



CHAPTER ONE

INVENTORY

The inventory chapter of existing conditions is the initial step in the preparation of the Payson Municipal Airport (PAN) Master Plan. The inventory will serve as an overview of the airport's physical and operational features, including facilities, users, and activity levels, as well as specific information related to the airspace, air traffic activity, and role of the airport. Finally, a summary of socioeconomic characteristics and review of existing environmental conditions on and adjacent to the airport are thoroughly detailed, which will provide further input into the study process.

Information provided in Chapter One serves as the baseline for the remainder of the master plan, which is compiled using a wide variety of resources, including: applicable planning documents; on-site visits; interviews with airport staff, tenants, and users; aerial and ground photography; federal, state, and local publications; and project record drawings. Specific sources are those listed below, and environmental resources are detailed at the end of this chapter.

Inventory Source Documents:

- Payson Municipal Airport *2009 Airport Master Plan Update*
- Payson Municipal Airport Layout Plan Updates (2013, 2021)
- Town of Payson's airport website (<https://www.paysonaz.gov/>)
- Town of Payson General Plan Update, 2014-2024
- Payson Municipal Airport Federal Aviation Administration (FAA) Form 5010, *Airport Master Record*



AIRPORT SETTING AND BACKGROUND

LOCALE

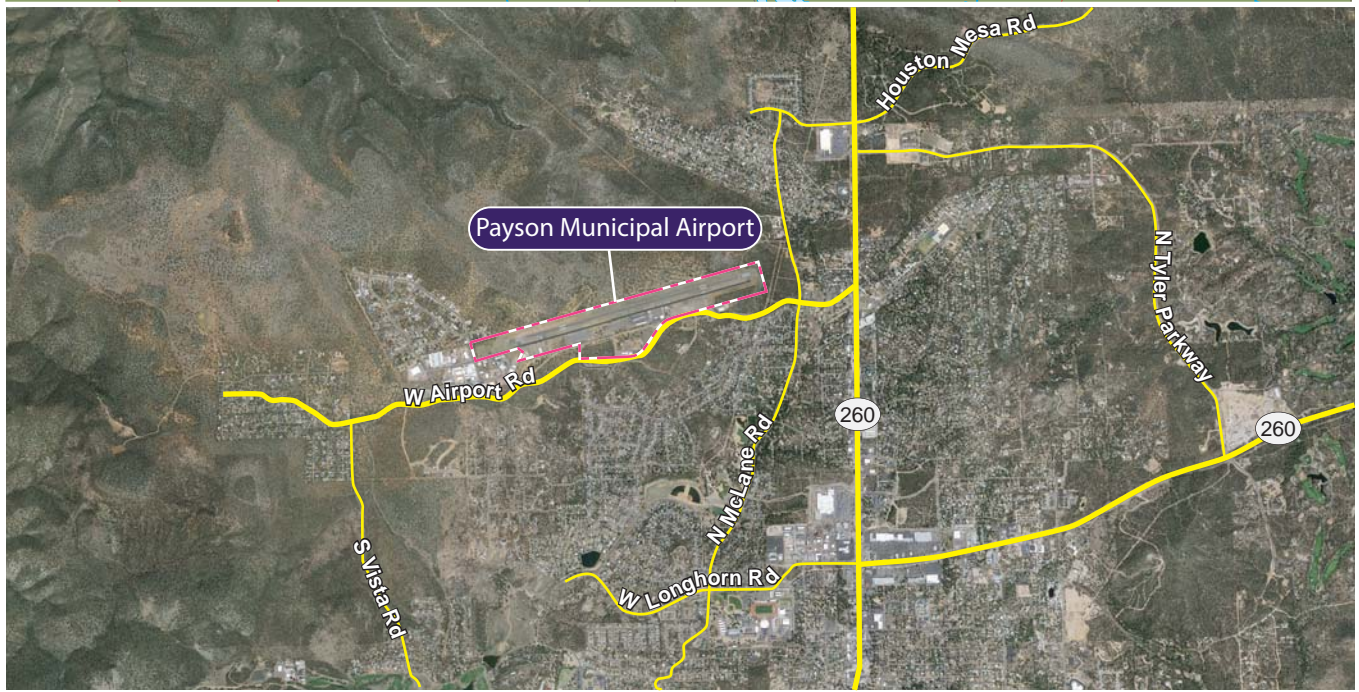
Located in northern Gila County, the Town of Payson is situated near the geographic center of Arizona. Payson is surrounded by the Tonto National Forest, which encompasses more than 2.8 million acres, making it the largest of the six national forests in the state. Known locally and beyond as “Rim Country,” the town is widely recognized as a recreation destination and the gateway to the Mogollon Rim. Payson sits at an elevation of 5,000 feet and enjoys diverse scenery, a rich history, and a thriving local economy. With a population of 16,351¹ people, the town boasts more residents than any other community in Gila County. These numbers swell each year with the millions of tourists who visit Gila County. Major industries in the area include education, health care, hospitality, and retail.

PAN is situated within the Payson limits on the northwest edge of town, approximately one-half mile west of downtown Payson. The airport encompasses approximately 125 acres and sits at an elevation of 5,156.8 feet above mean sea level (MSL). The surrounding major surface roadways include Arizona State Route 260, which is accessible from State Route 87 that connects the Phoenix metropolitan area to north-central portions of the state. West Airport Road provides access to airport property. **Exhibit 1A** depicts the airport in its regional setting.



Payson Municipal Airport

¹ U.S. Census Bureau, 2020, https://data.census.gov/profile/Payson_town_Arizona?g=1600000US0453700



AIRPORT HISTORY

Like many general aviation airports across the country, aviation in Payson dates back to the World War II era. Arizona was a major training ground for pilots serving the war effort, and northern Gila County was no exception. The airport in Payson was established in the early 1940s and consisted of a dirt strip, and air markers were placed on the Mogollon Rim to the north to assist pilots flying to the Phoenix area.

Following the war, not much is known about the history of the airport until 1973. That year, Gila County obtained a permit to construct the present-day airport on land within the Tonto National Forest. A 4,900-foot by 60-foot runway was constructed, along with a connecting taxiway and ramp, and the airport opened for operations in 1975. A charter service was established by Rich Henry in 1977, with aircraft maintenance and flight instruction to follow. The following year, the airport's on-site restaurant, Crosswinds, was opened and is still in operation today.

In 1988, Gila County's permit with the United States Forest Service ended, and the Town of Payson assumed responsibility for the airport by entering into a new agreement with the Forest Service. Since that time, many airport improvement projects have occurred, including a runway extension and widening project, installation of airfield lighting and visual approach aids, and construction of hangars and additional ramp space with tiedowns.

Today, the Payson Municipal Airport is a thriving facility that accommodates a wide array of general aviation aircraft, from small, piston-powered aircraft to mid-sized business jets. A variety of operators use the airport, including recreational fliers, medivac, flight training, scenic charters, and the military. Crosswinds remains a popular restaurant for both the flying and general public, and an on-site campground is a unique amenity for pilots.

AIRPORT ADMINISTRATION

PAN is owned and operated by the Town of Payson. An Airport Commission has advisory and oversight responsibilities regarding policies, capital improvements, land leases, safety matters, and other items as directed by the Town Council. The Commission consists of seven members who are appointed by Town Council and serve a three-year term. An Airport Coordinator provides day-to-day oversight of the airport and its maintenance and serves as a staff liaison to the Airport Commission. The airport is staffed six days per week between the hours of 7:00 a.m. and 4:00 p.m.



Airport Office

CLIMATE

Climate and local weather conditions are an important consideration in the master planning process as they can significantly impact an airport’s operations. For example, high surface temperatures and humidity increase runway length requirements, and runway orientation is dependent upon predominant wind patterns for the area. Cloud cover percentages and frequency of other climatic conditions also determine the need for navigational aids and light.

Due to its elevation, Payson experiences a Mediterranean climate, with four distinct seasons characterized by generally mild temperatures. Winters are cool with occasional snowfall, while summers are warm and rarely exceed 100 degrees. **Figure 1A** displays weather patterns in the town. July has the highest average maximum temperature of 92.5 degrees, while December is the coolest month with an average minimum temperature of 25.6 degrees. Annual rainfall totals 12 inches and is most plentiful during the late summer monsoon season, which brings high winds and heavy rains. July is the rainiest month, averaging 2.8 inches. Payson averages about 18.5 inches of snow each year, with February being the snowiest month with 4.9 inches.

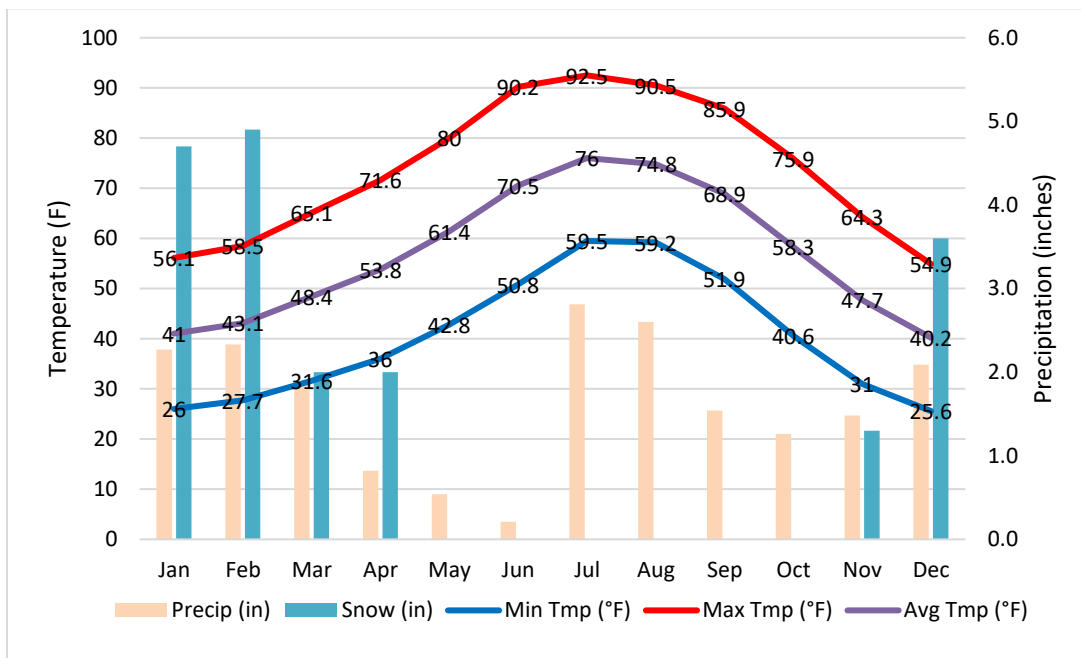


Figure 1A – Payson Weather Patterns

Table 1A indicates that visual meteorological conditions (VMC) occur 96.53 percent of the time. When under VMC conditions, pilots can operate using visual flight rules (VFR) and are responsible for maintaining proper separation from objects and other aircraft. Instrument meteorological conditions (IMC) account for all weather conditions less than VMC conditions that still allow for aircraft to safely operate under instrument flight rules (IFR). Under IFR, pilots rely on instruments in the aircraft to accomplish navigation. IMC conditions occur 1.51 percent of the time. Less than IMC, or poor visibility conditions (PVC), are present 1.96 percent of the time. These weather conditions are lower than instrument approach minimums, making the airport inaccessible to most air traffic.

Table 1A | Weather Conditions

Condition	Cloud Ceiling	Visibility	Percent of Total
VMC	≥ 1,000' AGL	≥ 3 statute miles	96.53%
IMC	≥ 500' AGL and < 1,000' AGL	≥ 1 to < 3 statute miles	1.51%
PVC	< 500' AGL	< 1 statute mile	1.96%

VMC: Visual Meteorological Conditions
 IMC: Instrument Meteorological Conditions
 PVC: Poor Visibility Conditions
 AGL: Above Ground Level

Source: Station ID 72374500374, observations from 1/1/2012 thru 12/31/2021

CAPITAL IMPROVEMENT HISTORY

Significant improvements have been made to the airport since its establishment. To assist in funding capital improvements, the FAA and Arizona Department of Transportation – Aeronautics Group (ADOT) have provided funding assistance to PAN primarily through the Airport Improvement Program (AIP). Airport improvement funds are collected through user fees, additional taxes on airline airfares, and aviation fuel taxes. As airports grow, or safety standards change over time, funding is needed to maintain a safe and efficient airport environment. The *Airport and Airway Development and Revenue Act of 1970* established the Aviation Trust Fund which funds the AIP. Generally, federal AIP grants fund 91.06 percent of FAA-approved airport improvement projects for airports in the State of Arizona. Airport sponsors are responsible for the remaining 8.94 percent; however, through Arizona’s State Aviation Fund, airport sponsors are eligible to receive state matching grants for 50 percent of the sponsor’s share. As a result, a typical project cost is broken out as 91.06 percent federal funding, 4.47 percent state funding, and 4.47 percent airport sponsor funding.

Table 1B summarizes approximately \$6.0 million in federal grant-aided capital improvement projects undertaken at the airport since 2005. State grant history since 2009 is also included and totals more than \$1.3 million. This has included funding for a variety of airport improvement projects, as listed in the table.

