



# Updates to the 2025 NDSASP and NDAEIS



# Project Team



Kimley»Horn

Expect More. Experience Better.



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# Agenda

1

Project Refresher

2

Completed 2025 NDSASP Chapters

3

10-Year System Needs and Funding Shortfall

4

Completed 2025 NDAEIS Tasks

5

Deliverables & Next Steps



# Project Refresher



# Project Purpose



2025 North Dakota  
State Aviation System Plan



2025 North Dakota  
Aviation Economic Impact Study

## Update to 2014 NDSASP

- Provides roadmap for long-term planning
- Guides future decision making
- Identifies system needs



## Update to 2015 NDAEIS

- Documents contributions of public-use airports
- Justifies continued investment
- Helps communicate airport benefits and value



Visit the Project Website: <https://2025ndsasp.com/>



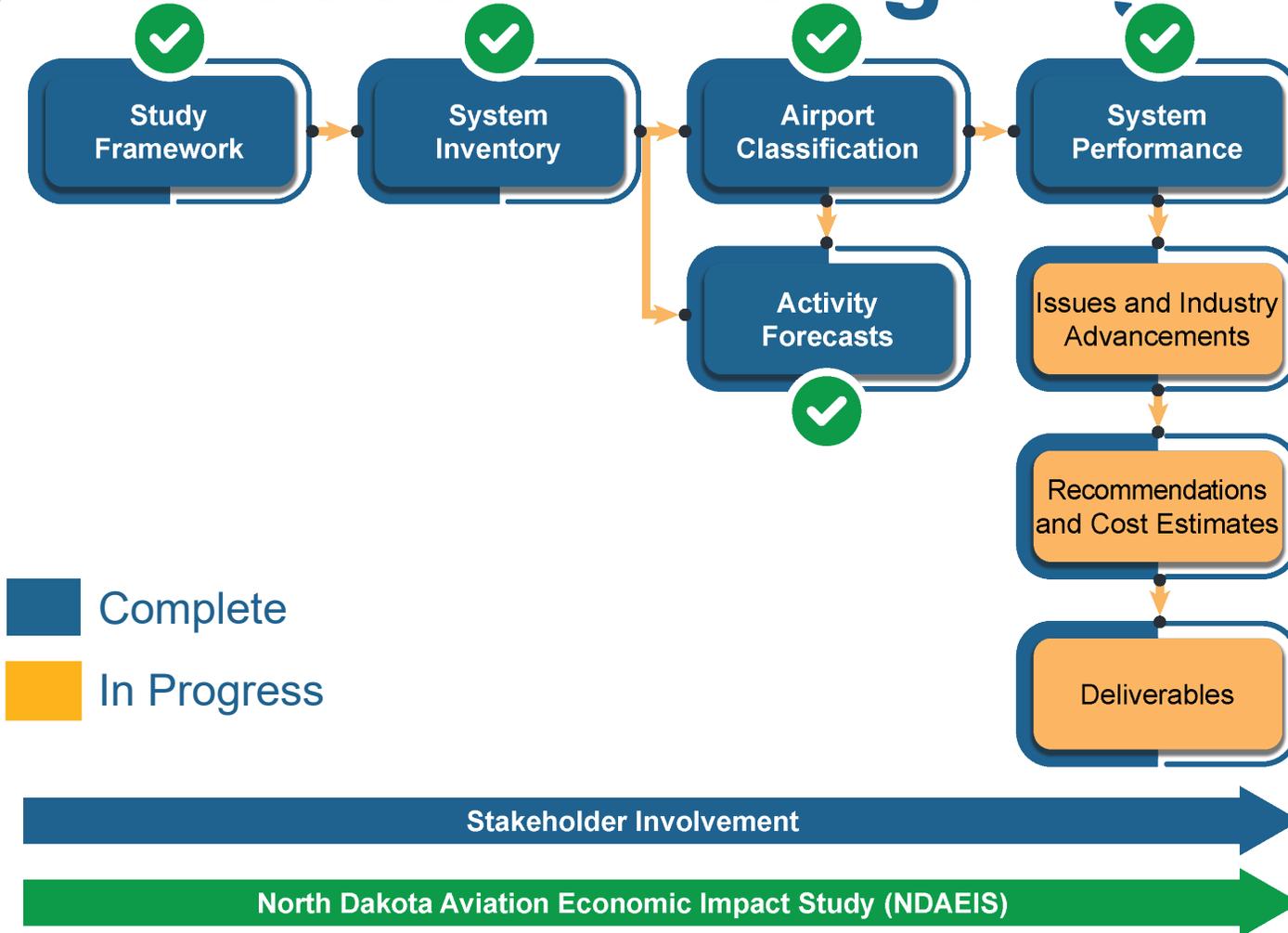
# Project Timeline

-  Virtual TAC Meeting
-  Regional Presentations
-  Fly ND Conference

	Month	2024				2025								2026											
		S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
<b>Task 1</b>	Study Design																								
<b>Task 2</b>	Project Management																								
<b>Task 3</b>	Stakeholder Engagement																								
<b>Task 4</b>	2025 NDSASP Framework (Goals, Performance Measures, Benchmarks)																								
<b>Task 5</b>	Airport Classification																								
<b>Task 6</b>	System Inventory																								
<b>Task 7</b>	Activity Forecasts																								
<b>Task 8</b>	System Performance																								
<b>Task 9</b>	Issues and Industry Advancements																								
<b>Task 10</b>	Recommendations and Cost Estimates based on Findings																								
<b>Task 11</b>	Economic Impact Study																								
<b>Task 12</b>	2025 NDSASP and NDAEIS Final Documents																								
<b>Task 13</b>	Website Story Maps and GIS Development																								



# Study Process and Ongoing Efforts





# Project Website



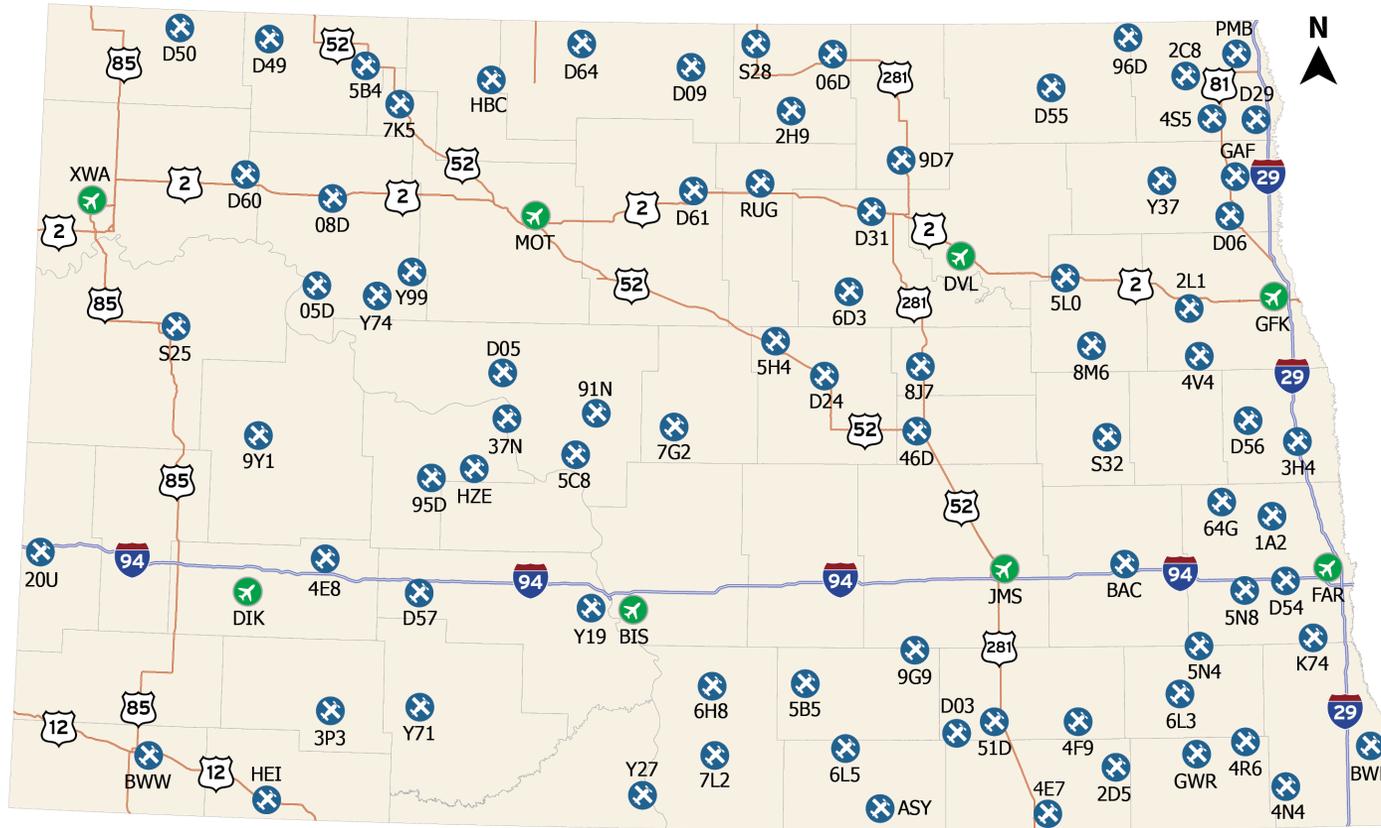
<https://2025ndsasp.com/>



# Completed 2025 NDSASP Chapters



# Chapter 1. Introduction



2025 NDSASP Public Airports



Commercial Service



General Aviation

County Boundaries

State Highways

Interstate Highways

## Chapter 1. Introduction

### 1.1. Introduction

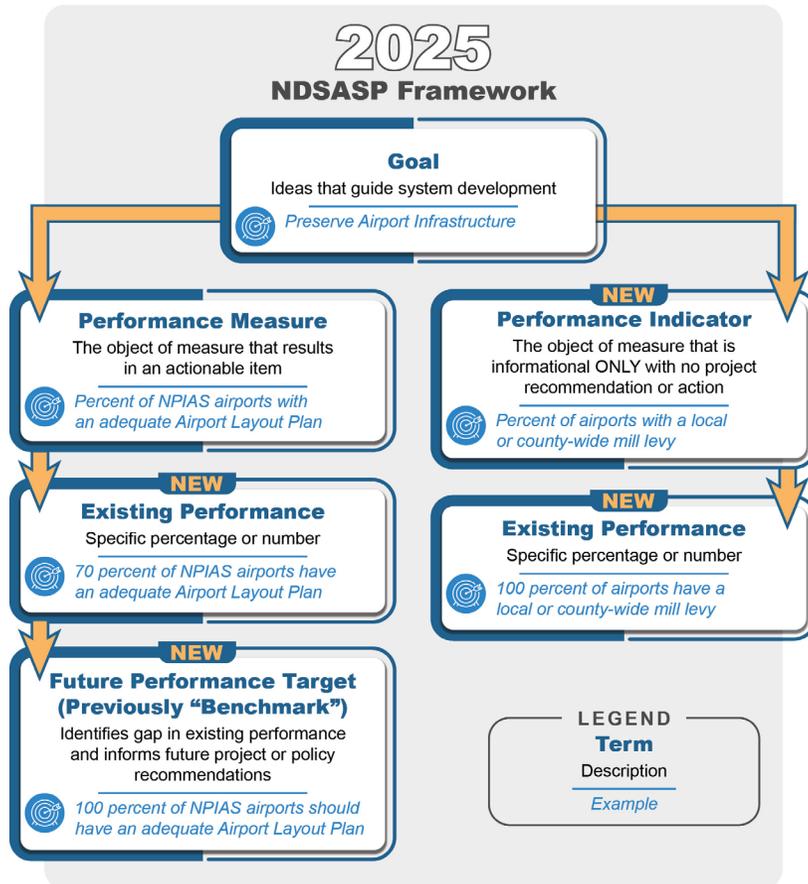
Aviation is a cornerstone of North Dakota's economy and infrastructure. The state's 89 public-use airports are vital assets that fulfill a wide range of needs, including the transportation of essential goods and services, connecting residents and visitors to destinations across the state and nation, and supporting key industries such as agriculture and tourism. These airports also serve as significant economic drivers through airport administration, construction activity, visitor spending, and other contributions. To ensure the continued success and optimization of these assets, the North Dakota Aeronautics Commission (NDAC) engages in long-term planning efforts, such as the North Dakota State Aviation System Plan (NDSASP) and the North Dakota Aviation Economic Impact Study (NDAEIS). These efforts provide critical insight into the needs and benefits of the state's aviation system.

