



# Project Advisory Committee

Meeting #2 – May 19, 2021



# Today's Discussion

- Introductions
- Review of PAC Role, NAHSP and AEIS
- System Goals & Performance Measures
- Inventory Data Collection
- State System Plan Roles
- Funding Discussion
- Introduction to Airport Regional Value (ARV) Methodology
- Next Steps

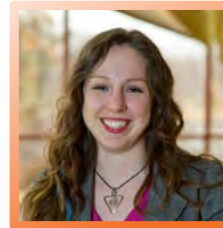
# Project Team



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Kimley»Horn



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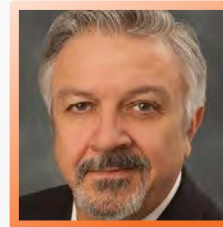
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*Airport Regional Value (ARV)*

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# **Review of PAC Role, NAHSP and AEIS**

# Purpose and Role of PAC





# Since PAC Meeting #1

## Airport & Stakeholder Interviews

**7. Facilities, Services, and Amenities**  
Uses of Information: Economic Impact, Performance Measures, Facility and Service Objectives, and Airport Regional Value

Do you have a general aviation terminal building? YES ☒ NO ☐

If yes, please explain any operational constraints, concerns about condition, or other issues:

What year was your terminal constructed?

Please check the amenities your airport has:

Public Restroom <input type="checkbox"/>	Free Wi-Fi <input type="checkbox"/>
Conference Room <input type="checkbox"/>	Auto Parking <input type="checkbox"/>
Post Lounge <input type="checkbox"/>	# of spaces: _____
Public Phone <input type="checkbox"/>	Other: _____

How is this Fast Forward credit card reader, FBO, call-out service?

2019	2020
Available? YES <input type="checkbox"/> NO <input type="checkbox"/>	Available? YES <input type="checkbox"/> NO <input type="checkbox"/>
100 low lead (LL) YES <input type="checkbox"/> NO <input type="checkbox"/>	100 low lead (LL) YES <input type="checkbox"/> NO <input type="checkbox"/>

## Blog Posts

### Updates

Updates will be provided throughout the project at various milestones:

#### NAHSP Blog Post #2

NAHSP Blog Post #2: The project team is continuing to make progress on several NAHSP and AESIS tasks. Our team developed a series of performance

[READ MORE >](#)

April 20, 2021

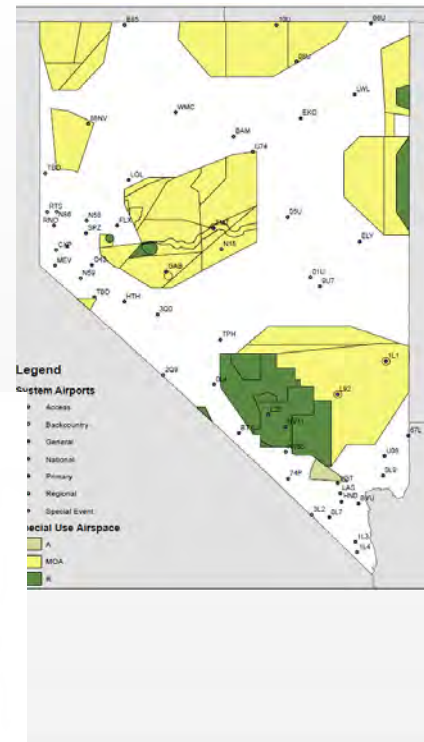
#### NAHSP Blog Post #1

NAHSP Blog Post #1: The project team is well underway on the 2021 NAHSP and AESIS. The first Project Advisory Committee (PAC) Meeting was held

[READ MORE >](#)

February 3, 2021

## Mapping & Analysis



## Chapter 1 Published

### Chapter 1. System Goals and Performance Measures

#### 1.1. Introduction

Nevada is known for world renowned resorts and casinos, rich natural resources, a diverse landscape, unique industries, and a plethora of opportunity. All of these things that make Nevada the great state that it is are intertwined in a network that is connected through aviation. With 45<sup>1</sup> public use aviation facilities, aviation is the industry that keeps the state safe, protected, and prospering. There are an additional 112 private use facilities (airports, heliports, and glider ports) that supplement the public use airports in Nevada.

In effort to provide, operate, and preserve a transportation system that enhances safety, quality of life, and economic development, the Nevada Department of Transportation (NDOT) Aviation Program team initiated the development of a new Nevada Airport and Heliport System Plan (NAHSP). The NDOT Aviation Program last implemented a system plan study in 2004. Since then, the NDOT Aviation Program realized that a new study was needed as the dynamic of aviation has changed around the state and throughout the U.S. and world, including the need to integrate rotorcraft and heliports in the state. Nevada has experienced tremendous growth in population and aviation activity over previous years, and this growth is expected to continue. The new NAHSP provides an updated, new outlook for Nevada aviation that includes both airports and heliports.

