



# STATE AVIATION SYSTEM PLAN UPDATE

**ADOT**

Kimley»Horn

**Spring AzAA  
May 2018**



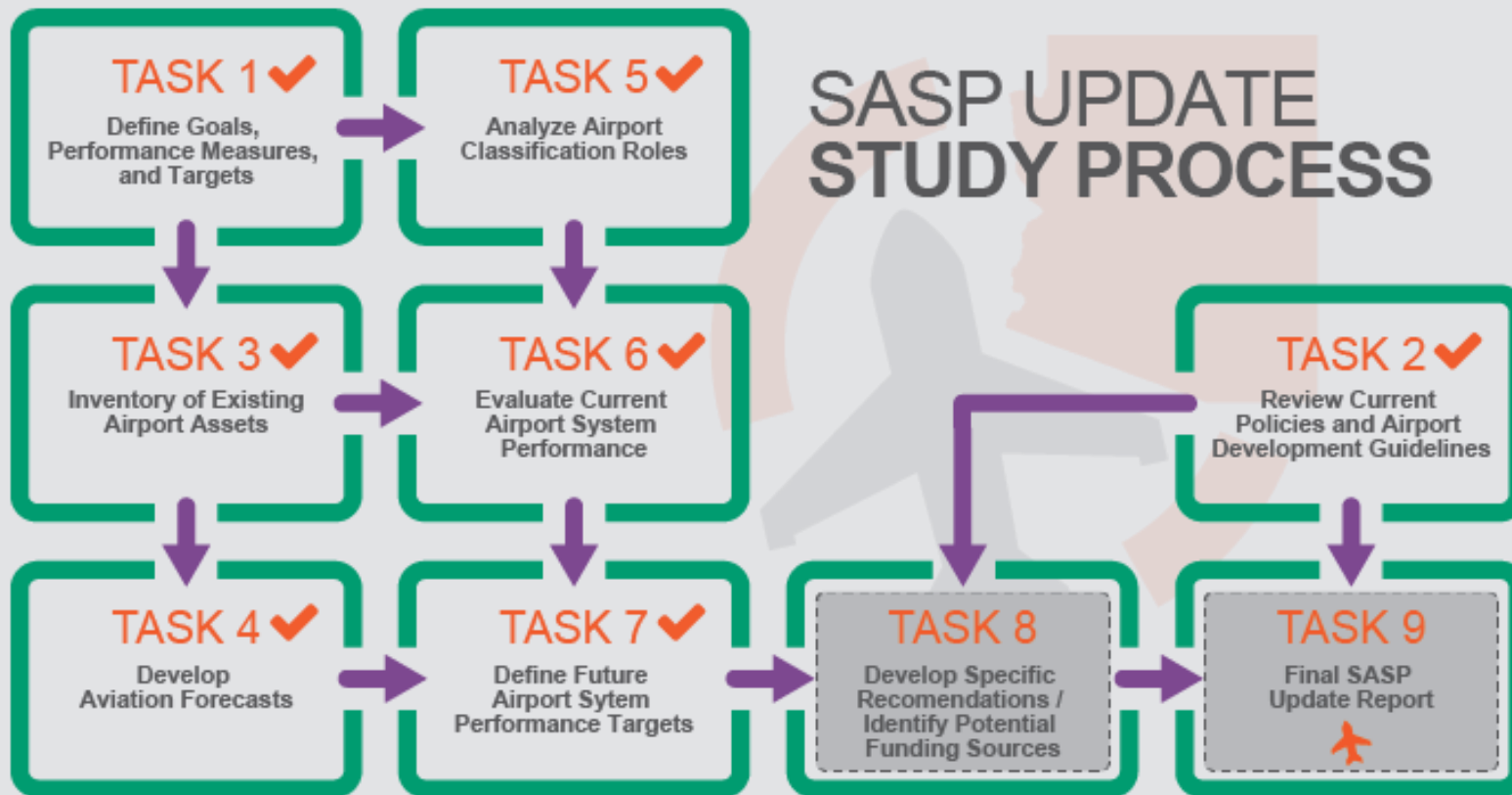
# Topics

- ADOT SASP Summary
- Airport Land Use Compatibility



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# SASP Process, Vision, and Goals



Only two remaining chapters of SASP Report



# SYSTEM VISION & GOALS

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

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Vision

System  
Plan Goals

Performance  
Measures

Targets

**POLICY  
RECOMMENDATIONS**



# 2017 SASP Update Goals



## SAFETY AND SECURITY

Arizona should maintain a safe and secure airport system as measured by compliance with applicable safety and security standards while supporting health and safety-related services and activities.

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## FISCAL RESPONSIBILITY

Arizona should implement cost-effective investment strategies to meet current and projected demand while remaining adequately accessible to Arizona's citizens, visitors, and businesses.

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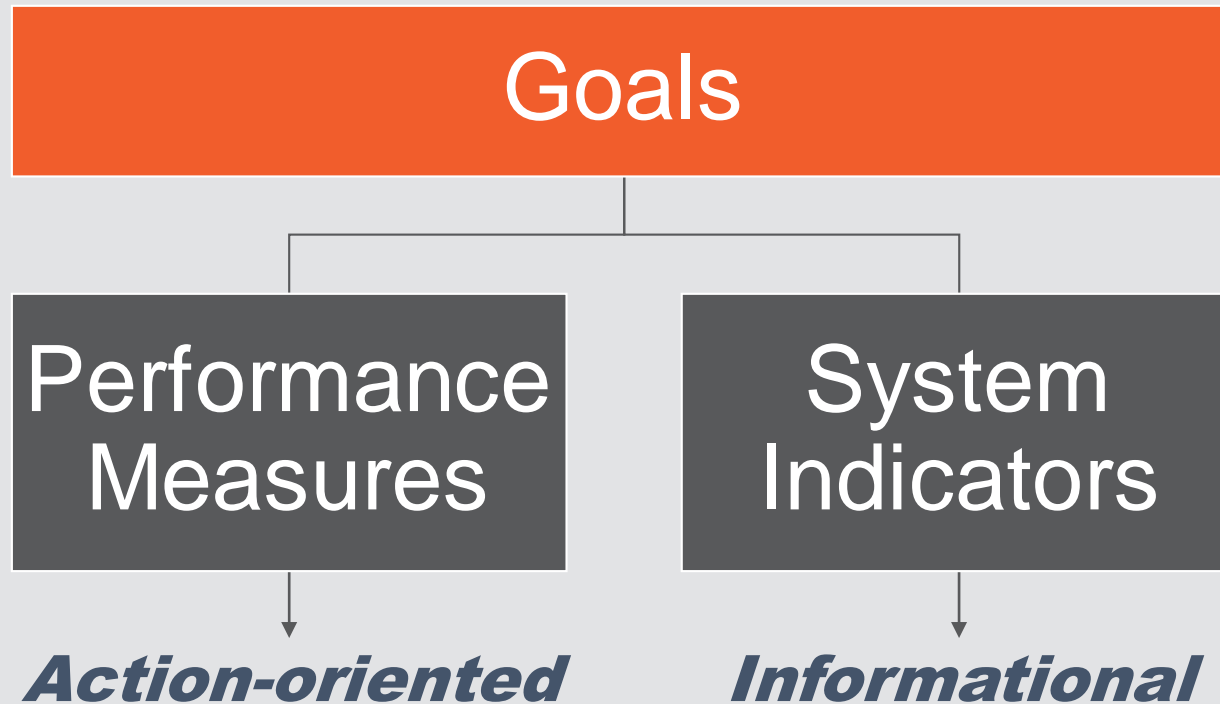


