STATE AVIATION SYSTEM PLAN UPDATE
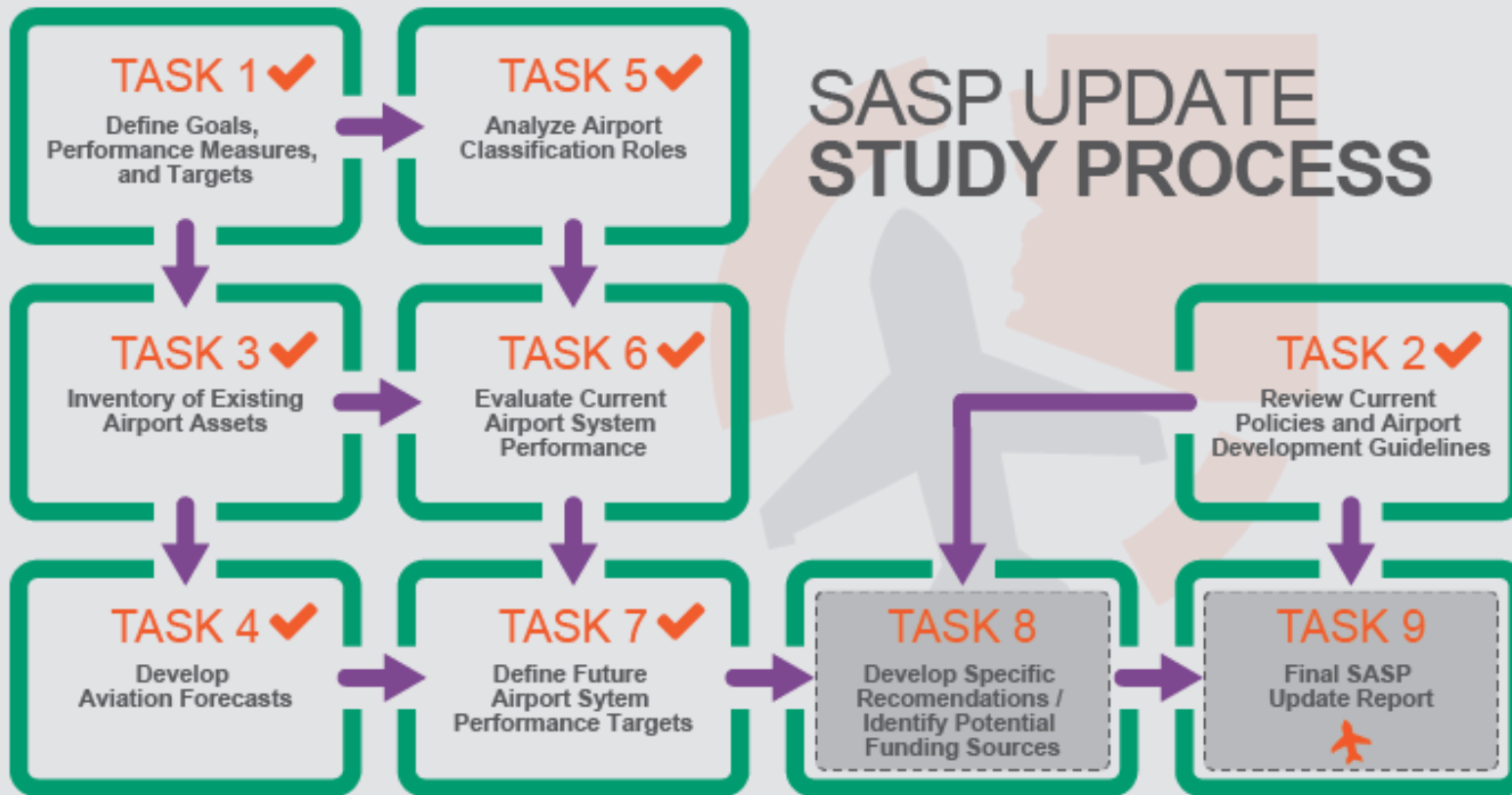
PAC Mtg. #4
May 2, 2018

ADOT

Kimley»Horn

Agenda

- Introductions

- Last PAC meeting for the SASP

- SASP progress update

- Review future system performance

- Review system needs, costs, and alternative scenarios

- Review draft recommendations

- Discuss next steps

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)

ADOT SASP Website

Future
Performance

Future Performance Evaluation

How did we do it?

- Reviewed outside influences that have historically and are anticipated to impact aviation within AZ and the U.S.

- Reviewed previous plan targets

- Solicited input from PAC and ADOT and FAA

- Analyzed performance if objectives were met

- Set realistic future performance targets based on these evaluations

Outside Influences

- Stability of oil prices
- Population growth
- Employment and industry trends
- Business use of aviation services
- Tourism and seasonal residency
- International trade developments
- Major surface transportation improvements