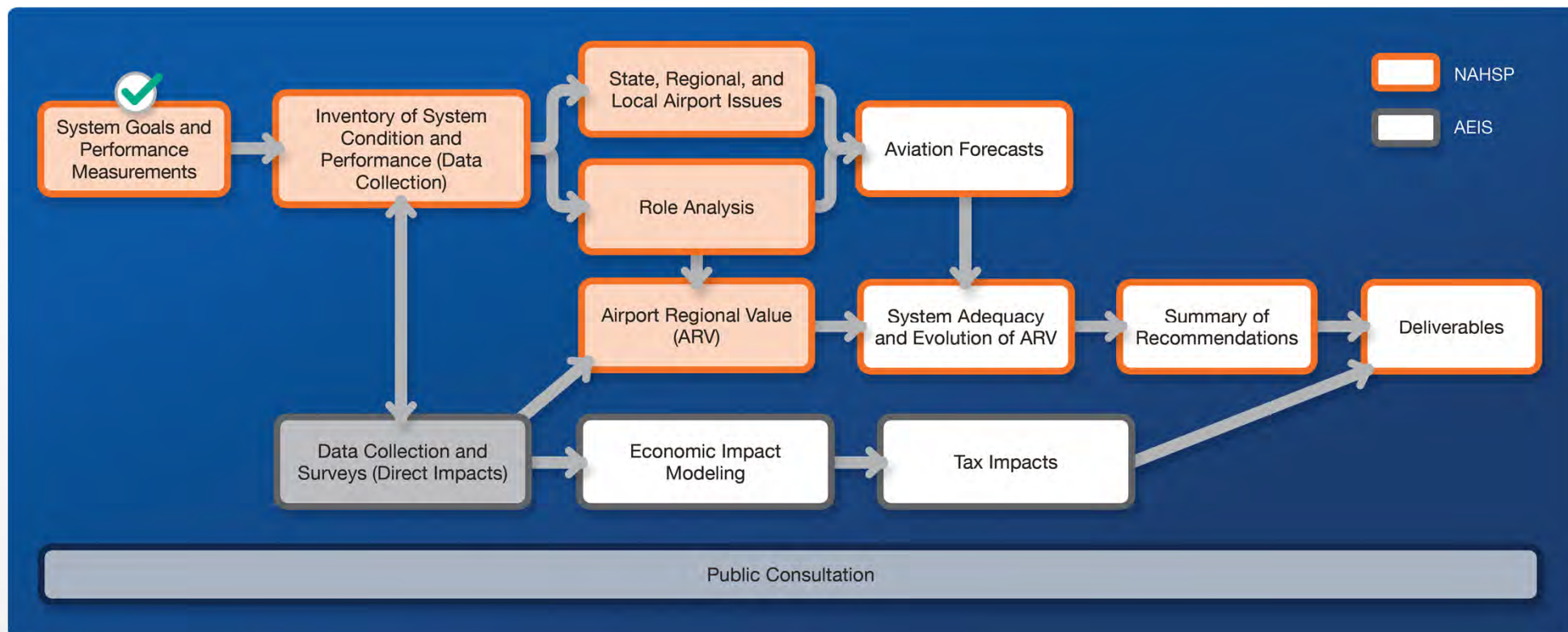
Included in this study is a complementary Airport Economic Impact Study (AEIS). Together, the NAHSP and AEIS demonstrate the system's needs and the economic impact of airports across the state of Nevada and the importance of continued investment in this critical resource to the state.

#### 1.2. Study Process

System plans are typically developed at the state level and are guided by the Federal Aviation Administration (FAA) through Advisory Circular (AC) 150/5070-7, Change 1, The Airport System Planning Process. The FAA uses state system plan data and information at the federal level as input to the national aviation system plan, known as the National Plan of Integrated Airport Systems (NPIAS). States and the FAA use system planning results to guide decision-making and distribute resources to develop a network

<sup>1</sup> This includes one facility that was recently transferred to State ownership but is not yet registered with the Federal Aviation Administration (FAA).

# NAHSP & AEIS Study Process





# **System Goals & Performance Measures**



# System Goals & Performance Measures

- One Nevada Transportation Plan
  - Tie in aviation into the larger multi-modal plan
  - Alignment of Goals & Performance Measures
  - Potential future funding sources
- Each goal has associated PMs to analyze Current System Performance
  - Much of data is available from airports and obtained through inventory process
  - Important PMs have relevance to majority of system airports
- Utilize these results to develop targets for Future System Performance which yields System Needs and potential Policy Recommendations