Table 1B | Grant History

FY	Grant Number	Project Description	Funding Source	Total
Federal Funds				
2005		Construct apron	AIP	\$1,602,630
2006		Construct apron	AIP	\$27,369
2008		Conduct environmental study	AIP	\$189,391
2010		• Acquire land for approaches	AIP	\$28,211
		• Acquire land for development	AIP	\$100,514
		• Improve Runway Safety Area	AIP	\$133,950
		• Install airfield guidance signs	AIP	\$82,650
2011		• Improve Runway Safety Area	AIP	\$58,742
		• Install airfield guidance signs	AIP	\$50,000
2012		Install weather reporting equipment (AWOS)	AIP	\$189,093
2013		Expand apron	AIP	\$52,938
2014		Expand apron	AIP	\$356,385
2017		Install perimeter fencing not required by 49 CFR 1542	AIP	\$110,782
		Rehabilitate apron	AIP	\$757,563

Table 1B | Grant History (continued)

FY	Grant Number	Project Description	Funding Source	Total
Federal Funds				
2018		Rehabilitate apron	AIP	\$787,375
2019		• Install runway vertical/visual guidance system	AIP	\$35,033
		• Rehabilitate taxiway lighting	AIP	\$40,000
2020		Coronavirus Aid, Relief, and Economic Security Act (CARES) Funds	CARES General	\$30,000
		Install runway vertical/visual guidance system	AIP	\$140,000
		Rehabilitate Taxiway Lighting	AIP Discretionary CARES Local	\$743,180 \$2,486 \$89,715
2021		Coronavirus Response and Relief Supplemental Appropriations (CRRSA) Act Funds	COVID Relief General	\$13,000
2022		Update Airport Master Plan	AIP	\$404,309
Federal Grants Subtotal				\$6,025,316
State Grants				
2009	E9F1501E	Conduct environmental study for 13 acres land acquisition		\$8,150
2011	E1F2801C	Acquire land for approaches		\$9,087
2012	E2F7001C	Improve Runway Safety Area		\$2,954
2013	E3F2H01C	Install Weather Reporting Equipment		\$10,375
2013	E3S2E01C	Runway Safety Area grading north side of Runway 6/24		\$180,000
2014	E4F1S01D	Design Echo Apron expansion (approx. 5,150 square yards)		\$2,682
2014	E4S1H01C	Pavement rehabilitation		\$876,742
2015	E5F2E01C	Expand apron (Echo Apron approx. 40,000 square feet)		\$17,621
2015	E5S1X01C	Evaluate and repair Taxiway A1 and A2 infield drainage		\$135,000
2018	E8M0901C	Rehab apron and install perimeter fencing		\$45,345
2019	E9M1K01C	Rehabilitate West Alpha Apron and Delta Apron		\$39,541
2020	E0M1K01C	Rehabilitate taxiway lighting		\$3,728
2023	E3M2R01P	Update Airport Master Plan		\$19,847
State Grants Subtotal				\$1,351,072
TOTAL GRANT FUNDS				\$7,376,388
FY: Fiscal Year				

Source: FAA AIP Grant History Visualization (2005-2021), https://www.faa.gov/airports/aip/grant_histories

ECONOMIC IMPACT

PAN is a significant economic asset to the region and is utilized year-round for recreational flying, flight training, air ambulance, and military operations, to name a few. In 2021, ADOT undertook a state-wide economic impact study to measure how Arizona’s airports stimulated the economy. Each airport was evaluated based on its direct impacts to the economy, as well as indirect or induced impacts. The study found that PAN generated more than \$10.9 million in total economic activity and supported 84 jobs with more than \$3.8 million in total earnings. **Exhibit 1B** includes an excerpt from the 2021 Arizona Aviation Economic Impact Study that focuses on PAN.

PAYSON AIRPORT (PAN)

“PAN is a GA airport in central Arizona located approximately one mile west of downtown Payson. The airport has a single asphalt runway (06/24) that is 5,504 feet long by 75 wide and helipad that is 50 feet long and 50 feet wide. PAN is a popular destination for recreational pilots visiting the on-site restaurant and campground. Many second homeowners use PAN to access their properties in the area surrounding Payson. The airport receives a significant amount of flight training traffic from schools based across southern and central Arizona. Payson Airport is also utilized by the local community for meetings and hosts an open house that draws people from around the region. Additionally, PAN is frequently utilized by military aircraft to conduct high altitude flight training, as well as by law enforcement and Civil Air Patrol to perform search and rescue missions in wilderness areas in central and eastern Arizona. PAN is also a base for an air ambulance helicopter that flies daily and acts as a staging area for aerial/wildland firefighting operations during the summer and fall fire seasons.”



Source: 2021 Arizona Aviation Economic Impact Study

ECONOMIC IMPACT OF PAN

\$4,456,000

On-Airport Activities

\$1,466,000

Visitor Spending

Indirect/Induced
\$5,072,000

PAN TOTAL IMPACTS

JOBS



84

Number of Full- and Part-Time persons employed

EARNINGS



\$3,862,000

Total compensation paid to workers including wages and benefits

ECONOMIC ACTIVITY (OUTPUT)



\$10,994,000

Value of sales that occur in the Arizona economy that are ultimately attributable to airport activities

TOP AIRPORT ACTIVITIES AT PAN

- Recreational Flying
- VIP Transport
- Aerial/Wildland Firefighting
- Flight Training
- Freight/Cargo

THE AIRPORT'S SYSTEM ROLE

Airport planning takes place at the local, state, and national levels, each of which has a different emphasis and purpose.

- **Local** | PAN has an Airport Master Plan, which was last updated in 2009. Two updates to the ALP have occurred since then, in 2013 and 2021.
- **State** | PAN is included within the 2018 update to the *Arizona State Airport System Plan (SASP)*.
- **National** | PAN is included in the *National Plan of Integrated Airport Systems (NPIAS)*, which categorizes overall airport roles and responsibilities based on input from local and state planning efforts (i.e., master plans and state system plans).

LOCAL AIRPORT PLANNING

2009 Airport Master Plan | The *2009 Airport Master Plan* provided a 20-year airport development vision based on aviation demand forecasts for activity levels. The study used 2007 data for its aviation forecasts baseline. The primary recommendations from the *2009 Airport Master Plan* included relocation of parallel Taxiway A to meet ultimate safety design standards, expansion of the taxiway system, property acquisition for approach protection, improved instrument approach procedures, and additional landside facilities (aprons/taxilanes/hangars) on the south side of the airfield, with reserve property acquired on the north side for potential aeronautical development.

2013 and 2021 Airport Layout Plan Updates | Updates to the ALP drawing set were prepared in 2013 and 2021 to reflect as-built conditions at the airport. In 2013, this included the addition of blast pads on each runway end, as well as a plan to construct new taxiway pavement and improve access to the fuel farm near the Runway 6 end. The 2021 update included the relocation of the AWOS equipment and the addition of a PAPI-2 visual approach aid on Runway 6.

STATE AIRPORT PLANNING

The primary planning document for the State of Arizona is the SASP, which was last updated in October 2018. The SASP focuses on keeping Arizona's airports highly advanced, safe, and responsive to the public's needs today and throughout the 20-year planning horizon. PAN is classified as a General Aviation (GA) Community airport within the SASP. The SASP definition for a GA Community airport is to "serve regional economies, connect to state and national economies, and serve all types of GA aircraft."²

² <https://azdot.gov/sites/default/files/2019/05/2018-arizona-sasp-update-technical-report.pdf>

FEDERAL AIRPORT PLANNING

Many of the nation's existing airports were either initially constructed by the federal government or their development and maintenance was partially funded through various federal grant-in-aid programs to local communities. The system of airports existing today is, therefore, due, in large part, to federal policy that promotes the development of civil aviation. As part of a continuing effort to develop a national airport system, the U.S. Congress has maintained a national plan for the development and maintenance of airports.

The FAA maintains a database of airports that are eligible for AIP funding and are for public use called the *National Plan of Integrated Airport Systems* (NPIAS). The NPIAS is published and used by the FAA in administering the AIP, which is the source of federal funds for airport improvement projects across the country. The AIP is funded exclusively by user fees and user taxes, such as those on fuel and airline tickets. An airport must be included in the NPIAS to be eligible for federal funding assistance through the AIP.

The most current plan is the NPIAS 2023-2027, which identified 3,287 existing public-use airports and eight proposed nonprimary airport anticipated to open by 2027 deemed important to national air transportation. The plan estimates that approximately \$62.4 billion in AIP-eligible airport projects will require financial assistance between 2023 and 2027, which is an increase of almost \$19 billion identified in the previous NPIAS report.

The NPIAS categorizes airports by the type of activities that take place, including commercial service, cargo service, reliever operations, and general aviation. PAN is currently classified as a Local GA airport in the FAA's NPIAS. These airports provide a critical component to the national GA system and account for 36 percent of all NPIAS airports. They are typically located near population centers and have moderate levels of activity. They often accommodate flight training and emergency services, and average approximately 33 based propeller-driven aircraft (no jets) at their facilities.

AIRPORT FACILITIES AND SERVICES

There are three broad categories of facilities and services at the airport: airside, landside, and support.

- **Airside facilities** | Facilities directly associated with aircraft operations, including runways, taxiways, lighting, markings, navigational aids, and weather reporting.
- **Landside facilities** | Facilities necessary to provide a safe transition from surface to air transportation and support aircraft parking, servicing, storage, maintenance, and operational safety.
- **Support facilities** | Serve as a critical link to provide the necessary efficiency to aircraft ground operations, such as fuel storage, airport maintenance, firefighting, and fencing.

AIRSIDE FACILITIES

Runway

As depicted on **Exhibit 1C**, PAN has a single runway, Runway 6-24, that is oriented north-east/southwest. Runway 6-24 measures 5,504 feet long by 75 feet wide and is constructed of asphalt. Pavement conditions, which are shown on the back of **Exhibit 1C**, are the result of a visual inspection conducted as part of the 2022 Arizona Airport Pavement Management System study. Pavement condition index (PCI) ratings range from 0 (failed) to 100 (excellent). As of the 2022 pavement inspection, Runway 6-24 has a PCI of 76, with distress that includes cracking and raveling.



West View from Runway 24

The runway has a weight-bearing capacity of 40,000 pounds for single wheel aircraft (S), 50,000 pounds for dual wheel aircraft (D), and 100,000 pounds for dual tandem wheel aircraft (2D). Both runway ends are equipped with non-precision markings, which support the area navigation (RNAV) global positioning system (GPS)-A approach. The runway slopes down from the 24 end at a gradient of 0.33 percent.

Taxiways

The taxiway system at PAN consists of a full-length parallel taxiway with four connectors, as identified on **Exhibit 1C**. Taxiway A serves as the 35-foot wide full-length parallel taxiway and has a 150-foot separation from Runway 6-24, centerline to centerline. Four taxiway connectors (Taxiways A1-A4 moving west to east) provide entry/exit points and measure between 30 and 80 feet wide. Taxiway B, which is accessible via a controlled access gate, extends from the west end of Taxiway A and provides access to the Mazatzal Mountain Residential Airpark and Sky Park Industrial Park. All taxiways are constructed of asphalt with PCI values in 2022 ranging from 76 (connectors) to 53 (Taxiway A).



East View from Taxiway A

Helipad

A 50-foot by 50-foot concrete helipad (H1) is located immediately east of the terminal apron, approximately 200 feet south of the runway. The helipad had a PCI value of 83 in 2022 and is equipped with lights. There is a left-hand traffic pattern for arriving and departing helicopters.



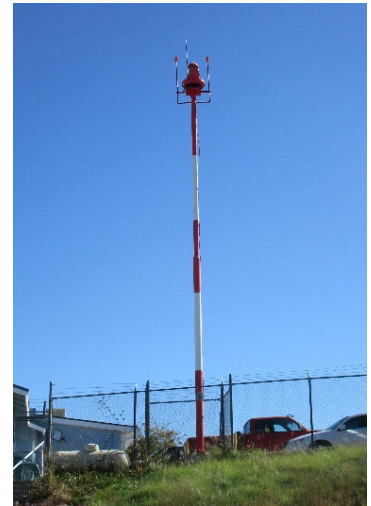
Helipad

Airfield Lighting

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

Airport Identification Lighting

The location of the airport at night is universally identified by a rotating beacon. The rotating beacon projects two beams of light, one white and one green, 180 degrees apart. The beacon operates from sunset to sunrise and is southwest of the Crosswinds restaurant.



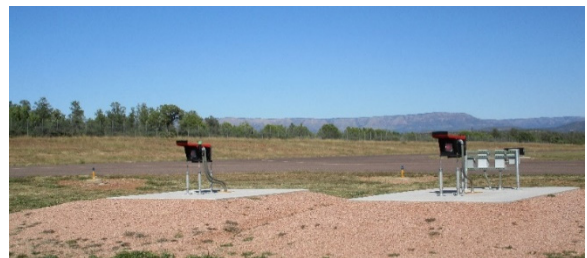
Rotating Beacon

Pavement Edge Lighting

Pavement edge lighting defines the lateral limits of the pavement to ensure safe operations during night and/or times of low visibility, which maintains safe and efficient access to and from the runway and aircraft parking areas. Runway 6-24 is equipped with medium intensity runway lighting (MIRL). Each runway end is equipped with threshold lights, which emit green light outward from the runway and emit red light toward the runway. Green lights indicate the landing threshold to arriving aircraft and red lights indicate the end of the runway for departing aircraft. Taxiway A and entrance/exit taxiways at the airport are equipped with medium intensity taxiway lighting (MITL). All edge lights are mounted on frangible bases approximately one foot off the ground.

Visual Approach Aids

Visual approach aids are installed at airports to assist pilots in determining the correct descent path to the runway end during landing. Each runway end at PAN is equipped with a two-box precision approach path indicator (PAPI-2) system, with the Runway 6 PAPI located on the right side of the runway and the Runway 24 PAPI located on the left. PAPIs have an effective visual range of three miles during the day and 20 miles at night. The PAPIs have standard 3.00-degree glide paths.



