



# Project Advisory Committee Meeting #4

February 17, 2022



# Agenda

- Project Overview
- Progress to Date
- Project Recommendations and Other Considerations
  - Performance Measures
  - Value Rating Variables/Facility and Service Objectives
- Airport Economic Impact Study
- Airport Replacement Values
- Final Individual Airport Reports
- Next Steps



# Project Overview

# Project Team



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*Project Planner*

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**Ekay Economic Consultants**

*Economic Impact*



**Quadrex (Dave Byers)**

*Airport Regional Value (ARV)*

# Public Consultation



# Project Purpose

## NAHSP

- Analyze system needs
- Identify policy/other recommendations

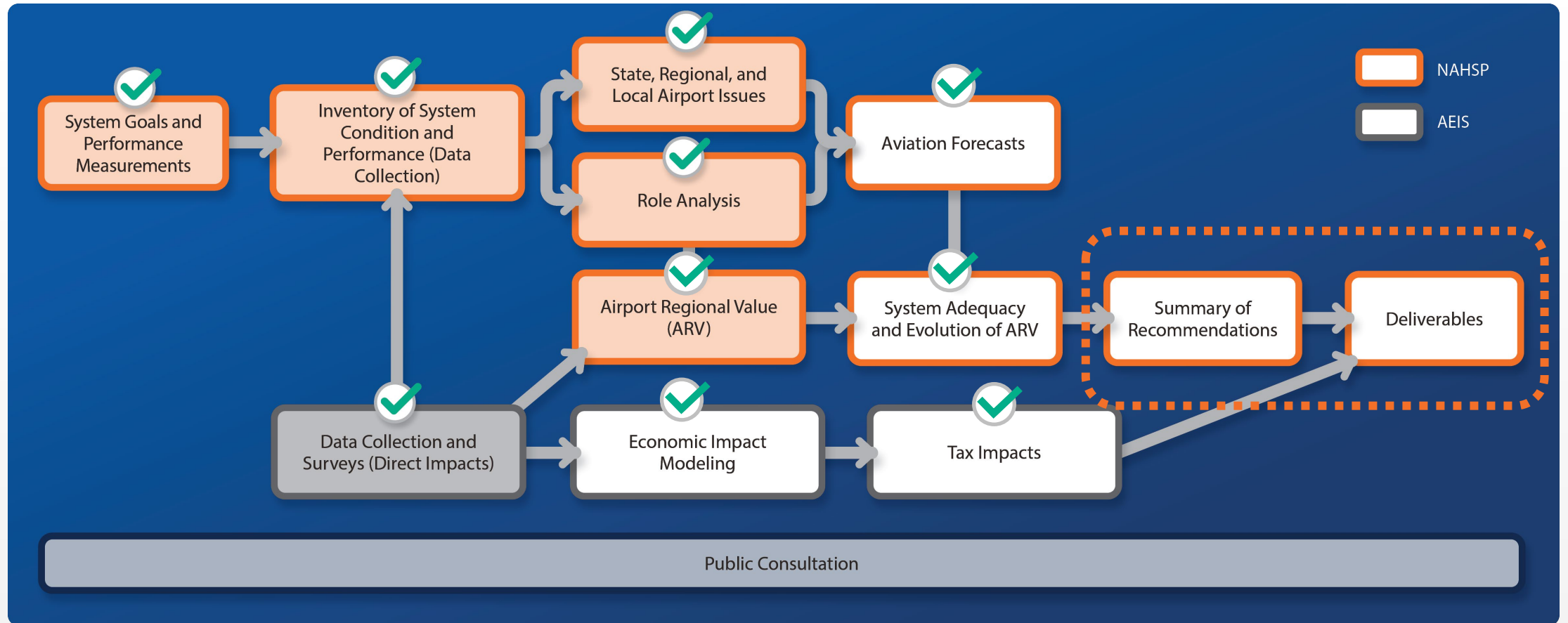
## AEIS

- Determine airport contributions – quantitative and qualitative

Provides NDOT and Nevada airports with complete portrayal of benefits derived and importance of airport investment to meet identified needs



# NAHSP & AEIS Project Process





# Progress to Date



# Since We Last Met, We've:

- Finalized forecasts
- Finalized existing system performance and future performance
- Completed the Airport Economic Impact Study
- Continued to produce Individual Airport Reports

**And today, we're asking for your input on preliminary NAHSP recommendations and considerations!**

# NAHSP Technical Report

Chapter 1: System Goals and Performance Measures

Chapter 2: Inventory of System Conditions

Chapter 3: Airport Roles and Classification Analysis

Chapter 4: State, Regional, and Local Airport Issues

Chapter 5: Airport Regional Value Methodology

Chapter 6: Forecast of Aviation Demand

Chapter 7: Existing and Future System Adequacy

Chapter 8: Summary of Recommendations and System Costs

Chapter 9: Airport Economic Impact Study (AEIS)



We're making great progress. Helps us get to the finish line!





# **Project Recommendations and Other Considerations**

# A Few Notes Before We Dive In....

Two types of recommendations are identified:

## 1. Project Recommendations

- Developed from project metrics that tie to a physical project/improvement
- Identified by the gap between existing system performance and future system performance targets
- Have a cost estimate associated

## 2. Considerations

- Developed from project metrics that **aren't** tied to a physical project/improvement
- Not developed at the airport level
- Informed by results of the system performance analysis and state, regional, and local issues
- Offer NDOT and airports action items that can be pursued
- Does not generate cost estimates

# A Few Notes Before We Dive In....

- Duplicate project recommendations occur when a facility improvement is tied to both a performance measure (PM) and a value rating variable (VRV) or facility and service objective (FSO)
- Proposed recommendations are presented by goal, then by VRV/FSO category
- Recommendations are not presented in order of priority or importance
- These recommendations are meant to be informative, so please....

**Don't be shy and share your thoughts!**



# Performance Measure Recommendations





# Goal 1: Safety and Security

| Performance Measure   | Recommendation  | Project OR Consideration |
|---|---|--------------------------|
| Percent of airports meeting applicable FAA design and safety standards                                      | Resolve non-standard designs or non-compliance                                | Project                  |
| Percent of state land area and population within 30 minutes of airports with weather reporting capabilities | AWOS/ASOS for Primary through General airports and Unicom for Access airports | Project                  |
| Percent of state land area and population within 30 minutes of an airport with a paved runway               | Pave any unpaved NPIAS airport  | Project                  |
| Percent of airports that have a designated helicopter landing location                                      | Establish a designated landing area   | Project                  |
| Percent of airports that have broadband service   | Establish a broadband connection  | Project                  |

# Goal 2: Preserve Infrastructure

| Performance Measure  | Recommendation  | Project OR Consideration |
|--|---|--------------------------|
| Percent of airports that have coordinated with local land use authority to adopt appropriate land use controls | NDOT and airports work with local land use authority to establish control<br>NDOT provide support/encouragement of airport compatible development<br>NDOT check in with airports during airport 5010 data updates<br>NDOT could develop a land use/zoning template to be used by airports (or develop other guides/resources)   | Consideration            |
| Percent of airports that have an approved airport planning document that was completed after 2013              | ALP for NPIAS airports<br>Airport Diagram (at minimum) for non-NPIAS  | Project                  |
| Percent of airports' primary runway meeting pavement condition index (PCI) of acceptable or rated Good (G)     | Pavement condition improvements   | Project                  |
| Percent of airports that are under a Military Operating Area (MOA) in the national airspace system             | NDOT work with state officials to limit future restricted airspace (to include Special Use Airspace [SUAs] and MOAs)<br>NDOT and airports continue to communicate with military installations on location/impact of restricted airspace<br>NDOT can educate and inform system airports and help them work with local decision makers about preventing future restricted airspace<br>NDOT can develop draft letter template for airports to send to local officials re: importance of local airports | Consideration            |