# NAHSP Goals



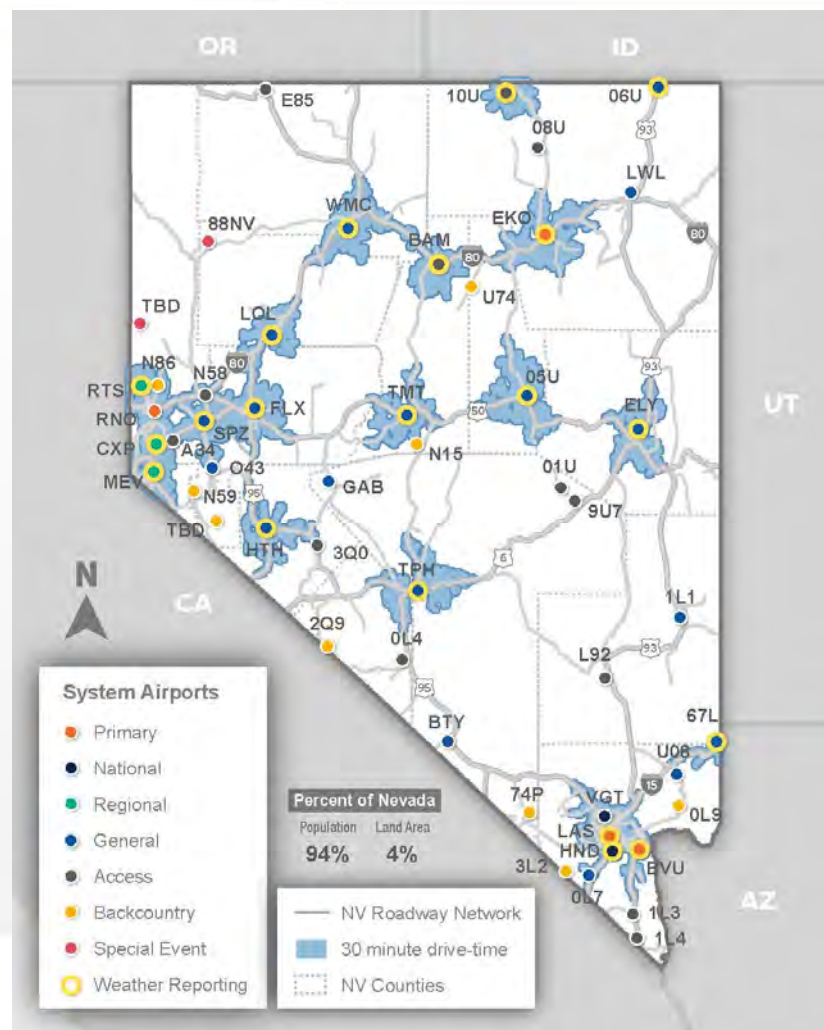
# Enhance Safety



Goal		Performance Measures
Enhance Safety	Continuously improve and promote aviation safety.	Percent of airports meeting applicable FAA design and safety standards
		<b>Percent of state land area and population within 30 minutes of airports with weather reporting capabilities</b>
		Percent of state land area and population within 30 minutes of an airport with a paved runway
		Percent of airports that have a designated helicopter landing location
		Percent of airports that have broadband service

94% of the state population and 4% of the state land area is within 30 minutes of airports with weather reporting capabilities

# Percent of state land area and population within 30 minutes of airports with weather reporting capabilities





# Preserve Infrastructure



Goal		Performance Measures
Preserve Infrastructure	Maintain the state's aviation assets to preserve investments.	Percent of airports that have coordinated with local land use authority to adopt appropriate land use controls
		Percent of airports that have an approved airport planning document that was completed after 2013
		Percent of airports' primary runway meeting pavement condition index (PCI) of acceptable or rated Good (G)
		<b>Percent of airports that are under a Military Operating Area (MOA) in the national airspace system</b>

16% of System Airports are under Military Operating Area

# Transform Economies



Goal		Performance Measures
Transform Economies	Improve the contribution of the aviation system to Nevada's economic competitiveness through a supportive and innovative transportation framework.	Percent of airports with active development partnerships with chambers of commerce, tourism bureaus, service organizations, industries, governments, military official, and recreational user groups
		Percent of airports with expansion / development potential
		Percent of airports that can support regular business aircraft activity (runway length, approach, weather, fuel)
		<b>Percent of airports with tour operators, specifically utilizing helicopters</b>