PAPI-2

LEGEND	
	Airport Property Line
	Existing Easement
	Taxiway Designator

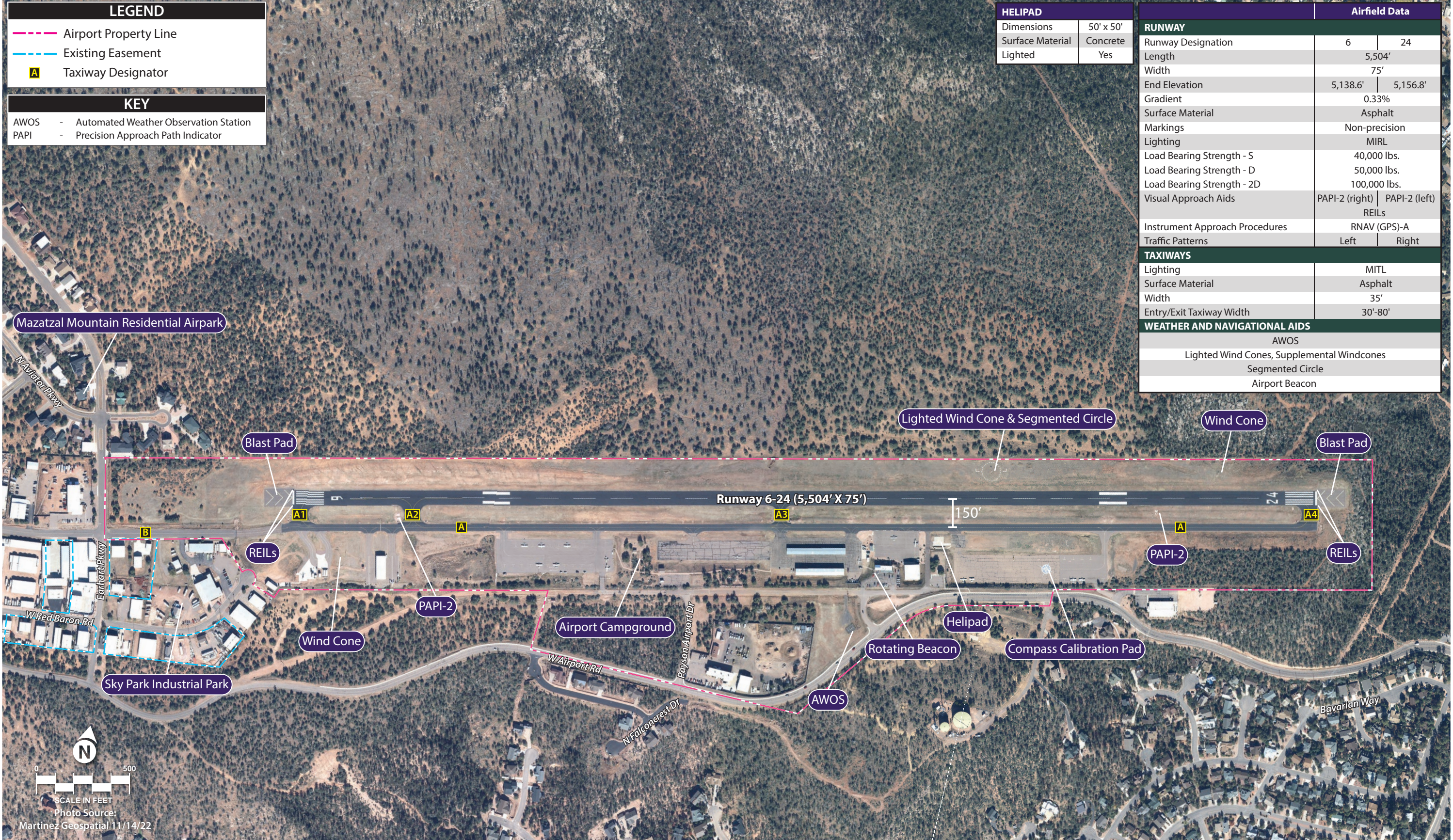
KEY	
AWOS	- Automated Weather Observation Station
PAPI	- Precision Approach Path Indicator

HELIPAD	
Dimensions	50' x 50'
Surface Material	Concrete
Lighted	Yes

RUNWAY	
Runway Designation	6 24
Length	5,504'
Width	75'
End Elevation	5,138.6' 5,156.8'
Gradient	0.33%
Surface Material	Asphalt
Markings	Non-precision
Lighting	MIRL
Load Bearing Strength - S	40,000 lbs.
Load Bearing Strength - D	50,000 lbs.
Load Bearing Strength - 2D	100,000 lbs.
Visual Approach Aids	PAPI-2 (right) PAPI-2 (left) REILs
Instrument Approach Procedures	RNAV (GPS)-A
Traffic Patterns	Left Right

TAXIWAYS	
Lighting	MITL
Surface Material	Asphalt
Width	35'
Entry/Exit Taxiway Width	30'-80'

WEATHER AND NAVIGATIONAL AIDS	
AWOS	
Lighted Wind Cones, Supplemental Windcones	
Segmented Circle	
Airport Beacon	



2022 Pavement Condition Index (PCI)

LEGEND	
	Airport Property Line
	Existing Easement
	Taxiway Designator
	86-100 PCI
	56-85 PCI
	0-55 PCI



SCALE IN FEET

 Photo Source:

 Martinez Geospatial 11/14/22

SOURCE: Arizona Airport Pavement Management System

Runway end identification lights (REILs) provide a visual identification of the runway end for landing aircraft. The REILs consist of two synchronized flashing lights, located laterally on each side of the runway end, facing the approaching aircraft. These flashing lights can be seen day or night for up to 20 miles depending on visibility conditions. Runway 6-24 is equipped with REILs on both ends.



REIL

Pilot-Controlled Lighting

During nighttime hours, pilots can use the pilot-controlled lighting (PCL) system to activate the airfield lights and visual approach aids from their aircraft through a series of clicks of their radio transmitter using the common traffic advisory frequency (CTAF) (122.8 MHz).

To ensure a reliable source of power for airfield lighting, PAN maintains a generator as a secondary power source for all runway and taxiway lighting systems.

Airfield Signage and Markings

Airfield identification signs assist pilots in identifying runways, taxiway routes, holding positions, and critical areas. PAN is equipped with lighted runway and taxiway designations, routing/directional, and noise abatement/elevation signage.



Airfield Signage

Pavement markings aid in the movement of aircraft along surfaces at the airport and identify closed or hazardous areas. The airport provides and maintains marking systems in accordance with Advisory Circular 150/5340-1, *Standards for Airport Marking*. As mentioned previously, both runway ends have non-precision markings that include the runway centerline, designation, threshold markings, and aiming points. The blast pads at each runway end are also marked with yellow chevrons. All taxiways at the airport are marked with yellow centerline, holding position markings, and leadoff lines on normally used exits. Centerline markings assist pilots in maintaining proper clearance from pavement edges and objects near the taxiway edges. Aircraft holding positions are marked at each runway/taxiway intersection. Holding positions are located 125 feet from the Runway 6-24 centerline.

Navigational Aids and Instrument Approach Procedures

Navigational aids are electronic devices that transmit radio frequencies that pilots in properly equipped aircraft can translate into point-to-point guidance and position information. The very high omnidirectional range (VOR), in general, provides azimuth readings to pilots of properly equipped aircraft transmitting a radio signal at every degree to provide 360 individual navigational courses. Frequently, distance

measuring equipment (DME) is combined with a VOR facility (VOR/DME) to provide distance as well as direction information to the pilot. Military tactical air navigation aids (TACANs) and civil VORs are commonly combined to form a VORTAC. The VORTAC provides distance and direction information to both civil and military pilots. The PAN area is served by three VORTACs (Winslow, 55.2 nautical miles [nm] northeast; Phoenix, 58.6 nm southwest; and Willie, 59.2 nm southwest).

A non-directional beacon (NDB) is a radio transmitter at a known location, used as an aviation or marine navigational aid. The signal transmitted does not include *inherent* directional information, in contrast to other navigational aids, such as a VOR. NDB signals follow the curvature of the Earth, so they can be received at much greater distances at lower altitudes, a major advantage over VOR. There are no NDBs in the vicinity of PAN. It should be noted that an NDB was installed at PAN during the 1990s, but it was never certified due to signal interference.

The global positioning system (GPS) is an additional navigational aid for pilots. GPS was initially developed by the United States Department of Defense for military navigation around the world. GPS differs from an NDB or VOR in that pilots are not required to navigate using a specific facility. GPS uses satellites placed in orbit around the earth to transmit electronic radio signals, which pilots of properly equipped aircraft use to determine altitude, speed, and other navigational information. With GPS, pilots can directly navigate to any airport in the country and are not required to navigate using a specific navigation facility.

Instrument approach procedures assist pilots in locating and landing at an airport during low visibility and cloud ceiling conditions. They are categorized as either precision, approach with vertical guidance (APV), or non-precision. Precision instrument approach aids provide an exact course alignment and vertical descent path for an aircraft on final approach to a runway with a height above threshold (HATh) lower than 250 feet and visibility lower than $\frac{3}{4}$ -mile. APVs also provide course alignment and vertical guidance but have HAThs of 250 feet or more and visibility minimums of $\frac{3}{4}$ -mile or greater. Non-precision instrument approaches provide only course alignment information with no vertical guidance.

Approach minimums are published for different aircraft categories (aircraft categories are described in greater detail in Chapter 2) and consist of a minimum “decision” altitude and required visibility. According to 14 Code of Federal Regulations (CFR) 91.175, a pilot must be able to make a safe landing, have the runway in sight, and the visibility requirement be met. For a precision approach or approach with vertical guidance, the decision altitude (DA) is the point at which the pilot must meet all three criteria for landing, otherwise they cannot land using the published instrument approach. For a non-precision approach, the minimum descent altitude (MDA) is a specified altitude at which the required visual reference must be made, or a missed approach initiated.

At PAN, GPS provides for area navigation (RNAV) via a circling GPS-A instrument approach, which is available for daytime use only. Currently, there are no straight-in instrument approach procedures available. **Table 1C** details the instrument approach procedure at PAN.

Table 1C | Instrument Approach Procedures

RNAV (GPS)-A	WEATHER MINIMUMS BY AIRCRAFT TYPE			
	Category A	Category B	Category C	Category D
Circling	543' / 1-mile	603' / 1-mile	703' / 2-mile	903' / 3-mile

Aircraft categories are based on the approach speed of aircraft, which is determined as 1.3 times the stall speed in landing configuration as follows:

- Category A: 0-90 knots (e.g., Cessna 172)
- Category B: 91-120 knots (e.g., Beechcraft KingAir)
- Category C: 121-140 knots (e.g., Canadair Challenger, Boeing 737)
- Category D: 141-166 knots (e.g., Gulfstream IV, Boeing MD-88)
- Category E: Greater than 166 knots (e.g., certain large military or cargo aircraft)

Note: (xxx' / x-mile) = Decision height/Visibility minimum

Source: AirNav <https://www.airnav.com/airport/KPAN>

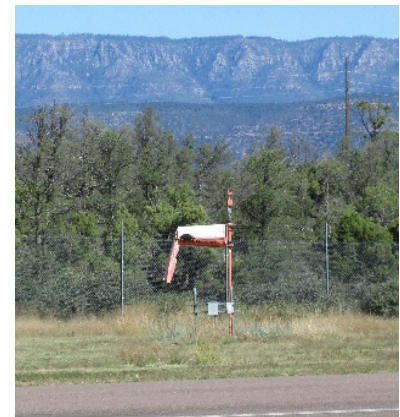
Weather and Communication

PAN is served by an automated weather observing system (AWOS). The system updates weather observations every minute, continuously reporting changes that can be accessed via radio frequency 119.325 MHz or by calling (928) 472-4260. The AWOS reports cloud ceiling, visibility, temperature, dew point, wind direction, wind speed, altimeter setting (barometric pressure), and density altitude (airfield elevation corrected for temperature). The AWOS is located on the south side of airport property near the juncture of West Airport Road and the airport access road leading to Crosswinds. The AWOS is situated approximately 700 feet from the Runway 6-24 centerline.



AWOS

PAN also has a lighted wind cone and segmented circle located north of Runway 6-24, as identified on **Exhibit 1C**. The wind cone informs pilots of the wind direction and speed, while the segmented circle indicates aircraft traffic pattern information. Two supplemental wind cones are located near the approach end of each runway.



Lighted Wind Cone and Segmented Circle

AREA AIRSPACE AND AIR TRAFFIC CONTROL

The *FAA Act of 1958* established the FAA as the responsible agency for the control and use of navigable airspace within the U.S. The FAA has established the National Airspace System (NAS) to protect persons and property on the ground, in addition to establishing a safe and efficient airspace environment for civil, commercial, and military aviation. The NAS covers the common network of U.S. airspace, including air navigation facilities; airports and landing areas; aeronautical charts; associated rules, regulations, and procedures; technical information; and personnel and material. The system also includes components shared jointly with the military.