# Goal 3: Transform Economies

| Performance Measure  | Recommendation   | Project OR Consideration |
|--|--|--------------------------|
| Percent of airports with active development partnerships with chambers of commerce, tourism bureaus, service organizations, industries, governments, military official, and recreational user groups | <p>NDOT can produce literature or host webinar for airports so they can better understand value of these relationships</p> <p>NDOT can provide airports with a list of potential area agencies to outreach with</p> <p>NDOT can develop a letter/email template that airports could use to make initial contact with relevant agencies</p> | Consideration            |
| Percent of airports with expansion / development potential   | <p>Airports should identify the level of expansion/development potential</p> <p>NDOT can support, promote, and encourage airport compatible development</p>  | Consideration            |
| Percent of airports that can support regular business aircraft activity (runway length, approach, weather, fuel)   | <p>Lengthen runway, improve approach, install AWOS, and/or acquire fuel equipment (whichever is needed so that the airport meets all criteria for supporting this activity)</p>  | Project                  |
| Percent of airports with tour operators, specifically utilizing helicopters  | <p>NDOT and airports can continue working with, and supporting, the helicopter tour companies currently at system airports</p>   | Consideration            |

# Goal 4: Foster Sustainability

| Performance Measure   | Recommendation  | Project OR Consideration |
|---|---|--------------------------|
| 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 | <p>NDOT can encourage airports to participate in public outreach activities</p> <p>NDOT and airports can continue sharing positive news and spreading awareness to the public about the importance of local airports</p>  | Consideration            |
| Percent of airports with or pursuing an alternative energy source   | <p>NDOT to continue consulting with NV Dept. of Conservation and Natural Resources to achieve the GHG reduction outlined in NV Bill 254 (Still a Bill, may go into effect in 2023)</p> <p>NDOT can participate in industry working groups and industry organizations to work on reducing environmental footprint of the aviation industry</p> <p>NDOT can educate airports on actions they can take to reduce their airport's environmental footprint</p> | Consideration            |
| Percent of airports with an airport manager to operate and maintain the airport   | <p>NDOT work with airport sponsors during airport 5010 data updates to identify strategies for establishing an airport manager role</p> <p>NDOT can educate airports on the importance of an airport manager and the value of different levels of management (doesn't need to be full-time)</p> <p>NDOT can work with NVAA to play a more active role in educating airports about basic airport management fundamentals</p>                               | Consideration            |
| Percent of airports that have received federal and/or state funding within the last five years  | <p>NDOT can continue participating in annual ACIP meetings</p> <p>NDOT can collect and review ACIPs and provide airports with helpful feedback</p> <p>NDOT can coordinate with elected officials to educate them on the value of local and state funding matches</p> <p>NDOT can work with non-NPIAS airports so they better understand state or local grant programs that may be available to them</p>   | Consideration            |

# Goal 5: Connect Communities

| Performance Measure  | Recommendation  | Recommendation Type |
|--|---|---------------------|
| <b>Percent of airports capable of supporting aerial firefighting operations</b>        | Runway extension and/or fuel equipment installation so that airports meet all aerial firefighting criteria  | Project             |
| <b>Percent of airports capable of supporting emergency (medical/police) operations</b> | Weather, Jet A fuel, and/or establish designated helicopter landing area so that airports meet all emergency operations criteria  | Project             |
| <b>Population within 30 minutes of any public-use airport</b>                          | NDOT can use findings from the analysis showing the service area impacts due to expired BLM leases (potential closures) to rally support for the continued operation of these airports (particularly those in remote communities) and to promote community support for keeping these facilities operational | Consideration       |
| <b>Percent of airports providing access to remote communities</b>                      | NDOT can continue to support airports that provide access to remote communities and encourage those airports to participate in local or regional planning studies   | Consideration       |

# Goal 6: Optimize Mobility

| Performance Measure  | Recommendation  | Recommendation Type |
|--|---|---------------------|
| Percent of airports that are adequately accessible in terms of signage and access road quality   | No recommendations developed because all applicable airports are meeting this PM  | Consideration       |
| Percent of airports that provide off-airport transportation (e.g., courtesy car, transportation network carrier, bus, rental car, other) | Acquire courtesy car  | Project             |
| Percent of airports that are involved in UAS/UAV (training, businesses, facilities, or safety protocols)                                 | NDOT could develop and post UAS awareness and safety posters at system airports<br>NDOT can participate in working groups and other FAA webinars about UAS proliferation<br>NDOT can identify industries in the state that use/rely on UAS and determine if there is anything airports or NDOT could do to support this growing industry  | Consideration       |
| Emerging Technologies – as a continuation of the UAS/UAV involvement PM  | NDOT can educate airports on the impacts of other emerging technologies, specifically the electrification of ground transportation and aircraft, as well as development in advanced air mobility (AAM)<br>NDOT can inform airports about opportunities that may arise related to emerging technologies, including informational webinars, published research, grant opportunities, and other<br>Airports can seek out opportunities for installing electric ground vehicle chargers at their airports, as well as consider future electric aircraft infrastructure needs during future facility planning<br>NDOT and airports work to address unleaded and sustainable aviation fuel (SAF) availability | Consideration       |