The 2025 NDSASP has been developed alongside the 2025 NDAEIS to provide a comprehensive understanding of the aviation system's requirements and impact. The methodology and findings of the NDAEIS are discussed in detail in **Chapter X: 2025 North Dakota Aviation Economic Impact Study**.

The 2025 NDSASP builds on the previous 2014 plan, reflecting the substantial changes in North Dakota's aviation landscape over the past decade. Following a period of rapid expansion driven by the oil boom that peaked in 2014, the state experienced a downturn between 2015 and 2017 due to declines in the energy sector. Growth resumed in 2018, only to face another significant challenge with the onset of the COVID-19 pandemic in 2020, which caused annual passenger boardings to drop by over 50%, falling below 600,000.



# Chapter 2. Study Framework



-  Maintain a Safe Aviation System
-  Promote Aviation System Coverage
-  Provide Air Access to Airports
-  Enhance Quality of Life
-  Preserve Airport Infrastructure
-  Support Aviation Education and Industry Advancement



# Performance Measures and Indicators

## Goal: Maintain a Safe Aviation System



Percent of Airports:

- With Clear Approaches to All Runway Ends
- With Public Gatherings in the RPZs

## Goal: Enhance Quality of Life



- Percent of Airports that Meet the Light Business Jet Criteria
- Percent of Area and Population within 30 minutes of Airport that can Meet the Needs of the King Air Emergency Aircraft

## Goal: Promote Aviation System Coverage



Percent of Area and Population:

- Within 30 Minutes of All Public-Use Airports
- Within 30 Minutes of a NPIAS Airport

## Goal: Preserve Airport Infrastructure



Percent of Airports:

- Meeting State PCI Thresholds on Primary Runways
- With an Adequate Airport Layout Plan

## Goal: Provide Air Access to Airports



- Percent of Airports with Available Covered Aircraft Storage
- Percent of Area and Population within 30 NM of an Airport with On-Site Weather Reporting

## Goal: Support Aviation Industry Advancement

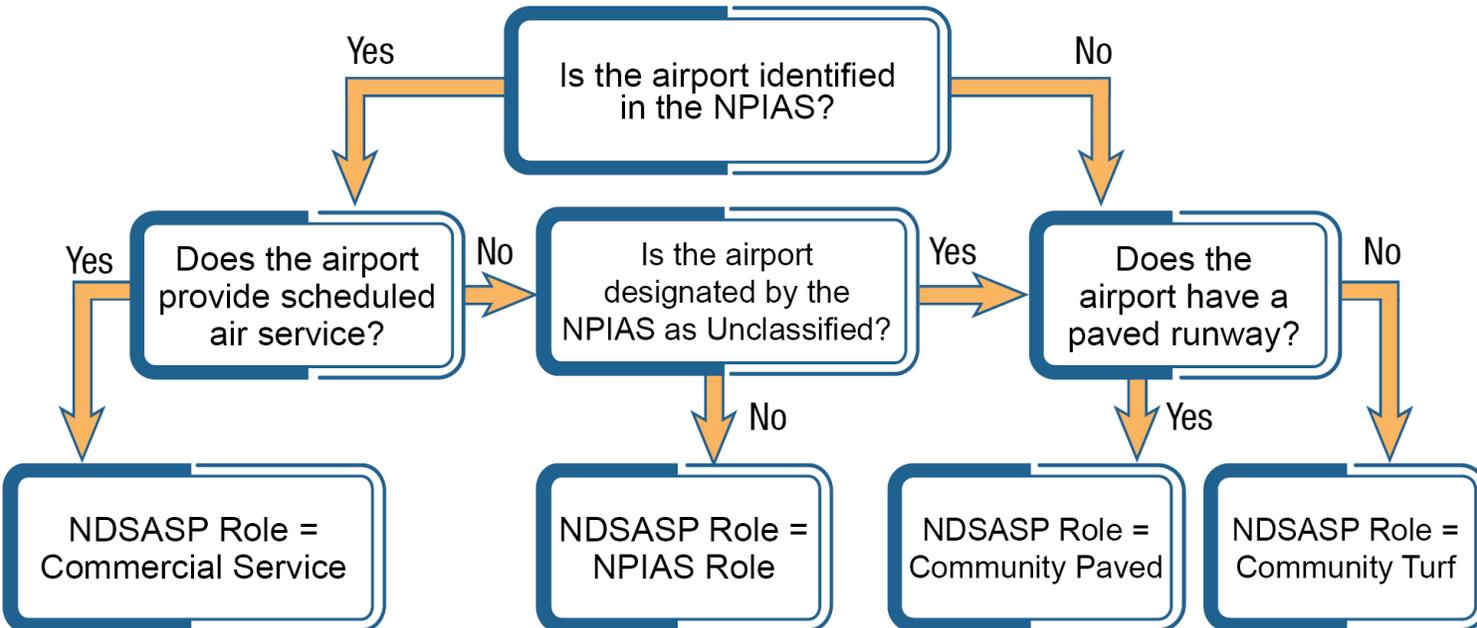


Percent of Airports:

- That Offer Flight Training
- That Participate in STEM Activities



# Chapter 3. Airport Classifications

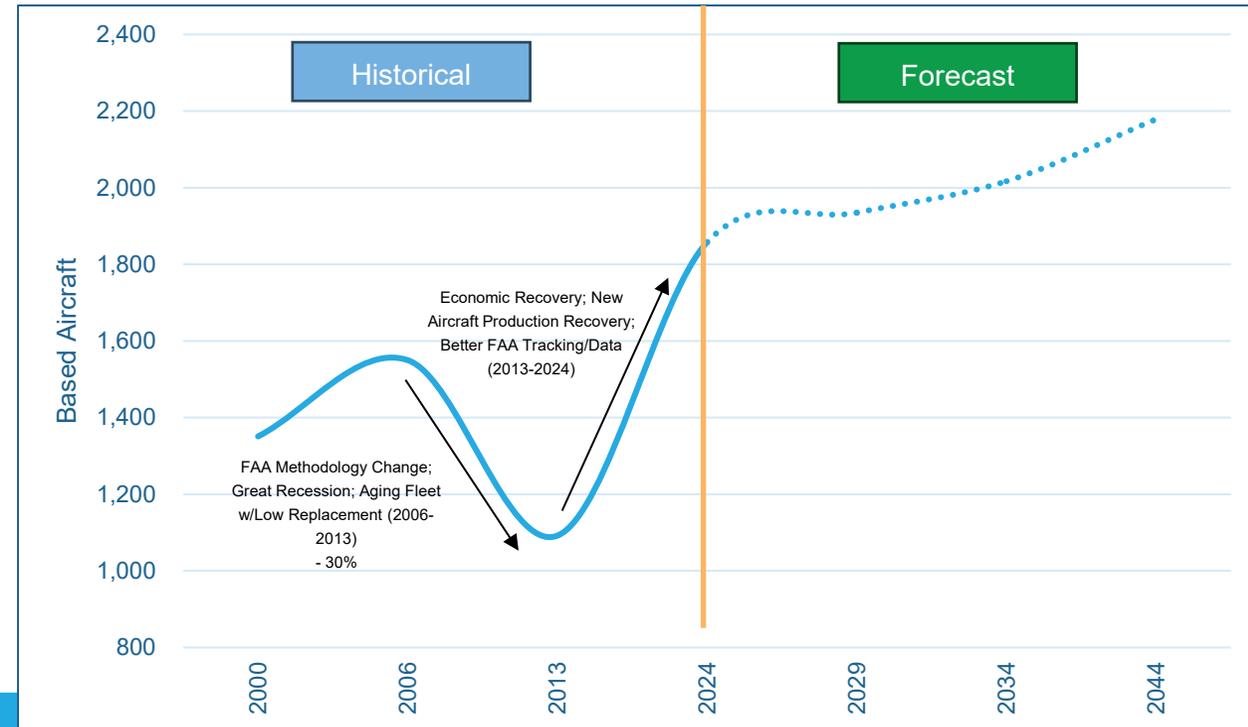
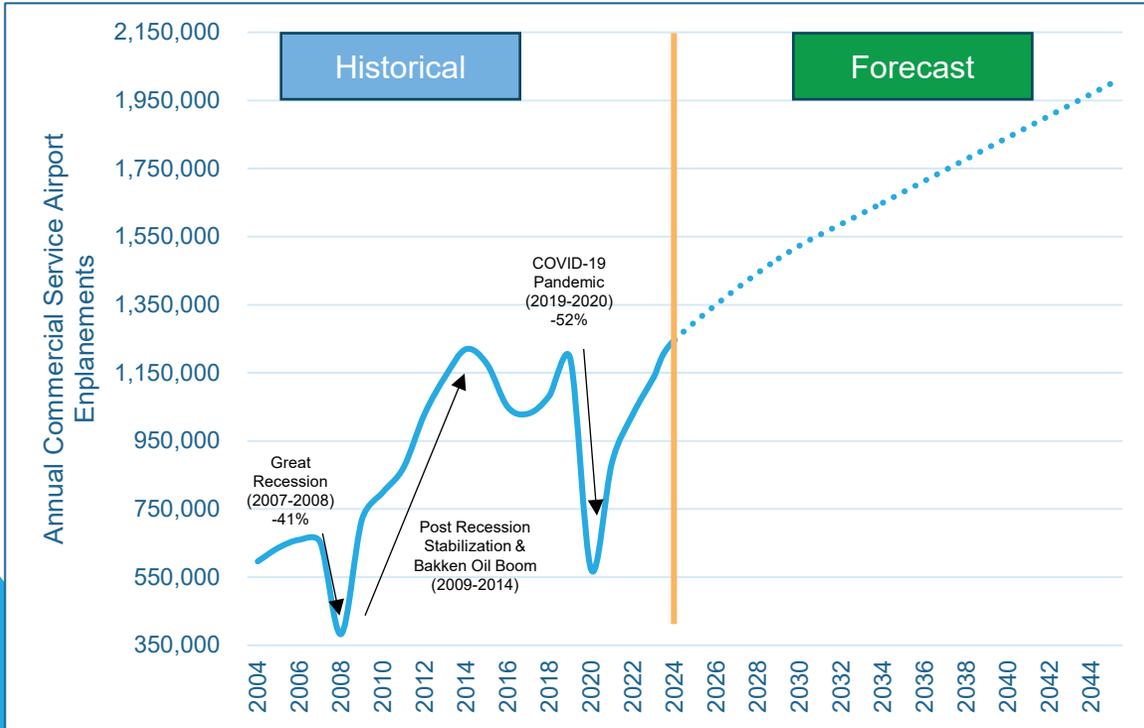