11% of System Airports have tour operators, specifically utilizing helicopters

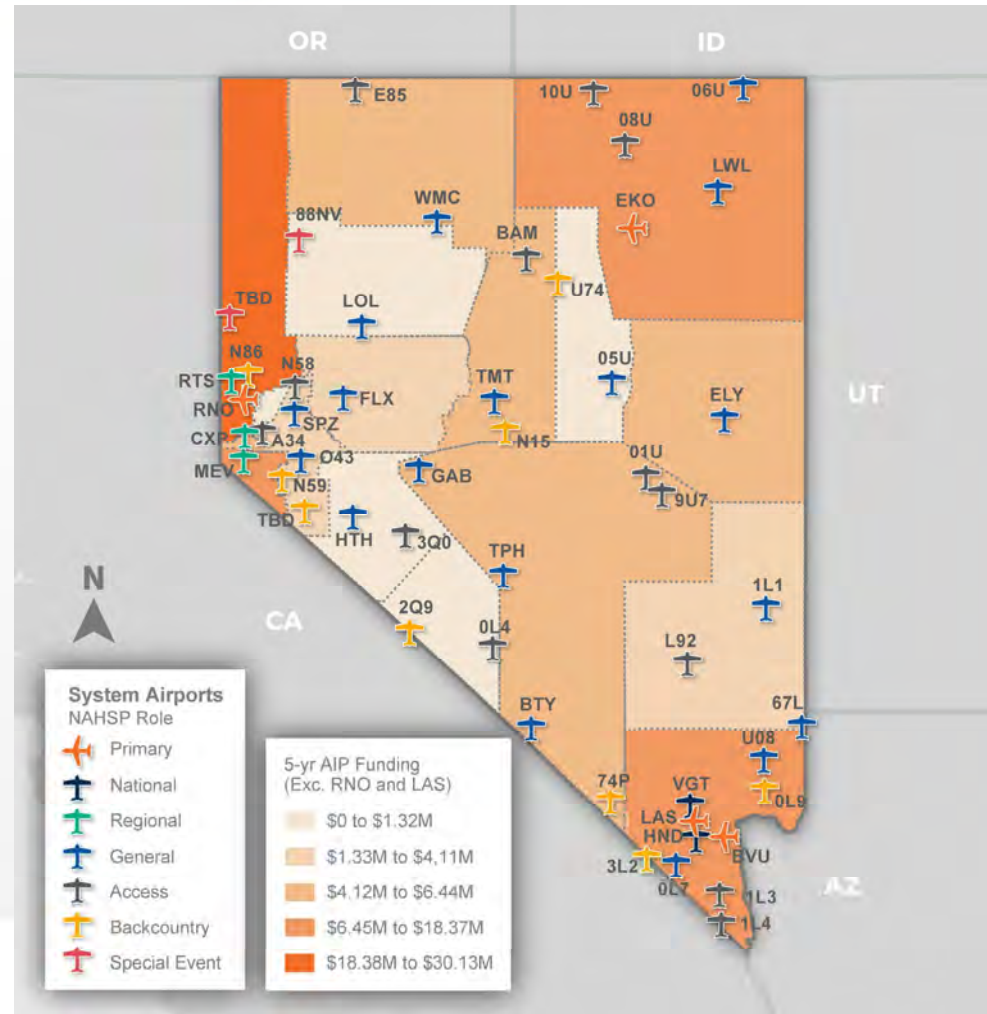
# Foster Sustainability



Goal		Performance Measures
Foster Sustainability	Develop an aviation network that reduces emissions while being environmentally, historically, culturally, and financially sustainable.	Percent of airports that have established public outreach protocols or programs that include efforts with the local community, as well as local, state, regional and federal governmental representatives
		Percent of airports with or pursuing an alternative energy source
		Percent of airports with an airport manager to operate and maintain the airport
		<b>Percent of airports that have received federal and/or state funding within the last five years</b>

52% of System Airports have received federal and/or state funding within the last five years

# Percent of airports that have received federal and/or state funding within the last five years





# Connect Communities



	Goal	Performance Measures
Connect Communities	Enhance opportunity, livability, and quality of life through better connections between aviation system and other modes.	Percent of airports capable of supporting aerial firefighting operations
		Percent of airports capable of supporting emergency (medical/police) operations
		Population within 30 minutes of any public-use airport
		<b>Percent of airports providing access to remote communities</b>

80% of System Airports are within 5 miles of a Remote Community

# Optimize Mobility



	Goal	Performance Measures
Optimize Mobility	Make strategic aviation investments that enhance mobility opportunities, better connections, and reliability expectations.	Percent of airports that are adequately accessible in terms of signage and access road quality
		<b>Percent of airports that provide off-airport transportation (e.g., courtesy car, transportation network carrier, bus, rental car, other)</b>
		Percent of airports that are involved in UAS/UAV (training, businesses, facilities, or safety protocols)

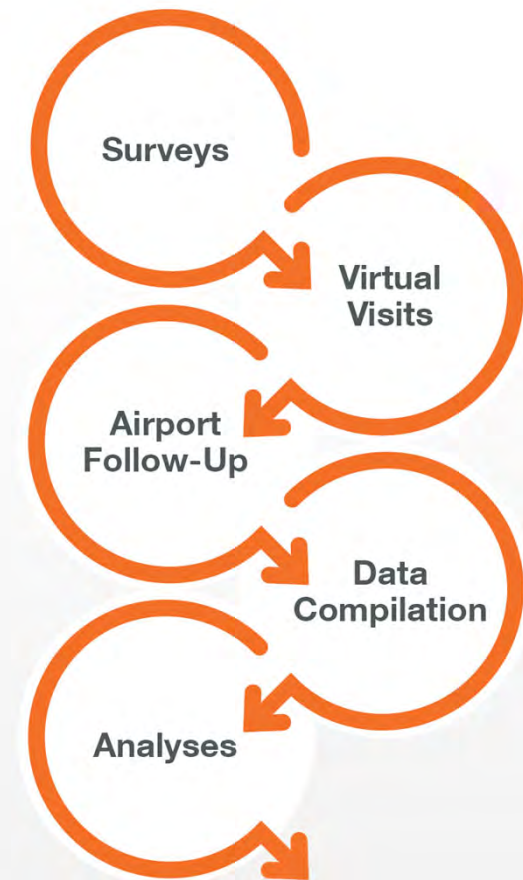
76% of System Airports provide off-airport transportation



# Inventory Data Collection

# Study Data Collection Effort

- Stakeholder Interviews: REMSA, REACH, BLM Firefighting, CCDOA, Papillon
- Data Collection Surveys: 51 Airports
- AEIS Tenant Surveys: ~100 Businesses
- Data Points collected for each airport: 400+





# Top Trends & Issues

- Encroachment
- Funding
- Increasing Costs
- Ownership
- Maintaining Infrastructure
- Communications
- Weather Reporting
- Runway Length
- Hangar Shortage
- Fuel Shortage
- Military Airspace
- International Tourism
- Community Relationships
- Application of New Technologies

