 feet wide.

Runway Designators

The end of each runway at GEU is marked with a number that indicates the approximate magnetic azimuth of the direction of operation. Runway designators are white with a height of 60 feet.

Aiming Point Markings

Aiming point markings are used to provide enhanced visual guidance to pilots when landing. At GEU, these markings consist of two white stripes that are 150 feet long, 20 feet wide, and spaced 50 feet apart, centered on the runway. The aiming point markings are placed approximately 1,100 feet from the landing threshold for Runway 1 and approximately 1,000 feet from the landing threshold for Runway 19.

Centerline and Edge Stripes

The runway centerline is a dashed white line positioned on the centerline of the runway. Runway edge stripes are solid white lines that designate the edges of the runway.

TAXIWAYS/TAXILANES

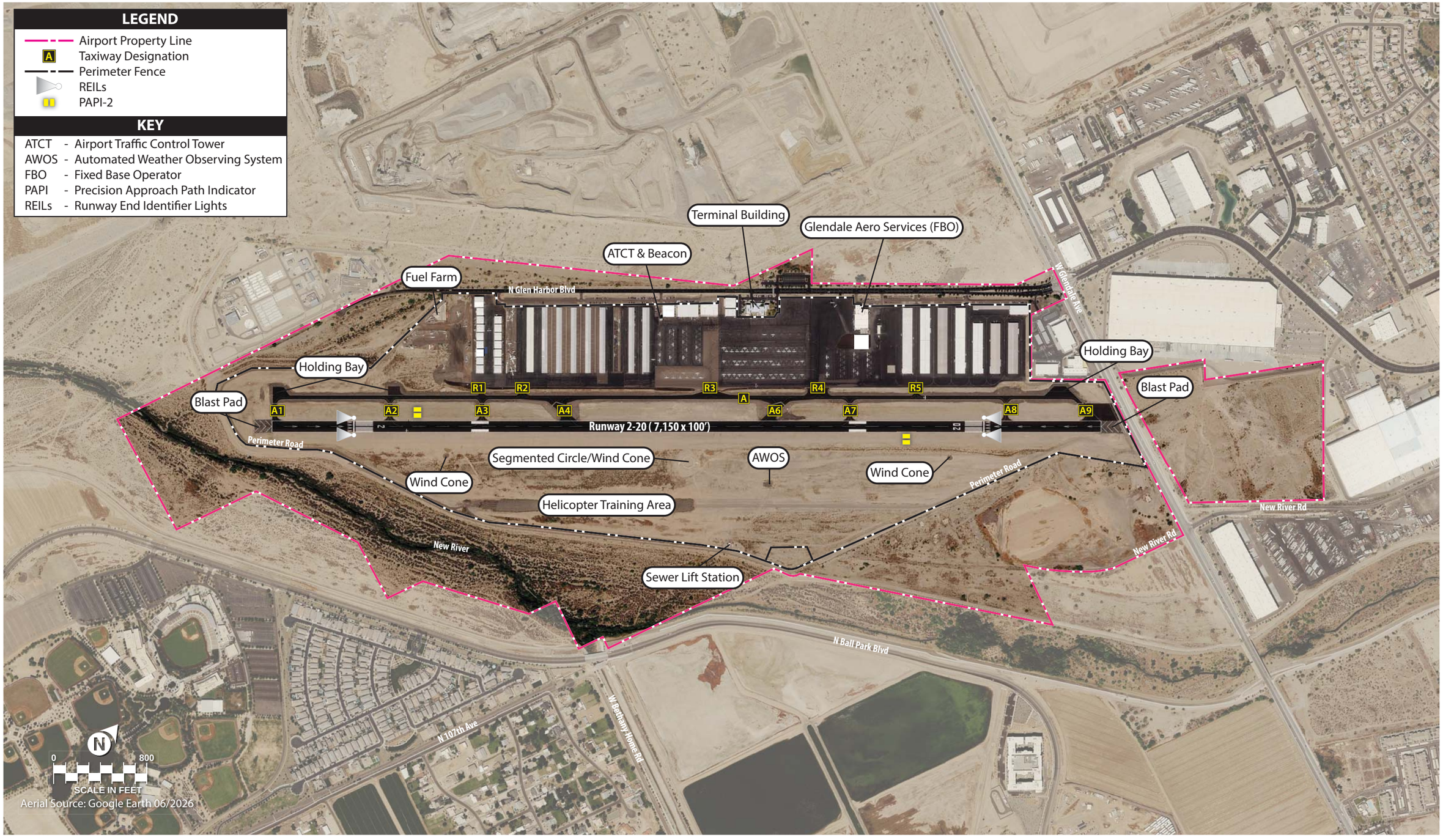
GEU features a comprehensive taxiway/taxilane system that consists of a parallel taxiway, connector taxiways, and entrance/exit taxiways. Taxiways facilitate aircraft movement to and from the runway system and are designed to accommodate relatively higher operating speeds. Taxilanes serve as access routes to hangar and apron areas and are intended for lower-speed aircraft movements.

LEGEND

- Airport Property Line
- A — Taxiway Designation
- Perimeter Fence
- REILs
- PAPI-2

KEY

ATCT - Airport Traffic Control Tower
AWOS - Automated Weather Observing System
FBO - Fixed Base Operator
PAPI - Precision Approach Path Indicator
REILs - Runway End Identifier Lights



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Taxiway widths at GEU vary according to aircraft design and operational usage. A description of taxiways and taxilanes is provided in **Table 1F**. It should be noted that certain taxilanes are designated as non-movement areas and are not subject to control by the ATCT; accordingly, pilots operating within these areas are not required to maintain communication with tower controllers. All taxiways and taxilanes are equipped with medium intensity taxiway edge lights.

TABLE 1F: Taxiway/Taxilane Details

Taxiway/Taxilane Designation	Width	Description
Taxiway A	35'	Parallel to Runway 2-20
Taxiway A1	40'	End connector to Runway 1
Taxiway A2	35'	Threshold connector to Runway 1
Taxiways A3	35'	Exit Taxiway
Taxiway A4	90'	High-speed exit
Taxiway A6	90'	High-speed exit
Taxiway A7	35'	Exit Taxiway
Taxiway A8	35'	Threshold connector to Runway 19
Taxiway A9	35'	End connector to Runway 19
Taxilane R	35'	Parallel to Taxiway A
Taxilane R1	35'	Southern hangar facilities access
Taxilane R2	65'	T-shade/covered tiedown access
Taxilane R3	140'	Terminal apron access
Taxilane R4	180'	Terminal apron/FBO facility access
Taxilane R5	35'	Northern hangar facilities access

Sources: GEU ALP, 2018; Coffman Associates Analysis

PAVEMENT STRENGTH

Pavement strength ratings have traditionally been measured in terms of the number of wheels on each landing gear strut of an aircraft. Additional wheels on each landing gear provide greater dispersal of an aircraft's weight, enabling the pavement to withstand heavier aircraft. The strength rating, which is expressed in pounds, indicates that the pavement can withstand repeated usage by aircraft within that weight limitation and experience normal wear and tear. Repeated usage of the runway by aircraft that are heavier than the strength rating will cause greater wear and tear and will shorten the useful life of the pavement.

Aircraft with a single wheel on each landing gear strut are classified as single wheel (S). Aircraft with two wheels on each landing gear strut are classified as double wheel (D) and aircraft with two single wheels in tandem are classified as (2S). The following are the published weight-bearing capacities for Runway 2-20 at GEU:

- 40,000 lbs. (S); examples include small business jets and turboprops, such as the Beechcraft King Air 360.
- 60,000 lbs. (D); examples include medium business jets, such as the Gulfstream G200.

In 2014, the FAA moved to implement the International Civil Aviation Organization (ICAO) pavement classification number (PCN) for identifying the strength of airport pavements. The PCN is a five-part code and is described as follows:

1. **The PCN numerical value** indicates the load-carrying capacity of the pavement, which is expressed as a whole number; the value is calculated based on several engineering factors, such as aircraft geometry and pavement usage.

2. **Pavement type** is expressed as either R for rigid pavement (typically concrete) or F for flexible pavement (typically asphalt).

3. **Subgrade strength** is expressed as A (high), B (medium), C (low), or D (ultra low); a subgrade of A would be considered very strong, like concrete-stabilized clay, and a subgrade of D would be very weak, similar to uncompacted soil.

4. **Maximum tire pressure** is expressed as W (unlimited/no pressure limit), X (high/254 pounds per square inch [PSI]), Y (medium/181 PSI), or Z (low/72 PSI) and indicates the maximum tire pressure the pavement can support; concrete surfaces are usually rated W.

5. **The process of determination** is expressed as either T (technical evaluation) or U (physical evaluation) and indicates method of pavement testing.

FAA AC 150/5335-5D, *Standardized Method of Reporting Airport Pavement Strength – PCR*, provides guidance on a new method for reporting airport pavement strengths. The new reporting method is the Aircraft Classification Rating–Pavement Classification Rating (ACR-PCR) method. There is no mathematical correlation between the ICAO's Aircraft Classification Number-Pavement Classification Number (ACN-PCN) method and the new ACR-PCR method. This new method provides the benefit of expressing the effect of an individual aircraft on different pavements with a single unique number, the ACN. ACN varies according to aircraft weight and configuration (e.g., tire pressure, gear geometry, etc.), pavement type, and subgrade strength. Conversely, the load-carrying capacity of a pavement can be expressed by a single unique number, the PCR, without specifying a particular aircraft or detailed information about the pavement structure.

For general aviation airports, reporting pavement strength with the ACR-PCR method is voluntary and is typically completed when the airport undertakes various pavement maintenance projects. Currently, pavement strength at GEU is not classified under the ACR-PCR methodology.

PAVEMENT CONDITION

Airport sponsors are required to maintain airport pavement surfaces in suitable condition, in accordance with Federal Grant Assurance No. 11 and Public Law 103-305. To meet this requirement, sponsors must implement and maintain effective airport pavement maintenance and management programs. These programs involve continuous evaluation of pavement conditions and the timely application of preventive maintenance measures to preserve pavement performance and extend the useful life of the pavements.

The ADOT Aeronautics Group funds pavement inspections for approximately 80 airports in the state and maintains the Airport Pavement Management System (APMS), which is in compliance with FAA requirements. The APMS is consistently updated with monthly pavement evaluations by airport sponsors, along with a complete database update conducted every three years. The most recent pavement condition survey for GEU was completed in 2025.

The survey was conducted using the pavement condition index (PCI) procedure documented in the following publications:

- FAA AC 150/5380-6C, *Guidelines and Procedures for Maintenance of Airport Pavements*
- American Society for Testing Materials (ASTM) D-5340, *Standard Test Method for Airport Pavement Condition Index Surveys*

The PCI procedure is the standard used by the aviation industry to visually assess pavement conditions. It was developed to provide engineers with a consistent, objective, and repeatable tool to represent overall pavement condition. During a PCI survey, visible signs of deterioration within a selected sample area are identified, recorded, and analyzed.

The results of a PCI evaluation provide an indication of the structural integrity and functional capabilities of the pavement. It should be noted that only the top layer of the pavement is examined during a PCI inspection and no direct measure is made of the structural capacity of the pavement system; nevertheless, the PCI provides an objective basis for determining maintenance and repair needs and establishing rehabilitation priorities in consideration of constrained resources. Furthermore, the results of repeated PCI monitoring over time can be used to determine the rate of pavement deterioration and estimate the times at which certain rehabilitation measures can be implemented.

The PCI scale ranges from 0 to 100. A PCI rating between 0 and 10 indicates a failed pavement condition and a PCI rating between 85 and 100 indicates good condition. In general, pavements with PCI ratings above 85 may only need spot repairs. Pavements with PCI ratings between 40 and 70 are more likely to be candidates for major rehabilitation, such as structural overlays or concrete section replacement. Reconstruction is often the most viable option when the PCI rating is below 40. Thresholds for maintenance, rehabilitation, or reconstruction will vary based on operational priority and other considerations.

Exhibit 1F shows the pavement condition index map from the 2025 inspections. In general, the pavements at GEU are in moderate condition with pavement conditions ranging from very good to very poor. Runway 2-20 was reported to be in fair condition with a PCI of 57, and is depicted as such on **Exhibit 1F**; however, due to the timing of the most recent inspection (May 2025), the reported PCI does not account for the one-inch overlay applied in October 2025. Therefore, the true PCI for Runway 2-20 is 100 or slightly less. Taxiway A had a reported PCI of 76, which means it is in satisfactory condition. The apron pavement adjacent to the terminal building has varying degrees of distress with PCIs ranging from 29 to 94. Similarly, the condition of pavement in the hangar areas is variable; many sections on the south end are in poor condition, interspersed with taxilanes that are in good condition. Taxilane pavement on the north side is in fair condition. The 2025 pavement condition report is timely, as its publication can inform this master plan. When considering the future condition of the pavements, a general rule of thumb is to subtract one to two PCI points for each year removed from the survey date.

HELICOPTER TRAINING AREA

A portion of airport property south of Runway 2-20 is used as a helicopter training area. Helicopter training primarily consists of low flight hovering and object pickup training, in accordance with FAA Airman Certification Standards (ACS). This area remains unpaved but has millings overlayed on the land to provide pilots with a more level surface when conducting various training operations.

AIRFIELD LIGHTING, SIGNAGE, AND MARKING

Airfield lighting systems extend an airport's usefulness into periods of darkness and/or poor visibility. Various lighting systems are installed at the airport for this purpose. These lighting systems are categorized by function and summarized as follows.

Identification Lighting

The location of the airport at night is universally identified by a rotating beacon, which projects two beams of light (one white and one green) 180 degrees apart. The rotating beacon at GEU is located atop the ATCT. The beacon is owned by the airport.