## ECONOMIC SUPPORT

Arizona should advance a system of airports that supports Arizona's economic growth and development and promotes partnerships in a manner that reflects Arizona's socioeconomic and demographic characteristics.



# Performance Measures and System Indicators

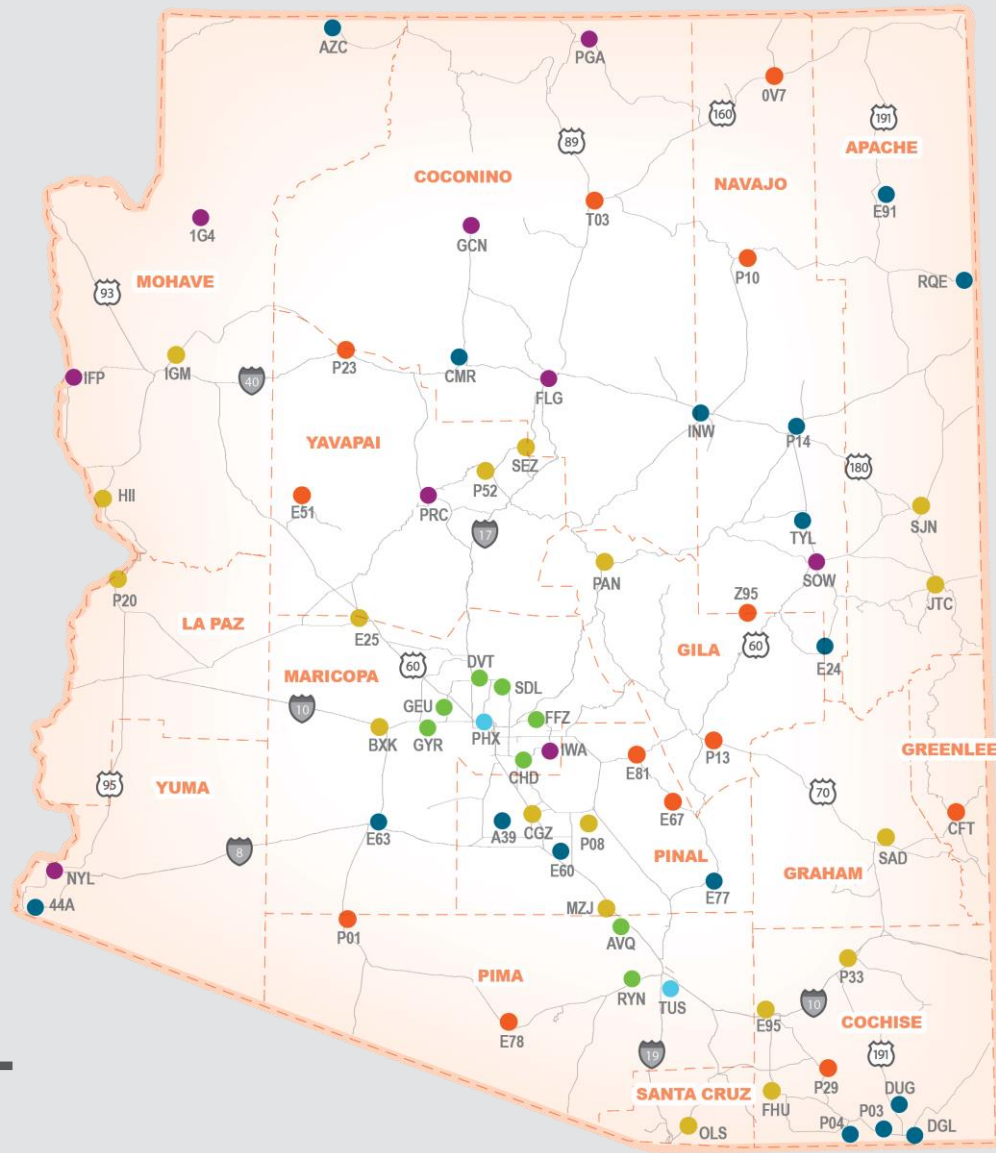


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# **System Airports and Classifications**



**The Arizona airport system is defined as all public-use airports owned by a political subdivision of the state or Tribal government.**



#### STATE CLASSIFICATIONS

- GA-Basic
- GA-Community
- GA-Rural
- Reliever
- Commercial-International
- Commercial-National



# 2008/2017 Airport Classification Comparison

Role/Classification	2008 SASP	2017 SASP	Total Change	Example SASP Airports Within 2017 Classification
Commercial Service-International	11	2	2	Phoenix Sky Harbor International Tucson International
Commercial Service- National		9	9	Ernest A. Love Field Flagstaff Pulliam Phoenix-Mesa Gateway Show Low Regional Yuma International
Reliever	8	8	8	Marana Regional Phoenix Deer Valley Ryan Airfield Scottsdale
GA-Community	24	18	↓ 6	Cottonwood Municipal Lake Havasu City Payson Safford Regional
GA-Rural	19	17	↓ 2	Ak Chin Regional Chinle Municipal H.A. Clark Memorial Field San Manuel
GA-Basic	5	13	↑ 8	Bagdad Eric Marcus Municipal Tombstone Municipal Tuba City



# Facility and Service Objectives

- **Not** standards or requirements
- Minimum levels of development
- Recommendations for services and facilities by classification