Key takeaway:
Growth anticipated to outpace the nation

Surface Transportation Improvements

FY 2018 – 2022 Construction Program
Roadway Improvements
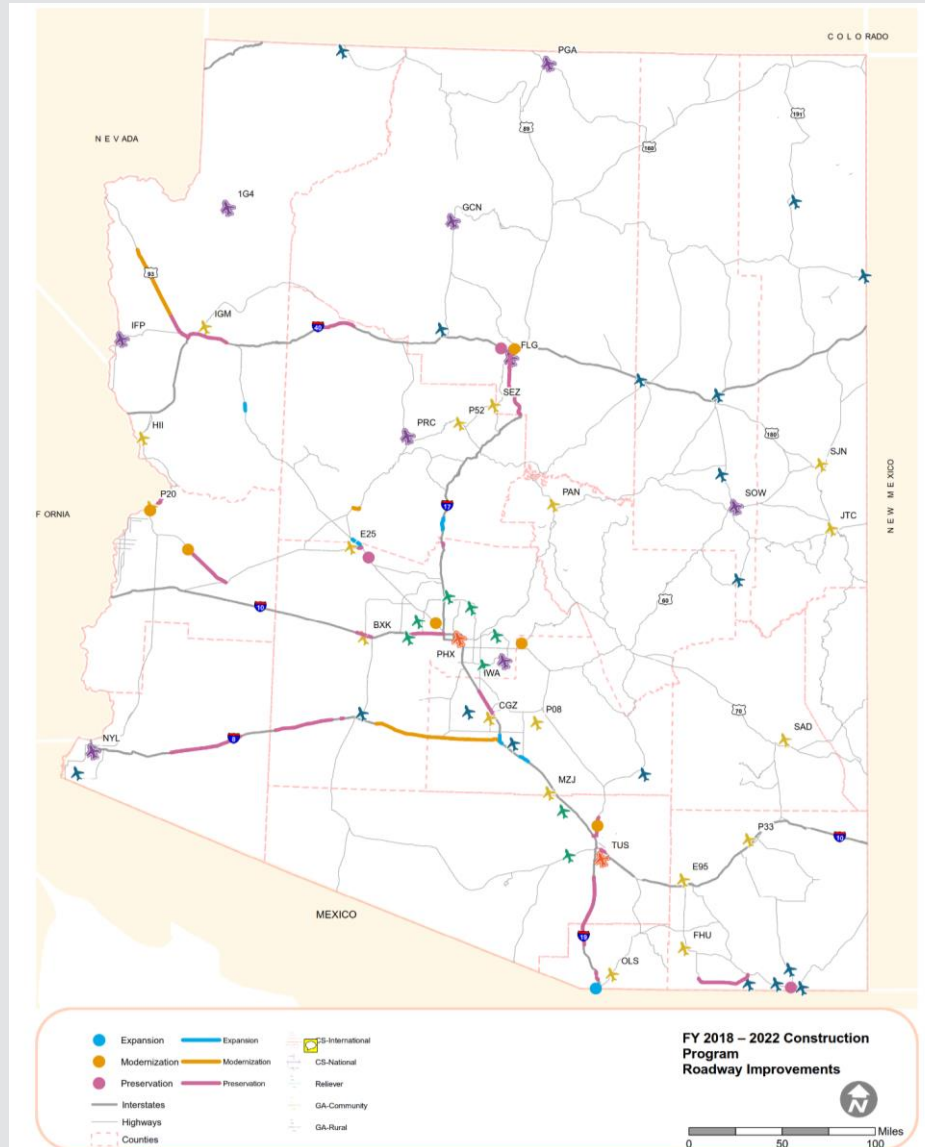
Previous Plan Comparison

2008 Performance Measures	2017 Performance Measures & Indicators
Development – 26 PMs	Safety & Security – 5 PMs, 3PIs
Economic Support – 8 PMs	Fiscal Responsibility – 3 PMs, 5 PIs
Safety & Standards – 12 PMs	Economic Support – 3 PMs, 2 PIs
Environmental Sensitivity & Stewardship – 6 PMs	

Safety and Security

Percent of airports capable of supporting medical operations.*

Classifications	2008 SASP		2017 SASP Update	
	Performance	Performance Target	Performance	Future Performance Target
CS-International	83%	Not applicable (NA)	100%	100%
CS-National			67%	100%
Reliever	88%		89%	100%
GA-Community	45%		44%	100%
GA-Rural	13%		18%	29%
GA-Basic	0%		8%	23%
System-wide	**40%**	**59%**	**40%**	**67%**

Sources: Wilbur Smith and Associates 2008, Kimley-Horn 2017

Actions: Airports should meet facility/service objectives. ADOT to look into funding options for supporting 24/7 fueling.

* 4,000+ foot runway, 24/7 fuel, non-precision approach, weather reporting

Safety and Security

Percent of airports w/surrounding municipalities with adopted controls/zoning, including "**disclosure areas**."

Airport Disclosure Maps

Classifications	2008 SASP		2017 SASP Update	
	Performance	Performance Target	Performance	Future Performance Target
CS-International	67%	NA	100%	100%
CS-National			33%	100%
Reliever	100%		88%	100%
GA-Community	31%		17%	100%
GA-Rural	8%		24%	100%
GA-Basic	20%		8%	100%
System-wide	**35%**	**100%**	**30%**	**100%**

Sources: Wilbur Smith and Associates 2008, Kimley-Horn 2017

Actions: ADOT to work with AzAA and other forums to educate airports on the purpose and process of developing and filing airport disclosure maps with ADRE.

Safety and Security

Percent of airports w/surrounding municipalities with **adopted controls/zoning**, including "disclosure areas."

Controls/Zoning

Classifications	2008 SASP		2017 SASP Update	
	Performance	Performance Target	Performance	Future Performance Target
CS-International	67%	NA	100%	100%
CS-National			78%	100%
Reliever	100%		100%	100%
GA-Community	72%		83%	100%
GA-Rural	46%		76%	100%
GA-Basic	20%		46%	100%
System-wide	**60%**	**100%**	**76%**	**100%**

Sources: Wilbur Smith and Associates 2008, Kimley-Horn 2017

Actions: Airports should engage w/local planning entity(ies) to discuss importance of land use protection. Use existing resources from FAA and ACRP to support this effort.

Safety and Security

Percent of airports with adopted wildlife management plans in accordance with appropriate FAA regulations.