2025 NDSASP Classification	No. of System Airports
Commercial Service	8
Local	26
Basic	19
Community Paved	19
Community Turf	17





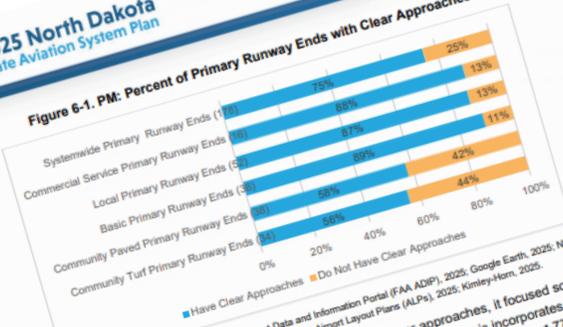
# Chapter 5. Projections of Aviation Demand





# Chapter 6. System Performance

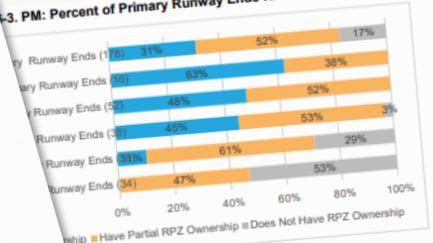
Figure 6-1. PM: Percent of Primary Runway Ends with Clear Approaches



Sources: Federal Aviation Administration - Airport Data and Information Portal (FAA ADIP), 2025; Google Earth, 2025; NDAC General Aviation (GA) Inspection Reports, 2025; Airport Layout Plans (ALPs), 2025; Kimley-Horn, 2025.

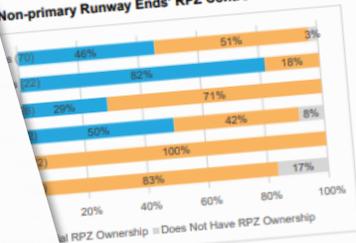
While the previous study also included an assessment of clear approaches, it focused solely on a 20:1 slope to identify potential obstructions. The 2025 NDSASP analysis incorporates a broader range of slope ratios, including 20:1, 34:1, and 50:1, based on the FAA Part 77 requirements for different types of runway approaches that demand the highest level of obstacle clearance. Because the 2025 NDSASP methodology accounts for these distinctions, this PM is reserved for precision instrument approaches that demand the highest level of obstacle clearance. As shown in Figure 6-2, an analysis of the system's non-primary runway ends reveals that approximately 91 percent of these runway ends have clear approach conditions. All nonprimary runways end at Commercial Service, Basic, and Community Paved airports with clear approaches. Nonprimary runway ends at Local airports are not far behind, with 89 percent compliance. Community Turf airports demonstrate more moderate performance, with 50 percent of their non-primary runway ends meeting the clear approach criteria. The 2014 NDSASP did not evaluate clear approaches for non-primary runways so a comparison in performance is not available.

Figure 6-3. PM: Percent of Primary Runway Ends RPZ Control



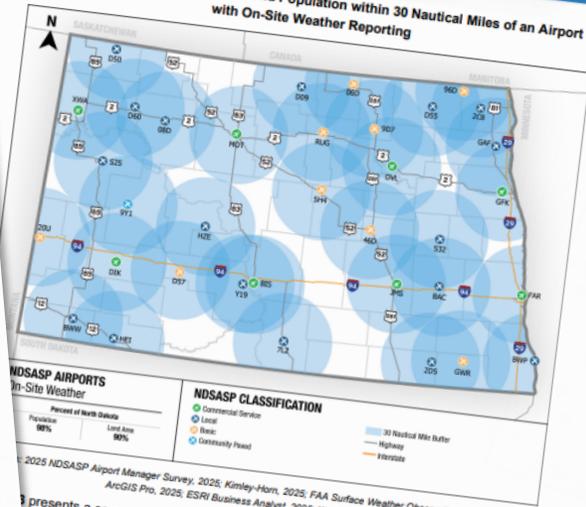
RPZ status of non-primary runway RPZs across the system. Primary runway ends have full control of their associated RPZs, and three percent have no control. Broken down by category, primary runway ends maintain either full or partial control of their associated RPZs, with 82 percent of primary runway ends demonstrating the highest level of ownership, with 82 percent at Commercial Service airports having full control and 18 percent at Basic airports having partial control.

Figure 6-4. PM: Non-primary Runway Ends' RPZ Control



As shown in Figure 6-2, an analysis of the system's non-primary runway ends reveals that approximately 91 percent of these runway ends have clear approach conditions. All nonprimary runways end at Commercial Service, Basic, and Community Paved airports with clear approaches. Nonprimary runway ends at Local airports are not far behind, with 89 percent compliance. Community Turf airports demonstrate more moderate performance, with 50 percent of their non-primary runway ends meeting the clear approach criteria. The 2014 NDSASP did not evaluate clear approaches for non-primary runways so a comparison in performance is not available.

Figure 6-13. PM: Percent of Area and Population within 30 Nautical Miles of an Airport with On-Site Weather Reporting

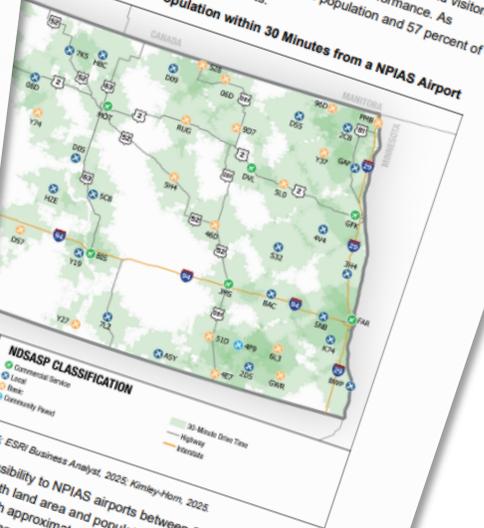


This map presents a comparison of the percentage of area and population within 30 nautical miles of airports equipped with on-site weather reporting from the 2014 and 2025 studies. Since 2014, weather coverage has increased by one percent, and land area coverage has grown by one percent. This change is primarily due to the addition of certified weather reporting at Dunn Smoky Hill Field Airport (9Y1) and Bottineau Municipal Airport (D09).

Percent of Area and Population within 30 Minutes from a NPIAS Airport

Airports in North Dakota serve a wide range of aviation needs, from recreational general aviation to business travel to emergency response and agricultural operations. These airports are a key component of the nation's system of aviation facilities and are eligible for federal funding to support development and maintenance. Ensuring that the state's residents and visitors have access to these facilities is a key component of system performance. As shown in Figure 6-10, approximately 94 percent of North Dakota's population and 57 percent of the land area are within the service areas of NPIAS airports.

Figure 6-10. PM: Percent of Area and Population within 30 Minutes from a NPIAS Airport



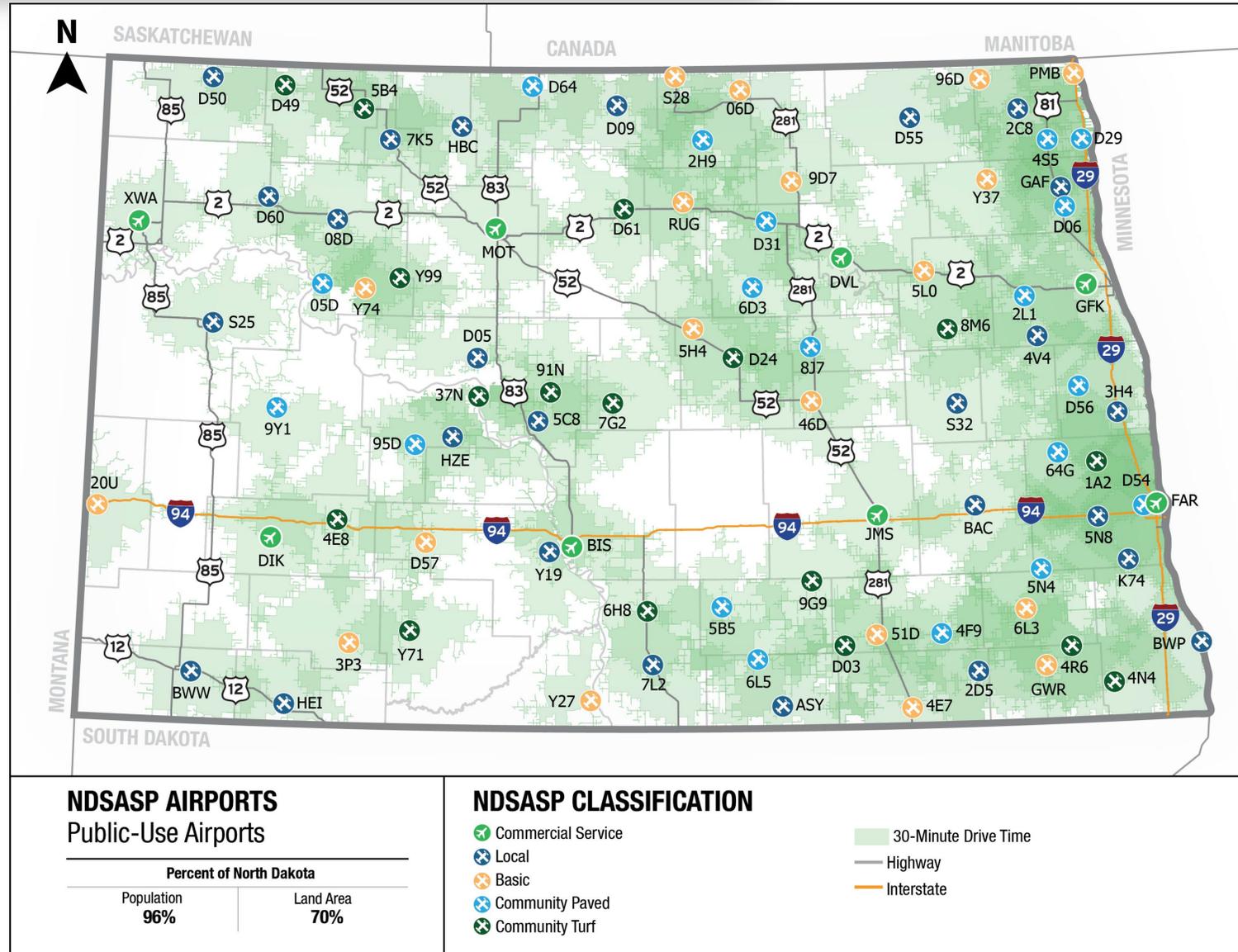
As shown in Figure 6-10, approximately 94 percent of North Dakota's population and 57 percent of the land area are within the service areas of NPIAS airports. Changes in population and land area coverage are affected by the associated increases or decreases in the number of airports.