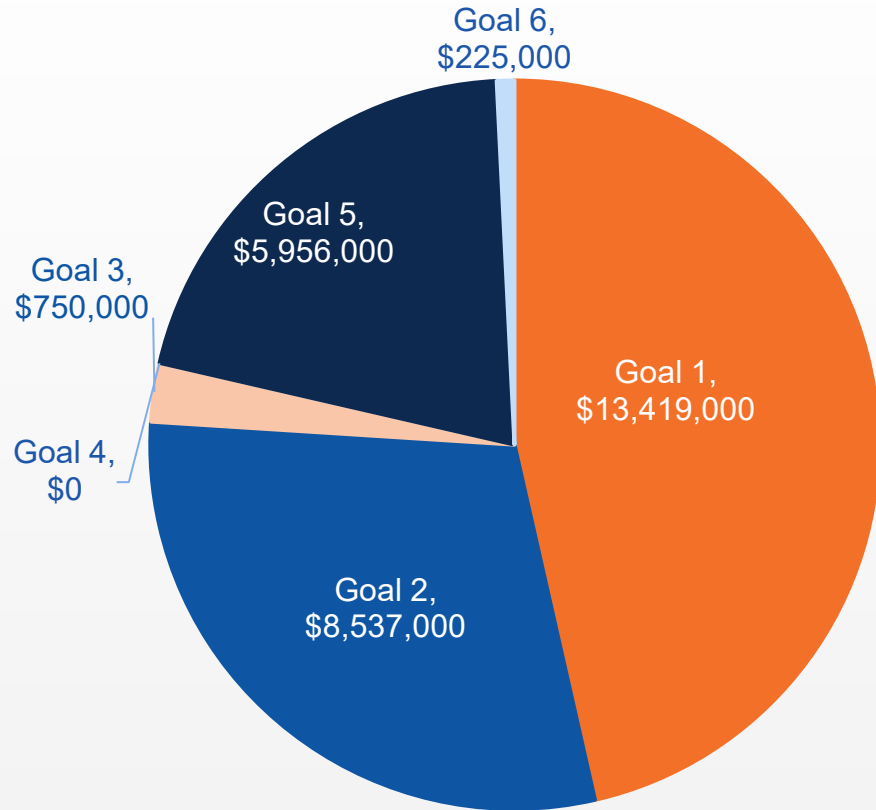


# Other Potential Recommendations

| Topic                       | Context  |
|-----------------------------|--|
| Operations Counting Program | ADS-B counters have been installed at approximately a dozen airports. A more uniform solution for operations counting is required, however, it relates back to concerns with widespread lack of broadband connectivity. NDOT can continue working to identify other operations counting programs and continue working with NV Governor’s Office on the proliferation of broadband service across the state.                    |
| Defunded Runways            | FAA practice of no longer funding non-primary runways is impactful to many airports. Crosswind runways for Austin, Eureka, and Fallon were removed from their ALPs. NDOT will continue working with and encouraging airports impacted by this issue to look for local or state funding opportunities to maintain their non-primary runway(s).  |
| Future Airports             | Nye County is currently undergoing a NPIAS feasibility study for Calvada Meadows in Pahrump and has requested site selection procedures for a new airport. There is also potential for the proposed Southern Nevada Supplemental Airport (SNSA) to be developed. NDOT can continue working with stakeholder groups and other agencies to identify the most appropriate solution for the location of new and proposed airports. |

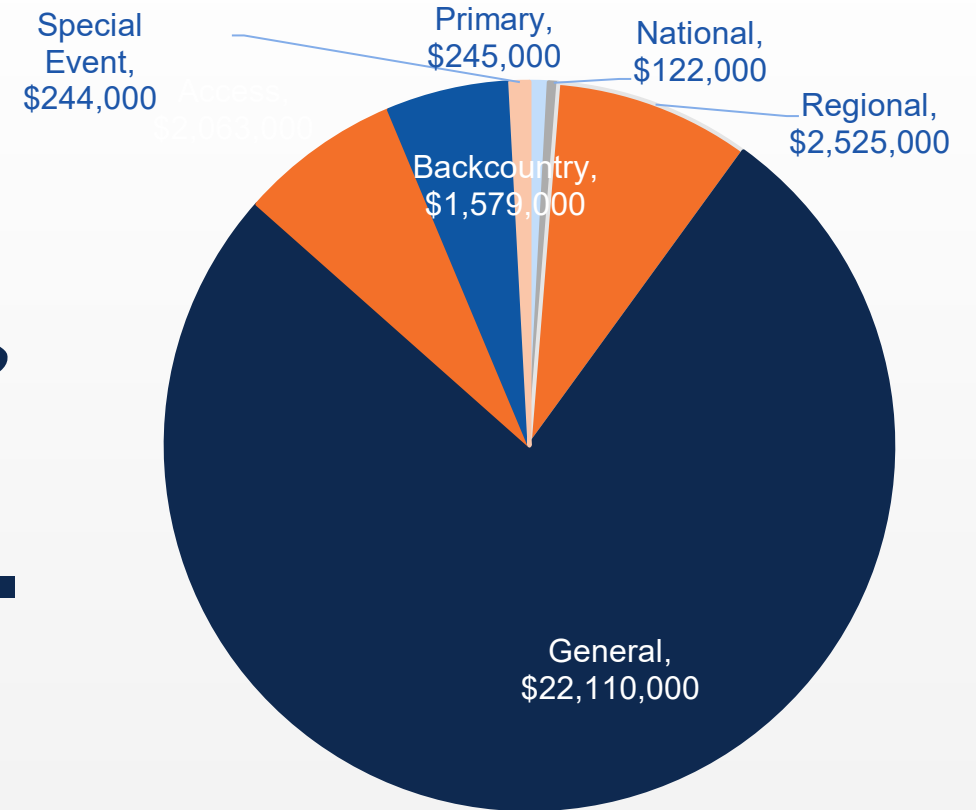
# Estimated Project Costs for NAHSP Goals

PM Costs by Goal



Total PM Costs:  
\$28,887,000

PM Costs by Airport Role



# Estimated Project Costs for NAHSP Goals

## Costliest Projects: Pavement!

| Project   | Cost                  |
|---|-----------------------|
| Pave an unpaved runway at a NPIAS airport                               | \$7.7 million         |
| Primary runway pavement maintenance at 5 airports (NPIAS and non-NPIAS) | \$7.3 million         |
| Runway extension at one NPIAS airport                                   | \$1.6 million         |
| <b>Total Pavement</b>   | <b>\$16.6 million</b> |

## Other Significant PM Costs:

| Project   | Cost          |
|---|---------------|
| Establish designated helicopter landing locations (28 airports)           | \$3.5 million |
| Acquire 24/7 Jet A fuel (3 airports)                                      | \$3.3 million |
| Weather reporting equipment (AWOS/ASOS or Automated Unicom) (19 airports) | \$3.2 million |

## Least Costly Projects: Planning

| Project                           | Cost          |
|-----------------------------------|---------------|
| Airport Layout Plans (3 airports) | \$1.2 million |
| Airport Diagrams (4 airports)     | \$40,000      |



**BREAK**



# **Value Rating Variable/Facility and Service Objective Recommendations**



# Regional Significance

| VRV/FSO                                 | Recommendation   | Recommendation Type |
|---|--|---------------------|
| <b>Longest Runway (duplicates)</b>      | Extend runway appropriate to role  | Project             |
| <b>T-hangar Ratio</b>                   | Construct hangars to achieve adequate T-hangar ratio   | Project             |
| <b>Fuel Availability (duplicates)</b>   | Acquire fuel pump and CC reader (if applicable to airport role)  | Project             |
| <b>Instrument Approach (duplicates)</b> | Improve approach as appropriate to role  | Project             |
| <b>Airport Ownership</b>                | For airports leased by BLM and privately owned airports: NDOT should continue coordinating with BLM and private owners to determine their commitment to owning/operating these facilities so in the event they no longer want to operate, NDOT can evaluate the potential transfer of the facility to their ownership<br>NDOT can assist with the transfer of these airports to local public sponsors in the event that an ownership change is needed. | Consideration       |
| <b>Airport Uses</b>                     | NDOT can use results of the NAHSP to determine if there are gaps in coverage of critical services and work with airports to provide those services<br>NDOT can check in with airports during airport 5010 data updates to determine if they are interested in attracting certain users   | Consideration       |
| <b>Nearest Airport</b>                  | NDOT can continue to monitor system needs as it relates to airport location and distance between airports<br>As new facilities are proposed and/or development on SNSA continues, NDOT should consider where these new facilities are proposed to be located relative to other facilities and plan for any overlap in services   | Consideration       |
| <b>Aircraft Maintenance</b>             | NDOT can continue monitoring the number and location of maintenance facilities<br>NDOT can continue providing non-financial support to airports as needed for airports that are interested in retaining or   | Consideration       |



# Airport Facilities

| VRV/FSO  | Recommendation   | Recommendation Type |
|--|--|---------------------|
| <b>FAA Design Standards (duplicates)</b>                         | Depends on the design standard deficiency; recommendation is to resolve deficiency                 | Project             |
| <b>Runway Surface Type/Condition (duplicates)</b>                | Improve runway to recommended surface type and condition   | Project             |
| <b>Runway Lighting</b>   | Install appropriate runway lighting per NAHSP role   | Project             |
| <b>Taxiways</b>  | Construct appropriate taxiway type per NAHSP role  | Project             |
| <b>Visual Aids</b>   | Install appropriate visual aids per NAHSP role   | Project             |
| <b>Weather Reporting (duplicates)</b>                            | Install appropriate weather reporting equipment per NAHSP role                                     | Project             |
| <b>GA Terminal</b>   | Construct appropriate GA terminal facilities per NAHSP role  | Project             |
| <b>Utilities</b>   | Install the appropriate utility connections per NAHSP role   | Project             |
| <b>Security/Wildlife Fencing</b>                                 | Assist facilities in identifying fencing needs (security or wildlife) and identify funding sources | Consideration       |
| <b>Communications Connectivity (duplicates – broadband only)</b> | Install public phone and secure broadband connection   | Project             |