Classifications	2008 SASP		2017 SASP Update			
	Performance	Performance Target[1]	Performance	Future Performance Target[2]	Performance Targets in Terms of Part 139 Status	
					Part 139	Non-Part 139
CS-International	50%	NA	100%	100%	2/2	0/0
CS-National			67%	100%	9/9	0/0
Reliever	25%		63%	63%	0/0	5/8
GA-Community	21%		17%	28%	2/2	3/16
GA-Rural	4%		18%	18%	0/0	3/17
GA-Basic	0%		0%	0%	0/0	0/13
System-wide	**18%**		**28%**	**36%**	**13/13**	**11/54**

Sources: Wilbur Smith and Associates 2008, Kimley-Horn 2017

Actions: Five Part 139 airports w/o plan should complete appropriate study in accordance with FAA Order 5100.38D *Airport Improvement Program Handbook.*

Fiscal Responsibility

Percent of population within 30 minutes of an all-weather runway.*

Classifications	2008 SASP		2017 SASP Update	
	Performance	Performance Target	Performance	Future Performance Target
System-wide	77%	84%	90%	93%

Sources: Wilbur Smith and Associates 2008, Kimley-Horn 2017

Actions: All airports should achieve their facility and service objectives, which will improve the population's access to all-weather runways.

* Paved runway, instrument approach, weather reporting

Fiscal Responsibility

Percent of airports with a current (within 10 years) master plan.

Classifications	2008 SASP		2017 SASP Update	
	Performance	Performance Target	Performance	Future Performance Target
CS-International			100%	100%
CS-National			89%	100%
Reliever			88%	100%
GA-Community	NA	NA	89%	100%
GA-Rural			82%	100%
GA-Basic			38%	100%
System-wide			**78%**	**100%**

Source: Kimley-Horn 2017

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

Fiscal Responsibility

Percent of airports with a primary runway PCI of 70 or greater.

Classifications	2008 SASP		2017 SASP Update	
	Performance	Performance Target	Performance	Future Performance Target
CS-International	75%	NA	100%	100%
CS-National			67%	100%
Reliever	100%		100%	100%
GA-Community	59%		67%	100%
GA-Rural	38%		59%	100%
GA-Basic	20%		46%	85%
System-wide	**54%**	**100%**	**64%**	**97%***

* 2 system airports are unpaved. Sources: ADOT 2008, ADOT APMS Report 2017, Kimley-Horn 2017

Actions: ADOT should continue the APMS evaluations and Implementation Program to maintain pavement quality over time.

Economic Support

Percent of airports that are recognized in **local**/regional growth plans.

Local Comprehensive Plans

Classifications	2008 SASP		2017 SASP Update	
	Performance	Performance Target	Performance	Future Performance Target
CS-International	83%	NA	100%	100%
CS-National	83%	NA	56%	100%
Reliever	100%	NA	75%	100%
GA-Community	69%	NA	78%	100%
GA-Rural	50%	NA	59%	100%
GA-Basic	30%	NA	31%	100%
System-wide	**64%**	**100%**	**61%**	**100%**

Sources: Wilbur Smith and Associates 2008, Kimley-Horn 2017

Actions: Airports and sponsors should engage with all pertinent planning authorities to ensure facilities are included in local and regional plans.

Economic Support

Percent of airports with the facilities to support jet aircraft.*

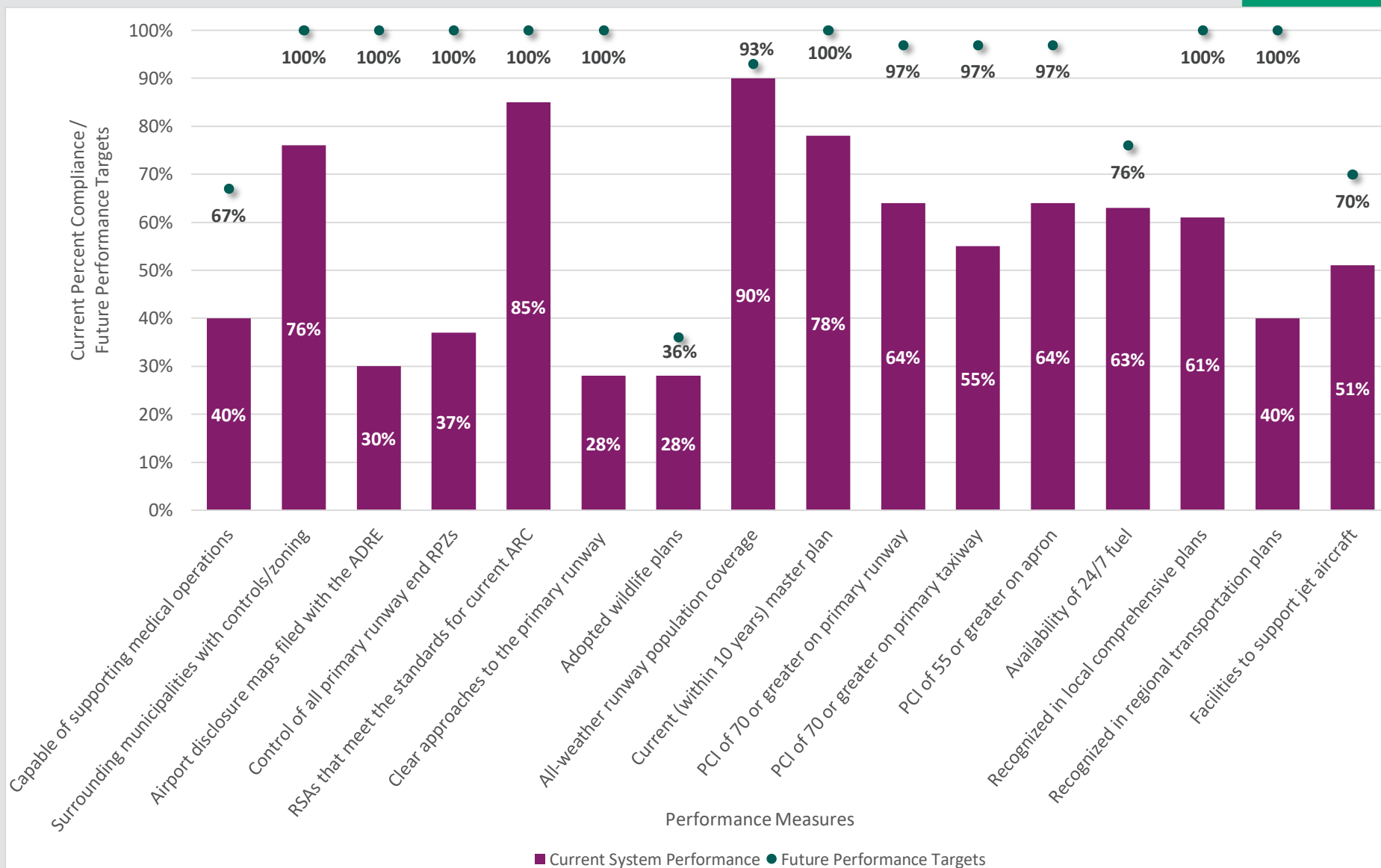| Classifications	2008 SASP		2017 SASP Update	
	Performance	Performance Target	Performance	Future Performance Target
CS-International	NA	NA	100%	100%
CS-National			78%	100%
Reliever			88%	100%
GA-Community			78%	100%
GA-Rural			18%	59%
GA-Basic			0%	0%
System-wide			**51%**	**70%**