Runway and Taxiway Lighting/Signage

Runway and taxiway edge lighting systems consist of fixtures installed along the pavement edges to clearly delineate the lateral boundaries of the pavement surfaces. These lighting systems are critical for maintaining safe aircraft operations during nighttime conditions and periods of reduced visibility, providing pilots with clear visual guidance for efficient movement between runways and aircraft parking areas.

The runway is equipped with standard medium intensity runway edge lights (MIRL). The runway edge lights incorporate split white/yellow lenses to identify the caution zone along the final 2,000 feet of each runway end. All taxiways are equipped with medium intensity taxiway edge lighting (MITL), providing clear visual guidance.

The airport also has a runway/taxiway signage system. The presence of runway/taxiway signage is an essential component of a surface movement guidance control system and is necessary for the safe and efficient operation of the airport. The signage system installed at GEU includes runway and taxiway designations, holding positions, routing/directional indication, and runway ends and exits.

Distance-Remaining Signs

The runway is equipped with lighted distance-remaining signs placed at 1,000-foot intervals to one side of the runway. These signs alert pilots to the number of feet remaining before the end of the runway. The distance-remaining signs are owned and maintained by the airport.


LEGEND
Airport Property Line
Perimeter Fence
A
Taxiway Designation
0-55 PCI*
56-85 PCI
86-100 PCI
*PCI - Pavement Condition Index
N Glen Harbor Blvd
W Glendale Ave
R1
R2
R3
R4
R5
A
A1
A2
A3
A4
A6
A7
A8
A9
Runway 2-20 (7,150 x 100')
Perimeter Road
N
0
500
SCALE IN FEET
Aerial Source: Google Earth 02/2025

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Visual Glideslope Approach Aids

Visual glideslope approach aids provide visual cues to pilots, alerting them to whether they are on the correct glide path to landing. The approaches to both ends of Runway 2-20 are equipped with two precision approach path indicator (PAPI) lights on the left side of the runway (PAPI-2). Both PAPIs are set to a standard 3.00-degree glide path and are owned by the airport.

Runway End Identification Lighting

Runway end identifier lights (REILs) are strobe lights placed at the edges of the landing thresholds to provide rapid identification of the landing threshold for up to 20 miles. The approaches to both ends of Runway 2-20 are equipped with a REIL system.

Pilot-Controlled Lighting

The airport's lighting system is connected to a pilot-controlled lighting (PCL) system. When the ATCT is closed, the PCL system allows a pilot to activate the PAPIs, REILs, and MIRL system on Runway 2-20 through a series of clicks with their transmitter on the common traffic advisory frequency (CTAF) 121.00 megahertz (MHz).

COMMUNICATION AND WEATHER REPORTING FACILITIES

Wind Cones

There are three wind cones in proximity to the runway system at GEU. The primary lighted wind cone is co-located with the segmented circle on the east side of the runway at midfield. The remaining two wind cones are located near each runway end on the east side.

Automated Weather Observation System

The GEU automated weather observation system (AWOS) is located east of the runway, opposite Taxiway A6. The AWOS automatically records weather conditions, such as temperature, cloud ceiling, dew point, wind speed and direction, altimeter setting, visibility, and density altitude. The AWOS updates observations each minute, 24 hours a day, and this information is transmitted to pilots in the airport vicinity via an FAA very high frequency (VHF) ground-to-air radio transmitter. Pilots can receive these broadcasts on the automated terminal information service (ATIS) frequency or via a dedicated AWOS local telephone number (623-877-8609), through which a computer-generated voice presents airport weather information. ATIS broadcasts are updated hourly and provide arriving and departing pilots with the current surface weather conditions, communication frequencies, and other important airport-specific information. The ATIS frequency at GEU is 119.425 MHz.

Segmented Circle

A segmented circle provides information related to the traffic pattern to pilots in the vicinity of the airport. As previously mentioned, the segmented circle is centrally located on the east side of the runway, perpendicular to the terminal and apron area. The segmented circle markings indicate that the Runway 1 traffic pattern is to the right and the Runway 19 traffic pattern is to the left.

Remote Communications Outlet

The remote communications outlet (RCO) is an unmanned remote aviation radio transceiver station that is used to extend the communication range of air traffic control (ATC) facilities, allowing communication with aircraft farther from the main control tower. The Prescott Radio RCO frequency is 122.2 MHz (Phoenix RCO).

AREA AIRSPACE AND AIR TRAFFIC CONTROL

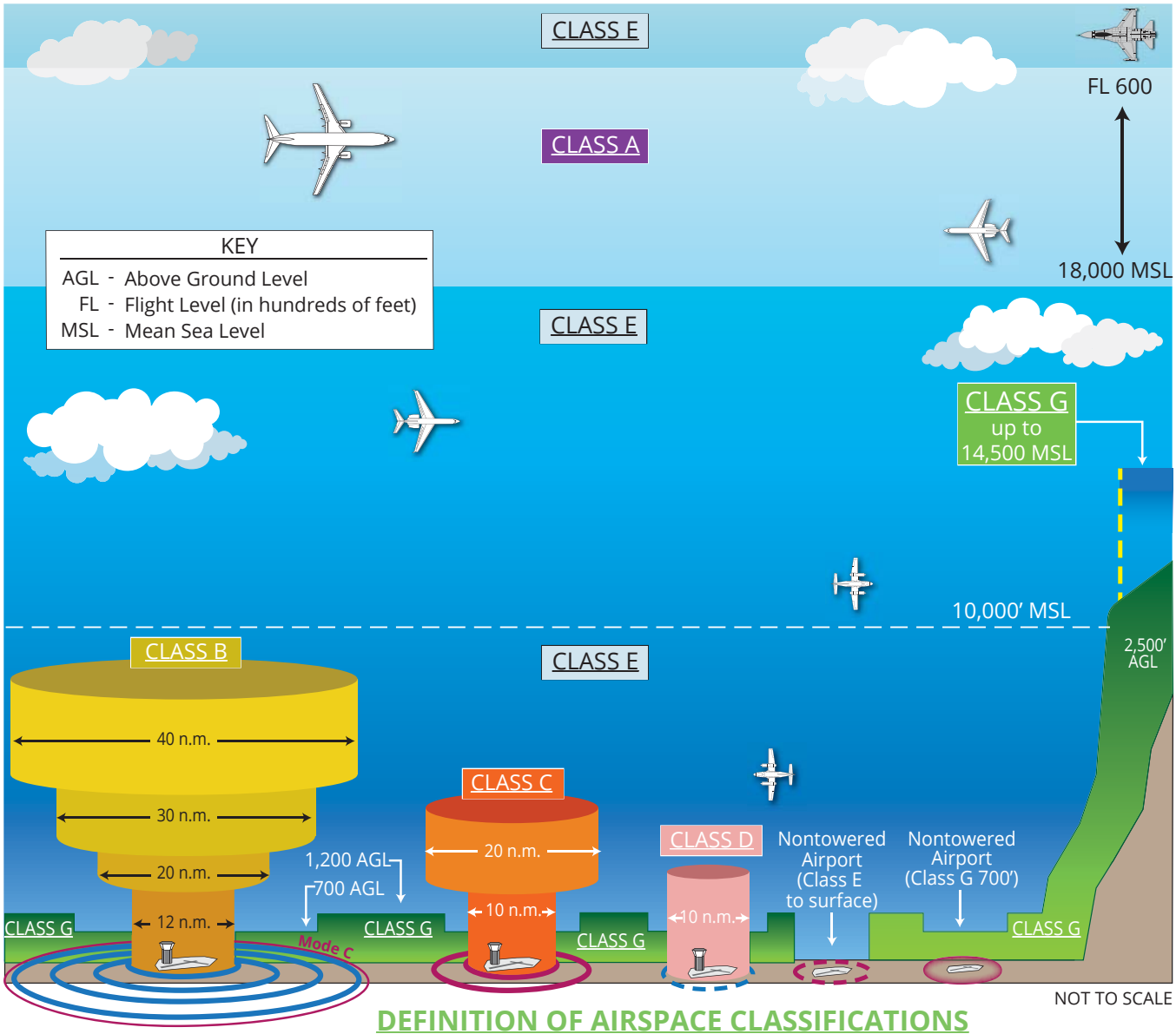
The *Federal Aviation Act of 1958* established the FAA as the federal authority responsible for regulating and managing the use of navigable airspace within the United States. To fulfill this mandate, the FAA developed the National Airspace System (NAS), which is designed to safeguard individuals and property on the ground while ensuring a safe, orderly, and efficient airspace environment for civil, commercial, and military aviation operations. The NAS encompasses the integrated network of U.S. airspace, including air navigation facilities, airports and landing areas, aeronautical charts, applicable rules and procedures, technical information, and the personnel and equipment required to support operations. The system also incorporates components that are jointly utilized with the military.

AIRSPACE STRUCTURE

Airspace within the United States is classified as either controlled or uncontrolled. The difference relates primarily to requirements for pilot qualifications, ground-to-air communications, navigation and air traffic services, and weather conditions. Six classes of airspace have been designated in the United States, as shown on **Exhibit 1G**. Airspace designated as Class A, B, C, D, or E is considered controlled airspace. Aircraft operating within controlled airspace are subject to varying requirements for positive air traffic control.

Class A Airspace

Class A airspace includes all airspace from 18,000 feet mean sea level (MSL) to flight level (FL) 600 (60,000 feet MSL). This airspace is designated in Federal Aviation Regulation (FAR) Part 71.193 for positive control of aircraft. The positive control area (PCA) allows only flights governed under instrument flight rules (IFR). An aircraft must have appropriate radio and navigation equipment, and its pilot must obtain clearance from an ATC facility to enter Class A airspace. In addition, the pilot must possess an instrument rating.



NOT TO SCALE

DEFINITION OF AIRSPACE CLASSIFICATIONS

CLASS A — **Think A - Altitude.** Airspace above 18,000 feet MSL up to and including FL 600. Instrument Flight Rule (IFR) flights only, ADS-B 1090 ES transponder required, ATC clearance required.

CLASS B — **Think B - Busy.** Multi-layered airspace from the surface up to 10,000 feet MSL surrounding the nation's busiest airports. ADS-B 1090 ES transponder required, ATC clearance required.

CLASS C — **Think C - Mode C.** Mode C transponder required. ATC communication required. Generally airspace from the surface to 4,000 feet AGL surrounding towered airports with service by radar approach control.

CLASS D — **Think D - Dialogue.** Pilot must establish dialogue with tower. Generally airspace from the surface to minimum 2,500 feet AGL surrounding towered airports.

CLASS E — **Think E - Everywhere.** Controlled airspace that is not designated as any other Class of airspace.

CLASS G — **Think G - Ground.** Uncontrolled airspace. From surface to a 1,200 AGL (in mountainous areas 2,500 AGL) Exceptions: near airports it lowers to 700' AGL; some airports have Class E to the surface. Visual Flight Rules (VFR) minimums apply.

Source: Federal Aviation Administration

Class B Airspace

Class B airspace has been designated around some of the country's busiest commercial service airports, such as PHX. Class B airspace is designed to regulate the flow of uncontrolled traffic above, around, and below the arrival and departure airspace required for high-performance passenger-carrying aircraft at busy commercial service airports. This airspace is the most restrictive controlled airspace encountered by pilots operating under visual flight rules (VFR).

To fly within Class B airspace, an aircraft must be equipped with special radio and navigation equipment and must obtain clearance from ATC. Its pilot must have at least a private pilot's certificate or be a student pilot who has met the requirements of FAR Part 61.95, which requires special ground and flight training for Class B airspace. Aircraft are also required to have and utilize Mode C transponders within a range of 30 nautical miles (nm) from the center of Class B airspace; a Mode C transponder allows the ATCT to track the altitude of the aircraft. A helicopter does not need special navigation equipment or a transponder if it operates at or below 1,000 feet above ground level (AGL) and has made a prior arrangement in the form of a Letter of Agreement with the FAA controlling agency.

GEU is located under the PHX Class B airspace, which extends from 4,000 feet AGL to 9,000 feet AGL.

Class C Airspace

The FAA has established Class C airspace at 122 airports around the country as a means of regulating air traffic in these areas. Class C airspace is designed to regulate the flow of uncontrolled traffic above, around, and below the arrival and departure airspace required for high-performance passenger-carrying aircraft at some commercial service airports.

To fly inside Class C airspace, an aircraft must have a two-way radio and an encoding transponder and must have established communication with the ATCT. Aircraft may fly below the floor of the Class C airspace or above the Class C airspace ceiling without establishing communication with ATC. The nearest Class C airspace to GEU surrounds Tucson International Airport (TUC).

Class D Airspace

Class D airspace is controlled airspace surrounding airports with ATCTs. The Class D airspace at an airport typically constitutes a cylinder with a horizontal radius of up to five miles from the airport, extending from the surface up to a designated vertical limit, which is typically set at approximately 2,500 feet above the airport elevation. If an airport has an instrument approach or departure, the Class D airspace sometimes extends along the approach or departure path. During periods when the airport's ATCT is closed, the Class D airspace typically reverts to Class E airspace. GEU is in Class D airspace, as are many other Phoenix area airports, such as Phoenix–Deer Valley Airport (DVT), Phoenix–Goodyear Airport (GYR), and Scottsdale Airport (SDL).

Class E Airspace

Class E airspace is controlled airspace designed to contain IFR operations near an airport and while aircraft are transitioning between the airport and en-route environments. Unless otherwise specified, Class E airspace terminates at the base of the overlying airspace. Only aircraft operating under IFR are required to be in contact with ATC when operating in Class E airspace. While aircraft conducting visual flights in Class E airspace are not required to be in radio communication with ATC facilities, visual flight can only be conducted if minimum visibility and cloud ceilings exist. Class E airspace encompasses the Glendale area, except where it is superseded by Class B or D airspace.