# Trends & Issues from PAC Meeting #1





# State System Plan Roles

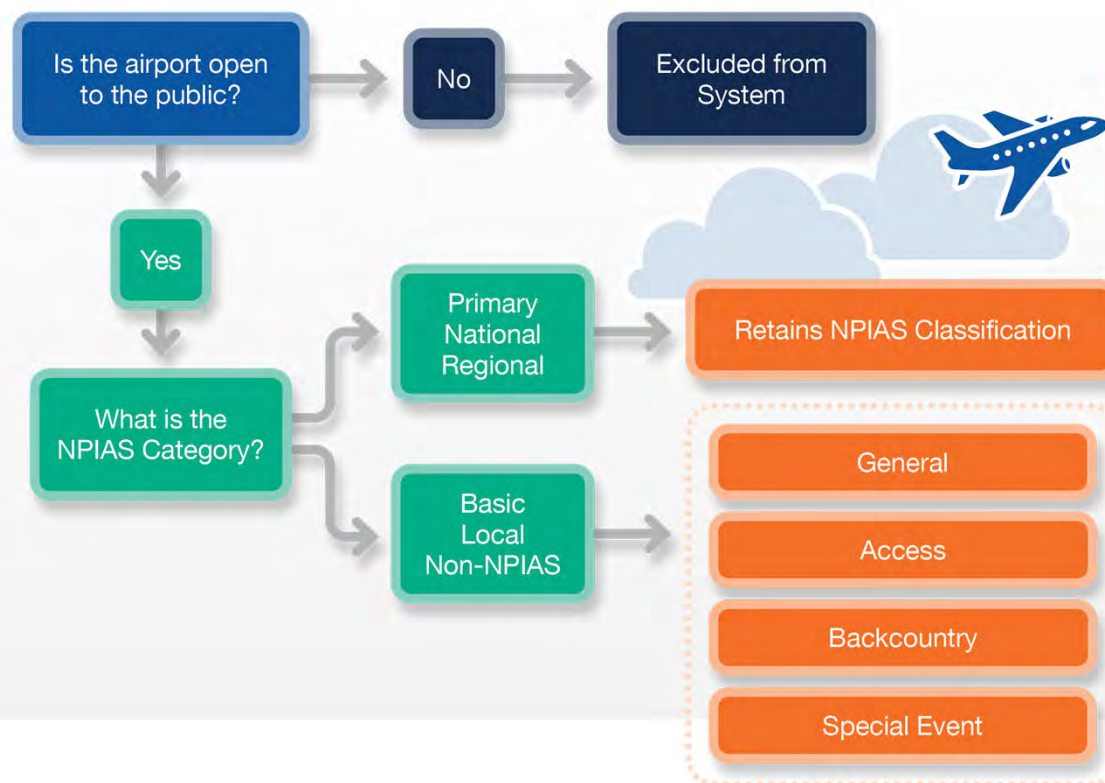
# Facility Classifications / Roles

- FAA: National Plan of Integrated Airport Systems (NPIAS)
  - Determined to be important to National Airspace System (NAS)
  - Access to federal funding
- State:
  - Developed as part of the System Plan
  - Incorporate non-NPIAS important to Nevada
  - Tailored to Nevada

NPIAS Classifications	
Primary	Large Hub
	Medium Hub
	Small Hub
Non-Primary	Commercial
	National
	Regional
	Local
	Basic
	Unclassified



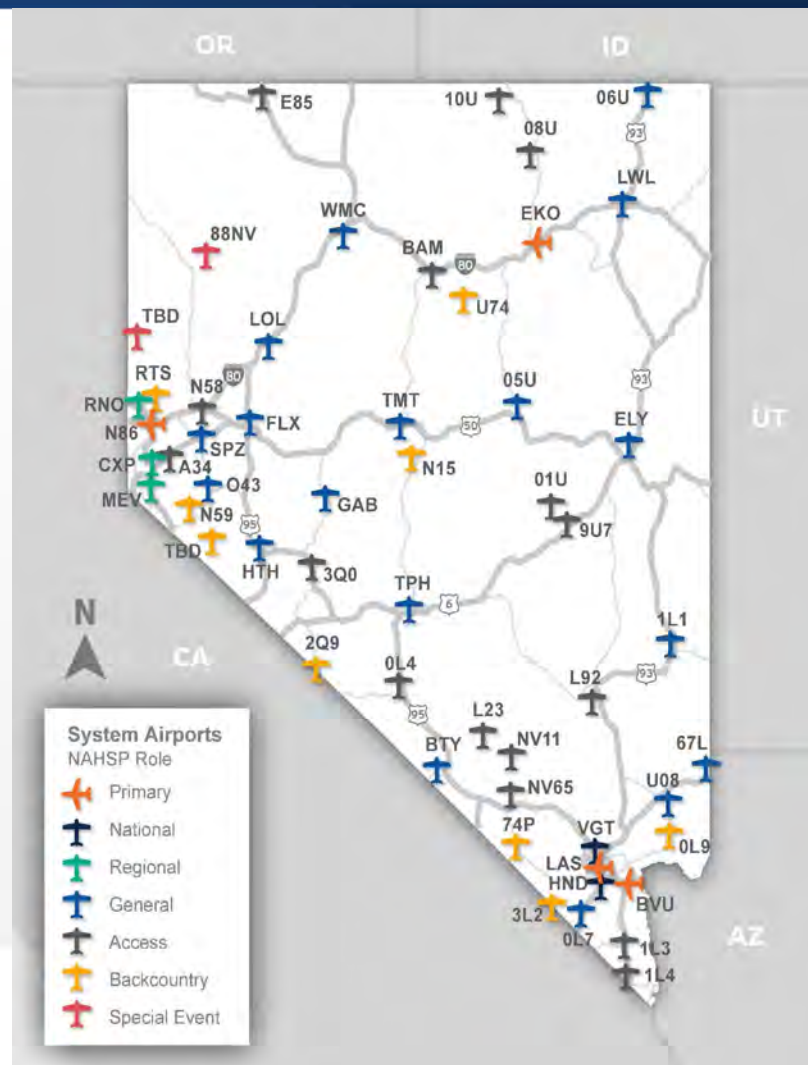
# NAHSP Airport Roles Flow Chart Methodology