AIRSPACE STRUCTURE

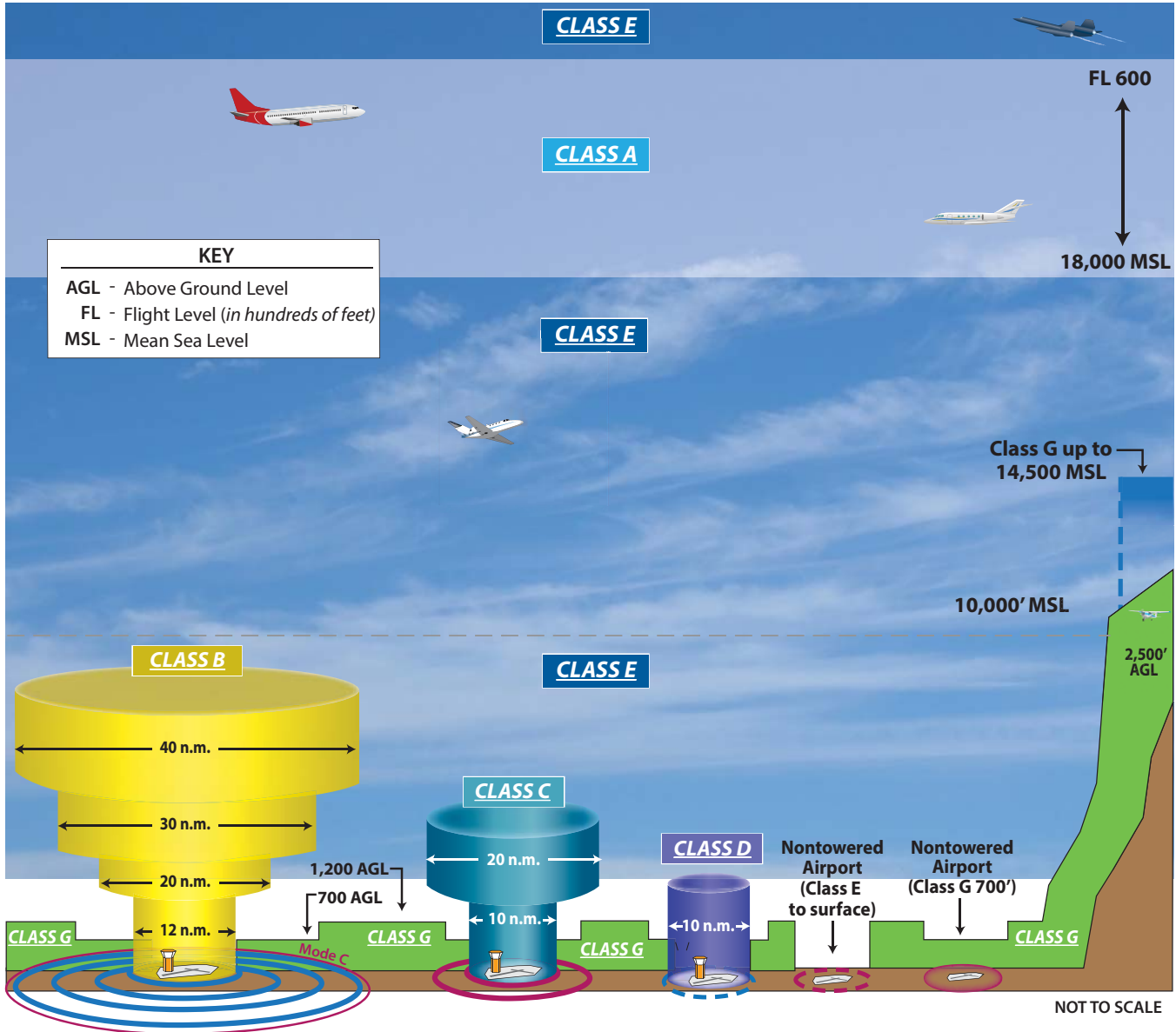
Airspace within the U.S. is broadly classified as either “controlled” or “uncontrolled.” The difference between controlled and uncontrolled airspace relates primarily to requirements for pilot qualifications, ground-to-air communications, navigation and air traffic services, and weather conditions. Six classes of airspace have been designated in the U.S., as shown on **Exhibit 1D**. 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. Airspace near PAN is depicted on **Exhibit 1E**.

Class A Airspace | Class A airspace includes all airspace from 18,000 feet MSL to flight level (FL) 600 (approximately 60,000 feet MSL) over the contiguous 48 states and Alaska. This airspace is designated in 14 CFR Part 71.33 for positive control of aircraft. All aircraft must be on an IFR clearance to operate within Class A airspace.

Class B Airspace | Class B airspace has been designated around some of the country’s major airports, such as Phoenix Sky Harbor International Airport (PHX), to separate all aircraft within a specified radius of the primary airport. Each Class B airspace is specifically tailored for its primary airport. This airspace is the most restrictive controlled airspace routinely encountered by pilots operating under VFR in an uncontrolled environment. In order to fly within Class B airspace, an aircraft must be equipped with special radio and navigation equipment and must obtain clearance from air traffic control. A pilot is required to have at least a private pilot certificate or be a student pilot who has met the requirements of F.A.R. Part 61.95, which requires special ground and flight training for the Class B airspace. Aircraft are also required to utilize a Mode C transponder within a 30 nautical mile range of the center of the Class B airspace. A mode C transponder allows the airport traffic control tower (ATCT) to track the location and altitude of the aircraft. PAN is located approximately 30 nm from PHX’s Class B airspace.

Class C Airspace | The FAA has established Class C airspace at approximately 120 airports around the country that have significant levels of IFR traffic. 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 major airports. To fly inside Class C airspace, an aircraft must have a two-way radio, an encoding transponder, and have established communication with the ATC facility. 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 PAN surrounds Tucson International Airport (TUS) and Davis Monthan Air Force Base (DMA).

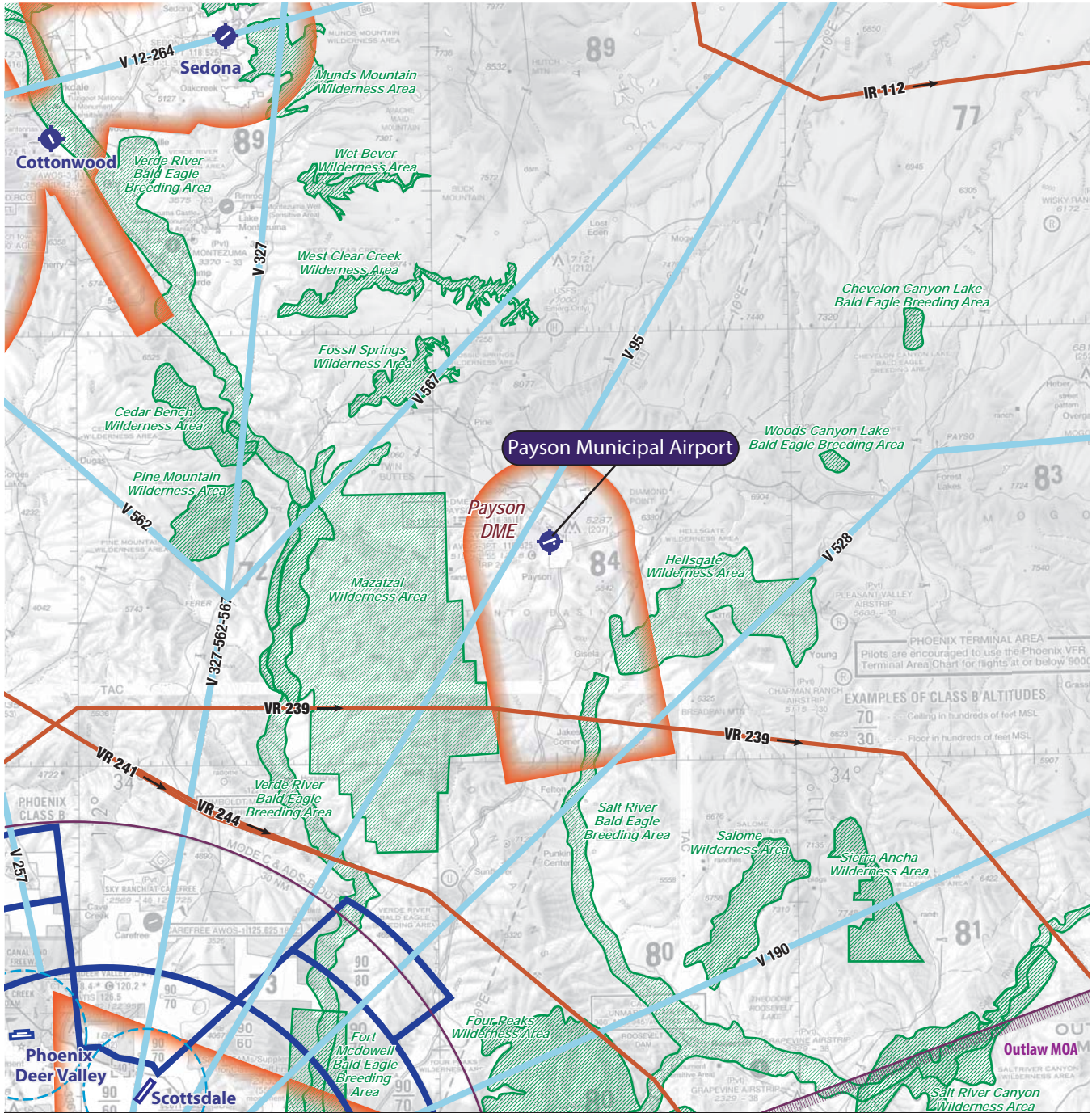
Class D Airspace | Class D airspace is controlled airspace surrounding airports with an ATCT. The Class D airspace typically constitutes a cylinder with a horizontal radius of four or five nautical miles (nm) from the airport, extending from the surface up to a designated vertical limit, typically set at approximately 2,500 feet above the airport elevation. Aircraft operators planning to operate within Class D airspace are required to contact air traffic control prior to entering or departing airspace and must maintain contact while within the controlled airspace to land or to transverse the area. The nearest Class D airspace surrounds Scottsdale Airport, approximately 43 nm southwest of PAN.



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: www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/15_phak_ch15.pdf



LEGEND

- | | | | | | |
|--|--|--|--------------------------|--|--|
| | Airport with hard-surfaced runways
1,500' to 8,069' in length | | Class B Airspace | | Victor Airways |
| | Airports with hard-surfaced runways greater than
8,069' or some multiple runways less than 8,069' | | Class D Airspace | | Class E Airspace with floor
700 ft. above surface |
| | Mode C Airspace | | Military Training Routes | | MOA - Military
Operations Area |
| | | | | | Wilderness Areas |

Source: Phoenix Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration. Sept. 08, 2022

Class E Airspace | Class E airspace consists of controlled airspace designed to contain IFR operations near an airport and while aircraft are transitioning between the airport and enroute 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 communications with ATC facilities, visual flight can only be conducted if minimum visibility and cloud ceilings exist. PAN is in Class E airspace with the surface beginning at 700 feet above ground level (AGL). Airspace below 700 feet AGL surrounding the airport is Class G airspace.

Class G Airspace | Airspace not designated as Class A, B, C, D, or E is considered uncontrolled, or Class G, airspace. Air traffic control 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 overlaying Class E airspace (700 feet AGL).

While aircraft may technically operate within this Class G airspace without any contact with ATC, it is unlikely that many aircraft will operate this low to the ground. Furthermore, federal regulations specify minimum altitudes for flight. F.A.R. Part 91.119, *Minimum Safe Altitudes*, generally states that except when necessary for takeoff or landing, pilots must not operate an aircraft over any congested area of a city, town, or settlement, or over any open-air assembly of persons, at an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.

Over less congested areas, pilots must maintain an altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure. Helicopters may be operated at less than the minimums prescribed above if the operation is conducted without hazard to persons or property on the surface. In addition, each person operating a helicopter shall comply with any routes or altitudes specifically prescribed for helicopters by the FAA.

Victor Airways | For aircraft arriving or departing the regional area using VOR facilities, a system of Federal Airways, referred to as Victor Airways, has been established. Victor Airways are corridors of airspace eight miles wide that extend upward from 1,200 feet above ground level (AGL) to 18,000 feet MSL and extend between VOR navigational facilities. Victor Airways near PAN are identified on **Exhibit 1E**.

Alert Areas / Military Operations Area (MOA) & Military Training Routes (MTRs) / Restricted Areas | Alert areas, MOAs, MTRs, and restricted areas are depicted on aeronautical charts to inform nonparticipating pilots of areas that may contain a high volume of pilot training, military operations/activities, or an unusual type of aerial activity. Pilots should exercise caution near and within these areas. All activity within these areas, if granted by the controlling agency, should be conducted in accordance with regulations, without waiver, and pilots of participating aircraft, as well as pilots transitioning the area, are equally responsible for collision avoidance. The nearest point of the Outlaw MOA is approximately 42 nm southeast of PAN, while restricted areas (R-2310A, B, and C) are located approximately 61 nm south of the airport. These restricted areas are used for live fire munitions training and unmanned aerial vehicle (UAV) training. A military training route (VR239) is located approximately 11 nm south of PAN.

Wilderness Areas | When operating near designated wilderness areas, aircraft are requested to maintain a minimum altitude of 2,000 feet above the surface of designated National Park areas, which includes wilderness areas and designated breeding grounds. FAA Advisory Circular (AC) 91-36C defines the “surface” as the highest terrain within 2,000 feet laterally of the route of flight or the uppermost rim of a canyon or valley. The Mazatzal and Hellsgate Wilderness Areas are located in close proximity to PAN, with portions of each located within PAN’s Class E airspace.