# Airport Protection

| VRV/FSO                                   | Recommendation   | Recommendation Type |
|---|--|---------------------|
| <b>Height Hazard (duplicate)</b>          | Refer readers to section that includes land use compatibility/zoning recommendations made in the PM section  | Consideration       |
| <b>Obstruction Mitigation</b>             | NDOT and airports can coordinate with local landowners to mitigate obstructions occurring off airport  | Consideration       |
| <b>Airspace Restrictions</b>              | NDOT should continue to coordinate w/ the FAA and other stakeholders re: new airspace restrictions that may occur in the future so that proactive steps can be taken and communication with impacted airports is undertaken. Also refer readers to the Military Operating Area PM for additional information   | Consideration       |
| <b>Runway Protection Zone</b>             | <p>If RPZs are on private property, an airport should actively engage with property owners and use tools such as right of first refusal so that the airport is better positioned to acquire that property if it goes on the market</p> <p>Airports should strive for open communication with neighboring landowners to mitigate RPZ concerns</p> <p>NDOT can support these efforts by providing general support to airports, such as drafting template letters to send to property owners or assisting in the communication/coordination process</p> | Consideration       |
| <b>Land Use Compatibility (duplicate)</b> | Refer readers to section that includes land use compatibility/zoning recommendations made in the PM section  | Consideration       |

# Airport Access

| VRV/FSO  | Recommendation   | Recommendation Type |
|--|--|---------------------|
| <b>Ground Transportation<br/>(duplicate – courtesy car only)</b> | Acquire Courtesy Car<br>Establish rental car or ride share connection  | Project             |
| <b>Community Access</b>  | NDOT and airport can work together to establish engagement strategies so that the airport can attract more community users and educate them on the benefits of their local airport | Consideration       |
| <b>Regional Access</b>   | Consideration recommendations (evaluation based on distance from airport to principal arterial)  | Consideration       |
| <b>Local Access</b>  | Airports should work with NDOT Aviation Program and the broader NDOT agency to determine options for roadway improvements to their airport's access road                           | Consideration       |

# Airport Expandability

| VRV/FSO   | Recommendation   | Recommendation Type |
|---|--|---------------------|
| <b>Total Acreage/Based Aircraft Ratio</b>             | <p>Airports should work with NDOT and local planning organizations to determine potential for expansion</p> <p>NDOT can continue coordinating with airports during airport 5010 data updates to better understand the airport's expansion desires/needs</p>                | Consideration       |
| <b>Airfield and Aeronautical Property (duplicate)</b> | Refer readers to the Expansion/Development Potential PM recommendations  | Consideration       |
| <b>Surplus Property</b>                               | <p>Airports should continue conducting facility planning and estimate future needs to identify if excess property is best suited for aeronautical or non-aeronautical purposes</p> <p>NDOT should continue coordinating with airports during airport 5010 data updates</p> | Consideration       |
| <b>Airfield Expandability</b>                         | Airport sponsors should continue conducting future facility planning efforts and routinely coordinate with NDOT on these needs   | Consideration       |

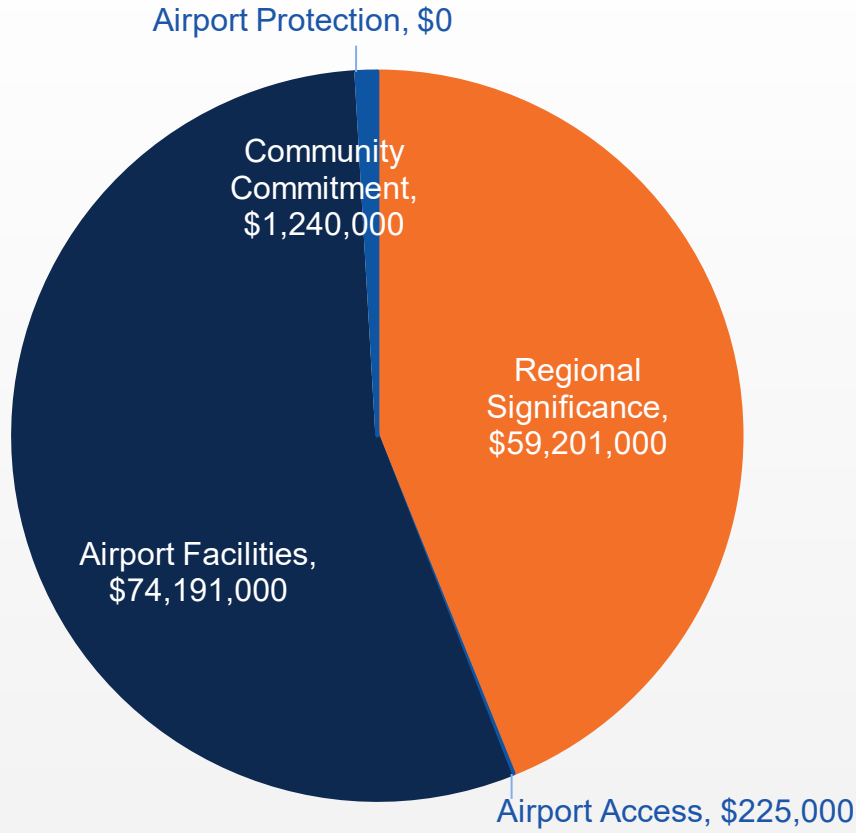


# Community Commitment

| VRV/FSO                     | Recommendation  | Recommendation Type |
|-----------------------------|---|---------------------|
| Last ALP Update (duplicate) | Complete an ALP   | Project             |
| Airport Manager (duplicate) | Refer reader to the Airport Manager PM recommendation   | Project             |
| Financial Subsidies         | Airports are encouraged to coordinate with NDOT routinely to identify if there are any grants or other funding opportunities that airports could seek out | Consideration       |
| Goodwill (duplicate)        | Refer reader to the Public Outreach Protocols PM recommendation   | Consideration       |