Sources: Kimley-Horn 2017

Actions: Airports should meet their facility and service objectives. Additionally, seven GA-Rural airports are suggested for improvement based on geographic coverage.

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

Future Performance Summary

Chart title: Future Performance Summary

Y-axis: Current Percent Compliance / Future Performance Targets

X-axis: Performance Measures

Performance Measure	Current System Performance	Future Performance Targets
Capable of supporting medical operations	40%	67%
Surrounding municipalities with controls/zoning	76%	100%
Airport disclosure maps filed with the ADRE	30%	100%
Control of all primary runway end RPZs	37%	100%
RSAs that meet the standards for current ARC	85%	100%
Clear approaches to the primary runway	28%	100%
Adopted wildlife plans	28%	36%
All-weather runway population coverage	90%	93%
Current (within 10 years) master plan	78%	100%
PCI of 70 or greater on primary runway	64%	97%
PCI of 70 or greater on primary taxiway	55%	97%
PCI of 55 or greater on apron	64%	97%
Availability of 24/7 fuel	63%	76%
Recognized in local comprehensive plans	61%	100%
Recognized in regional transportation plans	40%	100%
Facilities to support jet aircraft	51%	70%

Legend: ■ Current System Performance ● Future Performance Targets

System Needs, Costs, & Alternative Scenarios

System Needs Evaluation

How were the needs identified, evaluated, and costed?
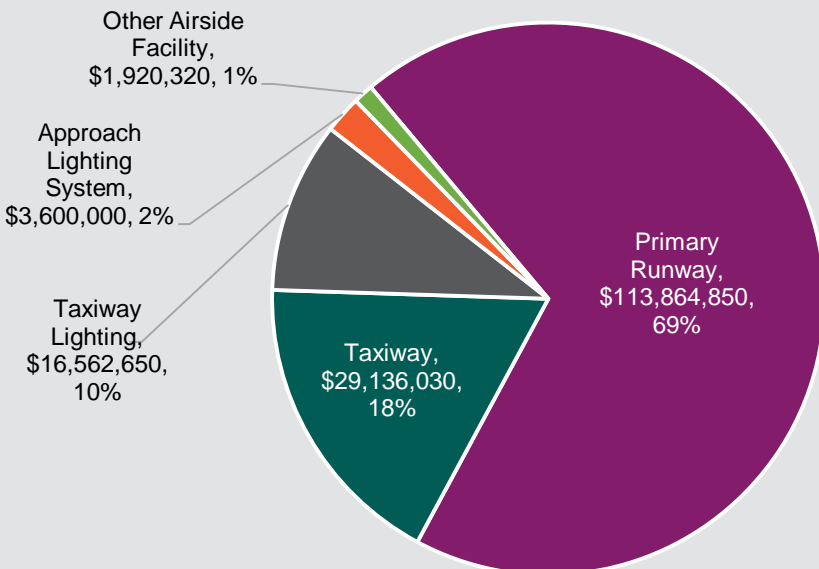
- Objective needs