Class G Airspace

Airspace not designated as Class A, B, C, D, or E is considered uncontrolled, or Class G, airspace. ATC does not have the authority or responsibility to exercise control over air traffic within this airspace. Class G airspace lies between the surface and the overlying airspace.

Exhibit 1H depicts airspace in the vicinity of GEU.

SPECIAL USE AIRSPACE

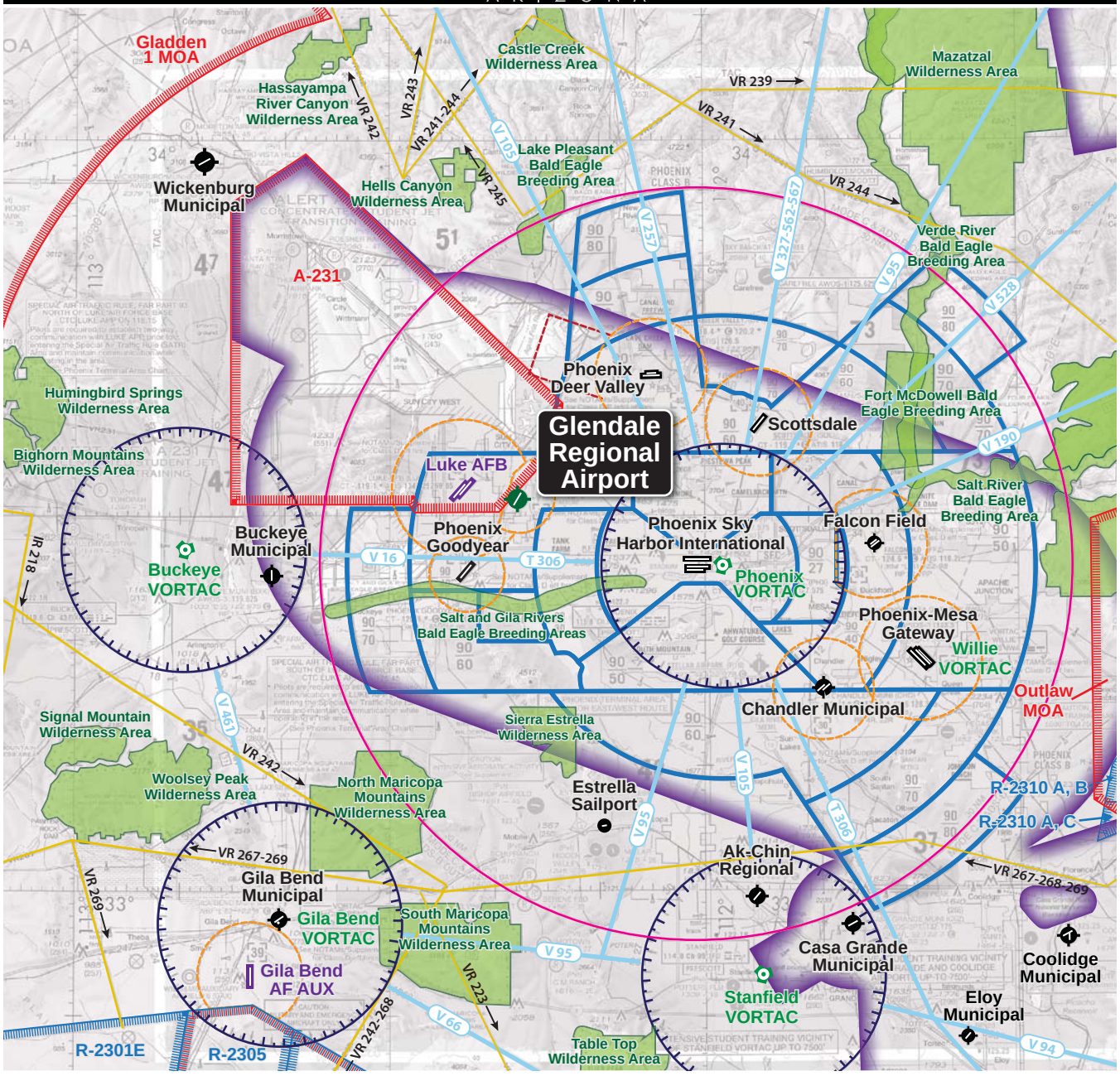
Special use airspace is defined as airspace where activities must be confined because of their nature or where limitations are imposed on aircraft not taking part in those activities. The designation of special use airspace identifies for other users the areas where military activity occurs, provides for segregation of such activity from other fliers, and allows charting to keep airspace users informed. These areas are depicted on **Exhibit 1H**.

Restricted Areas

No person may operate an aircraft within a restricted area between the designated altitudes and during the times of designation unless they have the advanced permission of the using agency. The nearest restricted areas are R-2301E, R-2305, and R-2304, which are located approximately 45 nm southwest of GEU. R-2301E extends from the surface to 80,000 feet MSL, whereas R-2305 and R-2304 extend from the surface to 24,000 feet MSL. R-2305 and R-2304 are restricted from Monday through Saturday during the timeframe of 6:30 a.m. to 12:00 a.m., or when published by NOTAM at least 48 hours in advance. R-2103E is restricted daily from 6:30 a.m. to 12:00 a.m. or when published by NOTAM at least 48 hours in advance. The Gila Bend Air Force Auxiliary Field is the primary using agency.

Alert Areas

An airspace alert area is a designated area in which pilots are made aware of unusual aerial activity or a large volume of pilot training. Pilots are advised to be alert when flying in these areas. Alert area A-231 is directly west of GEU and is associated with Luke Air Force Base (AFB) activity. FAA Order JO 7400.10F, *Special Use Airspace* (dated February 16, 2024), states that A-231 extends from 500 feet AGL to 6,500 feet MSL, excluding the airspace below 4,000 feet AGL within the Luke AFB Class D airspace.



LEGEND

- Airport with hard-surfaced runways 1,500' to 8,069' in length
- Airports with hard-surfaced runways greater than 8,069' or some multiple runways less than 8,069' (Military airfields are shown in Purple, public in Black)
- Compass Rose
- VORTAC
- Alert Area and Military Operations Area (MOA)
- Restricted Areas
- Class B Airspace
- Class D Airspace
- Class E Airspace
- Class E (sfc) Airspace with floor 700 ft. above surface that laterally abuts 1200 ft. or higher Class E airspace
- Mode C
- Victor Airways
- Military Training Routes
- Wilderness/Monument Area

Source: Phoenix Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration, 6/12/2025.

Military Operations Areas

A military operations area (MOA) is special use airspace established outside positive control areas to separate/segregate certain nonhazardous military activities from IFR traffic and to identify them for VFR traffic where these activities are conducted. MOAs are established to contain certain military activities (such as air combat maneuvers, air intercepts, acrobatics, etc.). The nearest MOA to GEU is the Sells 1 MOA, which is co-located with restricted areas R-2304 and R-2305 approximately 45 nm south of the airport. It should be noted that the Sells 1 MOA is excluded when R-2304 and R-2305 are active. The Sells 1 MOA extends from 10,000 feet MSL up to 17,999 feet MSL. The using agency is the Gila Bend Air Force Auxiliary Field.

Military Training Routes

A military training route (MTR) is designated airspace generally established for use by high-performance military aircraft to train below 10,000 feet AGL and in excess of 250 knots. There are VR (visual) and IR (instrument) designated MTRs. MTRs with no segment above 1,500 feet AGL are designated with VR or IR followed by a four-digit number. MTRs with one or more segments above 1,500 feet AGL are identified by the route designation followed by a three-digit number (e.g., VR223). The arrows on the route show the direction of travel. VR242, VR267, VR268, and VR269 are in the vicinity of GEU. General aviation aircraft should be alert when in proximity to an MTR.

Victor Airways

Victor airways are a system of federal airways established for aircraft arriving in or departing from regional areas using very high frequency omnidirectional range (VOR) facilities. Victor airways are eight-mile-wide corridors of airspace that extend upward from 1,200 feet AGL to 18,000 feet MSL and extend between VOR navigational facilities. There are few Victor airways in the vicinity of GEU due to congested airspace from Luke AFB and PHX; however, V16 is the nearest Victor airway to GEU. V16 is located south of the airport, directly above Phoenix–Goodyear Airport.

Wind Farms/Wilderness Areas

While not specifically considered part of the U.S. airspace structure, the boundaries of certain ground-based features are included on airspace sectional charts, including wind farms, national parks, wildlife areas, wilderness areas, and primitive areas. Aircraft operations are not specifically restricted over these areas; however, pilots should maintain a minimum altitude of 2,000 feet above the surface. There are few wilderness areas surrounding GEU; the nearest are the Salt River and Gila River bald eagle breeding areas, which are located southwest of the airport.

AIRSPACE CONTROL

The approximately 55-foot-tall ATCT at GEU was installed in 1992 after being relocated from Scottsdale Airport (SDL). It is owned by the airport and staffed through the FAA Contract Tower Program. The ATCT is located south of the terminal building and west of the midpoint of the runway. The tower operates from 6:00 a.m. to 8:30 p.m. Monday through Friday and 7:00 a.m. to 7:00 p.m. Saturday and Sunday. GEU controllers are responsible for the Class D airspace surrounding GEU.

The following frequencies are used at GEU:

- Glendale Ground: 118.0 MHz
- Glendale Tower: 121.0 MHz
- ATIS: 119.425 MHz
- CTAF: 121.000 MHz
- Prescott Radio RCO: 122.2 MHz

NAVIGATIONAL AIDS

Navigational aids are electronic devices that transmit radio frequencies, which pilots of properly equipped aircraft can translate into point-to-point guidance and position information. The types of electronic navigational aids available for aircraft flying to or from GEU include a VOR facility and global positioning system (GPS).

In general, a VOR facility provides azimuth readings to pilots of properly equipped aircraft by transmitting a radio signal at every degree to provide 360 individual navigational courses. Distance measuring equipment (DME) is frequently combined with a VOR facility (VOR-DME) to provide distance and direction information to pilots. Military tactical air navigation (TACAN) aids and civil VORs are commonly combined to form VORTACs, which provide distance and direction information to both civil and military pilots. The Phoenix VORTAC is located on the airfield at PHX.

GPS was initially developed by the United States Department of Defense for military navigation around the world. GPS differs from VOR in that it does not require pilots to navigate using specific facilities. GPS uses satellites placed in orbit around the earth to transmit electronic radio signals, which pilots of properly equipped aircraft can use to determine altitude, speed, and other navigational information. With GPS, a pilot can navigate directly to any airport in the country and is not required to navigate to a specific ground-based navigation facility.

FLIGHT PROCEDURES

Flight procedures are a set of predetermined maneuvers established by the FAA that use electronic or visual navigational aids to assist pilots in locating, landing at, or departing from an airport. Flight procedures at GEU include standard terminal arrivals (STARs), instrument approach procedures, and departure procedures.

Instrument Approach Procedures

Instrument approach procedures assist pilots in locating and landing at an airport during low visibility and cloud ceiling conditions. They are categorized as precision, approach with vertical guidance (APV), or non-precision.

Precision instrument approaches provide an exact course alignment and vertical descent path for an aircraft on final approach to a runway with height above touchdown (HAT) lower than 250 feet and

visibility lower than ¾ mile. Examples of precision approaches include an instrument landing system (ILS) and ground-based augmentation system (GBAS) landing system (GLS).

APVs also provide course alignment and vertical descent path guidance but have HATs of 200 feet or more and visibility minimums of ½-mile or greater. Examples include vertical navigation (VNAV), localizer performance with vertical guidance (LPV), and area navigation (RNAV) with required navigation performance (RNP). Both runway ends at GEU are equipped with APVs.

Non-precision instrument approach aids provide only course alignment information with no vertical component. Non-precision approaches have HATs of 250 feet or more and visibility minimums of ½-mile or greater. Examples include VOR, RNAV, lateral navigation (LNAV), localizer performance (LP), and localizer (LOC) approaches. Both runway ends at GEU are equipped with non-precision approaches.

Instrument approach minimums are published for different aircraft categories and are comprised of a minimum decision altitude and required visibility. (Aircraft categories are described in greater detail in Chapter 2.) According to FAR 91.175, a pilot must be able to make a safe landing and have the runway in sight, and the visibility requirement must be met. There are no cloud ceiling requirements; the decision altitude is the point at which the pilot must meet all three criteria for landing, otherwise they cannot land using the published instrument approach.

There are currently two published instrument approach procedures at GEU, as detailed in **Table 1G**.

TABLE 1G: Instrument Approach Procedures

Approach	Category	Minimums* by AAC A	Minimums* by AAC B	Minimums* by AAC C	Minimums* by AAC D
RNAV GPS: Runway 1	LPV DA	329'-1¼	329'-1¼	329'-1¼	329'-1¼
	LNAV/VNAV DA	408'-1½	408'-1½	408'-1½	408'-1½
	LNAV MDA	391'-1	391'-1	391'-1⅛	617'-1¼
RNAV GPS: Runway 19	LPV DA	274'-1	274'-1	274'-1	274'-1
	LNAV/VNAV DA	507'-1¾	507'-1¾	507'-1¾	507'-1¾
	LNAV MDA	475'-1	475'-1	475'-1⅜	475'-1½

Source: FAA Instrument Flight Procedures Gateway, procedures valid from April 16, 2026, through May 14, 2026

AAC = aircraft approach category
DA = decision altitude
GPS = global positioning system
LNAV = lateral navigation
LPV = localizer performance with vertical guidance
MDA = minimum descent altitude
RNAV = area navigation
VNAV = vertical navigation

*Example: 200'-½ = 200' decision altitude and ½-mile visibility minimums

Standard Terminal Arrivals (STARs)

A STAR is a preplanned, coded ATC IFR arrival route established for application to arriving IFR aircraft that are destined for certain airports. STARs simplify clearance delivery procedures and facilitate transition between en-route and instrument approach procedures. There are currently two published STAR procedures into GEU: DSERT TWO (RNAV) and SUNSS EIGHT.