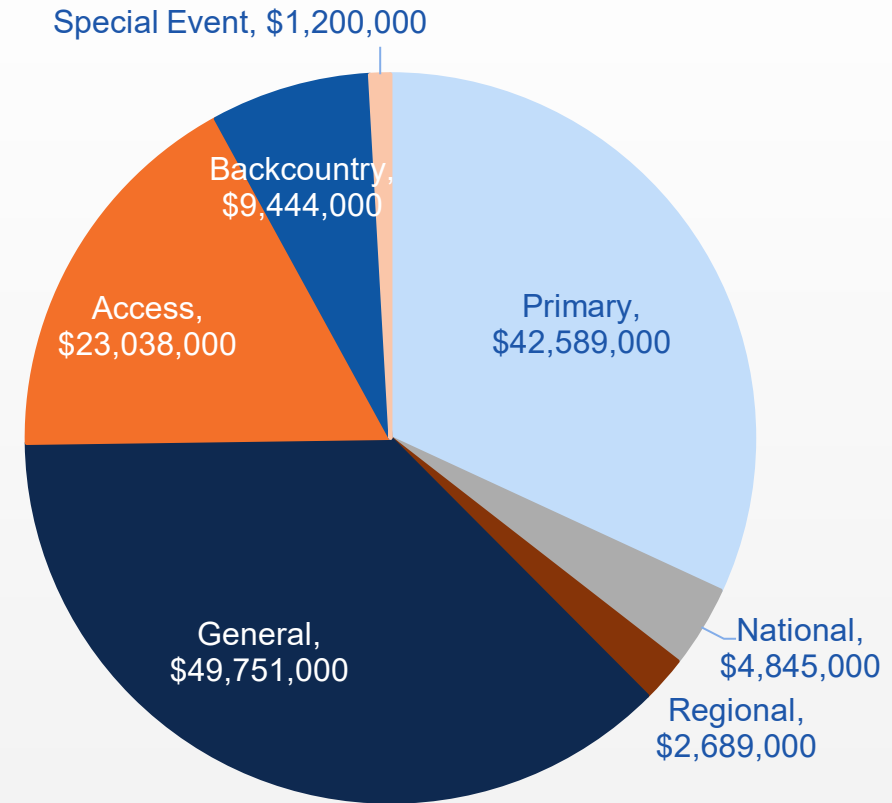
# Estimated Project Costs by VRV/FSO Category

VRV/FSO Costs by Category



**Total PM Costs:**  
**\$133,857,000**

VRV/FSO Costs by Airport Role





# Estimated Project Costs for NAHSP Goals

## Costliest Projects: Pavement!

| Project                                      | Cost                  |
|--|-----------------------|
| Runway Extensions<br>(9 airports)            | \$19.2 million        |
| Runway Pavement Maintenance<br>(10 airports) | \$13.4 million        |
| Pave an unpaved runway at a<br>NPIAS airport | \$7.7 million         |
| <b>TOTAL Pavement</b>                        | <b>\$40.3 million</b> |

## Other Significant PM Costs:

| Project                                 | Cost           |
|---|----------------|
| Approach Improvements*<br>(14 airports) | \$18.9 million |
| Taxiway Improvements**<br>(18 airports) | \$16.3 million |
| Establish ATCT (2 airports)             | \$7.0 million  |

\*Includes improvements from visual to non-precision and from non-precision to precision

\*\* Includes full parallel, partial parallel, and turnarounds

## Least Costly Projects: NAVAIDS

| Project                                       | Cost          |
|---|---------------|
| Runway lighting<br>improvements (13 airports) | \$2.7 million |
| Other NAVAIDS (10 airports)                   | \$560,000     |



# Airport Economic Impact Study

# Economic Impact Terminology Review

| Employment   | Labor Income   | Output  |
|--|--|---|
| Represents the total number of people employed by a business, regardless of part- or full-time status. This also includes jobs created or supported in the economy to support the business' economic activity. | All forms of employment income, including employee compensation (wages and benefits including health care insurance payments, retirement contributions, etc.) and proprietor income. | Represents the value of industry production and economic activity associated with the operation of the airport, including airport administration and management, sales of goods and services by airport tenants, budget expenditures by agencies located on airports, capital expenditures, and visitor spending. |

Base Year:  
2019

# Economic Impact Methodology Review

- Impacts for Harry Reid International (LAS), Henderson Executive (HND), and North Las Vegas (VGT) were derived from the Oxford Economics study published in 2019.
- Other airport impacts were derived from collecting a variety of data and modeling that data using IMPLAN (Impact Analysis for Planning). IMPLAN is an industry-accepted statistical modeling software.
- Data collected included:
  - Airport administration
  - Capital improvements
  - Tenant information
  - Commercial service and GA visitor impacts

# Nevada Airports' 2019 Contribution to the State Economy

| Measure      | State Economy      | Total NV Aviation Impacts | % of Economy Supported by Aviation |
|--------------|--------------------|---------------------------|------------------------------------|
| Employment   | 1,857,766          | 285,521                   | 15.4%                              |
| Labor Income | \$101,420, 997,685 | \$12,205,815,552          | 12.0%                              |
| Output       | \$298,932,168,595  | \$40,049,529,717          | 13.4%                              |

**Base Year:  
2019**

Base Year:  
2019

# Tax Impacts

- A variety of aviation activities generate tax revenues including:
  - Sales tax on visitor spending
  - Income tax on airport and tenant payroll
  - Property taxes
  - Fuel taxes

| Tax Type      | Tax Impact             |
|---------------|------------------------|
| Local         | \$119,568,819          |
| State         | \$251,949,175          |
| Federal       | \$381,279,660          |
| LAS, HND, VGT | \$5,900,000,000        |
| <b>Total</b>  | <b>\$6,652,797,654</b> |



# Special Events Considered in the AEIS

| Burning Man   | High Sierra Fly-in   | Reno Air Races   |
|---|--|--|
| Black Rock City Airport (88NV)  | Dead Cow Airstrip  | Reno-Stead Airport (RTS)   |
|   |   |    |
| Source: AOPA, Dave Hirschman<br><a href="https://www.aopa.org/news-and-media/all-news/2015/september/10/burning-man-airport-appears-then-disappears-without-a-trace">https://www.aopa.org/news-and-media/all-news/2015/september/10/burning-man-airport-appears-then-disappears-without-a-trace</a> | Source: High Sierra Fly-in Gallery,<br><a href="https://www.highsierraflyin.com/gallery">https://www.highsierraflyin.com/gallery</a> | Source: STIHL National Championship Air Races, STOL Drag Race Gallery, <a href="https://airrace.org/sights-and-sounds/racing-class-info/stol-class-gallery/">https://airrace.org/sights-and-sounds/racing-class-info/stol-class-gallery/</a> |