Promote Aviation System Coverage

## PI: Percent of Area and Population Within 30 Minutes of All Public-Use Airports

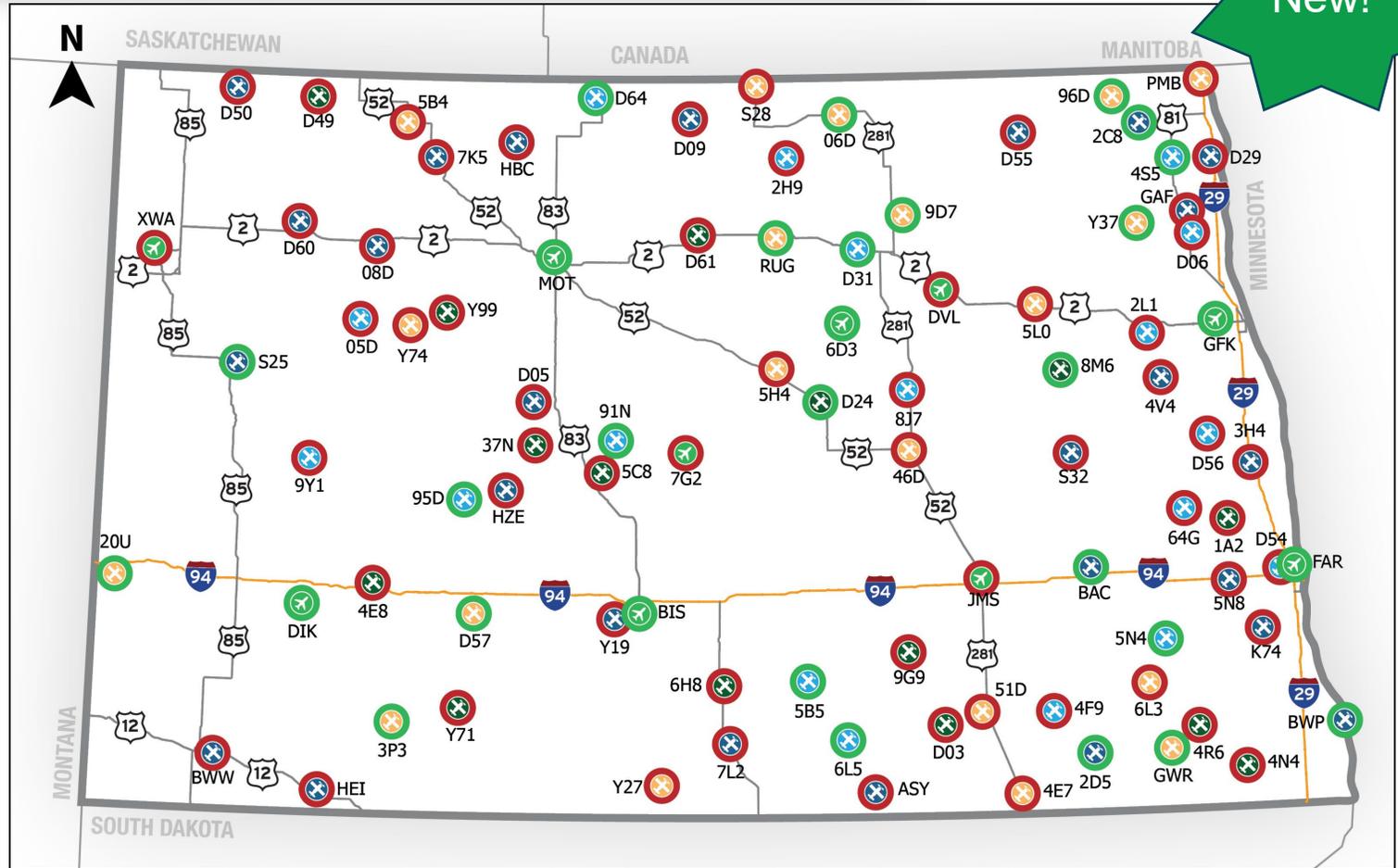
Year	Population Coverage	Land Area Coverage
2014	93%	58%
2025	96%	70%
Δ	+3%	+12%





Provide Air Access to Airports

## PM: Percent of Airports With Available Covered Aircraft Storage



### NDSASP AIRPORTS

Vacant Hangar Spaces

### NDSASP CLASSIFICATION

- Commercial Service
- Local
- Basic
- Community Paved
- Community Turf

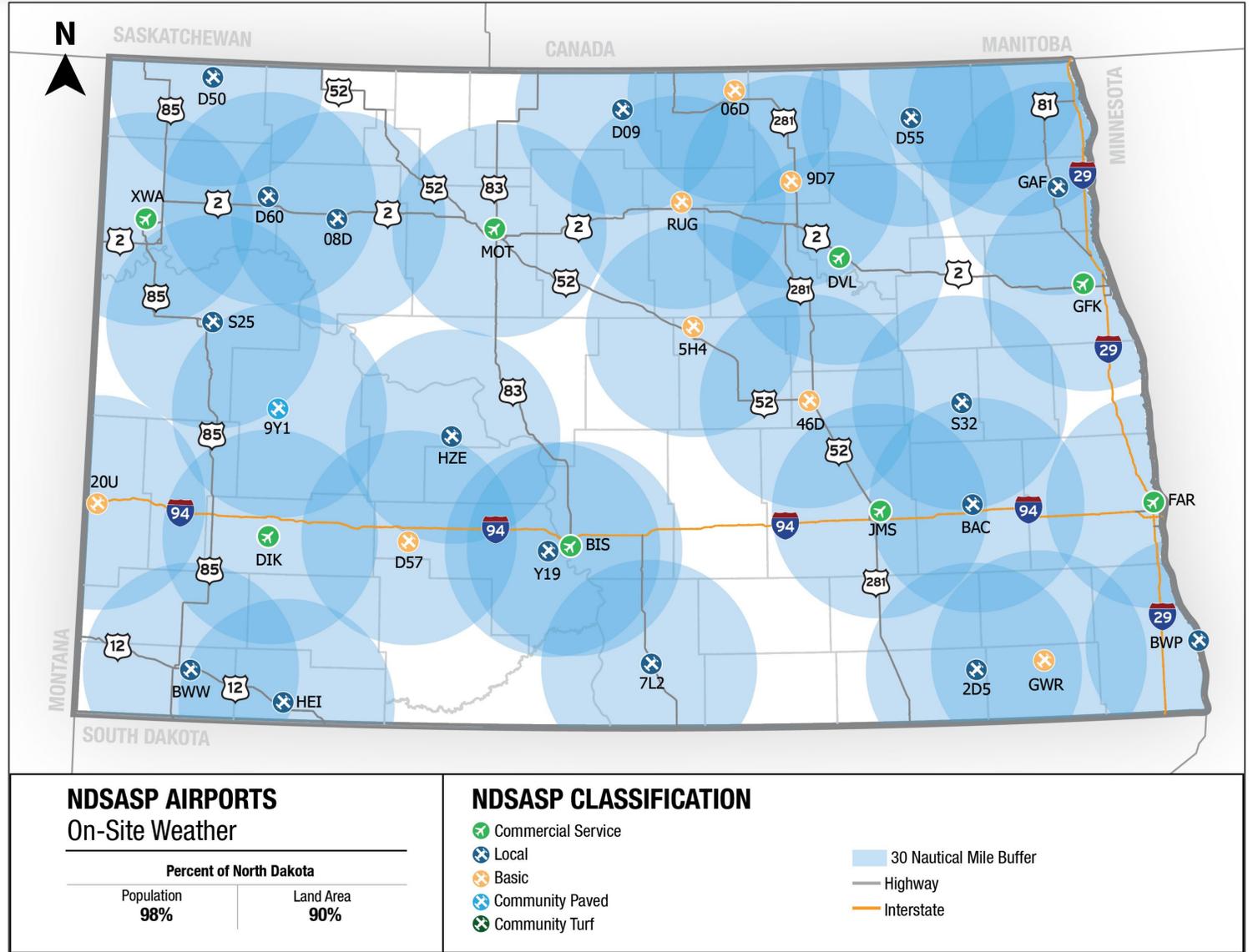
- Have Vacant Hangar Spaces
- Do Not Have Vacant Hangar Spaces
- Highway
- Interstate



Provide Air Access to Airports

## PM: Percent of Area and Population within 30 Nautical Miles of an Airport With On-Site Weather Reporting (AWOS/ASOS)

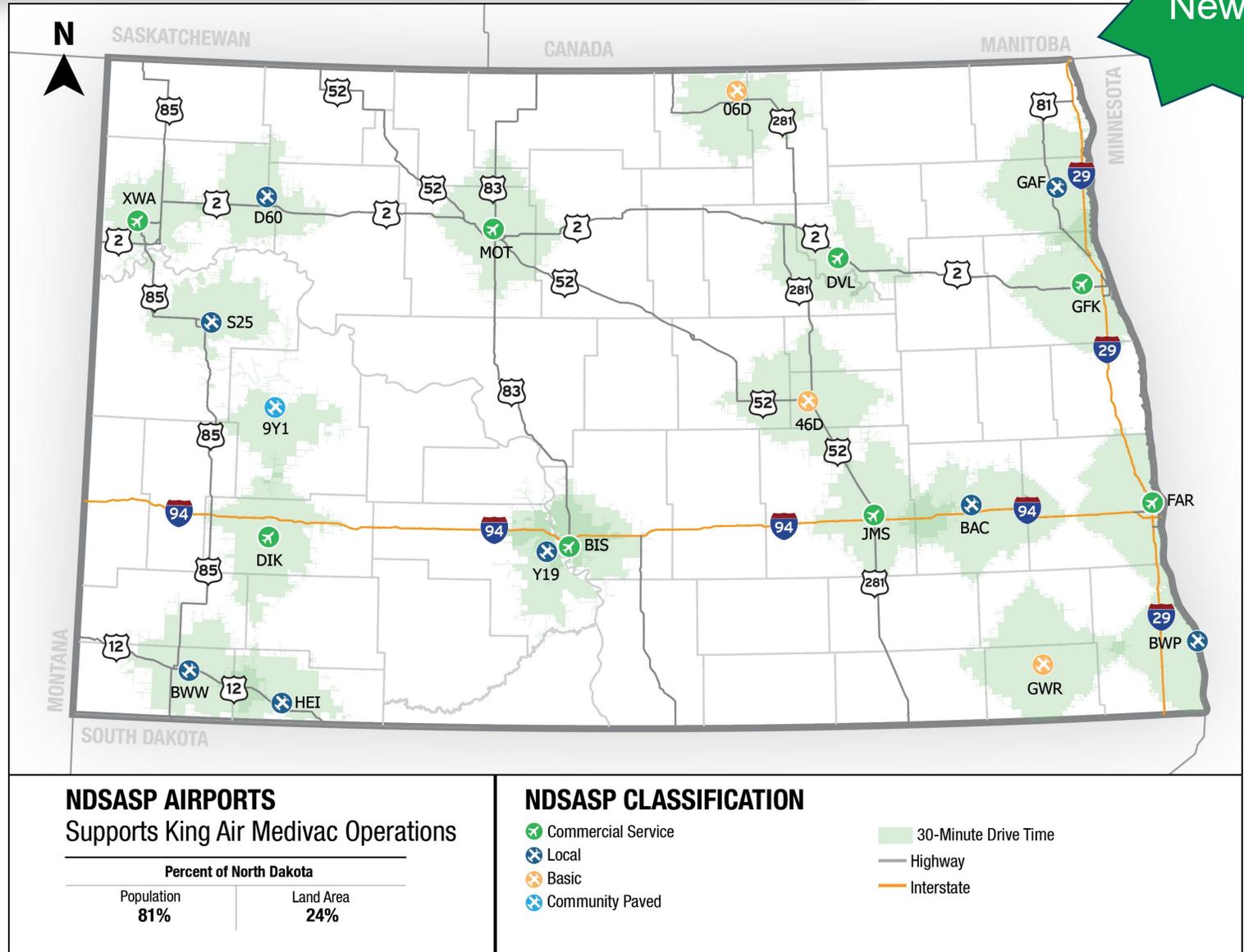
Year	Population Coverage	Land Area Coverage
2014	97%	87%
2025	98%	90%
Δ	+1%	+3%