Departure Procedures

Like a STAR, a departure procedure is a preplanned procedure for pilots to follow during departure in IFR conditions. These charted routes provide for obstacle clearance and a transition from the terminal area to the appropriate en-route structure. There are 11 published departure procedures at GEU.

REGIONAL AIRPORTS

A review of other public-use airports with at least one paved runway within a 30-nm radius of GEU was conducted to identify and distinguish the types of air service provided in the region. It is important to consider the capabilities and limitations of these airports when planning for future changes or improvements at GEU. **Table 1H** provides basic information on these airports.

TABLE 1H: Regional Airports Within 30 Nautical Miles of Glendale Regional Airport

Airport	Nautical Miles/ Direction from GEU[1]	FAA Service Level[2]	Towered[3]	Based Aircraft[3]	2025 Annual Operations[4]	Longest Runway[3]	Visibility Minimum[1]
Glendale Regional Airport (GEU)	**–**	**Reliever**	**Yes**	**355[5]**	**129,322**	**7,150'**	**1-mile**
Phoenix Goodyear Airport (GYR)	7.4 nm SSW	Reliever	Yes	199	157,277	8,500'	1-mile
Phoenix Deer Valley Airport (DVT)	14.4 nm NE	Reliever	Yes	965	490,702	8,196'	1-mile
Phoenix Sky Harbor International Airport (PHX)	15.2 nm ESE	Primary	Yes	70[6]	487,142	11,489'	½-mile
Scottsdale Airport (SDL)	20.1 nm ENE	Reliever	Yes	347	165,089	8,249'	1-mile
Buckeye Municipal Airport (BXK)	20.6 nm WSW	GA	No	58	95,222[6]	5,500'	–
Stellar Airpark Airport (P19)	23.4 nm SE	–	No	–	–	4,417'	1-mile
Falcon Field Airport (FFZ)	28.6 nm E	Reliever	Yes	711	475,503	5,100'	1-mile
Chandler Municipal Airport (CHD)	28.8 nm ESE	Reliever	Yes	443	247,187	4,870'	¾-mile

Sources: [1]Airnav.com; [2]FAA, National Plan of Integrated Airports System (NPIAS); [3]FAA, Airport Data and Information Portal (ADIP) or National Based Aircraft Inventory Program; [4]Annual operations are derived from FAA OPSNET unless otherwise noted; [5]GEU based aircraft count only includes validated aircraft; [6]FAA TAF

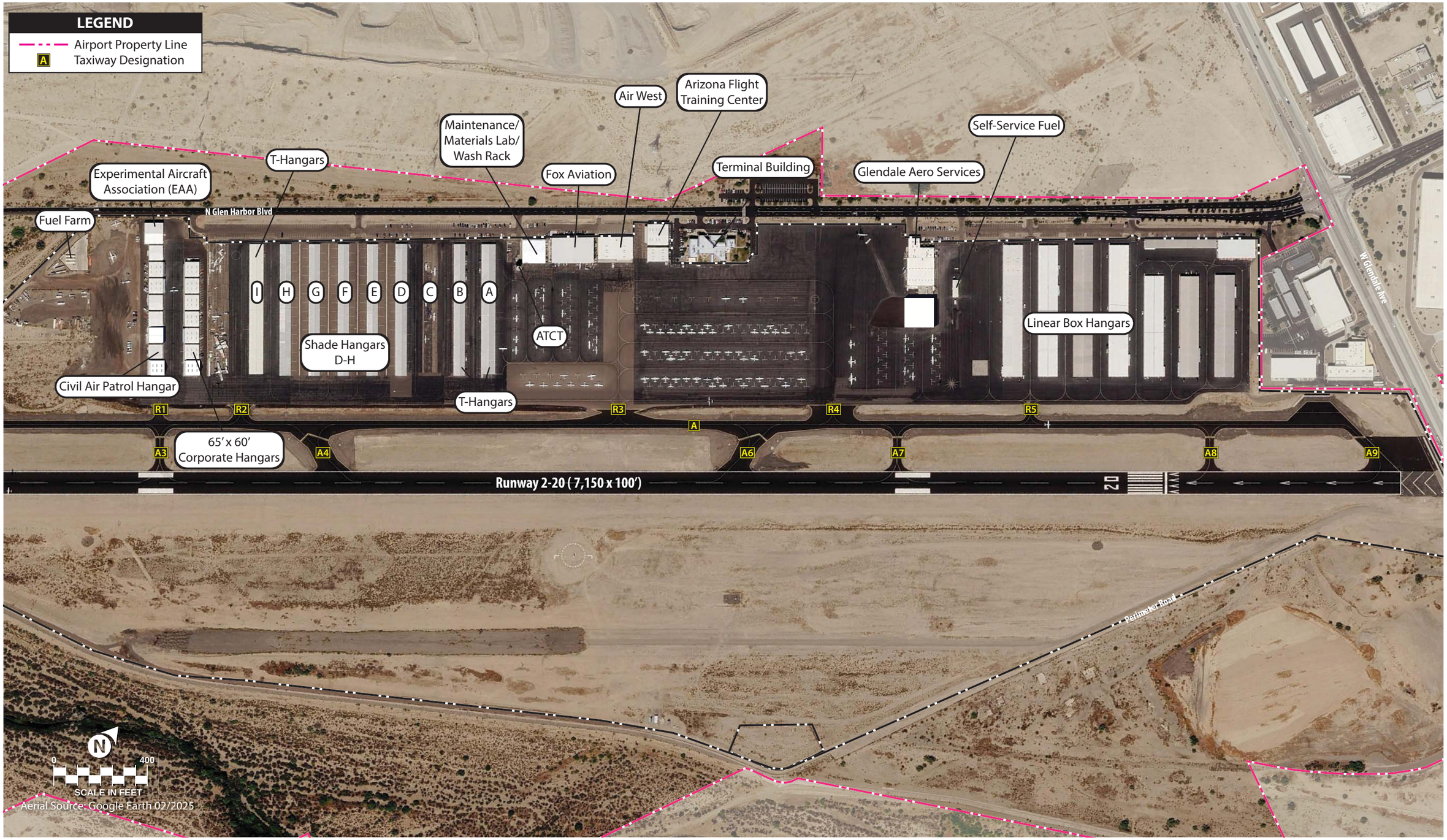
GA = general aviation
nm = nautical miles

LANDSIDE FACILITIES

Landside facilities consist of airport components that support aircraft operations and the handling of pilots and passengers but are not part of the airfield system itself. These elements include terminal operations and general aviation facilities, such as fuel storage, airport maintenance infrastructure, and aircraft rescue and firefighting (ARFF) services. A generalized map of the landside facilities at GEU is provided on **Exhibit 1J**.

TERMINAL/ADMINISTRATION BUILDING

GEU features a two-story general aviation terminal building located on N Glen Harbor Boulevard. The 22,000-square-foot facility was constructed in 1986 by the City of Glendale. The ground floor includes a public lounge and flight planning area, a pilot supply shop, office space, and offices for the City of Glendale Engineering Division. The second floor houses the airport administration offices, a conference room, and additional office space that accommodates aviation-related and non-aviation-related businesses. The terminal is open daily from 6:00 a.m. to 8:30 p.m. and the administrative office is open Monday through Friday from 8:00 a.m. to 4:00 p.m.


LEGEND
Airport Property Line
A Taxiway Designation
Air West
Arizona Flight Training Center
Maintenance/ Materials Lab/ Wash Rack
Self-Service Fuel
T-Hangars
Experimental Aircraft Association (EAA)
Fox Aviation
Terminal Building
Glendale Aero Services
N Glen Harbor Blvd
Fuel Farm
I
H
G
F
E
D
C
B
A
ATCT
Linear Box Hangars
N Glendale Ave
Shade Hangars D-H
Civil Air Patrol Hangar
T-Hangars
R1
R2
R3
R4
R5
A
65' x 60' Corporate Hangars
A3
A4
A6
A7
A8
A9
Runway 2-20 (7,150 x 100')
20
Perimeter Road
N
0
400
SCALE IN FEET
Aerial Source: Google Earth 02/2025

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AIRPORT BUSINESSES

Terminal Building

A significant portion of the terminal building is leased as office space, which includes 21 individual suites. These office suites are primarily used by aviation-related businesses; however, non-aviation-related businesses are also acceptable, pending approval by airport administration. **Table 1J** presents a list of airfield businesses within the terminal building, including the specific office suites that are utilized by these businesses.

TABLE 1J: On-Airport Businesses (Terminal Building)

Business Name	Suite #	Description of Services
SkyQuest Aviation	100	Program Management, Flight Operations Management, Aviation Maintenance
Aerosim	102	Flight Training, Aircraft Rental
The Pilot Shoppe	103	Pilot/Flight Material Sales
ATP	200, 202A, 205	Flight Training, Professional Pilot Services
G-Force Aviation	202B	Flight Training, Professional Pilot Services
MJP National, LLC	203	Unknown
Style Air	204	Unknown
Deep Sky Flight, LLC	206A	Flight Training
Threat Mitigation Risk Control Group	206C, 206D	Behavioral Analysis and Assessment, Incident Response, Event Security and Management
Vacant	206B	N/A
AirGo	207	Flight Training

Source: GEU Records

Fixed Base Operators (FBOs)

FBOs are airport service centers that are responsible for aircraft services, such as passenger handling, aircraft fueling, parking, maintenance, aircraft towing and storage, and other related services. GEU currently has one full-service FBO, Glendale Aero Services, which provides the following services:

- Full-service Jet A and 100LL fuel
- Self-service 100LL fuel
- Volume discounts
- Quick-turn service
- Ground Power Units (GPUs)
- Oxygen
- Nitrogen
- Potable water
- Coffee and ice
- Refrigerated catering storage
- Baggage carts



Glendale Aero Services (N Glen Harbor Boulevard)

- Lavatory service
- Ramp-side vehicle access
- Courtesy crew car
- Catering
- Dishwashing service
- Hotel reservations
- Rental car reservations (Enterprise and Hertz)
- Tiedowns
- Hangars
- Maintenance and avionics
- Flight school



Glendale Aero Services (Terminal Apron)

Glendale Aero Services operates out of a facility located on N Glen Harbor Boulevard, directly north of the terminal building.

Specialized Aviation Service Operators (SASOs) and Other Businesses

According to the FAA, SASOs are defined as single-service providers or special FBOs performing less than full services. These types of companies differ from full-service FBOs in that they typically offer only a specialized aeronautical service, such as aircraft sales, flight training, aircraft maintenance, or avionics services. In addition to SASOs, the airport offers mobile business permits for individuals, such as aircraft detailers or independent Airframe and Powerplant (A&P) mechanics. **Table 1K** displays the various SASOs and mobile business permittees on the airfield, as well as the services that are provided.

TABLE 1K: On-Airport Businesses

Business Name	Description of Services
Angel Aviation	Flight Training
Arizona Flight Training Center	Flight Training
ATP Flight School	Flight Training
Blackhawk	Aircraft Maintenance (Specializes in Cirrus Aircraft)
Eagle Sport LLC	Flight Training
Glendale Aero Services	Full-Service FBO
Fly Glendale	Flight Training
Fox Aviation & Recovery	Aircraft Maintenance, Aircraft Recovery
Glendale Hangars	T-Hangar and Covered Tiedown Management
Multi Engine Time Building	Flight Training
Mesa Pilot Development	Flight Training
Airwest Helicopters	Helicopter Charters, Flight Training, Utility Operations, and Aeromedical Transport
Star Gate Aviation	Aircraft Maintenance
Frank's Complete Aircraft Interiors	Aircraft Interior/Upholstery Services

Source: GEU Records

AIRCRAFT HANGAR FACILITIES

Hangar facilities at GEU consist of conventional hangars, executive box hangars, linear box hangars, T-hangars, and shade hangars. T-hangars and linear box hangars provide individual aircraft storage units within a larger contiguous structure. Covered tiedowns are outdoor aircraft parking spaces equipped

with protective roof coverings. Conventional hangars offer large, open interior spaces that are free of roof support structures, allowing them to simultaneously accommodate multiple aircraft; these hangars are typically 10,000 square feet (sf) or larger. Similar to conventional hangars, executive box hangars provide unobstructed aircraft storage without interior roof supports; however, they are generally smaller in size and typically measure less than 10,000 sf. It should be noted that several of the 60-foot by 60-foot box hangars located at the southernmost end of the landside facilities have been designated by the airport as corporate hangars. Hangars at GEU are identified on **Exhibit 1J**.

Approximate total square footages of the existing hangar types are below. Combined, these hangars provide approximately 709,600 sf of aircraft storage space:

- Conventional hangars: 58,400 sf
- Corporate box hangars: 79,500 sf
- Linear box hangars: 331,500 sf
- T-hangars: 97,700 sf
- Shade hangars: 142,500 sf

AIRCRAFT PARKING APRONS

Aircraft aprons are paved areas located away from aircraft taxiways and movement areas to support the safe and efficient transition of passengers between airside facilities (runways and taxiways) and landside facilities. At GEU, there is one primary apron area that provides approximately 130,000 square yards (sy) of apron space. The apron provides access to the terminal building, FBO/SASO facilities, and hangars, and accommodates both short-term and long-term aircraft parking. There are approximately 226 aircraft tiedown positions, including nine positions dedicated for transient fixed-wing aircraft and two positions dedicated for transient helicopters.

VEHICLE PARKING

Several vehicle parking areas are available at GEU to accommodate tenants and visitors. The airport terminal building provides approximately 57 parking spaces, with another 100 spaces available in an overflow lot across N Glen Harbor Boulevard. Tenant parking is available around the various hangars and provides approximately 470 additional spaces.