AIRSPACE CONTROL

The FAA has established 21 Air Route Traffic Control Centers (ARTCCs) throughout the continental U.S. to control aircraft operating under IFR within controlled airspace and while enroute. An ARTCC assigns specific routes and altitudes along Federal Airways to maintain separation and orderly traffic flow. The Albuquerque Center ARTCC controls IFR airspace enroute to and from PAN at altitudes greater than 10,000 feet above ground level (AGL).

Flight Service Stations (FSS) are air traffic facilities which provide pilot briefings, flight plan processing, inflight radio communications, search and rescue (SAR) services, and assistance to lost aircraft and aircraft in emergency situations. FSSs also relay air traffic control clearances, process Notice to Air Mission (NOTAMs), and broadcast aviation meteorological and aeronautical information. The Prescott FSS is the nearest to PAN.

LOCAL OPERATING PROCEDURES

The traffic pattern at the airport is maintained to provide the safest and most efficient use of the airspace. At PAN, Runway 6 uses a left-hand traffic pattern, which means aircraft conduct left-hand turns within the traffic pattern when operating on the runway. Runway 24 uses a right-hand traffic pattern. As a result, aircraft operating at PAN stay north of the airport and away from residential developments south of the field. The typical traffic pattern altitude for rotorcraft is 500 feet AGL; piston aircraft is between 800 and 1,000 feet AGL; and 1,500 feet AGL for turbine aircraft.

REGIONAL AIRPORTS

A review of other public-use airports with at least one paved runway within a 50-nm radius³ of PAN 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 PAN. **Table 1D** provides basic level information on three public-use airports within the vicinity of PAN.

³ Generally, an airport’s service area, or the geographic area from which most activity originates, is defined as 30 nm; however, there are no public-use airports within 30 nm of PAN. As such, airports within a 50-nm radius have been included for comparison purposes.

Table 1D | Airports Within 50 NM from PAN

Airport	Nautical Miles/ Direction from PAN ¹	FAA Service Level ²	Based Aircraft ³	Longest Runway (ft.) ¹	Lowest Visibility Minimum ¹
Payson Municipal	--	GA	65 ⁴	5,504'	1-mile
Sedona	41.9 nm/NNW	GA	60	5,132'	1½-mile
Cottonwood	44.6 nm/NW	GA	51	4,250'	1-mile
Scottsdale	47.5 nm/SW	Reliever	356	8,249'	1-mile

Sources: ¹www.airnav.com; ²NPIAS; ³basedaircraft.com; ⁴ Airport records (includes through-the-fence)

LANDSIDE FACILITIES

TERMINAL/AIRPORT OPERATIONS OFFICE

Payson Municipal Airport does not have a terminal building. Rather, some of the services typically provided from a terminal are conducted in an airport operations office building located south of the runway at midfield. The airport operations office is staffed by the on-site Airport Coordinator and is open Monday through Saturday from 7:00 a.m. to 4:00 p.m.



Airport Operations Office

FIXED BASE OPERATOR AND AVIATION BUSINESSES

Aviation fuel is provided by the airport’s fixed base operator (FBO), MPG East. Self-service Jet A and 100LL fuel are located on the west side of the field at the Runway 6 end. Other aviation service providers include:

- *Against the Wind* – Aircraft maintenance airframe and power plant
- *Av8tor* – Avionics; transponder and altimeter certification; ADS-B installation

AIRCRAFT HANGAR FACILITIES

Hangar facilities at PAN include T-hangars, linear box hangars, and an executive box hangar, which are shown on **Exhibit 1F**. There are two T-hangar facilities offering 14 individual storage units and comprising approximately 7,000 sf of storage space. These hangars are used primarily for small piston aircraft. Linear box hangars also offer individual storage space for tenants. There is one 4-unit linear box hangar on the airfield comprising approximately 9,400 sf of space. The airport’s only



Executive Hangar

executive hangar is located immediately east of the restaurant and is approximately 6,300 sf. This hangar houses Against the Wind and Av8tor. There are no conventional hangars on the airport, which are typically greater than 10,000 sf in size and are used to store larger aircraft, including jets. All of the hangars at PAN combined offer approximately 32,700 sf of aircraft storage space.

At the time of this writing (January 2023), all hangar spaces are occupied, and there are 21 individuals (aircraft) on a hangar waiting list.

AIRCRAFT PARKING APRONS

There are four aircraft parking aprons at PAN: Alpha ramp, Bravo ramp, Delta ramp, and Echo ramp. Charlie Ramp primarily functions as taxiway pavement providing access to the hangar facilities in this area but does contain two tie-downs for fixed wing aircraft. Alpha ramp, which is approximately 12,500 square yards (sy), provides 24 marked aircraft parking positions. Bravo ramp, at approximately 6,500 sy, has 13 marked parking positions. The Delta ramp, located adjacent to the on-airport restaurant and the executive hangar, is approximately 4,000 sy with seven marked parking positions. Echo ramp is the largest on the airport, at approximately 13,500 sy and offering 31 parking positions. Combined, these four aircraft parking aprons encompass approximately 36,500 sy with 77 marked parking positions for fixed wing aircraft. Aircraft parking aprons are identified on **Exhibit 1F**.

AIR AMBULANCE

Native Air, an air ambulance service provider, operates a helicopter from an apron on the west side of the airfield near the fuel tanks. Native Air provides medical evacuation services to all communities in the Rim Country and has a staff of 14 individuals, including pilots, nurses, paramedics, and aircraft mechanics. A station adjacent to the apron serves as a station for on-duty Native Air staff.

THROUGH-THE-FENCE ACCESS

“Through-the-fence” activities are those that are permitted by the airport sponsor through an agreement that provides access to the airside infrastructure to independent entities that have property adjacent to airport property. At PAN, a security gate on the west side of the airport provides access to the airfield from the Mazatzal Mountain Airpark and the Sky Park Industrial Park, as depicted on **Exhibit 1F**. The Mazatzal Mountain Airpark is a residential area consisting of homes and hangars, while the Sky Park Industrial Park features a mix of both aviation and non-aviation businesses. Residents and businesses in these areas are assessed a monthly fee to access the airfield. Access is provided via Taxiway B, which extends west from Taxiway A.



Bldg. #	Building Type	Size	Condition
1	Executive Hangar	6,300	TBD
2	On-Airport Restaurant	2,300	TBD
3	Airport Operations Office	450	TBD
4	T-hangars (10 units)	10,300	TBD
5	Linear Box hangars (4 units)	9,400	TBD
6	T-hangars (5 units)	6,700	TBD
7	Fuel Farm & Facilities	TBD	TBD
8	Air Ambulance Facility	N/A	TBD



LEGEND

- Airport Property Line
- Existing Easement
- A Taxiway Designator

0 500
 SCALE IN FEET
 Photo Source:
 Martinez Geospatial 11/14/22

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AIRPORT CAMPGROUND

A fly-in airport campground is located on the south side at midfield. The campground includes 12 individual campsites with fire rings and picnic tables, as well as a communal restroom and shower facility. Use of the campground is only for individuals who fly in and/or family members who are meeting them. Pilots using the campground are directed to tiedown on the Bravo ramp.

RESTAURANT

An on-airport restaurant, Crosswinds, is located adjacent to the Delta ramp and operates out of a 2,300-sf facility. A portion of the building is owned by the Town of Payson and the remainder by a private entity. The restaurant is open Sunday through Tuesday from 6:00 a.m. to 3:00 p.m., and Wednesday through Saturday from 6:00 a.m. to 8:00 p.m.

VEHICLE PARKING

A public vehicle parking lot is available at the front of the restaurant, accessible from West Airport Road and Airport Access Road. The parking lot has 28 marked vehicle parking spaces, with four additional handicapped spaces. Another public lot is located south of the observation area and offers 13 parking spaces, including two handicapped spaces. A third vehicle parking lot is located inside the perimeter fence, adjacent to the campground, and does not include marked parking. Tenants of the box/T-hangar facilities on the airport are authorized to pass through secured gates with their vehicles, so most of these facilities do not have separate vehicle parking areas.

SUPPORT FACILITIES

Firefighting Services

As a general aviation airport, PAN is not required to maintain on-site aircraft rescue and firefighting (ARFF) equipment or services. Firefighting services are provided by the Payson Fire Department, which operates three stations within the town. The nearest fire station to the airport is Station 12, located one mile east at 108 East Rancho Road.

Fuel Storage

Fuel storage facilities at PAN are located on the southwest side of the airport, as shown on **Exhibit 1F**. There are two aboveground tanks, one for 100LL fuel and one for Jet A. Both tanks have a 12,000-gallon capacity and are owned by the town. Both fuel types are dispensed via a self-service pump equipped with a credit card



Fuel Tanks and Self-Serve Fuel Pump

reader. There are no fuel trucks on the airport. Historic fuel flowage data provided by MPG East is summarized in **Figure 1D**. Over the past three years, MPG East dispensed an average of 79,626 gallons of 100LL fuel and 53,112 gallons of Jet A.

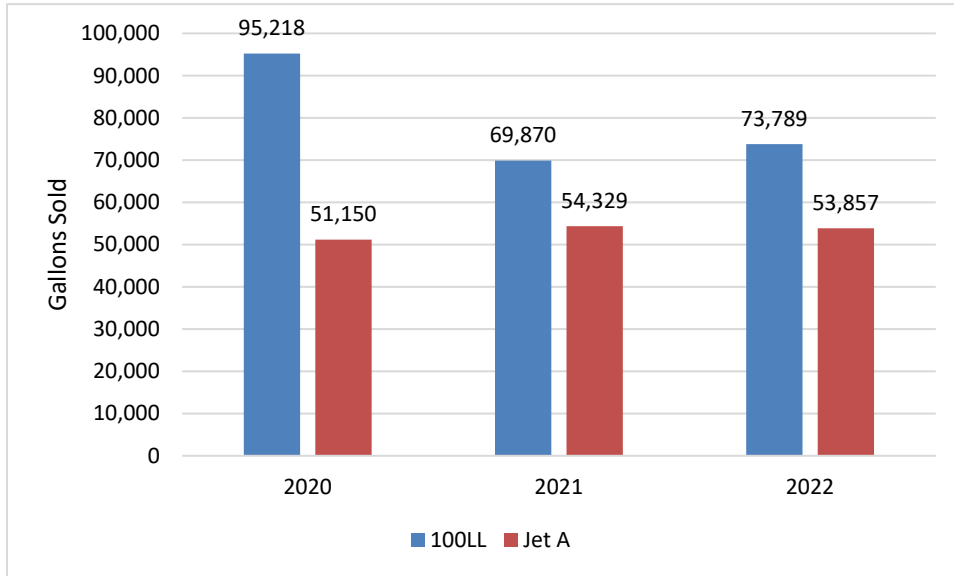


Figure 1D – Historic Fuel Flowage

Airport Maintenance Facilities

PAN has two areas on the airport where maintenance equipment is stored. This equipment, which includes a small tractor for mowing and dirt work as well as miscellaneous maintenance equipment and tools, is stored in a small building near the fuel farm and in a portion of the west T-hangar facility.

PERIMETER FENCING AND SERVICE ROAD

Airport administrative staff and emergency service vehicles can access the airfield via Taxiway A. The airfield perimeter is equipped with 8-foot-tall chain link security fencing topped with 3-strand barbed wire to restrict entry to unauthorized persons and vehicles. Three motorized gates allow access the airfield and landside areas to authorized personnel only. One gate is located on Taxiway B near the Runway 6 threshold, allowing residents and businesses from the neighboring Airpark and Industrial Park to access the airfield, while the two other motorized gates are located near the Alpha ramp and the observation area and helipad. Two non-motorized gates are located near the campground and east of the Echo ramp and are secured by padlocks.



Access Gate

UTILITIES

The availability and capacity of the utilities serving the airport are factors in determining the development potential of the airport property, as well as the land immediately adjacent to the facility. Of primary concern in the inventory investigation is the availability of water, gas, sewer, and power sources. Providers are detailed below:

- Electric – APS
- Water – Town of Payson
- Propane – Pinnacle
- Sanitary Sewer – Green Valley Water
- Solid Waste – Waste Management
- Communications – Lumen

AVIATION ACTIVITY

AIRCRAFT OPERATIONS

Aircraft operations (takeoffs and landings) are a primary indicator of aeronautical activity at PAN. Aircraft operations are classified as local or itinerant. Local operations often consist of touch-and-go or pilot training activity. Itinerant operations consist of aircraft that arrive from or depart to destination airports outside the local operating area.

Aircraft operations can be separated into four general categories: air carrier, air taxi, general aviation, and military. Due to the absence of an ATCT at the airport, it can be difficult to maintain an accurate count of the airport's operations. An estimated account of annual activity is available via the FAA Form 5010, *Airport Master Record*. The most current data estimates that PAN has approximately 34,250 operations per year. The *Airport Master Record* provides a breakdown of estimated operation totals for the airport by type. Chapter Two of the master plan will provide a more detailed account of aircraft operations for the airport. The following provides a description of the categories of aircraft operations detailed above.

- **Air Taxi** – operations associated with aircraft originally designed to have less than 60 passenger seats or a cargo payload of less than 18,000 pounds and carries cargo or mail on either a scheduled or charter basis, and/or carries passengers on an on-demand basis or limited scheduled basis.
- **Air Carrier** – operations defined as those conducted commercially by aircraft having a seating capacity of 60 or more seats and a cargo payload capacity of more than 18,000 pounds. There are currently no air carriers operating at the airport by definition of an air carrier operation.
- **General Aviation** – civil aviation operations other than scheduled air services and nonscheduled air transport operations for hire. PAN caters to general aviation activities, and the majority of its operations fall in this category.
- **Military** – operations conducted by aircraft and helicopters with a military designation.