- PM needs

- Non-SASP needs

- Total Needs
  - Alternative scenario #1 (maintenance)
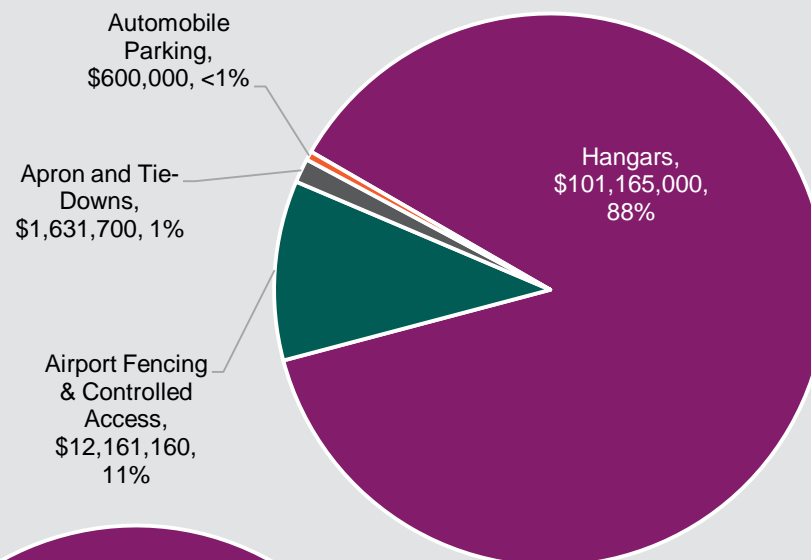 - Alternative scenario #2 (expansion)
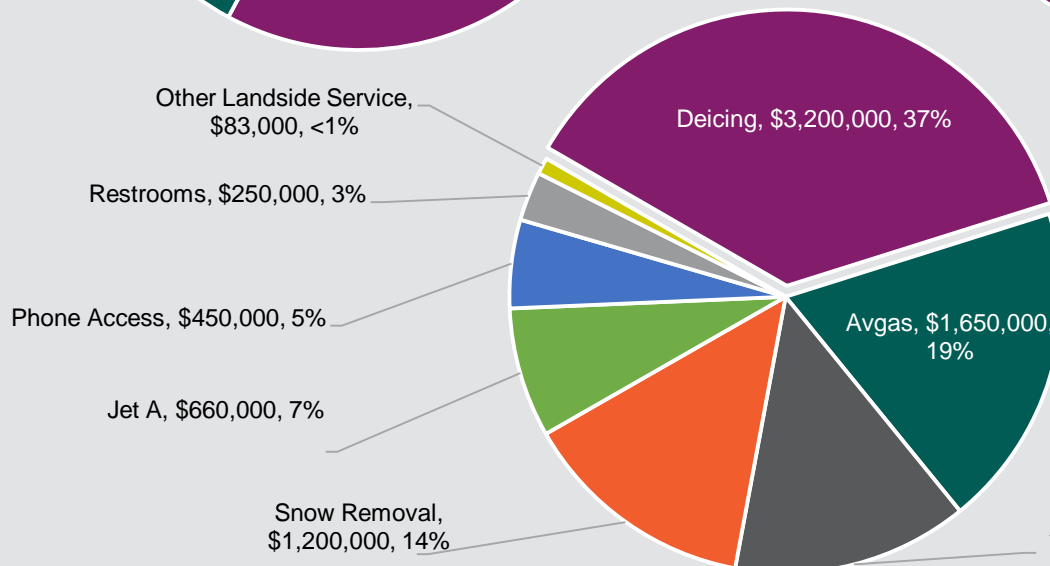
Facility/Service Objective Costs

Airside Facility Objective Recommendation Costs

Other Airside Facility, $1,920,320, 1%

Approach Lighting System, $3,600,000, 2%

Taxiway Lighting, $16,562,650, 10%

Primary Runway, $113,864,850, 69%

Taxiway, $29,136,030, 18%

Landside Facility Objective Recommendation Costs

Automobile Parking, $600,000, <1%

Apron and Tie-Downs, $1,631,700, 1%

Airport Fencing & Controlled Access, $12,161,160, 11%

Hangars, $101,165,000, 88%

Landside Service Objective Recommendation Costs

Other Landside Service, $83,000, <1%

Restrooms, $250,000, 3%

Phone Access, $450,000, 5%

Jet A, $660,000, 7%

Snow Removal, $1,200,000, 14%

Deicing, $3,200,000, 37%

Avgas, $1,650,000, 19%

AWOS, $1,200,000, 14%

$289.3 Million

Performance Measure Costs

$1.245 Billion

Other Performance Measures
Recommendation Costs*

Other Performance Measure, $8,480,000, <1%

Master Plan/ALP, $56,500,000, 4%

Taxiway Pavement Maintenance, $334,436,400, 27%

Runway Pavement Maintenance, $845,698,910, 68%
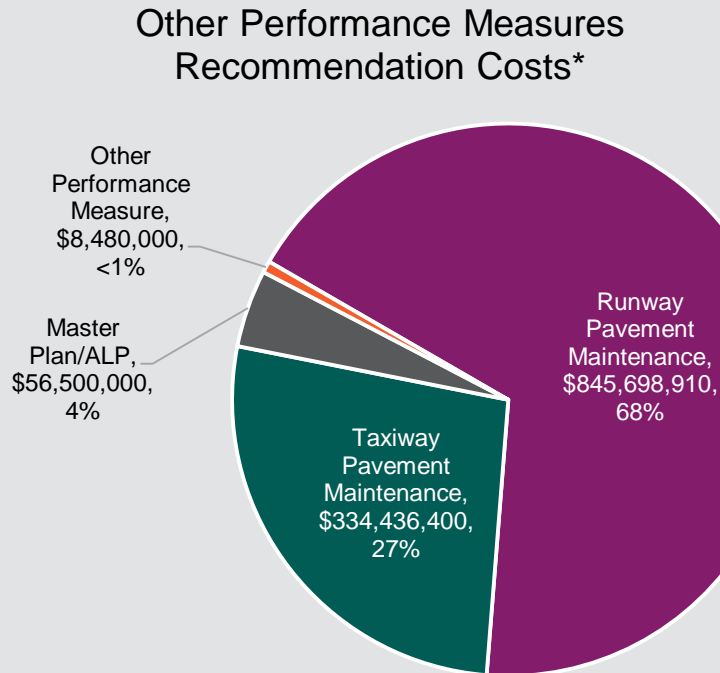
*Projects not costed include:
- Implementing land use controls/zoning
- Developing and filing disclosure maps with ADRE
- Control of all primary runway end RPZs (land acquisition)
- RSA compliance (land acquisition, other)
- Clear approaches to primary runway (land acquisition, obstruction removal)
- Airport recognition in local comprehensive plans and regional transportation plans