SUPPORT FACILITIES

AIRCRAFT RESCUE AND FIREFIGHTING (ARFF) SERVICES

GEU is not currently a Part 139 certificated airport, so it is not required to have on-site ARFF facilities/equipment. Part 139 airports are required to provide ARFF services during air carrier operations. Each certificated airport maintains equipment and personnel based on an ARFF index that is established according to the length of aircraft and scheduled daily flight frequency. There are five ARFF indices: A through E. Index A is applicable to the smallest aircraft and Index E is applicable to the largest aircraft, based on aircraft length.

GEU can provide FAA Index A ARFF services upon request. Prior permission is required 48 hours in advance of any air carrier operations to ensure availability of ARFF 15 minutes before and after an air carrier arrival and departure. At the time of this writing (March 2026), GEU does not have an on-site fire station; however, consideration has been given to the construction of a fire station within the direct vicinity of the airport that would support the City of Glendale, as well as the airport.

FUEL STORAGE

Aviation fuel services at GEU are offered by Glendale Aero Services. The airport's fuel farm is located south of the corporate hangars and is leased to Glendale Aero Services. The fuel farm includes three 20,000-gallon aboveground fuel storage tanks; two are used for Jet A fuel and one is used for 100LL fuel. Additionally, a 3,600-gallon self-serve facility used for 100LL fuel is located on the north side of the aircraft parking apron, adjacent to the FBO facility. GEU also has three fuel delivery vehicles: two 3,000-gallon Jet A trucks and one 1,200-gallon 100LL truck.

Fuel flowage records by fiscal year indicate that the airport averages approximately 485,173 gallons of flowage annually between 100LL fuel and Jet A fuel. Fuel flowage history is provided in **Table 1L**.

TABLE 1L: Fuel Flowage History

Fiscal Year*	100LL and Jet A
2020	299,736 gallons
2021	319,646 gallons
2022	482,150 gallons
2023	693,919 gallons
2024	535,390 gallons
2025	580,197 gallons

Source: GEU Records

*The fiscal year runs from October to September.

AIRPORT MAINTENANCE FACILITY

GEU has an airport maintenance facility that is located on N Glen Harbor Boulevard, south of the terminal building and directly adjacent to the ATCT. Maintenance equipment (such as mowers, pavement sweepers, tractors, and additional airfield lighting materials) is stored in this building.

AIRCRAFT WASH RACK

A designated aircraft wash rack is located at the rear of the airport maintenance facility, between the ATCT and the Fox Aviation hangar. This facility allows aircraft owners to wash their aircraft and was constructed to ensure proper drainage of run-off water and cleaning agents.

PERIMETER ACCESS ROAD AND FENCING

The perimeter of the airport is enclosed with security fencing. The fencing around the airport is a six-foot-high chain-link security fence with three-strand barbed wire. Signs prohibiting unauthorized entry are displayed on all gates and in other prominent locations to control inadvertent entry to the airfield. Gates located at various points on the airfield allow access to movement and non-movement areas and are locked either electronically or with padlocks.

A perimeter service road provides access to areas of the airfield that are not accessible from public roadways. The perimeter service road is accessible from any access gate on the airfield and has entry/exit points at the northernmost and southernmost portions of the existing landside facilities. The service road generally follows the perimeter fence to encircle the entire airfield.

Ground vehicles authorized by the airport to operate on movement and safety areas are limited to vehicles that are necessary for airport operations. These include airport maintenance vehicles, police patrol vehicles, fire and rescue vehicles, aircraft fuel and service vehicles, and others authorized by the airport, such as construction vehicles, FAA vehicles, and airport operations staff vehicles. The perimeter fence line and perimeter road are identified on **Exhibit 1E**.

ENVIRONMENTAL INVENTORY

The purpose of the following environmental inventory is to identify potential environmental sensitivities that should be considered when planning future improvements at the airport. Research was performed for each of the 13 impact categories within Federal Aviation Administration (FAA) Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures (§1.2(b)(1)). When considering the effects to these impact categories, which are listed below, the FAA, as the lead federal agency for examining environmental impacts of airport development projects, may examine the short-term and long-term effects, beneficial and adverse effects, effects on public health and safety, economic effects, and the effects on the quality of life to American people (FAA Order 1050.1G, §1.2(b)(2)) .

1. Aviation Emissions and Air Quality
2. Biological Resources (including fish, wildlife, and plants)
3. Coastal Resources
4. Department of Transportation Act, Section 303 (referred to as “Section 4(f)”) and Land and Water Conservation Fund (referred to as “Section 6(f)”)
5. Farmlands
6. Hazardous Materials, Solid Waste, and Pollution Prevention
7. Historical, Architectural, Archaeological, and Cultural Resources
8. Land Use
9. Natural Resources and Energy Supply
10. Noise and Noise-Compatible Land Use

11. Socioeconomic and Children's Health and Safety Risks
12. Visual Effects (including light emissions)
13. Water Resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)

AVIATION EMISSIONS AND AIR QUALITY

The concentration of various pollutants in the atmosphere defines the local air quality. The significance of a pollutant's concentration is determined by comparing it to the state and federal air quality standards. In 1971, the United States (U.S.) Environmental Protection Agency (EPA) established standards that specify the maximum permissible short- and long-term concentrations of various air contaminants. The National Ambient Air Quality Standards (NAAQS) consist of primary and secondary standards for criteria pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead (Pb). Based on federal air quality standards, a specific geographic area can be classified as an attainment, maintenance, or nonattainment area for each pollutant. The threshold for nonattainment designation varies by pollutant.

Glendale Regional Airport (GEU) is in Maricopa County, Arizona. Maricopa County is designated as nonattainment areas for PM_{10} (serious) and eight-hour O_3 (2008 and 2015) (moderate) standards. Maricopa County has also been classified as an area of maintenance for CO since April 8, 2005.[4]

In addition to federal oversight under the *Clean Air Act*, the State of Arizona has dust control laws that are enforced in Maricopa County. Under Maricopa County Rule 310, activities that will disturb a surface equal to or greater than 0.10 acres (4,356 square feet) require a dust control permit.[5]

BIOLOGICAL RESOURCES

Biological resources include the various types of plants and animals that are present in an area. The term also applies to rivers, lakes, wetlands, forests, and other habitat types that support plants and animals.

The U.S. Fish and Wildlife Service (USFWS) is charged with overseeing the requirements of the federal *Endangered Species Act* (ESA), specifically Section 7, which sets forth requirements for a consultation to determine if a proposed project may affect a federally endangered or threatened species. If any agency determines that an action may affect a federally protected species, Section 7(a)(2) requires the agency to consult with the USFWS on any action that is likely to jeopardize the continued existence of the proposed species or result in the destruction or adverse modification of proposed critical habitat.

[4] U.S. EPA, Arizona Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants (https://www3.epa.gov/airquality/greenbook/anayo_az.html), data current as of March 31, 2026

[5] Maricopa County, Dust Sources, Control, and Training, Dust Control (https://www.maricopa.gov/1913/Dust-Sources-Control-and-Training), accessed April 2026

Significant impacts occur when a proposed action could jeopardize the continued existence of a protected species or would result in the destruction or adverse modification of proposed critical habitat.

Section 3 of the ESA is used to protect federally designated critical habitat areas. Designated critical habitat areas are geographically defined and have been determined to be essential to the recovery of a specific species. There are no designated critical habitats at the airport.

The USFWS *Information for Planning and Consultation* (IPaC) database describes species and habitats protected under the ESA within the vicinity of the airport (**Table 1M**). The potential for occurrence of these species and habitats at the airport was determined based on a desktop review and a limited (one-day) field visit to the New River drainageway portion of the airport.

TABLE 1M: Species Protected Under ESA Section 7 with Potential to Occur at the Airport

Species Category	Common Name (*Scientific Name*)	Federal Status*	Habitat and Range	Potential for Occurrence
Birds	cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*)	Threatened	This species is found in heavily wooded xeroriparian washes with large saguaros or trees with suitable cavities in Sonoran desertscrub or semidesert grassland. This species' distribution is currently limited to portions of Pima County in Arizona (i.e., historical locations in the Altar Valley, Avra Valley, and Organ Pipe Cactus National Monument) and on the Tohono O'odham Nation).	**Unlikely to occur.** The airport property and surrounding area are highly disturbed. Suitable habitat, including saguaros with cavities, does not occur. GEU is far outside the current range of this species.
Birds	California least tern (*Sternula antillarum browni*)	Endangered	This species forms nesting colonies on barren to sparsely vegetated areas. It nests in shallow depressions on open sandy beaches, sandbars, gravel pits, or exposed flats along shorelines of inland rivers, lakes, reservoirs, and drainage systems at elevations below 2,000 feet above mean sea level (asml). This species is found in Maricopa, Mohave, and Pima Counties.	**May occur.** The project area contains habitats like those used by this species. Because the Glendale Recharge Ponds are immediately east of New River, this species could use the less dense areas of New River for foraging.
Birds	southwestern willow flycatcher (*Empidonax traillii extimus*)	Endangered	This species is found in dense riparian habitats along streams, rivers, and other wetlands where cottonwood, willow, boxelder, saltcedar, Russian olive, buttonbush, and arrowweed are present. Nests are found in thickets of trees and shrubs, primarily those that are 13 to 23 feet tall, among dense, homogeneous foliage. Habitat is below 8,500 feet amsl.	**Unlikely to occur.** Although a narrow band of riparian woodland vegetation is present along the New River drainageway in and adjacent to the airport, this species usually needs greater patch size than occurs in the project area; however, the species could use the drainageway as a stopover habitat during migration.

(Table continues)

TABLE 1M (continued): Species Protected Under ESA Section 7 with Potential to Occur at the Airport

Species Category	Common Name (*Scientific Name*)	Federal Status*	Habitat and Range	Potential for Occurrence
Birds	yellow-billed cuckoo (*Coccyzus americanus*)	Threatened	This species nests in low to moderate elevation (usually below 6,600 feet amsl) riparian woodlands with native broadleaf trees and shrubs that are 50 acres or more in extent. Most are associated with vegetation dominated by cottonwood/willow, but composition of dominant riparian vegetation can vary across its range. This species has not been found nesting in isolated patches (one to two acres) or narrow, linear riparian habitats less than 33 to 67 feet wide; migrant cuckoos have been detected in these habitats. During migration, this species uses a wider array of forest and shrub habitats but is rarely observed away from riparian habitats. The highest concentrations in Arizona are along the Agua Fria, San Pedro, upper Santa Cruz, and Verde River drainages and Cienega and Sonoita Creeks.	**May occur.** A narrow band of riparian woodland vegetation is present along the New River drainageway in and adjacent to the airport. This species could use the portion of airport within the New River drainageway as stopover habitat during migration.
Birds	Yuma Ridgway's rail (*Rallus obsoletus yumanensis*)	Endangered	This species requires wet substrate (mudflat, sandbar) with dense, emergent herbaceous or woody vegetation for nesting and foraging. Freshwater marshes dominated by cattail or bulrush are preferred habitat. Marshes with little residual vegetation may be preferred, as well. Habitat for this species is typically a mosaic of vegetated areas interspersed with shallow (less than 12 inches) open water areas below 4,500 feet amsl. The minimum size of suitable habitats is unclear; this species has been found in areas as small as two to three acres.	**May occur.** A narrow band of riparian woodland vegetation is present along the New River drainageway in and adjacent to the project area. This species could use the portion of the airport within the New River drainageway as stopover habitat during migration and for foraging or breeding activities.
Fish	desert pupfish (*Cyprinodon macularius*)	Endangered	This species is found in shallow waters of desert springs, small streams, and marshes at elevations below 5,000 feet asml. One natural population is still present in Pima County and reintroductions have been made in Pima, Pinal, Maricopa, Graham, Cochise, La Paz, and Yavapai Counties.	**May occur.** Appropriate aquatic habitats are in and adjacent to the project area in the New River drainageway. This part of the airport property is within this species' range of reintroduction.
Fish	Gila topminnow (incl. Yaqui) (*Poeciliopsis occidentalis*)	Endangered	Occurs in small streams, springs, and cienegas at elevations below 4,500 feet asml, primarily in shallow areas with aquatic vegetation and debris for cover. In Arizona, most of the remaining native populations are in the Santa Cruz River system. Reintroductions for conservation purposes have occurred and artificial populations for mosquito control are present in some urban areas.	**May occur.** Appropriate aquatic habitats are in and adjacent to the project area in the New River drainageway. This part of the airport property is within this species' range of reintroduction.