Enhance Quality of Life

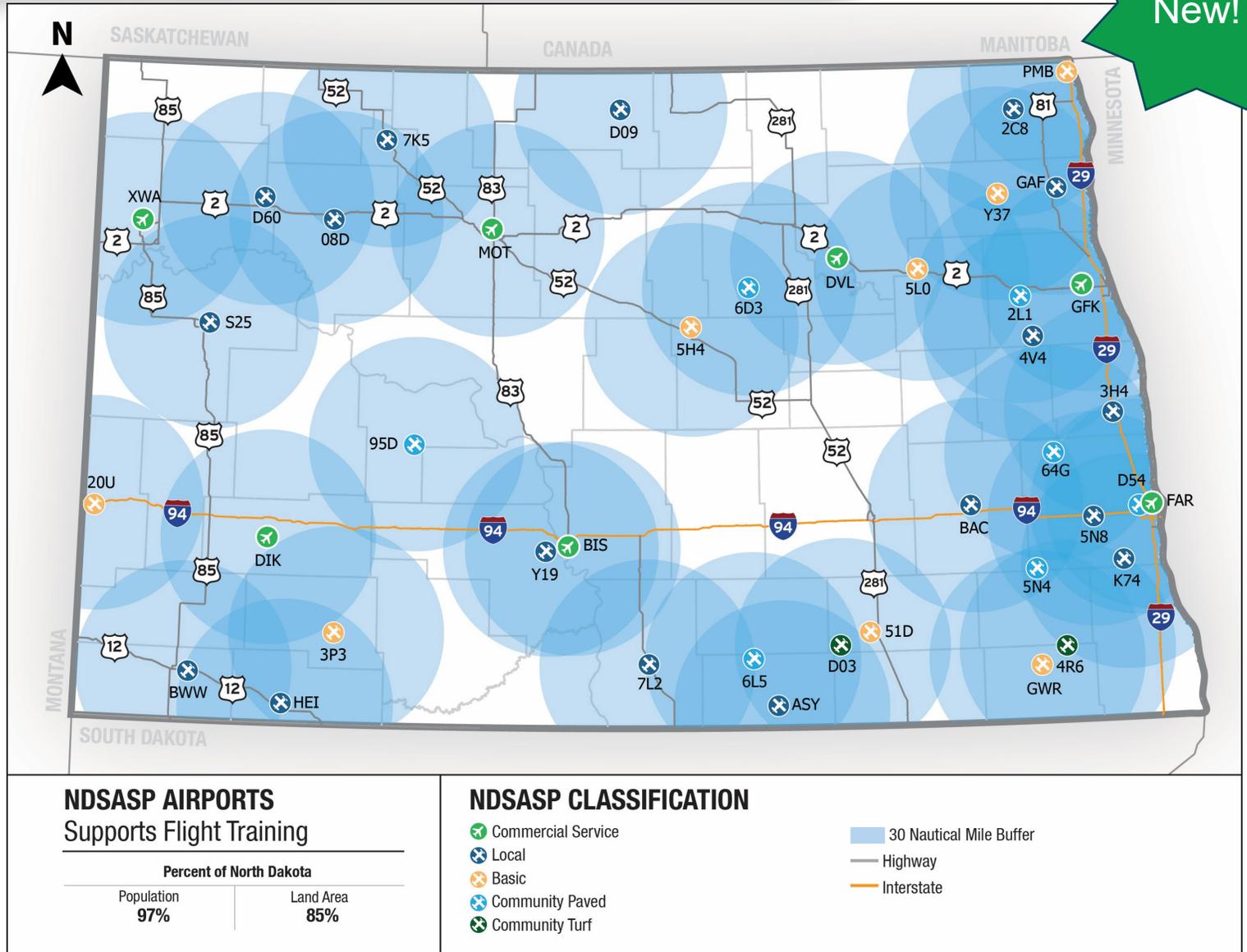
## PI: Percent of Area and Population Within 30 Minutes of an Airport That Can Meet the Needs of the King Air Emergency Aircraft





Support Aviation Education and Industry Advancement

## PI: Percent of Airports That Offer Flight Training





## Chapter 7. Issues and Industry Advancements\*

Advanced Air  
Mobility

Emerging Aviation  
Fuel Sources

Air Traffic Control  
Modernization

Aging Fleet and Pilot  
Population

Aviation  
Professional  
Shortage

Commercial Service  
Access

Economic  
Conditions and  
Impact on Buying  
Power

Revenue Producing  
Projects

*\*Currently underdoing internal review. Will be posted to the project website soon!*



## Chapter 8. Recommendations and Cost Estimates



- Provide a clear summary of recommended projects needed to support the statewide aviation system.
- Outline the planning-level cost estimates to meet NDSASP and airport goals.
- Establish a transparent basis for comparing needs against anticipated funding.
- Help decision-makers understand the investments required to meet future system needs.

*\*Currently underdoing internal review. Will be posted to the project website soon!*



# 10-Year System Needs and Funding Shortfall



# Estimating Needs Over 10 Years (2026-2035)

## NDAC's 10-year CIP

- Includes all estimated project needs at public-use airports
- Accounts for capital improvement and maintenance projects
- Prepared annually by NDAC



## Additional NDSASP Projects

- Additional needs identified through the NDSASP analyses
- Costs developed based on similar projects identified in the CIP
- Estimates total financial needs to satisfy NDSASP goals



## Estimated 10-year Needs

- Sum of CIP needs and additional NDSASP projects
- Duplicate projects removed to avoid double-counting
- Needs are likely much higher when considering a 20-year timeframe

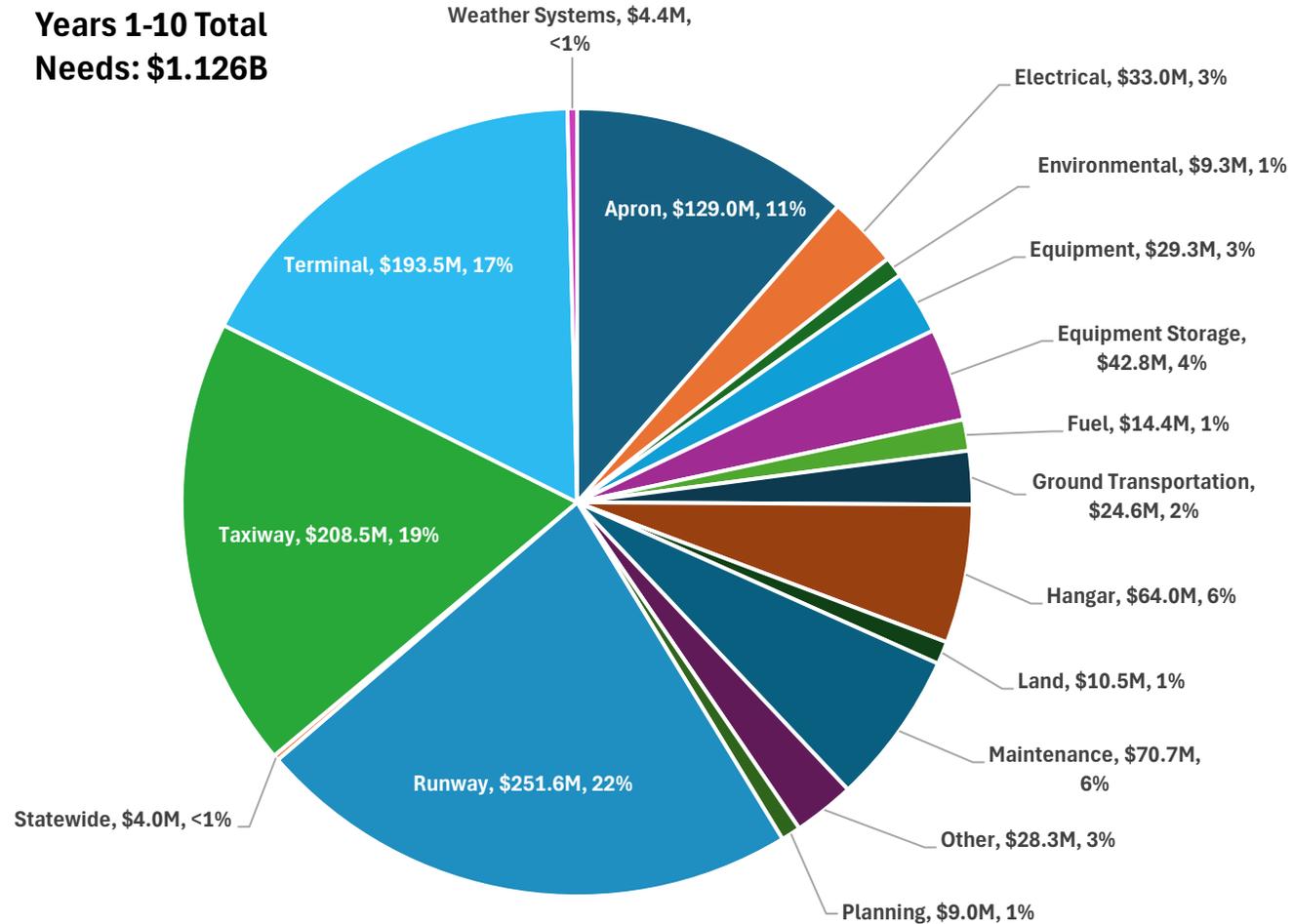


# North Dakota CIP Totals (2026-2035)

Years 1-10 Total  
Needs: \$1.126B

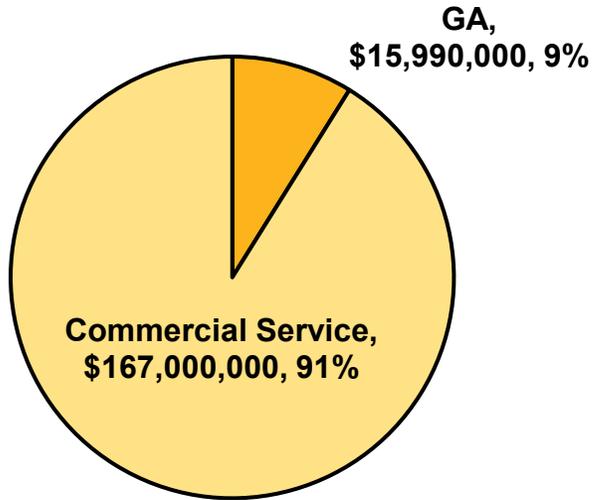
GA vs. CS 1-10 Year Total		
CS	\$697,000,000	62%
GA	\$425,780,000	38%
Statewide	\$4,000,000	<1%
<b>Total</b>	<b>\$1,126,780,000</b>	<b>100%</b>