# Airport Replacement Values



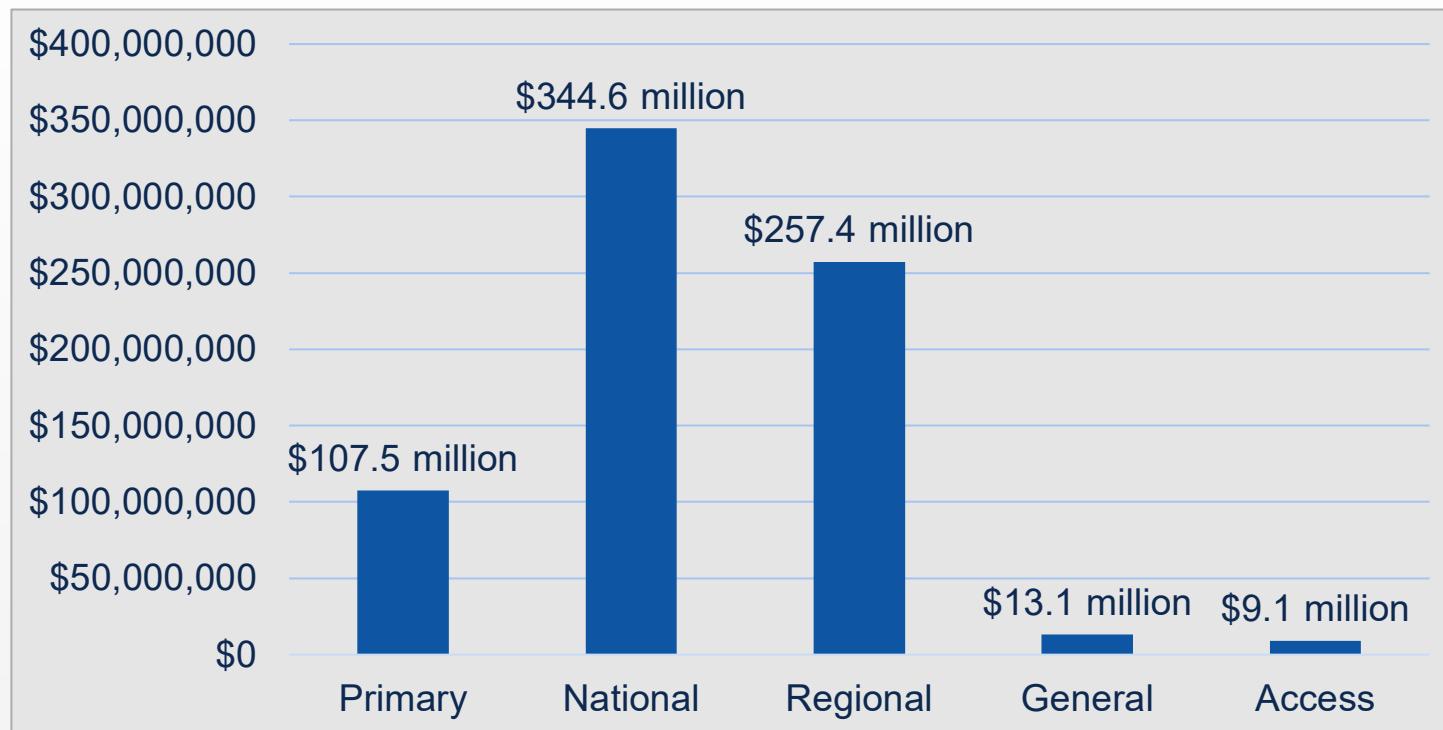
# Airport Replacement Value Analysis

- Only developed for NPIAS airports (excluding LAS & RNO)
- Included analysis of three asset categories:
  - Land
  - Pavement
  - Buildings
- Land area, pavement square footage, and building square footage data was collected
- Unit costs for land, pavement, and building costs were identified
- Asset information and unit costs were calculated to identify the airport's estimated replacement value

# Airport Replacement Value Results\*



Average Airport Replacement Value by Airport Role





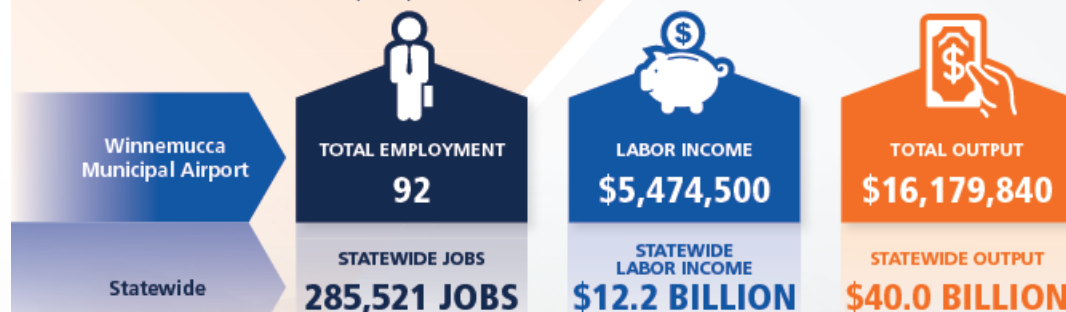
# Final Individual Airport Reports



# NPIAS Airport Layout

## AIRPORT ECONOMIC IMPACT STUDY

The Nevada Aviation Economic Impact Study (AEIS) evaluated the economic impacts of all system airports in Nevada. The components that comprise the total economic impact of Nevada's aviation system and the economic impact of WMC are presented below. Visit the NDOT website to learn more about the methodology used to determine the statewide and airport-specific economic impacts.



## AIRPORT OVERVIEW

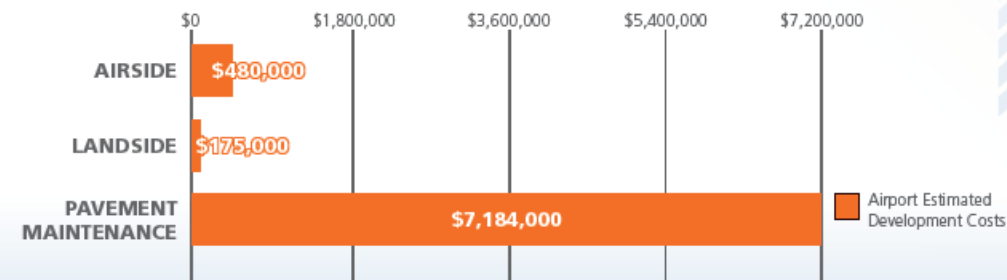
Winnemucca Municipal Airport (WMC) is a general aviation (GA) airport located approximately six miles southwest of the City of Winnemucca in Humboldt County. The airport is located just off I-80, offering quick access to much of the rest of Northern Nevada. WMC has two paved runways that are 4,800 and 7,000 feet in length, along with two helipads, multiple hangars, airport parking pads, and an industrial park located adjacent to WMC. There are 10 aircraft based at WMC with approximately 6,500 operations annually. These operations include recreational flights, air taxi operations, and cargo flights. Additionally, WMC is a base for the Bureau of Land Management (BLM), with many operations including Single Engine Air Tanker (SEAT), smoke jumpers, and air attacks. The development of a nearby lithium mine and salmon farm will contribute to the fast-growing Winnemucca community.

## AIRPORT REPLACEMENT VALUE

Airports generate economic impacts from their operation, but also have tremendous value as a physical asset. Airports are comprised of large tracts of land, sometimes miles of pavement, and numerous buildings that have substantial value, especially in terms of replacement. Replacement value was estimated based on existing facilities and current costs.

**\$23,986,000**

## WMC DEVELOPMENT NEEDS



Airport Estimated Development Costs were sourced from each Airport's Capital Improvement Plan (ACIP) that were provided during the development of this project. ACIPs are developed by airport sponsors and consultants to plan for capital improvement needs over the planning horizon.

## Nevada Aviation: A Vital, Growing Resource

## WINNEMUCCA MUNICIPAL AIRPORT WMC

The 2022 Nevada Airport and Heliport System Plan (NAHSP) and Airport Economic Impact Study (AEIS) are critical documents to the Nevada Department of Transportation (NDOT) Aviation Program. Combined, these are used to provide guidance and direction on how to maintain the aviation system, monitor performance, and invest in the future.

### NAHSP Process:

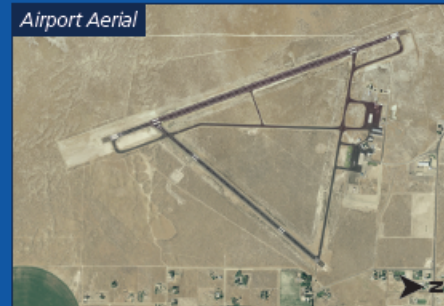
- Monitor aviation system performance
- Provide guidance and direction to maintain the aviation system
- Provide justification for continued investment in the aviation system

### NAHSP Roles:

- Seven functional classifications used in the NAHSP
- Mix of Federal Aviation Administration (FAA) National Plan of Integration Airport Systems (NPIAS) and unique NAHSP roles
- WMC is classified by the NAHSP as a General Airport and in the NPIAS as a Basic Airport

*General: Serve a variety of general aviation (GA) activities, support local economies, and provide basic aeronautical needs.*

Airport Aerial



Airport Location



## AIRPORT REGIONAL VALUE

The Airport Regional Value (ARV) measures the economic, social, environmental, emergency, and facility metrics associated with each airport. ARV results can inform airports about the impact and benefit of specific capital improvements and demonstrates the tie between airport investment and economic impact. There are three components of ARV: economic impact, replacement value, and value rating variables (VRV). Economic impact and replacement value are featured on the back page of this brochure while the results of the VRV analysis, presented as an Airport Development Report, are presented in the centerfold.