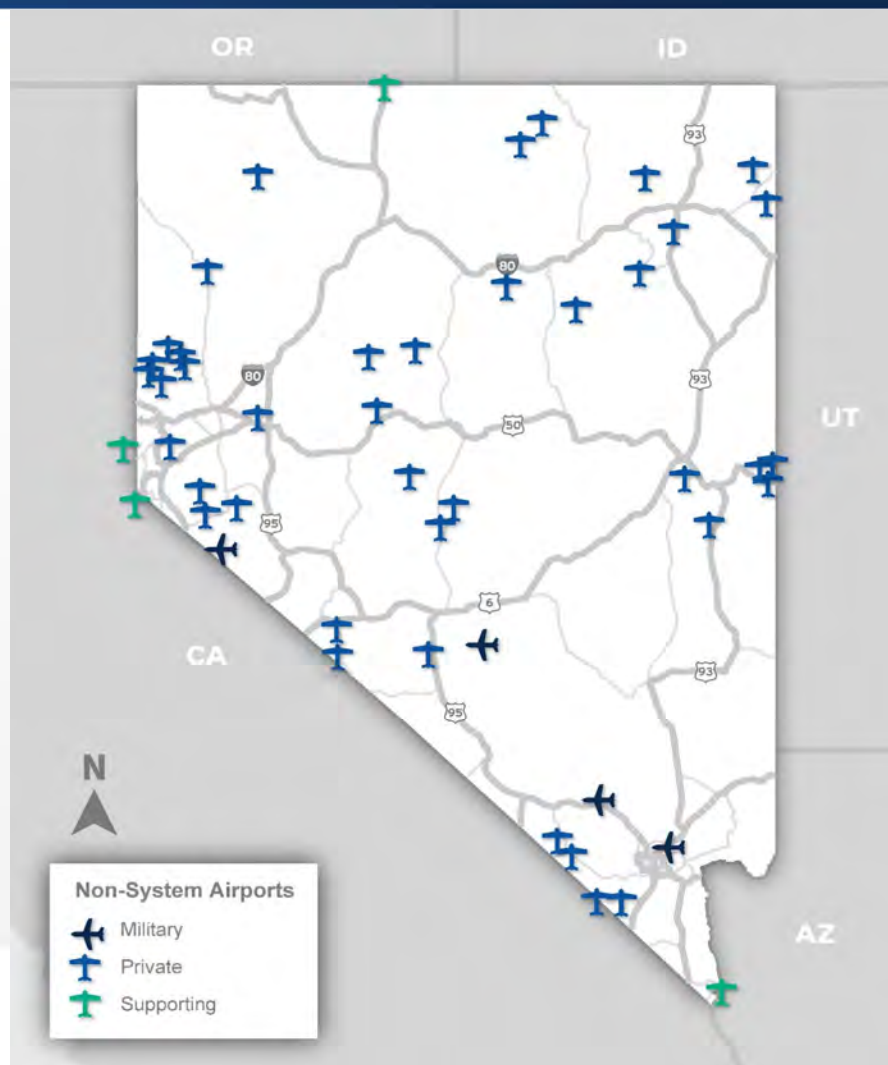
# State System Airport Roles

State Role Classification	Flow Chart Criteria			Number of Airports
	Public Use	NPIAS Classification	Primary Use	
<b>Primary</b>	Yes	Primary	Publicly owned commercial service airports that have more than 10,000 passenger boarding's or enplanements each calendar year and receive scheduled passenger service	4
<b>National</b>	Yes	National	Supports national and state system by providing communities with access to national and international markets in multiple states and throughout the U.S.	2
<b>Regional</b>	Yes	Regional	Supports regional economies connecting communities to statewide and interstate markets	3
<b>General</b>	Yes	Basic & Local	Multi-purpose public use facilities	18
<b>Access</b>	Yes	Basic & Local	Regularly utilized for a specific reason related to accessing the location such as emergency, medical, or business (e.g. mining, casinos)	13
<b>Backcountry</b>	Yes	-	Recreational use airports not utilized on a regular basis for another specific access purpose	9
<b>Special Event</b>	Yes, With Permission	-	Privately owned airports utilized for special events	2