(Table continues)

TABLE 1M (continued): Species Protected Under ESA Section 7 with Potential to Occur at the Airport

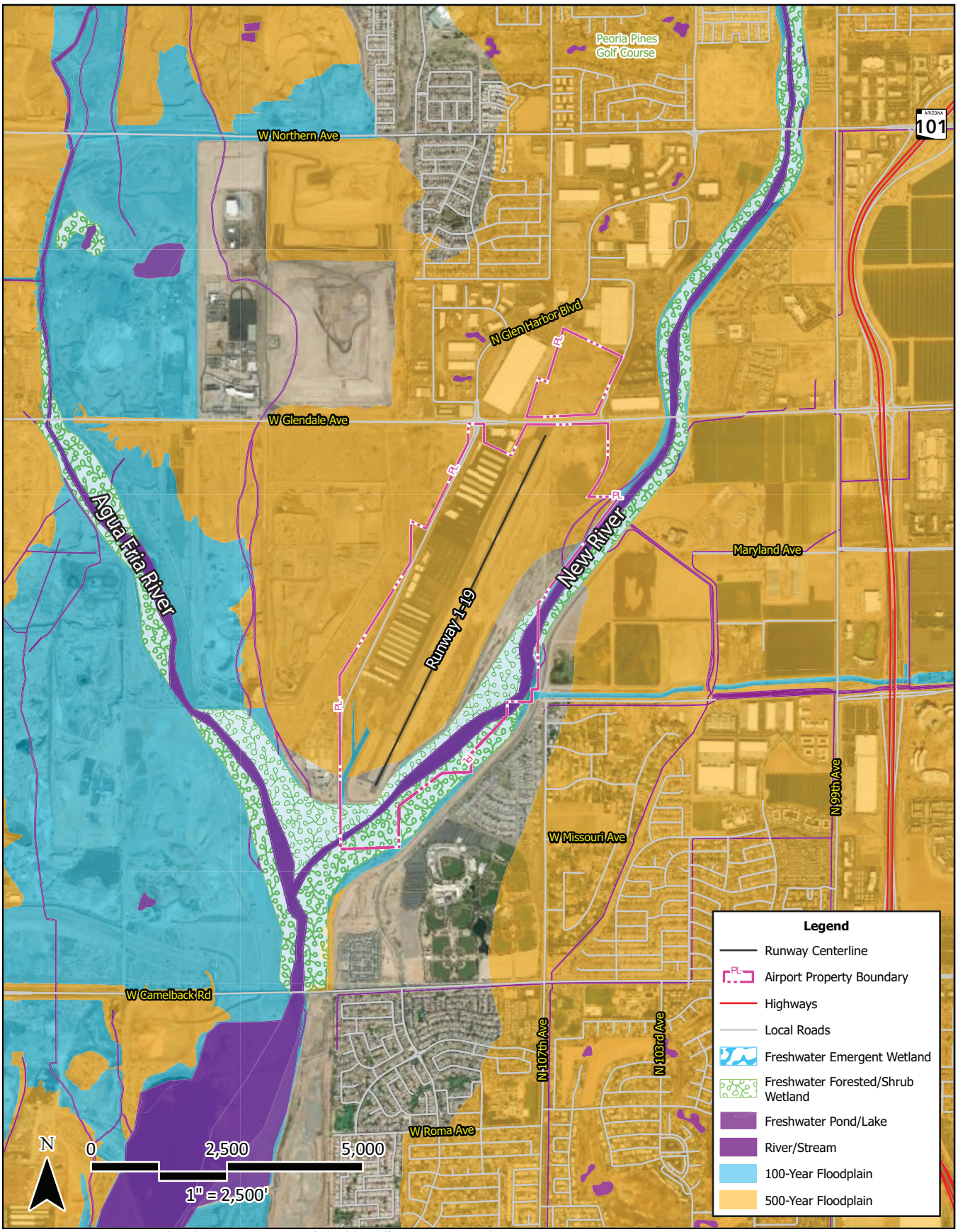
Species Category	Common Name (*Scientific Name*)	Federal Status*	Habitat and Range	Potential for Occurrence
Insects	monarch butterfly (*Danaus plexippus*)	Proposed Threatened	This migratory species is found in a variety of habitats. Monarch butterflies require milkweed (*Asclepias* spp.) for breeding. During fall migration in Arizona, monarchs favor nectar from a variety of native and garden plants. Populations in Arizona can migrate to California or Mexico for winter or may overwinter in the low desert in California. In the southwestern United States, migrating monarch butterflies often occur near water sources (e.g., rivers, creeks, riparian corridors, roadside ditches, and irrigated gardens). In the low deserts of Arizona, monarchs breed in late August to early September; however, monarch reproduction in Arizona is more common in higher elevations and is less common in the Sonoran desertscrub. No recent sightings of monarch individuals have been recorded in the vicinity of GEU; the closest recorded sighting was at Glendale Community College in 2003, approximately 6.5 miles northeast of the project area.	**May occur (seasonally within the New River drainageway portion of the airport).** A plant in the milkweed family, fringed twinevine (*Funastrum cynanchoides*), that can be used for foraging and/or breeding was present at the time of the limited field visit along the riparian area in the New River. The New River drainageway portion of the airport contains other species of flowering plants that can provide quality nectar foraging for the monarch. In addition, the riparian vegetation along the New River corridor could be used for overwintering. This species could forage anywhere within the airport where suitable plants provide a nectar source.

Sources: USFWS Arizona Ecological Services Field Office, Official Species List (Project Code: 2026-0064243); SWCA Environmental Consultants, Inc. (SWCA), Biological Resources Evaluation for the Glendale Municipal Airport Master Plan Update Project in Glendale, Maricopa County, Arizona, Technical Memorandum, April 30, 2026; Western Monarch Milkweed Mapper, Monarch and Milkweed Sightings Map (https://www.monarchmilkweedmapper.org), accessed April 2026 by SWCA

*USFWS Status Definitions

- Endangered: an animal or plant species that is in danger of extinction throughout all or a significant portion of its range
- Threatened: an animal or plant species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range
- Proposed Threatened: an animal or plant species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and has been proposed to be listed as threatened; proposed threatened species are not protected by the take prohibitions of Section 9 of the ESA

The airport is located just north of the confluence of the New and Agua Fria Rivers. A portion of the airport to the southeast is in the floodplain and drainageway of the New River (**Exhibit 1K**). The airport is surrounded by urban development with little natural vegetation/habitat present on or adjacent to the airport property; all natural or naturalized vegetation/habitats within the airport are located along the New River drainageway. The New River drainageway and its floodplain within the airport property (and upstream) have been modified with cement-lined banks and contain perennial flows. Four plants listed by the Arizona Department of Agriculture (AZDA) as noxious weeds were observed in the New River portion of the airport property: stinknet (Class A), Saharan mustard (Class B), saltcedar (Class C), and red brome (Class C).



Source: ESRI Basemap Imagery (2025), FEMA, USFWS, City of Glendale, Coffman Associates Analysis

The AZDA defines three classes of noxious weeds in the State of Arizona and maintains a list of noxious weed species under Arizona Administrative Code R3-4-425:

- Class A is categorized as a species of plant that is not known to exist or that is of limited distribution in the state and is a high-priority pest for quarantine, control, or mitigation.
- Class B is categorized as a species of plant that is known to occur but that is of limited distribution in the state and may be a high-priority pest for quarantine, control, or mitigation if a significant threat to crop, commodity, or habitat is known to exist.
- Class C is categorized as a species of plant that is widespread but may be recommended for active control based on risk assessment.

Surface water was present in the New River drainageway on the day of the field visit (March 2026) and in historical aerial imagery over the past 10 years, the sources of which are the Arizona Canal, which brings water to the New River drainageway upstream of the airport from the Salt River at Granite Reef Dam, possible subsurface flows from the adjacent Glendale Recharge Ponds, and stormwater and other surface water runoff from the surrounding urban areas. This surface water supports a 40- to 100-foot-wide riparian corridor within a larger 800-foot-wide floodplain that contains more xeric plant species (**Exhibit 1K**). The Arizona Game and Fish Department (AZGFD) Heritage Geographic Information System (AZHGIS) Online Environmental Review Tool indicates that two special areas intersect the general project area: the Agua Fria River (lower) Maricopa County Wildlife Movement Area and New River–Ganial Peak Wash Maricopa County Wildlife Movement Area.

The federal *Migratory Bird Treaty Act* (MBTA) protects migratory birds and their eggs, nests, and feathers. Potential impacts to species protected under the MBTA area are evaluated by the USFWS in consultation with other federal agencies. Habitat for migratory birds may occur if bushes or other types of ground nesting substrate are present. The breeding season for migratory birds that could be present is from February to late September.

Western burrowing owl (*Athene cunicularia hypugaea*) is a common species protected under the MTBA that requires a project-specific approach. No burrowing owls, evidence of burrowing owls, or suitable burrows were observed during the limited field visit to the New River portion of the airport as part of this master plan study; however, according to the AZHGIS Online Environmental Review Tool report, there are occurrence records of western burrowing owls in the vicinity of the airport.

The bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) are protected under both the MBTA and the *Bald and Golden Eagle Protection Act* (BGEPA) on all lands (public or private). The BGEPA prohibits anyone without a permit from taking eagles or their parts, eggs, or nests. “Take” is defined by the BGEPA as “to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb.” The BGEPA’s definition of take differs from the definition in the ESA in that it does not include habitat destruction or alteration, unless such damage disturbs an eagle. The BGEPA defines “disturb” as “to agitate or bother to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior” (Title 50 Code of Federal Regulations [CFR] 22.6).

No suitable bald eagle nesting, foraging (e.g., flowing rivers or lakes containing fish), or perching habitat of tall trees, cliffs, or other tall structures are within the project area except in the New River drainageway. Bald eagles have been recorded adjacent to the airport at the Glendale Recharge Ponds adjacent to the New River and a sighting was reported in the New River drainageway within the airport immediately adjacent to the Glendale Recharge Ponds. Golden eagles have been recorded approximately 10 miles west of the project area in the White Tank Mountains Regional Park.[6] The airport does not contain suitable foraging, nesting, or perching habitat for the golden eagle. Both bald and golden eagles could fly over the project area while seeking more suitable foraging habitats. Impacts to eagles of either species would be unlikely to result from any future project-specific activities unless activities were to take place in the New River drainageway.

COASTAL RESOURCES

Federal activities that involve or affect coastal resources are governed by the *Coastal Barriers Resource Act*, the *Coastal Management Act*, and Executive Order (E.O.) 13089, *Coral Reef Protection*.

The airport is not located within a coastal zone. The closest National Marine Sanctuary is the Channel Islands National Marine Sanctuary, which is located over 300 miles away.

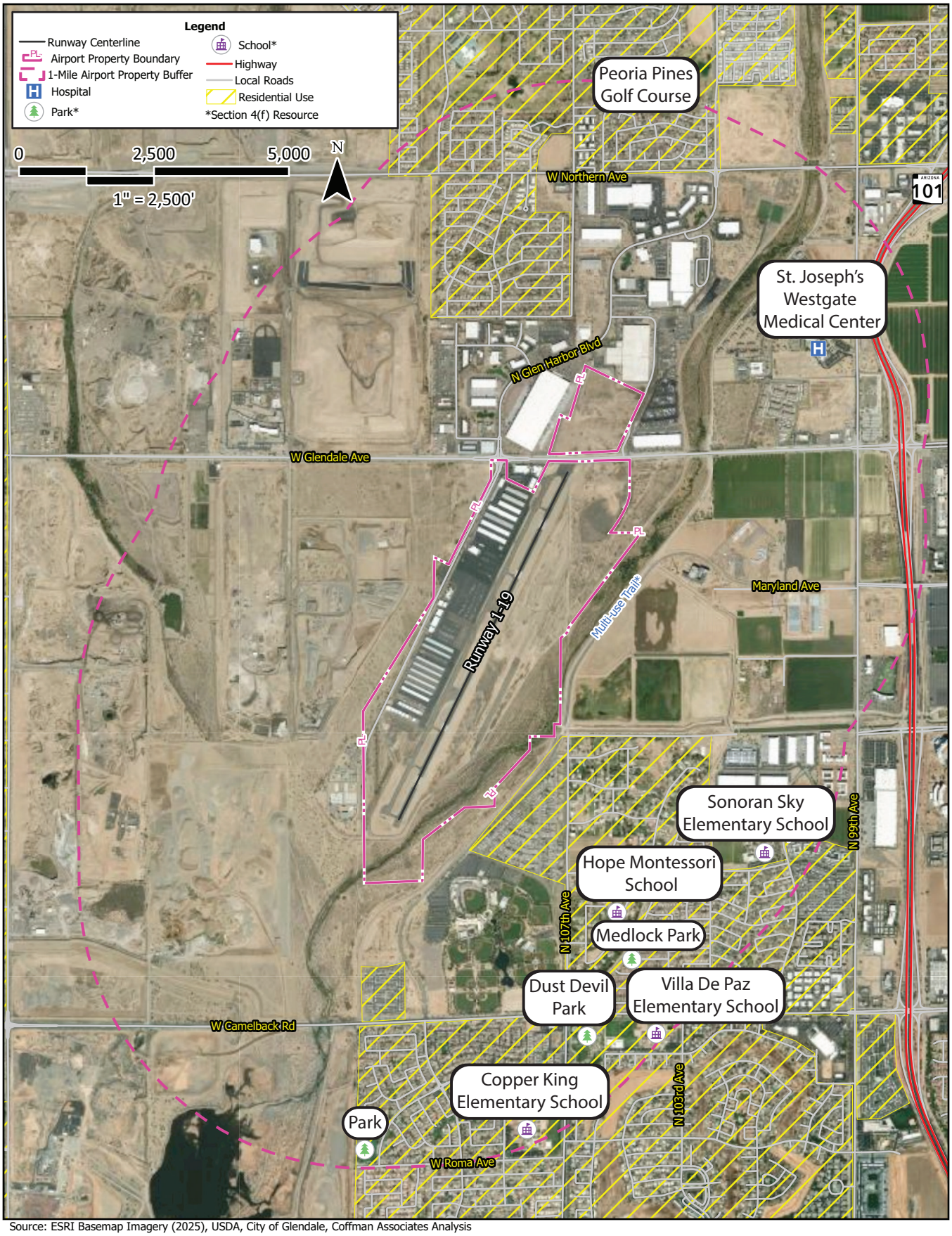
DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F)

Section 4(f) of the *Department of Transportation Act*, which was recodified and renumbered as Section 303(c) of Title 49 United States Code, provides that the Secretary of Transportation will not approve any program or project that requires the use of publicly or privately owned historic sites, public parks or recreation areas, or waterfowl and wildlife refuges of national, state, regional, or local importance unless there is no feasible and prudent alternative to the use of such land and the project includes all possible planning to minimize harm resulting from the use.