## WINNEMUCCA MUNICIPAL AIRPORT

Associated City  
**WINNEMUCCA**

FAA Identifier  
**WMC**

Classification  
**GENERAL**

| Category                       | Value Rating Variable (VRV)             | Airport Objective                                       | Current Performance                                    | Score |
|--------------------------------|---|---|--|-------|
| Regional Significance $V_{RS}$ | Airport Ownership                       | N/A   | Public   | 5     |
|                                | Airport Uses                            | N/A   | Firefighting   | 1     |
|                                | Nearest Airport                         | N/A   | 53 miles   | 5     |
|                                | Longest Runway                          | Accommodate 95% of Small Aircraft Fleet = 5,510 Feet    | 7,000 Feet   | 5     |
|                                | Based Aircraft                          | N/A   | 0.4%   | 1     |
|                                | T-Hangar Ratio (THR)                    | 0.50 - 0.60   | 1.5  | 5     |
|                                | Fuel Availability                       | Jet A or 100LL, Self Service (SS) w/ Credit Card Reader | Jet A & 100 LL Full Service (FS) and Self Service (SS) | 5     |
|                                | Aircraft Maintenance                    | Minor   | Minor  | 5     |
|                                | Instrument Approach                     | Non-Precision   | Non-Precision with Vertical Guidance                   | 5     |
|                                | Regional Significance $V_{RS}$ Subtotal |   |  | 37    |
| Airport Facilities $V_{AF}$    | Runway ARC Category                     | B-II  | B-II   | 5     |
|                                | FAA Design Standards                    | Meet FAA Design Standards                               | Yes  | 3     |
|                                | Runway Surface Type/Condition           | Paved and Good, PCI >71                                 | Asphalt and Good, PCI = 76                             | 5     |
|                                | Runway Lighting                         | Low-Intensity   | Medium-Intensity                                       | 5     |
|                                | Taxiways                                | Partial Parallel to Primary Runway                      | Full Parallel to All Runways                           | 5     |
|                                | Visual Aids                             | Rotating Beacon and Wind Cone                           | Rotating Beacon, Lighted Wind Cone, and PAPIs          | 5     |
|                                | Weather Reporting                       | AWOS or ASOS  | ASOS   | 5     |
|                                | GA Terminal                             | Public Restrooms  | Public Restrooms, Conference Room, and Pilot Lounge    | 5     |
|                                | Utilities                               | Electricity and Water Available                         | Electricity, Water, and Septic                         | 5     |
|                                | Security/Wildlife Fencing               | Partial   | Full   | 5     |
|                                | Communications Connectivity             | Public Phone and Cellular (Data/4G)                     | Public Phone and Cellular (Data/4G)                    | 5     |
|                                | Airport Facilities $V_{AF}$ Subtotal    |   |  | 53    |

Notes: EMS = Emergency Medical Services, ALP = Airport Layout Plan, MP = Master Plan, FAA = Federal Aviation Administration, ARC = Airport Reference Code, PCI = Pavement Condition Index, PAPIs = Precision Approach Path Indicator, VASIs = Visual Approach Slope Indicator, ALS = Approach Lighting System, REILS = Runway End Identifier Lights, ATCT = Air Traffic Control Tower, AWOS = Automated Weather Observing System, ASOS = Automated Surface Observing Systems, GA = General Aviation

| Category                       | Value Rating Variable (VRV)                | Airport Objective                             | Current Performance                 | Score |
|--------------------------------|--|---|-------------------------------------|-------|
| Airport Protection $V_{AP}$    | Height Hazard Zoning                       | Present                                       | Yes                                 | 5     |
|                                | Obstruction Mitigation                     | 15:1 - 18:1                                   | 26:1                                | 5     |
|                                | Airspace Restrictions                      | N/A   | 42 miles                            | 3     |
|                                | Runway Protection Zone                     | Full desired                                  | Full                                | 5     |
|                                | Land Use Compatibility                     | N/A   | Less than 1 mile                    | 1     |
|                                | Airport Protection $V_{AP}$ Subtotal       |   |                                     | 19    |
| Airport Access $V_{AA}$        | Community Access                           | N/A   | 5 miles                             | 3     |
|                                | Local Access                               | Collector (Minor)                             | Collector (Minor)                   | 5     |
|                                | Regional Access                            | N/A   | 3.2 miles                           | 5     |
|                                | Ground Transportation Services             | Rental or Courtesy Car and Taxi or Ride Share | Courtesy Car and Taxi               | 3     |
|                                | Airport Access $V_{AA}$ Subtotal           |   |                                     | 16    |
| Airport Expandability $V_{AE}$ | Total Acreage Ratio                        | N/A   | 97                                  | 5     |
|                                | Airfield & Aeronautical Property           | N/A   | 4%                                  | 5     |
|                                | Surplus Property                           | N/A   | 928 acres                           | 5     |
|                                | Airfield Expandability                     | N/A   | 1,116 Feet                          | 5     |
|                                | Airport Expandability $V_{AE}$ Subtotal    |   |                                     | 20    |
| Community Commitment $V_{CC}$  | Last ALP Update                            | < 10 years & After 2013                       | 2020                                | 5     |
|                                | Airport Management                         | Part Time or FBO                              | Full Time                           | 5     |
|                                | Historical Capital Improvements            | ≥ \$1.0 Million                               | \$5.95 Million                      | 5     |
|                                | Airport Capital Improvement Program (ACIP) | ≥ \$1.0 Million                               | \$7.15 Million                      | 5     |
|                                | Economic Development Partnership           | Established Partnership                       | Yes                                 | 5     |
|                                | Financial Subsidies                        | Capital Improvement Subsidy                   | Capital Improvement Subsidy         | 3     |
|                                | Goodwill                                   | N/A   | Education Program and Positive News | 4     |
|                                | Community Commitment $V_{CC}$ Subtotal     |   |                                     | 32    |