Component	Airport Criteria	
Airside Facilities	ARC	Runway Surface
	Runway Length	Approach Capability
	Taxiway	Visual Aids
	Lighting	Approach Lighting System
Landside Facilities	Operations/Maintenance Hangar	
	Hangars	Auto Parking
	Apron	Terminal/Pilot's Lounge
Landside Services	Fixed-base Operator (FBO)	Aircraft Maintenance
	Avionics Sales and Service	Off-Site Rental Car
	On-Site Rental Car	Restroom
	Phone Access (Landline or Cell)	U.S. Customs
	Fuel	Deicing
	Snow Removal	Oxygen
	Weather Reporting	Air Taxi/Charter Service
	Aircraft Rental	



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# Current / Future System Performance

# System Performance Assessment

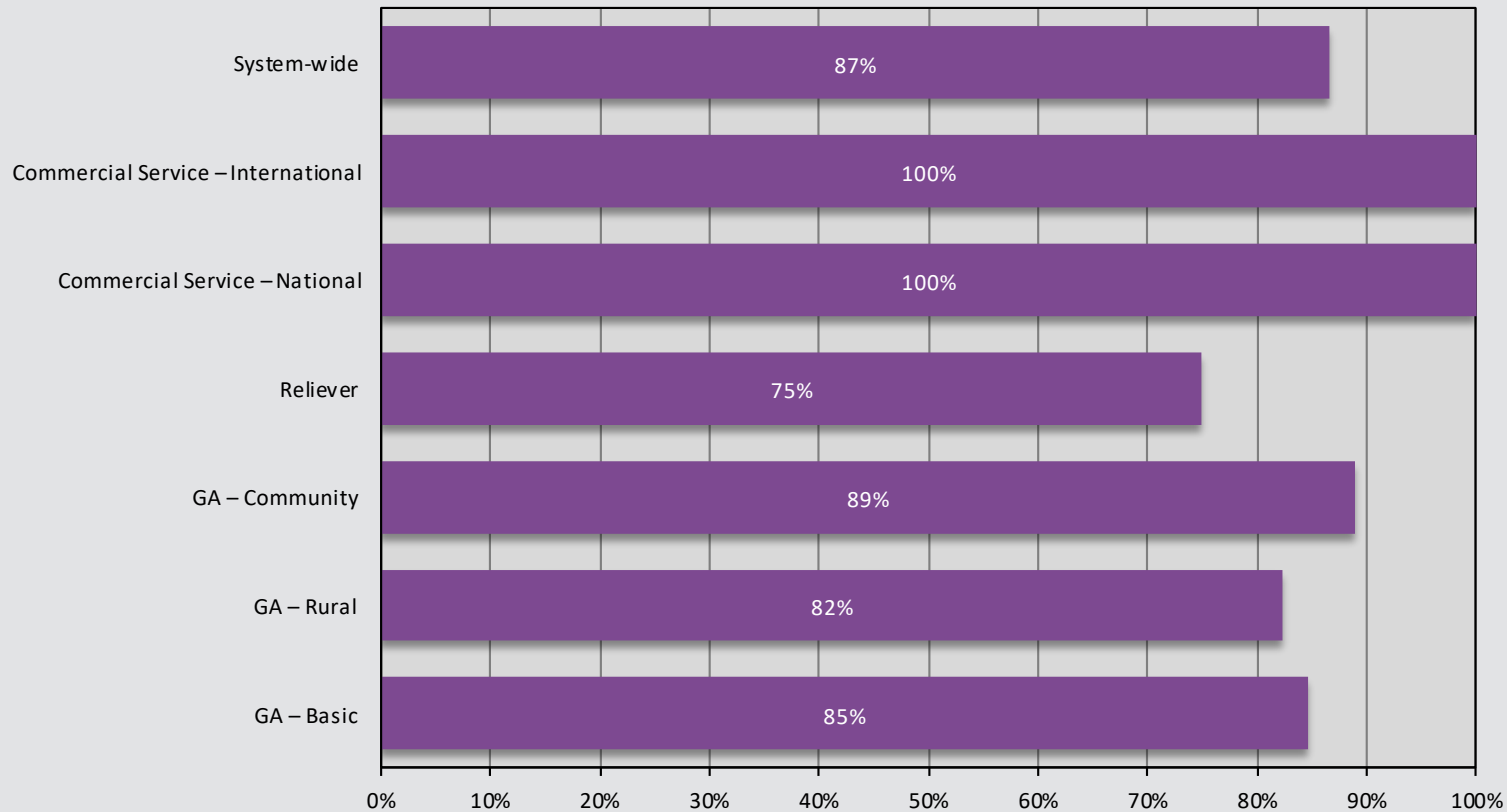
- Provides data to evaluate the system's ability to meets current and future needs by identifying areas of:
  - Adequate service
  - Surplus or duplication
  - Deficiencies
- Analyses organized by goal category utilizing:\*
  - Performance measures (PMs): Action-based
  - System indicators (SIs): Informational

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*\*Future targets only established for PMs, as SIs are primarily used to monitor the system over time.*