Non-SASP Costs

Non-SASP Project Categories	Maintenance/ Preservation	Expansion	Total Cost	Percent of Total
ARC	$7,893,000	$0	$7,893,000	0.11%
Runways	$52,983,722	$351,944,810	$404,928,532	5.78%
Taxiways	$64,274,233	$242,114,198	$306,388,431	4.37%
IAP	$0	$6,719,700	$6,719,700	0.10%
Visual Aids	$1,575,150	$12,303,950	$13,879,100	0.20%
Airfield Lighting/Signage	$2,285,000	$11,090,615	$13,375,615	0.19%
Fencing	$451,700	$5,219,420	$5,671,120	0.08%
Apron	$114,341,855	$206,472,949	$320,814,804	4.58%
Hangars	$7,430,227	$48,307,105	$55,737,332	0.80%
Terminal	$102,577,497	$702,548,972	$805,126,469	11.50%
Utilities	$19,771,500	$47,971,000	$67,742,500	0.97%
Roads/Parking/Access	$31,992,650	$137,162,710	$169,155,360	2.42%
Misc. Landside	$22,362,200	$76,080,591	$98,442,791	1.41%
Weather Reporting	$150,000	$1,983,000	$2,133,000	0.03%
Fuel Farm	$660,000	$48,821,947	$49,481,947	0.71%
Snow Removal	$250,000	$1,560,000	$1,810,000	0.03%
Wash Rack	$0	$2,949,000	$2,949,000	0.04%
RSA/RPZ/OFA	$13,009,800	$785,000	$13,794,800	0.20%
Environmental	$62,607,015	$0	$62,607,015	0.89%
Land Acquisition	$0	$485,815,569	$485,815,569	6.94%
Other	$10,442,251	$718,435,421	$728,877,672	10.41%
Post-2022 PHX CIP	$1,689,997,500	$1,689,997,500	$3,379,995,000	48.26%
Non-SASP Project Total	**$2,205,055,300**	**$4,798,283,457**	**$7,003,338,757**	**100.00%**

$7 Billion

2018 SASP Summary of Needs

Total System Needs Through 2036

Non-SASP Projects, $7,003,338,757, 82%

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

Objective Recommended Projects, $289,334,710, 3%
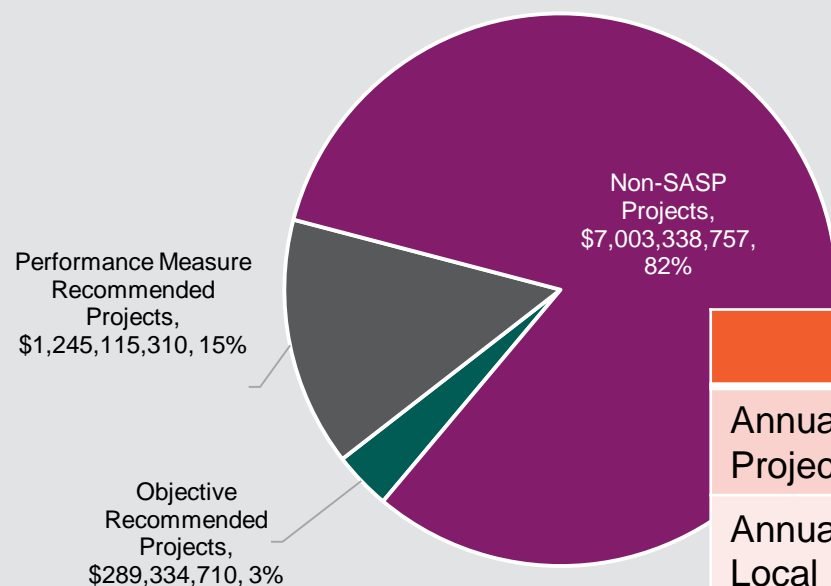
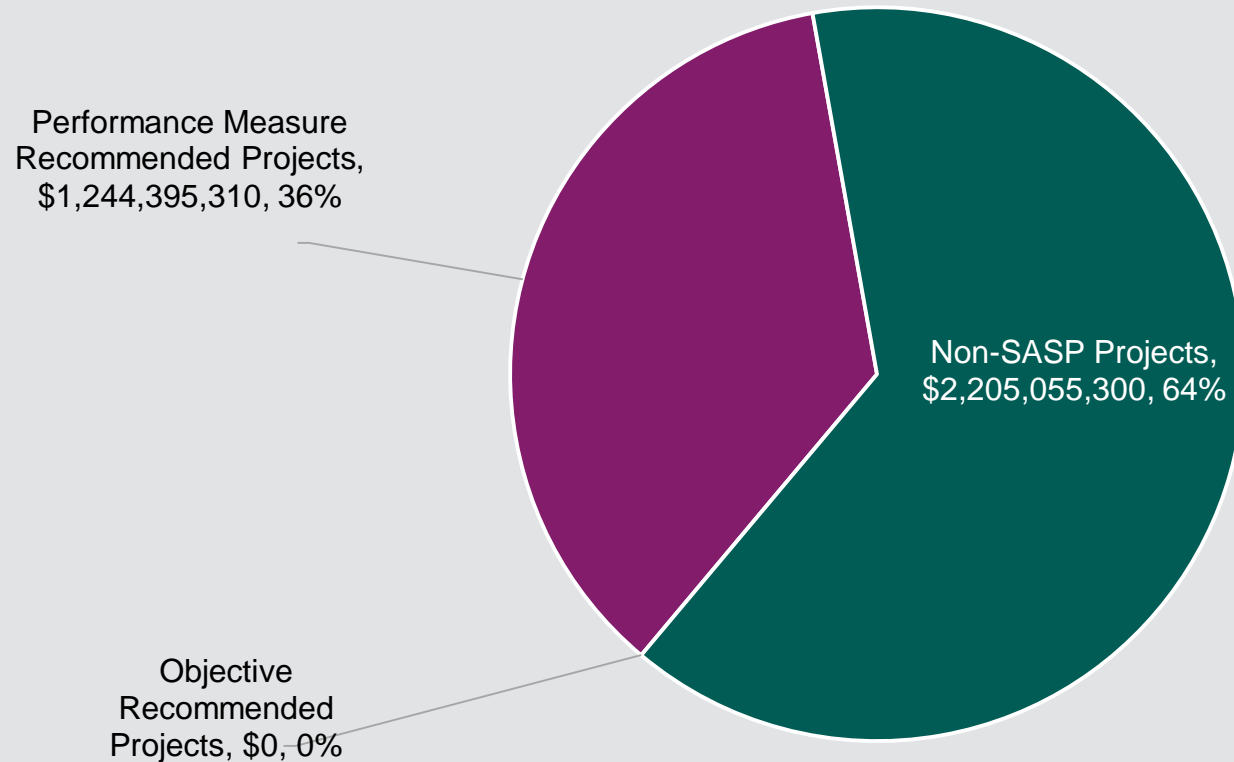| Funding Gap	Funding
Annual Need: SASP and Non-SASP Projects	$426,889,439
Annual Funding: Federal, State, and Local Match	$148,901,549
Annual Funding Gap	$277,987,890