BASED AIRCRAFT

Identifying the current number of based aircraft is an important part of the master plan process; however, it can be challenging to be accurate given the transient nature of aircraft storage. PAN maintains a recent record of based aircraft, but other sources, including previous planning studies, the state system plan, and FAA records were also consulted to provide a broader history. Historic based aircraft levels at PAN are shown on **Table 1E**.

Table 1E | Based Aircraft History

Base Year	Based Aircraft	Source
2007	90*	2009 Airport Master Plan
2016	54	2018 State System Plan
2022	65*	Current Airport Records

*Includes off-airport based aircraft

COMMUNITY PROFILE

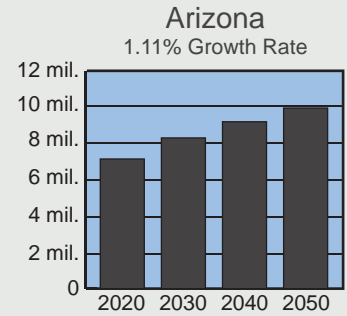
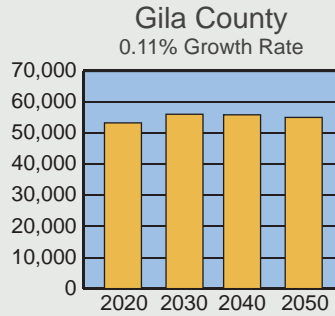
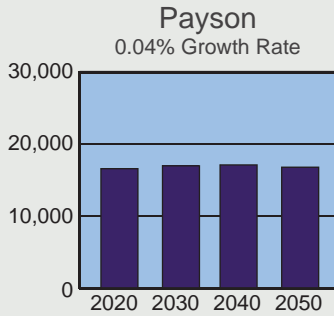
For an airport planning study, a profile of the local community including its socioeconomic characteristics are collected and examined to derive an understanding of the dynamics of growth within the study area. Socioeconomic information related to the local area is an important consideration in the master planning process. The community profile for the Town of Payson on **Exhibit 1G** is derived from several sources, including the town’s website, the Arizona Office of Economic Opportunity, and the U.S. Census Bureau. From a population perspective, growth in the town is projected to remain stagnant through 2050 at a compound annual growth rate (CAGR) of 0.04 percent, while Gila County is projected to experience slow growth at a CAGR of 0.11 percent. These estimates both lag behind the state, which is anticipated to add more than 2.8 million residents by 2050, reflective of a 1.11 percent CAGR. Key industries in Payson include education, health care, arts and entertainment, and retail, and these, along with others, support a labor force of nearly 6,000 people.

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 14 environmental impact categories described within the FAA’s Order 1050.1F *Environmental Impacts: Policies and Procedures*.

- Air Quality
- Biological Resources (including fish, wildlife, and plants)
- Climate
- Coastal Resources
- *Department of Transportation Act, Section 4(f)*
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archeological, and Cultural Resources

POPULATION



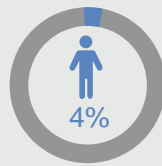
POPULATION BY AGE



AGES <14



AGES 15-19



AGES 20-24

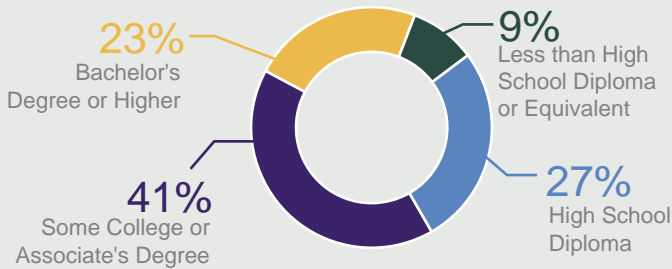


AGES 25-64

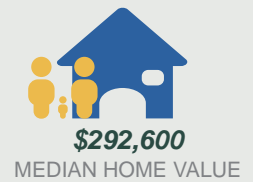


AGES 65+

EDUCATION



HOUSEHOLDS



MAJOR EMPLOYERS



EMPLOYMENT BY SECTOR



Sources: Town of Payson website; Arizona Office of Economic Opportunity; U.S. Census Bureau (2020 Decennial Census & 2021: ACS 5-Year Estimates)

- Land Use
- Natural Resources and Energy Supply
- Noise and Compatible Land Use
- Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks
- Visual Effects (including light emissions)
- Water Resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)

AIR QUALITY

The concentration of various pollutants in the atmosphere describes 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 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 (O₃), carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), coarse particulate matter (PM₁₀), 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.

The airport is in northern Gila County, Arizona, on the northwestern edge of the Town of Payson, one-half mile west of downtown Payson. The portion of Gila County that contains the airport is in attainment for all federal criteria pollutants.⁴ Payson was redesignated as a maintenance area for PM₁₀ in 2002.

BIOLOGICAL RESOURCES

Biotic 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. A biological resource evaluation was conducted by SWCA as part of this master plan study.

The U.S. Fish and Wildlife Service (USFWS) is charged with overseeing the requirements contained within Section 7 of the *Endangered Species Act* (ESA). The ESA provides a framework to conserve and protect animal or plant species whose populations are threatened by human activities. The FAA and USFWS review projects to determine if a significant impact to protected species will result in the implementation of a proposed project. 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 federally designated critical habitat in the area. The USFWS's Information for Planning and Consultation (IPaC) resource list describes species and habitat protected under ESA within the vicinity of the airport (**Table 1F**).

⁴ Arizona Nonattainment / Maintenance Status for Each County by Year for All Criteria Pollutants, November 30th, 2022 (https://www3.epa.gov/airquality/greenbook/anayo_az.html)

Table 1F | Species Protected Under ESA Section 7 with Potential to Occur at the Airport

Common Name (Scientific Name)	Federal Status	Habitat and Range	Potential for Occurrence
Mammals			
Mexican wolf (<i>Canis lupus baileyi</i>)	Experimental Population, Non-Essential (EXPN)	Occurs in the Mexican Wolf Experimental Population in central and southern Arizona. Can be found in a variety of southwestern habitats; however, they are absent from desert areas and prefer woodland areas.	Unlikely to occur. The airport does not contain suitable habitat for this species and is not within the Experimental Population Area.
Birds			
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	Threatened	Found in mature montane forests and woodlands and steep, shady, wooded canyons. Can also be found in mixed-conifer and pine-oak vegetation types. Generally, nests in older forests of mixed conifers or ponderosa pine (<i>Pinus ponderosa</i>) – Gambel oak (<i>Quercus gambelii</i>). Nests in live trees on natural platforms (e.g., dwarf mistletoe [<i>Arceuthobium</i> spp.] brooms), snags, and canyon walls at elevations between 4,100 and 9,000 feet amsl.	Unlikely to occur. The airport does not contain suitable habitat for this species.
yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Threatened	Typically found in riparian woodland vegetation (cottonwood, willow, or saltcedar) at elevations below 6,600 feet amsl. Dense understory foliage is an important factor in nest site selection. The highest concentrations in Arizona are along the Agua Fria, San Pedro, upper Santa Cruz, and Verde River drainages and Cienega and Sonoita Creeks.	Unlikely to occur. The airport does not contain suitable habitat for this species.
Amphibians			
Chiricahua leopard frog (<i>Rana chiricahuensis</i>)	Threatened	Headwater streams, springs, and livestock tanks. An important characteristic of habitat is that it be free or have low levels of nonnative species including nonnative fish, crayfish, bull frogs (<i>Lithobates catesbeianus</i>), and barred-tiger salamanders (<i>Ambystoma mavortium</i>).	Unlikely to occur. No perennial water is present at the airport or adjacent vicinity.
Insects			
monarch butterfly (<i>Danaus plexippus</i>)	Candidate	A migratory species found in a variety of habitats; monarch butterfly requires milkweed (<i>Asclepias</i> spp.) for breeding. During fall migration in Arizona, monarch butterflies favor nectar from native plants including sunflowers (<i>Helianthus</i> spp.), rabbitbrush (<i>Ericameria</i> spp.), desertbroom (<i>Baccharis sarothroides</i>), sweetbush (<i>Baccharis salicifolia</i>), milkweeds, and a variety of other native and garden plants. Populations in Arizona can migrate either to	Unlikely to occur. The airport is mostly devoid of flowering plants and no milkweed plants are present; thus, the species is not likely to use the project area for foraging or breeding. It should be noted that the survey in which this assumption is based upon occurred during the non-growing

	<p>California or Mexico for winter or may overwinter in the low deserts in California or Arizona. 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 monarch butterflies breed in late August to early September.</p>	<p>season for flowering plants and milkweed plants.</p>
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***USFWS Status Definitions**

- **Candidate:** species for which the USFWS has sufficient information on biological vulnerability and threats to support proposals to list as endangered or threatened under the ESA. However, these proposed rules have not yet been issued because such actions are precluded at present by other listing activity.
- **Endangered:** an animal or plant species that is in danger of extinction throughout all or a significant portion of its habitat range.
- **Threatened:** an animal or plant species in danger of extinction throughout all or a significant portion of its habitat range.
- **Non-Essential Experimental Population:** Experimental population of a species designated under Section 10(j) of the ESA for which the USFWS, believes is not essential for the continued existence of the species. Regulatory restrictions are considerably reduced under an NEP designation.

Source: USFWS IPaC (<https://ipac.ecosphere.fws.gov/>); SWCA Environmental Consultants, Biological Resources Evaluation Report in Support of the Master Plan Update for the Payson Municipal Airport – Rich Henry Field in Payson, Gila County, Arizona, dated December 13, 2022.

Section 3 of the ESA is used to protect 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 is no federally designated critical habitat at the airport.

The airport is located at an elevation of 5,141 feet above mean sea level (amsl) within the Great Basin Conifer Woodland biotic community.⁵ Residential communities occupy much of the land to the east and south of the airport property line, and additional residential and commercial structures are located to the west. North of the airport there is largely undeveloped, natural habitat of coniferous trees. Dominant native plant species observed in the area include banana yucca (*Yucca baccata*), purple threeawn (*Aristida purpurea*), sideoats grama (*Bouteloua curtipendula*), Sonoran scruboak (*Quercus turbinella*), two-needle pinyon (*Pinus edulis*), and Utah juniper (*Juniperus osteosperma*).

There is potential for avian concerns for areas at the airport listed in the IPaC. Habitat for migratory birds may occur if bushes or other ground nesting substrate is present.

CLIMATE

Increasing concentrations of greenhouse gases (GHG) can affect global climate by trapping heat in Earth’s atmosphere. Scientific measurements have shown that Earth’s climate is warming with concurrent impacts, including warmer air temperatures, rising sea levels, increased storm activity, and greater intensity in precipitation events. Climate change is a global phenomenon that can also have local

⁵ SWCA Environmental Consultants, Biological Resources Evaluation Report in Support of the Master Plan Update for the Payson Municipal Airport – Rich Henry Field in Payson, Gila County, Arizona, dated December 13, 2022.

impacts. GHGs, such as water vapor (H₂O), carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and O₃, are both naturally occurring and anthropogenic (man-made). The research has established a direct correlation between fuel combustion and GHG emissions. GHGs from anthropogenic (i.e., human made) sources include CO₂, CH₄, N₂O, hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆). CO₂ is the most important anthropogenic GHG because it is a long-lived gas that remains in the atmosphere for up to 100 years.

The U.S. EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2020* shows total transportation emissions, including aviation, decreased largely due to coronavirus (COVID-19), and the combined impacts of long-term trends in population, economic growth, energy markets, technological changes, and changes in energy efficiency. The inventory included aviation as a part of the 13.3 percent decrease in transportation sector GHG emissions leading up to 2020.⁶

Information regarding the climate for the airport and surrounding environments, including wind, temperature, and precipitation, are found earlier in this airport master plan.

Currently, the State of Arizona has a Climate Action document recognized by the U.S. Center for Climate and Energy Solutions. In 2006, Arizona released its Climate Change Action Plan. The plan recommends reducing state GHG emissions 50 percent below 2000 levels by 2040. Key aspects of the plan include reducing energy demand and increasing energy efficiency, expanding carbon sinks, and imposing a cap-and-trade program.⁷

COASTAL RESOURCES

Federal activities involving or affecting coastal resources are governed by the *Coastal Barriers Resource Act*, the *Coastal Zone 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 located 268 miles away.⁸

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 49 United States Code, provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly or privately owned historic sites, public parks or recreation areas, or waterfowl and wildlife refuges of national, state, regional, or local importance unless

⁶ Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020 (<https://www.epa.gov/system/files/documents/2022-04/us-ghg-inventory-2022-main-text.pdf>)

⁷ U.S. State Climate Action Plans — Center for Climate and Energy Solutions (<https://www.c2es.org/document/climate-action-plans/>)

⁸ Google Earth Aerial Imagery (December 2022)

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.⁹

Table 1G and **Exhibit 1H** identify potential Section 4(f) resources within one mile of the airport. School playgrounds or athletic fields may be considered a Section 4(f) resource if the recreational facilities at the school are readily available to the public.

Table 1G | U.S. Dept. of Transportation Section 4(f) Resources within One Mile of the Vicinity of the Airport

Place	Location	Distance from Airport (miles)	Direction from Airport
Public Recreational Facilities			
Rumsey Park	400 N McLane Road	0.83	South
Houston Mesa Campground	2100 Houston Mesa Road	0.95	East
Public Schools			
Payson Elementary School	500 E Rancho Road	0.75	East

Source: Google Earth Aerial Imagery (December 2022); 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>)

There are no National of Historic Places (NRHP)-listed Resources within one-mile of the airport.