### AIRPORT REGIONAL VALUE SUMMARY

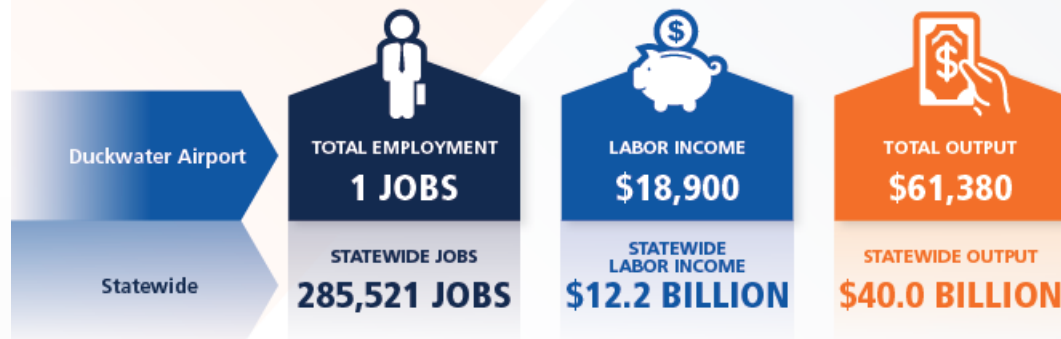




# Non-NPIAS Airport Layout

## AIRPORT ECONOMIC IMPACT STUDY

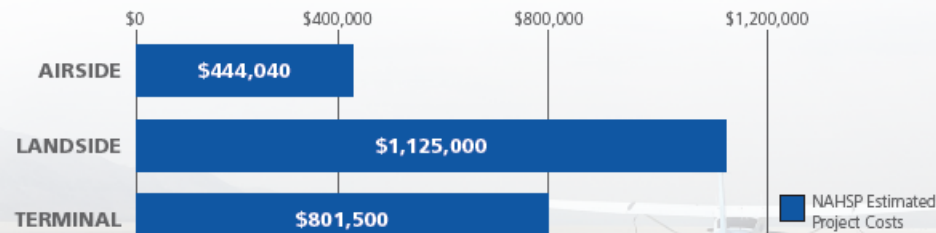
The Nevada Airport Economic Impact Study (AEIS) evaluated the economic impacts of all system airports in Nevada. The components that comprise the total economic impact of Nevada's aviation system and the economic impact of 01U are presented below. Visit the NDOT website to learn more about the methodology used to determine the statewide and airport-specific economic impacts.



## AIRPORT OVERVIEW

Duckwater Airport (01U) is a general aviation (GA) airport located six miles southeast of Duckwater in Nye County, over 50 miles from Ely. The airport is located on land owned by the Bureau of Land Management (BLM). 01U consists of two dirt runways approximately 3,000 feet in length. 01U provides critical access to the surrounding community by providing a location for doctors to access the local Duckwater Tribe and by supporting occasional emergency operations and aerial firefighting. The airport also serves as an access point for nearby hot springs and those visiting for local wildlife viewing or game hunting. The airport is located in open range land with sheep, cattle, and wild horses.

## 01U DEVELOPMENT NEEDS



NAHSP Estimated Project Costs were developed by summing the estimated costs of project recommendations from the NAHSP FSO and PM analysis. Costs were developed as planning level estimates only and do not include the level of detail needed to design projects or prepare grants.

The 2022 Nevada Airport and Heliport System Plan (NAHSP) and Airport Economic Impact Study (AEIS) are critical documents to the Nevada Department of Transportation (NDOT) Aviation Program. Combined, these are used to provide guidance and direction on how to maintain the aviation system, monitor performance, and invest in the future.

### NAHSP Process:

- Establish goals and project metrics
- Determine existing system performance
- Identify future performance targets
- Outline policy and project recommendations

### NAHSP Roles:

- Seven functional classifications used in the NAHSP
- 01U is an Access airport (not eligible for Federal Aviation Administration [FAA] funding)

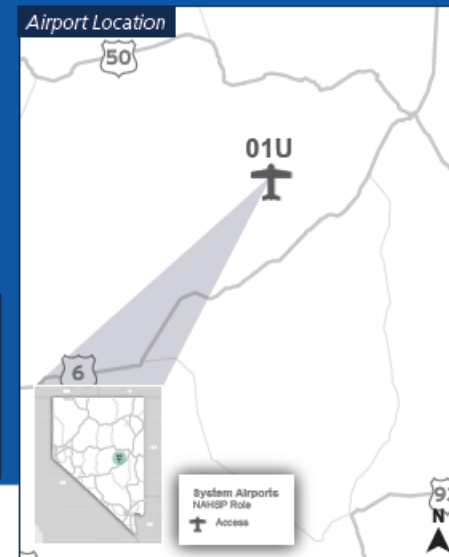
### Critical Services:

- Emergency Medical Services (EMS) Operations
- Provides Doctor's Access to Tribal Community
- Aerial Firefighting Operations

*Access airports: Regularly utilized for a specific reason related to accessing the location such as emergency, medical, or business (e.g. mining, casinos).*

## FACILITY AND SERVICE OBJECTIVES

Airports not included in the FAA's system were evaluated using a set of Facility and Service Objectives (FSOs). FSOs establish a minimum level of facilities and services recommended based on each airport's NAHSP role. FSOs help guide development at an airport level to ensure that each airport has the facilities and services recommended to fulfill their role within the system. The results of this evaluation are presented as an Airport Development Report included in this brochure's centerfold. The Airport Development Report clearly indicates the FSOs that the airport is meeting and not meeting.





## DUCKWATER AIRPORT

The Airport Development Report presents a snapshot of NAHSP objectives for the airport and current performance. In areas where the objective is not met, a development project may be recommended, as appropriate, for the airport to achieve the desired objectives" above this table.

| Category              | Facility & Service Objective  | Airport Objective                                     | Current Performance     | Meets Objective? |
|-----------------------|-------------------------------|---|-------------------------|------------------|
| Regional Significance | Longest Runway                | Maintain Existing at a Minimum of 3,000 Feet          | 3400 Feet               | Meets            |
|                       | T-Hangar Ratio (THR)          | > 0.25  | 0                       | Meets            |
|                       | Fuel Availability             | Jet A or 100 LL, Self Service with Credit Card Reader | None                    | Doesn't Meet     |
|                       | Instrument Approach           | Visual  | Visual                  | Meets            |
| Airport Facilities    | FAA Design Standards          | Meet FAA Design Standards                             | No                      | Doesn't Meet     |
|                       | Runway Surface Type/Condition | Non-Paved and Fair, PCI > 56                          | Dirt and Fair, PCI > 56 | Meets            |
|                       | Runway Lighting               | Reflectors, Low-intensity Desired                     | None                    | Doesn't Meet     |
|                       | Taxiways                      | Turn Arouds   | None                    | Doesn't Meet     |
|                       | Visual Aids                   | Wind Cone   | None                    | Doesn't Meet     |
|                       | Weather Reporting             | Automated Unicom                                      | None                    | Doesn't Meet     |

Notes: FAA = Federal Aviation Administration, PCI = Pavement Condition Index, GA = General Aviation, ALP = Airport Layout Plan

Associated City  
**DUCKWATER**

FAA Identifier  
**01U**

Classification  
**ACCESS**

| Category             | Facility & Service Objective   | Airport Objective                          | Current Performance | Meets Objective? |
|----------------------|--------------------------------|--|---------------------|------------------|
| Airport Facilities   | GA Terminal                    | Public Restrooms Desired                   | None                | Doesn't Meet     |
|                      | Utilities                      | Electricity and Water Available            | None                | Doesn't Meet     |
|                      | Security/Wildlife Fencing      | None                                       | None                | Meets            |
|                      | Communications Connectivity    | Public Phone or Cellular (Data/4G)         | None                | Doesn't Meet     |
|                      | Ground Transportation Services | Rental or Courtesy Car and Taxi/Ride Share | None                | Doesn't Meet     |
| Community Commitment | Last ALP Update                | < 10 yrs and after 2013 or Airport Diagram | Diagram             | Meets            |



# Next Steps

# Next Steps

- Finalize Chapter 8. Recommendations
  - Send to NDOT for review
  - Send to PAC for review
  - Address feedback and post to the project website!
- Finalize Chapter 9. AEIS
  - Address PAC feedback
  - Post to the project website
- Finalize all Individual Airport Brochures
  - Send to airports for their final review and feedback
- Draft Statewide Executive Summary Brochure & Presentation

# Stay Involved!

- Review and comment on remaining draft deliverables
- Check out Website
- Distribute Blog Posts

# Questions?

Thank you for your participation!

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