## *Percent of airports that have an RSA on their primary runway that meet the standards for their current ARC*



**Performance  
Measure**



# RSA Analysis



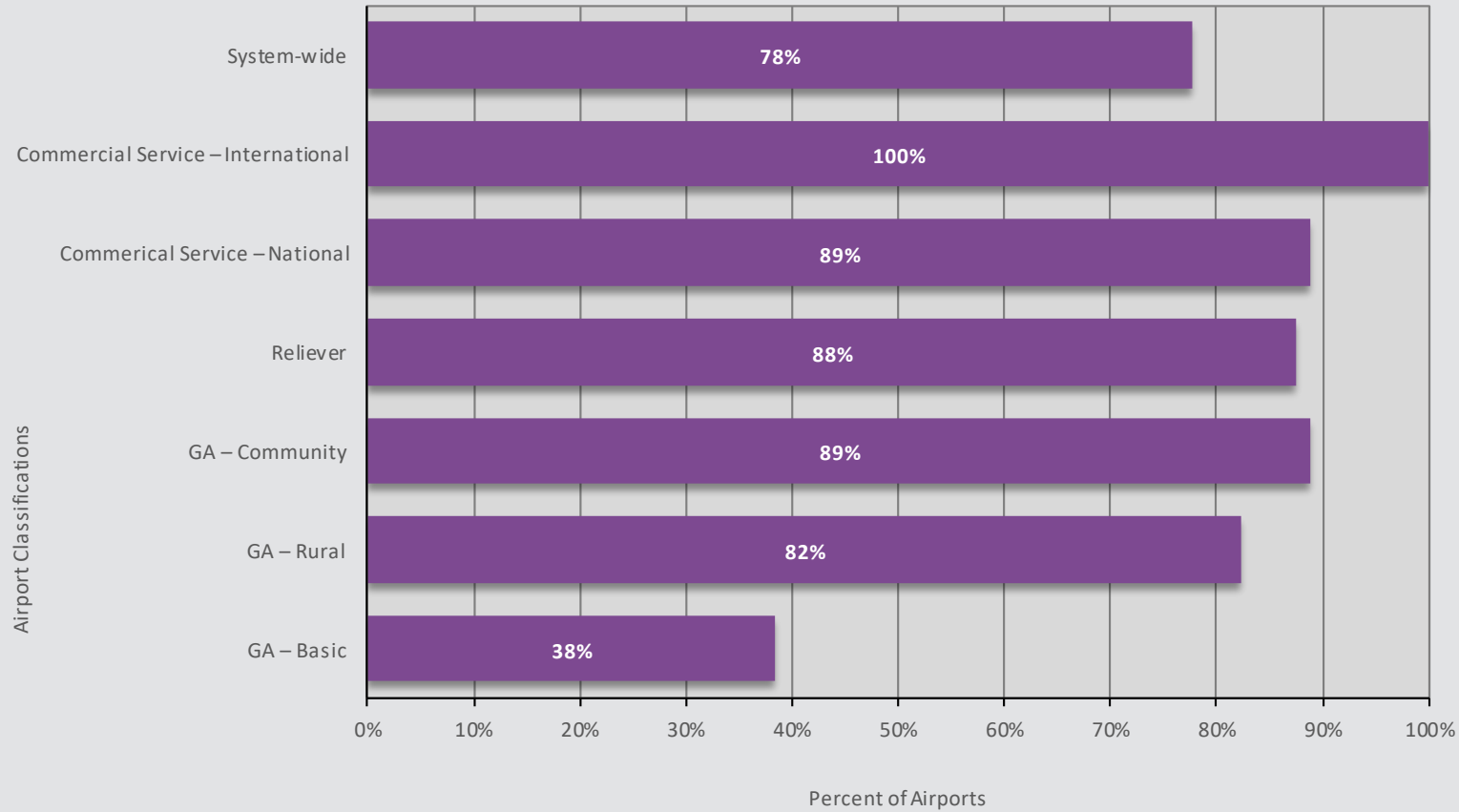
2008 Performance	2017 Performance	Future Target
59%	87%	100%
ADOT Priority: Medium		

## Actions to Improve Performance

- Airports that do not have sufficient property control over RSAs should actively work with owners to acquire the property
- If the property is insufficiently maintained in accordance with FAA standards, the airport should identify and implement the most appropriate corrective action(s) to achieve compliance



## *Number of airports with a current (past 10 years) master plan*



**Performance  
Measure**





# Airport Master Plan Analysis

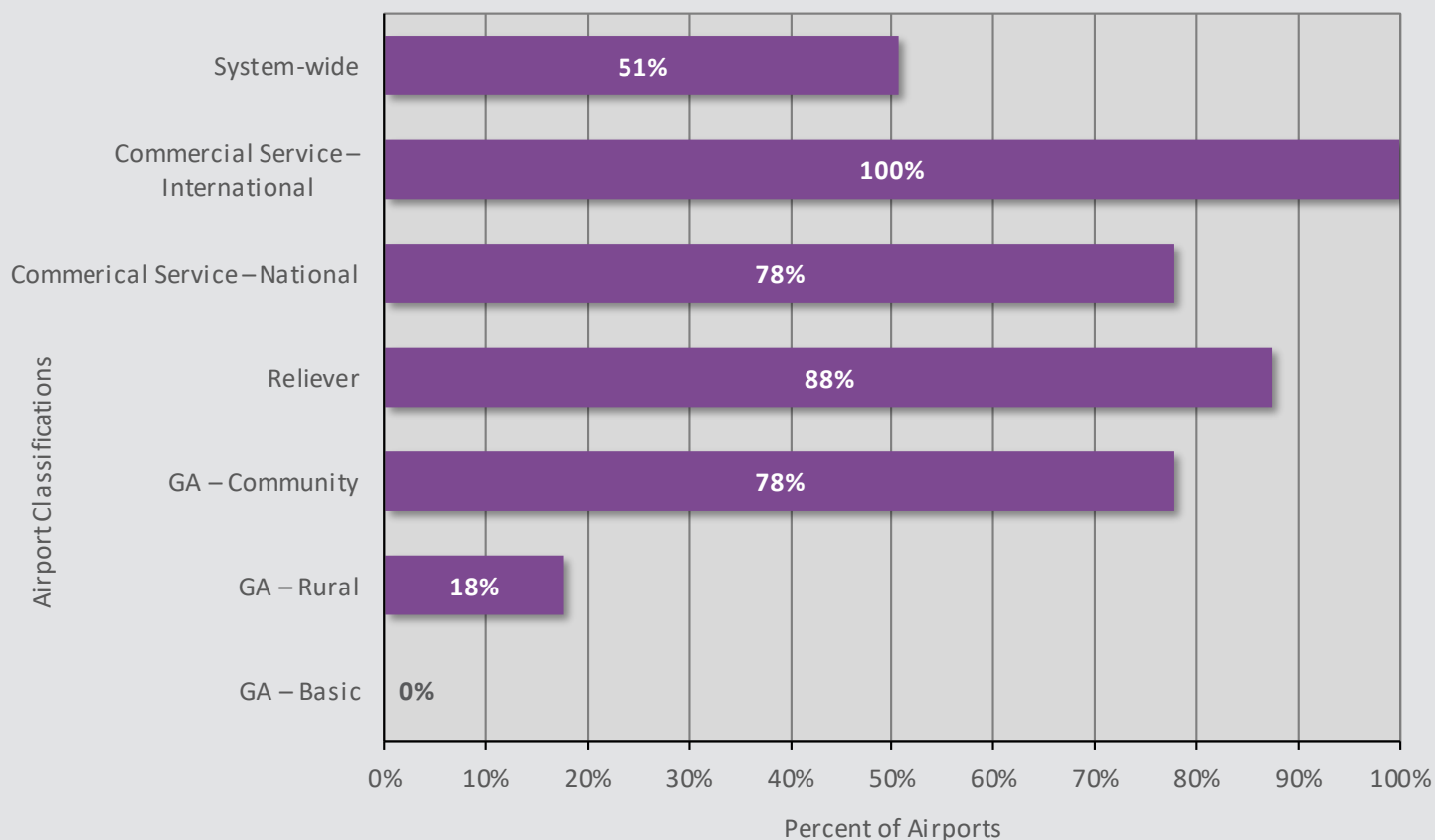
2008 Performance	2017 Performance	Future Target
NA	78%	100%
ADOT Priority: Medium		