# System Airport Roles



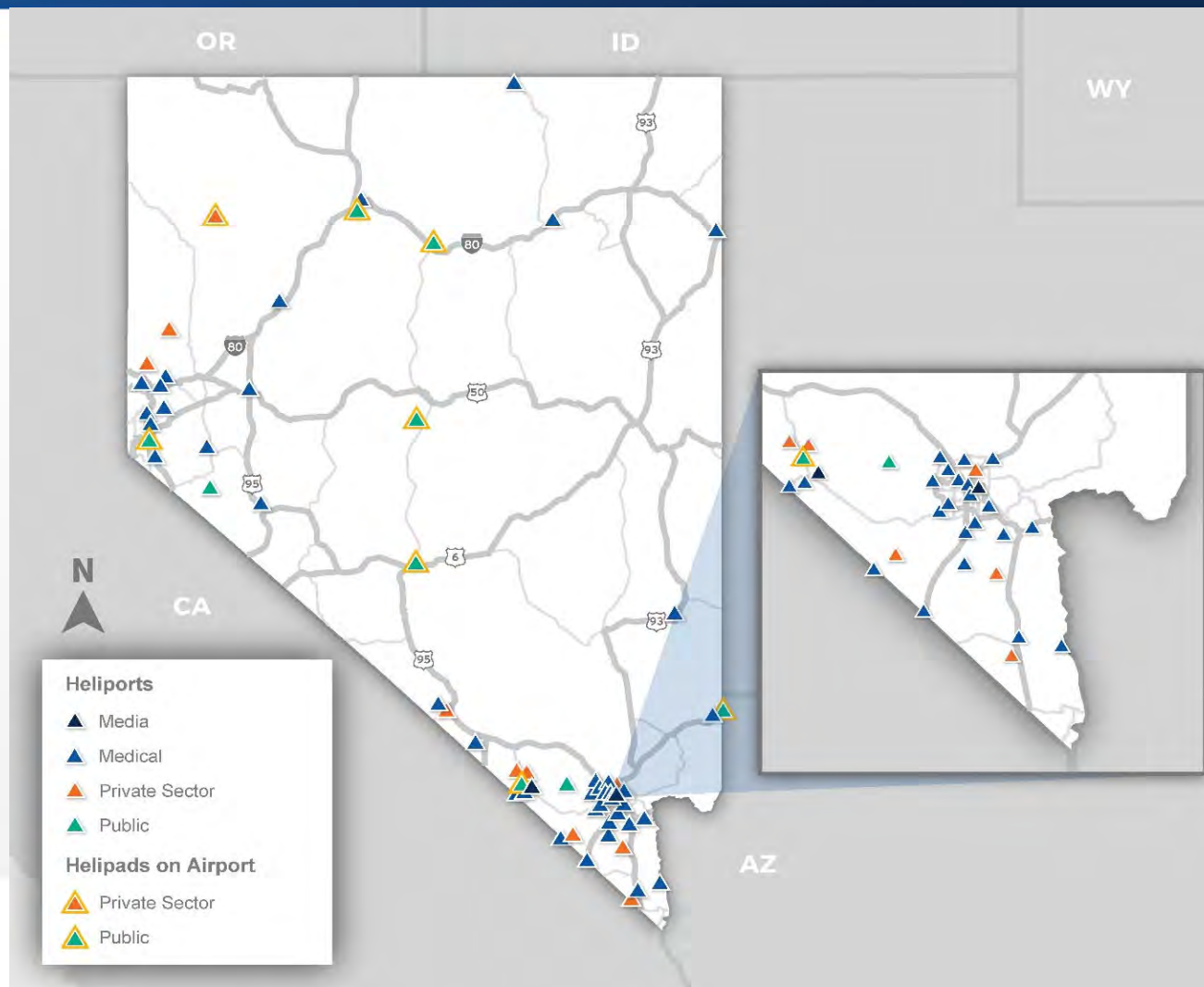
# Non-System Airport Roles



# Heliport Roles

Classification	Primary Use	Number of Facilities
Medical	Medical purposes including established medical facilities and emergency use only	43
Media	News and media activities, typically for news stations	2
Private Sector	Utilized by a private entity for a specific purpose whether recreation, business, tourism, or another purpose	15
Public	Available for use by the public	1

# Heliport Roles







# Funding Discussion

# Funding – Infrastructure Plans

- NAHSP will be providing recommendations on potential individual airport projects and statewide programs
  
- How or what should be prioritized?
  - Specific Projects
  - By Individual Airport
  - By Roles
  - Certain Goals or Performance Measures

**Funding  
Priorities  
for Nevada?**



# **Introduction to Airport Regional Value (ARV) Methodology**

# Airport Regional Value (ARV)

- Objective methodology for assessing airport characteristics & economic value
- Incorporates more qualitative factors than traditional methods
- Allows for fair comparison between airports based on different state roles

*Note: ARV Score assessments for individual airports are currently in process*

# Benefits of ARV

- For the airport sponsor:
  - Quantifies basic SWOT analysis
  - Snapshot of airport facilities & services
  - Assessment provides method for prioritizing action items
  
- For the NAHSP:
  - Support for federal airport development funding
  - Justification for state funding (matching share & other programs)
  - Support for state policy recommendations

## Value Rating Variables (VRVs)

- Provide index for comparison to standards or other benchmarks
- VRVs quantify airport's assets & opportunities in context of classic SWOT analysis
  - **Strengths** – Facilities & services currently in place & internally controlled
  - **Weaknesses** – Facilities & services perceived as deficient but can be improved
  - **Opportunities** – Advantages that contribute to benefit airport's ability to serve users
  - **Threats** – Disadvantages that inhibit ability to serve yet generally requires response



# Value Rating Variables (VRVs)

<u>Variable Sector</u>	<u>No.</u>	<u>Points</u>	<u>Percent</u>
Regional Significance ( $V_{RS}$ )	9	45	22.5
Airport Facilities ( $V_{AF}$ )	11	55	27.5
Airport Protection ( $V_{AP}$ )	5	25	12.5
Airport Access ( $V_{AA}$ )	4	20	10.0
Airport Expandability ( $V_{AE}$ )	4	20	10.0
<u>Community Commitment (<math>V_{CC}</math>)</u>	<u>7</u>	<u>35</u>	<u>17.5</u>
<b>Total</b>	<b>40</b>	<b>200</b>	<b>100.0</b>

# VRV Scoring

Each VRV has max value of 5 points

- *Scaled (S)* – indexed level of specific characteristics (1-5)
- *Binary (B)* – meets certain fundamental characteristics (0 or 5)
- *Binary (Hybrid) (B(H))* – meets minimum criteria specific to airport's system role (1 / 3 / 5 )
- *Additive (A)* – points added for each item included on factor list (1 point each with max 5 points)