The closest potential Section 4(f) resources to the airport are listed as follows (**Exhibit 1L**):

- A regional multi-use trail along the east side of the New River
- A small park (Medlock Park) within the residential neighborhood just east of the airport
- Sonoran Sky Elementary School, which is located roughly 0.70 miles to the east of the airport (public schools may be considered Section 4(f) properties if their recreational fields and playgrounds are available to the general public)
- An approximately 3.5-acre park within a residential neighborhood between N 109th Avenue, W Belmont Avenue, and W Kaler Drive roughly 0.75 miles north of the airport

[6] eBird, Online Observation Data Management System of Public Observations of Birds (https://ebird.org/home), accessed April 2026 by SWCA



Source: ESRI Basemap Imagery (2025), USDA, City of Glendale, Coffman Associates Analysis

There are other potential public recreational sites southeast of the airport, south of W Camelback Road, including Villa de Paz Elementary School, Copper King Elementary School, Dust Devil Park, and a small unnamed park along W Highland Avenue; however, these resources south of W Camelback Road are almost or over a mile from the airport and are not considered close enough to warrant further consideration related to Section 4(f).

Camelback Ranch–Glendale is a large baseball complex located just southeast of the airport on the northwest corner of N 107th Avenue and Camelback Road. The complex is owned by the City of Glendale and operated by Camelback Spring Training LLC, and is the spring training home for two major league baseball teams and the home of the Desert Dogs in the Arizona Fall League.[7] Due to its commercial nature, it is not likely to qualify as a Section 4(f) resource. Similarly, an indoor/outdoor sports complex (the MG Sportsplex) under development at 10139 W Northern Avenue, north of the airport, is not likely to qualify as a Section 4(f) resource due to its commercial nature.[8]

The nearest historic features or districts listed on the National Register of Historic Places (NRHP) are roughly four miles northeast of the airport. These include First Presbyterian Church of Peoria (10236 N 83rd Avenue, Peoria, Arizona), Central School (10304 N 83rd Avenue, Peoria, Arizona), and the Peoria Jail House (8322 W Washington Street, Peoria, Arizona).[9]

There are no waterfowl and wildlife refuges, wilderness areas, and national recreation areas located near the airport and no *Land and Water Conservation Fund* Section 6(f) facilities are located at or near GEU.[10]

FARMLANDS

Under the *Farmland Protection Policy Act* (FPPA), federal agencies are directed to identify and consider the adverse effects of federal programs on the preservation of farmland, consider appropriate alternative actions that could lessen adverse effects, and ensure such federal programs are compatible with state or local government programs and policies to protect farmland, to the extent practicable. The FPPA guidelines were developed by the U.S. Department of Agriculture (USDA) and apply to farmland classified as prime, unique, or state or local importance, as determined by the appropriate government agency with concurrence by the Secretary of Agriculture.

The USDA National Resources Conservation Service (NRCS) Web Soil Survey shows the types of soils on the airport, along with their farmland classifications. The airport contains soils that are classified as the following ratings:

- Farmland of unique importance
- Prime farmland if irrigated
- Not prime farmland

[7] Camelback Ranch–Glendale (https://www.mlb.com/camelback-ranch), accessed April 2026
[8] MG Sportsplex (https://mgsportsplex.com/what-is-mgsportsplex/), accessed April 2026
[9] U.S. Department of the Interior, National Park Service, National Register of Historic Places (https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466), accessed April 2026
[10] Land and Water Conservation Fund (https://lwcf.tplgis.org/mappast/), accessed April 2026

GEU is located within a designated urbanized area boundary;[11] therefore, the airport property would not be protected under the FPPA.

HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

Hazardous Materials

Federal, state, and local laws regulate hazardous materials use, storage, transportation, and disposal. These laws may extend to past and future landowners of properties that contain these materials. Disrupting sites that contain hazardous materials or contaminants may cause significant impacts to soil, surface water, groundwater, air quality, and the organisms using these resources.

The two statutes of most importance to airport projects are the *Resource Conservation Recovery Act* (RCRA), as amended by the *Federal Facilities Compliance Act of 1992*, and the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA), as amended (also known as Superfund). The CERCLA provides for the cleanup of any release of a hazardous substance that may endanger public health or the environment. These laws may extend to past and future landowners of properties that contain these materials. Locations identified as Superfund sites are listed on the National Priorities List (NPL). The airport does not contain any facilities or parcels that are listed as active Superfund or brownfield sites.[11] Based on the U.S. EPA's NEPAssist tool, the closest brownfield site is located 2.5 miles north of the airport, while the closest Superfund site is Goodyear Airport, which is located 4.6 miles to the southwest of GEU.

Based on the Arizona Department of Environmental Quality's (ADEQ) eMaps database, there are five permanently closed underground storage tank (UST) at the airport.[12] As discussed earlier in this chapter under *Fuel Storage*, a fuel farm is located south of the corporate hangars and includes three 20,000-gallon aboveground fuel storage tanks (one for Jet A fuel and one for 100LL fuel). Additionally, there is a 3,600-gallon self-serve facility for 100LL fuel located on the north side of the aircraft parking apron, adjacent to the FBO.

Solid Waste

Solid waste in Glendale is taken to the Glendale Municipal Solid Waste Landfill, which is located just west of the airport at 11480 W Glendale Avenue. Recycling drop-off customers can drop off recyclables within a designated area at the landfill. Waste not accepted at the landfill includes asbestos and other types of hazardous waste. The landfill receives 351,000 tons of refuse and processes approximately 15,500 tons of recyclables annually. The landfill has Intergovernmental Agreements (IGAs) with multiple cities in the area.[13]

[11] U.S. EPA, NEPAssist (https://nepassisttool.epa.gov/nepassist/nepamap.aspx), accessed April 2026
[12] ADEQ, eMaps, Waste Programs Division, Underground Storage Tanks (USTs) (https://azdeq.gov/emaps), accessed April 2026
[13] City of Glendale, Arizona, Trash and Recycling, Landfill (https://www.glendaleaz.gov/Live/City-Services/Trash-and-Recycling/Landfill), accessed April 2026

Pollution Prevention

National Pollutant Discharge Elimination System (NPDES) permits outline the regulatory requirements of municipal stormwater management programs and establish requirements to help protect the beneficial uses of the receiving waters. NPDES permits require permittees to develop and implement best management practices (BMPs) to control/reduce the discharge of pollutants to waters of the United States, to the maximum extent practicable. The NPDES program manages wastewater, construction runoff, stormwater, and pretreatment.

In Arizona, there is a state-specific permit called the Arizona Pollutant Discharge Elimination System (AZPDES) permit. AZPDES permits are required for all stormwater discharges that enter Arizona surface waters or municipal separate storm sewer systems (MS4s) leading to Arizona surface waters. These permits are also associated with construction activities that disturb one or more acres of land and support activities from temporary plants or operations set up to produce concrete, asphalt, or other materials exclusively for permitted construction projects.[14]

HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Determination of a project's environmental impact to historic and cultural resources is made under guidance in the *National Historic Preservation Act of 1966* (NHPA), as amended, the *Archaeological and Historic Preservation Act of 1974* (AHPA), the *Archaeological Resources Protection Act* (ARPA), and the *Native American Graves Protection and Repatriation Act of 1990* (NAGPRA). The *Antiquities Act of 1906*, the *Historic Sites Act of 1935*, and the *American Indian Religious Freedom Act of 1978* also protect historic, architectural, archaeological, and cultural resources. Impacts may occur when a proposed project causes an adverse effect on a resource that has been identified (or is identified after being unearthed during construction) as having historic, architectural, archaeological, or cultural significance.

As previously discussed under the *Department of Transportation Act*, Section 4(f) section, there are no listed NRHP resources on the airport. The nearest historic features or districts listed on the NRHP are roughly four miles northeast of the airport.

There are no historic-age buildings (i.e., 50 years or older) located at the airport, which was constructed in 1984, but one historic-age structure is present along the eastern property line: an in-use 20-inch-diameter underground natural gas pipeline that was constructed in 1953 to extend natural gas service from the San Juan Line to the Phoenix metropolitan area. El Paso Natural Gas (EPNG) Line No. 1203 has been the subject of numerous upgrades since its original construction. In the early 1980s, its alignment was shifted to the west to avoid the operation areas of the proposed Glendale Municipal Airport.

A literature and record search and Class III pedestrian survey were conducted in concert with this master plan in March 2026.[15] The results of the study were negative for cultural resources sites within the airport. No archaeological sites or isolated occurrences were found or have been recorded. Most of the airport has been disturbed by airport construction and operation. Outside the extant airport development is an abandoned materials pit.

[14] ADEQ, Construction Activity General Permit (CGP) for Stormwater (https://azdeq.gov/AZPDES/CGP), accessed April 2026
[15] SWCA Environmental Consultants, Inc., Cultural Resources Survey for a Master Plan Update at the Glendale Regional Airport in Maricopa County, Arizona, April 2026

LAND USE

Existing land uses surrounding the airport include the following:

- Farmland and single-family residential neighborhoods to the east
- The Camelback Ranch professional baseball complex to the southeast
- A wastewater treatment plant and aggregate materials source plants to the south and west
- The Glendale Municipal Solid Waste Landfill to the northwest
- Commercial, light industrial, and residential land uses to the north

The New River generally follows the airport's eastern border, traversing the southeastern corner of the airport. The closest residential neighborhoods to the airport are comprised of single-family homes east of N Ball Park Road, roughly 0.3 to 0.5 miles east of the runway, and residences north of W Orangewood Avenue, 0.5 miles north of the end of Runway 19.

Land use regulations near airports are achieved through local government codes, city policies, and plans that include airport district and planning areas. Regulations are used to avoid land use compatibility conflict around airports. The airport is owned and operated by the City of Glendale and is a division within the city's Transportation Department.

Local planning at the City of Glendale is contained in *Envision Glendale 2040 General Plan* (2016). General plan land use within the airport borders is listed as Light Industrial and Public Facility, while land uses around the airport include Business Park, Planned Commercial, and Parks and Open-Space.[16] In addition, land adjacent to the south side of the airport is governed by the City of Phoenix; the City of Phoenix general plan land use map currently includes Mixed Use, Residential (of varying densities), and Open Space for these areas (**Exhibit 1M**).[17]

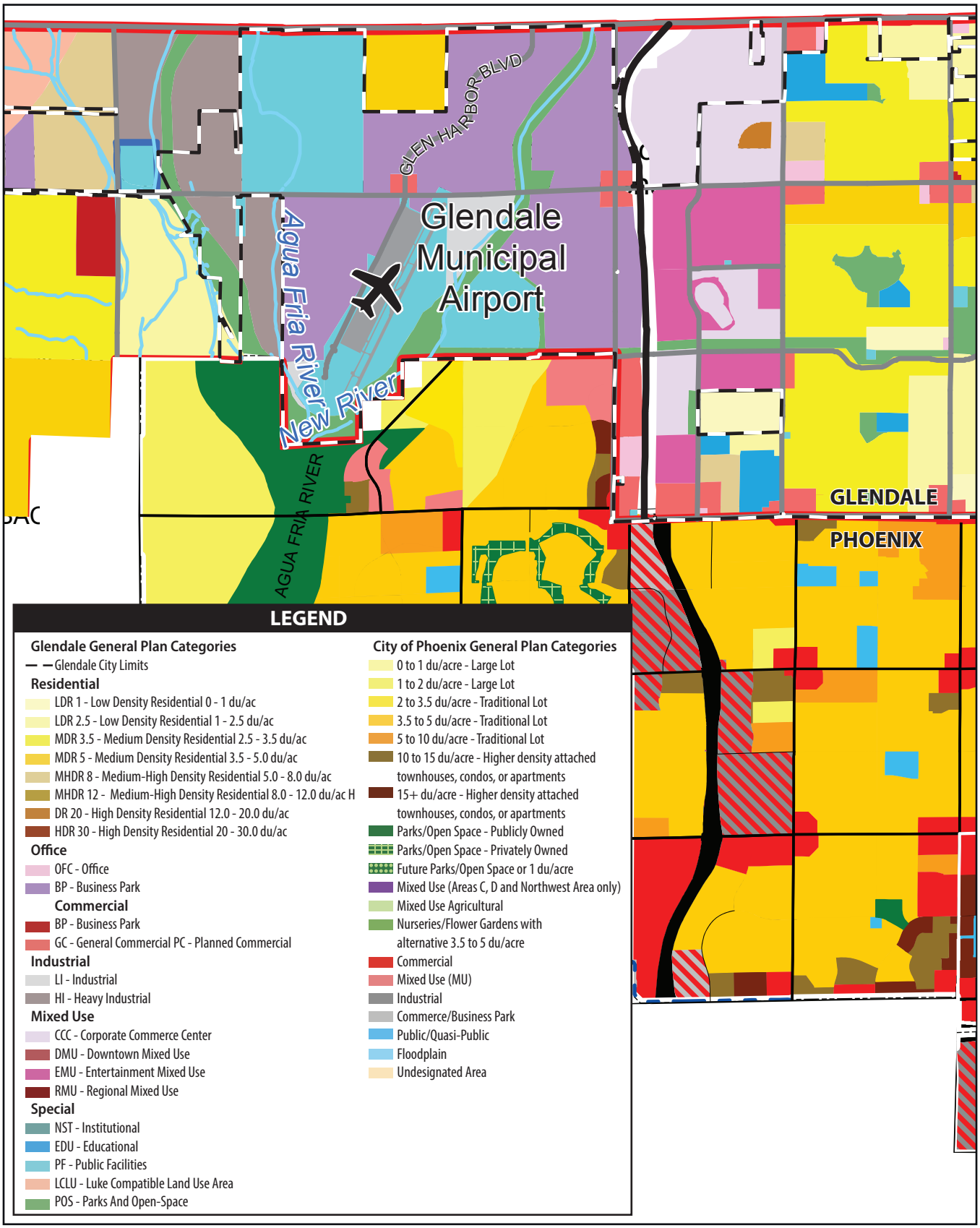
The City of Glendale has recently completed a planning document specific to the vacant east side of the airport. This plan, known as the *Eastside Development Plan* (2025), includes the following five broad categories: Airfield Operations, General Aviation, Non-Aeronautical Reserve, Aircraft Rescue and Firefighting (ARFF) Reserve, and New River Channel.