## Actions to Improve Performance

- Airports classified as GA-Community and above should complete a master plan update every 7-10 years
- GA-Rural and GA-Basic airport should complete an ALP update with narrative in lieu of a full master plan



## Percent of airports with the facilities to support jet aircraft\*



Performance  
Measure

\* 5,000+ foot runway, instrument approach, conventional hangar space, jet fuel

\*\* 5,000 feet of runway length was used as the baseline; however, airports at high elevations will require a longer runway length



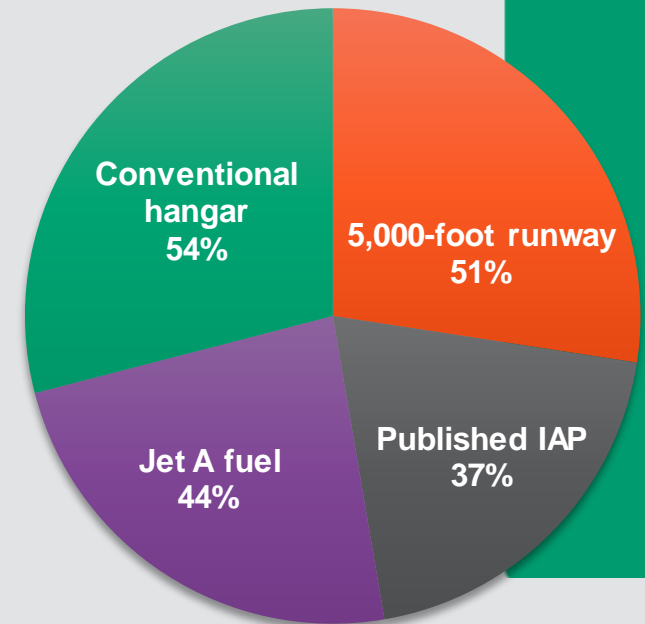
# Jet Facilities Analysis



2008 Performance	2017 Performance	Future Target
NA	51%	70%
ADOT Priority: Medium		

## Actions to Improve Performance

- A published IAP and Jet A fuel are the most commonly missing criteria statewide. These are both objectives for the four highest classifications.
- If all airports meet their objectives, six additional airports would achieve this PM to increase system performance to 54 percent.
- Seven GA-Rural airports are suggested for improvement to meet future performance targets.