Funding Source	Funding
Federal – FAA	$129,540,836
State	$9,680,356
Local Match	$9,680,356
Total Average Annual Funding Received	**$148,901,549**

$8.53 Billion

Scenario #1 Maintenance

Project Costs (2016-2036)

Performance Measure Recommended Projects, $1,244,395,310, 36%

Non-SASP Projects, $2,205,055,300, 64%

Objective Recommended Projects, $0, 0%

$3.45 Billion

Scenario #2 Expansion (includes Scenario #1)

Project Costs (2016-2036)

Non-SASP Projects, $7,003,338,757, 82%

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

Objective Recommended Projects, $289,334,710, 3%
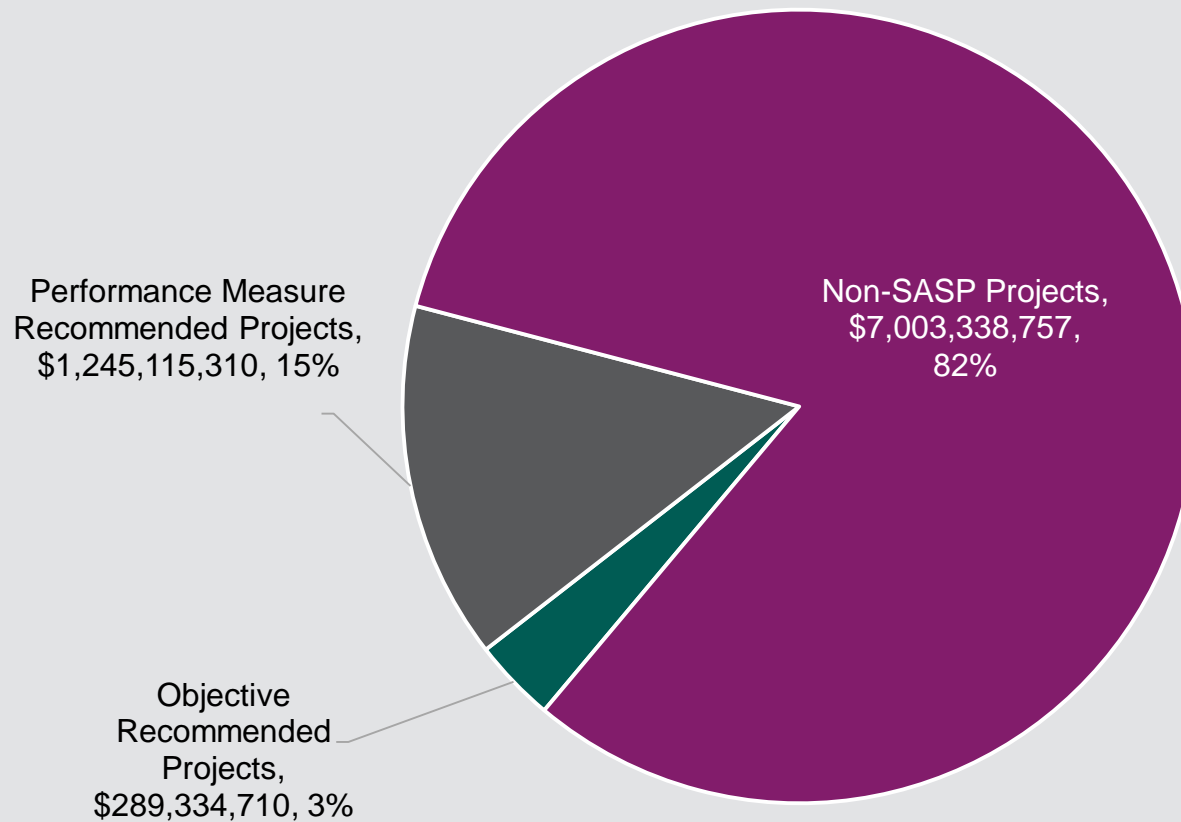
$8.53 Billion

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*
  - Address fund sweeps
- Article 2: Aeronautics Division
  - Aeronautics needs to be recognized as part of MPD
- Article 7: Airport Zoning and Regulation
  - Educate on importance of zoning & disclosure

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

Accomplishments and Next Steps

Today's Accomplishments

- Presented future system targets and associated needs

- Summarized costs of implementing SASP and non-SASP projects

- Reviewed system recommendations and policy implications

Next Steps

- AzAA presentation

- Transmit Chapter 7 – Future System Performance to PAC

- Complete drafts of Costs and Alternative Scenarios and Recommended Plan (Chapters 8 & 9)

- Complete SASP executive summary

- Finalize SASP

Additional Discussion

Thank You!