NPIAS vs. Non-NPIAS 1-10 Year Total		
NPIAS	\$1,093,130,000	97%
Non-NPIAS	\$29,650,000	3%
Statewide	\$4,000,000	<1%
<b>Total</b>	<b>\$1,126,780,000</b>	<b>100%</b>

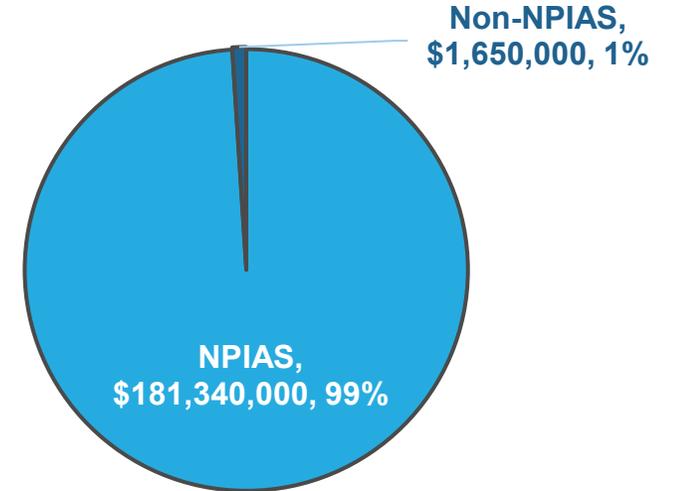
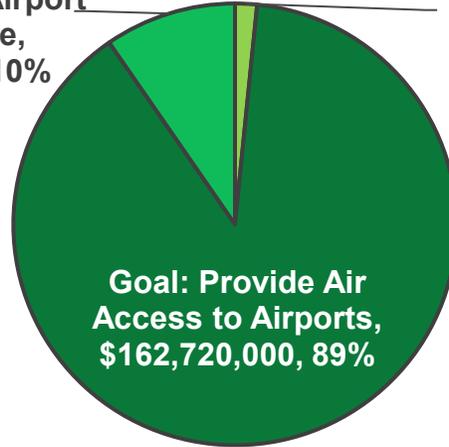




# Combined NDSASP Needs



Goal: Preserve Airport Infrastructure, \$17,550,000, 10%



Total Costs to Meet System Plan Goals	
SASP	\$5,500,000
SASP-related CIP Projects	\$177,490,000
<b>Total</b>	<b>\$182,990,000</b>



# Total Needs Over 10 Years (2026-2035)

NDAC's 10-year CIP

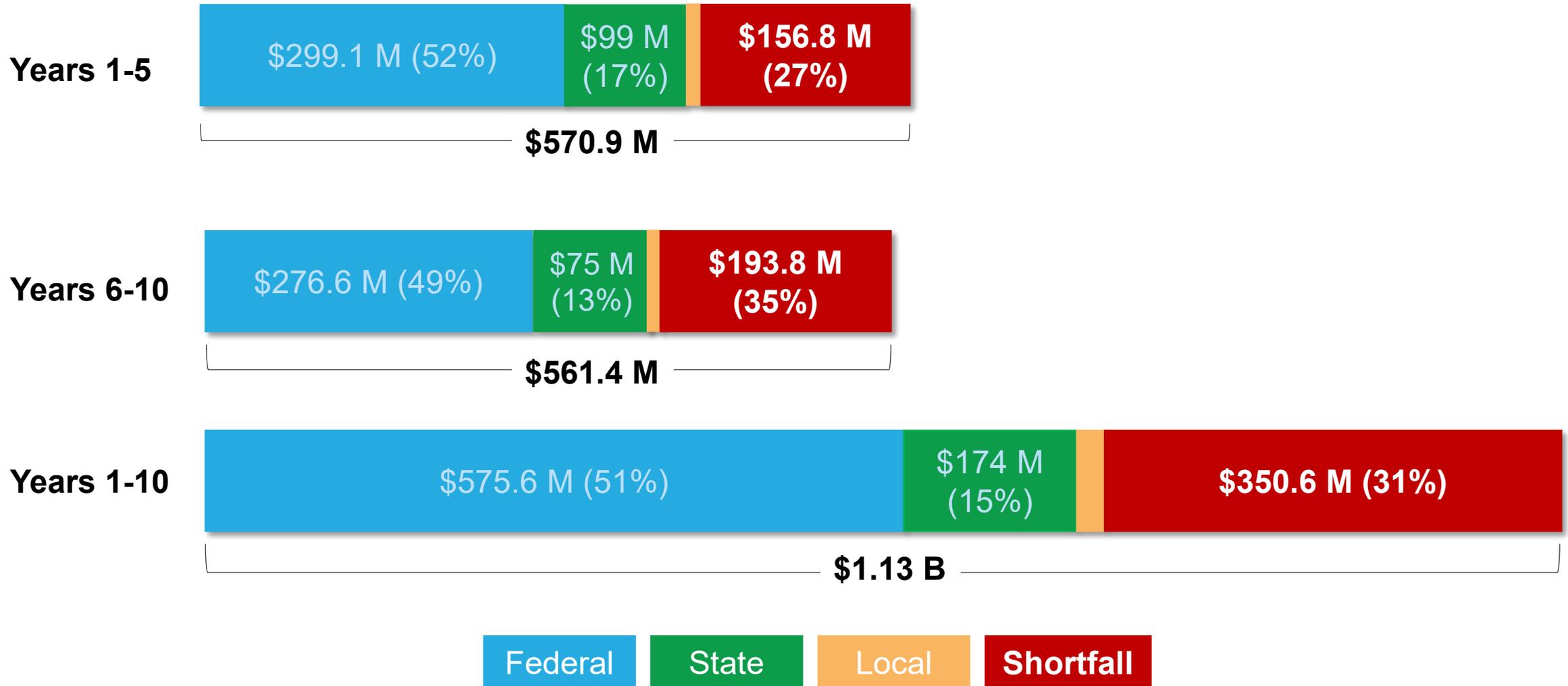
Additional NDSASP Projects

Estimated 10-year Needs

$$\text{\$1.126 Billion} + \text{\$5.5 million} = \text{\$1.132 billion}$$



# Anticipated Funding Shortfall

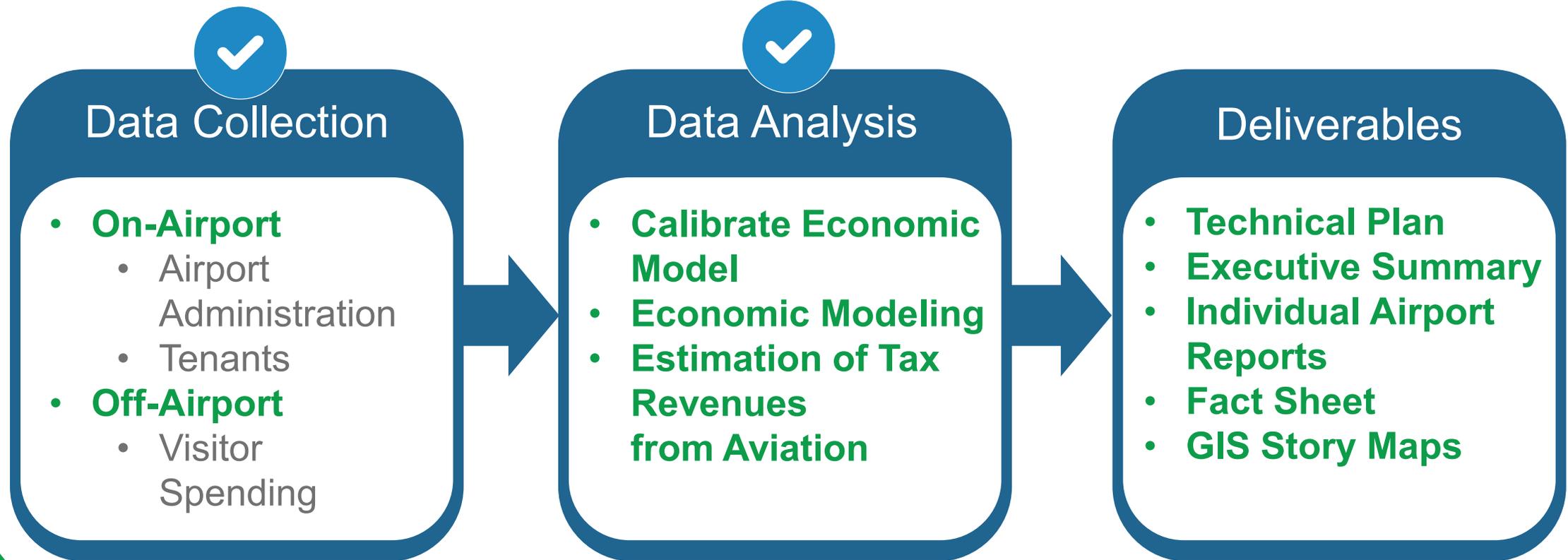




# Completed 2025 NDAEIS Tasks



# NDAEIS Process





# Measures of Economic Impact



## Jobs

Total **number of people employed**, both full-time and part-time because of aviation



## Payroll

Total **employment compensation**, including wages and benefits, of those employed



## Value Added

The **dollar value of final goods and services produced** within the local area because of economic activity, **excluding the value of intermediate goods and services** used in their production.



## Output

Total **expenditures** associated with **airport administration, capital projects, tenant sales of goods and services, as well as visitor spending** in North Dakota's hospitality-related sectors



# Categories of Economic Impact

## Direct Impacts

The **initial impacts occurring both on- and off-airports**, involving the payroll, expenditures, and capital improvements of airports and tenants are considered direct impacts. This also includes the spending by commercial and general aviation visitors.

## Multiplier Impacts

There are two distinct impacts that occur within the broader “multiplier impacts” term. The first is “**indirect impacts**” which occur when a **portion of direct revenues is used to purchase goods and services** from other businesses within a defined region. These impacts are sometimes referred to as “supplier sales.” The second is “**induced impacts**,” which are sometimes referred to as “income re-spending” and occur when **employees re-spend their income** earned in the defined region as a part of direct and indirect impacts.

## Total Impacts

Total impacts are simply the **sum of the direct and multiplier impacts** (induced and indirect).