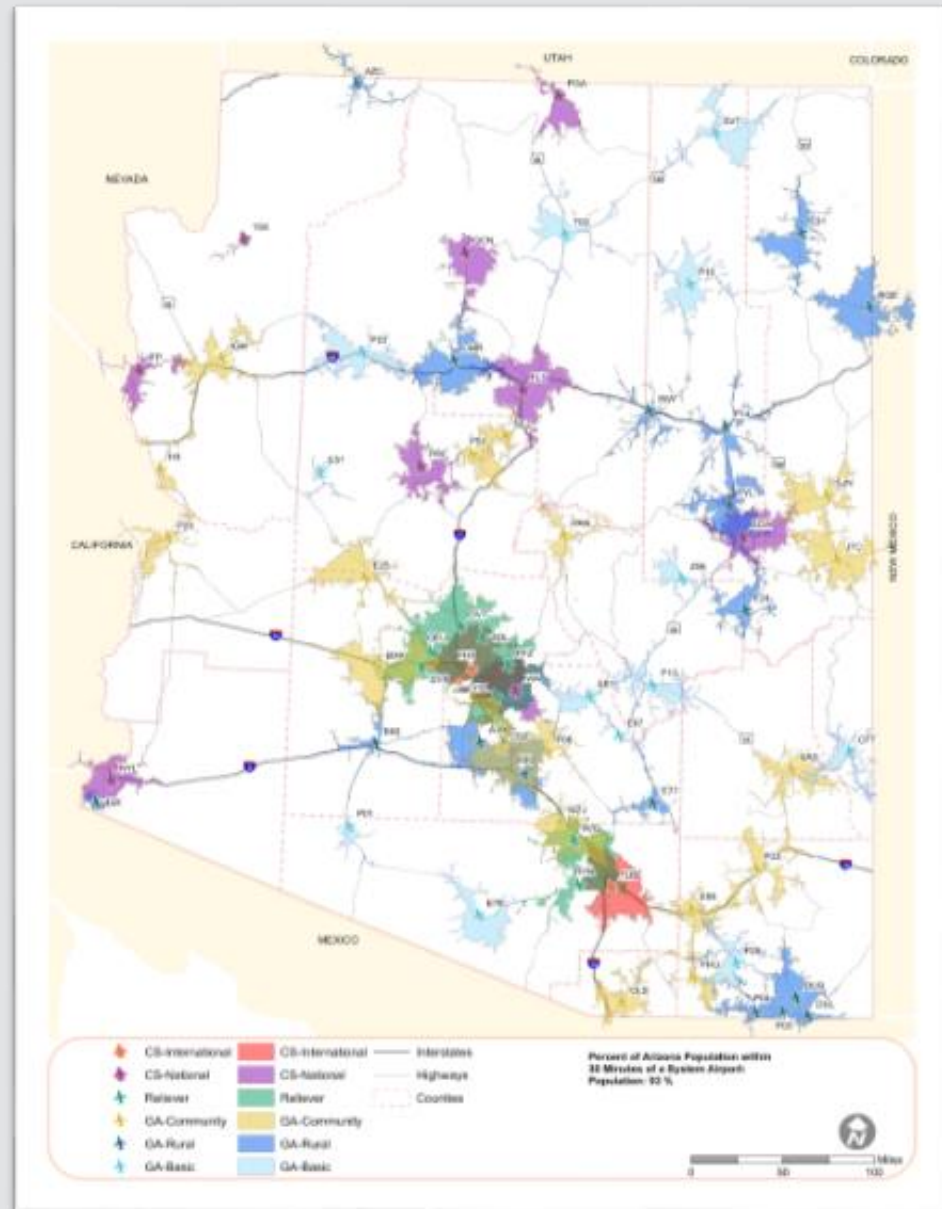


**Percent of Airports Meeting  
Criterion to Support Jet Aircraft**

# Access to a system airport

**93 percent**

of the population is within 30 minutes of a system airport



**2008 Recommendation:**  
*Inclusion of Tribal airports  
in the airport system*



**System  
Indicator**



# Access to a commercial service airport

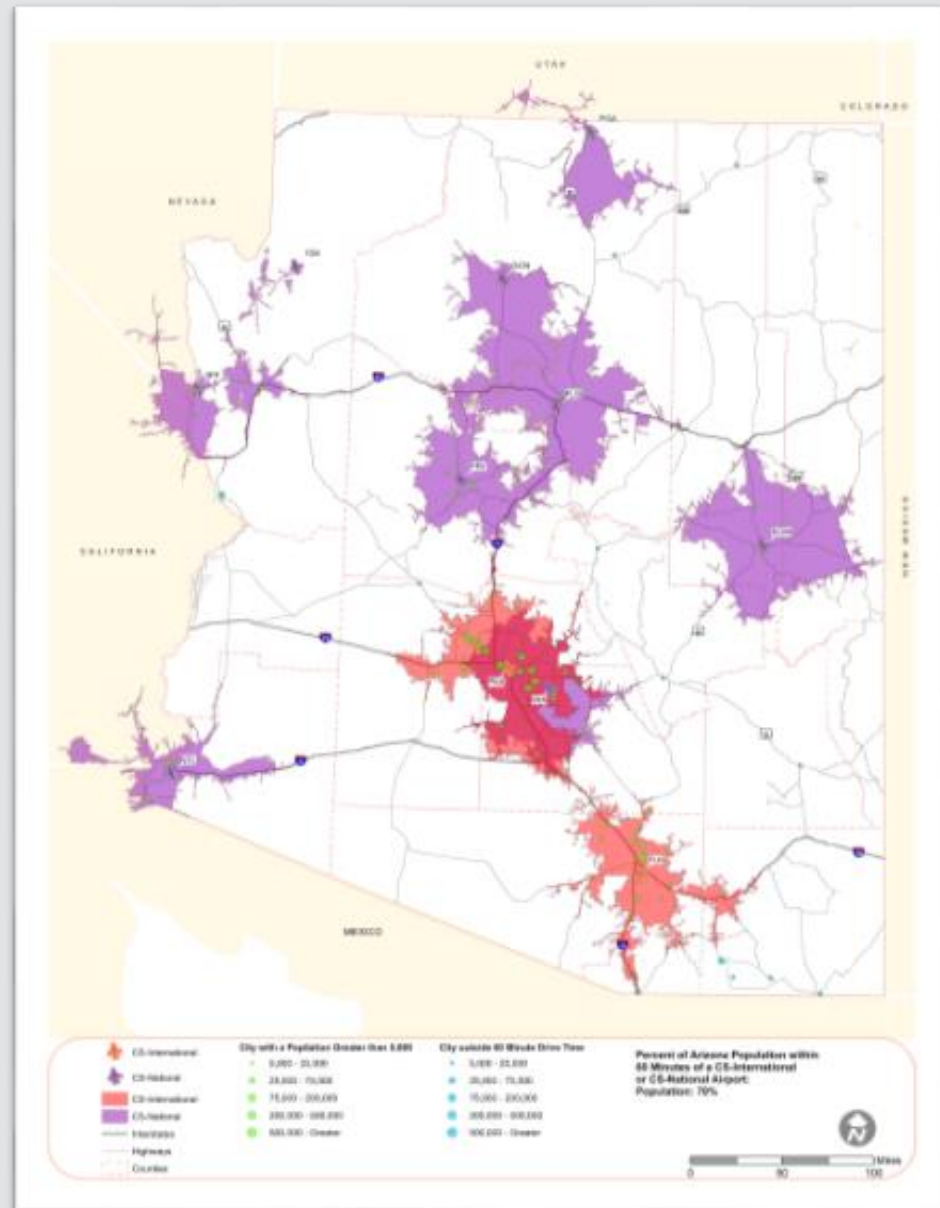
**70 percent**

of Arizona's population is within 60 minutes of a commercial service airport

**88% percent of communities** with a population of 5,000 or greater are within a 60-minute drive time of a commercial service airport.

Examples of communities outside of this threshold include:

- Douglas
- Globe
- Kayenta
- Lake Havasu City
- Nogales
- Payson
- Safford
- Sierra Vista
- Wickenburg



**System  
Indicator**

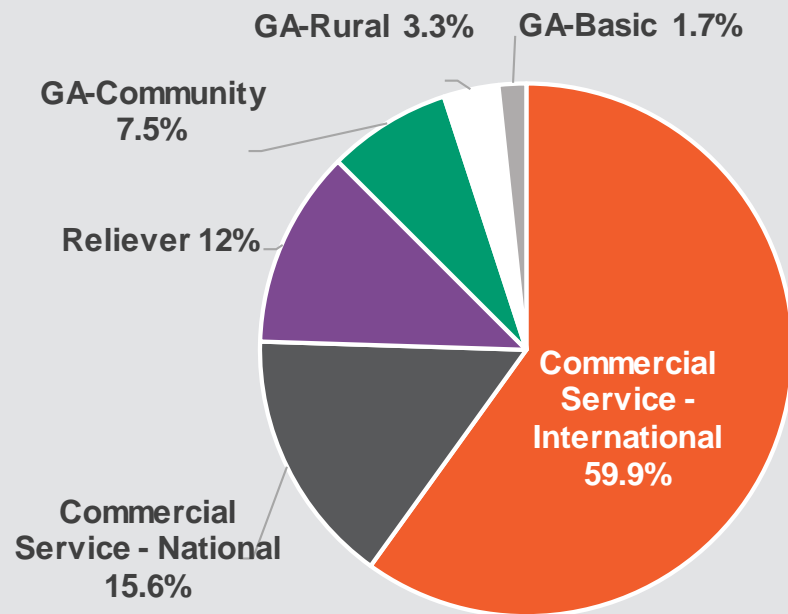


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# Summary of Needs

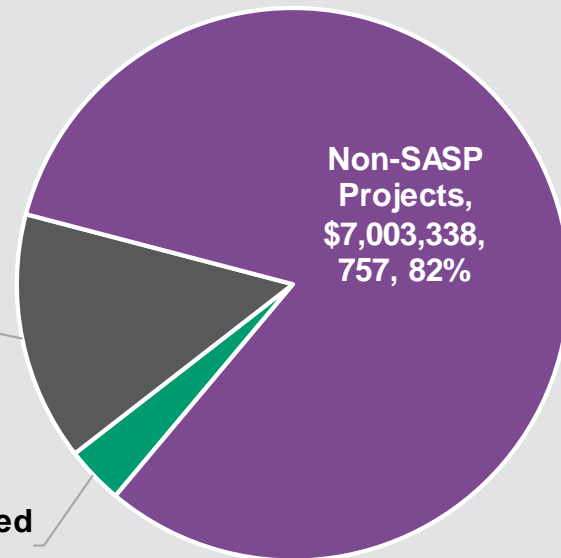
# Total Funding Needs by Classification 2016-2036