# Regional Significance ( $V_{RS}$ )

- Recognizes that airports serve regions well beyond immediate area
- Establishes value for utility as resource for users versus proximity of alternative airports

Factor	Scoring	Rationale
Airport Ownership	B(H)	Public vs private asset & long-term accessibility
Airport Uses	A	Specific Services or Utilizations
Nearest Airport	S	Driving distance to next nearest airport (divided by 2)
Longest Runway	B	Ability to serve ARC/Design Aircraft (w/density altitude)
Based Aircraft	S	Market Share (vs Total NV Based Aircraft)
T-Hangar Ratio (THR)	S	Aircraft Storage Supply/Demand (T-Hangars / Based Aircraft)
Fuel Availability	B(H)	Jet A / 100LL AvGas (Full Service & Self Service)
Aircraft Maintenance	B	Aircraft Services Component (ASC)
Instrument Approach	B(H)	Ability to use aircraft in inclement weather

# Airport Facilities ( $V_{AF}$ )

- Assesses resources that accommodate aircraft relevant to airport's service role

Factor	Scoring	Rationale
Runway ARC Category	B	Ability to serve various aircraft categories
FAA Design Standards	S	Meets Basic FAA Design Standards for ARC
Runway Surface Type / Condition	B	Paved / Non-Paved and PCI/Condition
Runway Lighting	B	HIRL/MIRL/LIRL/Reflectors
Taxiways	B	Runway Access/Egress
Visual Aids	B(H)	Beacon/PAPIs/REILs/Wind Indicators (Segmented Circles)
Weather Reporting	B	Local Weather Reporting
GA Terminal	B	Aircraft Services Component (ASC)
Utilities	A	Support for Emergency Services, FBO, & Other Uses
Security/Wildlife Fencing	B(H)	Safety & Security
Communications Connectivity	B	Ability to communicate

# Airport Protection ( $V_{AP}$ )

- Assess actions & ability to prevent encroachment of obstructions to navigable airspace & incompatible land uses

Factor	Scoring	Rationale
Height Hazard Zoning	B	Navigable airspace protection
Obstruction Mitigation	S	Available runway length vs runway pavement
Airspace Restrictions	S	Proximity to Warning/Alert/MOAs
Runway Protection Zone	B(H)	Fundamental airfield component (Controlling Interest?)
Land Use Compatibility Planning	S	Residential encroachment along extended RW

## Airport Access ( $V_{AA}$ )

- Assesses characteristics & quality of facilities & services for ground transportation and connectivity to regional highways

Factor	Scoring	Rationale
Community Access	S	Proximity to CDB
Intermodal Connectivity	B	Last mile capabilities (Ride Share/Courtesy Vehicle, etc.)
Regional Access	S	Proximity to closest US Highway or Interstate system
Airport Access	S	Access to Airport Entrance (NV Functional Road Classifications)



# Airport Expandability ( $V_{AE}$ )

- Assesses adequacy of airport property needed for aeronautical and nonaeronautical development

Factor	Scoring	Rationale
Total Acreage Ratio	S	Available airport property / per based aircraft
Aviation & Aeronautical Property	S	Area dedicated to aviation uses (runway, taxiways, RPZs, etc.)
Surplus Property	S	Area in use or available for revenue generation
Airfield Expandability	S	Ability to extend runway etc.

# Community Commitment ( $V_{cc}$ )

- Assesses support and resources committed to operate & maintain Airport

Factor	Scoring	Rationale
Last ALP Update	B	Evidence of community's development strategy
Airport Management	B(H)	Evidence of day-to-day stewardship
Capital Improvements	B(H)	Evidence of community's investment in airport's development
Airport Capital Improvement Program (ACIP)	B(H)	Evidence of community's interest in future development
Economic Development Partnership	B	Evidence of Public/Private Partnership Environment
Financial Sustainability	B(H)	Evidence of community's financial support
Goodwill	A	Evidence of community's perception of airport

# ARV Summary & Example

VRVs – provide broad yet simple characterization of airports

- Specific variable - illustrates conditions (met or needs attention).
- Cumulative score - allows comparison among peer airports

VRV	Value Rating Variable	VRV Basis	VRV Score	Remarks (Major Needs)
V <sub>RC</sub>	Regional Significance	45	38	<i>T-Hangars / Self-Service 100LL</i>
V <sub>AF</sub>	Airport Facilities	55	44	<i>Visual Aids / Security Fencing</i>
V <sub>AP</sub>	Airport Protection	25	18	<i>Height Zoning / Displaced Threshold</i>
V <sub>AA</sub>	Airport Access	20	17	<i>Turn Lane</i>
V <sub>AE</sub>	Airport Expandability	20	16	<i>Area for Non-aeronautical development</i>
V <sub>CC</sub>	Community Commitment	35	31	<i>Financial sustainability (CapEx subsidy)</i>
VRV	Total VRV Score	200	164	



# Questions



## Next Steps

# Next Steps

- Complete Existing System Adequacy
- Complete Activity Forecasts
- Conduct Future System Adequacy
- Draft Chapters
  - Inventory
  - Issues and Trends
  - Roles
  - ARV Methodology
  - Forecasts
- Tentative Next Meeting: August/September 2021





# Stay Involved!

- Attend Project Advisory Committee (PAC) meetings
- Represent constituency
- Respond to requests for input and data
- Review draft deliverables
- Share the Website
- Read and share the Newsletters

**Shout  
it Out!**

# Questions?

Thank you for your participation!

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