# Using IMPLAN



**1. Fills in Gaps in Dataset**

**2. Derives Multiplier Impacts**



# Sources of Economic Activity

Core Impacts		Supplemental Impacts
On-Airport Impacts	Airport Administration	Grand Forks and Minot Air Force Bases
	Business Tenants	Aircraft/Aerospace Manufacturing
	Capital Expenditures	UAS Businesses
Off-Airport Impacts	Commercial Service Visitor Spending	Off-Airport UND School of Aerospace Sciences
	General Aviation Visitor Spending	Economic Impact Loss of Workforce Development Challenges



# Overview of Data Collected



**185**

Airport Tenant  
Businesses Surveyed

Accounting for ~3,000 Employees!

Over   
**1,000**

Visitors Surveyed



**12 MILLION**

In tenant capital  
Improvements recorded

## Workforce Needs



Mechanics



Customer  
Service



Avionic  
Technicians



Sales

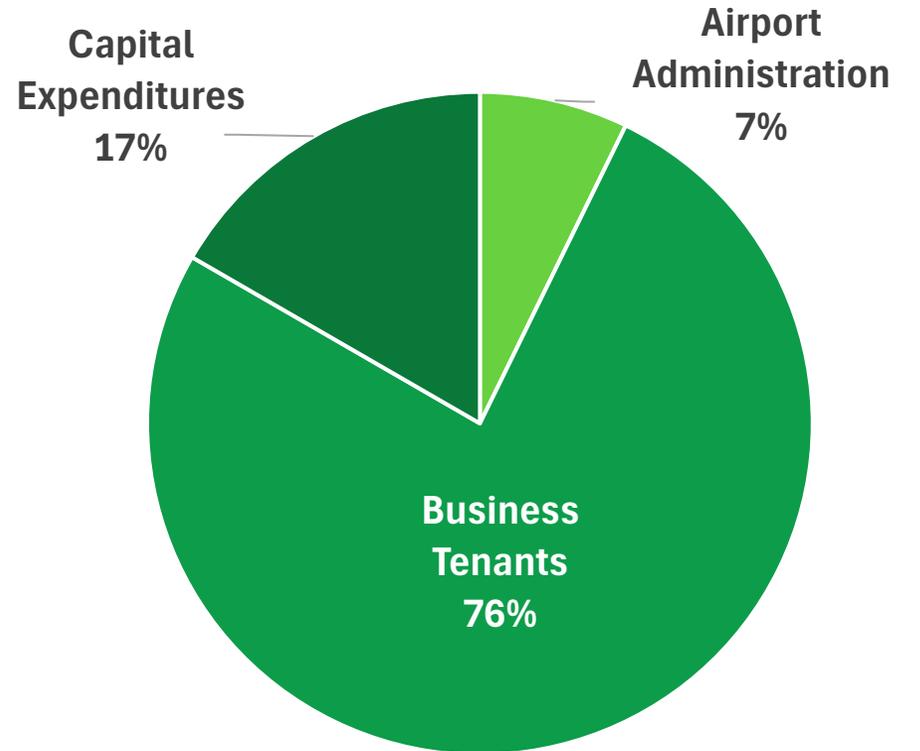


Ground  
Support



# Core Impacts – 2025 On-Airport Impacts

				
Category	Jobs	Payroll	Value Added	Output
Direct	5,312	\$372,439,000	\$465,117,000	\$658,989,000
Multiplier	2,353	\$145,510,000	\$236,328,000	\$437,479,000
<b>Total</b>	<b>7,665</b>	<b>\$517,948,000</b>	<b>\$701,445,000</b>	<b>\$1,096,467,000</b>



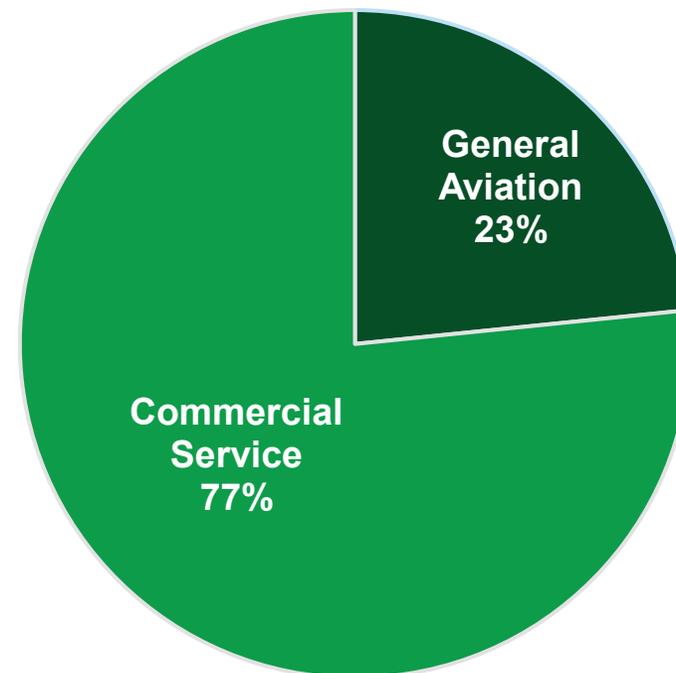
*Notes: Dollar values were rounded to the nearest 1,000. Totals may not sum due to rounding.*



# Core Impacts – Off-Airport Impacts

Category	 Jobs	 Payroll	 Value Added	 Output
<b>Direct</b>	4,518	\$150,182,000	\$242,494,000	\$435,926,000
<b>Multiplier</b>	1,454	\$82,682,000	\$133,187,000	\$258,492,000
<b>Total</b>	<b>5,972</b>	<b>\$232,864,000</b>	<b>\$375,681,000</b>	<b>\$694,418,000</b>

*Notes: Dollar values were rounded to the nearest 1,000. Totals may not sum due to rounding.*





# Commercial Service Passenger Feedback

Absolutely critical. A viable airport is important to a community's growth.

I could not live and work here without this airport!

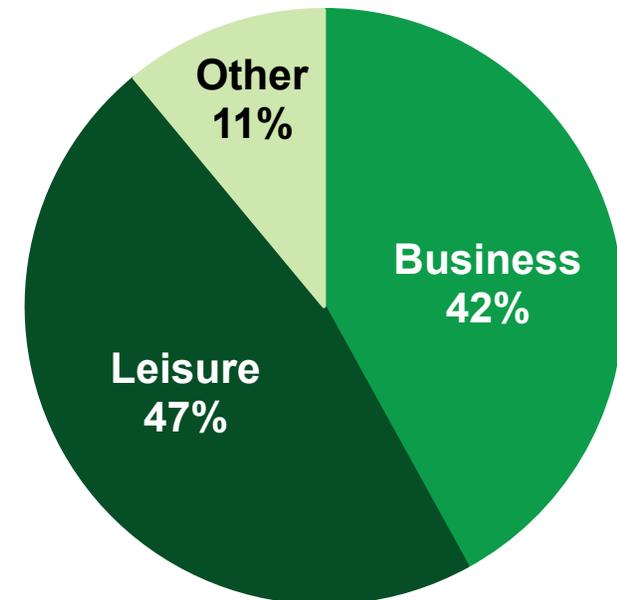
90%

Reported positive experiences flying into ND airports!

Airports are IMPERATIVE!  
They bring in new businesses and more people with them.

All airports in ND are important!

Reason for Travel



## Suggested Improvements:

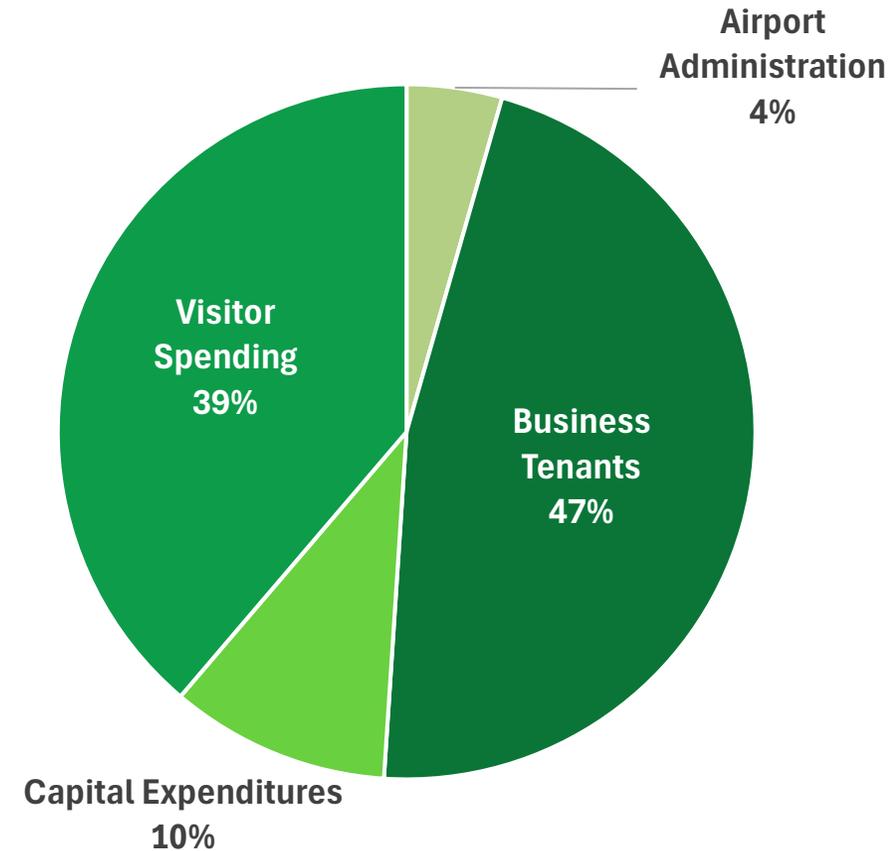
- More food options post security
  - More direct flight options
- Increased staffing at airline counters
  - Decreased TSA wait times



# Core Impacts – Statewide Totals

Category	 Jobs	 Payroll	 Value Added	 Output
Direct	9,831	\$522,620,000	\$707,611,000	\$1,094,915,000
Multiplier	3,807	\$228,192,000	\$369,515,000	\$695,970,000
<b>Total</b>	<b>13,637</b>	<b>\$750,812,000</b>	<b>\$1,077,126,000</b>	<b>\$1,790,885,000</b>

Notes: Dollar values were rounded to the nearest 1,000. Totals may not sum due to rounding.





# Core Impacts – Comparison

	 Jobs	 Payroll	 Value Added	 Output
2025	13,637	\$750,812,000	\$1,077,126,000	\$1,790,885,000
2015	12,217	\$505,247,509	N/A	\$1,564,352,371
% Change	12%	49%		14%



# Air Force Bases Impacts

Economic Impact Category	Grand Forks AFB (2023)	Minot AFB (2024)	Total
<b>Total Jobs (direct + indirect)</b>	2,611	8,494	11,105
<b>Total Payroll (annual payroll + estimated annual dollar value of jobs created)</b>	\$161,689,834	\$570,979,529	\$732,669,363
<b>Total Expenditures</b>	\$35,877,187	\$80,629,944	\$116,507,131
<b>Total</b>	<b>\$197,567,021</b>	<b>\$651,609,473</b>	<b>\$849,176,494</b>

Sources: Grand Forks Air Force Base – Fiscal Year 2023 Economic Impact Statement; Minot Air Force Base, North Dakota – Economic Impact Analysis, Edition FY24, 2025.