There are no waterfowl and wildlife refuges within one mile of the airport. The nearest wilderness and national recreation areas are listed below:

- Nearest Wilderness Area: Hellsgate Wilderness (seven miles from airport)
- Nearest National Recreation Area: Lake Mead National Recreation Area (157 miles from airport)

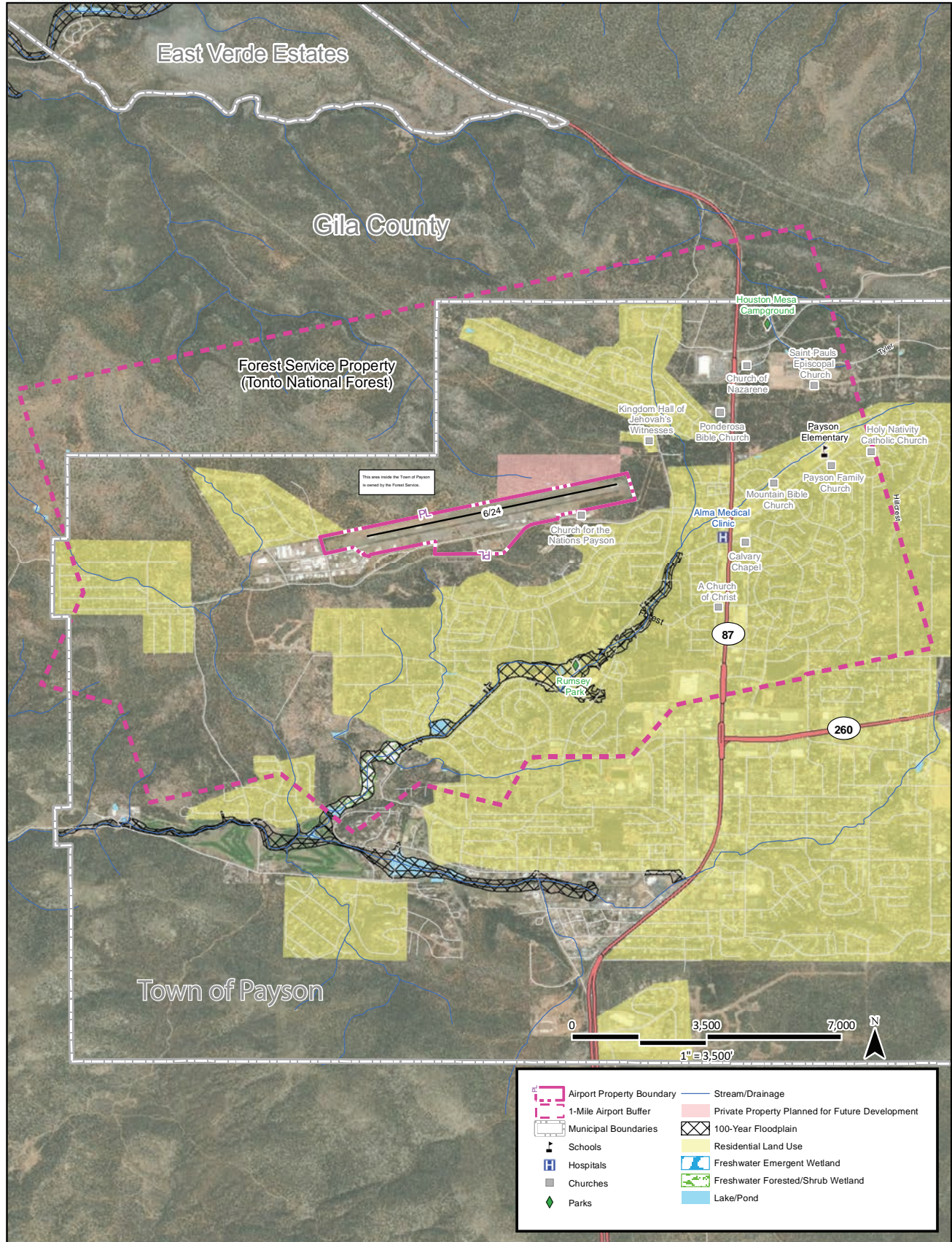
FARMLANDS

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, to consider appropriate alternative actions which could lessen adverse effects, and to assure that such federal programs are, to the extent practicable, compatible with state or local government programs and policies to protect farmland. The FPPA guidelines, developed by the U.S. Department of Agriculture (USDA), apply to farmland classified as prime, unique, or of state or local importance as determined by the appropriate government agency, with concurrence by the Secretary of Agriculture.

The U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey shows the types of soils and their farmland classification on and adjacent to the airport. The airport is not within urbanized area boundaries.¹⁰ However, all the airport is classified as “Not prime farmland”. **Table 1H** describes the farmland classification based on the soil inhabiting the airport’s boundaries.

⁹ 49 U.S. Code § 303 - Policy on lands, wildlife and waterfowl refuges, and historic sites

¹⁰ EPA EIScreen (<https://eiscreen.epa.gov/mapper/>) (December 2022)



Source: ESRI Basemap Imagery (2022), FEMA, USDA, USGS, City of Payson Arizona

Table 1H| Farmland Classification – Summary by Map Unit Tonto National Forest, Arizona, Parts of Gila, Maricopa, Pinal and Yavapai Counties (AZ687)

Web Soil Survey symbol	Soil Type	Farmland Rating
950	Jacks loam, deep, 3 to 8 percent slopes	Not prime farmland
951	Jacks stony clay loam, deep, 3 to 15 percent slopes	Not prime farmland
970	Rock outcrop, sandstone, 3 to 30 percent slopes	Not prime farmland

Source USDA-NRCS Web Soil Survey (<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>)

HAZARDOUS MATERIALS, SOLID WASTE AND POLLUTION PREVENTION

Federal, state, and local laws regulate hazardous materials use, storage, transport, and disposal. These laws may extend to past and future landowners of properties containing these materials. In addition, disrupting sites containing hazardous materials or contaminants may cause significant impacts to soil, surface water, groundwater, air quality, and the organisms using these resources. According to the U.S. EPA’s *EJSCREEN* online tool, there are no Superfund or brownfields sites within one mile of the airport.

There are no recycling services offered by the Town of Payson. The closest landfill is Buckhead Mesa Landfill more than 10 miles northwest of airport property boundaries.

National Pollutant Discharge Elimination System (NPDES) permits outline the regulatory requirements of municipal storm water management programs and establish requirements to help protect the beneficial uses of the receiving waters. They 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 (MEP). The NPDES program manages wastewater, construction, storm-water, and pretreatment.

In Arizona, there is an Arizona specific permit called the Arizona Pollutant Discharge Elimination System (AZPDES).¹¹ AZPDES permits are required for all stormwater discharges that enter Arizona surface waters or a Municipal Separate Storm Sewer System (MS4) leading to Arizona surface waters, and are also associated with: construction activities that disturb one or more acres of land, construction activities that disturb less than one acre but are part of a larger common plan of development that will ultimately disturb one acre or more, and support activities from temporary plants or operations set up to produce concrete, asphalt, or other materials exclusively for the permitted construction project.¹²

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 (NHPA) of 1966*, as amended, the *Archaeological and Historic Preservation Act (AHPA) of 1974*, the *Archaeological Resources Protection Act (ARPA)*, and the *Native American Graves Protection and Repatriation Act (NAGPRA) of 1990*. In addition, the *Antiquities Act of 1906*, the *Historic Sites Act of 1935*, and the *American Indian Religious Freedom Act of 1978* also

¹¹ State of Arizona Department of Environmental Quality (https://static.azdeq.gov/permits/azpdes/msgp_permit.pdf)

¹² ADEQ Arizona Department of Environmental Quality (<https://azdeq.gov/AZPDES/CGP>)

protect historical, architectural, archaeological, and cultural resources. Impacts may occur when a proposed project causes an adverse effect on a resource which has been identified (or is unearthed during construction) as having historical, architectural, archaeological, or cultural significance.

A cultural resources survey conducted by SWCA as part of this master plan resulted in the discovery of three Isolated Occurrences (IOs) of cultural materials and no archaeological sites within the airport. The IOs consist of prehistoric ceramics, flaked stone, and historic glass artifacts. None of the IOs are recommended as eligible for the listing on the NRHP. There are no historic buildings, districts, or neighborhoods within airport property boundaries.

The nearest tribal land to the Payson Municipal Airport is the Tonto Apache Reservation located more than four miles southeast of the airport on the eastern border of the State Route 260.¹³

LAND USE

Land use regulations near airports are achieved through local government codes, city policies, and plans that include airport districts and planning areas. Regulations are used to avoid land use compatibility conflict around airports.

The Town of Payson, Arizona, as of September 9, 2014, has adopted the Town of Payson General Plan Update.

According to the Town of Payson's 2014 Land Use Map, depicted on **Exhibit 1J**, airport property is designated as "civic" land use due to the airport being owned and operated by the Town of Payson.¹⁴ The northern boundary of the Payson Municipal Airport abuts the Tonto National Forest. West of Payson Municipal Airport lies industrial, office, and medium density residential land uses. East of the Payson Municipal Airport lies State Route 260, which can be utilized as an access point for the airport. Along State Route 260 lies a variety of land uses such as mixed use, commercial, and multifamily residential.

Most of the surrounding development occurs on the southern, eastern, and western portion of the airport, with the most common land use being single-family residential neighborhoods. On the northwestern portion of the airport lies the Mazatal Mountain Residential Airpark, where residents can park their aircraft in their own personal hangars just outside their homes. On the southwestern portion of the airport lies the Sky Park Industrial Park, which can be accessed from Taxiway B of the airport. On the northern border of airport property lies primarily undeveloped land owned by the Tonto National Forest and vegetated with trees and shrubs.

In the section of the *Town of Payson, Arizona, General Plan Update 2014-2024* called *Payson Airport Growth Area*, it states that the reported Payson Airport Growth Area is anticipated to host a great diversity of land uses. Furthermore, the increase in lands designated for industrial use presents expanded economic opportunity for both the Town of Payson and the airport.

¹³ Arizona Game and Fish Department (<https://ert.azgfd.gov/content/map>)

¹⁴ Town of Payson General Plan Update 2014-2024 (<https://www.paysonaz.gov/home/showpublisheddocument/1478/637902980605300000>)

The Town of Payson also contains an Airport Overlay District. The Airport Overlay District outlined in the *Town of Payson's, Code of Ordinances, Section 154-02-015*, acts as a zoning district that regulates land uses in vicinity of the airport, to protect public health and safety, by minimizing the public's exposure to crash hazards and high noise levels that may be created from operations of an airport.

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.

Under the *Environmental Quality Act of 1986*, the Arizona State Legislature created the Arizona Department of Environmental Quality (ADEQ) in 1987 as the state's cabinet-level environmental agency.¹⁵ The office's main goal is to protect and enhance both public health and environment in Arizona. ADEQ is comprised of three primary environmental programs: Air Quality, Water Quality, and Waste. Each of these programs have units responsible for technical, operational, and policy support. ADEQ administers the state's environmental laws and delegates federal programs to prevent air, water, and land pollution and ensure cleanup. Furthermore, ADEQ is responsible for a series of core functions: planning, permitting, compliance management, monitoring, assessment, cleanups, and outreach.

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).¹⁶ 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 the structure. 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.¹⁷

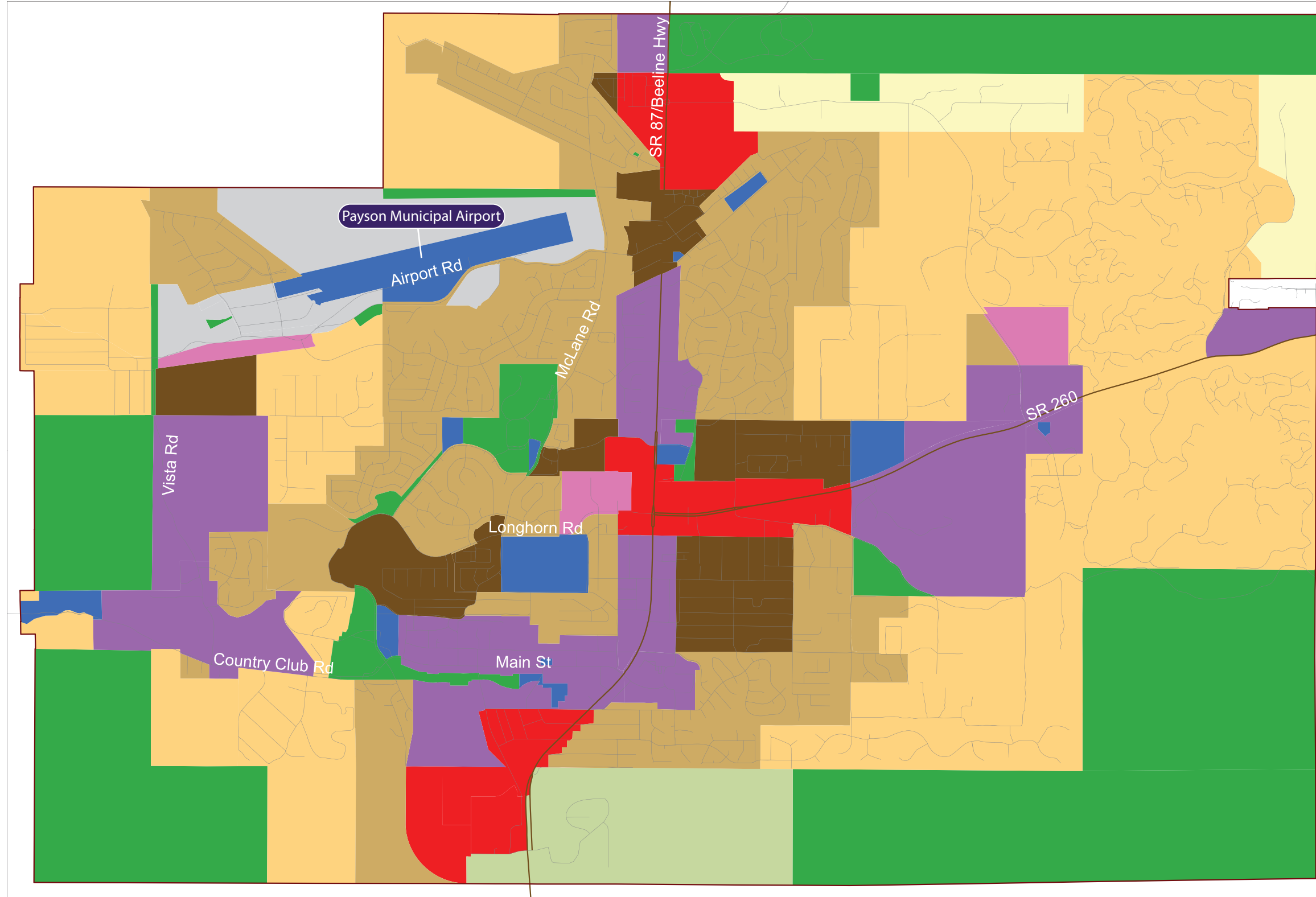
Table 1J below identifies noise-sensitive land uses within one mile of the airport. These land uses are also shown on **Exhibit 1H**. The closest residential areas are located northwest and adjacent to the airport boundary and across Earhart Parkway to the west of State Route 260.