NATURAL RESOURCES AND ENERGY SUPPLY

Natural resources and energy supply provide an evaluation of a project's consumption of natural resources. It is the policy of FAA Order 1053.1C, *Energy and Water Management Program for FAA Buildings and Facilities*, to encourage the development of facilities that exemplify the highest standards of design, including principles of sustainability.

The airport contains several types of utility infrastructure within its boundaries, including potable water, electricity, and natural gas. As discussed earlier in this chapter under *Fuel Storage*, a fuel farm and a self-serve facility are also present at the airport.

[16] City of Glendale, General Plan and Land Use Map (https://www.glendaleaz.gov/Work/Planning-Zoning/General-Plan), accessed April 2026
[17] City of Phoenix, General Plan 2025 Maps (https://www.phoenix.gov/administration/departments/pdd/growth-infrastructure/general-plan/general-plan-2025-maps.html), accessed April 2026



Sources: City of Glendale, Envision Glendale 2040 General Plan, Figure 2, Glendale General Plan Land Use Diagram; City of Phoenix General Plan 2025 Maps

Adjacent to the airport on the west side are aggregate material sources that provide these types of natural resources to Glendale and beyond.

The City of Glendale follows regional "assured water supply rules," which require that all new subdivisions have a 100-year assured water supply. The Arizona Department of Water Resources reviews the assured water supply in the Phoenix Active Management Area (AMA) at least every 15 years. In addition to the groundwater, the city receives water from the Colorado River via the Central Arizona Project (CAP) through water rights settlements and contract negotiations.[18] (See more discussion under *Water Resources/Groundwater* later in this section.)

NOISE AND NOISE-COMPATIBLE LAND USE

Federal land use compatibility guidelines are established under 14 Code of Federal Regulations (CFR) Part 150, *Airport Noise Compatibility Planning.* According to 14 CFR Part 150, residential land and schools are noise-sensitive land uses that are not considered compatible with a 65-decibel (dB) day-night average sound level (Ldn or DNL). Other noise-sensitive land uses (such as religious facilities, hospitals, or nursing homes), if located within a 65-dB DNL contour, are generally compatible when an interior noise level reduction of 25 dB is incorporated into the design and construction of such structures. Special consideration should also be given to noise-sensitive areas within Section 4(f) properties where the land use compatibility guidelines in 14 CFR Part 150 do not account for the value, significance, and enjoyment of the area in question.[19]

The closest residential areas are located roughly 0.3 to 0.5 miles east of the runway centerline and 0.5 miles north of the end of Runway 19 (**Exhibit 1L**). The closest school (Sonoran Sky Elementary School) is located roughly 0.7 miles to the east and the St. Joseph's Westgate Medical Center (Dignity Health) is located one mile northeast of the end of Runway 19. There are no places of worship near the airport; the closest such land uses are 1.5 miles away on the west side of N. El Mirage Road. Noise modeling will be required to determine if these types of noise-sensitive land uses are located within the current 65-dB DNL contour of the airport.

SOCIOECONOMICS AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

Socioeconomics

Socioeconomics is an umbrella term used to describe aspects of a project that are social or economic in nature. A socioeconomic analysis evaluates how elements of the human environment (such as population, employment, housing, and public services) might be affected by the proposed action or alternative(s).

[18] City of Glendale, Envision Glendale 2040, Public Facilities and Services, Section 6.3, Water Resources Element (pages 6–7)
[19] Title 49 U.S. Code § 47141, Compatible Land Use Planning and Projects by State and Local Governments

Children's Environmental Health and Safety

Executive Order (E.O.) 13045, *Protection of Children from Environmental Health Risks*, directs federal agencies to make it a high priority to identify and assess the environmental health and safety risks that may disproportionately impact children. Such risks include those that are attributable to products or substances a child is likely to encounter or ingest (e.g., air, food, and water, including drinking water) or to which they may be exposed.

The closest residential areas are roughly 0.3 to 0.5 miles east of the runway centerline and 0.5 miles north of the end of Runway 19. The closest school (Sonoran Sky Elementary School) is located roughly 0.7 miles to the east. Neighborhood parks, trails, and other recreational facilities also cater to children.

VISUAL EFFECTS

Visual effects deal broadly with the extent to which a proposed action or alternative(s) would either (1) produce light emissions that create an annoyance or interfere with activities or (2) contrast with or detract from the visual resources and/or the visual character of the existing environment. Each jurisdiction will typically address outdoor lighting, scenic vistas, and scenic corridors in its zoning ordinances and general plan.

Light Emissions

These impacts typically relate to the extent to which any light or glare results from a source that could create an annoyance for people or would interfere with normal activities. Generally, local jurisdictions include ordinances in their local codes that address outdoor illumination to reduce the impact of light on surrounding properties.

As described earlier in this chapter under *Airfield Lighting, Signage, and Marking*, the airport contains the following types of airport lighting:

- The airport has a rotating beacon, which projects two beams of light (one white and one green) 180 degrees apart and is located atop the ATCT.
- The runway is equipped with standard MIRL, which incorporate split white/yellow lenses to identify the caution zone along the final 2,000 feet of each runway end. All taxiways are equipped with MITL, which have blue lenses. The airport also has a lighted runway/taxiway signage system.
- Both runway ends are equipped with two-box PAPI lights (PAPI-2) on the left side of the runway, as well as a REIL system (i.e., strobe lights placed at the edges of the landing threshold).
- The airport has standard building security lighting for buildings on the west side of the airport along N Glen Harbor Boulevard.

The airport's airfield lighting system is connected to a pilot-controlled lighting (PCL) system. When the ATCT is closed, the PCL system allows a pilot to activate the PAPIs, REILs, and MIRL system on Runway 2-20 through a series of clicks with their transmitter on the common traffic advisory frequency (CTAF) 121.00 megahertz (MHz).

There are no light-sensitive land uses in proximity to the airport. The closest residential area is 0.3 to 0.5 miles from the airfield. At this distance, the airside and landside light emissions are in the long-range viewshed rather than the short-range viewshed of the residents.

Visual Resources and Visual Character

Visual resources include buildings, sites, traditional cultural properties, and other natural or human-made landscape features that are visually important or have unique characteristics. Visual resources may include structures or objects that obscure or block other landscape features. In addition, visual resources can include the cohesive collection of various individual visual resources that can be viewed at once or in concert from the area surrounding the site of the proposed action or alternative(s).

Visual character refers to the overall visual makeup of the existing environment where a proposed action or its alternative(s) would be located. For example, areas near densely populated areas generally have a visual character that could be defined as urban, whereas less developed areas could have visual characters defined by the surrounding landscape features (e.g., open grass, fields, forests, mountains, deserts, etc.).

The airport is in a developing area of west Glendale that includes a mix of residential, commercial, recreational, and light industrial land uses. Other areas around the airport are occupied with a sanitary landfill, aggregate materials pits, a wastewater treatment plant, and a groundwater recharge area associated with the floodplain along the New River.

In undisturbed areas, vegetation includes typical desertscrub plants such as desert broom, mesquite, and palo verde. The area does not provide unique scenic resources or a visual character other than views of the New River, which are provided from the regional multi-use trail and N Ball Park Road on its east side. Neither the State of Arizona nor the City of Glendale have established scenic routes or highways near the airport.

WATER RESOURCES

Wetlands

The U.S. Army Corps of Engineers regulates the discharge of dredged and/or fill material into waters of the United States, including wetlands with continuous surface connections to traditional navigable waters, under Section 404 of the *Clean Water Act* (CWA). Wetlands are defined in E.O. 11990, *Protection of Wetlands*, and can include swamps, marshes, bogs, sloughs, potholes, wet meadows, river overflows, mudflats, natural ponds, estuarine areas, tidal overflows, and shallow lakes and ponds with emergent vegetation. Wetlands exhibit three characteristics: (1) the soil is inundated or saturated to the surface at

some time during the growing season (hydrology), (2) the soil has a population of plants that are able to tolerate various degrees of flooding or frequent saturation (hydrophytes), and (3) the soil is saturated enough to develop anaerobic (absent of air or oxygen) conditions during the growing season (hydric).

Results of a desktop review and field reconnaissance conducted as part of a surface water delineation report for this airport master plan study indicate that there are no surface water features within the GEU property that could be considered waters of the United States (WOTUS).[20] While the New River drainageway is characterized as a relatively permanent water, it does not have a continuous surface connection to the Gila River (the closest traditional navigable water [TNW]) because of numerous impediments to flow between the project area and the Gila River, which is located more than nine miles downstream. Because there is no continuous surface connection to the Gila River TNW, the New River does not meet the definition of a WOTUS as a tributary to a TNW under the 2023 WOTUS rule, as amended (*Federal Register* 88:61964, September 8, 2023).

For similar reasons as those described in the prior paragraph, this assessment also indicates there are no potential jurisdictional wetlands or other special aquatic sites within the project area. Although wetland vegetation and wetland hydrology were visually apparent in aerial imagery and were identified by a qualified biologist during a field visit, because the New River drainage is not a WOTUS, any wetlands adjacent to the channel cannot be considered jurisdictional and would not be regulated under Section 404 of the CWA based on the current definition of WOTUS (including wetlands) at the time of this report.

Floodplains

E.O. 11988, *Floodplain Management*, directs federal agencies to take action to reduce the risk of flood loss, minimize the impacts of floods on human safety, health, and welfare, and restore and preserve the natural and beneficial values served by the floodplains. U.S. Department of Transportation (DOT) Order 5650.2, *Floodplain Management and Protection*, implements the guidelines contained in E.O. 11988.

At GEU, the 100-year floodplain, including a regulatory floodway, traverses the east property boundary in association with the New River (**Exhibit 1K**).[21]

Surface Waters

The CWA establishes water quality standards, controls discharges, develops waste treatment management plans and practices, prevents or minimizes the loss of wetlands, and regulates other issues concerning water quality. Water quality concerns related to airport development most often relate to the potential for surface runoff and soil erosion, as well as the storage and handling of fuel, petroleum, products, solvents, etc. Additionally, the U.S. Congress has mandated the NPDES under the CWA.

[20] SWCA Environmental Consultants, Inc., Biological Resources Evaluation for the Glendale Municipal Airport Master Plan Update Project in Glendale, Maricopa County, Arizona, Technical Memorandum, April 30, 2026

[21] Federal Emergency Management Agency (FEMA), Flood Map Service Center, FIRM Panel No. 04013C1695M (https://msc.fema.gov/portal/search?AddressQuery=Glendale%20Regional%20Airport%2C%20Glendale%2C%20AZ), effective date September 18, 2020

The airport is primarily within the City of Surprise–Agua Fria River watershed, which is a large watershed that drains into the Agua Fria River; the eastern side of the airport is within the City of Peoria–New River watershed. There are no assessed water bodies within either watershed, which means the water bodies within the watershed meet water quality standards.[22]

Currently, the airport collects its surface water using surface inlets and storm drainpipes that direct it to the New River.

Groundwater

Groundwater is subsurface water that occupies the space between sand, clay, and rock formations. The term *aquifer* is used to describe the geologic layers that store or transmit groundwater, such as wells, springs, and other water sources. Examples of direct impacts to groundwater could include withdrawal of groundwater for operational purposes or reduction of infiltration or recharge area due to new impervious surfaces.

The U.S. EPA's Sole Source Aquifer (SSA) program was established under Section 1424(e) of the *Safe Drinking Water Act* (SDWA). Since 1977, the SSA program has been used by communities to help prevent contamination of groundwater from federally funded projects. The program has also increased public awareness of the vulnerability of groundwater resources.

According to the U.S. EPA's *Sole Source Aquifers for Drinking Water* website, there are no sole source aquifers located with airport boundaries. The closest sole source aquifer to the City of Glendale is the Upper Santa Cruz and Avra Basin SSA, which is located 70 miles southeast.[23]

The City of Glendale includes groundwater recharge programs to store surface water underground for later use. The New River–Agua Fria Underground Storage Project (NRAUSP) is operated by the Salt River Project (SRP) and is located just east of the airport, upstream from the confluence of the New River and the Agua Fria River.[24] As discussed earlier under *Natural Resources and Energy Supply*, the airport is within the Phoenix AMA, which is reviewed every 15 years by the Arizona Department of Water Resources for assured water supply.

Wild and Scenic Rivers

The *National Wild and Scenic Rivers Act* was established to preserve certain rivers with outstanding, natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations.

[22] ADEQ, eMap, Impaired Waters (https://azdeq.gov/emaps), accessed April 2026; U.S. EPA, How's My Waterway (https://mywaterway.epa.gov/community/Glendale%20Regional%20Airport/overview), accessed April 2026
[23] Sole Source Aquifers (https://experience.arcgis.com/experience/1bfab371d71e4b868fc9ae7df62a16fe), accessed April 2026
[24] City of Glendale, Envision Glendale 2040, Public Facilities and Services, Section 6.3, Water Resources Element (pages 6–8)

The Nationwide Rivers Inventory (NRI) is a list of over 3,400 rivers or river segments that appear to meet the minimum *Wild and Scenic Rivers Act* eligibility requirements based on their free-flowing status and resource values. The development of the NRI resulted from Section 5(d)(1) in the *Wild and Scenic Rivers Act*, which directs agencies to consider potential wild and scenic rivers in the comprehensive planning process.

The closest designated national wild and scenic river identified is a segment of the Verde River, which is located 55 miles northeast of the airport.[25] The nearest NRI feature is the Hassayampa River, which is located 30 miles northwest of the airport.[26]

[25] National Wild and Scenic Rivers System (https://rivers.gov/), accessed April 2026
[26] Nationwide Rivers Inventory (https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm), accessed April 2026