# Aircraft/Aerospace Manufacturing Impacts

	 Jobs	 Payroll	 Value Added	 Output
Direct	1,598	\$145,987,000	\$267,442,000	\$526,009,000
Multiplier	1,025	\$67,432,000	\$110,087,000	\$205,637,000
Total	<b>2,623</b>	<b>\$213,419,000</b>	<b>\$377,529,000</b>	<b>\$731,646,000</b>

Notes: Dollar values were rounded to the nearest 1,000. Totals may not sum due to rounding.



# UAS Businesses Impacts

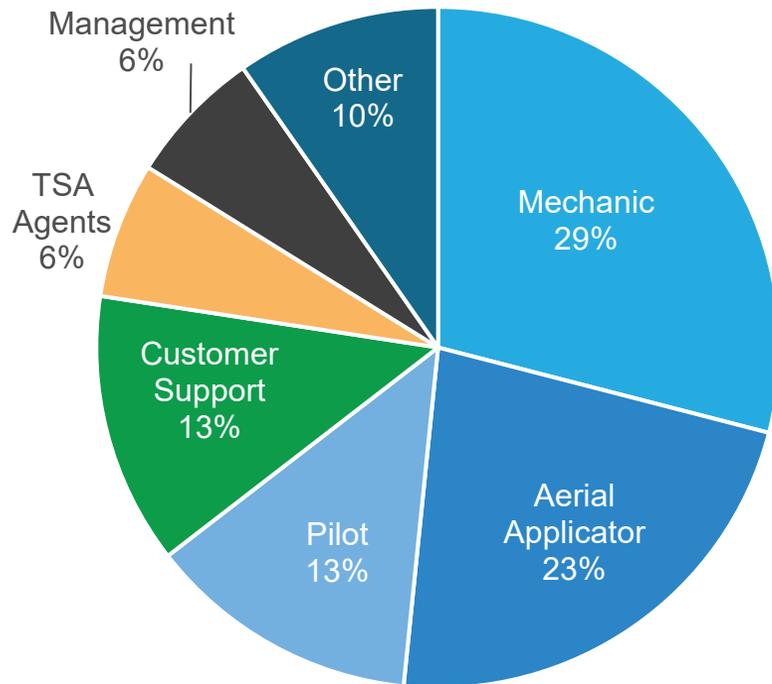
	 Jobs	 Payroll	 Value Added	 Output
Direct	380	\$32,767,000	\$40,403,000	\$72,581,000
Multiplier	232	\$14,378,000	\$22,695,000	\$41,722,000
Total	<b>612</b>	<b>\$47,145,000</b>	<b>\$63,097,000</b>	<b>\$114,304,000</b>

Notes: Dollar values were rounded to the nearest 1,000. Totals may not sum due to rounding.

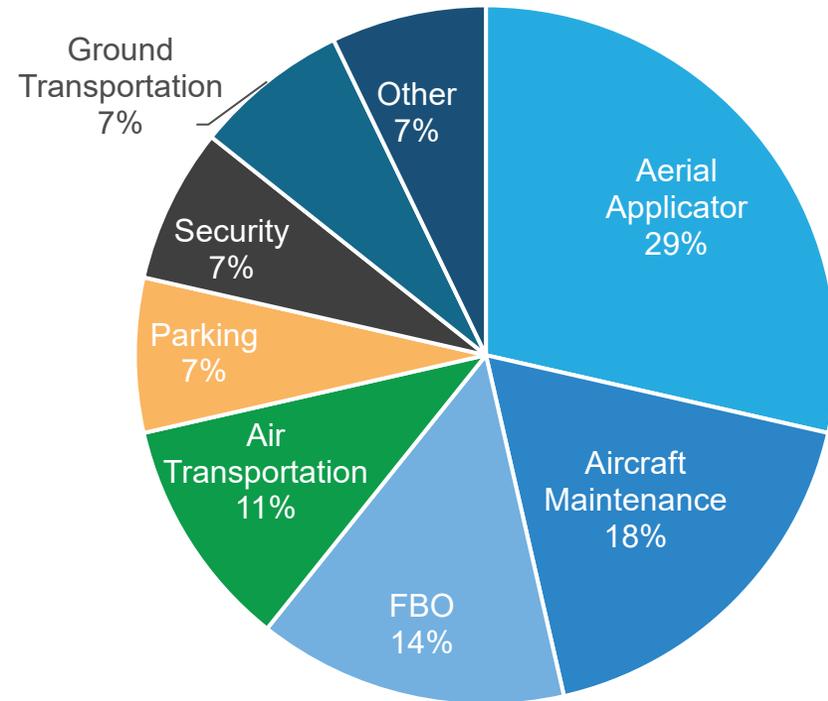


# Workforce Development Challenges

By Job Type



By Business Type





# Deliverables and Next Steps



# NDSASP-AEIS Deliverables



Technical Plan



Executive Summary



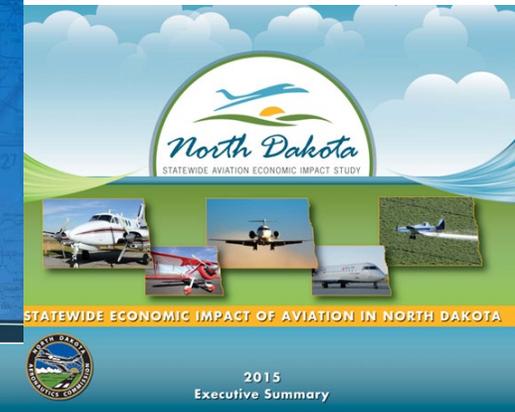
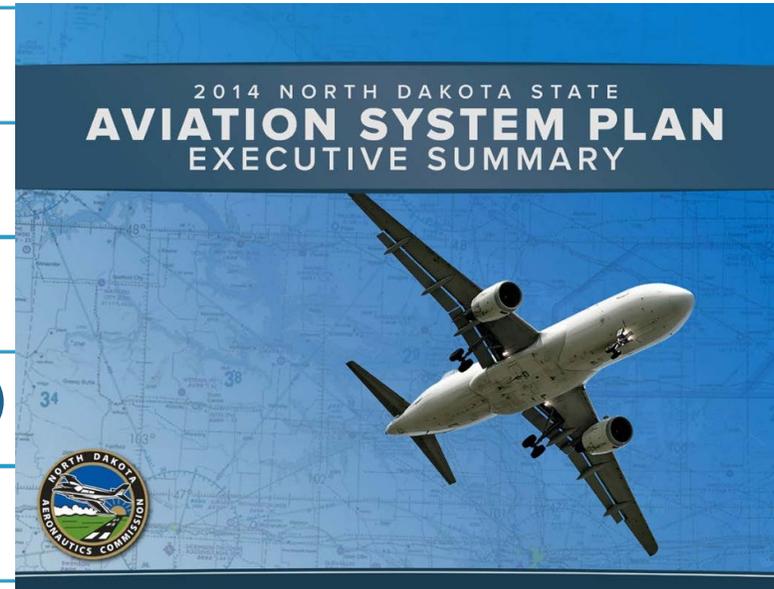
Fact Sheet



Individual Airport Reports (65 airports)



Story Maps (Up to 8)





# Story Maps



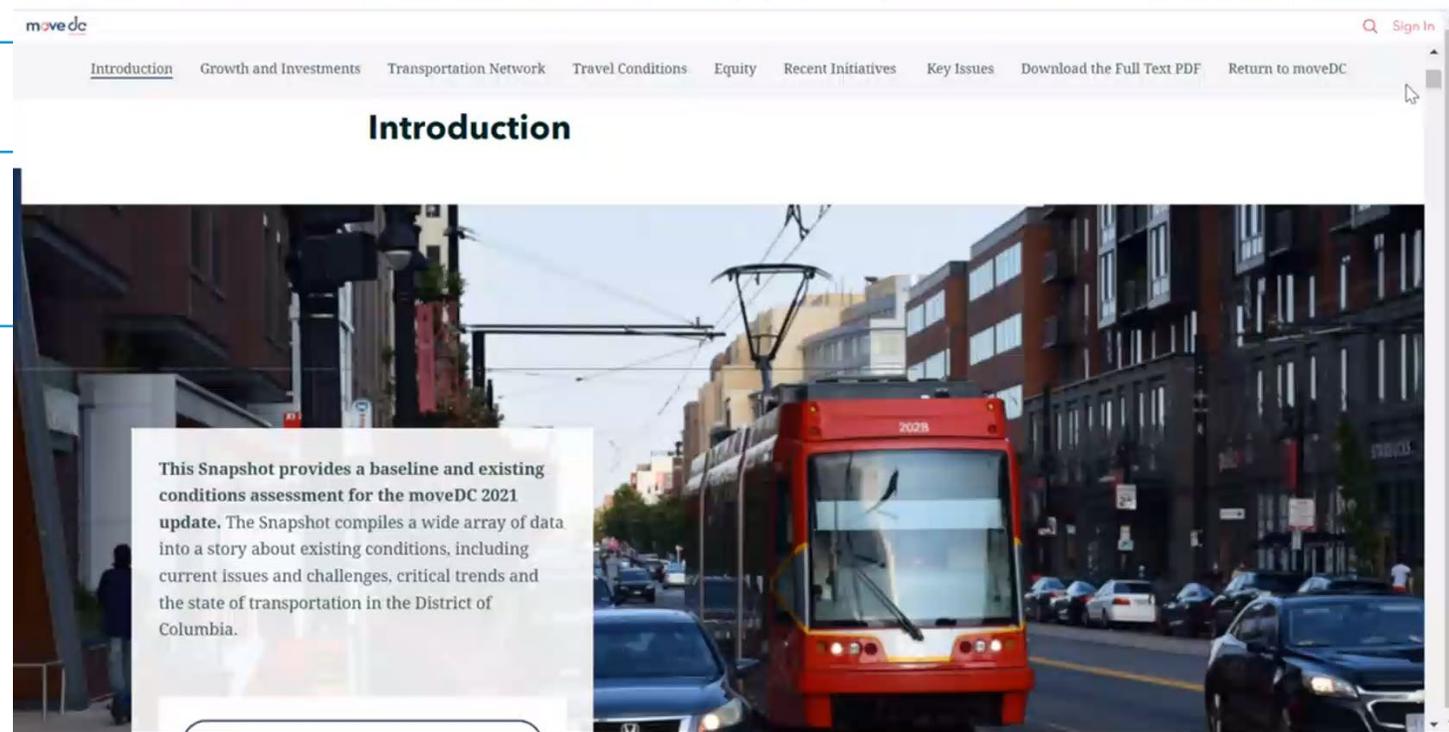
Web-based deliverable



Visually presents  
system changes



Represents several  
topics identified by  
NDAC





# NDAEIS Next Steps

- ➔ **Finalize Off-Airport UND Impacts**
- ➔ **Finalize Workforce Development Issue Impacts**
- ➔ **Compile Final NDAEIS Impacts**
- ➔ **Finalize NDAEIS Documentation**





# NDSASP Next Steps

Check the  
website in  
April for these  
chapters!

- **Finalize Issues and Industry Advancements effort**
- **Finalize Recommendations and Cost Estimates effort**
- **Finalize NDSASP documentation**
- **Initiate Final Project Deliverables**
- **Present at Regional Presentations**



# Thank you! Questions?

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