¹⁵ ADEQ – Arizona Department of Environmental Quality (<https://azdeg.gov/AboutUs>)

¹⁶ The DNL accounts for the increased sensitivity to noise at night (10:00 PM to 7:00 AM) and is the metric preferred by FAA, the U.S. EPA, and the U.S. Department of Housing and Urban Development as an appropriate measure of cumulative noise exposure.

¹⁷ 49 U.S. Code § 47141 – Compatible land use planning and projects by state and local governments

Town of Payson 2014 Land Use Map



Land Use Designations

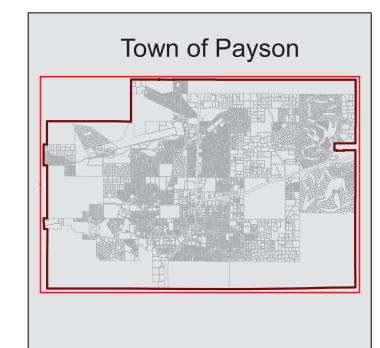
- RDR-Rural Density Res
- LDR-Low Density Res
- MDR-Medium Density Res
- MFR-Multifamily Res
- Civic
- Mixed Use
- Office
- Commercial
- Industrial
- Open Space
- Tonto Apache Reservation

Reference

- Town Roads
- State Roads
- Town Boundary



Source: U.S.Census Bureau; U.S. Department of the Interior Bureau of Land Management; Gila County Assessor's Office, Town of Payson Analysis: TischlerBise; Berkley Group



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Table 1J | Noise-Sensitive Land Uses within One Mile of Airport

Facility	Location	Distance from Airport (Miles)	Direction from Airport
Schools			
Payson Elementary School	500 E Rancho Road	0.75	East
Places of Worship			
Mountain Bible Church	302 E Rancho Road	0.60	East
Kingdom Hall of Jehovah’s Witnesses	1616 N McLane Road	0.20	Northeast
Saint Paul’s Episcopal Church	401 E Tyler Parkway	0.84	East
Calvary Chapel	1103 N Beeline Highway	0.55	East
Payson Family Church	501 E Rancho Road	0.80	East
Holy Nativity Catholic Church	1414 N Easy Street	1.00	East
Ponderosa Bible Church	1800 N Beeline Highway	0.48	Northeast
A Church of Christ	714 N Beeline Highway	0.64	Southeast
Church of the Nazarene	200 E Tyler Parkway	0.80	Northeast
Church for the Nations Payson	700 W Airport Road	0.01	Southeast

Source: EPA EJScreen (<https://ejscreen.epa.gov/mapper/>); Google Earth Aerial Imagery (December 2022)

SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN’S ENVIRONMENTAL HEALTH AND SAFETY RISKS

Socioeconomics | *Socioeconomics* is an umbrella term used to describe aspects of a project that are either 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 and alternative(s).

FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* specifically requires that a federal action causing disproportionate impacts to an environmental justice population (i.e., a low-income or minority population) be considered, as well as an evaluation of environmental health and safety risks to children. The FAA has identified factors to consider when evaluating the context and intensity of potential environmental impacts.

Would the proposed action?

- Induce substantial economic growth in an area, either directly or indirectly;
- Disrupt or divide the physical arrangement of an established community;
- Cause extensive relocation when sufficient replacement housing is unavailable;
- Cause extensive relocation of community business that would cause severe economic hardship for affected communities;
- Disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities; or
- Produce a substantial change in the community tax base.

Environmental Justice | *Environmental justice* is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no

group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies.

Meaningful Involvement ensures that:

- People have an opportunity to participate in decisions about activities that may affect their environment and/or health;
- The public’s contribution can influence the regulatory agency’s decision;
- Their concerns will be considered in the decision-making process; and
- The decision-makers seek out and facilitate the involvement of those potentially affected.¹⁸

The closest residential areas are located northwest and adjacent to the airport boundary and across Earhart Parkway to the west of State Route 260. According to the 5-Year 2016-2020 American Community Survey (ACS) estimates, the population within one mile of the airport is 6,587 persons, of which 30 percent of the population is considered low-income and 11 percent are people of color. Indicated in **Table 1K**, approximately seven percent of the population has identified as Hispanic or Latino.

Table 1K | Population Characteristics Within One Mile of the Airport

Characteristic	
Total Population	6,587
Population by Race ¹	
White	91%
Black	1%
American Indian	1%
Asian	2%
Pacific Islander	0%
Some Other Race	4%
Population Reporting Two or More Races	1%
Total Hispanic population (of any race)	7%

¹ Percentages do not add up to 100 percent. Hispanic or Latino is treated by the U.S. Census as a question separate from Race.
 Source: U.S. EPA EJSCREEN ACS Summary Report (5-Year 2016-2022) (<https://ejscreen.epa.gov/mapper/>)

Children’s Environmental Health and Safety | Federal agencies are directed, per E.O. 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, 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 that a child is likely to encounter or ingest (air, food, water – including drinking water) or to which they may be exposed.

According to the 2016-2020 ACS estimates, 11 percent of the population within one mile of the airport are age 17 or under. This equated to 735 persons. See **Tables 1G** and **1J** for lists of schools and recreational facilities that are used by children within one mile of the airport.

¹⁸ U.S. EPA website - Environmental Justice (<https://www.epa.gov/environmentaljustice>)

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 zoning ordinances and their general plan.

Light Emissions | *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 will include ordinances in the local code addressing outdoor illumination to reduce the impact of light on surrounding properties.

Airfield lighting at the airport includes a rotating beacon, medium intensity runway lighting (MIRL) at Runway 6-24, threshold lights at each runway end, medium intensity taxiway lighting (MITL), two-box precision approach path indicator (PAPI) lights at each runway end, and runway end identification lights (REILs) at each side of the runway end. The airfield lights utilize pilot-controlled lighting (PCL), and thus, the airfield lights are only lit when activated by pilots using the airport. For further information, see the discussion of the types of airfield lighting and visual approach aids earlier in the inventory.

Visual Resources and Visual Character | *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 a visual character defined by the surrounding landscape features, such as open grass fields, forests, mountains, deserts, etc.

Visual resources include buildings, sites, traditional cultural properties, and other natural or manmade 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).

Although the airport environment is not within an urban area, visually it is characterized not only by trees and vegetated open areas, but also by buildings and streets. Residential areas and commercial land uses are located adjacent to airport property. Views of the airport are accessible from surrounding roadways due to the sparse rather than dense vegetation.

The State of Arizona has a designated department called the Arizona Department of Transportation (ADOT) that administers the state-designated scenic roads program, while the Federal Highway Administration (FHWA) administers the byways program.

In Arizona, “scenic road” is a general term that is often used to identify both state-designated and federally designated scenic roads.¹⁹ At present, there are a total of 26 state-designated scenic roads in Arizona. Of the 26 state-designated scenic roads, three are state-designated historic roads, and four are state-designated parkways.

There are a total of five federally designated byways in the state. Of the five byways in Arizona, three of these byways are National Scenic Byways and two are classified as All-American Roads.

However, there are no routes within the Town of Payson, and therefore, no federal or national scenic byways 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 adjacent wetlands, under Section 404 of the *Clean Water Act* (CWA). Wetlands are defined in E.O. 11990, *Protection of Wetlands*, as “those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.” Wetlands 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: the soil is inundated or saturated to the surface at some time during the growing season (hydrology), has a population of plants able to tolerate various degrees of flooding or frequent saturation (hydrophytes), and soils that are saturated enough to develop anaerobic (absent of air or oxygen) conditions during the growing season (hydric).

USFWS manages the National Wetlands Inventory on behalf of all federal agencies. The National Wetlands Inventory identifies surface waters and wetlands in the nation. Within airport boundaries, there are no wetlands or other special aquatic sites present.²⁰ Furthermore, no wetland vegetation or wetland hydrology were identified on aerial imagery and during a field visit with biologists. However, just outside airport boundaries on the northeastern portion of the airport located less than 0.05 mile away lies a 0.15-acre Freshwater Pond. Additionally, there are multiple riverines mapped in the northern, northwestern, western, eastern, southeastern, and southwestern portions of the airport boundaries outside the developed airfield (**Exhibit 1H**).²¹

Floodplains | E.O. 11988, *Floodplain Management*, directs federal agencies to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health, and welfare, and restore and preserve the natural and beneficial values served by the floodplains. A review of the Federal Emergency

¹⁹ ADOT – Arizona Department of Transportation:

(<https://azdot.gov/about/historic-and-scenic-roads/types-scenic-roads#:~:text=There%20are%20a%20total%20of%20five%20federally%20designated%20byways%20in,scenic%20and%20federal%20byway%20designations.>)

²⁰ SWCA Environmental Consultants, Biological Resources Evaluation Report in Support of the Master Plan Update for the Payson Municipal Airport – Rich Henry Field in Payson, Gila County, Arizona, dated December 13, 2022.

²¹ National Wetlands Inventory (<https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>)

Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel numbers 04007C0240D and 04007C0239D effective December 4th, 2007, indicates that the airport is in Zone X, an area of minimal flood hazard.²²

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, Congress has mandated (under the CWA) the NPDES.

Payson Municipal Airport is in the Upper East Verde River and American Gulch watersheds. There are no impaired waters within these watersheds; however, there are four waterbodies (two in each watershed) in which the waterbody condition is unknown.²³ There are no impaired waterbodies near the airport.

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.²⁴

According to the Arizona Groundwater Site Inventory, there are two wells located within airport property boundaries. Both wells lie on the southwestern portion of airport property.²⁵ However, of the two wells only one has had water levels taken at the site. This well is situated between West Bravo Taxiway and West Baron Road near Runway 6. It has a depth of 287.60 feet below surface (bls).

U.S. EPA's Sole Source Aquifer (SSA) Program was established under Section 1424(e) of the *Safe Drinking Water Act* (SDWA). Since 1977, it has been used by communities to help prevent contamination of groundwater from federally funded projects. It has increased public awareness of the vulnerability of groundwater resources. The SSA program is authorized by Section 1424(e) of the SDWA (Public Law 93-523, 42 U.S.C. 300 et. seq), which states:

*"If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register."*²⁶

²² FEMA Flood Map (<https://msc.fema.gov/portal/search?AddressQuery=Payson%20Municipal%20Airport#searchresultsanchor0>)

²³ EPA – How's My Waterway (<https://mywaterway.epa.gov/community/806%20West%20Airport%20Road,%20Payson,%20AZ/overview>)

²⁴ United States Geological Survey - What is Groundwater? (<https://www.usgs.gov/faqs/what-groundwater>)

²⁵ Arizona Groundwater Site Inventory (<https://azwatermaps.azwater.gov/gwsi>)

²⁶ U.S. EPA - Overview of the Drinking Water Sole Source Aquifer Program (<https://www.epa.gov/dwssa/overview-drinking-water-sole-source-aquifer-program#Authority>)

According to the U.S. EPA Sole Source Aquifer for Drinking Water website, there are no sole source aquifers located within airport boundaries. The nearest sole source aquifer is the Upper Santa Cruz & Avra Basin more than 96 miles away from the airport.²⁷

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.

The Nationwide River 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*, directing Federal agencies to consider potential wild and scenic rivers in the comprehensive planning process.

The closest designated National Wild and Scenic River identified is the Verde River, located 30 miles from the airport.²⁸ The nearest National River Inventory feature is Verde River East, located 10 miles from the airport.²⁹

²⁷ Sole Source Aquifers (<https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>)

²⁸ National Wild and Scenic River System in the U.S. (<https://nps.maps.arcgis.com/apps/MapJournal/index.html?appid=ba6debd907c7431ea765071e9502d5ac#>)

²⁹ Nationwide River Inventory (<https://www.nps.gov/maps/full.html?mapId=8adbe798-0d7e-40fb-bd48-225513d64977>)