**\$8.53 Billion**



Performance Measure Recommended Projects, \$1,245,115,310, 15%

Objective Recommended Projects, \$289,334,710, 3%



*\*All costs are in draft form. Costs are subject to change until the completion of this plan*



# Annualized Funding & Need

Funding Source	Funding
Federal – FAA	\$129,540,836
State	\$9,680,356
Local Match	\$9,680,356
<b>Total Average Annual Funding Received</b>	<b>\$148,901,549</b>

Funding Gap	Funding
Annual Need: SASP and Non-SASP Projects	\$426,889,439
Annual Funding: Federal, State, and Local Match	<b>\$148,901,549</b>
<b>Annual Funding Gap</b>	<b>\$277,987,890</b>

*\*All costs are in draft form. Costs are subject to change until the completion of this plan*





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# Summary of Recommendations

# Key Preliminary Recommendations

- Airports to meet facility and service objectives and performance measures
  - Some actions impact policy (next slide)
- Continuous planning
  - Monitoring system performance
  - Special studies
    - Demand/capacity
    - Unmanned Aerial Systems (UAS)
    - APMS
    - Economic impact
    - Obstruction mitigation
    - Others



# Potential Policy Recommendations

## Arizona Revised Statutes Title 28 – Chapter 25 Aviation

- Article 1: Gen. Provisions - *State Aviation Fund*
- Article 2: Aeronautics Division
- Article 7: Airport Zoning and Regulation

## Arizona STB Aviation Policies

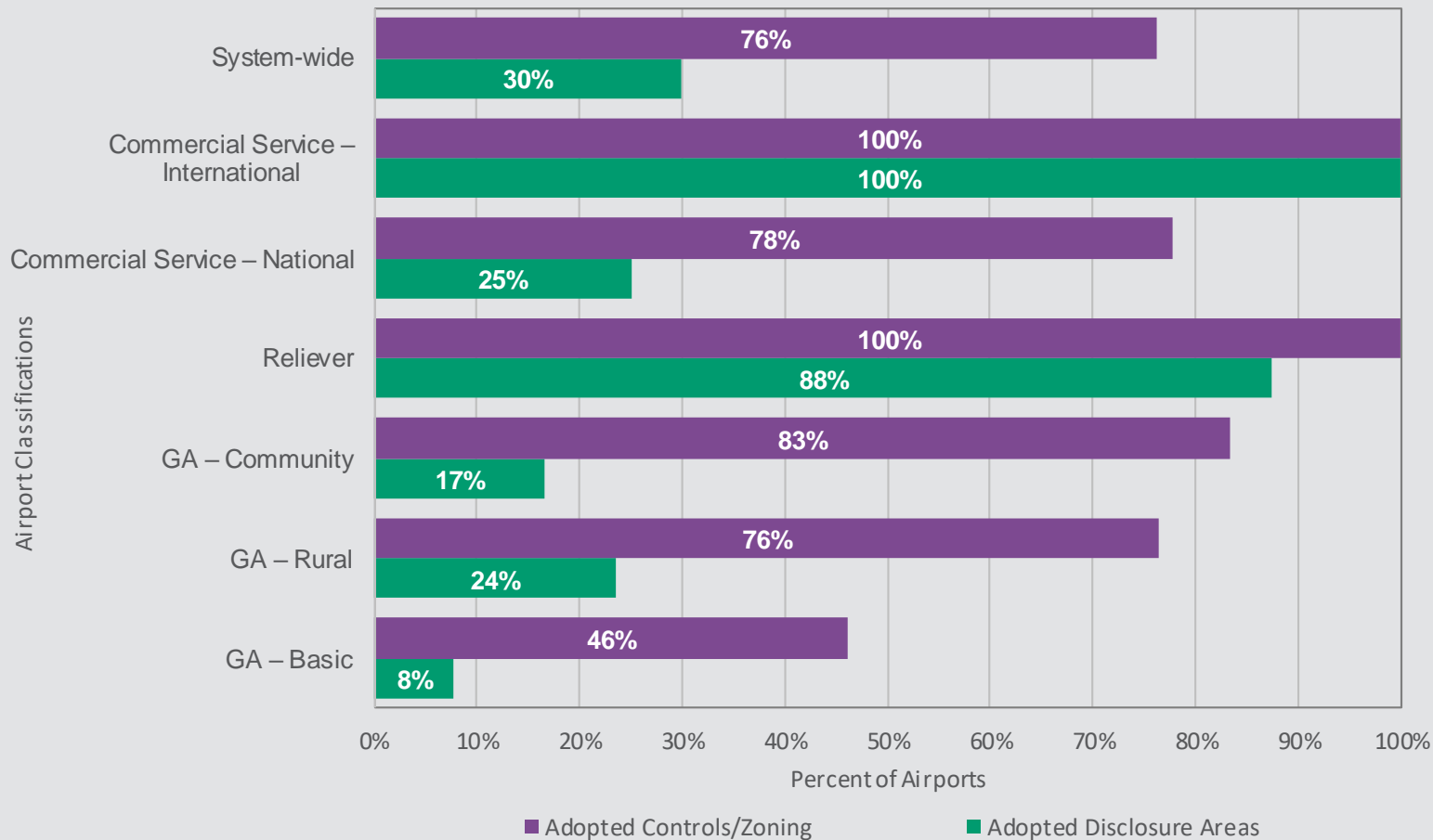
- Resource Allocation Policy
  - Aeronautics (APMS, grant matches)
    - Reallocate funding between airport classifications
    - Separate program for highest priority SASP project type
  - Grand Canyon Nat'l Park Airport (GCN)
- Project Selection and Prioritization Criteria Policy
  - To be updated after every SASP



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# Airport Land Use Compatibility