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www.azdot.gov/SASPUpdate

SASP Update Planning Advisory Committee (PAC)
Meeting 4 Summary

Date, Time	May 2, 2018; 1:30 – 3:30 PM	
Location	Webinar/Conference Call	
PAC Attendees	**Attendees:** ☒ Zenia Cornejo, Falcon Field Airport (FFZ) ☒ Robin Sobotta, Embry-Riddle Aeronautical University at Ernest A. Love Field (PRC) ☒ Micah Horowitz, AZ State Land ☒ Randy Payne (City of Phoenix Aviation Department) ☒ Gladys Wiggins, Yuma International Airport (NYL)	**Consultant Staff:** ☒ Pam Keidel-Adams (PKA), Kimley-Horn (KH) ☒ Regan Schnug (RS), KH ☒ Tom Gibson (TG), KH **ADOT Aeronautics** ☒ Don Kriz (DK), ADOT Aeronautics ☒ Matt Smith (MS), ADOT Aeronautics
1	**Introductions and Agenda**	a. Introduction and agenda review.
2	**SASP Process and Task Updates**	a. Review of study process and schedule update. b. The SASP Update is scheduled to be completed by the end of June 2018. c. The SASP Update will be presented at the AzAA Spring Conference. d. Draft chapters 1-6 and Appendices D and E have been uploaded to the project website. Chapter 7 and appendix F are planned to be uploaded shortly.
3	**Future System Performance**	a. Stacy Howard is disappointed that medical operations performance remained the same over 10 years. b. Stacy agreed on the action for ADOT to consider 24/7 fuel to help increase airport performance for supporting medical operations. c. Stacy would like to see more data on medical flights for more background on the issues at hand. d. A PAC member identified that it is hard to coordinate and file the disclosure notices with ADRE. Kimley-Horn is going to ask what the difficulty is to recommend a more streamlined process in the recommended plan chapter at the AzAA conference. e. Randy suggested that for future inventory visits, coordinate with the county for land use controls/zoning information, especially for the rural airports who rely on the county.

		f. Randy suggests that KH review the ADOT Wildlife Hazard Assessment (WHA) Study and make a recommendation in the plan that airports who completed a WHA also complete a Wildlife Hazard Master Plan (WHMP).
		g. Stacy identified that ADOT should consider creating a template for airports on compatible land use planning. Stacy also suggested that the template be available for city planners as well as airports.
		h. Micah Horowitz asked that the AZ State Land Department be included in the dissemination of the potential land use planning templates. Micah also suggested that the SASP include groups/agencies in the recommendation, as well as city planners, in the Request for Proposal (RFP) development process and through completion; especially if state land is involved.
		i. Randy suggested that a land use study should be added in the Best Practices Guide and agreed with Micah that the groups/agencies be included. He went further to state the League of Cities, Towns, and Counties needs to be included.
		j. The PAC identified that Proposition 207 (Private Property Rights Protection Act) needs to be included in the land use recommendation.
		k. During the presentation of airports with the facilities to support jet aircraft, Randy suggested KH compare if airports have plans to meet jet aircraft needs in the master plan. If they are met in the master plan objectives already, this needs to be documented to mitigate any duplicative recommendations.
		l. Robin Sobotta suggested that KH include a note about jet aircraft size for commercial service airports in reference to an airport being able to support not just jet aircraft, but commercial service jet aircraft.
		m. Stacy recommended that KH add date ranges to all the needs slides.
4	System Needs, Costs, and Alternative Scenarios	a. A PAC member identified the need to note that Scenario #1 is maintenance.
		b. Kimley-Horn to ask Kyler at FAA for FAA funding amounts at other states in comparison to the number of airports in that state. Because Arizona receives a much larger state match than other states in the region, there should be an emphasis on FAA funding instead.
5	Policy Recommendations	a. Stacy asked if there is a relationship between airports that don't have a disclosure notice on file and them not having a complete noise study. Pam said that traffic patterns will be larger than noise contours anyway so this shouldn't affect whether they have or not.
		b. Stacy noted that she wanted to review the chapters in greater detail prior to giving input on system recommendations.
6	Supplemental Policy Discussion with Matt Smith	a. The current funding priority at ADOT is as follows: • F/S/L • S/L • APMS • GCN

		b. Don Kriz would like APMS to be before the S/L program.
		c. Matt Smith would like Grand Canyon National Park Airport (GCN) to be #2 behind F/S/L.
		d. Matt thinks GCN should get a grant cap of $1.8 million (only capital and possibly building renewal fund) and get $275k-$300k for building renewal fund.
		e. Matt thinks ADOT Aeronautics Group should have a General Services Agreement (GSA) or on-calls so they don't have to go out ad hoc for each project. If a GSA/on-call is in place, they can issue task orders to pre-qualified firms to help them write scopes for new state projects.

Action Items

Date	Action Item	Owner	Status/Notes
05/02/18	Send Stacy information regarding medical flights for background on issues	KH	In progress
	Ask airport managers at AzAA what the difficulty is with filing disclosing forms	KH	In progress
	Include a recommendation in the plan that airports who completed a WHA also complete a WHMP, as needed	KH	In progress
	Recommend a template for ADOT to provide airports on compatible land use planning	KH	In progress
	Include Proposition 207 discussion in the land use recommendation	KH	In progress
	Check to make sure KH is not recommending duplicate projects. Specifically, if projects for "supporting jet aircraft" are identified in an airport's MP, CIP, or ALP.	KH	In progress
	Include a note about jet aircraft size for commercial service airports in reference to an airport being able to support not just jet aircraft, but commercial service jet aircraft	KH	In progress
	Add date ranges to all the needs slides	KH	In progress
	Ask Kyler at FAA for FAA funding amounts at other states	KH	In progress