***Percent of airports with surrounding municipalities that have adopted controls/zoning, including “disclosure areas,” to make land use in the airport environs compatible with airport operation and development\****



**Performance Measure**

*\*Controls/zoning may include but are not limited to airport influence areas. Data on airport influence areas specifically were not obtained during the 2017 SASP Update.*



# Land Use Fundamentals

- To promote development that is considered compatible with airports and preclude incompatible uses
- Key areas of concern:
  - Noise
  - Safety-related issues
    - Hazards to airspace and overflights
      - Tall structures, visual obstructions, wildlife attractants
    - Issues affecting accident severity
      - High concentrations of people, risk-sensitive uses, open lands
- Statutory obligation



# Arizona Legislation

	Airport Influence Areas	Airport Disclosure Maps
<b>Arizona Revised Statute (A.R.S.)</b>	A.R.S. 28-8485	A.R.S. 28-8486
<b>Purpose</b>	Political subdivisions of the state that operate a public airport <b>may</b> designate all property within the vicinity of an airport as an <b>airport influence area</b> after a notice and a hearing.	All public-use airports <b>must</b> identify the area surrounding its facility on an <b>airport disclosure map</b> sufficient to notify existing or potential property owners that the area is subject to aircraft noise and overflights.
<b>Process</b>	A record of the airport influence areas is to be filed with the office of the county recorder in which the property is located.	Airport disclosure maps are to be filed with Arizona Department of Real Estate (ADRE) and with the office of the county recorder in which the property is located.
<b>Airport Responsibility</b>	STRONGLY RECOMMENDED	MANDATORY



# Coverage Areas

## Airport Influence Area

**Property that is exposed to aircraft noise and overflights and**

- Experience a day-night average sound level of 65 decibels (dB) or higher or
- Located within a geographical distance from an existing runway to expose it to aircraft noise and overflights as determined by the airport owner or operator

## Airport Disclosure Map

**Property within the traffic pattern airspace as defined by the FAA and**

**Located in a county with a population of 500,000 or greater**

Experience a day-night average sound level of 60 dB or higher as identified in either the master plan for the 20-year planning period or in a noise study prepared in accordance with 14 CFR, Part 150, *Airport Noise Compatibility Planning*

**Located in a county with a population of 500,000 or less**

Experience a day-night average sound level of 65 dB or higher as identified in the airport master plan for the 20-year planning period







## PUBLIC AIRPORT DISCLOSURE MAP EXHIBIT A

### LEGEND

- Day-Night Level (DNL) Noise Contour / Airport Overflight Area Boundary
- FAA Traffic Pattern Airspace Boundary

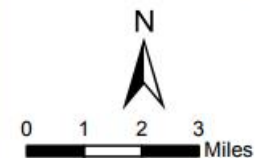
### NOTES

1. This exhibit has been prepared in accordance with Arizona Revised Statutes, Sections 28-8485 & 28-8486

2. FAA Traffic Pattern Airspace boundaries established in accordance with guidelines provided in FAA Order 7400.2D

3. Airport noise contours were developed using the Aviation Environmental Design Tool (AEDT, Version 2c), based on total annual operations (takeoff and landings) of 498,000

\* Applicable to new development



Airport Board Effective Date:  
February 21, 2017

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Source: ADRE 2017



# Consequences of Incompatibility

- Consequences for airports and airport users:
  - Impacts to air service, including constraining air service and an airport's future development potential
  - Impacts to runways' approach and departure procedures
  - Increased safety risks due to obstructions and wildlife
  - Unrealized development potential due to airport growth constraints
- Increased exposure to noise, emissions, and safety risks for people in the vicinity of the airport
- Economic impacts:
  - Litigation concerns if an accident should occur
  - Lost revenue and development potential for entire communities



# Actions to Improve Performance

- Airports should engage with their local municipal planning department, zoning commission, and/or city to develop and implement airport zoning, height controls, and other measures (as appropriate)
- Comply with A.R.S. – mandatory Airport Disclosure Map and consider implementing Airport Influence Area
- Resources
  - Airport Cooperative Research Program Report No. 27: *Enhancing Airport Land Use Compatibility*
  - Upcoming FAA AC on airport compatible land use



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# Next Steps

# Upcoming Tasks

- Finalize last two chapters
- Develop Executive Summary
- Prepare Final Report





# Transportation Programs

## Arizona State Aviation System Plan (SASP) Update



### Documents

This section provides the relevant documentation of the 2017 SASP Update.

#### SASP Update Documents

The following documents have been developed as part of the SASP (Update) study process. Please note that technical report chapters are not being developed chronologically, as the SASP Update is not a linear process. Instead, a series of interrelated tasks are occurring, and working documents will be posted as available.

- [Arizona Airports Association \(AzAA\) Spring Conference Presentation](#) (April 2017)
- Technical report chapters
  - [Chapter One: Aviation System Goals and Performance Measures](#) (August 2017)
  - [Chapter Two: Review of Current Policy](#) (January 2018)
  - [Chapter Three: Identification of Airport Assets](#) (October 2017)
  - [Chapter Four: Forecasts of Aviation Demand](#) (February 2018)
  - [Chapter Five: Airport Classification Analysis](#) (December 2017)
  - [Chapter Six: Current System Performance](#) (March 2018)
  - [Appendix D: Arizona Demographics](#) (February 2018)
  - [Appendix E: Facility and Service Objectives](#) (March 2018)



# Get Involved!

- Provide comments on online SASP materials and utilize results
- Promote the economic and qualitative benefits of aviation to the community and others in leadership positions
- Support airport compatible land use planning, zoning ordinances, and community planning efforts
- Participate in airport-specific planning efforts, including the development of airport master plans



# Thanks to our PAC!

Don Kriz

Matt Smith

LaDell Bistline

Zenia Cornejo

Mark Edelman

Kyler Erhard

Jordan Feld

Bill Gillies

Charla Glendening

Micah Horowitz

Lisa Marra

Scott Robidoux

Stacy Howard

Arlando Teller

Jim Timm

Marisa Walker

Gladys Wiggins

ADOT Aeronautics

ADOT Aeronautics

Colorado City

Falcon Field

AZ State Land

FAA

City of Phoenix

Luke Air Force Base

ADOT MPD

AZ State Land

Cochise County

Tucson Airport Authority

NBAA

Navajo DOT

Arizona Pilot's Association

AZ Commerce Authority

Yuma International Airport





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# Thoughts?

# Thank You!

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Contact

